



# **Caribbean In/Securities: Creativity and Negotiation in the Caribbean (CARISCC)**

## **Working Papers Series**

**Livelihood In/Securities, Vulnerability and Resilience to Global Change  
in the Caribbean Agriculture Sector**

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## **Caribbean In/Securities: Creativity and Negotiation in the Caribbean (CARISCC) Working Papers Series**

### **Livelihood In/Securities, Vulnerability and Resilience to Global Change in the Caribbean Agriculture Sector**

*Dr Kevon Rhiney, Rutgers University, US*

#### **Introduction**

In this working paper I draw attention to the varying ways underlying forces of economic globalization and global environmental change have been threatening the livelihood security of farmers throughout the Caribbean. The paper also sheds light on some of the local-scale implications of these wider changes, and highlights the fact that the impacts are likely to produce uneven vulnerability outcomes mediated largely around differences in the social and economic landscapes in which individual farmers operate. While the paper draws strongly on the growing body of regional analyses of vulnerability and resilience, I also seek to move the discourse beyond the usual binary and mutually exclusive representations of these two concepts. Instead, I argue that farmers in the Caribbean are neither fully vulnerable nor fully resilient to these global forces. And in fact, their resilience may at times create the very conditions that engender new forms of vulnerability. The paper therefore calls for a critical rethinking (and even decentering) of these two dominant frameworks, if we are to arrive at a better understanding of the root causes and overarching forces shaping regional farmers' insecurities to global change.

#### **Caribbean Agriculture and Global Change**

The historical vulnerability of Caribbean agriculture to the vagaries of an uneven world capitalist system and the legacies inherited from the region's colonial past is well documented in the academic literature (see, for example, Mintz 1985; Richardson 1992; Barker 1993; Klak 1998; Timms 2008; Barker 2012). One of the colonial legacies that has persisted into the modern era is the creation of a dual agricultural economy consisting of a small-scale peasantry and a traditional plantation export sector. In countries like Jamaica, the vulnerability of the small-scale farming sector has long been based on limited access to good farm land, with many smallholder farmers confined to poor marginal lands in the hilly interior of the island (Mintz 1985; Potter et al. 2004). Large estates have traditionally occupied the best agricultural lands (largely situated along coastal plains) and have specialized in the cultivation and export of plantation crops such as banana and sugar cane to overseas metropolitan markets primarily in Europe. In recent decades, the regional agriculture sector has been confronted with unprecedented challenges which have had a significant negative impact on both sectors. The overarching mechanisms responsible for these challenges are driven by global economic and environmental processes occurring in concert to produce unique and

uneven threats to agricultural production and livelihood security across the sector.

The economic vulnerability of the Caribbean agriculture sector results in part from neoliberal policies promoting free market fundamentalism and trade liberalization that have in effect subjected regional farmers to increased competition from overseas competitors and reduced state support (Rhiney 2016). The vulnerability of the sector to a variable and changing climate is also well established (Nurse et al. 2001; Nurse and Moore 2005; Mimura et al. 2007; Gamble et al. 2010; Campbell et al. 2011). When combined, these global processes have produced unique and complex challenges that if left unchecked could threaten the viability of the agriculture sector across the Caribbean.

Recognition of the heightened and increasing economic and environmental vulnerabilities of the Caribbean agriculture sector has generated a wave of new scholarship, focused primarily on established farming communities and rural livelihoods (see for example, Campbell et al. 2011; Shah et al. 2013; Popke et al. 2015; Smith and Rhiney 2015). A common objective seen in most of these studies is to characterize the vulnerability of local farming communities to the impacts of global environmental and economic changes. Implicit in these studies is the understanding that the impacts associated with these changes in the market and climate, will not be felt evenly. More and more impact studies are showing that vulnerability to external shocks and stresses depend upon a wide range of conditions. In the case of the Caribbean, this generally involves a complex set of specific and differential drivers of vulnerability that are usually mediated across geographic location,

topography and livelihood practices. As a result, the combined effects of free trade policies and climate-induced shocks and stresses are often unevenly distributed in time and space, which implies that the resultant consequences will most likely vary between communities as well as between different groups of farmers. It is not surprising therefore, that the plight of small resource poor farmers has attracted much attention among much of the regional scholarship, given their general limited adaptive capacities (often times equated to low resilience) and heightened vulnerabilities to externally induced shocks and stresses.

### **Rethinking Vulnerability and Resilience**

As aforementioned, the two dominant frameworks often used to assess the detrimental impacts that global change will inflict on farmers in the Caribbean are vulnerability and resilience. While each of these concepts offer a potentially powerful analytical frame for understanding the complex ways forces of global change impact the livelihoods of regional farmers, they seemingly fall short in adequately accounting for individual farmers' ability to exercise agency, even in the most precarious circumstances.

