



IICA-COLEACP Caribbean Agrifood Business Series

Session N°2 Promoting Bioeconomy and Green Businesses in the Caribbean: opportunities for SMEs

25th August 2021 – 10:00-12:00 (EST)

Online

1. Background

The bioeconomy¹ is an adequate framework for the harmonization of policies required for the implementation of the 2030 Agenda, supporting in an integrated manner the SDGs in the social, environmental and economic fields. Transitioning to a circular economy is critical for achieving the targets of the Paris Agreement and the 2030 Agenda for Sustainable Development.

Through the use of new sciences and technologies, the bioeconomy allows for more productive and sustainable use of biological resources, generating plant and animal materials that are more productive, disease-resistant and environmentally-friendly. It facilitates the use of biomass (including residue and waste) to produce new high value-added bioproducts, such as food, bioenergy and other biomaterials for the cosmetic, pharmaceutical and chemical industries, among others. It also spawns a range of new services (applied in the fields of human, plant and animal health, environmental bioremediation and in various preexisting activities) and increases the value of biodiversity.²

The transition to a circular economy has the potential to be a driver of job creation, value addition and economic growth, when supported by appropriate policies, legislation and incentives.³

1 The bioeconomy is the intensive and knowledge-based use of biological resources, processes, technologies, and principles, for the sustainable provision of goods and services in all sectors of the economy (IICA 2018). The circular economy is defined as a way of organizing economic activities, so that the value of products and material inputs is maintained within the economic cycle for as long as possible, thereby minimizing waste discarded into the environment. Its fundamental principles are to reduce, recycle and reuse all types of materials, including metals, minerals and biological resources. Therefore, the circular economy seeks to replace the typical linear cycle of "extracting-processing/ transforming/utilizing-discarding" that characterizes processes derived from the Industrial Revolution. In this regard, the bioeconomy and the circular economy share a common objective: to contribute to creating a more sustainable world with a lower carbon footprint.

IICA. [Bioeconomy and Production Development Program](#).

2 *ibid*

3 McCarthy, A., Dellink, R. and Bibas, R. (2018), [The Macroeconomics of the Circular Economy Transition: A Critical Review of Modelling Approaches](#), OECD Environment Working Papers, No. 130, Paris: OECD Publishing.

The circular economy⁴ concept concerns the creation of sustainable growth by maximising the efficiency of resource allocation and ultimately, producing more outputs from fewer inputs. With an increasing need to reduce waste, find new value streams and use limited resources efficiently to feed an ever-growing world population, the need for a more sustainable approach is critical. The need for sustainable food systems and reduced waste is driving the development of innovative solutions that benefit both the environment and the economy.

The circular economy plays a vital part in reducing the 45% of global GHG emissions associated with making products and growing food.⁵ The bioeconomy is related to the sustainable production of healthy foods and the sustainable intensification of agricultural production. In agriculture, there are opportunities to reuse outputs, such as waste, at all stages of the production process, and use them as inputs for other production chains. Energy efficiency, waste prevention, and nutrient management are good for the environment but can also offer economic returns to farmers and businesses.

2. Green growth in the Caribbean contributing to sustainable food systems

The bioeconomy offers major opportunities for sustainable food systems and agriculture in the Caribbean region, which can help avoid trade-offs between economic, social and environmental objectives.

The circular economy has gained prominence in Latin America and the Caribbean (LAC) in recent years as an approach to sustainable development. Countries in the region have either implemented or are planning new circular economy policies, public initiatives and roadmaps.⁶ Various activities that utilize sustainable agricultural intensification, biotechnology applications, bioenergy production, production using biomass residue, biodiversity-based agribusinesses, and the development of markets for ecosystem service demonstrate the significant progress that has been made. But much remains to be done to increase efficiency and sustainability in harnessing LAC's biological wealth.⁷

According to the Economic Commission for Latin America and the Caribbean (ECLAC), a regional vision on bioeconomy in Latin America and the Caribbean could be built on the following four pillars:

- i. Promote sustainable development, taking Agenda 2030 as a frame of reference;
- ii. Promote climate action, taking as a frame of reference the Paris Agreement and the proposals of the countries in their nationally determined contributions (NDCs);
- iii. Promote social inclusion (e.g. family farming, youth and women, indigenous peoples) and the reduction of territorial development gaps within countries;
- iv. Promote innovation processes that contribute to the diversification of economies and generate new value chains, especially those that contribute to regional development, are in high-growth market segments, or offer opportunities to young people and women.⁸

4 The circular economy entails moving away from the current linear economic model of 'take-make-throw away', in which resources are extracted, turned into products, consumed and finally discarded. In a circular world, by contrast, products and materials are kept in circulation for as long as possible by designing them to be more durable, reusable, repairable and recyclable. The circular economy concept applies life cycle thinking and 'cradle to cradle' approaches, considering residues as the 'food' for new products and processes, and is underpinned by the shift to using renewable energy sources.

Ellen MacArthur Foundation (2019), [Completing the Picture: How the Circular Economy Tackles Climate Change](#).

