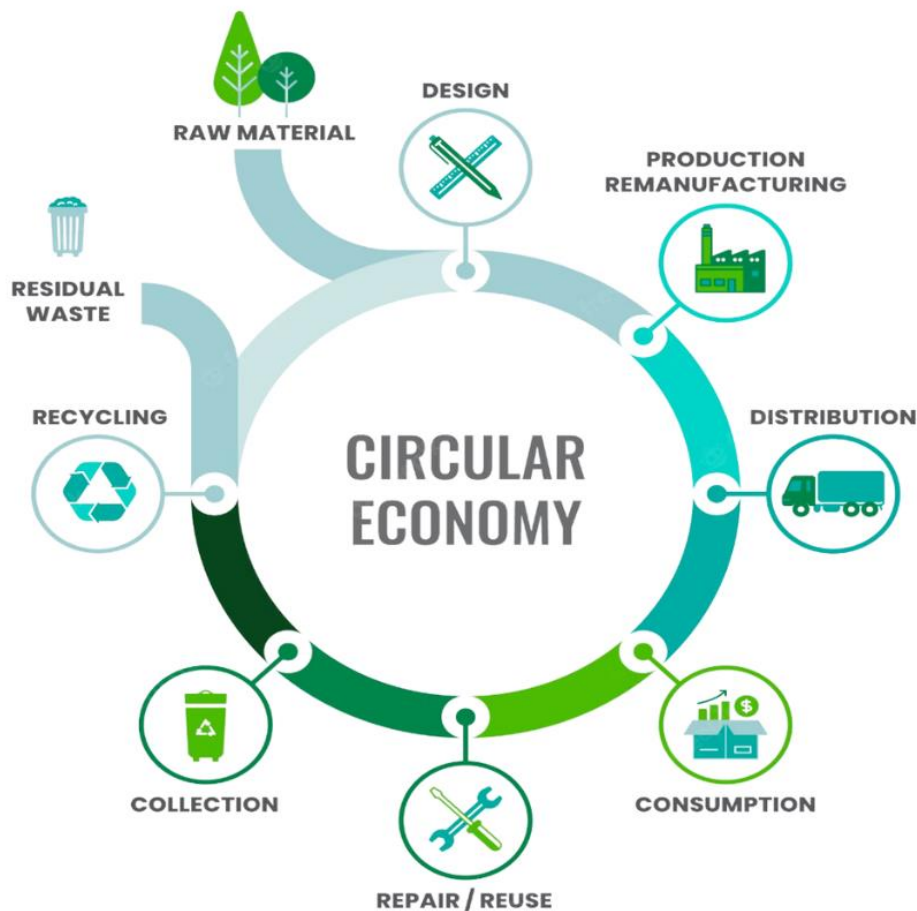


# Transition to a Circular Economy: Examples from Africa and the Caribbean



**Chibole Wakoli**

## **ABSTRACT**

Globally, there is growing discussion regarding the merits of transitioning from a linear economy – that is, one characterized by the “take-make-use-dispose” pattern – to a circular economy – that is, an economy that designs out waste and pollution, circulates products and materials at their highest value, and regenerates nature. Among other benefits such as the creation of jobs, the circular economy can contribute to addressing climate change, biodiversity loss, land degradation and the impact of water stress, and pollution. Africa and the Caribbean, being two of the world’s regions that are most vulnerable to the negative effects of climate change, stand to benefit from adopting circular economy principles. However, the formal adoption of circular economy approaches in the African and Caribbean contexts is still lacking. This paper makes the case for a transition by African and Caribbean countries to a circular economy and the role that international trade may play in this regard. The paper also offers examples of initiatives taking place in both regions that illustrate the ambition to transition to a circular economy. At the same time, the paper highlights that significant barriers remain for developing countries, particularly in Africa and the Caribbean, in transitioning to a circular economy.

The paper begins by introducing the concepts of linear economy and the circular economy. It then highlights the role of international trade as a tool to facilitate the adoption of circular principles. Thereafter, the paper discusses some of the incentives and challenges, for Africa and the Caribbean, in transitioning to a circular economy. This is followed by examples of African and Caribbean regional, national, and private sector initiatives that illustrate the ambition of these regions to transition to a circular economy. The paper concludes by offering suggestions on what may be done to address the obstacles impeding Africa and the Caribbean’s transition to a circular economy.

## ABOUT THE AUTHOR

**Chibole Wakoli** is a consultant on international trade and development with over 17 years of cumulative experience in international economic law, dispute resolution, legal advisory work, and development. Having started her legal career in private practice in Kenya, Chibole spent over a decade working for the World Trade Organization's (WTO) dispute settlement mechanism, assisting WTO panels and the Appellate Body in the adjudication of disputes. Chibole has also worked at the WTO's Institute of Training and Technical Cooperation where she was responsible for the development, organization, and delivery of WTO capacity-building activities targeted at government officials. Currently, Chibole is on a leave of absence from the WTO and works as a consultant on matters concerning public international law, dispute resolution, international trade, and development.

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## ABOUT THE SRC

The Shridath Ramphal Centre for International Trade Law, Policy and Services (SRC) at the University of the West Indies, Cave Hill Campus, is the premier Caribbean trade policy training, research, and outreach institution, working to build the region's trade capacity while creating innovative Caribbean trade solutions. The Centre's mandate is to assist countries within the Caribbean region with the transformation of their economies, through the capacity building of trade professionals to facilitate their access to, and more effective participation in, international trade. Consequently, the Shridath Ramphal Centre has designed and launched several initiatives including its flagship Masters in International Trade Policy (MITP) Programme, administered by a faculty of regional and international scholars, professionals, and practitioners, and intended to provide future trade professionals with a solid foundation in trade theory, practice, and governance with a special focus on the trade and developmental challenges being faced by small and vulnerable developing economies. In addition to the MITP Programme, the Shridath Ramphal Centre offers a number of short courses such as Trade and the Blue Economy, International Trade Policy for the Business Professional, and Trade and the Sustainable Development Goals. The Shridath Ramphal Centre also develops and promotes policy research on the unique trade and development challenges faced by countries within the Caribbean region. Some of the Centre's key trade policy research areas are E-commerce and Digital Trade, Regional Integration, Investment Law and Policy, Global Financial Regulation, Trade and Sustainable Development, and Gender and Trade.

Additional information about the Centre, its publications, and events may be found on the SRC's website: <https://shridathramphalcentre.com> and on social media on [LinkedIn](#), [Facebook](#), [Instagram](#), and [Twitter](#).

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## 1. INTRODUCTION

The linear production and consumption model – in which resources are extracted and transformed into goods and services, sold and used, after which they are discarded – has underpinned the expansion of the global economy since the industrial revolution. (UNCTAD, 2018). This linear approach has informed international trade behaviour, which has brought prosperity, higher living standards, and poverty alleviation to parts of the world. (Steinfatt, 2020)

At the same time, the linear approach, which is highly dependent on natural resource extraction, is, as the International Resource Panel describes, “a story of relentless demand and of unsustainable patterns of industrialization and development.” Over the last 50 years, material extraction has tripled, with the rate of extraction accelerating at a rate of 3.2 per cent per year between 2000 and 2017. (International Resource Panel, 2019) Another component of the linear economy is planned obsolescence – when a product is designed to have a limited lifespan to encourage consumers to buy the product again. This method of production, trade, and consumption encourages wastage, excess consumption, and the pursuit of monopoly profits. (Gasco News, 2022) The linear approach has also externalised the pressures placed on the environment, resulting in air, land, and water pollution, higher greenhouse gas emissions, surging waste volumes and pressures on biodiversity. Furthermore, the linear model has failed to deliver inclusive growth, and inequality has been persistently high overall, with poverty increasing in recent years. (CEC LAC, 2022) Critics also point out that the linear model, and the trade that facilitates it, are significant causes of social injustice. Most resource consumption and wealth accumulation occur in the Global North, while the worst environmental impacts and threats to human health are occurring in the Global South. (Barrie, 2023)

For these reasons, globally, there is growing discussion about the merits of transitioning from a linear economy to a circular economy — an economy that, by design, adopts an economic model of production and consumption that eliminates waste and pollution, circulates products and materials, and regenerates nature. (CEC LAC, 2022) By learning from the failures of the linear economy, the circular economy has the potential to be more holistic than the linear economy, incorporating not only economics and business, but also social and environmental factors and policies. The United Nations Environment Assembly (UNEA) recognises that pursuing circular economy approaches can be a pathway to achieving sustainable consumption and production patterns. The circular economy can contribute to addressing climate change, biodiversity loss, land degradation and the impact of water stress, pollution, and the impact thereof on human health, thus contributing to the achievement of related goals under the 2030 Agenda for Sustainable Development.<sup>1</sup> (UNEA, 2022)

Furthermore, climate experts assert that existing climate pledges and Nationally Determined Contributions (NDC) targets, even if fully achieved, are insufficient to limit warming to 1.5 degrees Celsius to avoid an extreme climate crisis. Additional strategies and actions are urgently needed to close the emissions gap. Transitioning to

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<sup>1</sup> The circular economy concept already fits within the existing Sustainable Development Goals (SDGs), particularly SDG 12 (sustainable consumption and production). Moreover, the implementation of circular economy solutions can achieve progress on other environmental, social, and economic SDGs. Examples are SDG 6 (ensure access to water and sanitation for all), SDG 11 (making cities inclusive, safe, resilient, and sustainable – for example, by improving housing conditions in informal settlements), as well as SDGs 8 and 9 on sustainable growth and industrialization (promote inclusive and sustainable economic growth, employment, and decent work for all; build resilient infrastructure, promote sustainable industrialization, and foster innovation). (Schroder et al, 2020)

a circular economy has been identified as one such strategy. (Wang et al., 2022) Indeed, it is estimated that transitioning to a circular economy could help reduce greenhouse gas emissions by 45 per cent. (Fwangkwai et al, 2022) It is further estimated that adopting a circular economy for five key sectors – cement, aluminium, plastics, steel, and food – could cut carbon dioxide emissions by 3.7 billion tonnes by 2050. (McGinty, 2020)

Additionally, 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. (Schröder et al, 2020) Moreover, if circularity were to become mainstream, global consumption of new materials could be reduced by 32 per cent in 15 years and by 53 per cent in 30 years. By contrast, business as usual under the linear approach will see waste expand by 70 per cent by 2050. (Simons, 2023)

