DCED
The Donor Committee for Enterprise Development

An Introduction to the Circular Economy for Donors

Synthesis Note

Switching to a circular economy allows developing countries to leapfrog to sustainable growth and avoid resource-heavy practices early on. COVID-19 offered a chance to incorporate circular principles into 'building back better' for a green recovery.

The absence of a clear global definition and pathway hampers learning from existing experiences and developing strategies. The feasibility and impact of adopting a circular economy in developing countries dependent on extractive industries remain uncertain.

There are many ways in which donors can stimulate change towards circularity in partner countries, including business environment reforms, modifications to procurement policies, and direct support for innovative circular business models through accelerator programmes or challenge funds. Globally, efforts like raising awareness, engaging with multinational companies, improving data and coordination, and leadership from developing countries could also help create a clearer shared vision of circularity.

/01 Introduction

Interest in the circular economy is increasing as a strategy for sustainable growth. This synthesis note serves as an introduction to the circular economy (CE) for private sector development practitioners. CE is especially relevant for those pursuing green growth objectives. The note adopts a policy perspective, outlining CE principles and exploring opportunities and challenges for promoting CE in developing countries. Practical suggestions are provided, while the annex offers examples of circular business models.

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Concept and debates

Definition

In the linear (environmentally unsustainable) economy that much of the world is currently structured around, consumers follow a take-make-waste system for single-use materials, resulting in large amounts of waste ending up in landfills or the oceans. In contrast, CE recognises that the planet is a closed system with respect to materials. CE offers a way to contribute to sustainable, green economic growth by reducing waste accumulation and conserving resources for reuse, minimising the need for mining and other environmentally damaging extraction activities (Stahel in Nature, 2016). CE, therefore, preserves the planet for future generations and is also commercially profitable in some cases (depending in part on government policies and incentives) (EC, 2020). While CE envisions system-level change, CE principles can be applied to structure business activities at a smaller scale within the current linear economic system.

The circular economy recognises that natural resources are finite, and aims to keep the materials in products in circulation for as long as possible: reusing, repairing, remanufacturing, sharing and recycling.

Chatham House, 2020

Debates

- **Where does CE fit into the landscape of green growth approaches?** While CE cannot drive all green growth solutions, it does offer practical strategies and business models for achieving green growth in many cases. Many companies and workers are probably already involved in activities that share some or all CE characteristics, but perhaps not with the CE title.
- **Is the circular economy just recycling?** CE is considered by some critics as 'just recycling'. CE advocates, however, stress that true CE represents a system-wide change involving redesigning products and value chains for maximum use and efficiency, changing social norms around ownership and sharing, and prioritising the goal of zero waste.
- **Is this a rich-country problem?** Much of the global waste is generated by wealthier countries. There is, therefore, a question over whether it is appropriate to target developing countries with CE measures. Just like climate action, which needs to happen worldwide, CE transformations need to take place in all countries. However, advocates point to the opportunity for developing countries to 'leap-frog' wealthier ones and incorporate circular economy principles in the early stages of their development process - for example, by beginning with reforming

For an introduction to the concept of circular economy, watch this 4-minute video from the Ellen MacArthur Foundation (2011)

environmental and waste management policies, and encouraging innovative green growth activities. It could also be in the economic self-interest of developing countries to pursue CE approaches, as, with the right policy environment, CE business models could have a competitive advantage (Accenture, 2021). CE goods and services may also command a price premium, as in the Fair Trade and Organic markets.

/03

Promoting a circular economy in developing countries

Lower-income countries are, in many ways, already more circular than high-income countries, partly because people reuse or repair items out of necessity (e.g. 60% of plastics are already recycled in India, compared to the global average of 9% [UNEP, 2018]). Indeed, developing countries are showing growing interest in the CE, especially in Africa. For example, the African Circular Economy Alliance was created at the World Economic Forum on Africa in Kigali in 2016 as a joint project among Rwanda, Nigeria, and South Africa, alongside the World Economic Forum and UN Environment. The Alliance advocates for developing-country leadership on Circularity at national, regional, and global levels, and for sharing best practices on regulatory frameworks, partnership building, and financing CE projects.

