An Introduction to the Circular Economy for Donors

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Main takeaways:

⏩ Moving towards an economy that is circular rather than linear could allow developing countries to 'leapfrog' on a path to more sustainable development, without locking-in resource-intensive practices from the beginning. COVID-19 offers a unique opportunity for embracing circular economy principles within the idea of 'building back better' for a green economic recovery.

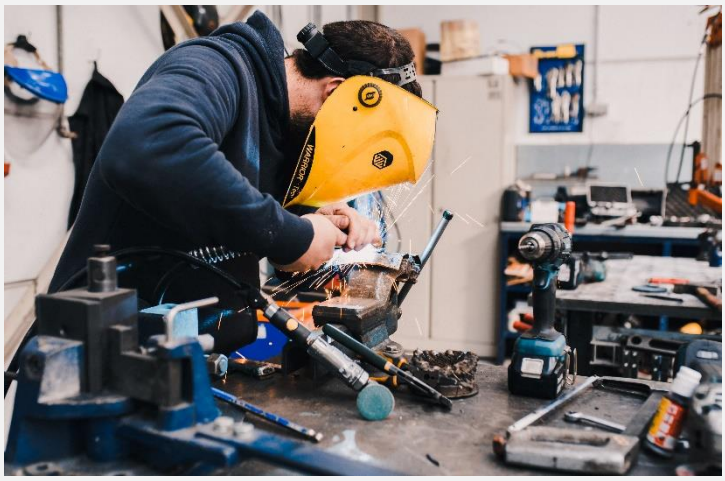
⏩ The lack of global agreement on a definition and on pathways towards a circular economy, however, make it difficult to learn from existing experiences and develop coherent strategies. The feasibility and impact of a shift towards a circular economy in developing countries reliant on extractive industries is particularly unclear.

⏩ Still, there are numerous ways in which donors can stimulate change towards circularity in partner countries. Depending on the context, this may include measures to catalyse system-wide change, e.g., through business environment reforms, changes to procurement policies, and direct support for innovative circular business models through accelerator programmes or challenge funds. At the global level, awareness raising, proactive engagement with multinational companies, better data and coordination, and representation and leadership from developing countries could also contribute to a clearer common vision on circularity.

Introduction

Interest in the circular economy is growing as a strategy for green growth. 'Building back better' after the Covid-19 pandemic could accelerate interest even further (Ellen MacArthur Foundation, 2020). This synthesis note is an introduction to the topic of circular economy (CE) for private sector development (PSD) practitioners. CE is particularly relevant to those working towards green growth objectives. The note takes a policy view, outlining CE principles and discussing opportunities and challenges for encouraging CE in developing countries. Practical suggestions are included, while the annex provides examples of circular business models.

For those interested in exploring the topic of green growth more broadly, visit the DCED Knowledge Page on Green Growth



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Concept and debates

1. *Definition:*

> *The circular economy recognizes 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.

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

In the linear (environmentally unsustainable) economy that much of the world is currently structured around, consumers accept a take-make-waste system for single-use materials, with large quantities of waste going to landfill or the oceans. In contrast, CE acknowledges that the planet is a closed system, as far as materials are concerned (ICMM, 2016). CE is a way to contribute to sustainable, green economic growth through reducing the accumulation of waste and husbanding resources for reuse, minimising the need for mining and other damaging extraction activities (Stahel in Nature, 2016). CE therefore maintains the planet for future generations and is also commercially profitable in some cases (depending partly 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.

2. *Debates:*

- *Where does CE fit into the landscape of green growth approaches?* While CE cannot drive all green growth solutions, it does represent a set of practical strategies and business models to achieve 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 reaching zero waste.

- *Is this a rich-country problem?* Much waste globally 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

Covid-19 has disrupted supply chains and international transport, highlighting the importance of local production capacities. The pandemic has also sparked renewed interest in thinking about our role in Earth systems; it is driving new thinking about the interrelationships of markets and environmental and human health, opening the door for CE and other models. Circularity is also being talked about more in conversations about 'building back better' for a greener future (Ellen MacArthur Foundation, 2020). There is, therefore, a pertinent question of whether circular businesses should be given priority in post-COVID-19 recovery support measures. In order to scale up circular activities, private sector engagement is needed, so that solutions are aligned with both environmental sustainability and economic viability.

ones and incorporate circular economy principles in the early stages of their development process - for example, by beginning with reforming 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 competitive advantage (Accenture, 2015). CE goods and services may also generate a price premium – like how the Fair Trade and Organic markets currently operate.

