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Vision 50/50- Tackling Constraints and Promoting Pathways to Rural Resilience



Dr. Patricia Northover

Sir Arthur Lewis Institute for Social & Economic Studies (SALISES)
University of the West Indies (Mona)

Dr. Kevon Rhiney

Department of Geography & Geology
University of the West Indies (Mona)

The Challenges facing us: Multiple Vulnerabilities

- The Caribbean region contains one of the world's largest concentrations of vulnerable small island and mini-states all faced with the common challenge of sustaining their development processes in the face of climate change and special socio-ecological constraints.
- Small states are called vulnerable because of their higher exposure and susceptibility to damage from external risks and shocks.
- VULNERABILITY IS NOT THE SAME AS POVERTY

Vulnerability dimensions

- Economic Vulnerability exists because of their openness,- great need to depend on trade- as well as, the limited basis for production diversification, and current high debt/income ratios.
- Environmental Vulnerability exists because with small size and ecological profile there is a difficulty in withstanding the impact of natural disasters, such as hurricane, flooding, earthquake.
- Social Vulnerability, exists because of the proneness of the society to shocks. This is often linked to the effects of violence and migration on a society. Open borders and trade also expose society to health hazards (avian flu)

Rural Vulnerability

- Rural spaces in these states are especially vulnerable despite 50 years of independence, face high rates of poverty – distributed across gendered, class and spatial/environmental lines.
- Rural spaces continue to be faced challenged by a spectrum of changes, for eg.
- climate induced changes in the environment
- socioeconomic crises caused by such the triple F crises (that is, a global increase in food and fuel prices plus financial shocks causing a global downturn in growth, job losses, rising poverty).

STEPS FOR BUILDING RESILIENCE

- In this context, as, the International Fund for Agricultural Development (IFAD) has stated in their 2001 poverty report:
- “putting a proper appreciation of risks and shocks at the center of a new agenda for rural growth and development requires a multipronged approach. On the one hand it involves strengthening the capacity of rural people to manage risk.... and develop new strategies. On the other hand, it requires that the conditions that they face be made less risky...” (IFAD 2010:18).

Unprecedented Risks: The Caribbean Region

- PRECIS Caribbean Climate Change (February 2008) has predicted future changes in Caribbean climate
- ✓ Caribbean will be between 1 to 5 degrees centigrade warmer by 2080s (annual means)
- ✓ Greater warming for north western Caribbean (Cuba, Jamaica, Belize..) than eastern Caribbean chain
- ✓ Greater warming in summer months than in cooler and traditionally drier earlier months of the year
- ✓ Most of the Caribbean will be up to 25% drier in the annual mean by 2080s

Climate Change & Caribbean Agriculture

- Caribbean expected to be first and most severely impacted by Climate Change and Global Warming (Simpson et al., 2009)
- Compounded by regional characteristics e.g. small size, geographical susceptibility to natural hazards, fragile economies etc. (Gamble et al., 2010; IIED, 2011; Mimura et al., 2007; Simpson et al., 2009)
- Longer more frequent droughts, greater variability in rainfall and drier and hotter summers
- Urgent steps needed to assess the potential impacts and build local and regional adaptive capacity

Increased mean annual temperatures	Reduced annual Rainfall	Shift in Rainy Season	Increase frequency and severity of extreme weather events	Rise in Sea Level
Heat-related stress may stunt plant growth	Reduction in water for farming	More erratic and inconsistent rainfall	Increase in the frequency and severity of cyclone activities	Increased salinization of agricultural lands
Reduction in plant-available moisture due to increased rates of evapo-transpiration	Drier conditions	Flash flooding	More and intense drought periods	Flooding of coastal communities (implications for fisher folks)
Increase in the spread of some pests and diseases				
Coral bleaching may affect fish stock				

- Already feeling effects
- World Bank (2009), estimates in 2007 the Caribbean suffered US\$10bn in economic losses from weather related events totaling > 13% GDP
- **Projected to continue**