Transitioning to a CE could offer economic and environmental benefits for developing countries (EC, 2020). Circular economy business models and policy frameworks are drivers of private-sector competitiveness and sustainable development and therefore represent a nexus between public and private goals (See DCED/IFC report, forthcoming). In addition to reducing a country's exposure to price volatility in natural resources and reducing environmental and health risks associated with unsustainable production processes, including unmanaged waste, CE could generate more and potentially better employment at a variety of skills levels (from waste processing and recycling to remanufacturing and redesigning products) (Chatham House, 2020). Although the potential benefits are clear, many obstacles to scaling up CE in developing countries remain. This section explores key strategies to move towards a CE in more detail.

Global coordination of the transition to a CE

Conceptually, there is a lack of global agreement on how to define where CE fits within the broader landscape of green growth and climate agendas. While

some blocs have joined-up cooperation (e.g., the EU's Green Deal has a coherent CE action plan), CE continues to be interpreted differently across regions. At a practical level, steps towards a CE are happening in various forms around the world, but not in a coordinated way. A related key issue is the frequent lack of alignment between CE support and existing sustainable development and trade cooperation strategies (Chatham House, 2020). For example, many people in developing countries are currently involved in the informal management of e-waste at sites such as Agbogbloshie in Ghana. The export of waste from developed to developing countries could be an opportunity for a linked-up global CE value chain if managed well, but it also has the potential to be hazardous to people and the environment (Chatham House, 2019). Linking waste management to nearby manufacturing has the potential to boost incomes and create new jobs (GIZ, 2019).

Reforming national policies and regulations

A key step in moving towards a circular economy is to reform policies. Developing country governments need to remove hard and soft barriers that impede CE and pursue policies (including through government procurement) that drive CE-aligned innovation and product standardisation (e.g., enabling component parts to be disassembled for renewal). These include their trade-oriented and domestic industrial policies, as well as improved waste management practices. This may seem daunting, but it can be broken down into practical steps, for example:

- **Assessing the state of play and context:** This is important because many CE activities may already be happening but are not labelled as such. Understanding what these activities are, and which segments of the workforce (including differences in CE jobs done by men versus women), will be essential to making effective policy decisions. A thorough assessment will make opportunities and risks clearer for agencies and governments and can be documented to inform a subsequent CE action plan.
- In connection to this, **collecting sex-differentiated data** on what is happening already is vital, as better data on successes and failures globally, and evidence on context-specific trade-offs are needed (Chatham House, 2017).
- **Articulating a clear starting point:** begin with improving environmental regulations and waste management systems. For example, placing bans on single-use plastics, as many countries have already done, or prioritising plastic recovery in waste management. Waste management systems that separate waste at the source (rather than shipping it away for separation) should be promoted, as should investments in logistical infrastructure.
- **Devising innovative green growth strategies, once basic regulations are in place:** These could include different elements, depending on context (EC, 2014). For example, education strategies could be pursued, preparing the working population for emerging circular jobs and supporting existing

businesses with training to encourage more circular activity. Digitalisation strategies could be pursued, so that the digital infrastructure needed by businesses that want to embrace a sharing platform model is available. Similarly, both multinational and domestic government procurement rules could be changed to incentivise CE – and penalise non-CE goods, services and processes.

Infrastructure for circular growth

Circular growth will still need physical infrastructure improvements and energy input. So, investment in renewable energy infrastructure should be encouraged to reduce reliance on fossil fuels and, therefore, mitigate climate change. Likewise, factories, businesses, government buildings and economic infrastructure, including bridges, ports, roads and rail, should be upgraded to be both energy efficient and climate resilient, to further contribute to climate mitigation and adaptation. Similarly, investment in digital infrastructure will be critical. As many CE activities are only made possible by advances in digital technologies, and there is a parallel need to reduce the environmental and climate footprint of the ICT industry, CE could be more strategically linked to digitalisation strategies (Accenture, 2015). For example, circular businesses that fall under the umbrella of 'sharing platforms' usually depend on ICT (well-known sharing platforms in the developed world include Uber and Airbnb). Examples in the **Annex** show some practical examples of businesses in developing countries that use ICT as a key part of their mission.

