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Guidelines to Accelerate the Transition Towards a Circular Economy in Africa

August 2022

Acronyms

ACEA	African Circular Economy Alliance
ACEF	Africa Circular Economy Facility
ACEN	African Circular Economy Network
AfDB	African Development Bank
AMCEN	African Ministerial Conference on the Environment
AUC	African Union Commission
CAP	Common Agricultural Policy
CAREC	Central Asia Regional Economic Cooperation (CAREC)
CEAP	Circular Economy Action Plan
CFD	Contract for Differences
COMESA	Common Market for Eastern and Southern Africa
CSO	Civil society organisation
DBSA	Development Bank of Southern Africa
DFI	Development finance institute
DRC	Democratic Republic of Congo
EAC	East African Community
EADB	East African Development Bank
Ecotax	Ecological taxation
EDPRS	Economic Development and Poverty Reduction Strategy
EPR	Extended Producer Responsibility
ESD	Education for Sustainable Development
ESG	Environmental, Social and Governance
EU	European Union
GBP	British Pound Sterling
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse gas
GPP	Green public procurement
IAoCE&SDGs	International Alliance on Circular Economy and Sustainable Development Goals
ICE&SDGs	Global Institute for Circular Economy and Sustainable Development Goals
ICLEI	International Council for Local Environment Initiatives
MSME	Micro, small, and medium enterprise
MUR	Mauritian Rupee
NGO	Non-governmental organisation
OECD	Organisation for Economic Cooperation and Development
PACE	Platform for Accelerating the Circular Economy
PAYT	Pay-as-you-throw
PRO	Producer Responsibility Organisation
R&D	Research and development

REC	Regional Economic Community
RECP	Resource Efficient and Cleaner Production
SADC	Southern African Development Community
UGEFA	Uganda Green Enterprise Finance Accelerator
UK	United Kingdom
UNDP	United Nations Development Programme
UNEA	United Nations Environment Assembly
UNECA	United Nations Economic Commission for Africa
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization
WEF	World Economic Forum
WIPO	World Intellectual Property Organization
ZAR	South African Rand

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EXECUTIVE SUMMARY

The Context for Advancing a Circular Economy in Africa

Africa has a rapidly growing population, which will increase pressure on the continent's already stretched natural resources. The population is forecast to reach approximately 2.5 billion by 2050, which will double 2017 levels.[1] The youth population is expected to account for 51% of the total population around that same period.[2] Between 2015 and 2035, Africa will, on average, gain 22.5 million new workers entering the labour force annually, and jobs will need to be created to sustain the economy.[3] The region's fast-growing young and middle-class population is expected to drive a higher standard of living and greater consumption including demand for food, decent-quality housing, and infrastructure – particularly in urban areas.[4] This presents an opportunity for Africa to adopt the circular economy to achieve "inclusive and sustainable economic growth and development"[5] as affirmed in Agenda 2063 of the African Union Commission (AUC).

Creating and optimising resource loops along value chains could help meet the material needs of growing populations and maintain sustainable rates of per capita primary resource use. The circular economy is defined as a holistic approach to socio-economic growth that maximises resource efficiency through promoting sustainable production and consumption practices. It involves rethinking how products are designed to extend product life and value, as well as reusing, repairing, or re-purposing end-of-life materials in manufacturing processes to reduce and ultimately eliminate waste. Several sectors have been identified as having high potential for circularity across Africa, and the agriculture, manufacturing, tourism, and integrated waste management sectors are making the most strides in increasingly advancing circular business models. Collaboration between governments, the private sector, experts, and financiers is required to replicate these business models at scale.

Countries across the region are at various stages of adopting circular processes in their production and consumption practices. Some countries do not have a holistic understanding of circular economy and its benefits for their economies. They have a fragmented implementation approach primarily anchored on integrated waste management initiatives, with limited exploration of circular economy opportunities in other sectors. They therefore require technical assistance to establish policies that have a clear vision aligned with national priorities, and regulatory frameworks to advance a circular economy, as well as support to achieve sponsorship for implementation from the highest level of the state. Other countries are establishing national policies or laws that can advance a circular economy, with some national support (personnel and funding) to drive specific sector-wide initiatives aligned with national goals. However, the countries that are this stage of their transition to a circular economy, typically face challenges in promoting a private sector-led circular economy that can scale new business models with adequate growth capital support from private financial institutions. In other instances, whilst regulations may be in place, enforcement mechanisms are inadequate, with limited capacity to monitor progress on achieving national circular economy objectives.

Overall, African countries still face many challenges that hinder their ability to advance circular economy initiatives across different economic sectors. This report has identified five main challenges in advancing a circular economy in Africa, namely:

- Lack of a holistic approach to adopting the circular economy which reflects opportunities in all sectors beyond just waste management
- Limited awareness and communication of the benefits of a circular economy

[1] Worldometer, Africa Population (LIVE)
[2] UN, The World Youth Report – Youth and the 2030 Agenda for Sustainable Development, 2018
[3] One.org, The African Century, 2017
[4] World Economic Forum, Five Big Bets for the Circular Economy in Africa, 2021
[5] African Union Commission, Agenda 2063: The Africa We Want., 2022

- Market entry barriers for innovation and growth of circular economy business models developed by the private sector
- Limited coordination of circular economy strategies and action plans, as well as little monitoring of circular initiatives
- Insufficient and misaligned financing mechanisms and funding options

The Purpose of the Regional Guidelines

The circular economy is not a new phenomenon in Africa as countries have been driving policy transitions to support circularity for years. In 2019, the ministers of environment from all African countries committed to advancing the circular economy to spur sustainable socio-economic development and job creation whilst reducing waste, pollution, and the reliance on natural resources during the African Ministerial Conference on the Environment (AMCEN) held in Durban, South Africa.[6] Following this conference, AUC and AMCEN set up an Africa Union Circular Economy Expert Woking Group seeking to draft a regional action plan to enable an integrated approach towards circularity.[7] In March 2022, the United Nations Environment Assembly (UNEA) adopted a resolution encouraging member states to integrate circularity in national and regional development plans, and create a conducive environment to increase access to affordable green financing and sustainable markets, particularly to micro, small, and medium-sized enterprises (MSMEs). Also in March 2022, the African Development Bank (AfDB) launched the Africa Circular Economy Facility (ACEF) to provide: (1) institutional capacity building to strengthen the regulatory environment for circular economy innovations and practices; (2) support to the private sector through a business development program; and (3) technical assistance to the African Circular Economy Alliance (ACEA). Many other initiatives – such as SWITCH Africa Green which supported seven countries to adopt sustainable consumption and production practices – have been implemented to promote a circular African economy.

The transition to a circular economy must primarily be led by the private sector, with regional bodies and national governments providing the appropriate enabling environment to sustain the transition. These regional guidelines seek to help make the business case for the circular economy and establish a common and suitable enabling environment across the continent by promoting regional coherence and collaboration. The key guidelines for advancing circular economy are:

- ***Guideline 1: Make the case for the circular economy by increasing awareness of its significance for sustainable development in Africa***
  - Establish strong economic cases for a circular economy across African countries aligned with their national priorities and objectives, as well as regional and international commitments
  - Get buy-in from the highest level of government to enact national circular economy policies
  - Set regular multi-stakeholder discussion sessions to strengthen public-private partnerships and encourage a private sector-led transition
  - Coordinate regional in-person and virtual peer learning platforms across RECs to foster collaboration in circular business model development
  - Run awareness-raising campaigns and capacity development programmes across the country to communicate the importance of adopting a circular economy and promote innovation. Specifically:
    - Collect and share stories on various initiatives and business models that are successfully advancing the transition towards a circular economy
    - Integrate circular economy principles in academic curricula to develop the right capacity for innovation and implementation

[6] AMCEN, Draft Durban Declaration for environmental sustainability and prosperity in Africa, 2019
[7] Ellen MacArthur Foundation, Circular economy in Africa: examples and opportunities Public Policy, 2021

- ***Guideline 2: Establish policy and governance structures to ensure that national and regional policies on the circular economy are complementary***
  - Establish an institutional framework which explicitly states key stakeholders and their roles in implementing initiatives – both national and regional – to advance a circular economy, including coordination structures
  - Create a National Cleaner Production Centre to coordinate sustainable production and consumption programming between government and businesses. Where one exists, strengthen its capacity
  - Establish national regulatory frameworks that are aligned across RECs to reduce barriers to entry, exit, and growth of new circular firms and business models
  - Ensure adequate resources for implementing, monitoring, and evaluating regional circular economy strategies established by RECs
- ***Guideline 3: Strengthen market demand for circular economy products by providing effective incentives for firms to consider the impact on natural capital in their decision-making***
  - Engage the private sector to understand their needs to unlock resources and increase innovation advancing a circular economy. Specifically, support upstream innovation that is tackling issues from their roots by designing context-specific circular economy solutions
  - Enact circular procurement policies for government entities such as furniture refurbishment policies and internally circulating excess supplies to create demand for circular products
  - Co-develop EPR policies for a range of products and sectors with relevant stakeholders so that circularity becomes embedded in business decision making and operations
  - Phase out contradictory subsidies that support linear business models and establish environmentally positive incentives across countries. For instance, reduce or remove import duties on primary goods used for managing pollution and resources (such as equipment used in recycling plants, or on secondary raw materials)
- ***Guideline 4: Increase access to financing for circular business models, including risk capital, by supporting financial innovation and entrepreneurial skills development***
  - Allocate a certain portion of the national budget for specific and prioritised circular economy initiatives to channel funds towards circular economy solutions. Advocate for RECs to allocate funding for regional circular economy initiatives
  - Develop technical assistance programmes for MSMEs to equip them with the skills and documentation required to access funds designated for the circular economy
  - Develop due diligence frameworks that allow financiers to determine whether companies are truly adopting circular business practices and/or production processes
  - Engage regional DFIs to establish innovative financial products and adopt proactive circular economy credit policies and lending strategies
- ***Guideline 5: Establish sector-specific priorities and policies, and ensure their coherence across countries and RECs***
  - Conduct national scoping studies to identify key sectors with high potential for advancing a circular economy and the relevant business opportunities
  - Establish a national fund to support R&D and innovation for circular economy solutions
  - Liaise with regional trade partners to collaboratively enact coherent policies and incentive frameworks to advance the circular economy at the national and regional levels

I. INTRODUCTION: THE IMPORTANCE OF A CIRCULAR ECONOMY IN AFRICA

Africa has a rapidly growing population, which will increase pressure on the continent's already stretched natural resources. The population is forecast to reach approximately 2.5 billion by 2050, which will double 2017 levels.[8] The youth population is expected to account for 51% of the total population during that same period.[9] Between 2015 and 2035, Africa will, on average, gain 22.5 million new workers entering the labour force annually, and jobs will need to be created to sustain the economy.[10] The region's fast-growing young and middle-class population is expected to drive a higher standard of living and greater consumption including demand for food, decent-quality housing, and infrastructure – particularly in urban areas.[11] This presents an opportunity for Africa to adopt the circular economy to achieve "inclusive and sustainable economic growth and development"[12] as affirmed in Agenda 2063 of the AUC. The circular economy also has socio-economic benefits for the private sector (see Figure 1

Figure 1: Non-exhaustive breakdown of socio-economic benefits of a circular economy to the private sector

Theme	Description	Case example
Business sustainability	The climate crisis and loss of natural capital have highlighted the urgency and need for businesses to adopt greener business practices. Hence, sustainability is becoming a determinant of business competitiveness.	Over 50% of total global GDP is estimated to be nature-dependent. In Sub-Saharan Africa, over 70% of the population depends on forests and woodlands for their livelihoods.
Alignment with consumer preferences	Growing consumer awareness of the importance of transitioning to sustainable business practices such as the circular economy has direct implications for the businesses and/or products they choose to support.	In France, 60% of adults who make online purchases prefer to purchase eco-friendly products. In metropolitan China, 82% of online shoppers have this similar preference.
Access to finance	Investors and DFIs are increasingly using ESG and sustainable development as key criteria in their investment decision making processes. To access finance from these entities, businesses must ensure that their objectives and activities align with the investment mandates of the providers of capital.	97% of Robeco's EUR 201 billion AUM are managed under assets that have integrated ESG policies. The firm seeks 100% ESG compliance across all its investment funds as part of its long-term strategy.
Access to markets	The global regulatory environment is integrating sustainable development and circular business practices. Therefore, businesses seeking to operate in both domestic and international markets must proactively comply with these requirements.	The European Green Deal introduced in 2019 to support the EU's goal to reduce GHG emissions and be carbon neutral by 2050 requires suppliers to the EU to adhere to the market's sustainability standards.

), mainly on meeting new sustainability requirements being demanded by consumers and unlocking new domestic and international markets.

Figure 1: Non-exhaustive breakdown of socio-economic benefits of a circular economy to the private sector

[8] Worldometer, Africa Population (LIVE)
[9] UN, The World Youth Report – Youth and the 2030 Agenda for Sustainable Development, 2018
[10] One.org, The African Century, 2017
[11] World Economic Forum, Five Big Bets for the Circular Economy in Africa, 2021
[12] African Union Commission, Agenda 2063: The Africa We Want., 2022

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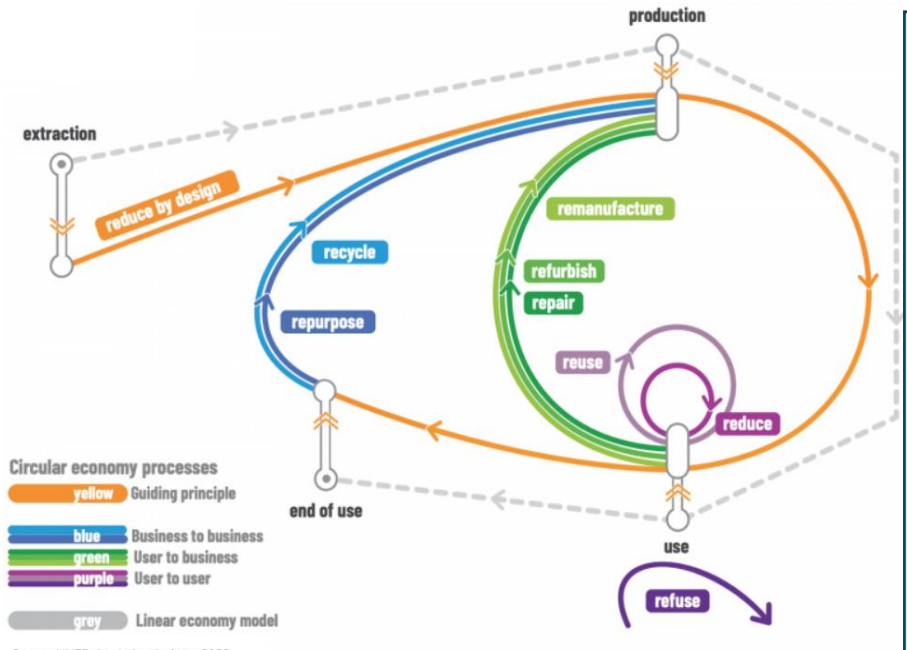
Access to markets	The global regulatory environment is integrating sustainable development and circular business practices. Therefore, businesses seeking to operate in both domestic and international markets must proactively comply with these requirements.	The European Green Deal introduced in 2019 to support the EU's goal to reduce GHG emissions and be carbon neutral by 2050 requires suppliers to the EU to adhere to the market's sustainability standards.