Firstly, vulnerability is often characterized in terms of the sensitivity or exposure of a social or ecological system to extrinsically generated shocks, stresses, or disturbances, and that system's ability to anticipate, respond to, recover from, or even adapt to these perturbations (see for example, Luers 2005; Wisner et al. 2004; Buckle et al. 2000). In the case of an agricultural system, the external component comprises that system's level of exposure to external shocks such as hurricanes, introduction of new pests and diseases or spikes in the prices of inputs, as well as stresses such as longer term shifts in seasonal rainfall patterns. On the other hand, the internal component of vulnerability is seen as consisting of a system's lack of

means to cope with or adapt to shocks and stresses without incurring damaging losses, including severe economic hardship, dependency, and social impoverishment.

The challenge however, is that vulnerability is often times reduced to statistical measures of exposure, sensitivity and adaptive capacity, thus ignoring wider societal and historically contingent factors. In the case of the regional agriculture sector for instance, there is need to take into account “the ways entrenched societal norms and development practices, may themselves, produce and reproduce vulnerability, and in effect, serve as barriers to meaningful adaptation” (Rhiney, 2015: 110). Indeed, the present day vulnerability of the majority of small-scale farmers in the Caribbean to global change have as much to do with the systemic way these individuals and their livelihoods have been historically marginalized.

Resilience, on the other hand, is normally defined as the capacity of a system to absorb disturbance and re-organize itself while undergoing change, so as to still retain essentially the same structure, identity and feedbacks (see for example, Folke, 2006; Popke, 2015). An underlying assumption in resilience discourse is therefore the inevitability of change, which raises attention to the need for managing risks and future uncertainties. In other words, for a farming community to be considered resilient, would assume that the community as a whole, has the capacity to anticipate and absorb the impacts of potential shocks. The challenge with this framing of resilience however, is its inability to recognize the social and economic inequities that defines most social relations, especially within post-colonial societies. Social relations are laden with power contestations primarily over resources that in turn render some groups more vulnerable than others. As Pelling (2012: 56) points out, the value-neutral way in which resilience is often framed, only serve to “downplay the contested character of social life and socio-nature relations”.

Despite their obvious appeal to the research community, I'm arguing here that neither of these two concepts seem to fully capture the complexity of the challenges confronting the regional agriculture sector or even the wide range of responses that individual farmers have been employing on the ground. They also do not readily allow for the consideration of important historically contingent and context specific factors that have helped shape modern day Caribbean landscapes.

Another key and overlapping theme in these impact studies is the particular ways in which these two terms should be defined in relation to each other. For example, resilience is sometimes taken to mean the binary opposite of being vulnerable. It is however debatable whether a farmer or farming community that is labelled as resilient, stops being vulnerable. Likewise, it is not accurate to assume that farmers who exhibit traits of vulnerability are powerless or lack agency. The fact is, farmers' livelihoods (like that of most other socio-economic groups in society) are constantly in a state of flux and fall in and out of vulnerability. More importantly, these vulnerabilities are negotiated across a multiple and overlapping timescales and are by no means static. Additionally, while small farmers tend to display a high degree of vulnerability, they are not passive agents. In fact, studies have also shown that small farmers display a tremendous amount of agency and creativity at the farm level, even within a context of limited resources and technical support. For instance, some farmers have been found to be quite effective in negotiating their livelihood insecurities through the application of traditional knowledge and social cooperation. In fact, I would argue that it is because of this very agency displayed by regional smallholder farmers over the years, that is partly responsible for their continued neglect and marginalization.

## Concluding remarks

This working paper reports on some of my preliminary thoughts and analyses of the Caribbean global change literature within the context of the Caribbean agriculture sector. The paper specifically highlights the need for continued and more critical engagement of the dominant discourses around vulnerability and resilience. It is evident from the foregoing discussions that both global economic and environmental change present clear and unprecedented challenges for Caribbean agriculture. However, great care must be taken when assessing the challenges in order to adequately capture the diverse and complex processes at play. Here, I argue that farmers in the Caribbean are neither fully vulnerable nor fully resilient to the vagaries of global change. Instead, their livelihood insecurities oftentimes straddle both sides of the vulnerability-resilience spectrum.