Underlining the growing relevance of circularity for Africa and the Caribbean, on 15 September 2021, as part of the World Circular Economy Forum (WCEF) 2021, the African Circular Economy Alliance (ACEA) and the Circular Economy Coalition of Latin America and the Caribbean (CEC LAC) held their first interregional dialogue to strengthen cooperation on their respective transitions to the circular economy. (AfDB, 2021) The speakers at this dialogue pointed out that while the term “circular economy” may have been coined in the Global North, several traditional practices observable in Africa, Latin America and the Caribbean have long embodied the principles of circularity. For example, the African “hand-me-down” culture – where goods are often passed on from person to person, or household to household – maintains products in use for a long time. Likewise, the traditional practices of crop rotation, and composting animal and plant waste to use as manure, ensure the regeneration of soil fertility.<sup>2</sup> Additionally, those present at the dialogue highlighted the need for public-private partnerships and greater collaboration between governments and industry players to scale up the current circularity efforts, most of which are taking place in the informal sector. During the dialogue, entrepreneurs from both regions highlighted business models that small and medium-sized enterprises (SMEs) are undertaking to achieve a circular economy. The dialogue also called for enhanced interregional cooperation, especially knowledge-sharing on best practices, to accelerate the transition to the circular economy.<sup>3</sup> (WCEF, 2021)

Despite the growing interest, circular economy solutions remain niche as linear approaches continue to dominate present-day economic activity. By some estimates, as of 2023, the global economy is only 7.2 per cent circular, having shrunk from 9.1 per cent in 2018. The rate of circularity has gone down as the general rate of global material extraction has risen. (Circle Economy, 2023) This is partly because it remains generally more cost-effective to produce goods from extracted virgin resources, use, and discard them, than to reduce, reuse, and recycle. (Steinfatt, 2020) Creating a circular economy requires fundamental, and often expensive, changes throughout the value chain, from product design and production processes to new business models and consumption patterns. Accordingly, trade behaviour and economic policies, which have traditionally supported the linear approach of take-make-dispose, require a paradigm shift to incentivize the transition to a circular economy.

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<sup>2</sup> Other traditional practices that embed circularity include making organic clothing material from animal skins, and using biodegradable construction materials like wood, grass, and mud in rural villages. (UNEP CTCN, 2022)

<sup>3</sup> The key takeaways of this interregional dialogue echoed the outcomes of the first High-level Meeting of the Global Alliance on Circular Economy & Resource Efficiency (GACERE). At the GACERE meeting held the day before the interregional dialogue, environment ministers of several countries and representatives from multilateral organizations emphasized the need for stronger regional cooperation to accelerate the adoption of the circular economy model worldwide. (Green Policy Platform, 2021)

Furthermore, the economic value from circularity is distributed highly unevenly across the world. For example, Chatham House estimates that, according to available data, around 99 per cent (\$287 billion) of the total value of trade in secondary goods, materials, waste, scrap, and residues in 2020 was traded between and among high- and middle-income countries, with trade between China, Europe and the US being most prominent. Around 45 per cent (\$131 billion) of the total trade value was traded solely between high-income countries. Conversely, trade to and from low-income countries comprised only approximately 1 per cent (\$4 billion) of the total value. The data suggests an inequity in value-capture from circular trade. (Barrie et al, 2022) Thus, the transition to the circular economy requires the alteration of global trade and economic policies and behaviour in a manner that levels the playing field. (Sitra, 2023) Indeed, if an explicit goal to reduce inequality is not embedded into the processes behind the global circular economy transition, it is likely that these inequities will create a circular trade divide – one in which the gains accrued from circular trade are highly unevenly distributed between developed and developing countries. (Barrie et al, 2022) This calls to mind the notion of a just transition framework for the circular economy. This framework is one that “can identify opportunities that reduce waste and stimulate product innovation, while at the same time contributing positively to sustainable human development.” (Schroder, 2020) This just transition is needed to reduce inequalities within and between countries, and to ensure that the commitment of the UN Sustainable Development Goals to leave no one behind is fulfilled. (Schroder 2020)

Against this background, section 2 of this paper identifies a few definitions for the concept of the circular economy, including those relied on by African and Caribbean regional bodies. Section 3 highlights the role of international trade as a tool to facilitate the adoption of circular principles. Section 4 of this paper discusses some of the incentives and challenges, especially for Africa and the Caribbean, in transitioning to a circular economy. Thereafter, section 5 highlights examples of African and Caribbean initiatives – regional, national, and private sector – that illustrate the ambition of these regions to transition to a circular economy. Section 6 concludes by offering suggestions on what more may be done to motivate the African and Caribbean transition to a circular economy.

## 2. WHAT IS A CIRCULAR ECONOMY?

At the moment there is no globally accepted definition of a circular economy. However, in this paper, we highlight and rely on the following definitions.

The African Circular Economy Network (ACEN) describes the circular economy as “an alternative to a traditional linear economy (make, use, dispose) in which resources are kept in use for as long as possible, maximum value is extracted from them whilst in use, then materials are recovered, and products are regenerated at the end of each life.” (ACEN online)

For the Circular Economy Coalition for Latin America and the Caribbean (CEC LAC), a circular economy is “an economy that, by design, adopts an economic model of production and consumption that eliminates waste and pollution, circulates products and materials, and regenerates nature. A circular economy offers a model for creating long-term economic prosperity and contributes to the delivery of multiple Sustainable Development Goals (SDG).” (CEC LAC, 2022)

The Ellen MacArthur Foundation’s often cited definition describes a circular economy as “a systems solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution. It is based on three principles, driven by design: eliminate waste and pollution, circulate products and materials (at their highest value), and regenerate nature.” (Ellen MacArthur Foundation online)

The broad definitions above illustrate that the concept of the circular economy encompasses a wide range of activities, some of which overlap with the other climate-related concepts of the blue economy and the green economy. Like the circular economy, these two concepts also address the optimization of natural resources and the protection of the environment. (Simpson, 2021) That said, for purposes of this paper, the understanding of the circular economy relies on the three principles articulated by the Ellen MacArthur Foundation and reiterated in the ACEN and CEC LAC definitions: eliminating waste and pollution; circulating products and materials (at their highest value); and regenerating nature.

This understanding is further informed by Schroder’s proposition that for the transition to a circular economy to be considered a success, it must be “just”. This implies that the transition must be deliberately engineered to “reduce inequalities within and between countries, and to ensure that the commitment of the UN Sustainable Development Goals to leave no one behind is fulfilled.” (Schroder, 2020) The achievement of a just transition depends on the successful confluence of several political, economic, technical, and social factors. The political factors include supportive policy and regulatory work by governments. Economic factors, for their part, include investment from both public and private sectors, as well as the use of international trade as a tool to facilitate the adoption of circular principles. In this vein, the next section of this paper highlights the role that international trade may play in the transition to a circular economy.



### 3. WHAT IS THE ROLE OF INTERNATIONAL TRADE IN THE TRANSITION TO A CIRCULAR ECONOMY?

As was the case with the linear model that has underpinned economic growth since the industrial revolution, trade has a role to play in the transition to a circular economy. The role of trade is not only evident at the local and national levels, but also at the global level. No country can achieve a circular economy in isolation. Rather, all countries are dependent (to varying degrees) on international trade to secure affordable and reliable access to the different goods and services with which to perform circular economy activities such as reuse, resource sharing, repair, remanufacturing, and recycling. (Barrie, 2023)

Some scholars refer to trade taking place in a circular economy as *circular trade*. Barrie et al consider that circular trade encompasses any trade transaction that contributes to realizing a circular economy at the local, national, and global levels. This includes trade in:

- (i) circular economy-enabling goods, services, and intellectual property;
- (ii) second-hand goods for reuse, repair, remanufacture or recycling;
- (iii) refurbished and remanufactured goods e.g., medical, automotive, and industrial equipment and parts;
- (iv) secondary raw materials such as metals; and
- (v) non-hazardous waste, scrap and residues that can be safely recovered or valorised. (Barrie et al, 2022)

By some estimates, circular trade has grown in value over the past two decades. For example, data collected by Chatham House suggests that the value of trade in second-hand goods, secondary raw materials and waste for recovery rose by more than 230 per cent, from \$94 billion to \$313 billion, between 2000 and 2019. The global export value of trade in goods rose by around 195 per cent over the same period. Similarly, the value of trade in maintenance and repair services increased from \$74 billion to \$108 billion between 2015 and 2019. (Barrie, 2023)

That said, it is acknowledged that the ability to monitor and track circular trade flows is severely limited because there remains a lack of shared definitions and classification of circular goods and services. For instance, the Harmonized System (HS) codes do not always distinguish between primary and secondary material or between used, recycled or new products. In other cases, the HS uses the same code for waste, residue, scrap materials, and primary resources. This makes it difficult to obtain reliable data and statistics on circular trade. (Bellman, 2021) The constrained capacity (of skills, technologies and/or time) of customs officials to make this distinction, particularly in low-income countries, further exacerbates the problem.

Fortunately, there has been some progress in this regard in two sectors of particular interest to African and Caribbean economies – e-waste and plastics. The HS 2022 amendments include a new heading 8549, under Chapter 85, that more clearly describes several categories of e-waste. The 8549 heading includes the battery scrap descriptions in the prior schedule, but now it also covers “electrical and electronic waste and scrap,” including printed circuit boards, CRT glass and other components that have been shredded or otherwise

destroyed and are destined for commodities recovery, not reuse. The heading has three subcodes: e-scrap “of a kind used principally for the recovery of precious metal,” e-scrap made up of “other electrical and electronic assemblies and printed circuit boards,” and “other” e-scrap. (Paben, 2022) Additionally, there are ongoing discussions to help implement amendments for plastics as part of HS 2027. Nonetheless, given that the HS amendments take place every 5 years only, following a relatively slow process, interim solutions should be sought to complement the HS work. (Barrie et al, 2022)

Despite the challenges of tracking circular trade flows, scholars still assert that open trade would help to ensure that the circular economy activities happen in the best possible locations in terms of cost, quality, and skills. (Steinfatt, 2020) Furthermore, the COVID-19 pandemic revealed significant shortcomings in the linear trading patterns – the vulnerability of global value chains, the depletion of natural resources and the exacerbation of social inequalities. It is unlikely that trade relations will bounce back to “normal” (that is, linear trading patterns) in the post-COVID-19 economic recovery. The circular economy, and circular trade, offer an alternative framework for a potentially more resilient and inclusive economic model. (Schroder et al., 2020) Depending on the adoption of appropriate policies, legislation, and incentives, Africa and the Caribbean can take advantage of these emerging opportunities for reform.<sup>4</sup>

At the same time, countries’ circular economy measures are likely to affect trade flows, generate spill-over effects on trade, and in some cases test the limits of multilateral trade rules. For instance, as the WTO Deputy Director-General Jean-Marie Paugam observed, “the proliferation of new private and public environmental standards is creating new kinds of barriers to trade, increasing transaction costs — for example, costs related to the environmental auditing and certification of products — and affecting the functioning of value chains.” (WTO News, 2023) It is therefore important to understand the trade-related impacts of circular economy measures so as to ensure their mutual supportiveness. (Brandi, 2017). This is particularly the case for countries in Africa and the Caribbean whose economies are dependent on international trade for, *inter alia*, food security, economic growth, and development.