Technical and vocational training for CE jobs

There is high employment potential in circular activities as waste streams shift and new business models emerge. As businesses transition to CE and CE activities are scaled up, new jobs will be created, including in remanufacturing and repair, which are typically more labour intensive than manufacturing from raw materials (European Commission, 2017). Additionally, a move towards a CE will involve job transformation and redefinition (Chatham House, 2020) – with significant implications for businesses and workers that find themselves in non CE sectors and industries. For the transition to a CE to be just, a deliberate process of targeted reskilling is necessary, in which workers, industries, and communities are supported through the social consequences of restructuring toward circularity. Investment in technical and vocational training schemes, including digital skills training for those activities that depend on digital technologies, will be needed and building local CE capacity will be vital to promoting best practice (Chatham House, 2019).

Engaging with extractives industries

The extractive industries are often politically sensitive sectors and employ many formal and informal workers in developing economies. However, in a

CE, there is less need for raw materials as product life is extended and materials are used multiple times rather than only once. As demand for some extracted materials falls, there will be a need to engage with industries that extract these raw materials, especially in situations where countries depend on these industries for a high proportion of their exports (Centre of Expertise on Resources, 2016).

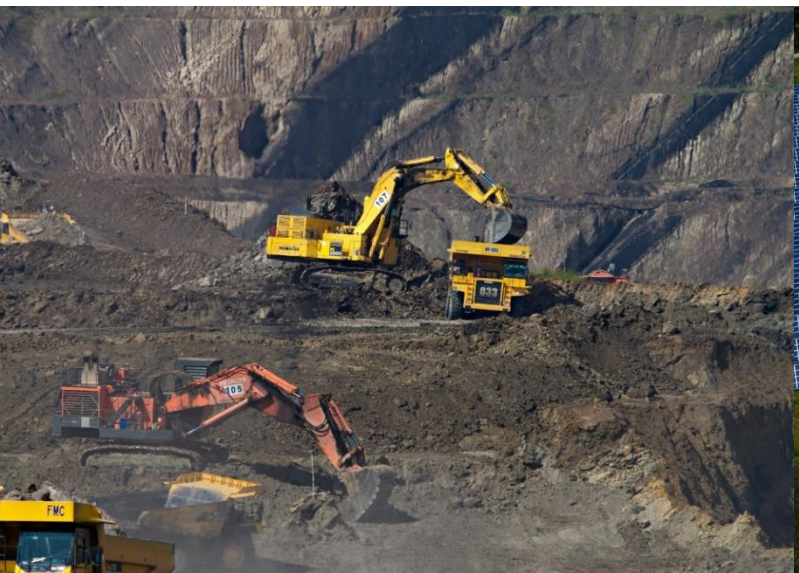
This applies to both formalised mining operations, which can generate substantial government revenues, and the livelihoods of artisanal miners. The business case for a CE becomes more important here, as industry actors need to understand the long-term benefits of shifting to greener business models (ICMM, 2016) and see how they can benefit from this transition.

While demand for some extracted materials will fall as we shift towards cleaner technologies, it is also important to be realistic about the likely speed of change. The World Bank's Climate Smart Mining Facility predicts a significant increase in mining for specialised minerals needed for solar panels, wind turbines and other infrastructure, even under the most optimistic scenarios for material circularity (World Bank Group, 2020). For example, the production of graphite, lithium and cobalt could increase by nearly 500% by 2050 to meet the growing demand for clean energy and electric vehicles. Circularity of minerals for clean energy will be important, but extraction of these resources will still be needed for the foreseeable future.

In this context of changing demand patterns, it is likely that governments will need support in engaging with extractive industries to, on the one hand, achieve the responsible closure of operations that are no longer viable, while, on the other, make the most of the benefits of producing mineral substances essential for modern technologies. Several organisations are already active in this space. Where the decline of extractive industries, with an increase in CE, results in large-scale redundancies, workers will require retraining or reskilling. For example, China is already retraining 800,000 people from the coal and steel industries (Chatham House, 2017).