Sources: African Law & Business, The continued rise of investor interest across Africa, 2022; Robeco, 2022; CBI, The EU Green Deal – How will it impact my business, 2021; World Economic Forum, Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy, 2020; UNEP, Our Work, 2022; Forrester, Global Consumers Drive The Market Toward Sustainable Retail, 2021

The circular economy is based on adopting nature-positive practices that eliminate waste and maximise resource value as an approach towards developing strong and resilient economies.[13] A circular economy is one in which products and materials are recycled, repaired, and reused rather than thrown away, and in which waste from one industrial process becomes a valued input into another. It is a system-wide approach to adopting nature-positive practices that: i) eliminate waste and pollution; ii) maximise resource efficiency; and iii) promote sustainable production and consumption, to develop strong and resilient economies. Circular processes can be grouped into four categories as outlined in Figure 2:

- Reducing by design: reducing the amount of material used, particularly raw material, should be applied as an overall guiding principle from the earliest stages of design of products and services
- From a user-to-user perspective: Refuse, Reduce and Re-use
- From a user-to-business intermediary perspective: Repair, Refurbish and Remanufacture
- From business-to-business: Repurpose and Recycle.

Figure 2: An illustration of the circular economy approach



For these guidelines, a circular economy is defined as a holistic approach to socio-economic growth that maximises resource efficiency through promoting sustainable production and consumption practices. It involves rethinking how products are designed to extend their useful life and value, and reusing, repairing or repurposing end-of-life materials in manufacturing processes to reduce and/or eliminate waste

The circular economy and the green economy are two approaches to achieving inclusive and sustainable development. There are different perspectives on the interrelation between the circular economy and the green economy. on the one hand, the two are view synonymously; on the other hand, the circular economy is viewed as a subset of the green economy. The United Nations Environment Programme (UNEP) defines a green economy as follows:

A green economy is a low-carbon, resource efficient, and socially inclusive economy where income and employment growth are driven by public and private investment into economic activities, infrastructure, and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevent the loss of biodiverse ty and ecosystem services.[14]

The circular economy can therefore be viewed as a first and crucial step to achieving a green economy.

In Africa, interventions to reduce single-use plastic products and enhance integrated waste management have been the main drivers of the transition to a circular economy. On average, only 4% of municipal solid waste is currently being recycled in Africa.[15] Even so, Egypt, Nigeria, South Africa, Algeria, Morocco, and Tunisia, are expected to double their imports of plastics by 2030. [16] In response to the threat of increased plastic waste, African countries are exploring opportunities to reduce and re-use plastics through Extended Producer Responsibility (EPR) programs.[17] There is also ongoing research and initiatives on the use of non-biodegradable waste such as plastics to create alternative building materials to replace the cement and steel traditionally used in construction. Recently, South Africa[18] and Kenya[19] launched national Plastics Pacts and are members of the Plastics Pact Network[20] which seeks to strengthen public-private collaboration to facilitate the transition towards a circular economy across the entire plastic value chain. Mauritius is establishing Civic Amenity Centres where households and MSMEs can dispose of waste items such as paper, plastics, metals, construction and demolition wastes, waste oils, e-waste, and used tyres. Recyclers can then collect this waste and use it as inputs in their production processes.[21] In Nigeria, Lagos state[22] has various Integrated Waste Management Initiatives co-funded by different international organisations including UNEP.[23] Despite all these efforts, only 44% of solid waste in Sub-Saharan Africa is collected, and 8% is recycled and/or composted.[24] In some instances, the huge focus on waste recycling has detracted countries from identifying and taking advantage of the range of opportunities such as product design and remanufacturing across different sectors to derive the full socio-

[14] UNEP, Green Economy, accessed 2022
[15] UNEP, Africa – waste management outlook: summary for decision makers, 2018
[16] Babayemi, J.O., Nnorom, I.C., Osibanjo, O., et al., Ensuring sustainability in plastics use in Africa: consumption, waste generation, and projections, Environ SciEur 31, 60, 2019
[17] EPR schemes for packaging are already being implemented in a number of countries including Senegal, the Gambia, and Zimbabwe, and are currently in development in Kenya and South Africa.
[18] The South African Plastics Pact was launched in January 2020 with the support of the UK's Waste and Resources Action Programme. It aims to increase job creation in the country's plastics collection and recycling industry while also exploring new business models in plastic design and reuse. The Pact was founded by Coca-Cola Africa, Danone, SPAR, and Unilever, and partners with the World Wide Fund for Nature South Africa and South African Plastics Recycling Organisation and has ambitious targets to drive significant change by 2025.
[19] The Kenya Plastics Pact was launched in October 2021 and is led by Sustainable Inclusive Business Kenya to integrate the plastics value chain and create collaborative solutions to plastic waste and pollution, with four ambitious targets to achieve significant change by 2030.
[20] Ellen MacArthur Foundation, The Plastics Pact Network, 2022
[21] Association for the Protection of the Environment and Consumers, Civic Amenity Centre, 2020
[22] Lagos state has 16 waste and recycling companies and is setting the national standard for good waste management's practices.
[23] Stakeholder consultations, 2022
[24] Chatam House, Circular Economy Earth: Municipal Solid Waste, 2022

economic benefits of a circular economy. Box 1 highlights some socio-economic benefits of a circular economy for Ghana and Nigeria.

The transition to a circular economy requires collaborative effort between governments, industry associations, private sector players, and financiers to create a viable enabling environment. Taking advantage of circular economy business opportunities requires a holistic system transformation, with multiple stakeholders at national and regional levels to not only raise awareness, but to also create financing options and trading markets for the circular products. Governments have a critical role to play in developing legislation and policies to provide a clear definition and purpose of the circular economy. Academia and the private sector are crucial in researching, innovating, and prototyping new circular business models that can be attractive investments for private investors. Additionally, current public and private financing mechanisms need to be adapted to suit the needs of circular economy business models and the MSMEs who are often leading the innovations. Box 2 summarises the role of key stakeholder to coordinate efforts and accelerate the transition towards a circular economy.

Box 1: Examples of the socio-economic benefits of the circular economy in Ghana and Nigeria

For Ghana and Nigeria, adopting the circular economy in sectors such as agriculture, integrated waste management, and construction could generate the following benefits by 2030:

Ghana

- EUR 1.9 billion added to GDP, equivalent to a 1.9% increase compared to business-as-usual levels
- EUR 274 million reduction in imports, thus improving the country's balance of trade
- Enhanced agriculture value chain to reduce post-harvest losses
- 61,000 additional jobs created (0.3% increase) as compared to remaining in the linear economy
    - The highest job creation potential is found in sectors such as agriculture, waste management, financial services, education, and telecommunications among others

Nigeria

- EUR 15.2 billion added to GDP, equivalent to a 3.2% increase compared to business-as-usual levels
- EUR 4.4 billion reduction in imports, thus improving the country's balance of trade
- Enhanced agriculture value chain to reduce post-harvest losses
- 1.6 additional jobs created (3.9% increase) as compared to remaining in the linear economy
    - The highest job creation potential is found in sectors such as agriculture, waste management, retail, and manufacturing

Sources: 1. Hemkhaus, M.; Ahlers, J.; Kumi, E.; Boateng, P.; Hack, J.; Bauer, T.; Smit, Tycho; Akenji, L.; Van Hummelen, S. & McGovern, M. (2020) Circular economy in the Africa-EU cooperation – Country report for Ghana. Country report under EC Contract ENV.F.2./ETU/2018/004 Project: "Circular Economy in Africa-EU cooperation", Trinomics B.V., ACEN, adelphi Consult GmbH and Cambridge Econometrics Ltd; 2. Rajput, J.; Potgieter, J.; Aigbokhan, G.; Felgenhauer, K.; Smit, T.A.B; Hemkhaus, M.; Ahlers, J.; Van Hummelen, S.; Chewpreecha, U.; Smith, A. & McGovern, M., (2020) Circular economy in the Africa-EU cooperation - Country report for Nigeria. Country report under EC Contract ENV.F.2./ETU/2018/004 Project: " "Circular Economy in Africa-EU cooperation", Trinomics B.V., Tomorrow Matters Now Ltd., Adelphi Consult GmbH and Cambridge Econometrics Ltd

Box 2: The role of different actors in advancing the circular economy

***Governments and National Cleaner Production Centres**: establish appropriate policy and regulatory environments for circularity, facilitate dialogue and coordinate national interventions across a range of stakeholders (research organisations, civil society organisations (CSOs), private sector, etc.), increase awareness and education on the circular economy, and promote sustainable consumption and production including sharing, re-using, recycling, and eco-labelling*

***Businesses, Industry Associations, and Trade Unions:** develop and invest in new business models, products, and services based on circular economy principles and/or industrial symbiosis, cooperate with regulatory and government entities in implementing initiatives, and aid in scoping visions for circularity at the regional, national, and municipal levels. Also, work with governments and MSMEs to implement national circular initiatives and provide business development support to MSMEs to enable them to create commercially viable projects and access commercial financing instruments and consumer markets*

***Research organisations, cluster organisations, and universities:** establish new training courses and academic curricula to embed circularity in the design of products and services, attract investments in R&D for new and green technologies, and create mass awareness on sustainable consumption, production, and procurement practices for circular goods and services*

***CSOs and Non-governmental organisations (NGOs):** lobby for specific regulations or policies (e.g., integrated industrial policies aligned with sustainable national development goals), foster technological innovation for efficient green industrial processes, invest in R&D for clean energy and energy-saving technologies, support environmentally-friendly and sustainable practices (e.g., recycling, eco-mobility,[25] and sustainable lifestyles), and collaborate on creating and testing new circular innovations with end users and civil society*

The purpose of the proposed guidelines is to accelerate the transition of African countries towards a circular economy by providing a clear pathway to adopting its principles. To develop these guidelines, multiple stakeholders across the public and private sectors were consulted to understand the current state of adoption of a circular economy across Africa, and the required interventions to encourage stakeholders to incorporate circular economy principles in their activities. A mix of virtual and in-person one-on-one interviews, as well as in-person focus group discussions in several African countries, provided invaluable insight for this work. These engagements served as the first phase of validating findings and building consensus on what is required to accelerate the transition to a circular African economy. A complete draft of these guidelines was then shared with various stakeholders from different countries across the continent ahead of a regional validation workshop held in Accra, Ghana at the end of August 2022. This workshop provided a platform for these stakeholders to share their feedback on the draft guidelines and engage in an open, plenary discussion to validate the guidelines. In the process of developing these guidelines, however, little evidence was found on the mechanisms that are effectively advancing the transition to a circular economy in Africa as data is scarce and programs are still at a relatively early stage. Furthermore, it is important to note that the study focused on ten countries and four sectors, and there may be effective initiatives in countries outside these focus areas that are not captured in this report.

This rest of the report is arranged as follows: Section 2 assesses the challenges in advancing a circular economy in Africa; Section 3 discusses the critical enablers required to accelerate the transition; Section 4 explores the regional adoption of a circular economy in Africa; Section 5 identifies key regional guidelines and best practices that countries can adopt and adapt to their specific context to advance a circular economy; and Section 6 provides recommendations on how countries can begin to adopt these guidelines.

[25] This term refers to environmentally friendly, integrated, and socially inclusive modes of transportation including walking, cycling, carpooling in electric light electric vehicles, and using public transport

II. Challenges in Advancing a Circular Economy in Africa

African countries still face numerous challenges that hinder their ability to advance circular economy initiatives across different economic sectors. This report has identified five common challenges in transitioning to a circular economy in Africa, including:

- Lack of a holistic approach to adopting the circular economy which reflects opportunities in all sectors beyond just waste management
- Limited awareness and communication of the benefits of a circular economy
- Market entry barriers for innovation and growth of circular economy business models developed by the private sector
- Limited coordination of circular economy strategies and action plans, as well as little monitoring of national initiatives
- Insufficient and misaligned financing mechanisms and funding options

Lack of a holistic approach to adopting the circular economy which reflects opportunities in all sectors beyond just waste management

The interconnection between circular economy objectives and national development goals is often limited in African countries, reflected in the narrow presence of circular initiatives in national policy instruments and/or regulatory frameworks. The holistic understanding of the circular economy as a system transformation is still new in Africa, with only eight African governments being part of ACEA[26] and committing to creating linkages and coordinating various efforts to facilitate Africa's transition to a circular economy. More generally, there is still limited knowledge on the full breath of opportunities that the circular economy presents, as it is usually just associated with waste management. Hence, the mandate to develop and implement circular economy activities tends to be limited and isolated to the Ministries of Environment.[27] The regulatory environment is still not conducive enough for the circular economy. Limitations may include a lack of strong commitment to circular initiatives such as green procurement, regulations, and technical standards that support the innovations (both technological and non-technological) required to advance the circular economy.[28]

Limited Awareness and Communication of the Benefits of a Circular Economy

Limited awareness, capacity building, and education on the socio-economic benefits of the circular economy make it harder to translate circular economy ideas into investable business models. The circular economy is often either viewed as a trade barrier resulting from stringent transnational trade regulations on product types and quality. Additionally, because the circular economy concerns how products are designed, produced, used, and what happens to them at end of life - it tends to be perceived as a system that limits production capacity. However, the production of many goods that end up in the African markets largely occurs outside the continent, meaning design decisions are made without the engagement of African stakeholders. Hence, the circular economy tends to be reduced to recycling and/or reusing products with minimal investments in R&D for product re-design. Also, many MSMEs, particularly those in the waste sector, are unable to articulate their scaling plans, including how the technologies they are developing can be applied to other aspects of the economy

[26] African Circular Economy Alliance
[27] To illustrate this point, ACEA was founded by the ministries of environment of Nigeria, Rwanda, and South Africa.
[28] UNECA, Unleashing of the Potential of the Private Sector in Driving Green Growth and Job Creation in Selected African Countries, 2022 [Draft Report - Under Review]

beyond recycling, for example. Coupled with limited consumer awareness of circular products, this impairs the perceived competitiveness of these products relative to their linear counterparts.

Moreover, there is a pervasive lack of awareness of the various circular model business opportunities that exist and how the transition would benefit businesses, society, and the economy at large. Information sharing among African companies is very limited and serves as a barrier to circular economy acceleration and scaling up. There is a lack of education programs in circular thinking for primary and secondary schools, vocational and higher technical education; limited communication about the economic and environmental benefits of going green; lack of knowledge-sharing, limited sharing of best practices in the green economy space; no time for market actors to follow informative courses about the benefits and the circular economy approach; and lack of consumer and investor awareness and interest in a circular economy. To unlock the circular economy, stakeholders throughout the value chain need education and more awareness to shift their mindsets.