5 Ellen MacArthur Foundation (2020), [Financing the circular economy Capturing the opportunity](#).

6 The circular economy in Latin America and the Caribbean Opportunities for building resilience. UNIDO. 2020. https://www.unido.org/sites/default/files/files/2020-09/circular_economy_lac.pdf

7 IICA. [Bioeconomy and Production Development Program](#).

8 The circular economy in Latin America and the Caribbean Opportunities for building resilience.

The bioeconomy represents a new and powerful opportunity for countries in Latin America and the Caribbean (LAC), where 8 of the 17 most megadiverse countries on the planet are located. The region possesses more than one fourth of the world's arable land and one third of its fresh water resources (UNDP 2010). In addition to being one of the primary producers of sustainable biomass, LAC possesses the necessary scientific-technological expertise, industrial infrastructure and entrepreneurial base to mobilize that potential. Regardless of the direction taken with respect to any of the projected future scenarios, the region will play a strategic role in striking a global balance between food, fibres and energy, as well as in improving environmental sustainability. The bioeconomy provides new opportunities to achieve equitable growth across the region—through improved agricultural and biomass production – and to increase job opportunities.⁹

3. MSMEs to support the transition towards circular economy

The struggle to combat global environmental degradation and the progress in including socioeconomically marginalised communities in global value chains are both fundamentally dependent on small and medium-sized enterprises (SMEs).¹⁰

Innovation across the value chains include among others: packaging design to increase recycled content and reusability, recyclability and compostability, development of renewable feedstocks, and chemical recycling; promoting regenerative agricultural practices; improving sustainable soil and water management; developing precision agriculture solutions (e.g. nutrient and water looping for vertical or indoor farming); designing food products and supply chains to eliminate waste, bring production closer to consumption, and regenerate nature and soils ; transforming food by-products into new products, biomaterials, and agriculture and aquaculture inputs to return nutrients to the soil; developing approaches to minimize food losses.¹¹

In agriculture, traditionally considered a low productivity sector, the application of digital technologies has the potential to increase productivity and yields while reducing inputs of chemical fertilizers, collect, sort and distribute waste, intelligent waste management systems necessarily rely on sensors, big data analytics and cloud computing.

Areas of support to MSMEs are strengthening sanitary and phytosanitary measures, increased traceability, reducing technical barriers to trade, and developing or enforcing intellectual property schemes.

Operators need to be aware of the opportunities and benefits of the bioeconomy and be incentivized to develop new products and production processes and new businesses and value chains to meet a growing demand for more environmentally friendly products and forms of production and create new quality jobs and new markets.

MSMEs need to be informed about policies and regulations, link to research and development, innovation and use of ICT and digital technologies to overcome trade and regulatory barriers that may limit the development of the bioeconomy.

Numerous barriers can hamper the implementation of circular and green economy practices by SMEs that can originate, for example, from the SME enabling environment, such as culture and policy-making, from the market chain in which the SME operates, such as behaviour of suppliers, and from lack of technical skills and finance.

The lack of government support and encouragement (through the provision of funding

UNIDO. 2020. https://www.unido.org/sites/default/files/files/2020-09/circular_economy_lac.pdf

9 IICA. [Bioeconomy and Production Development Program](#).

10 SEED (2021): [Journeys to Scale: An Evidence-based Framework and Comparative Analysis of Eco-Inclusive SMEs](#).

11 Ellen MacArthur Foundation (2020), [Financing the circular economy Capturing the opportunity](#).

opportunities, training, effective taxation policy, import duty, etc.) is widely recognised as a significant barrier in the uptake of environmental investments.

The lack of knowledge about the benefits of the circular economy has been identified as one of the barriers to the implementation of circular economy practices among SMEs.

The transition of SMEs to green business practices usually incurs administrative burdens stemming from environmental legislation.

Many SMEs do not have the technical capacity to identify, assess and implement more advanced technical options that would enable them to reduce their environmental impacts while realising cost savings. As a consequence, they usually prioritise technologies with which they are already familiar and depend on the suggestions of their suppliers for new technical solutions; however, in order to assess the new options they still need a certain level of technical skill and knowledge.¹²

The development of the bioeconomy requires new knowledge and funding resources to develop an innovative product. It also requires a behavioural change and policy measures to raise consumers' awareness about circular economy practices and products to encourage the adoption of circular business models.

12 [The Circular Economy: Barriers and Opportunities for SMEs](#). Vasileios Rizos, Arno Behrens, Terri Kafyeke, Martin Hirschnitz-Garbers and Anastasia Ioannou. CEPS Working Document. 2015.

PROGRAMME

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10:00-10:10 Introduction and Moderator: *Ena Harvey, IICA Representative, Barbados*

10:10-11:00 Panel: Experiences from businesses

- Johanan Dujon, founder and CEO, Algas Organics, St Lucia
- Gustavo Gandini, Organic Agricultural, Biodiversity and Environment Coordinator, Banelino, Dominican Republic
- Nigel Jordan, co-founder and CEO, Twigs Naturals, Trinidad and Tobago

Moderator: *Isolina Boto, Head of Networks and Alliances, COLEACP*

11:00-11:25 Insights from partners and experts

This session will include inputs from experts representing policy-makers, research and finance.

- Ricardo M. James, Senior Technical Specialist, Business Environment and Export Development, OECS
- Guy Faure, Senior Policy Officer, INTPA F3 Sustainable Agri-Food systems and Fisheries, European Commission
- Guillaume Simões, Investment Officer, EDFI AgriFI

11:25-11:50 Q&A session

11:50-12:00 Way forward and closure

- Insights from Escipión J. Oliveira Gómez, Assistant Secretary General, Structural Economic Transformation and Trade, OACPS