## References

- Barker, D. 1993. Dualism and disasters on a typical island: constraints on agricultural development in Jamaica. *Tijdschrift voor Economische en Sociale Geographie* 84 (5): 332-340.
- Barker, D. (2012). Caribbean agriculture in a period of global change: vulnerabilities and opportunities. *Caribbean Studies* 40 (2), pp. 41-61.
- Buckle, P., Marsh, G. and Smale, S. (2000). New approaches to assessing vulnerability and resilience. *Australian Journal of Emergency Management* 13 (4), pp. 21-26.
- Campbell, D., Barker, D. and McGregor, D.F.M. (2011). Dealing with drought: small farmers and environmental hazards in southern St. Elizabeth, Jamaica. *Applied Geography* 13 (1), pp. 1-16.
- Gamble, D.W., Campbell, D., Allen, T.L. et al. (2010). Climate change, drought and Jamaican agriculture: local knowledge and climate change record. *Annals of the Association of American Geographers* 100 (4), pp. 880-893.
- Klak, T. 1998. *Globalization and neoliberalism: The Caribbean context*. Lanham MD: Rowland & Littlefield Publishers.
- Luers, A.L. (2005). The surface of vulnerability: an analytical framework for examining environmental change. *Global Environmental Change* 15, pp. 214-223.
- Mimura, N., Nurse, L., McLean, R.F. et al. (2007). Small islands. In: Parry, M.L., Canziani, O.F., Palutikof, J.P., van der Linden, P.J. and Hanson, C.E. (eds) *Climate change 2007: impacts, adaptation and vulnerability. Contribution of working group II to The Fourth Assessment Report of the IPCC*. Cambridge, UK: Cambridge University Press, pp. 687-716.
- Mintz, S. 1985. From plantations to peasantries in the Caribbean. In *Caribbean Contours*, ed. S. Mintz, 127-153. Baltimore: The Johns Hopkins University Press.
- Nurse, L.A., Graham, S.E.M., Hay, J.E., Suarez, A.G., Wong, P.P., Briguglio, L., Ragoonaden, S. (2001). Small island states. In: McCarthy, J.J., Canziani, O.F., Leary, N.A., Dokken, D.J., White, K.S. (eds). *Climate change 2001: impacts, adaptation and vulnerability, contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press, pp. 842-975, available at: [http://www.grida.no/publications/other/ipcc\\_tar/](http://www.grida.no/publications/other/ipcc_tar/)
- Nurse, L. and Moore, R. (2005). Adaptation to global climate change: an urgent requirement for Small Island Developing States. *Review of European Community and International Environmental Law* 14 (2), pp. 100-107.
- Folke, C., 2006. Resilience: the emergence of a perspective for social-ecological systems analyses. *Global Environ. Chang.* 16, 253-267.

Pelling, M., 2012. Resilience and transformation. In: Pelling, M., Manual-Navarrete, D., Redclift, M. (Eds.), *Climate Change and the Crisis of Capitalism*. Routledge, New York, pp. 51–65.

Popke, J., S. Curtis and D.W. Gamble. 2015. A social justice framing of climate change discourse and policy: Adaptation, resilience and vulnerability in a Jamaican agricultural landscape. *Geoforum* Available online 5 December 2014. doi:10.1016/j.geoforum.2014.11.003

Potter, R., Barker, D., Conway, D. and Klak, T. (2004). *The contemporary Caribbean*. Harlow: Pearson/Prentice Hall.

Rhiney, K. 2015. Geographies of Caribbean vulnerability in a changing climate: issues and trends. *Geography Compass* 9(3): 97-114.

Rhiney, K. (2016) "From Plantations to Services": A Historical and Theoretical Assessment of the Transition from Agrarian to Service-based Industries in the Caribbean", In C. Beckford and K. Rhiney (eds.) *Globalization, Agriculture and Food in the Caribbean: Climate Change, Gender and Geography*. London and New York: Palgrave-Macmillan, pp. 23-50.

Richardson B.C. (1992). *The Caribbean in the Wider World, 1492-1992: A Regional geography* Cambridge: Cambridge University Press.

Shah, K.U., H.B. Dulal, C. Johnson and A. Baptiste. 2013. Understanding livelihood vulnerability to climate change: Applying the livelihood vulnerability index in Trinidad and Tobago. *Geoforum* 47: 125-137.

Smith, R. and K. Rhiney (2015). Climate (in) justice, vulnerability and livelihoods in the Caribbean: the case of the indigenous Caribbean communities in northeastern St. Vincent, *Geoforum* 73 (1), pp. 22-31 <http://dx.doi.org/10.1016/j.geoforum.2015.11.008>

Timms, B.F. 2008. Development theory and domestic agriculture in the Caribbean: recurring crises and missed opportunities. *Caribbean Geography* 15(2): 101-117.

Wisner, B., Blaikie, P., Cannon, T. and Davis, I. (2004). *At risk: natural hazards, people's vulnerability and disasters*. London and New York: Routledge.

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