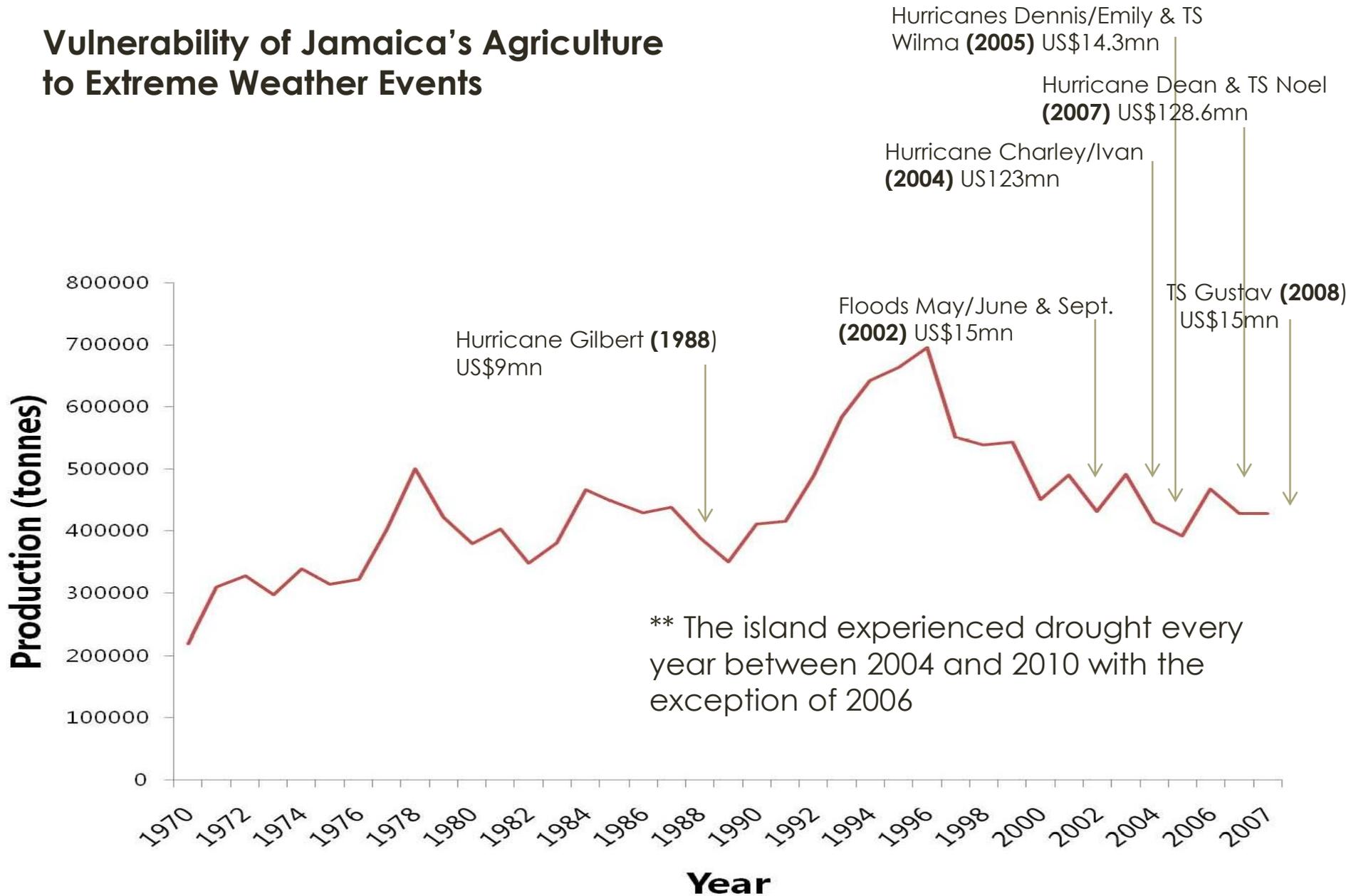
Caribbean Region – Cost of Inaction (High-Impact minus Low-Impact Scenarios)				
Total Caribbean	Cost of Inaction (US\$ Billions)			
	2025	2050	2075	2100
Storms	1.1	2.8	4.9	7.9
Tourism	1.6	3.2	4.8	6.4
Infrastructure	8.0	15.9	23.9	31.9
Total	10.7	21.9	33.7	46.2
% Current GDP	5.0	10.3	15.9	21.7

Adapted: Bueno et al. (2008)