Access to finance for CE

Access to finance for circular businesses will be key to scaling up CE activities. Multilateral financial institutions can play a huge part in this scaling up, and



most are starting to focus on circularity (Chatham House, 2017). However, because large-scale CE activities are by nature more systemic solutions, many do not fit into the traditional model of project-based financing. As such, the entire spectrum of domestic finance needs to be engaged, including addressing the financing gap faced by many micro, small and medium-sized businesses with innovative CE ideas, including in the informal sector. Given the particular challenges of women and minorities in these business environments, there also needs to be a deliberate focus on ensuring inclusion and equitable access to these financial (and complementary non-financial) services.

Access to technical advice for CE

Technical advice and capacity building need to be offered to existing businesses in developing countries to transition to more circular activities (Chatham House, 2019), as well as to new businesses that rise to the CE challenge. Similarly, business development service (BDS) providers will be needed to help all businesses become more circular, and their capacity can be further strengthened with donor support. This, alongside access to finance and enabling policy environments, will be key to the success of scaling circular businesses.

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What can donors do? Practical steps forward

The following points summarise practical ideas for donor agencies from the discussion above.

1. Global and country-level coordination and knowledge sharing

- There is a lack of a coherent, global agenda for achieving a circular economy, so donors (working closely with the multinational and national businesses that source products from developing countries) could sponsor the shared articulation of a precise definition for CE, and the development of a global action plan.
- At the national level, donor support to circularity can become more effective if it is strategically linked to other development strategies, including digitalisation and trade facilitation.
- There may also be opportunities for donors to facilitate increased coordination of global learning on what works. For example, Chatham House (2019) suggests creating a global 'CE accelerator network' to pilot policy interventions, share knowledge and build capacity. Donors, in partnership with organisations such as the Ellen MacArthur Foundation or the Circular Economy Club, would be well placed to do this. Donors could also explore facilitating the creation of ICT-based platforms that integrate players in global and national value chains to identify practical options for collaborating on circular economy solutions.

2. Sequencing support to national policies and reforms.

- A practical entry point for donor agencies in encouraging more circularity is to support national policy reforms on environmental regulations and waste management. Initial reform successes and a deeper understanding of the context can inform the development of broader innovative green growth strategies further down the line. This may include facilitating public-private dialogue and partnerships across targeted value chains, particularly between partner country governments and the extractives sector, to understand and engage with issues related to transitioning to lower rates of extraction.

3. Engaging with the private sector for innovation and access to finance.

- In the short term, donors could consider including criteria on circularity in their selection process of existing private sector engagement programmes and prioritise partnering with businesses that are circular in some form (see **Annex** for examples of circular businesses).
- New circular economy programmes could facilitate business innovation and access to finance in a more targeted way by strengthening the capacity of intermediary business development service (BDS) providers to mentor businesses, potentially as part of challenge funds or accelerator programmes.
- Finally, there may be opportunities to increase engagement and coordination with IFIs and DFIs on how to prioritise circular activities when accessing finance, and on how to shift IFI and DFI investments towards pro-CE investees.

Case study

The Netherlands: A circular economy by 2050 - A government-wide programme was launched in 2016 to develop a circular economy in the Netherlands by 2050, involving an interim 50% reduction in the use of primary raw materials (minerals, fossil fuels, and metals) by 2030. The main priorities are: biomass and food, plastics, the manufacturing industry, the construction sector, and consumer goods. The programme is led by the Ministry of Infrastructure and Water Management and the Ministry of Economic Affairs and Climate Policy. It involves activities such as introducing a deposit on plastic bottles and rethinking infrastructure design. For example, in 2019, the first reusable flyover, constructed from building blocks that can be completely dismantled and reused, was built in the Netherlands, between Kampen and Dronten. PACE (Platform for Accelerating the Circular Economy) led a systemic change project to stimulate a circular management system for electronic products in Nigeria. They work with the Nigerian Ministry of Environment, UN Environment, Phillips, Dell, HP, Microsoft, Computer Warehouse Group, and the Global Environment Facility. The long-term goal is to expand to more countries in Africa.

