



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



Background note for the regional preparatory meetings for the global consultations on circular economy

13-20 November 2020

Regional preparatory meetings for the global consultations on circular economy

Background note



I. UNIDO global consultations on circular economy

The General Conference, in its resolution GC.18/Res.7, requested the United Nations Industrial Development Organization (UNIDO) to organize consultations on circular economy for experts from Member States with a view to facilitating exchanges on best practices, and emerging innovations and the promotion and adoption of circular economy principles and practices by industries of Member States.

The regional preparatory meetings for the global UNIDO consultations on circular economy, scheduled to be held from 13 to 20 November 2020, will focus on two topics, selected by UNIDO Member States:

Topic 1: Circular economy as a substantial contribution to addressing the climate crisis and advancing the achievement of the Sustainable Development Goals.

Topic 2: Mobilizing finance, technology and capacity-building to promote circular economy principles and practices in developing countries.

Both topics will be considered together in the course of the regional preparatory meetings. Participants are encouraged to structure their interventions so as to address both topics and present their points of view, experiences and recommendations on each, as per the following guiding questions:

- What do you see as key benefits your country, company or organization can derive from adopting circular economy principles and practices in terms of achieving Sustainable Development Goals and meeting national climate change priorities?
- Are there successful examples of introducing circular economy principles and practices in your country, company or organization, including policy and regulatory

frameworks as well as national, multilateral, bilateral and South-South cooperation initiatives and partnerships?

- What are the barriers impeding the adoption of circular economy principles and practices in your country, company or organization?
- What support, including arrangements for access to finance, technology transfer and capacity-building, would your country, company or organization require to enable the adoption of circular economy principles and practices?

II. Circular economy principles and practices

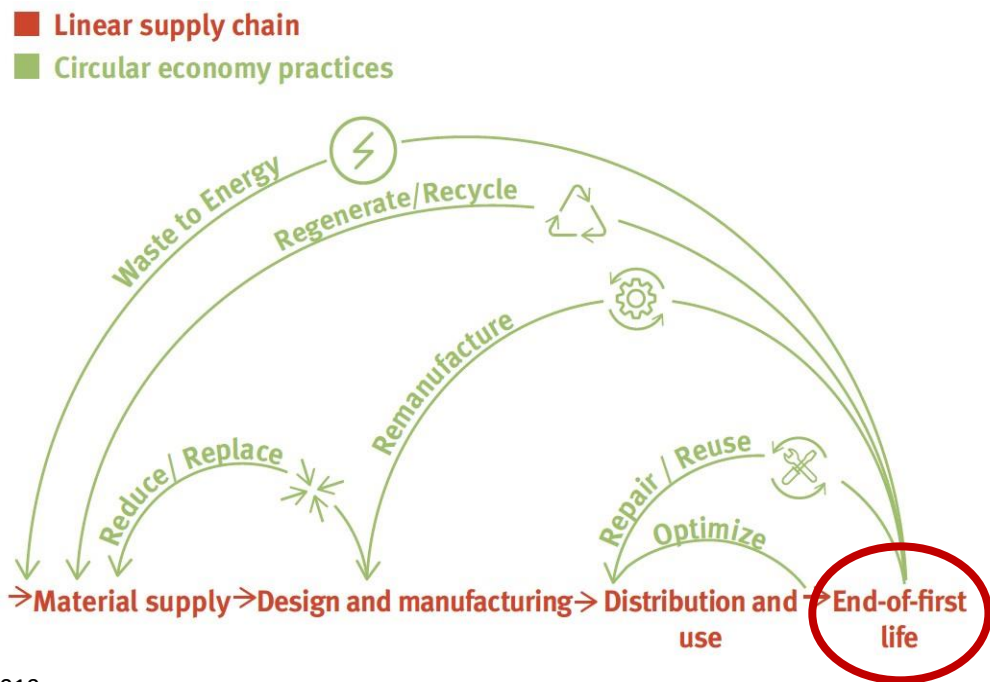
Industrial development is widely seen as a global engine for growth. The 2030 Agenda for Sustainable Development¹ refers to inclusive and sustainable industrial development in its Sustainable Development Goal 9. On the other hand, current trends of the climate emergency, massive and unsustainable consumption of resources, and population growth are exacerbating the fact that the globally prevalent model of consumption and production, “take-make-use-dispose”, is no longer sustainable. Circular economy is an alternative that seeks to decouple economic growth and social well-being from environmental degradation.