Market Entry Barriers for Innovation and Growth of Circular Economy Business Models Developed by the Private Sector

African countries are adopting circular designs at slow rates due to several market barriers that inhibit the development and sustaining of circular business models and/or initiatives. The prevailing market barriers on the African continent include low costs of virgin material which make reusing resources an unattractive alternative; limited subsidies or market incentives for secondary materials and products to be incorporated into production processes; high upfront investment costs for identifying and establishing circular business processes; and lack of substantial market volumes or economies of scale for new and innovative circular products. Lack of technical knowledge on circular business opportunities, limited facilities to implement circular business models, and limited access to finance for these business models are additional key barriers that are hindering widespread private sector involvement in the sector. Furthermore, most businesses are reluctant to make such investments as there isn't yet clear evidence that these costs will be recovered through higher sales revenues (often referred to as the 'green premium').

The limited data on circular economy business processes also inhibits the scaling of initiatives. Across the continent the inability to share information about the availability, quality, and location of circular materials, and the lack of data on environmental footprints, technical performance, tracking and reuse planning, all result in most projects and businesses remaining small in scale.[29]

Limited Coordination of Circular Economy Strategies and Action Plans, as well as Little Monitoring of Circular Initiatives

Poor coordination and monitoring of circular economy initiatives result in entities, both public and private, working in silos, duplicating efforts, and inefficiently utilising the limited resources at their disposal. Some incumbent industries are resistant to changing business-as-usual and adopting circular economy practices. For example, South Africa has an Extended Producer Responsibility (EPR) policy[30], for plastic packaging, implemented and enforced through seven Producer Responsibility Organisations (PROs) that developed separate mandates for their respective members.[31] Membership was voluntary, which restricted the adoption and implementation of this policy as some producers opted out of the EPR scheme. Consequently, not all producers within the PROs were implementing the EPR, the PROs were not working as a collective, and the government had to align and monitor multiple action plans and mandates. Another challenge that delays the implementation

[29] UNECA, Unleashing of the Potential of the Private Sector in Driving Green Growth and Job Creation in Selected African Countries, 2022 [Draft Report - Under Review]
[30] The EPR policy is contained within the Section 18 Regulations of the South African National Environmental Management: Waste Act of 2020 and came into effect in May 2021.
[31] Plastics SA, Extended Producer Responsibility – creating a true circular economy for plastics packaging, 2022

of initiatives is government reshuffles that happen, sometimes abruptly with no coordination[32], or clear path for the undisrupted implementation of current initiatives.

Insufficient and Misaligned Financing Mechanisms and Funding Options

There is a lack of hybrid financing mechanisms that combine grant funding with more mainstream commercial financing products to develop and scale circular economy business models. Funding to grow and scale circular business models is predominantly provided by governments, NGOs, and a few global development finance institutions (DFIs). Economic incentives such as tax breaks and subsidies to encourage the private sector to invest in the circular economy are underdeveloped relative to those for linear business models. As a result, funding – particularly for MSMEs – tends to come from the government as part of government efforts to advance a circular domestic economy. Furthermore, existing circular business models do not exhibit attractive profitability levels and lack proper risk assessments, thus limiting their access to traditional funding from commercial banks. Additionally, circular business models are relatively unknown and therefore deemed as riskier and more complex than their linear economy counterparts, which inhibits their ability to access seed and growth capital. A challenge that is more prevalent amongst MSMEs are the collateral and due diligence requirements connected with commercial funding. This makes MSMES hesitant to seek debt financing as they typically lack the resources to meet these requirements.[33] Instead, they tend to seek subsidies or grants, which are difficult to mobilise. Finally, financial institutions lack financing products designed to fund circular business models. For example, blended finance models are scarce, and very limited R&D capital is available. This type of funding is required to develop and incorporate new technologies in consumption and production processes. Consequently, this lack of financial innovation limits the amount of private sector capital being channelled towards these businesses.

[32] Addis Standard, News: PM Abiy forms new gov't; adds 20 institutions including NISS, investment & financial security accountable to his office, 2021
[33] Stakeholder consultations, 2022

III. Critical Enablers to Advance a Circular Economy in Africa

To address the barriers to the adoption of circular economy practices on the continent, UNEP identified six critical enablers that can facilitate a regional transition towards circularity. These are: (i) establishing conducive circular economy policies to set clear priorities for different stakeholders; (ii) enacting comprehensive laws and regulatory enforcement mechanisms to encourage product substitution, resource efficiency optimisation, as well as sustainable production and consumption; (iii) creating institutional frameworks for collaborative implementation of circular economy initiatives; (iv) creating awareness about circular economy processes, benefits, and best practices, as well as capacity building through technical assistance to private and public sector entities to help them integrate circular processes and technologies in the economy; (v) enhancing private sector engagement to co-create solutions and market incentives to increase innovation and the adoption of circular economy practices; and (vi) mobilising adequate funding for circular economy initiatives. The following subsections articulate the relevance of these six enablers for Africa, how they are currently being deployed on the continent (in some instances, examples from outside Africa are provided), and the impact they have had in advancing the circular economy.

Policy Environment

Transitioning to a circular economy requires a phased approach in which a country's context informs policy priorities, and various policy instruments to aid the transition are developed with joint input from both public and private stakeholders. Although most of these instruments are often established and implemented at a country-level, regional institutions can play a role in harmonising policy priorities for increased transnational collaboration to create an enabling environment for the circular economy across Africa. Table 1 provides a non-exhaustive list of different types of policies and instruments with varying effectiveness in advancing the circular economy across the continent.

Table 1: Non-exhaustive list of policy types and instruments that can accelerate the transition to a circular economy

Policy Type	Instrument	Examples
Public strategies and policies	Regional/National/City-level Policies	• COMESA Industrialisation Strategy, COMESA • National Climate Change Adaptation Policy Framework, Mauritius • Rwanda National Environment and Climate Change Policy, Rwanda
	Strategies/Implementation or Action Plans	• Climate Resilient Green Economy Strategy, Ethiopia • The Green Economy Strategy & Implementation Plan, Kenya
	Sector Policies or Guidelines	• National Policy on Plastic Waste Management, Nigeria • Tourism Concession Guidelines for Transfrontier Conservation Areas in SADC, SADC
	EPR Policies	• The National Environmental (Base Metal, Iron & Steel Manufacturing/Recycling Industries Sector) Regulations, Nigeria • Extended Producer Responsibility for Plastics Packaging, South Africa
Procurement and Innovation	Circular or Green Public Procurement	• EU Green Public Procurement Criteria, EU • City of Cape Town Green Procurement Action Plan, South Africa
	Eco-design requirements: durability, repairability, recyclability	• EU's Eco-Design Directive, EU

	Voluntary Agreements	• European PVC industry voluntary agreement, EU • The Courtauld Commitment 2030, UK
Certifications & Labelling	Certifications	• BCA Green Mark[34] certification e.g., Nyarutarama Plaza, Rwanda • Mauritian certification for adopting international Green Agricultural Practices[35] , Mauritius
	Eco-labelling	• EU Ecolabel, EU • Der Grüne Punkt, Germany

Public policies which require manufacturers to assume responsibility for the environmental impacts of their products throughout the whole product lifecycle are amongst the most successful policy measures globally. By internalising the end-of-life management costs of materials (i.e., those linked to collection and recycling), policies such as EPR schemes are an important tool to boost innovation and enhance resource efficiency.[36] These policies are also gaining traction in Africa, with almost 20 countries having at least one EPR policy in place primarily for plastics or electronic products.[37] There are significant variations in the products for which countries are enacting EPR policies across the continent, and there is a need to: (1) expand the application of these policies in more countries; and (2) harmonise products covered by these policies to allow for regional economies of scale in managing products at their end-of-life. In voluntary agreements – which can be between government and private stakeholders, or simply made among private sector actors for mutual benefit – signatories commit to taking certain actions to advance a circular economy. These instruments rely on self-regulation, coordination, information disclosure, and shared goals for them to be effective. For instance, in the European PVC industry voluntary agreement, fifteen companies in the imaging sector committed to complying with requirements on primary design, resource efficiency, and providing consumers with accurate information on the environmental impact of their products and thus contribute to achieving the EU Action Plan on Energy Efficiency.[38]

Procurement and innovation-based policies such as those on circular or green public procurement are another key instrument to accelerate the transition to a circular economy. These procurement policies set resource efficiency standards for suppliers and products purchased by the public sector, thus stimulating innovation, shaping consumption and production, and ultimately creating markets for greener products.[39] They can be used to design criteria relevant to the circular economy, such as product lifespan requirements and quality standards for second-hand or repaired products. More sustainable and nature-positive public procurement processes can have a high impact. For instance, in 2016, government procurement in member countries of the Organisation for Economic Cooperation and Development (OECD) accounted for one third of public expenditures and 12% of GDP.[40] In sectors such as construction, health services, and public transport where the public sector is the major consumer, circular public procurement has a high potential. In 2020, the AfDB – with support from UNEP – established a Sustainable Public Procurement Policy that requires borrowers to include sustainability provisions to allow the bank to determine the potential impact of excluding certain products or suppliers, or limiting eligibility to a selected group of qualified green products or categories of bidders on the market.[41] Whilst these types of policies are increasing across the

[34] The Green Mark Certification Scheme is a rating system for green buildings that is designed to assess the environmental impact and performance of a building.
[35] Stakeholder consultations, 2022
[36] EPR schemes can include a variety of policy instruments, such as product taxes, recycling requirements, deposit-refund schemes, and disposal fees
[37] African countries with EPR policies include Mauritius; Madagascar; Zimbabwe; Zambia; Tanzania; Rwanda; Uganda; Ghana; Nigeria; Sao Tome & Principe; Côte D'Ivoire; Gambia; Cabo Verde; Mali; and Egypt
[38] Industry Voluntary Agreement to Improve the Environmental Performance of Imaging Equipment Placed on the European Market, VA v.5.2, 2015
[39] For best practices on GPP, see this paper here: OECD, Going Green: Best Practices for Sustainable Procurement, 2015
[40] OECD, Towards a more resource-efficient and circular economy - the role of the G20, 2021
[41] AfDB, Sustainable Public Procurement Guidance Note, 2020

continent, there are barriers to implementation that hinder their effectiveness. For example, in most countries, there are no green product verification systems to assist in screening green products and ultimately simply product evaluation processes. Due to limited government resources, the cost of product verification would likely be borne by producers. Premium costing is also anticipated due to the small number of suppliers able to provide green products, and this higher cost of circular products relative to linear ones may slow down the adoption of circular procurement processes.[42] Thus, when creating an enabling environment to accelerate the transition to a circular economy, policymakers must engage various public and private stakeholders to enhance acceptance and adoption. European countries in the North Sea region have been piloting various projects through ProCirc (see Box 3) to determine the opportunities for circular procurement.

Box 3: ProCirc: Piloting circular procurement in the North Sea Region

ProCirc is a project implemented from 01st January 2018 to 31st December 2022 covering multiple countries in the North Sea region, namely: Belgium, England, Denmark, the Netherlands, Scotland, and Sweden. The aim of the project is to advance the transition to a circular economy using procurement processes to create market demand for circular products. ProCirc involves 30 pilot initiatives to determine the benefits of a circular economy and procurement processes in the region.

As part of the program, in 2019, Het Facilitair Bedrijf – the Facilities Services Agency of the Flemish government in Belgium – signed two framework contracts with a local company for the supply of refurbished office furniture. Under the first contract, government entities could have their existing furniture inventoried, collected, refurbished, and returned in a renewed state by the local company. The second contract allowed government entities to trade their surplus furniture for credits with the partner company. These credits could be used to acquire other circular items – as needed – from the company at discount prices. In 2021 alone, over 1,000 refurbished furniture items were reused, and over 1,100 more pieces were reused following light refreshment services by the local company. In terms of climate change mitigation, procuring refurbished furniture prevented over 308,000 tons of CO_2 emissions.

Sources: North Sea Region, ProCirc; Circular Flanders, Refurbished furniture for employees of the City of Leuven and AG Stadsontwikkeling Leuven; Circular Flanders, The Flemish government's Facility Services Agency opts for circular office furnishings. All accessed 2022.

Additionally, information-based policy instruments such as certifications and eco-labelling could be effective in encouraging multi-stakeholder participation in advancing a circular economy. Such instruments seek to increase information transparency on the circularity of business processes and products, thus allowing consumers to make informed choices. They generally have lower compliance and enforcement costs than traditional command and control policies such as public and procurement and innovation policies.[43] Certifications and eco-labelling requirements help to build the business case for circularity by using industry requirements, competition among businesses, and meeting consumer preferences as enforcement and compliance mechanisms.

Regulatory Frameworks and Legal Instruments

The legal and regulatory frameworks define mechanisms through which the policies can be enforced, thus ensuring compliance and motivation for all stakeholders to advance the circular economy. However, it is challenging to establish and align legal instruments across countries, as well as ensure appropriate implementation and enforcement mechanisms for them. Table 2 provides examples of regulatory mechanisms that have been effective in promoting the circular economy.

[42] Naicker, CT., Opportunities and barriers for greening procurement in South African Provincial Public Entities- perspectives from KwaZulu-Natal, 2018

[43] Bengtsson, M., Hotta, Y., Hayashi, S., and Akenji, L., The four main types of policy instruments Policy Tools for Sustainable Materials Management: Applications in Asia, 2010

Table 2: Non-exhaustive list of regulatory frameworks that can accelerate the transition to a circular economy

Regulatory Frameworks	Legal Instruments	Examples
Legal and compliance mechanisms	Legislative Acts	• Environmental Management & Co-ordination Act, Kenya • Hazardous and Electronic Waste Control Management Act, Ghana
	Prohibitions (e.g., single use bans)	• Prohibition of Manufacturing, Importation, Use, and Sale of Polythene Bags, Rwanda • Plastic ban (National Environmental Act No.5), Uganda
Economic and financial mechanisms	Ecotaxes (e.g., virgin material taxes)	• Eco-levy on imported electric and electrical goods and tires (Hazardous and Electronic Waste Control and Management Act 917), Ghana • Plastic bag levy (Section D to Part 3 of Schedule No. 1 of Act No. 20 of 1998), Namibia
	Incentive frameworks (e.g., Grants, Subsidies, Differentiated interest rates, Exemptions)	• 5-year tax exemption for businesses that use cocoa by-products derived from substandard cocoa beans, cocoa husks, and other cocoa waste as main production input, Ghana • Development Bank of Rwanda provides low interest rate loans to the agriculture sector. The rates are lowered even further if the project performs well[44]

Legal and compliance mechanisms allow regulatory authorities to enforce various policy instruments that are within the statutes of their mandates. Policymakers use legislative acts to codify the decisions they make into binding laws that provide direction on acceptable actions under the specific policy. For example, in Kenya, the Environmental Management and Co-ordination Act is the guiding law for environmental management and related matters in the country.[45] Governments and policymakers can also use prohibitions to remove undesirable products from domestic markets. Prohibitions are widely used across Africa, particularly those banning the use, manufacture, sale, and even importation of single-use plastic products. Some countries, such as Rwanda, have even banned the importation of used clothing to promote the local garment and textile industry.[46] As a circular economy seeks to maximise resource value, prohibitions can be applied to enhance product quality. For example, countries could prohibit the importation of poor quality used clothing to mitigate the fast-fashion trend and bring more circularity in the fashion and textiles industry.