In this regard, **harmonized policy approaches** are important for delivering inclusive circular trade. WTO Members, recognising this link between international trade and the circular economy and the importance of collective action in this respect, have established an informal working group on the circular economy under the auspices of the WTO Trade and Environmental Sustainability Structured Discussions (TESSD).<sup>5</sup> The aim of this working group is to, *inter alia*, identify and compile best practices, as well as explore opportunities for voluntary actions and partnerships to ensure that trade and trade policies are supportive of and contribute to achieving a more resource-efficient circular economy. (WTO, 2021)

Additionally, in November 2020, a group of WTO Members launched an initiative to explore how the WTO could contribute to efforts to reduce plastics pollution and promote the transition to more environmentally

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<sup>4</sup> Despite this paper’s focus on two regions rather than individual countries, it is underlined that the challenge of achieving a balance between maximizing the benefits of circular trade and mitigating the risks will be different for each country. Chatham House suggests that a country with vast reserves of natural resources and a strong industrial base may be more inclined to restrict international trade while promoting domestic circular trade flows and activities. By contrast, a country with few natural resources (or where growth in demand outstrips domestic supply) but strong trading relationships, may be more open to international circular trade. (Barrie et al, 2022)

<sup>5</sup> As of May 2023, there were 74 WTO members participating in the TESSD including Cabo Verde, Chad, the Gambia, Senegal, and Suriname.

sustainable trade in plastics. The Dialogue on Plastics Pollution and Environmentally Sustainable Plastics Trade (DP)<sup>6</sup> is open to all WTO members and seeks to complement discussions in the Committee on Trade and Environment (CTE). At the 2021 WTO Ministerial Conference, the DP Ministers issued a statement calling on WTO Members to, *inter alia*: (i) share experiences of effective approaches to move towards more circular, resource efficient and environmentally sustainable plastics trade; and (ii) address trade-related capacity building and technical assistance needs of developing members, in particular least developed members and vulnerable small island developing States (SIDS), to support their efforts to move towards more circular plastics economies. (WTO Ministerial Statement, 2021)

Pursuant to the objectives of the Ministerial Statement, in February 2022, the DP created three workstreams to move technical work forward: (i) cross-cutting issues (e.g., transparency, technical assistance); (ii) promoting trade to tackle plastic pollution; and (iii) reduction to tackle plastic pollution and circular economy for plastics. On 27 April 2023, the DP in cooperation with the UNEP, held an exploratory workshop on reduction and circularity to tackle plastic pollution. (WTO online) The workshop discussed:

- (i) types of trade measures most often used and best practices;
- (ii) unnecessary or harmful plastics and plastic products most targeted by trade policies, including single-use plastics and plastic packaging associated with international trade;
- (iii) trade policies and practices requiring realignment with the objective of ending plastic pollution; and
- (iv) criteria used when prioritizing trade action on unnecessary or harmful plastics, plastic products, and other goods. (WTO, 2023)

Complementary to the WTO efforts, the International Organization for Standardization (ISO) established a Technical Committee on the Circular Economy (ISO/TC 323) in 2018. The ambition of this Technical Committee is to develop – in the field of circular economy – standardization frameworks, guidance, supporting tools, and requirements, to maximize the circular economy’s contribution to sustainable development. The ISO/TC 323 works in cooperation with existing ISO committees on subjects that may support the circular economy. (ISO online)

Additionally, there are two non-governmental initiatives that may also contribute to the development of harmonized policy approaches. First, during the Stockholm+50 conference in June 2022, Chatham House launched a paper presenting the idea of a global roadmap for an inclusive circular economy. (Schröder et al, 2022) Based on feedback received by multiple stakeholders from around the world, Chatham House, and several partners<sup>7</sup>, launched the Global Circular Economy Roadmap Initiative at the WCEF 2022. Chatham House and their partners have extended an open invitation to stakeholders to join this initiative. The aim of this process is to develop a common vision for an inclusive global circular economy transition. (Chatham House online)

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<sup>6</sup> As of April 2023, 76 WTO members were participating in the IDP including Angola, Barbados, Cabo Verde, Cameroon, Central African Republic, Chad, Jamaica, Mauritius, Morocco, and Suriname.

<sup>7</sup> These partners include UNIDO, WBCSD, AfDB, ACEN, GIZ, Circular Innovation Lab, EU CE Stakeholder Platform, PACE, World Economic Forum, IGES and Circular Electronics Partnership.

Second, as part of its “Stockholm Action Agenda”<sup>8</sup>, the World Business Council for Sustainable Development (WBCSD) proposed a Global Circularity Protocol to remove common roadblocks for businesses and SMEs to scale circular business models. (WBCSD, 2022) The WBCSD launched the Global Circularity Protocol (GCP) development at the WCEF 2023. According to the WBCSD, the Protocol should create a voluntary framework that is open to all, and “will be designed to foster policy alignment, facilitate accountability of businesses, attract investment, and raise consumer awareness.” (WBCSD News, 2023)

In addition to voluntary actions and partnerships, **trade agreements** (bilateral, plurilateral, and multilateral) are important mechanisms to foster cooperation and coherence in the global transition to the circular economy. For the few trade agreements that already include circularity provisions, these provisions often take the form of high-level statements in the trade and sustainable development chapters, and as such lack objective requirements or commitments.<sup>9</sup> Therefore, there is an opportunity for countries to negotiate and include circularity in trade agreements. Barrie et al identify some areas for collective action that may be negotiated into trade agreements, including:

- (i) agreeing on definitions and classifications of circular goods;
- (ii) reducing technical barriers to circular trade;
- (iii) enhancing circular trade facilitation measures (e.g., piloting cross-border transparency and traceability approaches for circular economy trade flows); and
- (iv) circular trade capacity-building. (Barrie et al, 2022)

Despite the current lack of explicit internationally agreed trade rules exclusively governing the circular economy, globally, governments are already implementing **trade-related policies and measures** relevant to the circular economy. Steinfatt’s analysis of WTO notifications between 2009 and 2017 identified 370 measures, notified by 65 WTO Members, which refer to activities related to the circular economy. Of the measures notified, government support is the most frequently notified type of measure in relation to the circular economy at the WTO. Government support comprises measures such as grants and direct payments, preferential loans and loan guarantees, and income and price support. Technical regulations, standards and conformity assessment procedures are the second most frequently notified type of measure<sup>10</sup>, followed closely by trade bans and licensing requirements.<sup>11</sup> WTO Members have also notified government procurement measures related to the circular economy, along with a handful of sanitary and phytosanitary measures and measures pertaining to trade in services. (Steinfatt, 2020)

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<sup>8</sup> The WBCSD’s “Stockholm Action Agenda: Transforming Global Value Chains” proposes three action priorities that, according to the WBCSD, provide the necessary impetus for wholesale business-driven value chain transformation: (i) a global corporate accountability and transparency mechanism; (ii) a global circularity protocol; and (iii) a global sustainability skills-for-action initiative. (WBCSD, 2023)

<sup>9</sup> An example of this is the modernized EU–Mexico Global Agreement. Article 13 of the Trade and Sustainable Development Chapter of this Agreement recognizes the importance of promoting inclusive green growth and the circular economy. For a more detailed discussion on embedding circularity in Regional Trade Agreements, see Bellman et al. (2021).

<sup>10</sup> See, for example, Kenya’s April 2023 notification of its Extended Producer Responsibility (EPR) Regulations. (WTO document G/TBT/N/KEN/1424)

<sup>11</sup> See, for example, South Africa’s notifications of licensing measures aimed at controlling the import and export of, *inter alia*, used goods, waste, and scrap. (WTO document G/LIC/N/3/ZAF/7)

With the implementation of these measures concerning the circular economy, several **trade-related concerns** have arisen and been discussed by WTO members under the rubric of specific trade concerns (STCs).<sup>12</sup> For example, a few Caribbean Members of the WTO have raised, and responded to, specific trade concerns relating to the circular economy at the WTO Committee on Technical Barriers to Trade.<sup>13</sup> Among the potential trade problems arising from the STC discussions at the WTO are:

- (i) the inability of trade regimes to distinguish between unwanted waste or obsolete goods on the one hand, and goods, components and materials flowing in and out of circular economy processes, on the other – this is partly a function of the lack of harmonized definitions for circular goods and services; and
- (ii) the lack of proper consideration given to the constraints faced by micro, small, and medium-sized enterprises (MSMEs), especially those in developing countries, to meet circular economy requirements. (Steinfatt, 2020)

Beyond the concerns raised under the rubric of the STCs, another issue impacting the relationship between international trade and the circular economy relates to **the non-discrimination obligation** of the WTO. This obligation requires: (i) “like” products from different countries to be treated equally (most-favoured nation (MFN) treatment); and (ii) foreign “like” products to receive equal treatment as domestic “like” products (national treatment). In order to motivate the transition to a circular economy, governments may wish to restrict the production and sale of non-circular products while offering tax incentives for circular products and processes.<sup>14</sup> However, the distinction between the level of circularity of products is currently irrelevant in determining “likeness”, for purposes of the WTO non-discrimination obligations. This situation presents an opportunity for WTO Members to initiate discussions on whether current rules relating to “like” products may impede a country’s ability to transition to a circular economy. (Barrie et al, 2022)