Circular economy is an industrial economy that returns products, parts and materials (biomass, fossils, metals and non-metallic minerals) into use several times, based on the principles that:

- Products are designed to last;
- Value is maintained for as long as possible;
- Generation of waste and pollution is minimized;
- Renewable energy is used along a value chain, as much as possible.

Circular economy principles are applicable to all economies, whether industrialized and less industrialized, and all actors, governments, businesses and consumers, as the “take-make-use-dispose” habits of how we produce and consume products today apply to all.

¹ <https://sustainabledevelopment.un.org/post2015/transformingourworld>



Source: UNIDO 2019

UNIDO promotes the concept that every product (goods and services), its parts and materials circulating in our economies today should have multiple lives, meaning have an end-of-**first** life at the end of its first use; and is deemed a resource instead of waste, as a minimum. Circular economy practices, which are in effect business practices, applied along domestic and global value chains with a lifecycle perspective, can help retain value in the economy many times over, while creating new business opportunities, innovations, partnerships and jobs and safeguard the environment.

For example, a product may be **replaced** like in the case of single use plastics, saving a precious resource, made of fossil fuels. In the design and manufacturing phase, amount of materials and water used could be **reduced** and hazardous materials replaced with non-toxic inputs that will ensure a product, its parts and materials are more easily returned to additional economic uses, while retaining costs savings for consumers and industries. Increasing the **durability, reusability, upgradability, repairability and recyclability** of products by design would help consumers and industries to reap additional value from materials and water consumed in the first and next lives of a product, its parts and materials, while reducing environmental impacts of resource consumption.

Increasing **recycled content** and ensuring products use energy and other resources more efficiently; maximizing **resource efficiency in manufacturing**, optimizing or **intensifying use of products**; enabling **remanufacturing**; **recycling to recover** materials and **regenerating biomass** would all have similar positive effects on consumers and businesses, while continuing to generate revenue for governments to be used for the whole of society. Even a transitional measure such as **recovering energy from waste**, after maximizing circularity everywhere else, would be better than landfilling what remains and losing an economic opportunity eternally.

In summary, adoption of circular economy practices would lead to increased resource efficiency and economic opportunities and reduced environmental impacts. A summary of potential benefits for consumers, industries/businesses and governments is shown below.

Economic benefits	Environmental benefits	Social benefits
Increased productivity (with resource efficiency)	Reduced environmental impact	Improved well-being
Reduced production costs and improved competitiveness	Reduced emissions of GHG and pollutants	New jobs and incomes
New business activities and practices	Reduced pollution and end-of-life waste	Improved health and working conditions of people
New markets and investment opportunities	Higher quality of ecosystem services	Improved health of animals and plants
Enhanced consumer loyalty	Preservation of natural resources (water, land, materials)	New partnerships and collaborations
Reduced resource scarcity and better protection against resource price fluctuations	Safeguarding biodiversity	Innovations and technologies that make life easier

III. Potential sustainable development and climate benefits of circular economy transition

In recent years, circular economy principles and practices have gained traction as viable solutions to some of the most pressing global challenges. By addressing root causes, circular economy principles and practices hold much promise to accelerate the implementation of the 2030 Agenda for Sustainable Development and the related Sustainable Development Goals (SDGs), in particular:

- SDG 3 (Health) and SDG 6 (Clean Water and Sanitation) by reducing waste and air, soil and water pollution;
- SDG 7 (Affordable and Clean Energy) by promoting a shift towards renewable energy sources;
- SDG 8 (Decent Work and Economic Growth) by creating new jobs and incomes;
- SDG 9 (Sustainable and inclusive industrialization, resilient Infrastructure and innovation) by ensuring industrialization is sustainable and inclusive, and innovations in materials and business practices are deployed, including digitalization;
- SDG 12 (Responsible Consumption and Production) by accelerating a mindset change that values resources and reverses unsustainable consumption habits of consumers, businesses and governments;
- SDG 13 (Climate Action) by reducing greenhouse gas (GHG) emissions from resource extraction and processing; and

- SDG 15 (Life on Land) by reducing the impact of resource extraction and processing on biodiversity and land.