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National policies

Since 2000, many governments have created policies, laws and regulations to promote the development of a more circular economic system:

- 2000 - Japan - Fundamental Law for Establishing a Sound Material-Cycle Society, which included a 3R policy (reduce, reuse, recycle) as well as other mechanisms to promote a circular economy.
- 2000s - EU the End-of-Life Vehicles Directive (2000), the Waste Electrical and Electronic Equipment Directive (2002) and the Directive on Ecodesign Requirements for Energy-using Products (2005) were early examples of circular-economy-type policies.
- 2008 - China - Circular Economy Promotion Law.
- 2015 - European Commission - launched the Circular Economy Action Plan. A new iteration of the Action Plan came into force in 2020 as part of the EU Green Deal. The Action Plan recognises public procurement as a key driver of the transition towards a CE and details several actions that integrate CE principles in greening public procurement (GPP), including emphasising CE in the EU GPP Criteria (European Commission, 2017).

Chatham House (2020) have recently developed a global interactive overview of policies related to the CE that allows users to explore the trade dynamics and trade-offs associated with moving from a linear to a circular economy.

Annex

Circular business models

There are different ways in which individual businesses can be circular. The World Business Council for Sustainable Development (2019) cite three types of benefits for companies that adopt circularity. Firstly, CE strategies can accelerate growth because additional revenue can be generated through existing products and services, rather than using new materials every time. Secondly, it allows stronger relationships with customers/employees who align with brand sustainability values and, thirdly, moving towards a CE approach could mitigate risks, e.g. price volatility of raw materials.

Research from Accenture (2015) and the OECD (2019) suggests the following categories of business models (although note that individual businesses won't achieve the sort of system-wide change needed for full circularity; they provide some of the building blocks instead):

- **Circular supply chain,** where materials are renewable, recyclable or biodegradable and can therefore be used in consecutive product life cycles again and again until they safely degrade.
- **Recovery and recycling** of 'end-of-life' products to recapture and reuse materials, or reclaiming waste and by-products from production processes.

- **Sharing platforms** (e.g. Uber, Airbnb), increasingly using digital technologies, allow consumers to connect with companies and entrepreneurs who rent, share, swap or lend their products.
- **Product as service** is the idea that the manufacturer or retailer retains ownership of the product, and consumers lease or pay-per-use. In this model, maximising product life is therefore incentivised, as manufacturers would focus product design on longevity and reusability.
- **Product life-extension,** designing products from the beginning to be easier to repair, resell or to be taken apart and their constituent parts made into something else.

There are a wide variety of examples of businesses, both small and large, in developing countries, that are in some way circular. The Circular Economy Club, a global CE network, has created a MasterList of CE activities that is well populated with examples from all over the world. The list can be filtered and sorted, so is a useful resource to find examples of CE businesses. A select few are described in more detail below as case studies.

Business case studies

EcoPost, based in Kenya, is a social enterprise with a mission to create sustainable jobs for people in marginalised communities and conserve the environment. They manufacture plastic lumber from recycled plastic waste, which is then used in numerous industries, from fencing and road signage to outdoor furniture. This tackles both plastic pollution and deforestation simultaneously. Ecopost was initially funded through a number of different organisations, such as Opes Impact Fund, the WWF, Coca-Cola and Bank of Africa.

Agbogbloshie Makerspace Platform (AMP) is a youth-driven project to promote maker ecosystems in Africa, starting at Agbogbloshie in Accra, Ghana, a scrapyard for e-waste that is one of the most polluted places on Earth, according to the Blacksmith Institute. There are an estimated 6-10,000 informal workers at Agbogbloshie working in the scrap trade; dismantling items and forwarding on materials to other industries. AMP provides spaces for people to make new products on-site from reclaimed materials, and connects them to a digital support network that links recycling with manufacturing.

Zoomcar, available in 9 Indian cities including Bangalore and Chennai, is a car-sharing company. They have 6,500+ cars available and have had 48 million users to date. Users can rent by the hour, day, week or month, and cars are located around the city for easy pick-up. Zoomcar is an example of a sharing platform, a key circular economy business model that allows materials, in this case those that make up a car, to be shared rather than owned by one user, so that each car is used at maximum efficiency. ICT is critical for Zoomcar and many other sharing-platform businesses.

For more resources on this topic see the DCED's Green Growth knowledge page.

This synthesis note was written by Ella Duffy of the DCED Secretariat and is currently being updated. Please get in touch at admin@enterprise-development.org if you would like to share new insights or evidence to be considered.

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