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Enhancing the circular economy in Africa

Note by the secretariat

I. Introduction

- 1. With the population of Africa expected to reach 2.8 billion in 2060, the adoption of sustainable consumption and production practices is imperative if the region is to achieve sustainable development. The circular economy is a vehicle for promoting sustainable consumption and production and provides an opportunity for the continent to move to more resource-efficient and environmentally sound technologies and infrastructure. box and
- 2. In an African context, sustainable consumption and production means more efficient, better-informed and less resource-intensive consumption and production practices, while at the same time meeting the basic needs of the ever-increasing population. The circular economy contributes to green business development by eliminating or minimizing waste into the environment in a variety of ways, including reducing, reusing, recycling, refurbishing and remanufacturing.
- 3. A green business is an enterprise which implements sustainable consumption and production practices, thus minimizing its negative impact on the environment, society and the economy. It incorporates sustainability into its daily operations by addressing environmental concerns for example, through efficiency in areas such as energy, water and raw materials, and sustainable waste management processes while retaining profitability.
- 4. For the implementation of the circular economy and green business practices, Governments and the private sector look to green financing opportunities. Green financing refers to financial investments which flow into sustainable development projects and initiatives, environmental products and policies that encourage the development of a more sustainable economy. African countries have the opportunity to use circular economy solutions as part of the continent's developmental transformation as set out in Agenda 2063 of the African Union and in the achievement of the sustainable development goals.¹
- 5. This note presents the key areas for transition to a circular economy, namely the policy and regulatory framework needed to support the circular economy; the green financing mechanism; and retooling and reskilling, awareness-raising and knowledge-sharing. It highlights opportunities for the

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¹The importance of circularity to addressing pollution is highlighted in a background report and an implementation plan entitled "Towards a Pollution-free Planet", prepared for the third and fourth sessions of the United Nations Environment Assembly of the United Nations Environment Programme respectively; the implementation plan is the subject of resolution 4/21, adopted by the United Nations Environment Assembly at its fourth session.

circular economy in Africa and concludes by focusing attention on a number of potential areas for action, including scaling up existing circular economy practices; integrating the circular economy into national and regional development plans; information and knowledge management regarding the circular economy. Other areas of action include advancing political will; supporting access to affordable green financing and sustainable markets, with a particular focus on micro-, small and medium-sized enterprises.

II. What is the circular economy?

6. According to the European Environment Agency (2016), the circular economy is an alternative to the traditional linear economic model of take-make-consume-dispose. It represents an alternative economy, in which products and materials are recycled, repaired, refurbished or re-used so that a byproduct or waste from one economic process becomes an input in another (see figure 1). A circular economy is therefore an economy that decouples production and consumption from natural resource constraints. It operates on the basis that resources should be kept in use for as long as possible, maximum value should be extracted from them whilst they are in use, and then products and materials should be recovered and regenerated at the end of their service life. This is explained in greater detail in box 1 below.

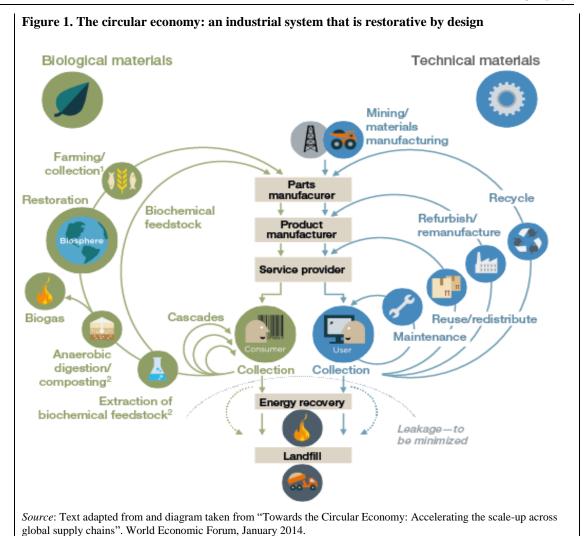
Box 1: Principles of a circular economy model

The principles of a circular economy model are shown in figure 1. First, at its core, a circular economy aims to eliminate waste. Waste does not exist: products are designed and optimized for a cycle of disassembly and reuse. Tight component and product cycles define the circular economy and set it apart both from disposal and even recycling, in which large amounts of embedded energy and labour are expended.