To date, efforts to tackle the climate crisis and achieve carbon neutrality by 2050 have focused on a transition to renewable energy, complemented by energy efficiency measures and avoiding deforestation. Though crucial and necessary, these measures can only address about 50 per cent of global GHG emissions. The remaining 50 per cent of emissions come from extraction and processing of resources and lifestyle choices. Furthermore, extraction and processing of resources are associated with about 90 per cent of water stress and biodiversity loss due to land use, and about 50 per cent of particulate matter related health impacts (air pollution)²

Societal needs may be categorized into six major groups: housing and infrastructure, nutrition, mobility, consumer goods, services (e.g. education, restaurants, dry cleaning, others), healthcare, and communications. Products (goods and services) are produced by manufacturing industries by using materials (biomass, fossils, metals and non-metallic minerals), land and water.

According to the 2018 and 2019 Circularity Gap reports³, global societal needs were satisfied with products that consumed materials to the level of:

- **45 per cent for housing and infrastructure** (e.g. sand, gravel, cement, steel, cables, switches, asphalt in roads, bridges, etc.);
- **23 per cent for nutrition** (e.g. biomass, chemicals such as fertilizers, pharmaceuticals, packaging, etc.);
- **13per cent for mobility** (e.g. steel, aluminum, plastics, glass, rubber and textiles in cars, trucks, airplanes, trains, etc.);
- **10 per cent for consumer goods** (e.g. metals, plastics in refrigerators, computers, textiles in furniture, garments, chemicals in cleaning and personal care products, etc.);
- **5 per cent for services** (e.g. metals in pots/pans/cutlery for restaurants, coat hangers for dry cleaners, rubber and plastics in basketballs, plastics in computers, etc.);
- **2 per cent for healthcare** (e.g. chemicals in pharmaceuticals, metals, plastics in imaging equipment, glassware in laboratory testing, etc.); and
- **2 per cent for communication** (e.g. metals, plastics, glass in cell phones, server farms, cables, chemicals in air conditioning equipment for call centers, etc.).

In manufacturing industries, transitioning to circular economy practices can be achieved by substantially extending the lifetime of products, such as buildings, vehicles, consumer goods, medical equipment, computers and others through reuse, repairs, and remanufacturing, and recycling the materials used to make them. This reduces the demand for virgin materials, including energy (fossil fuels) and the emissions associated with their extraction and processing. In food systems, using regenerative agricultural practices and designing out waste along whole food and feed value chains serve to sequester carbon in the soil and avoid

² Global Resource Outlook 2019 (<https://www.resourcepanel.org/reports/global-resources-outlook>), International Resource Panel, 2019, p. 68

³ <https://www.circle-economy.com/resources/the-circularity-gap-report-our-world-is-only-9-circular> 2018 and <https://www.circle-economy.com/resources/the-circularity-gap-report-2019>

emissions related to uneaten food, unused by-products, food packaging, fuels used in their transport and energy spent in cooling, etc.

In addition to major health and economic benefits associated with less waste and pollution⁴, circular economy practices also have the potential to increase resilience to the effects of climate change. For example, in keeping materials in use, businesses can decouple economic activity from the consumption of raw materials vulnerable to climate risks, and therefore build greater flexibility. In food systems, regenerative agriculture improves the health of soil, leading to its greater capacity to absorb and retain water, increasing resilience against both intense rainfall and drought.⁵ Finally, the Circularity Gap Report 2020 finds that today the global economy is only 8.6 per cent circular, meaning that only 8.6 per cent of minerals, fossil fuels, metals and biomass that enter the economy are reused annually⁶, resulting in great economic and welfare losses and environmental degradation .

IV. Policy frameworks to enable the circular economy transition

Recent years saw the proliferation of national regulatory and legal frameworks that promote the adoption of circular economy principles and practices in various countries worldwide. Many countries included some of the circular economy principles and practices in their national development plans and/or their environment and climate programmes, including targets for recycling and reuse of waste materials as well as for linking circular economy and climate action, plans to stimulate innovation and job creation through shifts to a circular economy, and processes to bring together important national stakeholders.