It is also worth noting that a significant proportion of trade in Africa and the Caribbean is carried out by MSMEs. The African Development Bank (AfDB) estimates that MSMEs in Africa represent 90 per cent of all businesses and generate more than half of all jobs. (AfDB, 2022) According to the Caribbean Development Bank (CDB), MSMEs represent between 70-85 per cent of Caribbean businesses, contribute between 60-70 percent of Gross Domestic Product (GDP), and account for approximately 50 per cent of employment. (CDB, 2021) One of the key challenges facing MSMEs is the multiplicity of conformity assessment procedures for circular goods (e.g., testing, certification, and inspection). Differences in countries’ conformity assessment procedures (CAPs) may lead to duplication of these procedures across jurisdictions, ultimately raising the costs and barriers to trade. **Mutual recognition of standards and procedures** is another way in which international trade can facilitate the circular economy. Specifically, mutual recognition agreements of CAPs for circular goods would allow an

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<sup>12</sup> Starting in 1995, WTO members have used various WTO Committees and Councils to discuss trade issues arising from specific measures maintained by other members. This practice, known as “specific trade concerns” or STCs, is a form of peer review which helps WTO members to ease trade tensions by providing further information and clarification, working towards mutually satisfactory solutions. For additional information see the WTO Trade Concerns Database, available at <https://tradeconcerns.wto.org/en>

<sup>13</sup> See, for example, Dominican Republic’s concerns regarding measures taken by Jamaica (banning single use plastics) and Trinidad and Tobago (prohibiting the commercialization and importation of polystyrene plastics). These concerns were discussed at the WTO TBT Committee meeting held on 6-7 March 2019. (WTO documents G/TBT/M/77 and G/TBT/W/611)

<sup>14</sup> For example, the banning of plastic bags in Antigua and Barbuda was accompanied by tax exemptions for reusable bag imports in 2016. (Schroder et al, 2022)

importing country to recognize the technical competence of a specific body in an exporting country to perform conformity assessment. (Barrie et al 2022) Guidance for such mutual recognition may be drawn from Article 6 of the WTO Agreement on Technical Barriers to Trade (TBT Agreement), as well as from Annex 6<sup>15</sup> of the Agreement Establishing the African Continental Free Trade Area (AFCFTA).

This section has highlighted the role that international trade policy can play in facilitating the adoption, by African and Caribbean nations, of circular principles. However, as underlined in the introduction, achieving a just transition to a circular economy is not reliant on trade alone. Rather, it depends on the successful confluence of several political, economic, technical, and social factors, which must be supported by appropriate policies, legislation, and incentives.

#### 4. WHAT ARE THE INCENTIVES AND CHALLENGES FOR AFRICAN AND CARIBBEAN COUNTRIES IN TRANSITIONING TO A CIRCULAR ECONOMY?

The traditional linear economic model has not served the African and Caribbean regions well. This is evidenced by, *inter alia*, ongoing, and recurrent significant fiscal and current account deficits, high total debt, and limited economic diversification.

Most Caribbean economies are highly dependent on tourism services, which in turn depend on the Caribbean's pristine land and marine environments. These environments are being harmed by the consequences of the linear economic model which has led to the pollution of both land and sea. Hence, the opportunity costs of degrading the natural environment make a strong case for shifting away from the linear model. (UNECLAC, 2021) Indeed, as signalled by the XXI Meeting of the Forum of Ministers of Environment of Latin America and the Caribbean in February 2021, the circular economy is being recognised as an alternative, resilient, and SDG-aligned economic development model for the post Covid-19 era. (CEC LAC, 2022)

Africa too is coming to the realization of the need to shift away from the linear economy model. Circularity is particularly relevant for African countries, whose economies remain largely resource-dependent and under sustained pressure from rapid population growth. Some scholars argue that Africa can adopt circular principles quickly because its ecological footprint is still relatively low and there is growing interest in the circular economy. (Fwangkwai et al., 2022) Indeed, the World Circular Economy Forum (WCEF)<sup>16</sup>, one of the leading annual circular economy events in the world, was hosted in a developing country for the first time in December 2022. The WCEF

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<sup>15</sup> Annex 6 contains the AFCFTA's Protocol on TBT.

<sup>16</sup> The World Circular Economy Forum brings together business leaders, policymakers, experts, civil society, and others to explore the world's best circular economy solutions. The WCEF examines how to accelerate the circular transition while pursuing the United Nations Sustainable Development Goals. The WCEF is a global initiative of Sitra, the Finnish Innovation Fund. The first WCEF was held in Helsinki, in June 2017, during Finland's celebrations of its 100 years of independence. Since then, the forum has been held in Japan, Canada, the Netherlands, and Rwanda. (See <https://www.sitra.fi/en/projects/wcef/#what-is-wcef-about> )

2022<sup>17</sup> took place in Kigali, Rwanda, gathering global participants to discuss how Africa can contribute to a global circular economy. (Sitra, 2023)

Furthermore, in 2021 the African Circular Economy Alliance (ACEA) published the results of its market research on the circular economy in Africa. The ACEA report identified five opportunity areas that could transition Africa to a circular economy development model that enables economic growth, job creation, and environmental conservation. These five areas are food systems, packaging, built environment, fashion, and electronics. These areas were prioritized based on their circularity potential. The selection of these five areas also involved additional criteria to ensure that prioritized sectors have economic significance on the continent, the potential for transformative impact, and momentum. (ACEA, 2021)

In sum, the movement towards a circular economy is slowly gaining traction in both Africa and the Caribbean. However, the transition to a circular economy is not without its challenges for both regions. The section below outlines some incentives for African and Caribbean countries to transition to a circular economy, while also highlighting some of the barriers to the adoption of a circular economy.

## 4.1 Incentives

Starting with the environmental perspective, Africa and the Caribbean are two of the world's regions that contribute the least to greenhouse gas emissions, but that are most vulnerable to the negative effects of climate change. According to UNEP, Africa stands out disproportionately as the most vulnerable region in the world. This vulnerability is driven by the prevailing low levels of socioeconomic growth in the continent, meaning that African nations lack sufficient resources to buffer themselves and recover from the worst of the changing climate effects. (UNEP online) Likewise, Caribbean nations are particularly vulnerable to the effects of climate change owing to: (i) their relative geographic isolation; (ii) small land masses (they are mostly island states); (iii) concentration of their populations and infrastructure in coastal areas; (iv) narrow economic base; (v) dependency on natural resources; (vi) limited financial, technical, and institutional capacity; and (vi) chronic debt. (Remy, 2023)

As mentioned in the introduction, the circular economy can contribute to addressing climate change, biodiversity loss, land degradation and the impact of water stress, and pollution. Indeed, it is estimated that transitioning to a circular economy could help reduce greenhouse gas emissions by 45 per cent. (Fwangkwai et al, 2022) Specifically, it is expected that circular businesses can bring more environmental-friendly production methods, better waste management processes, and a reduction in the production of waste. As a result, the level of air and water pollution can be drastically decreased, and directly benefit local communities by increasing their life quality and health. Circular economy practices in agriculture can also lead to restoration of grasslands, soil integrity and biodiversity, and can contribute to stabilize climatic conditions. (Raedemaekers et al, 2020) Still related to the environment, since the successful provision of tourism services (a mainstay of most Caribbean

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<sup>17</sup> The WCEF 2022 was co-hosted by the Government of Rwanda, the African Circular Economy Alliance (ACEA), the African Circular Economy Network (ACEN) and the Finnish Innovation Fund Sitra, together with 16 partners and many international collaborators. (Sitra (2023), WCEF 2022 Summary Report. Available at <https://www.sitra.fi/en/publications/wcef2022-summary-report/>)

economies) is so intimately linked to the preservation of the natural environment, a circular economy strategy which seeks to minimize material and energy use is prudent. (Gasco News, 2022)

From an economic perspective, trade in used (second life) goods for reuse, repair, or remanufacturing not only generates opportunities for local demand for industry and employment but may also enable affordable access to essential goods and services for those in developing country markets like Africa and the Caribbean. (Barrie, 2023) A shift to a circular economy in Africa and the Caribbean could also have a positive impact on the development of larger, more competitive, and resilient manufacturing sectors in both regions. This is because circular economy strategies can help businesses in the manufacturing sector to better utilize the material resources available in waste streams, thereby reducing the dependence on imported materials. While opportunities for circularity vary from country to country, key sectors that may benefit from employing circular strategies include agriculture, packaging, and construction. (UNEP CTCN, 2022) That said, there are significant challenges involved in adapting to circular strategies, relating to improving domestic skills, trade infrastructure, access to circular finance, and enhancing industrial and innovation capabilities.

As an additional incentive, the circular economy could enhance the economic diversification of African and Caribbean economies beyond their current reliance on primary commodity exports and tourism, respectively. Such diversification is likely to increase jobs and improve living standards. (Sitra, 2023) A 2018 ILO study found that, due to new jobs in the recycling and reprocessing of secondary materials (for example, metals, plastics, glass, and pulp), global employment growth was estimated to be driven mostly by Latin America and the Caribbean (over 10 million jobs). By contrast, net employment losses are expected in Africa (around 1 million jobs). This is especially so if no action is taken to promote economic diversification and active redeployment strategies. (ILO, 2023) This is because while a shift to a circular economy will provide new economic opportunities, it will also bring structural changes to the economy. As such, some sectors (like the extractives sector) may see declining activity. The negative impacts of this declining activity will need to be mitigated through government policies and initiatives aimed at retraining workers from the declining sectors for the newly introduced economic activities. (Rademaekers et al, 2020)

Another factor that may motivate African and Caribbean nations to adapt to circularity is the evolution of their existing trading relationships with their global partners. For instance, the European Union (EU) is a major trading partner for both Africa and the Caribbean. With its publication of the European Green Deal, including a new Circular Economy Action Plan, the European Union has made clear its ambition to transform its economy from the existing linear model into a circular one. According to Raedemaekers et al, if only the EU economy were to undergo a circular economy transition, this could have a negative impact on trade with Africa, mostly due to: (i) reduced imports of manufactured imports into the EU due to increased repairs and product lifetime; as well as (ii) reduced imports of primary raw materials from Africa. (Raedemaekers et al, 2020, and van der Ven, 2020) However, when both regions undergo a shift to a more circular economy, overall Africa-EU trade might decline slightly, but for Africa it would result in significant improvements in its trade balance in sectors such as textile and apparel, raw agricultural products, and food products. For example, raw agricultural products and food products are a large product category in EU-Africa trade. Even though agriculture represents a large share of the African economy, the continent is still a net importer of agri-food products, with imports being three times as high as the exports. This is caused by a number of factors, including food losses. The implementation of circular strategies such as cold chain storage could help to improve productivity in Africa's



agricultural sector, thereby contributing to increased farmer income, food security and a reduction in food import needs. (Raedemaekers et al, 2020)

