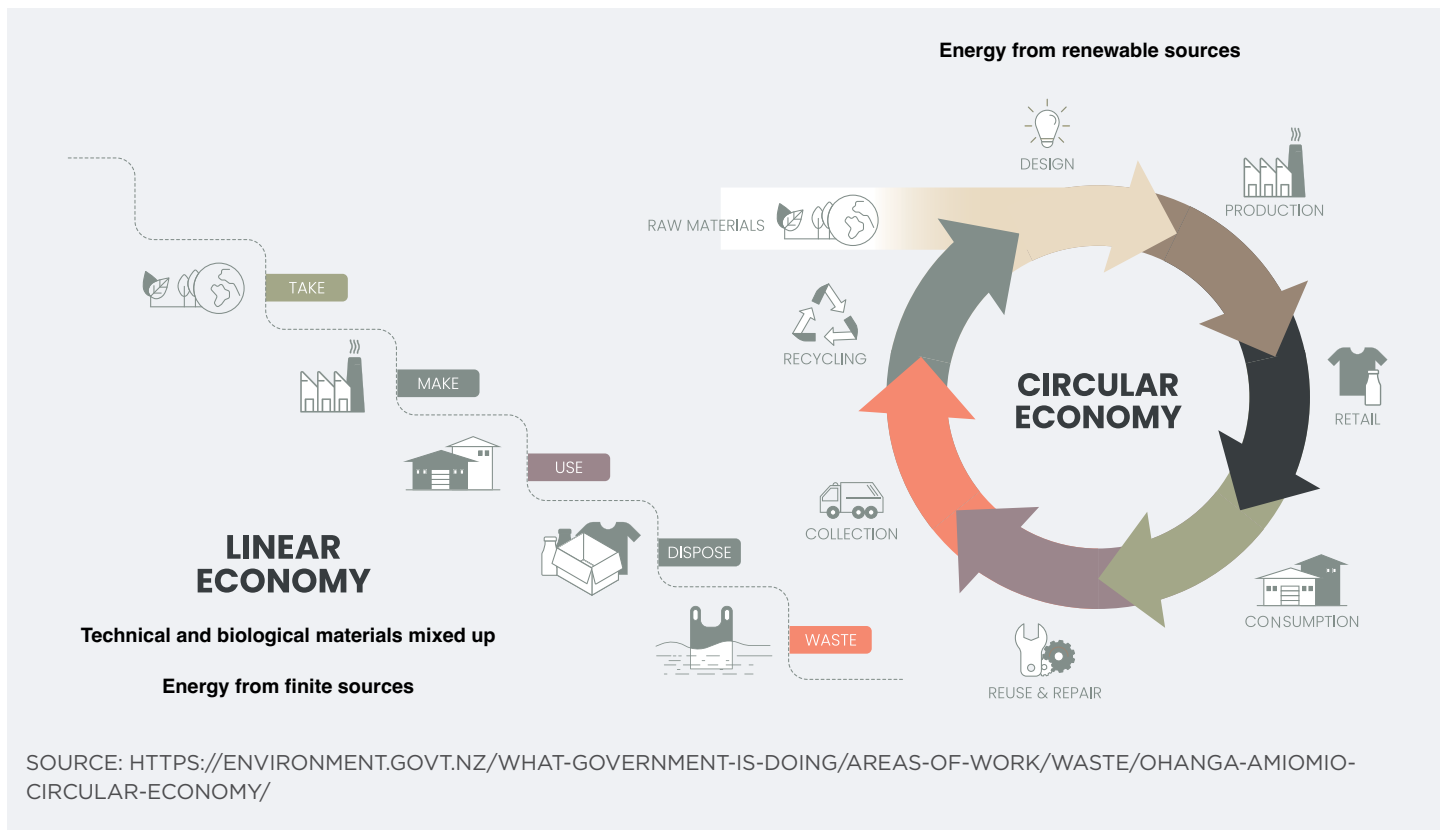


ON THE
GREEN
AGENDA

Accelerating the shift to a circular economy



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Gains from the industrial revolution of the 18th and early 19th centuries, as well as the green revolution of the 20th century, are responsible for growing global prosperity and increased product and food availability over the last hundred years. These generational improvements in the standard of living have come about due to the creation of the linear economy.

We have a “take, make and dispose” economy. We take natural resources, make things, and dispose of them in landfills and elsewhere. One component of the linear economy is planned obsolescence, when a product has been designed to have a limited lifespan to encourage consumers to buy the product again. This method of production and consumption encourages wastage, excess consumption, and the pursuit of monopoly profits.

In recent years, we have reluctantly come to the realisation that this economic archetype has hard limits,

in terms of the ability of the planet to provide materials, cheap energy or a method for disposing of waste. Indeed, the quadruple crises of the COVID-19 pandemic, ongoing climate change, pollution, and biodiversity loss point to the high cost of maintaining unsustainable means of production. As we rebuild from the pandemic, we have an ideal opportunity to reset.