At the national level, promotion of cleaner production in the 1990's and resource efficiency in the 2000's preceded the circular economy related policies and frameworks. Going back about two decades, Japan was the first country to issue a "Fundamental Law for a Sound Material-Cycle Society" in 2001⁷, one year after issuing the "Law on Resource Efficiency". Japan has also championed 3R (reduce, reuse, recycle) practices since their agreement by the G8 in 2008. In the same year, the Republic of Korea issued its "Act on the Promotion of Saving and Recycling of Resources"⁸. China, one of the front-runners in circular economy policies, launched its "Law on Cleaner Production" in 2002, its "Law on Circular Economy Promotion" in 2008, followed by "China Circular Economy Development Strategies Plan" in 2013⁹.

Germany issued its "Raw materials strategy" in 2010 and launched its "Law on Closed Cycle Management of Waste" in 2012, together with its Resource Efficiency Programme. India's Resource Efficiency Strategy of 2017 mentions recycling, reuse, repair and remanufacturing

⁴ According to the report of the Lancet Commission on Health and Pollution, in 2015, 9 million premature deaths were associated with air, soil and water pollution, and caused a USD 4.6 trillion in welfare loss in the world economy. Lancet Commission report on pollution and health, The Lancet, Vol. 391, No. 10119, 2017 at <https://www.thelancet.com/commissions/pollution-and-health> , financially supported by the European Union and UNIDO, among others.

⁵ https://www.ellenmacarthurfoundation.org/assets/downloads/Completing_The_Picture_How_The_Circular_Economy_Tackles_Climate_Change_V3_26_September.pdf

⁶ <https://www.circularity-gap.world/2020#interactive>

⁷ https://www.env.go.jp/en/recycle/smcs/3rd-f_plan.pdf

⁸ <https://www.global-regulation.com/law/korea/644700/act-on-the-promotion-of-saving-and-recycling-of-resources.html>

⁹ [https://www.greengrowthknowledge.org/sites/default/files/downloads/policydatabase/CHINA\)%20Circular%20Economy%20Promotion%20Law%20\(2008\).pdf](https://www.greengrowthknowledge.org/sites/default/files/downloads/policydatabase/CHINA)%20Circular%20Economy%20Promotion%20Law%20(2008).pdf)

and prioritizes becoming a manufacturing hub, improving efficiency of urban infrastructure, creating affordable housing, and reducing domestic pollution and waste. Multi-dimensional benefits are expected from resource efficiency actions. South Africa's Waste Management Act of 2008, as amended in 2014, incorporates extended producer responsibility in a number of sectors, similar to practices in many other countries. More recently, Slovenia prepared its "Roadmap towards the Circular Economy"¹⁰, Colombia its "National Strategy on Circular Economy"¹¹ and Chile its *Circula El Plástico*¹².

Among other developments, the EU-Vietnam Free Trade Agreement of 2018, which is a first of its kind, recognizes the value of "remanufactured goods" and parties decided to "*accord to remanufactured goods the same treatment as that accorded to new like goods*"¹³.

The European Union adopted a new Circular Economy Action Plan for a Cleaner and More Competitive Europe¹⁴ in March 2020 - one of the main blocks of the European Green Deal, Europe's new agenda for sustainable development. The Action Plan places emphasis on product value chains and proposes "*a sustainable product policy legislative initiative*" to "*make products fit for a climate-neutral, resource efficient and circular economy*", regulating aspects such as durability, upgradability, reparability, increased and recycled content. There will also be regulations to enable remanufacturing and high-quality recycling and incentivizing product-as-a-service business practices. The Action Plan also identified key product value chains for urgent, comprehensive and coordinated action as electronics and ICT, batteries and vehicles, packaging, plastics, textiles, construction and buildings, and food, water and nutrients.