## 4.2 Challenges

Section 4.1 above highlighted the transition to a circular economy by global trading partners, such as the EU, as possible motivation for Africa and the Caribbean to also shift towards a circular economy. However, these steps taken by the EU may also be viewed as a challenge for African and Caribbean countries. For instance, the EU's Circular Economy Action Plan has different policies, key among them being the Sustainable Products Initiative (SPI). In implementing the SPI, in March 2022, the European Commission submitted a proposal for an Ecodesign for Sustainable Products Regulation (ESPR).<sup>18</sup> The ESPR will replace the current Ecodesign Directive (2009/125/EC)<sup>19</sup>, introducing more Ecodesign criteria for a broader range of products. (European Commission online) The ESPR will require that all products placed on the EU market – including imported products – are more durable, reusable, and repairable, and include a certain percentage of recycled content. Moreover, the ESPR envisions that a Digital Product Passport will accompany all products. (van der Ven, 2023) The new “Digital Product Passport” will provide information about products’ environmental sustainability. The European Commission hopes that the passport will help consumers and businesses make informed choices when purchasing products, facilitate repairs and recycling, and improve transparency about products’ life cycle impacts on the environment. The product passport should also help public authorities to better perform checks and controls. (European Commission online) The ESPR has significant implications for African and Caribbean countries, for whom the EU is an important export market. The need to comply with the ESPR requirements as a pre-requisite for exportation will likely lead to additional costs for traders, many of whom are MSMEs. These costs will likely relate to the upgrading of equipment and infrastructure, as well as the need to upskill workers to meet the requirements of the ESPR. In this way, the ESPR and similar regulations may potentially end up as non-tariff barriers to trade for African and Caribbean countries.

An additional concern, particularly for African countries, relates to their dependence on commodities trade. UNCTAD categorizes a country as commodity-dependent when its share of primary commodity exports to total merchandise exports is more than 60 per cent.<sup>20</sup> Based on this definition, 83 per cent of African countries are commodity dependent<sup>21</sup>, accounting for 45 per cent of the commodity-dependent countries worldwide. Commodity-dependent economies are associated with low growth and are highly vulnerable to global commodity price shocks. (UNCTAD, 2022) Exacerbating this vulnerability, the circular economy model advocates for a reduction in the extraction and use of virgin or primary raw materials corresponding to an increase in the

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<sup>18</sup> While the ESPR is the main policy instrument of the SPI, the SPI is implemented further through the EU Strategy for Sustainable and Circular Textiles and the revision of the Construction Products Regulation. These two instruments cover more product-specific rules, while the ESPR covers environmental aspects. (Ecochain, 2023)

<sup>19</sup> The EU's Ecodesign Directive prescribes energy-related Ecodesign criteria for certain products and communicates this through energy labels. (Ecochain, 2023)

<sup>20</sup> Primary commodities include extractive resources (oil, gas, and minerals) and agricultural products (food and agricultural raw materials). (UNCTAD, 2022)

<sup>21</sup> This accounts for 45 of the 54 African economies. 12 African economies rely mainly on exports of oil, natural gas, and coal. 16 depend mostly on exports of minerals such as gold, copper, and iron ore. 17 export mainly agricultural products like cocoa, coffee, cotton, and tea. (UNCTAD, 2022)

use of secondary raw materials. Absent any policies to adapt to this change in demand, this will likely have a negative impact on the commodity-dependent African economies. An example of this potential negative impact concerns the urban mining of discarded printed circuit boards (PCBs). PCBs are one category of e-waste from which international recyclers can recover gold and palladium, Africa's most prominent minerals besides petroleum. Thus, where circularity is applied to the mineral extraction and processing chain, this may lead to less of these minerals being required from Africa in the longer term. (Simons, 2023) One may argue that this potentially negative impact on primary commodities trade, particularly minerals and metals, offers an incentive for more African countries to diversify their economies beyond the exportation of primary commodities. This in turn creates an opportunity for the development of higher value-added industries.

While the decrease in demand in primary commodities may, over the longer term, present challenges to commodity-dependent African economies, so does the rapid increase in demand for certain primary commodities. The current race, among advanced economies, towards net zero<sup>22</sup> has implications for Africa's commodities trade, particularly for the Democratic Republic of Congo (DRC). According to GlobalData, the DRC was the world's largest producer of cobalt in 2022, accounting for 71 per cent of global production. (Mining Technology, 2023) The shift to a clean energy system is set to drive a huge increase in the requirements for minerals such as cobalt. In a scenario that meets the Paris Agreement goals, the IEA estimates that clean energy technologies' share of total demand may rise significantly over the next two decades to over 70 per cent for cobalt. (Kim et al, 2022) The anticipated increase in demand in cobalt may, in theory, be of economic benefit to the DRC. However, the mining of cobalt in the DRC has been linked to grave human rights abuses, including the exposure of miners to unsafe worksites, mining-related deaths, and reliance on child labour. (Amnesty International, 2016) Thus, absent appropriate government intervention and international regulation of the extraction and processing of cobalt, the potential economic benefits for DRC may be outweighed by the observed negative impacts.

The lack of common classification of concepts pertaining to the circular economy also presents significant challenges for policy makers worldwide, including in Africa and the Caribbean. In the case of waste, for example, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (the Basel Convention) provides a uniform starting point for regulating trade in hazardous waste. However, in practice, the classifications of hazardous waste, non-hazardous waste, and non-waste goods destined for reuse, repair and refurbishment may differ significantly from country to country. This diversity of definitions alongside the proliferation of different regulatory requirements, may deter investment in high-quality repair, refurbishment, and recycling infrastructure. (Bellmann, 2021)

There is also a lack of coordination across institutions, regulations, and sectors. The circular economy cuts across sectors which are already regulated such as agriculture, waste management, energy, and trade. Additionally, many of these regulations and policies were designed with a linear, instead of a circular, model in mind. This results in many trade-related policies and measures inadvertently hindering the activities and functions that are at the core of the circular economy. (Steinfatt, 2020) For example, for years, thieves in South Africa and Kenya have been vandalizing public infrastructure for scrap metal collection and trade. The resulting loss of public property has led to economic losses for utility companies. As a consequence, Kenya and South Africa imposed

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<sup>22</sup> Net zero is a target of completely negating the amount of greenhouse gases produced by human activity, to be achieved by reducing emissions and implementing methods of absorbing carbon dioxide from the atmosphere.

restrictions on the sale of metallic scrap in domestic and export markets. In January 2022, Kenya imposed a complete ban on domestic and export trade of scrap metal. In April 2022, this ban was replaced by a requirement for scrap merchants to obtain licenses to trade. Traders have complained that the fees to obtain these licenses are exorbitant. South Africa, for its part, mandated metal merchants to obtain licenses and prohibited them from dealing in cash. Additional proposed rules place the onus on traders to undertake due diligence on their consumers and track the provenance of the scrap metals. (Beya, 2022) From a circular economy perspective, these restrictions tend to create a disincentive for collecting and trading in scrap metals. Export restrictions on metal scrap may also result in depressed trade flows and higher prices for secondary metals, making them less competitive relative to (substitute) primary metals. (Steinfatt, 2020)

Thus, African and Caribbean policymakers have the challenge of integrating the principles of circularity in existing policies and measures, alongside the additional challenge of abandoning the implementation of policies in silos. (UNEP CTCN, 2022) This silo approach is exacerbated by making a government's activities relating to the circular economy the sole remit of one Ministry. The development of national circular economy road maps and plans are a good start towards addressing these challenges. (Fwangkwai et al, 2022) That said, there should be international coordination to ensure that these discrete national road maps work in harmony with policies in other countries and do not further fragment the global transition to the circular economy. Regional bodies such as the African Union (AU), the African Continental Free Trade Area (AfCFTA), and the Caribbean Community (CARICOM) may lead coordination efforts. At the global level, there is also a need for increased collaboration to develop rules and standards which work for all, as opposed to African and Caribbean countries being required to conform to rules and standards developed largely in the Global North. The proposed collaboration can be laid out in trade and economic cooperation agreements.

Additional concerns exist regarding trade in second-hand or refurbished goods. For example, it has been argued that imports of these types of goods put additional pressure on the waste management systems of developing countries like those in Africa and the Caribbean. This is especially so when the goods in question have shorter lifespans than the corresponding goods in "new" condition. In addition, the African Group at the WTO<sup>23</sup> raised the concern that second-hand, refurbished, or remanufactured goods imports may lock developing economies into outdated and less efficient technological solutions, thus delaying the achievement of environmental goals. (Steinfatt, 2020) This concern has been carried over into the Nationally Determined Contributions (NDCs)<sup>24</sup> of several African and Caribbean countries. For example, in its NDC, Bahamas has indicated that it will discourage the importation of inefficient motor vehicles by linking the tax regime to mileage per gallon and the engine capacity. Saint Lucia mentions a new levy to control importation of used vehicles. Eritrea, for its part, refers to the restriction on import of used cars as part of its planned mitigation measures. (Brandi, 2017)

Trade in waste is one of the activities encouraged under the circular economy model that poses a challenge for Africa and the Caribbean. Waste turns into a tradeable product when countries decide not to – or do not have the capacity to – process waste for recycling domestically. Under proper controls, trade in waste can provide opportunities for countries that have a comparative advantage in sorting and processing activities. (van der Ven, 2020) However, such trade is not without its risks, especially for developing countries like those in Africa and the Caribbean. Waste has been predominantly traded from advanced economies into developing economies,

<sup>23</sup> Communication from the African Group (2010), Questions related to different NTBs proposals, WTO document JOB/MA/36.

<sup>24</sup> See section 5.2 below.

mostly due to cheaper recycling services, less stringent environmental policies, and a lack of enforcement of environmental regulations. This has resulted in “waste dumping.” Waste dumping refers to increased amounts of waste imports of either insufficient quality for recycling, waste that is hazardous, or waste for which developing economies lack the capacity to recycle. (van der Ven, 2020) As a result, waste ends up in landfills or is dumped in the environment, with devastating consequences for human, plant, and animal health. There is therefore a need to develop global standards that would help countries differentiate between “desirable” easy-to-recycle waste and, waste that is unfit for recycling. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (The Basel Convention), which regulates the movement of hazardous waste, offers a good starting point. However, more detailed standards and rules governing the trade in, and disposal of, non-hazardous waste are required.

