

The Green Economy - The Link to Sustainable Development

DEVELOPING PRIME AGRIBUSINESS FOR THE SUSTAINABLE GREEN ECONOMY IN JAMAICA

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What is a green economy?

- ✿ According to Blaj (2013), the concept of green economy was launched by the United Nations Environmental (UNEP) since 2008 as an alternative to traditional economic growth and defined as : *seeking an improvement in social and human welfare while causing an improvement in the ecological deficit and reducing man's impact on the environment.* Fundamentally, a green economy is one that is low carbon, resource efficient, socially inclusive and moreover provides justice for climate and humanity (Blaj, 2013; Popke et al., 2014).

Green Economy Model

1. Renewable energy (geothermal, solar, wind etc.)
2. Green constructions (such as building Leadership in Energy and Environmental Design-LEED buildings)
3. Alternative fuels (Electrics, hybrids, alternative combustibles)
4. Water management (water treatment, water harvesting etc.)
5. Waste management (reduce, re-use, recycle, storage, removal)
6. Territory Management (land stabilization, forestation, organic agriculture, habitat conservation etc.)
7. Green Markets (such as green banking and financing, and carbon trading) (Acey and Culhune, 2013; Blaj, 2013; Chao et al., 2013; Janicke, 2012; Kahn, 2009; Slaper and Krause, 2012)

Green economy can be conceived across 4 main domains: 1) financial involving the investors seeking to finance the green economy, 2) institutions acting to establish the economy, 3) regulatory focusing on the standards and rules and 4) cultural involving the various modalities of green industrial and consumption centers taking place in the green economy.

Policy and Strategy	Component	Goals
Development of green economic policy framework on renewable energy, waste, water, land and green markets	Green House Gas (GHG), Water, Land use and Waste Management pledges. Regulation on current and future industrial development w.r.t low carbon, low waste, low water consumption	Reduction of emissions and consumption targets of the critical components (e.g. to 2000 levels by 2030 and 50% below by 2050)
Implementing legislation to support green economy such as GHG reduction act, land and water conservation acts, waste management act and green market act	Establish of regulatory, trading systems within a policy framework. Establish key performance standards across sectors Establish feed-in and tariff subsidies programs to accelerate adoption of green economic practices	Implementing pledges. Establish levels for renewables, waste recycling, green projects, green industries and land use Mandating by regulation the use of best available technology and best practices
Development of Frameworks on the development of energy, water, land use, waste management, green markets	Establish of future caps on demand to regulate supply and technology to provide sustainability Public education, awareness and mobilization Demonstration of industry and household proof of concepts	Improvement targets on energy intensity, water /waste/land management and green trading 100% Public awareness and consumer education 100% sensitization and demo of key transformative technologies and concepts.
Strategic ecological and social assessment of energy, water, land, and waste intensive industries	Regulating the future potential impact of critical industries Identification of transformative technology for installation to achieve renewal or reduction of impact.	Identify output caps on already ecological intensive sectors. Identify and quantify growth agenda in alternative green industries.

Jamaican Post Colonial Agriculture

STRUCTURAL CONTRADICTIONS

1. Structurally being on an island of 1,440 square miles of which over 60% is either mountainous or forest, makes large plantation agriculture challenging and therefore impossible in achieving comparable economies of scale to other competing countries with similar acreage or greater.
2. The economic penalty of having to ship raw materials and technological inputs for manufacturing from a continent remote of the island and follow the reverse logistics to export the same goods. This naturally pushes the cost of goods north of comparable industries with more efficient modalities of transportation. Inherently, foreign exchange can only be earned from foreign direct investment or the exportation of a portion of these same goods.
3. At the turn of the 21st century when the economic subsidies were removed, thereby causing the banana industry to stand on its own in an open world economy
4. A double edged sword of being on an island in the Caribbean Sea means a high risk of hurricane meanwhile having sunshine at least 70% of the time. The downside of natural disasters such as hurricanes and earthquakes are that they completely destroy banana and other above ground shrubs and trees in plantations. The upside being the ability to charge a premium not only for domestic consumption but also for the exportation of primary, secondary and tertiary goods produced on the island because of the exotic nature of being made on an island in the face of these very risks. Indeed, the later is at the forefront of the thrust by other sectors promoting the green economy in Jamaica (tourism, entertainment, energy).