Strategies for 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 between Rwanda, Nigeria and South Africa alongside the World Economic Forum and UN Environment. The Alliance advocates for developing country leadership on Circularity at a national, regional and global level, and to share best practices around regulatory frameworks, partnership building and financing CE projects.

Transitioning to a CE could have economic as well as environmental benefits for developing countries (EC, 2020). Circular economy business models and policy frameworks are a driver for private sector competitiveness and sustainable development, and therefore represent a collective 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). However, while the potential benefits are clear, there are many obstacles to scaling up CE in developing countries. 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 defining where CE fits into 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 in different ways in different regions.

At a practical level, steps towards a CE are happening in various forms all over the world, but not in a linked-up 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 informal management of e-waste at sites like Agbogbloshie in Ghana. The exporting of waste from developed to developing countries could be an opportunity for a linked-up global CE value chain, if managed well, but also has the potential to be

hazardous for people and the environment (Chatham House, 2019). Linking waste management with manufacturing nearby 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 standardization (e.g., so that component parts can be disassembled for renewal). These include their trade-oriented and domestic industrial policies, as well as improved waste management practices (See DCED/IFC report, forthcoming). This may seem daunting but 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: DCED/IFC (2021, forthcoming) suggest beginning 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 products at the source (as opposed to shipping them away for separation) should be promoted, as well as 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 who want to embrace a sharing platform model is available. Similarly, both multinational and domestic government procurement rules could be changed to incentivize CE – and penalize 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 the advancement of digital technologies, and there is a parallel need to reduce the environmental and climate footprint of the ICT industry, CE could be linked up more strategically with 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 make the transition to CE, and as 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. In order for the transition to a CE to be just, a deliberate process of targeted reskilling is necessary, where workers, industries and communities are supported through the social consequences of restructuring around 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 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 very significant government revenues, and to the livelihoods of artisanal miners. The business case for a CE becomes more important here, as industry actors need to be able 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 specialized 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 extractives industries to, on the one hand, achieve responsible closure of operations that are no longer viable while, on the other, make the most of the benefits from 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, will result in large-scale redundancies, workers will require retraining or re-skilling. For example, China is already in the process of retraining 800,000 people from 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 already 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 to address 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 insuring 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 the capacity of these providers can be further strengthened through donor support. This, alongside access to finance and enabling policy environments, will be key to the success of scaling circular businesses.

What can donors do? Practical steps forward

The following points summarize some practical ideas for donor agencies from the above discussion:

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 the creation of 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, in particular between partner country governments and the extractives sector, to understand and engage with issues around 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 for increased engagement and coordination with IFIs and DFIs on how to prioritise circular activities in accessing finance, and on how to shift IFI and DFI investments towards pro-CE investees.

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 has come into force in 2020 as part of the EU Green Deal. The Action Plan recognises public procurement as a key driver in the transition towards a CE, and details several actions that integrate CE principles in greening public procurement (GPP), including emphasizing 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.

Case studies

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 and metals) by 2030. The main priorities are: biomass and food, plastics, the manufacturing industry, 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 includes activities such as introducing a deposit on plastic bottles as well as rethinking infrastructure design. For example, in 2019 the first reusable flyover, made from building blocks that can be completely taken apart and reused, was built in the Netherlands, between Kampen and Dronten.

Circular Economy Approaches for Electronics in Nigeria - PACE (Platform for Accelerating the Circular Economy) lead a systemic change project stimulating a circular management system for electronics 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 ambition is to scale to further countries in Africa.

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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 instead some of the building blocks):

- ***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, have created a MasterList of global CE activities which 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 selected few are described below in more detail as case studies.

Business case studies

EcoPost, based in Kenya, is a social enterprise with the mission of creating sustainable jobs for people in marginalized communities as well as conserving the environment. They manufacture plastic lumber from recycled waste plastic, which is then used in numerous industries, from fencing to road signage to outdoor furniture. This tackles the issues of 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 themselves on site from reclaimed materials, as well as connecting them to a digital support network, linking 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, as well as many other sharing platform businesses.