Furthermore, if not properly regulated, circular trade can incentivize the creation of dangerous and low-paid work, such as informal recycling and repair hubs, exposing workers to toxic substances and other hazards. (Barrie et al, 2022) An example of this is in Kenya, where e-waste is often disposed of by so-called “burner boys” – young boys who burn circuit boards and wires over open fires to salvage the metals inside. (Sitra, 2022) There is therefore a need for governments, through targeted legislation and incentives, to facilitate opportunities for decent work and economic growth, while mitigating against the risk of worker exploitation and environmental harm. (Barrie et al, 2022)

In addition, cultural or perception barriers may be slowing the adoption of circular economy approaches in Africa and the Caribbean. Such barriers include a general lack of consumer interest and awareness, and rigidity and reluctance to change for both consumers and producers. For example, businesses might have a culture that is hesitant to adopt circular designs and strategies, perhaps owing to low virgin material prices and high upfront investments costs for circular business models. This hesitancy to invest on the part of business contributes to the lack of awareness on the part of the consumer since there are no circular products being offered on the market. Furthermore, where there are circular products on the market, consumers sometimes harbour misperceptions about reused and recycled products, viewing them as inferior or defective. (UNEP CTCN, 2022) Governments can help alleviate these barriers through increased awareness campaigns of the benefits of circularity. More practically, governments may introduce financial incentives such as offering tax refunds or rebates for businesses trading in circular goods and services. Policy incentives and advocacy can also encourage individuals and households to adopt new methods of consumption, such as sharing and renting. In the same vein, policymakers may also introduce bans to disincentivize the use of non-circular products. An example of this is in Kenya, where 80% of the population stopped using single-use plastic bags after the government introduced a ban in 2017. (McGinty, 2020)

Moreover, as mentioned in the introduction, the current distribution of the value captured from circular trade is highly uneven with most of the value remaining in high- and middle-income countries. Global inequities in power relations, digital trade capabilities, trade infrastructure, access to circular finance, and industrial and innovation capabilities mean that higher-income countries are better positioned than lower-income countries to reap the benefits of circular trade. (Barrie et al, 2022) Thus an explicit goal to reduce inequality should be built into the global circular economy transition, through the notion of a “just” circular economy. This refers to an economy that “reduce[s] waste and stimulates product innovation, whilst at the same time contributing positively to sustainable human development.” (van der Ven, 2023) If a “just” circular economy transition is not

embraced, it is likely that the existing inequities will create a “circularity trade divide”, in which the gains accrued from circular trade are unevenly distributed between developed and developing countries. (Barrie et al. 2022)

Furthermore, there is a growing fear that current geopolitical trends – such as economic nationalism and deglobalization – may lead to countries pursuing resource security in their circular strategies rather than collective sustainability objectives. The resulting actions may create ripple effects along global value chains which could potentially have a negative impact on other countries and exacerbate existing inequities (Barrie, 2023), particularly for countries in Africa and the Caribbean. Accordingly, there is a need to build capacity in these regions around the circular economy. This may be done, for example, by entrenching the concept of the circular economy in formal and informal education, and by upskilling the private and public sector to ensure that policymakers and implementers have the right tools at hand. Instruments such as the WTO Aid for Trade Initiative<sup>25</sup> can also be deployed to scale up circular trade capacity-building. Key areas for circular capacity-building that Aid for Trade could focus on include:

- (i) investing in infrastructure to enable domestic circular activities such as manufacturing circular goods, repairing, remanufacturing, and recycling;
- (ii) trade infrastructure; customs systems and enforcement measures to counter illegal waste shipment;
- (iii) circular production skills and training; and
- (iv) policy development. (Barrie et al, 2022)

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<sup>25</sup> For information regarding the WTO’s Aid for Trade Initiative, see [https://www.wto.org/english/tratop\\_e/devel\\_e/a4t\\_e/aid4trade\\_e.htm](https://www.wto.org/english/tratop_e/devel_e/a4t_e/aid4trade_e.htm)

## 5. EXAMPLES OF AFRICAN AND CARIBBEAN INITIATIVES ILLUSTRATING THE AMBITION TO TRANSITION TO A CIRCULAR ECONOMY

### 5.1 Regional Initiatives

#### 5.1.1 The Caribbean

In February 2021, the XXI Meeting of the Forum of Ministers of Environment of Latin America and the Caribbean saw the signing of the Decision on Sustainable Consumption and Production and Circular Economy and the formal launch of the Circular Economy Coalition for Latin American and the Caribbean (CEC LAC).<sup>26</sup> CEC LAC was born out of the growing interest in and initiatives on circular economy among governments, the private sector, and civil society; as well as of the multiple initiatives of both regional and international organizations providing technical support in this area. Therefore, the Coalition seeks to provide more coordinated support, avoiding duplications and strengthening cooperation for a bigger impact. CEC LAC's main objectives are to:

- (i) create a common vision for a circular economy, taking into account a regional perspective that is both integrated and holistic;
- (ii) provide a platform for knowledge-sharing and tools; and
- (iii) support the transition to a circular economy through system thinking. (CEC LAC, 2022)

As a sector-specific initiative, in 2018, the World Bank launched a new initiative, "Wastewater: From Waste to Resource". This initiative is focused on raising awareness among decision-makers across the LAC region regarding the potential of wastewater as a resource and aimed to introduce circular economy principles in wastewater management. (Schroder et al, 2020) The purpose of the initiative is to encourage a paradigm shift in the sector, recognizing the new value proposition of wastewater and its potential in a circular economy context – this is to say, wastewater should not be seen as a burden to governments and society, but as an economic opportunity that can be turned into a valuable resource. The World Bank is implementing this project in partnership with CAF – the Development Bank of Latin America. In this regard, CAF is developing a conceptualization guide for wastewater treatment projects, promoting the circular economy approach. (World Bank Group, 2019)

Likewise, although the Caribbean is one of the world's biodiversity hot spots, the Caribbean is the second most polluted sea in the world after the Mediterranean. This harms tourism and fishing, which constitute the livelihood of many people in the region. In October 2022, KfW Development Bank (on behalf of the German Government) and the Caribbean Biodiversity Fund signed a grant agreement. KfW is financing € 25.7 million for the establishment of a facility to boost the circular economy in the region and reduce the amount of waste in the Caribbean Sea. The newly created financing instrument provides grant funding in up to nine countries and territories in the Caribbean. The funding will support at least 18 selected individual projects that are suitable for publicising and implementing the circular economy. Measures along the entire life cycle of products, from new product developments to optimised design, are eligible for funding. Improved waste management is also

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<sup>26</sup> CEC LAC is hosted by the UNEP.

supported. The facility also finances measures to collect the existing waste on the beaches and in the sea and to dispose of it in an orderly manner or to recycle it. (SLUNCF, 2022)

Additionally, the Organisation of Eastern Caribbean States (OECS) launched the RePlast-OECS Pilot Plastic Recycling Project in May 2019. The RePlast-OECS project was a public-private initiative implemented by UNITE Caribbean.<sup>27</sup> The Project aimed at setting-up an incentivized plastic waste collection and recycling scheme. Advocating a circular economy approach, the RePlast-OECS project moved Polyethylene Terephthalate (PET) and High-Density Polyethylene (HDPE) waste from collection to export, redirect plastic from the natural environment, and created new financial flows from the collection and purchase of recyclable plastic waste. Saint Lucia was the pilot country for the implementation of the RePlast-OECS project, with the broader goal of establishing a sustainable Caribbean-wide waste management and recycling system. The pilot phase, which ended in 2021, was funded primarily by the Republic of France in partnership with the Government of Saint Lucia, the public and private sectors, and civil society.

While the RePlast-OECS was successful at demonstrating plastic waste from collection to export, unfortunately, the activities were not sustainable post-project due to the lack of a supporting institutional and regulatory framework, including sustainable financing mechanisms. In addition, the cost of exporting was exorbitant, challenging business viability. With this in mind and with support from the European Union, in February 2022, the OECS in collaboration with the French Development Agency launched another initiative – Recycle OECS. This initiative seeks to develop a model for sustainable waste separation, collection, and recycling of plastic waste for the OECS. An important aspect of the model is that it considers a regional approach, self-financing, sustainability, and business viability. The development of the model is meant to be iterative, based on lessons learned, new information, and emerging issues. The model comprises five pillars: (i) technical; (ii) economic; (iii) sustainable financial; (iv) institutional; and (v) communications. The model will be demonstrated in Grenada and Dominica, two OECS countries that show readiness to implement sustainable recycling programmes. Saint Lucia will also receive support under the Recycle OECS initiative to enable the sustainability of actions undertaken under the RePlast Project.

Finally, while not specific to the Caribbean, the Circular Economy Platform of the Americas (CEP – Americas) is also worth highlighting. CEP-Americas is a member-based portal where information about circular economy from and for the Americas is made available. The Platform posits that by linking people, ideas and actions through CEP-Americas, the transition toward a circular economy in the Americas is facilitated.<sup>28</sup> CEP-Americas is also the convener of the Circular Economy Forum of the Americas (CEFA). CEFA facilitates high level discussions with key circular economy experts and practitioners from across the Western Hemisphere to debate the state of the needs, challenges, and opportunities of this important and rapidly expanding field of work. CEFA's purpose is to generate a common and deeper understanding of the circular economy and its relevance and applicability in the Americas. (CEP-Americas online)

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<sup>27</sup> UNITE Caribbean is a Caribbean Consulting Firm based in Guadeloupe and Saint Lucia promoting the sustainable development of the Caribbean. (<https://unite-caribbean.com/en/>)

<sup>28</sup> The Circular Economy Platform of the Americas is an initiative powered by the Americas Sustainable Development Foundation (ASDF). See <https://www.sustainableamericas.com>

### 5.1.2 Africa

Held in November 2019 in Durban, South Africa, the 17th Ordinary Session of the African Ministerial Conference on the Environment (AMCEN) called for the widespread adoption of the circular economy on the continent. Outlined below are some of the regional initiatives promoting the adoption of the circular economy in Africa.