V. Partnerships and initiatives to mobilize circular economy actors

The transition from a linear to a circular economy requires a joint effort by stakeholders from industrial/business sectors, actors in government and the society. The private sector can contribute to the transition by developing competencies in circular design to implement product reuse, repairs, remanufacturing and recycling, and serving as trend-setters of innovative circular economy practices, including product-as-a-service, where the product's performance is the basis for business transactions instead of change of its ownership. Policymakers can support the transition by promoting the reuse of products, parts and materials and higher resource productivity by rethinking incentives and providing the right set of policies and access to financing. Civil society and consumers play an important role by mobilizing broad forces to carry out practical actions, demanding more circular products and putting pressure on businesses and governments to accelerate implementation. A range of partnerships and initiatives has been established to unite stakeholders in a joint pursuit for circular economy transition.

¹⁰ https://circulareconomy.europa.eu/platform/sites/default/files/roadmap_towards_the_circular_economy_in_slovenia.pdf.

¹¹ https://unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.33/2020/mtg1/S2_4_CE_SEEA_DANE_Colombia.pdf

¹² <https://www.newplasticseconomy.org/news/chile-announces-plastics-pact-targets>

¹³ <http://trade.ec.europa.eu/doclib/press/index.cfm?id=1437> Chapter 2, Article 2.6 entitled Remanufactured Goods.

¹⁴ https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf

The Platform for Accelerating the Circular Economy (PACE)¹⁵ is a global community of leaders working together to accelerate the transition to a circular economy by mobilizing business, government and civil society; transforming knowledge into an evidence-based collective action agenda; and advancing projects that are pioneering or scaling up circular economy practices. PACE was created in 2018 by the World Economic Forum and is now hosted by the World Resources Institute.

Launched at the United Nations Climate Change Conference in 2017, the African Circular Economy Alliance (ACEA)¹⁶ is a government-led coalition of African nations and global partners committed to advancing circular economy transitions at the national, regional and continental levels. The ACEA serves as a centralized platform for knowledge-sharing and best practices identification, the creation of enabling legal and regulatory frameworks, as well as the building of partnerships for financing and creation of circular economy projects in Africa.

The vision of the African Circular Economy Network¹⁷ is to build a restorative African economy that generates well-being and prosperity inclusive of all its people through new forms of production and consumption which maintain and regenerate its environmental resources.

Scale360° fast-tracks the Fourth Industrial Revolution's impact on the circular economy by bringing together public and private sector leaders and innovators to foster dynamic local and regional ecosystems for innovation.¹⁸

VI. Examples of support for circular economy transition in developing countries

While there are no dedicated mechanisms or arrangements yet in place to provide finance, technology and capacity-building support to developing countries to facilitate the adoption of circular economy principles and practices, several United Nations entities, bilateral partners and international financial institutions launched related programmes and projects.

The Global Network for Resource Efficient and Cleaner Production (RECPnet)¹⁹ brings together RECP service providers to catalyse the effective and widespread application of RECP in developing economies. Established by UNIDO and the United Nations Environment Programme (UNEP) in 2010 together with partner governments, the 65 RECP service providers²⁰ in 50 countries assist businesses and governments in development, application, adaptation, scaling up and mainstreaming of RECP concepts, policies, practices and technologies, both at the regional and global levels.

The UNIDO-led Circular Opportunities Programme²¹ seeks to identify solid circular business prospects in Uruguay in plastics, leather, construction, wineries and food sectors.

¹⁵ <https://pacecircular.org/african-circular-economy-alliance>.

¹⁶ <https://pacecircular.org/african-circular-economy-alliance>

¹⁷ <https://www.acen.africa/>

¹⁸ <https://www.weforum.org/scale360-circular-innovation/home>

¹⁹ https://www.recenet.org/wp-content/uploads/2018/10/RECPnet-Brochure_1610.pdf

²⁰ Capacity-building assistance to most RECP service providers by UNIDO starting in 1994.

²¹ <http://oportunidadescirculares.org/>

The UNIDO-led SwitchMed I, SwitchMed II programmes²² covering Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine and Tunisia, as well as the EU4Development programmes²³, supported by the Organisation for Economic Co-operation and Development and covering Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine, and the UNEP-led Switch Africa Green programme²⁴ promote circular practices such as recovery of materials from textiles and garments, resource efficiency in food, paint, chemicals value chains, biogas technology, e-waste management, organic agriculture, green manufacturing, eco-industrial parks, and standards and labelling in the hotel industry.