Second, circularity introduces a strict differentiation between the consumable and durable components of a product. Unlike today, consumables in the circular economy are largely made of biological ingredients or "nutrients" that are at least non-toxic and possibly even beneficial, and can safely be returned to the biosphere, either directly or in a cascade of consecutive uses; an example would include industrial symbiosis² (see box 1). Durables such as engines or computers, on the other hand, are made of technical nutrients which are unsuitable for the biosphere, such as metals and most plastics. These are designed from the start for reuse, and products which are subject to rapid technological advance are designed for upgrade.

Third, the energy required to fuel this cycle should be renewable, to decrease resource dependence and increase systems resilience (to oil shocks, for example).

² Where two or more companies have innovative collaborations to exchange materials, energy or information in a mutually beneficial manner; for example, when waste from one company is used as raw material by another.



III. Integrating the circular economy into national development agendas in Africa

African countries are already implementing a variety of programmes which incorporate elements of the circular economy. The fundamental challenge is to align the circular economy with national development plans and budget processes. Key areas to be considered in supporting the transition to a circular economy include the following:

A. Policy and regulatory framework needed to support the circular economy

8. There is not only a need for an enabling environment for the circular economy in Africa, but also for a means to curb its illegal use. During the regional meeting on

integrated waste management in Africa, held in Accra on 11 and

Do the enabling conditions for the circular economy exist in Africa?

12 June 2019, for example, it was emphasized that Africa should develop a regional framework on integrated waste governance with a particular focus on regulating trade in waste, both within a country and across borders, examining barriers to trade in waste and waste products, and making recommendations to address the matter. That would promote sustainable business models, including the circular economy, in the region. It is also in line with many African national development plans, which embrace the three pillars of sustainability, economic, environmental and social.

B. Green financing mechanisms

9. Financing has often proved a significant challenge to enterprises wishing to implement sustainable consumption and production practices and circular economy principles in their business operations. Micro-, small and medium-sized enterprises need financial support in the application of

sustainable consumption and production practices, including for financing the acquisition of efficient technologies,

What opportunities and challenges are available for green financing in Africa?

implementing new ideas, capacity-building and scaling up operations. The need to identify alternative financing options beyond the formal financial system has frequently been reiterated. For example, the African Development Bank's ten-year strategy (2013–2022) aims to transform African countries by supporting them to embrace the green economy. In addition, it is assisting several countries to develop green growth strategies which incorporate circular

economy principles and provides a suite of tailor-made financial instruments that drive innovation on the continent,

including through public and private circular economy projects.³

C. Retooling and reskilling, awareness-raising and knowledge-sharing

10. Enabling and empowering workers to transform and update their skills and giving them access to cleaner, more efficient technology is a key concern for many businesses. Capacity-building and knowledge-sharing should be expanded to cover skills and technologies required for the private sector implement the circular economy. In order to ensure the

How do we integrate the circular economy into national and regional development planning, including national budgeting?

development and implementation of successful business models, awareness-raising among the general public is necessary. Public awareness of waste management in terms of open dumping, littering and waste segregation needs to be improved. In parallel, there is a need to extend training to government officials, focusing on the governance and policy environment, to enable them to support private sector development in implementing the principles of the circular economy.

D. Access to sustainable markets

- 11. Governments should foster an appreciation for green products by both public and private consumers. Mechanisms to address supply and demand for such products include the development and improvement of sustainable public procurement policies; enhancing awareness of sustainable products through consumer information networks; supporting the formation of associations of producers of green or sustainable products; and supporting the development of standards and of certification for green products.
- 12. In addition, there is need to develop and support initiatives to link micro-, small and medium-sized enterprises to markets for their products, including by providing appropriate economic and fiscal incentives. To achieve that, governments will need to strengthen related rules and regulations, which includes putting in place relevant compliance and enforcement measures to ensure that Africa does not become a dumping ground for substandard products.

³ Available from https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/AfDB_Strategy_for_2013%E2%80%932022___At_the_Center_of_Africa%E2%80%99s_Transformation.pdf.

IV. Opportunities for the circular economy in Africa

13. Many of the principles of the circular economy have been in use for generations in Africa. Repairing, refurbishing and reusing electronics is common, and in agriculture, composting has been

practised for many decades. However, such practices have slowly been replaced by the make-use-discard model of the linear economy, which has led to cities full of waste. That waste has become hazardous and almost impossible to manage. In addition, imports of waste, including second-hand clothing and electronics, have made the waste issue an even greater problem, leading in some cases to the closure of certain industries. As new sustainable business models and technologies emerge (see box 2), greater opportunities in agriculture, manufacturing, construction and waste management can be harnessed through the circular economy to create jobs, improve livelihoods and reduce poverty (see figure 2).