Enter the circular economy

The circular economy is a method of economic production and use that minimises disposal and waste by maximising recycling, repurposing, reusing, lending, leasing, sharing, repairing, and refurbishing existing products as long as is feasible.

The appeal of the circular economy is that it is far more holistic than the linear economy, as it incorporates not only the realm of economics and business, but also involves social and environmental factors and policies.

The circular economy gives us the tools and ability to tackle both climate change and the loss of biodiversity, while addressing important social needs. It has the potential to increase prosperity and jobs, while reducing greenhouse gases, pollution, and waste. The circular economy can also be key to economic recovery and development that is aligned with the Sustainable Development Goals (SDGs), by supporting wellbeing, prosperity and ecosystem regeneration. More importantly, while the concept is new, the learnings are not. The circular economy is unique in that it draws from both new knowledge and technologies as well as on traditional and indigenous worldviews and expertise.

Assessing conditions for the circular economy

The potential for successful implementation of the circular economy, however, needs to be assessed based on location. How relevant is it to this part of the world?

Caribbean economies are characterised by the following:

Small and open. Countries have small land spaces and are open, permitting access to their economies and domestic markets. On the other hand, many of the small land economies have extensive ocean resources available, presenting potential for long-term sustainability if properly utilised.

High dependence on imported fossil energy. Apart from Trinidad and Tobago, Suriname and more recently, Guyana, the Caribbean does not possess significant hydrocarbon resources. Most countries are net energy importers. However, there is considerable potential for the generation of power from renewable resources in the form of solar, wind and geothermal energy.

Heavily dependent on imported goods and services. This is consistent with economies initially established to provide unprocessed raw materials to the metropole. In most such economies, high dependence on energy imports and scale limitations of small markets stymied the efficient development of other sectors such as manufacturing.

Highly dependent on tourism services to drive their economies. Eleven Caribbean countries are in the top 20 most tourism-dependent economies in the world.¹

¹Mooney and Zegarra (2020) 'Extreme Outlier: The Pandemics Unprecedented Shock to Tourism in Latin America and the Caribbean'. Inter-American Development Bank. Available at: <https://publications.iadb.org/publications/english/document/Extreme-Outlier-The-PandemicsUnprecedented-Shock-to-Tourism-in-LatinAmerica-and-the-Caribbean.pdf>



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Highly vulnerable to natural hazards. This is evidenced by annual occurrences of flooding and seismic activity throughout the region, frequent occurrence of major hurricanes, and, less frequently, significant earthquakes and volcanic eruptions. Between 2017 and 2021, countries in the Caribbean were hit by several devastating hurricanes² and one major volcanic eruption.³

High level of biodiversity per unit of area. The Caribbean has a high percentage of endemic species relative to land area, high values of ecosystem services per capita, and generally pristine nature. This flora and fauna, however, are exceptionally vulnerable to the effects of climate change and invasive species.

Susceptible to the effects of climate change⁴. Despite the differences among Caribbean nations, climate change poses a serious threat to them all. According to the IPCC, average temperatures in the region have increased by 0.1° to 0.2°C per decade over the past three decades. Rainfall patterns have shifted in the region, with the number of consecutive dry days expected to increase. Additionally, sea level rise has occurred at a rate of about two to four centimetres per decade

over the past 33 years, a trend which presents risks to the region's freshwater resources and to its coastal population, largely dependent on tourism and agriculture. Even if all pledges made by governments and companies are fulfilled, global temperatures may still rise beyond 1.5 degrees. Such a temperature rise is predicted to result in catastrophic warming, which could make several regions, including the Caribbean, unliveable.

The traditional linear economic model, modified by colonisation, slavery, and in some cases indentureship, have not served the region well. This is evidenced by enduring challenges of low economic growth throughout the region, ongoing and recurrent significant fiscal and current account deficits, high total debt⁵, limited economic diversification and monoculture. Former sugar economies became tourism economies. Commodity exporters, by and large, remained commodity exporters, even if the leading commodity changed. This would imply that economies within the Caribbean, such as Trinidad and Tobago, would be prime candidates for an accelerated shift to the circular economy.

Transitioning to a circular economy
For the transition to take place, a combination of economic, social, and environmental policies must be put in place, with recommendations

considering the area's unique characteristics.

Desired environmental outcomes of a shift to a circular economy include the reduction of raw materials for production/excess material for consumption, reduced and/or optimised energy use and reduced waste emissions. Desired economic outcomes include the reduction of raw material and energy costs as well as waste and other emissions costs, lower risks, and the fostering of innovative new product designs and business opportunities. Social outcomes would involve changes in individual and group behaviour, and evolving a "sharing economy" with greater joint social decision-making and more cooperative use of capital.