Launched in 2017, the African Circular Economy Alliance (ACEA) was founded by three countries – Rwanda, Nigeria, and South Africa – along with UNEP and the World Economic Forum (WEF). The objectives of the ACEA are:

- (i) policy development – sharing best practices for the creation of legal and regulatory frameworks, the building of partnerships, and the financing and creation of circular economy projects;
- (ii) leadership and advocacy – advocating for and raising awareness of the circular economy at national, regional, and global levels; and
- (iii) support for scaling circular business and projects – bringing about new projects and partnerships within individual or multiple countries, including through design, implementation, and financing of circular economy projects. (Milenge, 2022)

As part of its activities, the ACEA has published reports: (i) identifying five opportunity areas that could transition Africa to a circular economy; (ii) proposing approaches to address the plastics challenge in Africa; and (iii) identifying circular economy opportunities in Africa’s mining sector. (ACEA online)

Current member countries of the ACEA include Benin, Burkina Faso, Cote d’Ivoire, Democratic Republic of Congo, Ghana, Malawi, Niger, Nigeria, Rwanda, Senegal, South Africa, and Sudan. In addition, in 2022, Chad, Gabon, Morocco, and Zambia expressed their interest to join the ACEA. A unique aspect of the ACEA is that its membership is open to multiple categories of stakeholders including national institutions, public sector entities, international organizations, funding institutions, and research centres. At the moment, ACEA membership is not open to private sector players although the ACEA works closely with the private sector through consultation and collaboration on specific projects and activities. (PACE online) The African Development Bank (AfDB) hosts the ACEA Secretariat, WEF provides technical assistance to the ACEA Secretariat, and Dalberg runs ACEA’s administrative affairs. (Milenge, 2022)

The African Circular Economy Facility (ACEF) is the AfDB’s flagship programme intended to mainstream the circular economy as a development strategy in Africa. The ACEF increases AfDB’s portfolio of operations that align with the circular economy. This portfolio also includes renewable energy, climate-smart agriculture, and green manufacturing sectors. (Tena, 2022) The ACEF is structured as a multi-donor trust fund for grants allocation, with the initial endowment of €4 million from the Government of Finland and the Nordic Development Fund. ACEF is intended to operate over a 5-year period (July 2022 – June 2027). (Milenge, 2022) The ACEF operates at both the continental and national levels and is focused on three intervention areas:

- (i) institutional capacity building for the creation of enabling environments necessary for the uptake of circular innovations and practices;
- (ii) private sector support through a differentiated business skills development programme for start-ups and SMEs in the circular economy; and



- (iii) promotion of country ownership by strengthening the ACEA. (AfDB online).

In 2023, the ACEF is supporting three main activities in Africa. First, the ACEF is supporting several countries in the development of their national circular economy policy roadmaps. Second, the ACEF is supporting the implementation of business development programmes in the circular economy by providing technical assistance to start-ups and small grants to eligible SMEs through financial intermediaries. Third, the ACEF is supporting the ACEA and its secretariat in creating a pool of circular economy champions and encouraging partnerships and knowledge-sharing on the African continent and beyond. (ACEF Brochure, 2023)

The African Circular Economy Network (ACEN) is a coalition of circular economy specialists with the expertise required to support the transition to more circular approaches to business on the African continent. The vision of the ACEN is to build a restorative African economy that generates well-being and prosperity, inclusive of all its people, through new forms of economic production and consumption which maintain and regenerate its environmental resources. (ACEN online)

The ACEN, in collaboration with Trinomics, formed the ACEN Foundation. The Foundation's goal is to "accelerate the just transition to an inclusive, circular and sustainable economy in Africa, which is in line with global climate change ambitious and the UN Sustainable Development Goals and promotes an economy within social and planetary boundaries." (ACEN Foundation online) The ACEN Foundation's activities focus on capacity building, knowledge transfer, incubation and business support, awareness raising, projects, and fundraising. (ACEN online)

## 5.2 National Incentives

In the context of the circular economy, the role of national governments has been to establish and enforce policies, regulations, and legal frameworks promoting the transition to a circular economy. African and Caribbean governments are starting to include plans for a circular economy into their Nationally Determined Contributions (NDCs).<sup>29</sup> Several have expressly included plans for transitioning to a circular economy as part of their commitments in their latest NDCs. These plans articulated in the NDCs may be a good starting point for designing and implementing circular measures.

African countries that have expressly included a reference to the circular economy in their NDCs are Angola, Burundi, Cabo Verde, Cameroon, Eswatini, Liberia, Mauritius, Rwanda, São Tomé and Príncipe, Seychelles, Sierra

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<sup>29</sup> NDCs represent the commitments of each country to reduce greenhouse gas emissions and adapt to climate change. They were agreed to by countries under the Paris Agreement, arrived at during the Climate Change Conference of the Parties (COP) in Paris in 2015. These initial commitments to decarbonize, transition to lower carbon and renewable energy, are not sufficient to keep global temperature rise below 2.0 degrees. Every five years countries are expected to review and enhance their NDCs and submit more ambitious actions to reducing greenhouse gas emissions. The Paris Agreement is a legally binding international treaty. It entered into force on 4 November 2016. With the ratification by Eritrea of the Paris Agreement on 7 February 2023, 195 Parties (194 States plus the European Union) have now ratified the Paris Agreement. More information regarding NDCs is available at [https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs#:~:text=Nationally%20determined%20contributions%20\(NDCs\)%20are,the%20impacts%20of%20climate%20change](https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs#:~:text=Nationally%20determined%20contributions%20(NDCs)%20are,the%20impacts%20of%20climate%20change). and <https://www.un.org/en/climatechange/all-about-ndcs>.

Leone, South Sudan, and Uganda. The Caribbean States that have done the same include Antigua and Barbuda, Barbados, Dominica, and Dominican Republic. (UNFCCC, NDC Registry online)

Beyond the NDCs, several African and Caribbean governments have also factored aspects of the circular economy into their national development planning tools, as illustrated in Table 1 below.

Table 1: Types of circular economy related policies adopted by African and Caribbean States

Type	Description	Africa	Caribbean	
1	Extended Producer Responsibility (EPR) (national and state level)	Relates to policies that place the responsibility for the environmental impacts of products throughout the product life cycle to producers and is often applied to the collection, processing, and re-utilization of waste.	(18) Cabo Verde, Cote d'Ivoire, Egypt, Gambia, Ghana, Kenya <sup>30</sup> , Madagascar, Mali, Mauritius, Mozambique, Nigeria, Rwanda, São Tomé and Príncipe, Senegal, Tanzania, Uganda, Zambia, Zimbabwe.	
2	Fiscal policy	Includes government tax and spending policies that incentivize circular practices. For example, in 2019, Guinea implemented a law requiring the verification, collection, and receipt of an “ecotax” on new or second-hand electrical and electronic equipment, as well as tyres, imported into Guinea. As another example, Algeria. Another example can be drawn from Mauritius which in 2014 introduced a refund scheme with a view to encouraging recycling companies to increase collection rates of plastic PET bottles for export.	(10) Algeria, Benin, Botswana, Burkina Faso, Guinea, Lesotho, Mauritius, Namibia, Seychelles, South Africa.	
3	National circular economy policy (national level)	Includes any national circular economy policies already in place as well as national green growth or sustainable development strategies which integrate circular economy principles.	(8) Algeria, Egypt, Gabon, Kenya, Madagascar, Nigeria, Rwanda, Tunisia,	(1) Guyana

<sup>30</sup> While Kenya is not reflected in the [circulareconomy.earth](https://www.circulareconomy.earth) data tracker, it has notified its (EPR) Regulations to the WTO. See WTO document G/TBT/N/KEN/1424.

4	Product policy (national level) <sup>31</sup>	Includes any policies that support circular practices relating to the design, manufacture, distribution or import of specific products and materials.	(38) Angola, Benin, Burkina Faso, Burundi, Cabo Verde, Cameroon, Congo, Cote d'Ivoire, DRC, Egypt, Eritrea, Ethiopia, Gabon, Gambia, Guinea-Bissau, Kenya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Somalia, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe.	(2) Antigua and Barbuda, Puerto Rico
5	Waste management and recycling (national and state/city level)	Covers policies that encourage circular practices relating to the management of waste covering generation, segregation, transfer, sorting, treatment, recovery, and disposal.	(47) Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Cote d'Ivoire, Djibouti, DRC, Egypt, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Kenya, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Somalia, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe.	(5) Antigua and Barbuda, Cuba, Dominican Republic, Guyana, Puerto Rico,

Source of data: Circulareconomy.earth (Available at <https://circulareconomy.earth/> Accessed on 9 June 2023)

<sup>31</sup> It is notable that almost all the policies in this category concern the ban of single-use or non-recyclable plastics, or other regulation of plastic materials. The exceptions are policies passed in Seychelles (prescribing environmental standards for bottles and labels for beverages), and Tunisia (concerning the management of used oils and oil filters, used tyres, and used batteries).

## 5.3 Private Sector Initiatives

As a complement to the governmental action in Africa and the Caribbean, there has been promising progress and innovation originating from the private sector. The section below highlights examples from the private sector, selected from among the five priority areas identified by the ACEA – electronics (e-waste management), food systems, and plastics recycling in the built environment.

### 5.3.1 E-waste Management

E-waste is defined as any end-of-life piece of equipment that depends on electric currents or electromagnetic fields to function properly and includes all components, sub-assemblies and consumables that constituted the product at the time of discarding. According to UNEP, 54 million metric tonnes of e-waste are produced each year; a number predicted to double by 2050 if nothing is done. Only 17 per cent of e-waste is recycled. The rest is dumped, often to be sifted through in low-income countries by informal workers, including children, seeking to extract valuable materials at grave risk to their health. (UNEP, 2022)

A 2021 study by Mohammadi et al revealed that the five Caribbean islands subject of the study<sup>32</sup> produced double the e-waste per capita per year, i.e., 13 kg/cap/year compared to global average of 6.1 kg/cap/year in 2016. The aggregated amount of e-waste generated per year on these five islands seems to significantly rise in future: from 27,500 tonnes in 2010 to an estimated amount of 59,000 tonnes in 2025. This considerable e-waste generation rate, when not responsibly managed, is not only harmful for the local environment, but also translates into considerable health impacts and loss of valuable resources. (Mohammadi et al, 2021)

In 2008, Malikca Cummings founded Caribbean E-Waste Management Inc. (CEWMI) in Barbados. CEWMI was founded out of a need to create employment and contribute to the environmentally sound management of e-waste in the Caribbean. Electronic equipment that cannot be repaired, refurbished, or upgraded are collected by CEWMI and disassembled and processed for the recovery of recyclable raw materials which include, circuit boards, motherboards, aluminium, plastic, steel, cables, etc. Recovered materials are then shipped to e-Stewards or R2 certified<sup>33</sup> International recyclers to undergo further processing. CEWMI also refurbishes computers and monitors for resale and collects computer parts for resale. In addition, CEWMI offers data destruction services – securely wiping data which is held on discarded ICT equipment. Furthermore, CEWMI offer educational seminars and training on e-waste, to help end users understand the impact that their actions have on the environment and what they can do to minimize that impact by beginning to recycle e-waste. (CEWMI online)

Like CEWMI, the Waste Electrical and Electronic Equipment Centre (WEEE Centre) uses a holistic approach to solving the e-waste problem in Kenya. WEEE Centre's services include: (i) creating awareness regarding e-waste; (ii) offering training on how to handle e-waste properly; (iii) recovering, refurbishing, and reusing functional electronic, equipment, parts and accessories; (iv) asset disposition – decommissioned parts of equipment that

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<sup>32</sup> Aruba, Barbados, Grenada, Jamaica, and Trinidad and Tobago.