How can we use the circular economy to achieve the Sustainable Development Goals and Africa's agenda?

Figure 2. Opportunities for the circular economy

Integrated waste management

- Organic waste to compost
- Plastic waste recycling
- E-waste recovery
- Biogas generation

Agriculture

- Composting as an affordable alternative to chemical fertilizers
- Promoting agricultural waste to provide energy
- Reuse of waste water for irrigation
- Post-harvest loss management

Building and construction

- Recovery and reuse of construction materials
- Waste water recycling or reuse
- Energy recovery
- Integrated waste management
- Regular maintenance

Manufacturing

- Improved product design to maximize durability (in textiles, for example)
- Promoting industrial symbiosis/ waste exchange
- Refurbishing products that are close to end of life
- Remanufacturing and recycling
- Recovery of valuable components

Box 1. Tannery turning splits and offcuts into profit in Uganda $\,$

Sky Fat Ltd. specializes in processing hides and skins. Forty per cent of skins and hides received used to end up as waste, either from splits or from offcuts. Their disposal was a problem frequently raised by the Uganda National Environment Management Authority (NEMA), as the company used landfills for waste disposal. After training on industrial symbiosis provided by SWITCH Africa Green, a UNEP-implemented project, the company is now producing dog chew for export from the offcuts before processing the hides. In addition, the splits are sold to a South African gelatin processing company. That not only provides a new revenue stream for the company, but also saves it from the challenges of disposal with NEMA and the local community. Each year, the company saves US\$380,000 on waste disposal costs and brings in US\$580,000 from sales of the oxidized splits. The company employs 250 people, paid for by what was once waste, and the initial investment has been paid back.

Box 2. Promotion of biogas technologies in Ghana

This project develops capacity for the use of biogas technology to manage human waste (faecal sludge) while creating the opportunity for income generation. The project eliminates the physical handling of faecal sludge and consequently facilitates the environmentally sound management of faecal sludge while generating energy for cooking and lighting, among other things. Through a UNEP intervention, the project trained 100 artisans in the construction of biogas plants and they have now constructed 57 plants. The plants generate biogas to replace domestic and institutional fuel wood or charcoal-sourced energy for cooking or petrol/diesel for electricity generation for beneficiaries who have adopted the technology.

V. What actions are required for Africa to adopt circular economy practices?

- 14. The scaling-up of circular economy practices is essential. This should include joint action beyond existing programmes, such as Resource Efficiency and Eco-innovation in Developing and Transition Economies, SWITCH Africa Green, Partnership for Action on Green Economy, Operationalizing Green Economy in Africa, and the low carbon and climate resilient industrial development in Africa. The activities being implemented through such programmes are good entry points for scaling up circular economy practices, green business practices and green investments with the aim of creating jobs, increasing productivity and promoting gender-responsive interventions. Strategies to replicate and scale up the results from such interventions can collectively contribute to this process, but need support from and collaboration with development partners and the private sector.
- 15. Integrating the circular economy into national and regional development plans is also required, through the following actions:
- (a) The integration of circular economy principles into existing national and regional development plans;
- (b) Institutional strengthening, including by enhancing knowledge management, creating awareness and sharing information within and across countries, for example, by promoting centres of excellence such as cleaner production centres (see box 3).

Box 3: Cleaner production centres in Africa

Fourteen countries in Africa have established national cleaner production centres (NCPCs), which have been promoting interventions such as resource-efficient and cleaner production, sustainable consumption and production and eco-innovation. Those institutions can be the implementing partners for the circular economy in the countries concerned. There is a growing demand for NCPCs to be established in other countries, with the demand coming from the countries themselves.

- 16. Supporting access to affordable green financing and sustainable markets is also essential, with a particular focus on micro-, small and medium-sized enterprises:
- (a) Micro-, small and medium-sized enterprises form the backbone of most of Africa economies. Today, those small and growing businesses create some 80 per cent of employment in the region and are establishing a new middle class and fuelling demand for goods and services;
- (b) Green financing is one of the main challenges facing micro-, small and medium-sized enterprises in Africa, as they have limited capacity to obtain financing and credit through commercial banks to improve or "green" their businesses. Furthermore, there is a need to create a demand for circular products and services through, for example, sustainable public procurement, to encourage companies to invest in circular business models.

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