Economic and financial mechanisms – such as ecotaxes, subsidies, and differentiated interest rate schemes – can also be used to enhance resource efficiency and incentivise the transition to a circular economy. Virgin material taxes seek to foster efficient resource use by increasing the cost of extracting and using natural resources and raw materials, while landfill taxes can play a key role in diverting waste flows from landfills. In most cases, however, resource tax rates tend to be too low to effectively enhance resource productivity. In addition to incentivising materials reuse and recycling, environmentally positive subsidies can also encourage increased materials productivity. Waste management can also benefit from pay-as-you-throw (PAYT) schemes, as well as cap-and-trade schemes, such as the tradable landfill permits scheme implemented in the UK.[47] Although the application of these instruments to advance a circular economy is currently limited in Africa, they have huge potential (see Box 4 on the application of ecotaxes and subsidies in Europe).

[44] Stakeholder consultations, 2022
[45] The Republic of Kenya, Environmental Management and Co-ordination Act, Revised edition 2016 [2014]
[46] BBC, How the United States and Rwanda have fallen out over second-hand clothes, 2018
[47] OECD, Towards a more resource-efficient and circular economy - the role of the G20, 2021

Box 4: Ecotaxes and subsidies on cars

Ecotaxes provide economic incentives to promote environmentally friendly practices by putting a levy on products, practices, or activities which are deemed harmful to the environment. In 2011, the European Commission envisioned that by 2020, the contribution of ecotaxes to public revenue would have increased due to a shift from labour taxation to environmental taxation systems. Although this shift has not fully materialised, European countries have implemented ecotaxes on various products and activities. Ecotaxes on vehicles are one mechanism European countries are promoting more circular modes of transportation.

In 2019, Italy introduced an ecotax on highly polluting cars and an eco-bonus to purchasers of environmentally friendly modes of transport such as mopeds, scooters, motorbikes, and electric vehicles. Both the ecotax and the eco-bonus are applied to the price of the vehicle at the time of purchase. The tax ranges between EUR 1,100 and EUR 2,500 depending on an individual vehicle's carbon dioxide emission levels. A tax rebate of up to EUR 3,500 is available to owners who replace their vehicles that are at least 10 years old with new ones. Furthermore, Italy signed a decree to allocate EUR 650 million annually for incentives to buy electrified or low-polluting cars during the 2022-2024 period. The country plans to subsidise up to EUR 6,000 of the purchase price of new electric vehicles to support the local car industry.

Bulgaria charges between EUR 64 and EUR158 for vehicles registrations depending on the age of the car. As of April 2022, cars older than five years will incur and additional 3% increase on the eco tax they are charged. Additionally, the Ordinance on annual technical inspections of road vehicles had an addendum, noting that vehicles will now have to add a sticker on their windshield of which eco-group the car belongs to, and this will be part of efforts to promote more environmentally friendly vehicles.

Source: Reuters, Italy to give new electric car buyers subsidy of up to 6,000 euros, 2022; ANSA, Car 'ecobonus-ecotax' system kicks in, 2019; Automotive News Europe, Italy to introduce scrapping program to boost sales after coronavirus hit, 2020; Bulgarian National Television, In Bulgaria, eco tax on cars older than 5 years goes up, 2022; Nonivite.com, Bulgaria: What will change after eco-stickers for vehicles are mandated, 2021.

Institutional Arrangements

The transition to a circular economy requires well-established structures that facilitate coordination in the implementation of initiatives and mitigate the duplication of efforts by different stakeholders. These governance structures seek to align different national and regional policies to enable a coordinated regional transition to a circular economy and widespread compliance, to ease the enforcement burden. This coordination among policy makers also allows them to establish uniform standards and accreditation statutes so businesses can scale their operations regionally. Additionally, countries need to have monitoring and evaluation mechanisms to support effective implementation and progress, as well as ensure that initiatives are not contradictory. Overall, having clearly defined institutional frameworks allow for the efficient allocation of resources to support the transition to a circular economy. Box 5 explores the institutional framework used by the EU to implement its Circular Economy Action Plan.

Box 5: Institutional framework for the EU Circular Economy Action Plan

The EU has made great strides in promoting the circular economy among its member states. Earlier legislation and initiatives, both mandatory and voluntary, targeted specific sectors or economic activities without promoting circularity across the entire economic process. For example, the *Ecodesign Directive* of 2009 provided a framework to enhance energy efficiency through regulating the design on energy-related products. While this was a progressive move towards a circular economy within the EU, it could not result in the required system transformation.

In 2015, the EU unveiled its first *Circular Economy Action Plan (CEAP)* outlining 54 action plans covering a broad range of circular economy principles including product design, consumption, waste management, and creating a market for secondary raw materials. The plan employed a mix of voluntary initiatives and regulatory requirements and sought to establish cross-sectoral partnerships along the entire value chain.

The Directorate-General for Environment and Directorate-General for Internal Market, Industry, Entrepreneurship, and SMEs co-lead the implementation of the CEAP, whilst the Secretariat General of the European Commission coordinates the implementation efforts of the different directorates.

Following the successful implementation of the CEAP, the EU then launched the *European Green Deal* in 2019 to further accelerate the region's transition to a circular and competitive market. This is an ambitious plan focusing on nature and societally positive economic development that will make Europe the world's premier climate-neutral continent. In 2020, the EU unveiled its second *Circular Economy Action Plan*.

Having defined institutional arrangements to coordinate the efforts of the EU member countries and their cooperation towards achieving the shared goal of sustainable and climate-smart growth has been instrumental in promoting an exemplary regional approach to transitioning to a circular economy.

Sources: European Commission, First circular economy action plan, 2022; European Union, Circular Economy Action Plan: For a cleaner and more competitive Europe, 2020; Ellen MacArthur Foundation, The EU's Circular Economy Action Plan: Setting the world's largest single market on a transition towards a circular economy, 2020

Capacity Development and Awareness Creation

Circular business models and practices are different from their linear counterparts, and capacity development is instrumental in ensuring that all stakeholders have the relevant skills to adopt these practices. Furthermore, capacity development enables relevant stakeholders, particularly MSMEs, to access the required technologies and financing to allow innovation and the growth of circular business models. In addition to capacity development, awareness creation creates common understanding of the circular economy, available business opportunities, and its potential socio-economic benefits by the government, private sector, development partners, and consumers. When jointly pursued, capacity development and awareness creation eventually allow for parallel adoption of circular practices at the production and the consumption levels (see Box 6).

Box 6: Capacity Development by the Institute for Circular Economy and Sustainable Development Goals

Global Institute for Circular Economy and Sustainable Development Goals

The Global Institute for Circular Economy and Sustainable Development Goals (ICE&SDGs) is an international think tank headquartered in India seeking to advance innovations in science and technology using current research and development. ICE&SDGs was founded in 2018 and provides capacity development, awareness creation, and advisory services to help individuals and organisations transition to a circular economy by adopting zero-waste, zero-carbon, and carbon-neutral practices.

To date, ICE&SDGs has provided capacity building training to over 400 organisations across 78 countries in Africa, Asia, Europe, and the Americas on adopting circular economy practices in their operations. The institute has also offered sector-specific training to MSMEs in India on transitioning to a circular economy. Additionally, the institute partnered with Climate-KIC, a European climate knowledge and innovation initiative to mentor more than 35 circular economy and sustainability start-ups from various countries including India, Canada, and Bangladesh.

To further accelerate the transition towards a circular economy, ICE&SDGs established the International Alliance on Circular Economy and Sustainable Development Goals (IAoCE&SDGs) in 2021. The Alliance has over 110 representatives from governments, funders, private sector, and experts from the South Asian Association for Regional Cooperation and across the globe. The members exchange knowledge to build the required capacity and collaboratively advance a circular economy. IAoCE&SDGs has since developed the Circular Economy Standard and Certification System, which can be used to determine the circularity of products, business and production processes, as well as buildings. This certification framework seeks to align with international standards for a circular economy and make circular economy principles more mainstream.

Circle Economy

Circle Economy is an organisation seeking to empower decision-makers from the public and private sectors to develop and implement circular economy strategies and business models. Since its founding in 2011, Circular Economy has worked with over 20 national governments, more than 40 city governments, and over 100 businesses to create evidence-based circular economy roadmaps to be used in decision-making and to prompt action. Other service offerings include the Circle Workshop Suite, which is a set of on- and offline training courses to build knowledge on the circular economy. Along with an introduction on circular economy, other topics covered include financing circular business models; circular design practices; and innovating for a circular economy.

Table 3 provides additional examples of different mechanisms countries can use to increase awareness of the circular economy and relevant initiatives. It also provides some examples on tools that can be used to provide capacity building to support organisations and individuals as they adopt circular economy principles.

Table 3: Non-exhaustive list of awareness creation and capacity development instruments to advance a circular economy

Type	Instruments	Examples
Awareness creation	Advocacy and Lobbying	• Ecopreneur.eu – Circular Economy • Africa Circular Economy Alliance
	Conferences and Webinars	• World Circular Economy Forum • European Circular Economy Stakeholder Platform
	Consumer Awareness (e.g., Social Behaviour Change Campaigns) Mass Media Sensitisation (TV, Radio, social media)	• E-waste management awareness campaign, Uganda • PROSOL Project - Solar water heaters awareness raising campaigns, Tunisia
Capacity Development	Research	• Circular Economy Research Centre, France • Council for Scientific and Industrial Research - The Science and Technology Policy Research Institute, Ghana

	Knowledge Repositories	• Footprints Africa – Knowledge Hub • Ellen MacArthur Foundation
	Technical Assistance	• SWITCH Africa Green Programme, Burkina Faso, Ethiopia, Ghana, Kenya, Mauritius, South Africa, and Uganda • Confédération Générale des Entreprises de Côte d'Ivoire - Patronat Ivoirien, Côte d'Ivoire • Uganda Green Enterprise Finance Accelerator, Uganda
	Peer Learning Platforms and Networks	• Africa Circular Economy Network • Nigeria Circular Economy Working Group • Platform for Accelerating the Circular Economy

Private Sector Engagement

The circular economy requires a systemic change in economic activity, including strengthened public-private partnerships to facilitate a multi-stakeholder approach. In particular, the role of the private sector is key in leading the innovation and technological development which will accelerate the transition towards a circular economy. Furthermore, the private sector can mobilise the resources required to make this transition sustainable. Box 7 spotlights some examples of how private sector engagement can advance a circular economy.

Box 7: Private sector engagement

Holland Circular Hotspot

The Ministry of Infrastructure and Water Management in collaboration with the Netherlands Enterprise Agency created the Holland Circular Hotspot, a private-public platform to help companies, knowledge institutions, and local authorities promote the Dutch circular economy. The platform focuses on eight themes, namely: biomass and food; circular cities; construction; consumer goods; manufacturing; plastics; textiles; and water. Cases studies, publications, events, and news related to each of these themes can be found on the platform.

The Holland Circular Hotspot presents an opportunity to support interested Dutch organisations with circular innovations and/or initiatives that they wish to export to other places with capacity development and a medium to facilitate the trade. The platform also organises frequent meetings on current developments in circular business models globally. Additionally, it organises numerous events and provides businesses with peer learning opportunities by highlighting success stories from various countries to showcase progress in advancing a circular economy.

SWITCH Africa Green

The SWITCH Africa Green Programme has provided policy and networking support to the private sector. One of the key activities of this programme has been to enhance the resource productivity and environmental performance of MSMEs through industrial symbiosis. The project trained MSMEs on the concept of industrial symbiosis and sought to enhance the capacity of Resource Efficient and Cleaner Production (RECP) Centres to enable them to continue delivering business support for improved production systems and resource use. Applying the lessons from this engagement, the Western Cape province in South Africa launched an industrial symbiosis program in the city of Cape Town. The success of this initiative has served as a positive example that has prompted other cities, both in South Africa and across the continent, to also adopt industrial symbiosis in their journey towards a circular economy.

Source: SWITCH Africa Green, Enhancing the resource productivity and environmental performance of MSMEs in 6 African countries through the concept of industrial symbiosis, 2019. Holland Circular Hotspot

Funding and Financing Options

Circular business models and initiatives require different production and implementation approaches than their linear counterparts. Hence, financial innovation is required to catalyse adequate capital to finance the acquisition of required technology, R&D, product prototyping, and

market development for circular business models and initiatives. Table 4 provides a non-exhaustive list of funding and financing mechanisms to promote a circular economy.

Table 4: Non-exhaustive list of funding and financing instruments to advance a circular economy

Type	Instruments	Examples
Public Sector Based	Seed capital	• SEED Entreprise Support Programme
	Innovation Grants	• SME Mauritius Technology and Innovation Scheme, Mauritius • FONERWA's Innovation Grant, Rwanda
	Credit Lines *(with differentiated rates for circular businesses)*	• FONERWA's credit line (11.45% compared to market rates of 16-18%)
	Challenge/Innovation Funds	• Innovation Fund, EU • African Innovation Foundation
Private Sector Based	Working Capital Loans	• Uganda Green Finance Entreprise Accelerator, Uganda
	Asset Financing	• M-KOPA, Ghana, Kenya, Nigeria, and Uganda

De-risking instruments from governments have also been effective in encouraging innovation and increasing demand for circular products such as renewable energy solutions. Box 8 looks at one mechanism used by the UK government to incentivise investments in renewable energy generation and adoption.

Box 8: UK Contracts for Difference Scheme for the generation of renewable energy

The Contracts for Difference (CfD) Scheme is the main mechanism used by the UK government to increase low-carbon energy generation capacity in the country. The volatility of the country's energy market is a deterrent to investors. To channel more funds towards renewable energy generation, the government created the CFD scheme which directly hedges wholesale prices for developers of projects with high initial capital requirements and long lifespans. Through this de-risking mechanism, the scheme indirectly protects consumers from paying increased support costs resulting from high electricity prices. to offer a minimum price for electricity generated.

To support the country's goal to phase out the use of fossil fuels, the UK launched a renewable energy auction scheme in 2021. The scheme received GBP 285 million in funding for the development of low-carbon technology, with GBP 200 million allocated towards harnessing offshore wind power, GBP 75 million designated for emerging technologies, and the rest going towards established renewable energy technologies such as solar power.