In Ghana, the United Nations Development Programme facilitated the establishment of a Waste Recovery Platform, for connecting stakeholders and stimulating partnerships to address waste management data, policy and implementation gaps, with the ultimate goal of promoting a transition towards a circular economy.²⁵

In 2018, the World Bank launched a new initiative, the “Wastewater: From Waste to Resource” project, which focused on raising awareness among decision-makers across the Latin America and the Caribbean region regarding the potential of wastewater as a resource and aimed to introduce circular economy practices in wastewater management.

Circular economy has been recognized by the Global Environment Facility (GEF) as a unique opportunity to pursue a suite of environmental benefits through public–private partnerships. GEF-7 investments focus on actions that can lead to a shift in global supply chains. Examples of projects include promoting the recycling of plastic waste and addressing the disposal of PET plastics in Guyana, Peru and Suriname. The following UNIDO projects that focus on the promotion of circular economy practices will start in 2020-2021 in partnership with the GEF:

- Global green chemistry initiative²⁶;
- Promoting the transition to a circular economy in Uruguay through cleantech innovations;
- Accelerating cleantech innovation and entrepreneurship in SMEs to support transition towards a circular economy and create green jobs in South Africa;
- Establishing a circular economy framework for the plastics sector in Ghana;
- Promotion of circular economy in the textile and garment sector through the sustainable management of chemicals and waste in Ethiopia, Lesotho, Madagascar and South Africa.

The Switzerland-funded Global Eco-Industrial Park Programme that supports the transformation of industrial parks to eco-industrial parks and promotes circular economy practices in parks and resident firms is implemented in Colombia, Egypt, Indonesia, Peru, South Africa, Ukraine and Viet Nam by UNIDO. The global “SWITCH to circular economy value chains” project, funded by the European Union and led by UNIDO, will start in January 2021,

²² <https://switchmed.eu>

²³ <http://www.eu4environment.org/> , UNIDO is one of the partners for this project.

²⁴ <https://www.unenvironment.org/switchafricagreen/>

²⁵ <https://www.africa.undp.org/content/rba/en/home/presscenter/articles/2020/transitioning-to-a-circular-economywith-a-multi-stakeholder-pla.html>

²⁶ <https://www.global-green-chemistry-initiative.com>

in collaboration with the European Investment Bank, the Chatham House, and the Circle Economy. The focus of this project will be on promoting circular economy practices in selected global value chains and their supplier networks in developing countries.

The European Union and the Government of India signed a Joint Declaration of Intent in 2018 to promote cooperation initiatives, including support for an eco-labelling scheme for secondary materials; assistance in developing recycling standards for e-waste, plastics, and construction and demolition waste; and promotion of R&D in resource efficiency.²⁷

In China, President Xi Jinping announced that the Belt and Road Initiative should promote a “*green, low-carbon, circular and sustainable*” form of development. An example is the planned construction of a China-African Circular Economy Industrial Park in South Africa, led by a private sector company specializing in resource recycling.²⁸

Japan contributes to the circular economy transition through the Regional 3R Forum in Asia and the Pacific. This cooperative platform enables governments from 39 countries in the region to promote policy coordination; network building; research cooperation; piloting of circular economy projects; and knowledge-sharing with international organizations, the private sector and civil society stakeholders.²⁹ Japan also demonstrates its leadership for reducing marine plastic litter by funding projects on alternative materials and plastic waste processing technologies and systems, one of which is underway in South Africa in collaboration with UNIDO since 2019.

The German Ministry for Economic Cooperation and Development expanded its cooperation with partner countries on integrated waste management as part of its marine litter action plan.³⁰

²⁷ https://eeas.europa.eu/delegations/india/45883/european-union-and-india-sign-joint-declaration-resourceefficiency_en

²⁸ http://www.xinhuanet.com/english/2018-01/23/c_136918116.htm

²⁹ <http://www.env.go.jp/recycle/3r/en/index.html>

³⁰ <https://www.bmz.de/en/issues/abfall/meeresmuell/index.html>



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