In this case, one size does not fit all. The Caribbean and Trinidad and Tobago have unique challenges to overcome in facilitating interventions to aid the shift to a circular economy. In most cases, options for reorienting economies through reuse and reduction of materials and energy remain limited, due to limited size and small scale of potential inputs.

Moreover, since the successful provision of tourism services (a mainstay of most Caribbean economies) is so intimately linked to the preservation of the natural environment, a circular economy strategy which seeks to minimise material and energy use is prudent. Trinidad and Tobago, as an oil, gas and commodity petrochemical exporter has different challenges, as it has to balance existing production with long-term sustainability imperatives without impacting existing incomes and standards of living or impacting social stability. For the Caribbean, interventions to facilitate the shift to the circular economy (considering its unique characteristics) would need to centre around the following:

² <https://publications.iadb.org/en/assessment-of-the-effects-and-impacts-caused-by-hurricane-irma-the-bahamas-2017>;
<https://reliefweb.int/disaster/tc-2017-000136-atg>;
<https://reliefweb.int/report/bahamas/facts-hurricane-dorian-s-devastating-effect-bahamas>

³ <https://reliefweb.int/sites/reliefweb.int/files/resources/Executive%20Summary%20SVG%20PDNA%20Volcanic%20Eruption.pdf>

⁴ <https://www.iadb.org/en/ove/climate-change-caribbean-small-island-states#:~:text=Additionally%2C%20sea%20level%20rise%20has,dependent%20on%20tourism%20and%20agriculture.>

⁵ Reliefweb. "Survival mode on as pandemic ramps up Caribbean debt" (2021) Available at <https://reliefweb.int/report/world/survival-mode-pandemic-ramps-caribbean-debt>.

TABLE 1: CARIBBEAN INTERVENTIONS TO ACCELERATE THE SHIFT TO THE CIRCULAR ECONOMY

SECTOR	INTERVENTION	NOTES RE. TRINIDAD AND TOBAGO
Energy	Promote renewable energy development	In train, though prices of gas-generated electricity remain low
	Retrofitting buildings for energy efficiency/cooling	Significant scope exists for building retrofitting, given climate trends
Transportation	Develop efficient land-based transportation	
	Implement vigorous policies for promoting public transportation, while discouraging individual vehicle ownership	Mass transit initiatives have not been successful for non-economic reasons
Green Taxes	Implement green taxes	Possibly the most widely recognised in the Caribbean is the Green Fund Levy which is implemented in Trinidad and Tobago
	Establish green and blue investment bonds Credit terms are specified to direct financial resources towards promoting healthy environments, low carbon development and more sustainable use of the natural resource base. Green bonds help to finance these developments on land, while blue bonds support the sustainable use of the ocean space.	Scope exists for utilising both green and blue bonds
	Broader use of green taxes for funding environmental amelioration activities such as tree planting and coastal clean-ups	Difficulties in applying for Green Levy funds due to criteria. Changes in the process of being made
Green Investments	Investment in public goods and services to obviate environmental impacts from production and consumption.	Done for private goods and services. Not done by the State recently



TABLE 2: CARIBBEAN ENVIRONMENTAL INTERVENTIONS TO ACCELERATE THE SHIFT TO THE CIRCULAR ECONOMY

SECTOR	INTERVENTION	NOTES RE. TRINIDAD AND TOBAGO
Waste Management	Promote efficient waste minimisation	Initiatives at embryonic stage
	Community level investment in municipal waste management such as community composting	Scope for initiative exists
Water Management	Promote efficient water pricing and regulation	Significant institutional changes needed; ageing infrastructure remains a challenge
Environmental	Implement performance bonds for public/ cultural events	Bonds used, but not necessarily environmental
Capacity limits	Set optimal carrying capacity limits for the natural resource base - depend on a determination of the optimal long-run social cost for the use of its natural resource base	Not currently done for Trinidad and Tobago

SOURCE: DERIVED FROM UNECLAC (2021). 'CONCEPTUALISING A CIRCULAR ECONOMY IN THE CARIBBEAN: PERSPECTIVES AND POSSIBILITIES.' AVAILABLE AT: [HTTPS://REPOSITORIO.CEPAL.ORG/BITSTREAM/HANDLE/11362/47604/1/LCCAR2021_07_EN.PDF](https://repositorio.cepal.org/bitstream/handle/11362/47604/1/LCCAR2021_07_EN.PDF)