Country	2005 value (US\$ Millions)²	Value lost to climate change, lower bound (2.96% of 2005 value)	Value lost to climate change, upper bound (8.43% of 2005 value)
Antigua & Barbuda	34.8	1.03	2.93
Bahamas ¹	15.0	4.44	12.63
Barbados	122.4	3.62	10.32
Belize	166.5	4.93	14.04
Guyana	244.9	7.25	20.65
Haiti ¹	1,078.0	31.91	90.88
Jamaica	669.0	19.80	56.40
St. Kitts & Nevis	12.9	0.38	1.09
St. Lucia	35.2	1.04	2.97
St. Vincent & Grenadines	35.2	1.04	2.97
Suriname	106.8	3.16	9.00
Trinidad & Tobago	151.4	4.48	12.76

Adapted: Simpson et al., 2009 p. 165

Vulnerability of Jamaica's Agriculture to Extreme Weather Events



State of Jamaica's agriculture sector

- Agriculture contributes on average 6% to GDP, yet significant source of employment and livelihood
- Sector has been faced with tremendous challenges in recent decades i.e. decline in output, widening trade deficits, susceptibility to various natural hazards
- Continued high volatility in fuel prices, praedial larceny, rising cost of inputs such as seeds and fertilizers, and inflation
- **Need to find appropriate response pathways to climate risk reduction and the promotion of climate smart practices**

Resilience: How can we recognize it?

- Resilience comes from social psychology- used to speak to individual's capacity to bounce back from stress or shocks, (concept used in examining effects of violence on kids and women)
- . Short run resilience versus long run resilience. For e.g. a resilience strategy may deepen vulnerability, for example, increased exploitation of natural resources to survive but increases risks faced thereafter

System and rural resilience

- Resilience can also apply to ecological systems and human-environment interaction (i.e. socio-ecological systems). How strong are these system's ability to adapt to shock, stress? Will they break down? Is that part of getting to new resilience levels?

Rural Resilience

- 'Rural resilience,' is defined by Shouten et al 2009, as
- "the capacity of a rural region to adapt to changing external circumstances in a way that a satisfactory standard of living is maintained, while coping with the ecological, economic and social vulnerability."
- What are the ingredients for rural resilience?
- Human capital, social capital, productive and financial capital and natural capital.

Rural Poverty- The fundamental constraint to Caribbean resilience

- **Since 1995 the CDB with the assistance of CIDA has helped nine countries to conduct a Country Poverty Assessment (CPA) to measure and characterise poverty.**
- **The CPAs have shown that regional poverty is predominantly a rural phenomenon.**
- .Poverty is a state of absolute or relative deprivation.