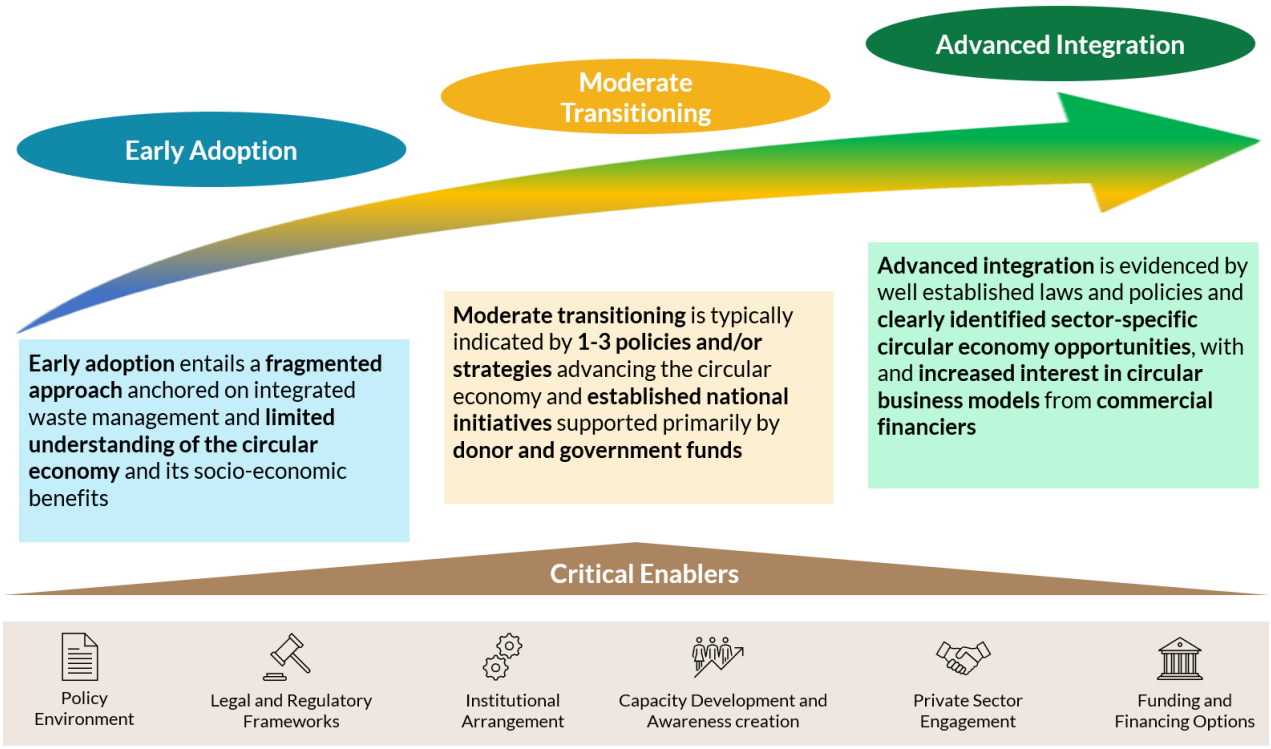
The CfD scheme has been effective in increasing the deployment of renewable energy across the UK and reducing energy costs. As a result, the latest allocation round of the scheme aims to establish a more resilient energy system in the journey towards net zero.

Source: Gov.UK, Biggest ever renewable energy support scheme opens, 2021; Power Compare, Contracts for Difference: How Does It Work & Why Do We Need It?, accessed 2022.

IV. Regional Adoption of a Circular Economy in Africa

Across the continent, countries are advancing towards adopting a circular economy at differing paces. The transition to a circular economy can best be defined as traversing a continuum. As such, transitioning to a more circular economy is a phased approach, along a hierarchy of different objectives that aim to improve public health, mitigate environmental impacts from disposal practices, and facilitate environmental improvements through material efficiency and recovery.[48] The process of developing these guidelines uncovered three phases along this continuum (see Figure 3), marked by a set of enablers to promote further progression and adoption of circularity. The following subsections discuss the characteristics in each phase in line with the critical enablers required for further adoption of a circular economy.

Figure 3: Stages in the transition to a circular economy



During the early adoption stage, countries understand what the circular economy is but not necessarily the alignment with their national objectives or the macro-economy, thus a fragmented approach to advancing the circular economy is common. Different economic actors (public and private) are working in siloes and only adopt circular economy practices based on their individual interests. Even within government, there is limited awareness of what different government institutions are doing to advance the circular economy, which may lead to the inefficient allocation of the limited government resources and duplication of effort. Furthermore, even though there is understanding of the economic benefits of the circular economy, business models and initiatives are anchored on integrated waste management as this is the typical entry point for countries as they transition. Food, plastic, and electronic waste present immediate opportunities for circularity, and there is currently a major focus on recycling, which exerts a lot of pressure on an economy's recycling capacity.[49]

At the early adoption phase, countries also understand that circular business opportunities beyond recycling also exist. To discover and unlock opportunities in reusing, repairing, remanufacturing, and

[48] OECD, Towards a more resource-efficient and circular economy - the role of the G20, 2021
[49] Stakeholder consultations, 2022

redesigning products, countries begin to develop a comprehensive roadmap for the circular economy. This roadmap tends to outline implementable steps and actions that key stakeholders – from both the public and private sectors – will adopt to facilitate the transition.[50] Figure 4 shows the key characteristics and critical enablers to advance a circular economy during the early adoption phase.

Figure 4: Key characteristics and enablers for the early adoption phase

Characteristics	Critical Enablers
Weak political commitment at the highest levels of government and enforcement mechanisms to advance the circular economy	Establish national / city-level circular economy policies and action plans to provide a clear pathway for adopting the circular economy
No clear laws and guidelines for industries to promote new circular economy approaches and sector opportunities, although some policies and laws may exist with embedded provisions that can advance the circular economy	Advocate across the highest levels of government to create buy-in for passing circular economy policies and laws Develop a clear institutional framework and targets for the circular economy to aid enforcement, monitoring, and evaluation
Focus of circular economy activities is on integrated waste management, with insufficient data on pollution levels to guide this process and limited understanding of how other sectors can replicate these initiatives	Conduct national scoping studies to identify sector specific circular economy opportunities and key interventions for them
Limited knowledge of new technologies required to effectively enable businesses to adopt circularity in their production processes	Execute nation-wide awareness creation campaigns to enhance public knowledge of circular economy concepts, initiatives, opportunities, and the required skills and technologies
Not all economic sectors are active in advancing the circular economy, and most initiatives are government-led	Engage the private sector to discuss unlocking barriers to incorporating circular business practices and promote technological and business model innovation
Funding to drive the circular economy is typically from within existing national budgets	Mobilise financial resources e.g., grants to support key national initiatives, R&D, and early-stage circular business models

During early adoption, countries require technical assistance to establish policies that have a clear vision aligned with national priorities, laws/regulatory frameworks to advance the circular economy, and advocacy to achieve sponsorship to facilitate implementation from the highest authoritative level of the state

The moderate transitioning phase is characterised by a shift towards employing an integrated approach to advancing the circular economy across specific product and/or sector value chains. At this stage, countries typically have a few comprehensive policies that explicitly support the transition to a circular economy which are accompanied by some ongoing national initiatives primarily financed through donor or government funds under the leadership of a handful of government ministries. Nevertheless, monitoring and evaluation mechanisms still need to be strengthened through capacity building and resource mobilisation. Along with this, businesses face challenges in converting the identified sector-wide opportunities for the circular economy into attractive investment opportunities, which slows down participation in the circular economy. Figure 5 details the critical enablers required to overcome these challenges and continue to advance the circular economy in the moderate transitioning phase.

[50] Ibid

Figure 5: Key characteristics and enablers for the moderate transitioning phase

Characteristics	Critical Enablers
National policies and regulations that can advance the circular economy (such as climate resilience and adaptation, green growth and sustainable development, and EPR policies) exist	Align national initiatives, especially production processes and quality standards, with global ones to ensure competitiveness of domestic circular economy products
Monitoring and evaluation mechanisms are still weak and under-resourced	Make regional and local studies on the circular economy publicly available to improve data availability for monitoring and evaluation, even those conducted by private entities
	Engage government institutions to facilitate intra- and intergovernmental coordination, monitoring, evaluation, and raising awareness about the circular economy
1-3 ministries, typically the ministries of agriculture, environment, and finance, lead and fund circular economy initiatives from their specific budget allocations or donor funding targeting specific projects	Provide fiscal and technical incentives to encourage the private sector to invest in circular business models and innovation, including developing new technologies
	Engage the private sector to mobilise resources and increase innovation in circular economy business models and technologies
Clear sector-wide opportunities identified, but with challenges converting them into viable commercial businesses and/or encouraging wide-spread uptake	Provide business development support to draft appropriate business plans, collect and keep relevant required data to access financing, and skills development to apply for available funding
	Nominate appropriate regulatory bodies to provide appropriate business certifications and/or labelling standards to improve the credibility of circular businesses, products, and services
Financial institutions are starting to gain interest in circular businesses, but do not have sufficient data or technical understanding to confidently invest in these businesses	Engage financing institutions to catalyse private capital and provide financing products tailored to the circular economy

The moderate transitioning phase requires institutional arrangements, including regulatory bodies, that can enforce laws to advance the circular economy and monitor progress on national plans, as well as increased private sector engagement for the adoption of circular business practices

The advanced integration phase is characterised by a well-established policy environment with multiple stakeholders working together to advance the circular economy. At this stage, countries completely understand that a systems transformation across the entire national economy is required to derive the full benefits of the circular economy. Therefore, there is a big focus on further enhancing policy coordination and public-private partnerships to enable this change without adversely impacting socio-economic activity. The partnerships are essential for developing transnational business models, green financing mechanisms, innovation and technology, human capital, and expertise, as well as creating access to diverse markets. Also, they allow circular business models to achieve economies of scale and expand so that they can effectively compete with, and replace, linear business models. Furthermore, establishing robust integrated value chain databases is another critical enabler in the advance integration phase. Countries at the advanced integration stage tend to collaborate with each other to develop sector and product specific databases to enhance efficiencies in business operations, production process, and consumption habits. These data can also be utilised by financial service providers to conduct due diligence on potential circular economy investments or loan applications to ensure business case viability. Figure 6**Error! Reference source not found.** details the key characteristics and critical enablers required to continue to advance a circular economy in the advanced integration phase.

Figure 6: Key characteristics and enablers for the advanced integration phase

Characteristics	Critical Enablers
Well-established national policy and regulatory environment with defined and effective institutional frameworks to advance a circular economy	Coordinate policies with regional trading partners with clear institutional arrangements to facilitate regional integration driven by a circular economy
Strong collaboration amongst multiple stakeholders (private, public, CSOs, research institutions) to develop and implement initiatives advancing a circular economy	Establish a Transnational Steering Council with representation from all economic actors (public and private sectors, academia, NGOs, civil society, etc.) to coordinate regional integration efforts
	Create a dedicated entity, such as a Secretariat, with representation from various stakeholders to strengthen public-private partnerships
Lack of data to support increased investment and the scale-up of circular economy business models	Develop linkages between the Ministry of ICT and technical experts share knowledge and expertise for the development and maintenance of secure value chain databases
Limited awareness amongst end-consumers of circular economy products, which limits market demand for them and the relevant technologies and skillsets to make these products	Integrate circular economy principles in school curricula to help mainstream circularity and develop the right capacity for innovation and implementation of these business models
Existing price discrepancies between products produced through linear and circular business models	Develop innovative financing products tailored to circular economy business models e.g., blended financing, private equity, venture capital, and tradeable stocks

The advanced integration stage requires strengthened public-private partnerships to unlock more potential (transnational business models, financing, innovation, human capital and expertise, access to diverse markets, etc.) to accelerate the transition to a fully circular economy

The advanced integration phase does not mark the end of the transition to a circular economy. circular economy requires constant adaptation and innovation to promote resource efficiency and sustainable socio-economic development. Therefore, all stakeholders must diligently monitor their actions so that they fully embody circular economy principles. This also entails ensuring circularity across entire business value chains, which includes all domestic and international trading partners.

V. Regional Guidelines and Best Practices to Accelerate the Transition towards a Circular Economy

Intended Outcomes of Adopting the Guidelines for Advancing a Circular Economy in Africa

In Africa, the AUC, AfDB, and Regional Economic Communities (RECs) can play a pivotal role in advancing the transition towards a circular economy. For instance, these regional bodies can help countries to establish harmonised circular economy policies and legislation, as well as facilitate knowledge exchange and peer learning to build viable transnational business models. Table 5 explores the progress made by RECs to advance the circular economy.

Table 5: Current initiatives developed by Regional Economic Communities to advance the circular economy

REC	Circular economy initiatives
Common Market for Eastern and Southern Africa	• Plans to develop a framework for a private sector-led circular economy to help achieve the region's Industrialisation Strategy and Action Plan goals[51]
East African Community	• Launched the Eastern African Regional Bioeconomy Strategy 2021/22-2031/32 whose organising framework is a bio-based circular economy and prioritises innovation in bio-based products and processes[52]
Southern African Development Community	• Launched its Green Economy Strategy and Action Plan for Sustainable Development aimed at enabling even, resource-efficient, and sustainable socio-economic development across member states • Currently drafting a sub-regional circular economy roadmap to guide member states on the key targets and opportunities for the circular economy on which they can collaborate[53]

The present guidelines seek to complement ongoing initiatives at the national, regional, and continental levels to accelerate the transition towards a circular economy. Firstly, they seek to help countries make the business case for the transition through developing markets for new circular products and scaling existing circular business models. This will ensure that the circular economy is not simply viewed as an environmental solution under government mandate, but as a solution for business sustainability led by the private sector. Secondly, these guidelines seek to help countries establish a common and suitable enabling environment to advance a circular economy through policy harmonisation between countries. For the regional transition to be successful and sustainable, such an enabling environment must exist across all countries to ensure that initiatives at both the national and regional levels to advance a circular economy are complementary. Thirdly, the guidelines promote regional coherence and collaboration which is essential for resource mobilisation and implementation. This will include finances, knowledge, technical expertise, and innovation which will make circular business models more mainstream and unlock economies of scale. Ultimately, these guidelines aim to support a coordinated approach to advance a circular economy in Africa by identifying key actions that need to occur at the national level that countries can adopt and adapt to their specific context, and those that must be driven at the regional level to accelerate the continent-wide transition for maximum impact.