Super food crops: cassava, yams, sweet potato and breadfruit have been cultivated in subsistence and by small and medium farmers for primary commodities on fresh produce market

Sugar declined as well as Tobacco giving way to 100 years of banana which was considered green gold known and along with coconuts and coffee were carrying the export flag. Like crops prior structural problems persisted and this industry declined with the removal of economic subsidies from the EU. The last 100 years of agribusiness operations carry more just conditions for climate and labor which has evolved with labor movement and globalization.

Without the historical economic system of slavery or the economic subsidies and preferential trade agreements, primary agricultural commodities remain uncompetitive in the mainstream market. However in the domestic trade, gourmet and value added segments, with the application of best practices and best available technology for primary and secondary manufacturing, a green economy can strongly compete and importantly grow sustainably.

Prime Agribusiness in Green Economy

Description: Mixed model farming 20 acres or greater with best practice production systems of sweet potato, cassava and breadfruit, conserved forrest (30%-30%-30%-10% land use respectively)

1. Renewable energy for irrigation, harvesting and packing and cold storage.
2. LEED certified buildings from farm shed to production warehouse
3. Alternative fuels using composting and bio-digesters
4. Rain water harvesting practices and water treatment to re-use grey water
5. Waste management practices in production from land clearing to outbound logistics (reduce, re-use, recycle, storage, removal)
6. Soil conservation practices, habitat conservation, organic agriculture practices, forest reservation of at least 10% and crop rotation with nutritional fallow crop.
7. Green financing for low carbon equipment, renewable energy infrastructure and carbon fund equity trading linked to annual production production

- Intervention by Trade and Investment arm of the GOJ to strategic direction of Green Economy development through white and green papers
- Capacity building of supply and production of value chains from relevant agencies to the key stakeholders in enabling the transformation process from post-colonial agriculture to a agribusinesses gearing a green economy.
- Raise domestic and export consumer awareness to drive the demand side of the green economy

Reference

- Acey, C. S., & Culhane, T. H. (2013). Green jobs, livelihoods and the post-carbon economy in African cities. *Local Environment*, 18(9), 1046–1065.
<http://doi.org/10.1080/13549839.2012.752801>
- Blaj, R. (2013). Green economy – The economy of the future GREEN ECONOMY. *Scientific Papers Series : Management*, 13(4), 63–68.
- Chao, C. W., Ma, H. W., & Heijungs, R. (2013). The Green Economy Mirage? *Journal of Industrial Ecology*, 17(6), 835–845.
- Clayton, A., K'nife, K., & Spencer, A. (2012). Using integrated assessment to develop policy options – trade, land use and biodiversity. *World Journal of Entrepreneurship, Management and Sustainable Development*, 8(2/3), 170–182. <http://doi.org/10.1108/20425961211247770>
- Elder, J. (2009). Fueling the Green Economy. *Community College Journal*, 80(2), 40.
- Jänicke, M. (2012). “Green growth”: From a growing eco-industry to economic sustainability. *Energy Policy*, 48, 13–21.
- Kahn, M. E. (2009). The Green Economy. *Foreign Policy*, (172), 34–38.
- Manley, M. (1987). *Up the down escalator : Development and the international economy : A Jamaican case study / Michael Manley*. London: Andre Deutsch.
- Popke, J., Curtis, S., & Gamble, D. W. (2014). A social justice framing of climate change discourse and policy: Adaptation, resilience and vulnerability in a Jamaican agricultural landscape. *Geoforum*. <http://doi.org/10.1016/j.geoforum.2014.11.003>
- Schulz, C., & Bailey, I. (2014). The green economy and post growth regimes: Opportunities and challenges for economic geography. *Geografiska Annaler: Series B, Human Geography*, 96(3), 277–291. <http://doi.org/10.1111/geob.12051>

Reference

Slaper, T. F., & Krause, R. A. (2009). The green economy: what does green mean? *Indiana Business Review*, 84(3), 10.

Wu Hongbo. (2013). World population projection. Retrieved October 18, 2015, from

<https://www.un.org/development/desa/en/news/population/un-report-world-population-projected-to-reach-9-6-billion-by-2050.html>

Williams, E. (2008). *Capitalism and Slavery*.



Thank you