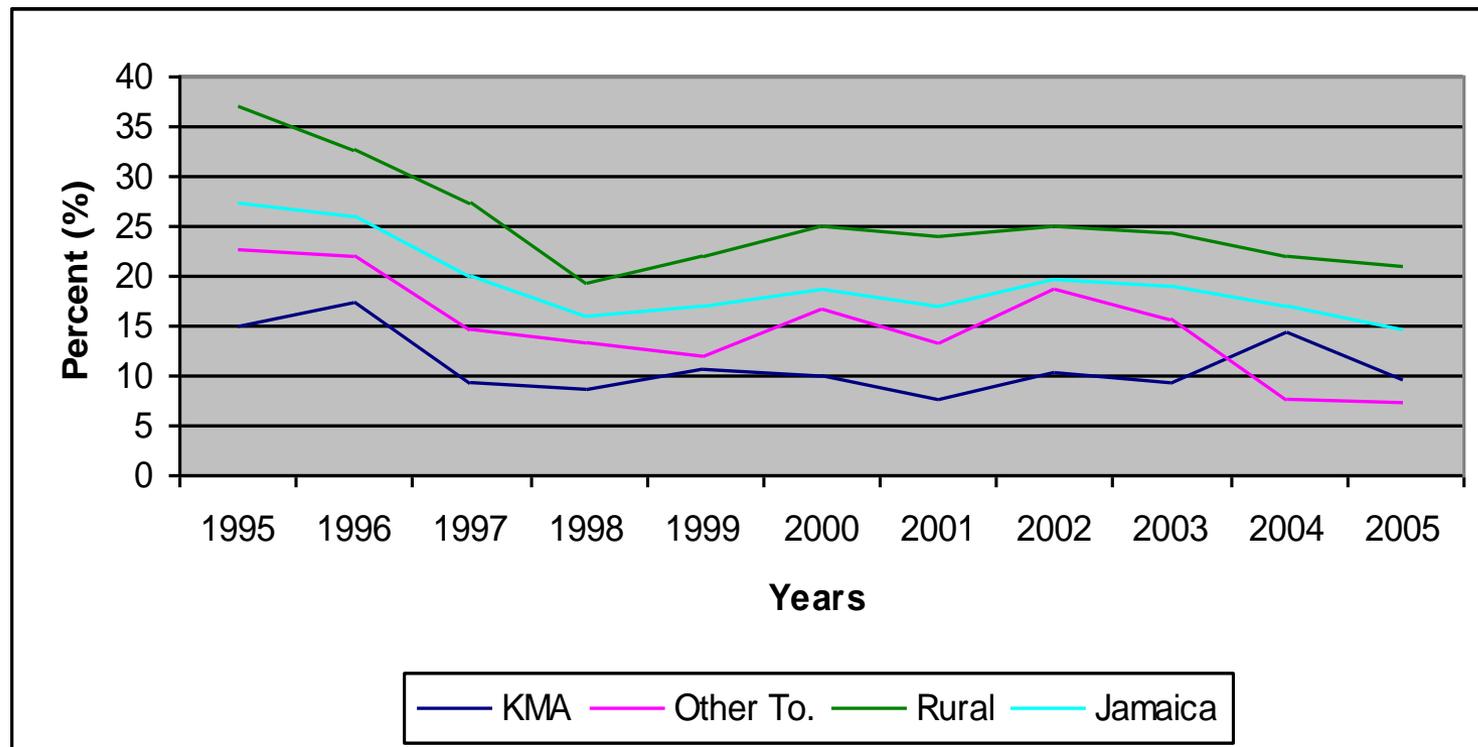
Poverty is multi-dimensional

- . Ball and Dunn (1995) refer to poverty as “lack of opportunity, equality of treatment, rights, power, dignity, and self-respect, ...lack of access to information and resources.”

World Bank Report (2001) defines poverty as

- Lack of opportunities and capabilities
- Lack of power/political voice
- High exposure to risks , shocks, violence, ie high vulnerability or insecurity

Incidence of Poverty, All Jamaica 1995-2005



o **Local Policy Framework for supporting resilience**

- *Agriculture Sector Plan Vision 2030*

- Efficient Competitive Diversified Value- Added Agricultural Production
- Strong Marketing Systems for Domestic and Export Markets
- Competent and Adequate Human Resources
- Contributor to Long-Term Rural Development
- An Environmentally Sustainable Sector

- *Food Safety Policy*

- Establish one integrated Food Safety System;
- Ensure that food consumed is safe, sound and wholesome;
- Implement a system of traceability for food from production to consumption;
- Institute a formal risk analysis system to enhance food safety;
- Promulgate appropriate legislation to support food safety; and
- Effect behavioral change through heightened public awareness about food safety issues

o Existing Policy Framework cont'd

- *National Plant Health Policy (2010)*
 - Promote the use of sustainable integrated pest management strategies in order to reduce the dependence on pesticides by farmers thus enhancing food quality;
 - Protect the natural environment from the harmful impact of invasive plant pests; and
 - Increase public awareness and role of stakeholders in protecting plant health.

- *Draft Food and Nutrition Security Policy*
 - The policy aims at addressing the threats and opportunities related to food security in the country by focusing on the four pillars of food availability, food accessibility, consumption and utilization and stability.

Other Relevant Policies:

- *Jamaica Country Strategy for the Adaptation of the Sugar Industry (2006-2015)*
- *The Strategic Forest Management Plan (2009-2013)*
- *Jamaica Agriculture Subsector Strategy (2010)*
- *Draft Biosafety Policy*

Gaps and way forward

- Despite the tremendous work in progress, many gaps remain and more information is needed to help decision makers chart a path to rural resilience.
- Our work at SALISES is in its early stages, and is designed to complement existing and ongoing research at UWI and elsewhere. A key focus is on building a multi-disciplinary approach to research in moving ahead.

Projects supported:

- As part of the 50/50 initiative engaged in
- Historical archiving as well as analysis of contemporary development issues shaping rural spaces. Some projects include:
 - Sugar documentary film series
 - Mainstreaming Gender in climate change and rural development
 - Research on enterprise development and non-farm rural economy
 - Youth in rural spaces- aspirations