Five key guidelines have been identified to advance the transition to a circular economy in Africa:

1. Make the case for the circular economy by increasing awareness of its significance for sustainable development in Africa
2. Establish policies and governance structures to ensure that national and regional policies on circular economy are complementary

[51] COMESA, Medium Term Strategic Plan 2021 – 2025, 2022
[52] East African Science and Technology Commission, The Eastern African Regional Bioeconomy Strategy: A Summary, 2020
[53] Stakeholder consultations, 2022

3. Strengthen market demand for circular economy products by providing effective incentives for firms to consider the impact on natural capital in their decision-making
4. Increase access to financing for circular business models, including risk capital, by supporting financial innovation and entrepreneurial skills development
5. Establish and harmonise sector-specific priorities and policies across countries and sub-regional economic communities

These guidelines and their respective best practices are discussed in the following sub-sections.

Guideline 1: Make the case for the circular economy by increasing awareness of its significance for sustainable development in Africa

A circular economy is a system-wide approach to socio-economic development that emphasises adopting nature-positive practices to develop strong and resilient economies. This requires rethinking how economic activity occurs in a country, as well as behavioural change to shift away from linear and unsustainable production and consumption practices. Governments, both national and regional, must provide overall guidance on the goals of the circular economy and on how to effectively make the transition. For them to adequately assume this role, increased awareness and understanding among government leaders of the significance of the circular economy as an engine for sustainable growth in Africa is required. However, accelerating the transition to a circular economy is not solely a government responsibility. The private sector needs to drive innovation and develop viable circular business models, whilst consumers need to create demand for circular products. Increased overall awareness about the circular economy (see Box 9 Box 9on how Finland undertook this) will therefore help to create a conducive environment to support the transition and shift the thinking of all relevant stakeholders due to a clear understanding of the benefits of adopting a circular economy. Table 6 provides a list of best practices for increasing awareness. Each best practice has examples of where these have been applied, which provides a practical reference point for countries in their transition.

Box 9: Increasing circular economy awareness – Finland Circular Economy Education

As the first country to develop a comprehensive national circular economy roadmap, Finland is a pioneer in advancing a national transition. Creating mass awareness is critical to achieving this goal, and the country has made great strides by integrating circularity principles in academic curricula at all educational levels.

The Finnish Innovation Fund Sitra developed the Circular economy teaching for all levels of education package to facilitate the development of skills, knowledge, and understanding of the circular economy. Implemented from 2017 to 2019, the projects in the package covered various fields including arts, engineering, behavioural sciences, and design. Multiple lectures, presentations, training sessions were held throughout the country. As of 2019, more than 70,000 students from primary, secondary, vocational, and university institutions around the country had studied about the circular economy.

An external impact evaluation on the package showed that circular economy education could be permanently offered as formal courses in the Finnish education system in the future. The projects stressed the importance of identifying experienced project implementors, encouraging multi-disciplinary cooperation, establishing a knowledge-sharing platform accessible by all schools, and reflecting sustainable circular economy principles in the overarching strategies of educational institutions.

Sources: SITRA, How to make the circular economy part of the national education system – Tips from Finland, 2019; SITRA, Circular economy teaching for all levels of education, 2019

Table 6: Best practices for raising awareness of the importance of the circular economy for sustainable development

Best Practices	Examples	Potential Regional Implementers
Increase awareness amongst government entities and get buy-in from the highest level of government to enact national circular economy policies	• ACEA provides policy development support, leadership, and advocacy at the national, regional, and pan-African levels to help governments accelerate the transition to a circular economy[54] • The Nordic Waste Prevention Group, an arm of the Nordic Council of Ministers, launched the "Moving towards a circular economy – successful Nordic business models" project to mainstream the concept of the circular economy in the Nordic countries and accelerate the transition to a circular economy[55] • The Environmental Protection Agency in Ireland launched a Circular Economy Programme in 2021 which will provide leadership to align national, regional, and local circular economy activities to support the implementation of the country's circular economy strategy[56]	AUC, RECs, ACEA
Increase national awareness of circular practices and initiatives to accelerate their adoption	• In 2020, the government of Rwanda launched #GreenRwanda, a two-year national campaign to raise awareness of sustainable e-waste management and encourage the public to dispose of their e-waste at designated collection sites for them to be recycled by EnviroServe Rwanda [57] • The African Circular Economy Network (ACEN) Foundation organises various conferences, workshops, and activities to raise awareness of the significance of the circular economy. These initiatives target stakeholders at the country and regional levels[58]	ACEN, ACEA
Strengthen national and regional public-private partnerships and establish information exchange platforms to foster collaboration and circular business model development for a private sector-led transition	• The Ellen MacArthur Foundation and UNEP are leading the Global Commitment, a platform that enables governments and the private sector to commit to changing the way they produce, use, and reuse plastic[59] • The Polish Circular Hotspot is a platform that brings together various public and private stakeholders so that they can collectively advance the transition to a circular economy in alignment with their interests[60]	AUC, UNEP
Establish strong economic cases for the circular economy across African countries aligned with their national priorities and objectives	• ACEN, through its network of over 100 country representatives in 30 countries across Africa, works with key stakeholders in the countries of presence to share best practices through developing circular business cases and projects to promote the circular economy[61] • Footprints Africa and ACEN, through the support of GRID-Arendal and Shifting Paradigms collects case studies on various circular economy initiatives implemented by MSMEs across the continent. To date, over 500 cases have been included in the Knowledge Hub housed by Circular Economy[62]	UNECA, ACEN, ACEA

[54] African Circular Economy Alliance, About ACEA, accessed 2022
[55] Norden, Moving towards a circular economy – successful Nordic business models, 2015
[56] Government of Ireland, Whole of Government Circular Economy Strategy 2022 – 2023 'Living More, Using Less', 2021
[57] Rwanda Ministry of ICT and Innovation, Rwanda launches campaign to boost e-waste recycling and collection, accessed 2022
[58] ACEN Foundation, Awareness raising, accessed 2022
[59] Ellen MacArthur Foundation, The Global Commitment, accessed 2022
[60] The Polish Circular Hotspot is one of several platforms promoting the circular economy in Europe. It seeks to develop innovative, practical, and scalable solutions for public and private stakeholders to adopt circular economy practices, reduce the reliance on natural resources, reverse environmental degradation.
[61] African Circular Economy Network, accessed 2022
[62] Knowledge Hub, Discover practical examples of the circular economy in Africa!, accessed 2022

Coordinate in-person and virtual regional peer learning platforms across RECs	• ACEN has chapters in different countries, and chapter members have access to training, workshops, events, and other knowledge sharing activities for the circular economy • ICLEI World Congress has a major summit every three years, to showcase how cities, towns and regions across its network are advancing sustainable design ideas on an urban scale. This summit is attended by government leaders and presents learning sessions for the attendees. It also hosts monthly webinars and offers both virtual and in-person training	ACEA, ACEN, ICELI, UNECA
Integrate circular economy principles in academic curricula to develop the right capacity for innovation and implementation	• The Education for Sustainable Development in the Southern African Development Community Regional Strategic Framework was developed to help SADC Member States to integrate Education for Sustainable Development (ESD) into their education systems. ESD builds the capacity of individuals, communities, and society as a whole to make informed judgments and choices in favour of sustainable development	RECs

Guideline 2: Establish policy and governance structures to ensure that national and regional policies on circular economy are complementary

Countries have been implementing various initiatives to advance the circular economy, but these efforts have primarily been government-led and executed in siloes. There is limited coordination between ministries and other government institutions to effectively implement circular economy initiatives for widespread adoption and impact. In many countries, circular economy policies are mainly owned by and seen as a responsibility for the ministries of the environment, yet successful adoption of a circular economy will bring a system change that goes beyond environmental conservation and enhancement. Circular economy policies need to be addressed at the national level, and governments should ensure that other existing policies are aligned with these policies to avoid countering efforts to advance and promote the circular economy.

Additionally, regional, and national policies need to be complementary to help in the realisation of economies of scale. Aligning regional and national circular economy policies will help circular businesses from different countries operate under similar policy environments and should enable cross-country and cross-business sector models. This will facilitate the replication of successful circular business models in different countries and the development of transnational businesses, which will ultimately help circular businesses become more mainstream. The EU has developed a circular economy action plan to provide regional direction which member countries can reference and align with when developing their respective national action plans for implementation (see Box 10). Table 7 provides a list of best practices that can be adopted to establish and/or strengthen governance structures that will help harmonise national and regional policies for the circular economy. Each best practice has examples, of where these have been implemented, that regional entities can leverage.

Box 10: EU Cicrcular Economy Action Plan

The circular economy is one of the main building blocks of the European Green Deal. As such, the EU launched its second Circular Economy Action Plan (CEAP) which articulates the economic bloc's ambition to promote a just transition to a climate-neutral, resource-efficient, and circular economy globally. This latest action plan also emphasises the need to dematerialise the economy, reduce the current reliance on primary materials in economic activity, and secure access to resources to foster resilient supply chains.

Furthermore, the CEAP identifies key product value chains in electronics and ICT, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water, and nutrients. It also identifies required actions such as the development of sustainable product policy legislation and minimum mandatory green public procurement processes.

As with the first CEAP, the current plan also targets product design, promotes circular economy processes, encourages sustainable consumption, and aims to ensure that waste is prevented by keeping resources used in production and consumption in the EU economy for as long as possible

The coherence in priorities and policies across the EU – which contributed to the successful implementation of the first CEAP – can serve as a guide for Africa countries on how to better reflect circularity in their policies and initiatives whilst also working collaboratively with other member states within their RECs to accelerate the transition to a circular economy.

Source: European Commission, Circular Economy Action Plan – For a cleaner and more competitive Europe, 2020

Table 7: Best practices for creating governance structures to ensure the complementarity of national and regional circular economy policies

Best Practices	Examples	Potential Regional Implementers
Establish national regulatory frameworks that are aligned across RECs to reduce barriers to entry, exit, and growth for new circular firms and business models	• South African Development Community (SADC) launched a Green Economy Strategy and Action Plan for Sustainable Development to facilitate even, resource-efficient, and sustainable socio-economic development across member states • The East African Organic Products Standard was adopted in 2007 by the East African Community (EAC) to act as the official standard for organic agriculture production in the region. The Standard was the first regional organic standard on the continent and the second worldwide, and it established organic agriculture as a trade and environment priority in the EAC	AUC
Define a coordination structure for the implementation of national and regional circular economy initiatives	• In Zimbabwe, the National coordination on the Implementation of SDGs (NACOS) Initiative was established with the aim to ensure that there is a coherent, coordinated, and all-inclusive participatory approach to the effective localisation, implementation, and coordination of the 2030 Agenda in Zimbabwe.[63]	AUC, RECs
Ensure adequate resources for implementing, monitoring, and evaluating regional circular economy strategies established by RECs	• ACEA is a government-led coalition and platform that supports the transition to a circular economy at the national, regional, and continental levels. Resources on Increasing Circularity in Africa's Plastics Sector, Increasing Circularity in Africa's Mining Sector, and the Five Big Bets for Circular Economy in Africa offer vast knowledge that can be leveraged and discussed further through the platform. The Alliance is organising the World Circular Economy Forum planned for December 2022 which will bring together various circular economy professionals	AUC, AfDB
Strengthen the capacity of National Cleaner Production Centres and similar institutions to support governments and businesses, especially MSMEs	• Since the mid-1990s, UNIDO and UNEP have collaborated to foster global uptake of RECP, a concept that addresses production efficiency, environmental protection, and social enhancement. In 2009, the entities launched RECPnet to act as a global network to enable the effective and efficient development, application, adaptation, and replication of RECP methodologies and technologies. The network has about 70 members and has worked with over 50 National Cleaner Production Centres[64] • German Resource Efficiency Programme is a commitment by the German government to report on the progress of national resource efficiency every four years and amend activities with the goal to make natural resource use and extraction more sustainable[65] • One of the five priorities identified by the government of Rwanda in the Second Economic Development and Poverty Reduction Strategy (EDPRS II) for 2013-2018 is advancing a "green economy" with a focus on encouraging green innovation in industry and the private sector. In line with EDPRS II, the Environment and Climate Change Innovation Centre was established to promote green innovation. The Centre was merged with the Rwanda Resource Efficient and Cleaner Production Centre to form the Cleaner Production and Climate Innovation Centre which provides technical support, technology transfer, and training on green technology to encourage innovation	AUC, UNEP, UNIDO

[63] United Nations, National Coordination on the Implementation of SDGs (NACOS Initiative), accessed 2022
[64] UNIDO, Resource Efficient and Cleaner Production (RECP), accessed 2022
[65] Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection, German Resource Efficiency Programme (ProgRess)- an overview, 2020

Guideline 3: Strengthen market demand for circular economy products by providing effective incentives for firms to consider the impact on natural capital in their decision-making

African countries are adopting circular economy principles at slow rates due to limited market demand for circular products which does not encourage the development and scaling of circular business models and initiatives. The low demand for circular products coupled with high costs of non-virgin materials relative to virgin ones, underdeveloped subsidies and market incentives promoting the use of secondary materials or by-products in production processes, high upfront investment costs for identifying and developing circular business processes, insubstantial market volumes or economies of scale for new and innovative circular products, and inadequate data on the breadth of circular business opportunities, all lead to a slower transition to a circular economy for businesses. Creating viable incentives to encourage businesses to adopt circularity will boost innovation and the competitiveness of circular products, which will ultimately increase demand.

Regional collaboration will offer an opportunity to extend incentives that increase interest across circular businesses in different countries. Actions such as reducing or removing import duties on inputs that are used in the production processes of the circular businesses will encourage firms to adopt circular practices. Shared objectives and regional incentives (see Box 11 on how one region in the Netherlands is creating demand for circular products) can allow for cross-country business models, and eventually help achieve economies of scale, thus helping to make products more affordable. Table 8 provides a list of best practices countries can adopt to establish and strengthen market demand for circular economy products and services. Alongside each best practice are examples, of where these have been implemented, that regional entities can leverage.

Box 11: Chemelot, the first circular economy hub in Europe

In 2020, the Chemelot Region in Limburg, Netherlands, became the first European Circular Economy Hub. Home to the Chemelot Industrial Park and Brightlands Chemelot Campus, the Chemelot Circular Hub provides a space where local residents, MSMEs, and large industries consciously consider how they handle raw materials, energy sources, and the environment in which they do business, work, live, and relax. Various companies, knowledge institutes, and government agencies came together to develop an investment agenda for the 2020-2030 period. Some of the objectives set out the agenda include promoting industrial symbiosis and creating new circular jobs that will attract people and investments into Limburg.

Some of the ongoing circular activities in the region include processing PET plastic and converting it into raw materials for other products, as well as converting carpet waste into materials to make mattresses. The region also has a plastic recycling plant and a solar company supplying part of the electricity consumed. The region plans to continue creating, experimenting, implementing, and scaling promising circular innovations. Chemelot offers a conducive environment to advance circularity as this is where innovations in chemistry, sustainable materials, and biomedical solutions occur and are prioritised.

Source: Brightsite, Chemelot Region first European Circular Hub , 2020. Brightlands Chemelot Campus.