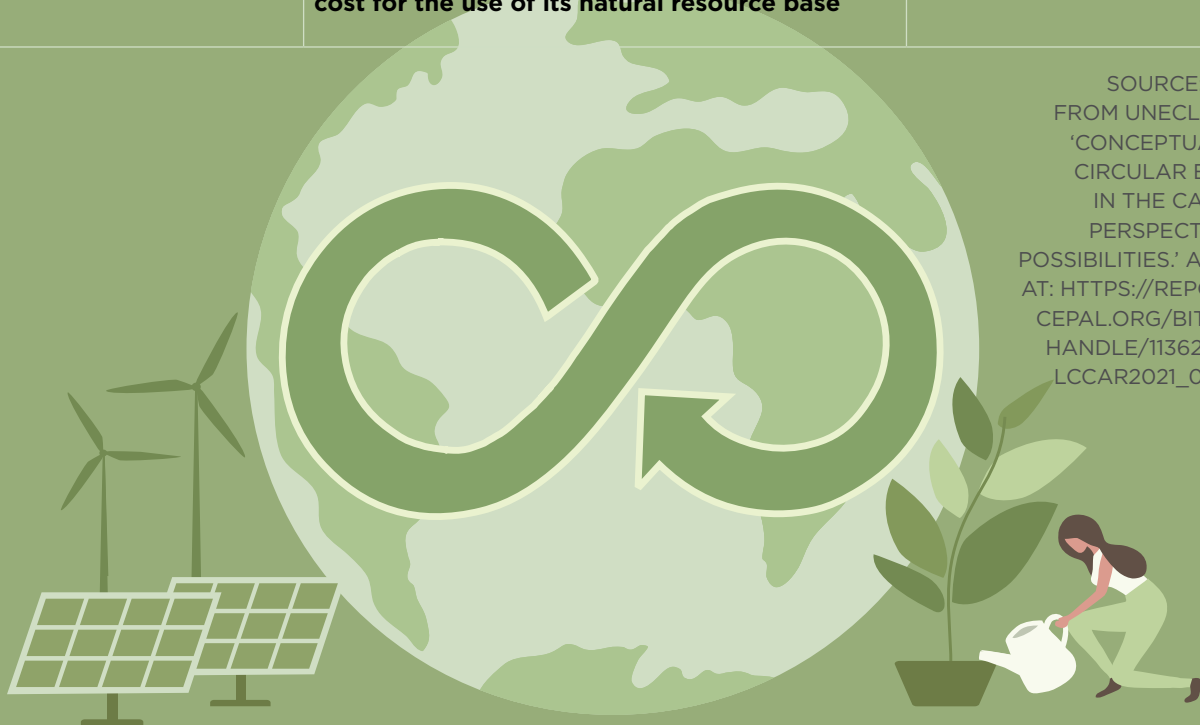


TABLE 3: CARIBBEAN SOCIAL INTERVENTIONS TO ACCELERATE THE SHIFT TO THE CIRCULAR ECONOMY

SECTOR	INTERVENTION	NOTES RE. TRINIDAD AND TOBAGO
Promote Elements of a Shared Economy	Mitigating negative externalities will change economic cost structures, which will in turn result in new regimes of gainers and losers. Reduced use of materials and energy also implies differences with respect to the use of capital, property rights in terms of the level of public versus private goods and access to and use of the environmental commons	
Social Reorientation	Social interventions for Caribbean economies across several spheres (energy, waste management, green taxes)	
	Promotion of joint community ownership of social services such as transportation, gardening services, and even home repairs. In this way, the value of materials and energy are cycled through the economy for longer periods, before diminishing to the level of disposal	
Use of Private Sector Shared Services	Capital sharing may be employed at the corporate level - shared services	Done for some petrochemical companies in the Point Lisas Industrial Estate. Can plausibly be extended to other sectors without State intervention

SOURCE: DERIVED FROM UNECLAC (2021). 'CONCEPTUALISING A CIRCULAR ECONOMY IN THE CARIBBEAN: PERSPECTIVES AND POSSIBILITIES.' AVAILABLE AT: [HTTPS://REPOSITORIO.CEPAL.ORG/BITSTREAM/HANDLE/11362/47604/1/LCCAR2021_07_EN.PDF](https://repositorio.cepal.org/bitstream/handle/11362/47604/1/LCCAR2021_07_EN.PDF)





The recommendations are generally feasible, though not without disruption to the existing organisation of the economy. The reality remains: for Caribbean countries, the shift to a circular economy, though necessary for long-term sustainability and viability, represents a significant disruption for a series of economies that have been historically built to benefit from the linear economy, not to mention the influence of entrenched economic and other interests in the status quo. Smaller islands may be closer to implementing these recommendations since, being in a much more parlous economic state post-COVID, any overall shift may be less jarring.

For Trinidad and Tobago, the economic pain point which would make a general transition to a circular economy feasible is much further away. Though elements that would facilitate the transition exist in the

SDGs and country commitments under the Paris Accord, they are not present as a series of overall policies. What is lacking is an explicit circular economy framework, and a means to evaluate and monitor the progress to the circular economy. ■

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