<sup>33</sup> R2 stands for Responsible Recycling and is a standard specifically created for the electronics recycling industry by Sustainable Electronics Recycling International (SERI).

cannot be recycled or reused locally are reshipped to recycling facilities with capability and capacity to safely dispose of them; and (v) securely wiping data from electronic devices. (WEEE Centre online)

Beyond the economic gains, the work of the WEEE Centre has social and environmental impacts. By properly recycling electronic waste, WEEE Centre reduces the need for virgin raw materials to be used in new products, thereby mitigating damage to the environment. Additionally, the refurbished items that WEEE Centre sell are not simply sent back into the marketplace. The new owners sign a circular commitment agreement, whereby at the end of their life, these items must be returned to WEEE Centre or otherwise properly disposed of. (Sitra, 2022)

### 5.3.2 Food Systems

According to UNEP and the FAO, approximately 828 million people go hungry each year, and 3 billion cannot afford a healthy diet. The amount of food lost and wasted contributes to these crises. For instance, of the total food produced for human consumption, an estimated 14 per cent is lost before the food reaches the consumer.

The lack of effective refrigeration is a major contributor to this problem. Moreover, food loss post-harvest reduces the income of 470 million smallholder farmers by as much as 15 per cent – with developing countries hit the hardest. (UNEP & FAO, 2022) However, sustainable food cold chains could avoid much of this loss – cooling significantly slows down the rate of deterioration, thereby increasing the storage life of produce. One solution to this problem – walk-in, solar-powered cold rooms for off-grid storage and preservation of perishable foods – is currently being implemented in Nigeria by ColdHubs. ColdHubs cold rooms are installed in major food production and consumption centres (in markets and farms). Farmers place their produce in clean plastic crates, these plastic crates are stacked inside the cold room. According to ColdHubs, this extends the freshness of fruits, vegetables, and other perishable food from 2 days to about 21 days, reducing post-harvest loss by up to 80 per cent. The solar powered walk-in cold room is made of 120mm insulating cold room panels to retain cold. Energy from solar panels mounted on the roof-top of the cold room are stored in high-capacity batteries. These batteries feed an inverter which in turn feeds the refrigerating unit. ColdHubs offers farmers a pay-as-you-store subscription model. Farmers pay a daily flat fee for each crate of food they store.<sup>34</sup> (ColdHubs online)

In the Caribbean, the dominant tourism sector, as a major generator of food waste, is strategically positioned to lead in solving this problem. The hotel industry is particularly known for its excessive food production and waste. CaribShare, founded by Carol Lue, is a not-for-profit that created Jamaica's first organic waste recycling program. Operating a large scale biodigester plant, between 2016 and 2019, CaribShare recycled food waste from eight hotels in the Montego Bay area into biogas and organic fertilizer. The organic fertilizer was donated to the small farming community of Braco, Trelawny to help enhance and restore their soil ecosystem. In addition, CaribShare successfully organized and hosted Jamaica's 1st Food Waste Conference in collaboration with the Center for Responsible Travel and World Wildlife Fund in January 2021. The event broadened the business case for holistic and sustainable food waste management to include food waste reduction and food

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<sup>34</sup> Still with respect to cold chains, although these are not private sector initiatives, it is worth noting that Grenada and Guyana have consolidated the implementation of cold chains and provided adequate equipment for the processing and storage of fruits and vegetables to avoid post-harvest losses. Both Jamaica and Trinidad and Tobago have undertaken similar actions, complementing them with training for producers, food packers and marketers in the potato and cassava chains. (FAO, 2016)

donations as well as food waste recycling to 15 hotels in the Montego Bay and Trelawny areas. (CaribShare online)

### 5.3.3 Plastics Recycling in the Built Environment

The OECD estimates that globally, the annual production of plastics has doubled, soaring from 234 million tonnes (Mt) in 2000 to 460 Mt in 2019. Plastic waste has more than doubled, from 156 Mt in 2000 to 353 Mt in 2019. After taking into account losses during recycling, only 9 per cent of plastic waste was recycled, while 19 per cent was incinerated and almost 50 per cent went to sanitary landfills. The remaining 22 per cent was disposed of in uncontrolled dumpsites, burned in open pits or leaked into the environment. (OECD, 2022)

By some estimates, in Nairobi, 500 metric tonnes of plastic waste are generated every day and only a fraction of that is recycled. Nairobi-based startup company Gjenge Makers, founded by Nzambi Matee, has created a lightweight and low-cost building material that is made of recycled plastic with sand to make bricks that are stronger than concrete material. Gjenge Makers obtains the plastic waste from packaging factories for free or buys it from other recyclers. This plastic waste is then mixed with sand at very high temperatures and compressed into pavers. The company's pavers are fully certified by the Kenyan Bureau of Standards. The pavers have a melting point over 350°C and are much stronger and more durable than their concrete equivalents. The plastic pavers also have lower maintenance costs than their equivalents in the market. Gjenge's pavers are currently used in the construction of buildings as well as streets. For this initiative, Matee was named a Young Champion of the Earth 2020 Africa winner at the United Nations Environment Programme (UNEP). (Kenya Architecture News, 2021) In 2021, Gjenge Makers recycled 50 tonnes of plastic, but they hope to increase that amount as production expands. (Perry, 2022)

## 6. CONCLUSION

Even though there are significant benefits and incentives to transition to a circular economy, this paper has highlighted that significant challenges remain particularly for developing countries like those in Africa and the Caribbean. These challenges include: the lack of infrastructure; the circular economy plans of global trading partners like the EU; the need to diversify from commodity-dependence to higher value-added industries; the lack of coordination across institutions, regulations, and sectors; the risks of the global waste trade; cultural and perception barriers; and the inequities in the distribution of the value of circular trade.

The examples of regional and national initiatives offered in this paper show that at a governmental level the transition efforts are fragmented, with different national policies and plans being implemented. That said, there are nascent regional initiatives aimed at sharing best practices and enhancing collaboration among countries. If successful, these initiatives will reduce the current fragmentation and contribute towards greater international cooperation in the transition to the circular economy. These regional initiatives are complemented by the multilateral coordination efforts taking place in institutions such as the Basel Convention, ILO, ISO, UNEP, and the WTO. Supplementing these efforts are non-governmental initiatives like the global circular economy roadmap initiative led by Chatham House, and the Global Circularity Protocol development, led by WBCSD.

This paper has also offered examples of private sector initiatives in Africa and Caribbean that are leading the charge towards circularity in the two regions. These initiatives would benefit from government support in the form of incentives and regulation. Policymakers in Africa and the Caribbean have a significant role to play in mainstreaming circularity. For example, tax breaks for circular businesses and higher taxes for wasteful products can incentivize the private sector to promote circular solutions. Likewise, institutional procurement schemes such as paperless procurement and plastics ban in government institutions could accelerate the dissemination of circular innovations among the private sector. Policy incentives and advocacy can also encourage individuals and households to adopt new methods of consumption, such as sharing and renting.

Finally, the paper underlines that the transition to a circular economy is playing out at multiple geographical and political levels. In many cases, the choice of action is dependent on local context. As has been demonstrated in the NDCs, national circular economy road maps, and plans that are being implemented in Africa and the Caribbean, the current push for governance of the circular economy is taking place at the national level, motivated by local economic, social, and environmental circumstances. This necessarily implicates the role of international trade and the development of multilateral rules to guide the transition to the circular economy. The author is of the view that international cooperation is necessary to arrive at shared and mutually recognized definitions for circular trade, harmonize circular economy standards and regulations, establish effective and fair governance mechanisms for circular trade, and enhance policy coordination. At the same time, given the need to take account of local circumstances, it may be appropriate for international policies on the circular economy to be developed only where they: (i) promise to be more effective than national policies in achieving economies of scale; (ii) avoid or mitigate against potential conflict; and (iii) create safeguards such as effective and impartial dispute settlement procedures that protect countries against coercion from, or exploitation by others.

In sum, this paper highlights that there are clear economic, environmental, and social incentives for Africa and the Caribbean to transition to the circular economy. However, significant barriers remain, hindering the



adoption by Africa and the Caribbean of the circular economy. Failure to address these challenges, particularly the need to ensure a just transition to the circular economy, will result in Africa and the Caribbean losing out on the maximum potential gains that the circular economy can bring about. This in turn will exacerbate the current inequities in the distribution of the value captured from the circular economy. Efforts to address the challenges impacting the transition to the circular economy by Africa and the Caribbean may include:

- (i) Leveraging the regional initiatives in Africa and the Caribbean to share best practices, harmonize national circular economy plans and standards, and where applicable, fund and otherwise support circular initiatives;
- (ii) Leveraging the budding interregional cooperation between Africa and the Caribbean to advocate for a more just and inclusive transition to the circular economy;
- (iii) Greater participation in the multilateral efforts – including those at the Basel Convention, ILO, ISO, UNEP, and the WTO – to enhance international cooperation and harness the benefits of an inclusive circular trade;
- (iv) Participation in the non-governmental initiatives aimed at harmonizing policy and business approaches to the circular economy, such as those led by Chatham House and the WBCSD; and
- (v) Making use of the WTO Aid-for-Trade and similar initiatives to enhance capacity in circular-trade-related activities.

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