Table 8: Best practices for strengthening demand for circular products

Best Practices	Examples	Potential Regional Implementers
Phase out contradictory subsidies that support linear business models and establish environmentally positive incentives across countries	• Fossil subsidies are known to be popular in many countries, but recently, countries, such as member countries of the G7, have committed to stop funding overseas fossil fuel developments.[66] Additionally, phasing out inefficient fossil fuel subsidies is a key component of delivering on Article 2.1.c of the Paris Agreement[67] • Denmark has set out to ban new exploration and end oil and gas production in the North Sea by 2050, to achieve the goal of becoming climate neutral. The country no longer issues licenses to search for and produce oil and gas[68] • The UK allocated GBP 265 million in subsidies to fund and develop projects to install new wind farms, solar panels, and other alternative energy sources. Of this amount, GBP 55 million will be allocated to emerging technologies seeking to increase the use of renewable energies [69] • European Council approved a plastic tax in 2021 to incentivise recycling of plastic waste. However, members of the European Plastics Converters argued that taxing the landfill disposal of plastic packaging waste instead would be more efficient[70]	AUC
Reduce the costs of intellectual property rights for MSMEs and start-ups developing new circular economy business models	• In healthcare, when pharmaceutical companies make a new drug, they hold a patent on the manufacturing of that drug, but to make the drugs more affordable, after a certain period, the patent protection is lifted, and other companies manufacture the same drug. Taking on the same concept to circular innovations, arrangements should be made on how to ensure the innovators hold intellectual property rights to benefit from their creations, while also availing the technology/innovation to others at a favorable cost	AUC, WIPO
Support the development of upstream innovation that is tackling issues from their roots to design context-specific circular economy solutions	• Ecopost is a Kenyan MSME that uses plastic and agricultural waste as a resource to manufacture sustainable materials for the construction and transport industries. The company uses a cloud-based management app and employs a points-based reward system for their waste suppliers. Supporting such innovative and effective business models would help improve and expand their operations	UNECA, UNEP, Footprints Africa
Establish metrics for businesses to assess the circularity potential and impact of their operations	• ESG metrics have been established to allow businesses to measure their environmental, social and governance performance, and to be transparent with consumers and stakeholders. Given that ESG metrics have some aspects that can reflect circularity, such as water consumption, energy efficiency, and waste generation, among others, then it can be good guidance and reference when building circular-specific metrics that can be used	UNEP, Ellen Macarthur Foundation, WEF
Establish and harmonise EPR policies, starting with products such as plastics and electronics	• For regional harmonisation of EPR policies, regulatory bodies in participating countries should come together to establish modulated Extended Producer Responsibility fees according to sustainability criteria which penalise producers whose products are waste intensive	AUC, RECs, UNEP

[66] The Guardian, G7 countries to stop funding fossil fuel development overseas, 2022
[67] G7 Germany, G7 Climate, Energy and Environment Ministers' Communique, 2022
[68] BBC, Denmark set to end all new oil and gas exploration, 2020
[69] Electropages, UK Government offering £265m in renewable energy subsidies, 2021
[70] Plastics Today, EU Plastic Tax Approved by the European Council, 2020

Reduce or remove import duties on primary goods used for managing pollution and resources – such as equipment used in recycling plants – or on secondary raw materials	• In 2010, The Ministry of Finance, General Administration of Customs of People Republic of China and the State Administration of Taxation implemented the decision to remove import duties and value-added taxes on key technological equipment, which included equipment used to generate hydro and wind electricity.[71] Countries, through their RECs, can agree on relaxing some import duties and taxing resources that advance circularity, to lower capital costs for circular businesses	AU
Promote and support the adoption of green procurement policies in government tender processes	• The EU developed a website with resources on adopting Green Public Procurement (GPP) for its member countries. Among the resources provided are a criteria development work plan, GPP good practice, legal and policy frameworks, GPP projects • Uganda has introduced a sustainable public procurement, also known as the Green Public Procurement, that helps to choose goods, services and infrastructure that is environmentally friendly.[72] The new sustainable public procurement brings an environmental sustainability angle and seeks to improve the procurement process	UNEP, EU

[71] Energy Central, China Removes Import Duties on Wind and Hydro Equipment, 2018
[72] UNEP, Sustainable Public Procurement in Uganda, 2019

Guideline 4: Increase access to financing for circular business models, including risk capital, by supporting financial innovation and entrepreneurial skills development

Circular business models are newer and require seed funding to convert them into successful and sustainable businesses. Financing such as seed and growth capital to grow and scale new and existing circular economy business models is limited and is predominantly provided by governments, NGOs, and a few global DFIs. This is because these business models are relatively unknown and are therefore deemed as riskier and more complex than linear economy business models. Developing widely acceptable metrics that both private and public financial institutions can use to assess the circularity of businesses, providing innovative tailored financing mechanisms for circular businesses (see Box 12 for an example on integrating the circular economy in a financial institution's portfolio), and capacity building to MSMEs to ensure that they have the skillset to develop bankable projects are some key best practices that will help circular businesses scale their operations nationally and regionally. Table 9 explores these best practices and provides some examples of practical applications.

Box 12: Integrating the circular economy in investment decisions and financing products

The circular economy is a mechanism that offers vast potential for businesses to mitigate the various risks they face in the linear economy, such as the depletion and scarcity of raw materials and a changing regulatory environment and consumer preferences. These risks mean that for businesses to survive, be sustainable, and be resilient, they need to shift from business-as-usual and adopt circular economy principles. As this awareness and the adoption of the different business opportunities in this economy grows, financial institutions are also increasingly developing both debt and equity financing products tailored to these business models.

Intesa Sanpaolo, one of the largest European international banking groups, is an example of a financier that has been proactively seizing the opportunities presented by the circular economy. The Group launched the Circular Economy Plafond of EUR 6 billion (which was increased from the initial EUR 5 billion credit line) for their 2018-2021 business plan. This facility was part of the Group's efforts to provide tangible support to businesses that are adopting the circular economy through increasing access to commercial finance.

In 2020, the facility was extended to the Group's International Subsidiary Banks Division which has strategic commercial banking presence in Central Eastern Europe, the Middle East, and North Africa. In 2021, this division utilized approximately EUR 22 million from the facility to finance initiatives in the circular and green economies. Over 86% of this financing went to SMEs. Overall, EUR 7.7 billion worth of financing has been provided through the Plafond, and EUR 5.5 billion of this amount was disbursed in 2021 alone.

A portion of the credit facility supports investments in producing renewable energy, energy efficiency, sustainable farming, and biodiversity conservation. Another portion is allocated towards green mortgages to finance the purchase of new high-ranking energy-efficient homes or home renovations to meet the targeted energy efficiency rankings.

The Intesa Sanpaolo Innovation Center provides technical assessments on received applications against specific circular economy criteria jointly developed by Intesa Sanpaolo and the Ellen MacArthur Foundation. By the end of 2021, about 300 projects with circular criteria received over EUR 3.9 billion total financing (Out of the 800 total applications received from corporate clients, only 100 projects with green criteria valued at over EUR 2.6 billion were financed). The financed company projects include replacing essential fossil fuel-based materials with recycled or organic materials, converting organic urban waste into energy (biomethane) and compost, industrial symbiosis, and enhancing renewable energy plants to extend their lifetimes and production capacity.

Source: Bocconi University, Ellen MacArthur Foundation, Intesa Sanpaola (2021), The circular economy as a de-risking strategy and driver of superior risk-adjusted returns; Intesa Sanpaolo, Support to the Circular Economy, accessed 2022

Table 9: Best practices for increasing access to financing for circular business models

Best Practices	Examples	Potential Regional Implementers
Engage regional DFIs to establish innovative financial products and adopt proactive circular economy credit policies and lending strategies	• The Development Bank of Southern Africa (DBSA) has a ZAR 500 million Green Fund which targets small-scale initiatives that support the transition to a green economy. Through this fund, DBSA provides investment funding and technical assistance. The funding is in the form of recoverable grants and debt. The latter includes mezzanine debt[73]	AfDB, DBSA, EADB
Develop due diligence frameworks that allow financiers to determine whether companies are truly adopting circular business practices and/or production processes	• In February 2022, the European Commission adopted a proposal for a directive on corporate sustainability due diligence. If adopted by the European Parliament and Council, EU member countries will convert the directive into enforceable national law in their respective countries. The proposed due diligence requirements seek to ensure that corporate action across their global value chains respects human rights and the environment[74]	UNECA, AUC
Advocate for RECs to allocate funding for regional circular economy initiatives	• Sustainable Groundwater Management in SADC Member States Phase 2 is a current 4-year project that SADC has secured funding for, to help address the current water challenges faced by the SADC region[75] • COMESA has secured funding from the World Bank to finance the Regional Infrastructure Finance Facility Project. One of the three components of this project will focus on facilitating debt financing for SMEs, particularly those in the renewable energy sector[76]	AU, AfDB, UNECA
Provide technical assistance to equip MSMEs with the skills and documentation required to access funds designated for the circular economy, as well as skills to iterate and improve on their innovations to make their business models more bankable	• Through funding from the EU, the Uganda Green Enterprise Finance Accelerator (UGEFA) provides business development support to green MSMEs in Uganda. UGEFA facilitates group and one-on-one activities that seek to help participating MSMEs build their financial capacity and strengthen their business models. The organisation also works with financial institutions to create tailored products to increase access to loans to green business models and technologies • SWITCH Africa Green has a green business development component that provides grants to MSMEs to green their businesses • The ACEF is a EUR 4 million multi-donor trust fund that will support programming that advances the circular economy at both the continental and national levels. One of the three intervention areas of the ACEF will be providing technical assistance to the private sector, particularly start-ups and MSMEs, that will develop and demonstrate innovative new circular economy business models, as well as develop strategic and innovative partnerships and knowledge exchange platforms to create "fertile ground for the diffusion of circular practices in regional member countries"[77]	EU, UNEP, UNDP

[73] Stakeholder consultations, 2022
[74] European Commission, Corporate sustainability due diligence, 2022
[75] SADC, Sustainable Groundwater Management in SADC Member States Phase 2, 2021
[76] World Youth Magazine, 9 COMESA Projects Impacting Africa Youth, 2021
[77] African Development Bank Group, Africa Circular Economy Facility (ACEF), 2022

Guideline 5: Establish sector-specific priorities and policies, and ensure their coherence across countries and RECs

There is a need to articulate sector-specific transnational business cases for the circular economy in order to facilitate a continent-wide transition. To do this, countries need to collaborate and align their national priorities and policies with regional ones to ensure complementarity. This will also allow for knowledge sharing, better coordination, as well as easier monitoring and evaluation. Table 10 explores the best practices and provides some examples of how to establish and harmonise circular economy priorities and policies across countries and RECs. The last part of guideline 5 provides specific opportunities for the circular economy, challenges, best practices, and some examples of initiatives that are taking advantage of opportunities in agriculture, manufacturing, tourism, and integrated waste management (the four focus sectors of this engagement). This sector-specific approach (see Box 13 on the approach taken by the World Economic Forum) can be replicated and adapted for other priority sectors for accelerating the national and/or regional transition to a circular economy.

Box 13: Sector-Specific Circular Economy Action Plan

To support the transition towards a circular economy, the World Economic Forum (WEF) launched the Platform for Accelerating the Circular Economy (PACE) in 2017. Through a process involving over 200 stakeholders with representation from the public and private sectors, PACE developed the Circular Economy Action Agenda, a call to collaborative action between governments, private sector, experts, consumers, and civil society to accelerate the transition to a circular economy globally.

The Agenda is comprised of five publications focusing on sectors identified to have the greatest potential for circularity. These key sectors are capital equipment, electronics, food, plastics, and textiles, and each public includes: (1) the objectives of advancing a circular economy in the sector; (2) potential social and environmental impacts of achieving the set objectives: (3) challenges in implementing or scaling circular economy initiatives; and (4) ten calls-to-action to optimize impact, mitigate the barriers, and unlock new opportunities. The calls-to-action also include practical examples and case studies of effective implementation to provide starting point for countries to explore relevant opportunities in the identified sectors and then adapt the actions as required for implementation in the specific country context.

Source: Circular Economy Action Agenda – Capital equipment, Electronics, Food, Plastics, Textiles, accessed 2022

Table 10: Best practices for establishing and harmonising sector-specific priorities and policies

Regional Best Practices	Examples	Potential Regional Implementers
Identify key sectors with circularity potential at the country and regional levels, and establish circular economy priorities that align with sector-specific opportunities across RECs	• In Five Big Bets for the Circular Economy in Africa, ACEA identified three key sectors that span five thematic focus areas with immediate and existing opportunities to advance the circular economy in Africa. These sectors (and thematic focus areas) are agriculture (food systems); construction (built environment); and manufacturing (electronics, fashion and textiles, and packaging)[78] • The Ellen MacArthur Foundation, in collaboration with ICLEI Africa, Chatham House, and the University of Lagos, curated a series of articles identifying opportunities for the circular economy in automotives, the built environment, and electronics and e-waste, fashion and textiles, finance, food and agriculture, and plastics. These reports feature examples from different countries across the continent that have adopted circularity along the thematic focus area that other countries can replicate and adapt to their specific contexts[79]	AUC, RECs, ACEA, ICLEI Africa
Establish policy instruments (e.g., EPR, ecotaxes, tax exemptions, etc.) and standards (e.g., labelling) that are aligned across sectors at a regional level	• The EAC, through the East African Standards Committee, developed East African Standards to harmonise quality requirements for products and services in the region. These standards are aligned with international best practices and technological advances, which means they are subject to regular reviews. They cover water quality, sanitation, clothing industry, production processes, products in the timber industry, and renewable energy engineering such as solar and wind systems to name a few areas. This regional standardisation system can be extended to advancing the circular economy and then replicated and adapted in other RECs as well for continent-wide adoption	AUC, RECs

[78] Published in 2021, the report was developed by Dalberg, the World Economic Forum, and AfDB with support from the Ministry of Foreign Affairs in Denmark (Danida) on behalf of and in close collaboration with ACEA
[79] Ellen MacArthur Foundation, Circular economy in Africa: Examples and opportunities, accessed 2022

Promoting Circularity in Agriculture

Table 11: Opportunities, challenges, and best practices for advancing the circular economy in agriculture

	Production	Distribution	Consumption
Opportunities to advance a circular economy	• Reducing water loss through efficient irrigation practices to increase resource efficiency • Adopting regenerative farming methods to improve soil health • Reducing resource needs by adopting climate-smart practices such as operating vertical farms • Reducing post-harvest losses through improved mobile storage and transportation services	• Reducing distribution losses by simplifying supply chains using technology to directly link farmers to markets	• Reducing resource demand by consuming locally produced foods
Common issues hindering progress	• Lack of technical skills to adopt innovative practices such as soil-less farming systems • Limited financial resources to replace traditional methods with efficient circular farming methods	• Limited access to the neighbouring markets • Poor transportation services and limited storage available to keep produce fresh	• Increase in unhealthy eating habits that increase waste
Best practices to enable national and regional uptake	• Provide technical assistance to help farmers understand and adopt circular practices such as resource efficiency and organic production • Increase financing to farmers to enable them to purchase the necessary equipment for water recovery and circular irrigation, for example. A regional fund can be established to support smallholder farmers and agriculture MSMEs seeking to adopt circular economy principles • Develop the local agro-processing industry to process agricultural products such as dried fruits, and juices. Each REC could pool resources to build a cutting-edge agro-processing hub and increase the competitiveness of African products • Establish enforceable regional standards for organic farming and products	• Develop digital platforms that connect farmers with markets • Encourage transnational trade to expand access to markets for available produce • Invest in appropriate infrastructure such as reliable transport and cold chain services which is accessible to MSMEs and smallholder farmers	• Increase consumer awareness of the benefits of consuming locally produced agricultural goods while also mainstreaming cuisines that reduce food waste and use ingredients that are in-season

Examples	• The Africa Agriculture and Trade Investment Fund aims to improve food security and generate additional employment and income to farmers, entrepreneurs, and labourers by providing patient capital to efficient local value chains. The Fund provides loans of more than USD 3 million to businesses that are already operational • The EU's common agricultural policy (CAP) strategic plans seek to support farmers and improve food security in the region. The new CAP covering the 2023-2027 period was adopted in December 2021. This plan targets greener and fairer agriculture in alignment with the European Green Deal. Like its predecessors, the new plan will be implemented at the national level[80]	• Great Lakes Facilitation Project is a World Bank funded project, in cooperation with COMESA, that aimed at facilitating cross-border trade. Phase one. In phase One, the project supported cross-border trade between the Democratic Republic of Congo (DRC), Rwanda and Uganda, and phase two, looked at Burundi, DRC, Tanzania, and Zambia[81] • COMESA, through its preferential tariffs trading environment, introduced the Simplified Trade Regime to streamline the required documentation and procedures to clear small-scale cross-border trade consignments. Burundi, Democratic Republic of Congo, Ethiopia, Kenya, Malawi, Rwanda, Uganda, Zambia, and Zimbabwe are already implementing the STR[82]	• The Ministry of Agriculture, Forestry, and Fisheries in Japan organised the Awards for Excellence in Local Production for Local Consumption acknowledging those who contributed to promoting the use of local produce and increasing understanding and awareness of local products among consumers[83]

[80] European Commission, The new common agricultural policy 2023-2027
[81] The World Bank, Great Lakes project to help African traders get their goods and services to the market, 2015
[82] COMESA, Countries implementing the Simplified trade Regime set to rise, 2021
[83] MAFF, Promotion of 'local production for local consumption', accessed in 2022

Promoting Circularity in Manufacturing

Table 12: Opportunities, challenges, and best practices for advancing the circular economy in manufacturing

	Production	Distribution	Consumption
Opportunities to advance a circular economy	• Recycling and refurbishing automotive parts • Redesigning manufacturing by using non-virgin materials or alternative materials that are circular, such as producing bioplastics using plant-based material	• Redesigning procurement to promote circularity	• Purchasing circular products
Common issues hindering progress	• Lack of the required technological capacity to adopt sophisticated circular processes • Higher costs of production when using non-virgin materials or alternative materials compared with virgin and regular materials • Limited R&D on developing and adopting cost-effective alternative manufacturing materials and efficient technologies	• Lack of a regulatory framework that promotes the procurement of circular products	• Limited demand for circular products
Best practices to enable national and regional uptake	• Develop the capacity of manufacturers through tailored courses and practical training on circularity in design, engineering, and manufacturing • Provide financial support to manufacturers to purchase required equipment and technology for manufacturing circular products • Increase R&D investment to develop reliable manufacturing materials for different sectors such as construction and textiles • Increase partnerships between countries with advanced manufacturers and nascent ones for improved skills transfer	• Prioritise circular manufacturing and procurement in national development plans	• Create awareness campaigns to increase consumer interest in circular products to increase demand, hence encouraging the manufacturing sector to adopt green manufacturing on a larger scale
Examples	• Der Grüne Punkt is revolutionising the plastics market by producing by using recycled plastic material to produce Systalen. The high-quality Systalen regranulates are used as inputs for products used in construction, civil engineering, logistics, and packaging technology, to name a few uses[84] • Tech Access Partnership was created in 2020 to help address critical shortages in essential health technologies and equipment. The initiative connects experienced and emerging manufacturers to share information, technical expertise, and resources necessary to scale up production of the health tools.[85] This partnership can be replicated to advance circularity in manufacturing	• Thailand approved its first procurement plan focused on improving environmental quality as early as 2008. To align with the procurement requirements, the Packaging Division of Siam Cement Group, Thailand's largest cement company, decided to green the procurement of flexographic ink, which is the most important material used by the Division[86]	• The Zambian Ministry of Commerce, Trade, and Industry initiated a Proudly Zambian Campaign to promote the production and consumption of high-quality Zambian products.[87] The Ministry signed a Memorandum of Understanding with Zambia Association of Manufacturers, for the latter to manage the campaign. Such campaigns can be replicated to promote circularity

[84] Der Grüne Punkt, Systalen – The Regranulate from Der Grüne Punkt, accessed 2022
[85] United Nations, UN agencies launch Tech Access Partnership in joint effort to scale up local production of life-saving health technologies for COVID-19, 2020
[86] Green Purchasing Network Malaysia, A Sampling of Success in Green Public Procurement, 2017
[87] Zambia Association of Manufacturers, Proudly Zambian Campaign – Beyond the Logo, 2020

Promoting Circularity in Tourism

Table 13: Opportunities, challenges, and best practices for advancing the circular economy in tourism

	Production	Distribution	Consumption
Opportunities to advance a circular economy	• Redesigning infrastructure by renovating existing buildings and making new buildings with circularity in mind (e.g., using mass timber and local labour) • Redesigning products such as packaging materials, producing biodegradable products, and eliminating single-use plastic and nonbiodegradable products • Developing innovative and circular tourist activities	• Reducing resource needs by promoting sharing services and places such as shared accommodation (e.g., Airbnb and Vrbo), transport (e.g., Uber and Bolt), and parks	• Reducing transportation emissions by buying carbon offsets for miles flown and using electric vehicles for high end safaris • Consuming intentionally by using certified and eco-labelled products and services
Common issues hindering progress	• High costs of materials and inputs to produce circular products and buildings • Limited innovation to integrate circular economy principles in the sector	• Limited market demand for shared services and facilities	• Limited consumer awareness of green tourism
Best practices to enable national and regional uptake	• Develop a unified certification scheme across countries to identify circular tourist facilities • Create incentives to use mass timber and other alternative materials for the construction of new tourist facilities • Establish uniform policies to promote sustainable forestry practices to produce timber used by the tourism industry • Invest in R&D to discover innovative products, services, and activities that integrate circularity in tourism	• Create incentives, for both the users and the providers, that promote shared services • Foster collaboration between RECs to identify resource-sharing opportunities, such as through increasing programming to promote and maintain shared spaces such as parks and other recreation facilities	• Promoting local and regional tourism to reduce emissions from flights. Regional economic committees can collaborate on developing packages and programs that attract the consumers • Creating awareness on how to offset individual carbon footprints
Examples	• Circular Tourism Vietnam is a strategy to help the tourism sector recover from the effects of the COVID-19 pandemic. The project offers a platform to collect insights and define strategies that incorporate circular economy principles in the tourism sector. The project also aims to launch a Circularity Lab that will facilitate new circular idea generation and prototyping activities, among other services[88]	• Central Asia Regional Economic Cooperation (CAREC) developed a CAREC 2030 strategy in which tourism is one of the priority sectors. The Asian Development Bank funded a scoping study to determine how to promote regional cooperation in tourism. Some of the recommendations of the study include unifying travel requirements to allow tourists to visit different countries within CAREC with ease and sharing product offerings to attract a wider market[89]	• Ecotourism Kenya is an initiative with a voluntary certification scheme that rates facilities based on their socio-economic, cultural, environmental, and legal impact. Such an initiative can be expanded to more countries to allow easy identification of circular places and facilities

[88] CSPC, Circular Tourism Vietnam, 2020
[89] Asian Development Bank, Promoting Regional Tourism Cooperation Under CAREC 2030- A Scoping Study, 2019

Promoting Circularity in Integrated Waste Management

Table 14: Opportunities, challenges, and best practices for advancing the circular economy in integrated waste management

	Agriculture	Manufacturing	Tourism
Opportunities to advance a circular economy	• Converting food waste into organic fertiliser to increase circularity in food systems and soil health • Converting agricultural residue into energy for more circular agricultural processing and distribution • Recovering wastewater for irrigation as a circular and climate-conscious practice • Using food waste to produce nature-friendly animal feed	• Using recycled waste materials to reduce the use of virgin inputs in cloth-making • Use plastic waste to create affordable building material	• Working with local farmers to take food waste and convert it into organic fertiliser • Eliminating single-use plastic packaging, especially on hotel-supplied toiletries • Reusing linens and towels for extended stays to reduce energy and water usage • Replacing toxic chemicals with more natural cleaning and laundry products
Common issues hindering progress	• Lack of technical skills to convert food waste for other uses such as organic fertilisers, energy, animal feed, etc • Lack of funding required to adopt technologies necessary for increased resource efficiency	• High costs of alternative circular materials compared to linear materials • Limited investment in R&D to create reliable circular materials that can be used in manufacturing	• Lack of awareness and/or limited willingness to adopt circular practices • Limited affordable circular alternatives to linear products (e.g., construction, cleaning, and packaging products)
Best practices to enable national and regional uptake	• Align on food waste conversion processes and methods that across RECs (e.g., waste-to-fertiliser and waste-to-energy) • Provide training to farmers on regionally acceptable methods they can apply to produce quality organic products • Create incentives to explore the uses of food waste, such as developing markets for organic fertilisers • Provide support to those adopting circular practices to access the necessary equipment and technologies at an affordable cost	• Increase investment in R&D to develop reliable material from waste for use in manufacturing • Create regional partnerships to promote the reuse of waste to increase circularity in the manufacturing industry	• Develop regional agreements on banning single-use plastics and • Partner with the private sector, mainly businesses that make compostable and reusable items • Create a circularity certification program for hotels and other tourist facilities • Increase public awareness of circular economy benefits for local communities
Examples	• Opportunity International facilitates training on good agricultural practices to teach farmers effective soil health management and crop cultivation to increase harvests.[90] The organisation also offers other services including financial support, market access, and digital services to farmers under their Agriculture Finance programme • AgriProtein uses insects to turn food waste into animal feed	• HP partnered with Sinctronics to create a circular reverse logistics ecosystem in the Brazilian electronics sector. To understand and redesign the product cycle, HP created a Recycling and Innovation Centre next to the local manufacturing site. R&D led to the	• BioPak offers a packaging solution by producing compostable food packaging made from plants and specifically designed for a circular economy. The company's product range include hot and cold cups, containers, plates, and cutlery

[90] Opportunity International, Training for Farmers, accessed 2022

		creation of a recycled white plastic to be used in producing electronic products[91]	

[91] Ellen Macarthur Foundation, Creating a reverse logistics ecosystem: HP Brazil & Sinctronics, accessed 2022

VI. RECOMMENDATIONS

These proposed key guidelines provide a framework to promote a coordinated regional approach to the transition towards a circular African economy. They are neither prescriptive nor exhaustive. Instead, they encourage countries to be cognisant of their specific needs and resources, and tailor how they adopt these guidelines to their specific contexts. The transition to a circular economy is not linear and requires conceited collaboration among various stakeholders across all aspects of the economy (public, private, academia, CSOs, research institutes, etc) to enable a successful systems transformation. Below are recommendations to help countries begin to adopt these key guidelines.

Guideline 1: Make the case for the circular economy by increasing awareness on its significance for sustainable development in Africa

- Establish strong economic cases for a circular economy across African countries aligned with their national priorities and objectives, as well as regional and international commitments
- Get buy-in from the highest level of government to enact national circular economy policies
- Set regular multi-stakeholder discussion sessions to strengthen public-private partnerships and encourage a private sector-led transition
- Coordinate regional in-person and virtual peer learning platforms across RECs to foster collaboration in circular business model development
- Run awareness-raising campaigns and capacity development programmes across the country to communicate the importance of adopting a circular economy and promote innovation. Specifically:
  - Collect and share stories on various initiatives and business models that are successfully advancing the transition towards a circular economy
  - Integrate circular economy principles in academic curricula to develop the right capacity for innovation and implementation

Guideline 2: Establish policy and governance structures to ensure that national and regional policies on circular economy are complementary

- Establish an institutional framework which explicitly states key stakeholders and their roles in implementing initiatives – both national and regional – to advance a circular economy, including coordination structures
- Create a National Cleaner Production Centre to coordinate sustainable production and consumption programming between government and businesses. Where one exists, strengthen its capacity
- Establish national regulatory frameworks that are aligned across RECs to reduce barriers to entry, exit, and growth of new circular firms and business models
- Ensure adequate resources for implementing, monitoring, and evaluating regional circular economy strategies established by RECs

Guideline 3: Strengthen market demand for circular economy products by providing effective incentives for firms to consider the impact on natural capital in their decision-making

- Engage the private sector to understand their needs to unlock resources and increase innovation to advance a circular economy. Specifically, support upstream innovation that is tackling issues from their roots to design context-specific circular economy solutions
- Enact circular procurement policies for government entities such as furniture refurbishment policies and internally circulating excess supplies to create demand for circular products
- Co-develop EPR policies for a range of products and sectors with relevant stakeholders so that circularity becomes embedded in business decision making and operations
- Phase out contradictory subsidies that support linear business models and establish environmentally positive incentives across countries. For instance, reduce or remove import

duties on primary goods used for managing pollution and resources (such as equipment used in recycling plants, or on secondary raw materials)

Guideline 4: Increase access to financing for circular business models, including risk capital, by supporting financial innovation and entrepreneurial skills development

- Allocate a certain portion of the national budget for specific and prioritised circular economy initiatives to channel funds towards circular economy solutions. Advocate for RECs to allocate funding for regional circular economy initiatives
- Develop technical assistance programmes for MSMEs, to equip them with the skills and documentation required to access funds designated for the circular economy
- Develop due diligence frameworks that allow financiers to determine whether companies are truly adopting circular business practices and/or production processes
- Engage regional DFIs to establish innovative financial products and adopt proactive circular economy credit policies and lending strategies

Guideline 5: Establish sector-specific priorities and policies, and ensure their coherence across countries and RECs

- Conduct national scoping studies to identify key sectors with high potential for advancing a circular economy and the relevant business opportunities
- Establish a national fund to support R&D and innovation for circular economy solutions
- Liaise with regional trade partners to collaboratively enact coherent policies and incentive frameworks to advance the circular economy at the national and regional levels

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