Advancing Circular Economy in Africa

From Continental to Regional and National Action Plans, and the Data Needed for Effective Implementation

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What is circular economy ?

DESIGN OUT WASTE AND POLLUTION

A circular economy reveals and designs out the negative impacts of economic activity that cause damage to human health and natural systems. These costs include: the release of greenhouse gases and hazardous substances; the pollution of air, land, and water; and structural waste, such as underutilised buildings and cars.

KEEP PRODUCTS AND MATERIALS IN USE

A circular economy favours activities that preserve value in the form of energy, labour, and materials. This means designing for durability, reuse, remanufacturing, and recycling to keep products, components, and materials circulating in the economy. Circular systems make effective use of biologically based materials by encouraging many different economic uses before nutrients are returned to natural systems.

REGENERATE NATURAL SYSTEMS

A circular economy avoids the use of non-renewable resources where possible and preserves or enhances renewable ones, for example by returning valuable nutrients to the soil to support natural regeneration.

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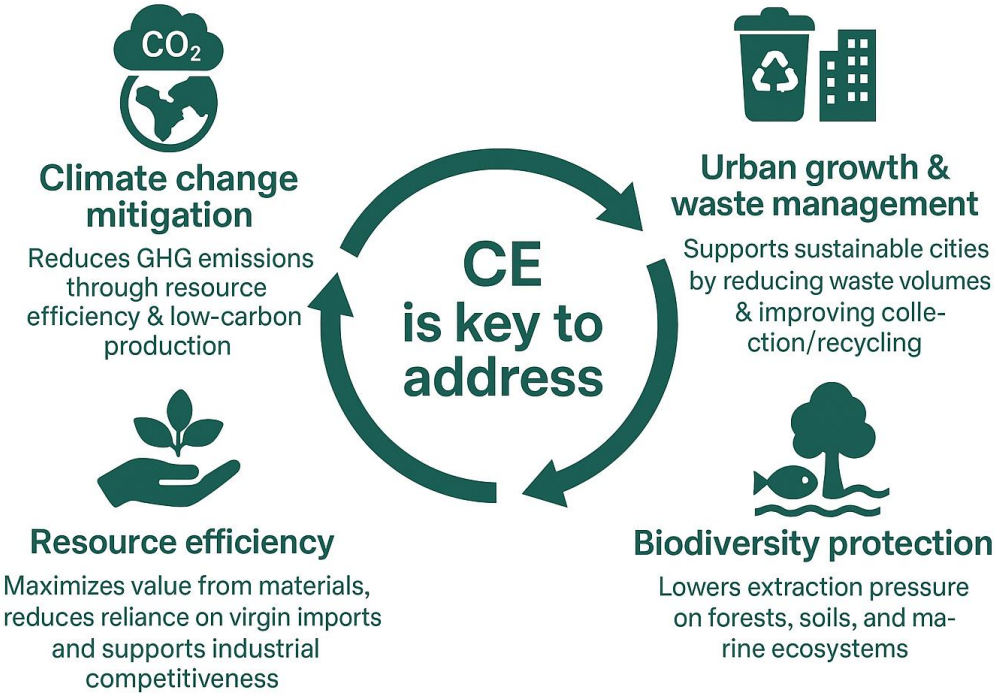
Circular economy : A growing opportunity for Africa

- Circular Economy supports **Africa's broader development agenda** in achieving environmental, economic, and job creation objectives.
- Circular Economy is embedded in the **African Union Agenda 2063** and is aligned with the **AfCFTA**.
- Circular Economy is a **billion-dollar opportunity** for Africa.



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Circular Economy and Employment

- **11 million jobs:** Circular economy could unlock millions of new opportunities across Africa.
- **Youth-led transition:** Young innovators are already driving recycling, repair, and new business models.
- **Skills & support:** Reskilling and strong enterprise frameworks are essential to scale inclusive, local solutions, while considering the participation of the informal sector.

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Promoting Circular Economy at the Continental level

- **AU CEAP 2024–2034**: the roadmap for Africa's circular economy.
- Addresses poverty, climate risks, mismanaged waste and other key developmental agenda for the continent.
- Circular Economy enablers: **regional cooperation, monitoring, stakeholder engagement, financing.**
- Success depends on **regional & national implementation.**

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Circular Economy sector prioritization for Africa

Sector	Justification for prioritization
Water	Africa faces increasing water scarcity due to climate change, urbanization, and agriculture demand. Circular approaches like water reuse, rainwater harvesting, and wastewater-to-energy are critical for resilience, food production, and industrial competitiveness.
Waste	Rapid urban growth and limited waste infrastructure create unmanaged waste streams that threaten health and ecosystems. CE models enable waste prevention, segregation, and recycling, turning waste into economic resources and jobs.
Energy	Many African countries have low energy access but high renewable potential (solar, wind, hydro, biomass). Circular energy systems improve efficiency, reduce fossil fuel dependence, and enable local, off-grid solutions for rural areas.
Agri-food and Fisheries	Agriculture and fisheries are key livelihood sources but face losses from inefficiency and spoilage. Circular strategies such as valorizing agricultural residues, sustainable aquaculture, and nutrient cycling improve food security and incomes.
Transport and Mobility	Growing cities face congestion, pollution, and inefficient transport. Circular mobility promotes shared systems, low-emission vehicles, and resilient infrastructure, reducing fossil fuel use and environmental impacts.
Tourism	Africa's tourism depends on natural and cultural assets that are vulnerable to degradation. Circular tourism emphasizes resource efficiency, waste minimization, and local value chains, ensuring long-term competitiveness.
Construction	Industrial growth and urban expansion consume large quantities of raw materials. Circular construction uses recycled materials, modular designs, and extended product life cycles, lowering costs and emissions.
Packaging and Plastics	Africa is highly affected by plastic pollution, especially in waterways and coasts. Circular packaging systems (EPR, biodegradable materials, reuse) address pollution, protect biodiversity, and create recycling markets.
Electronics	Rising digitalization is generating growing volumes of e-waste, often handled informally. Circular electronics systems recover valuable metals, reduce imports of raw materials, and create safe recycling jobs.
Textiles	Africa's textile and apparel sectors are resource-intensive and face rising waste from fast fashion. Circular textiles promote sustainable fibers, reuse, and recycling, reducing water use and pollution while supporting local manufacturing.
Mining	A key economic driver, but mining has high environmental impacts and waste generation. Circular mining practices optimize resource extraction, reuse mine waste in construction or industry, and restore ecosystems post-mining.

Promoting Circular Economy at the Regional Level

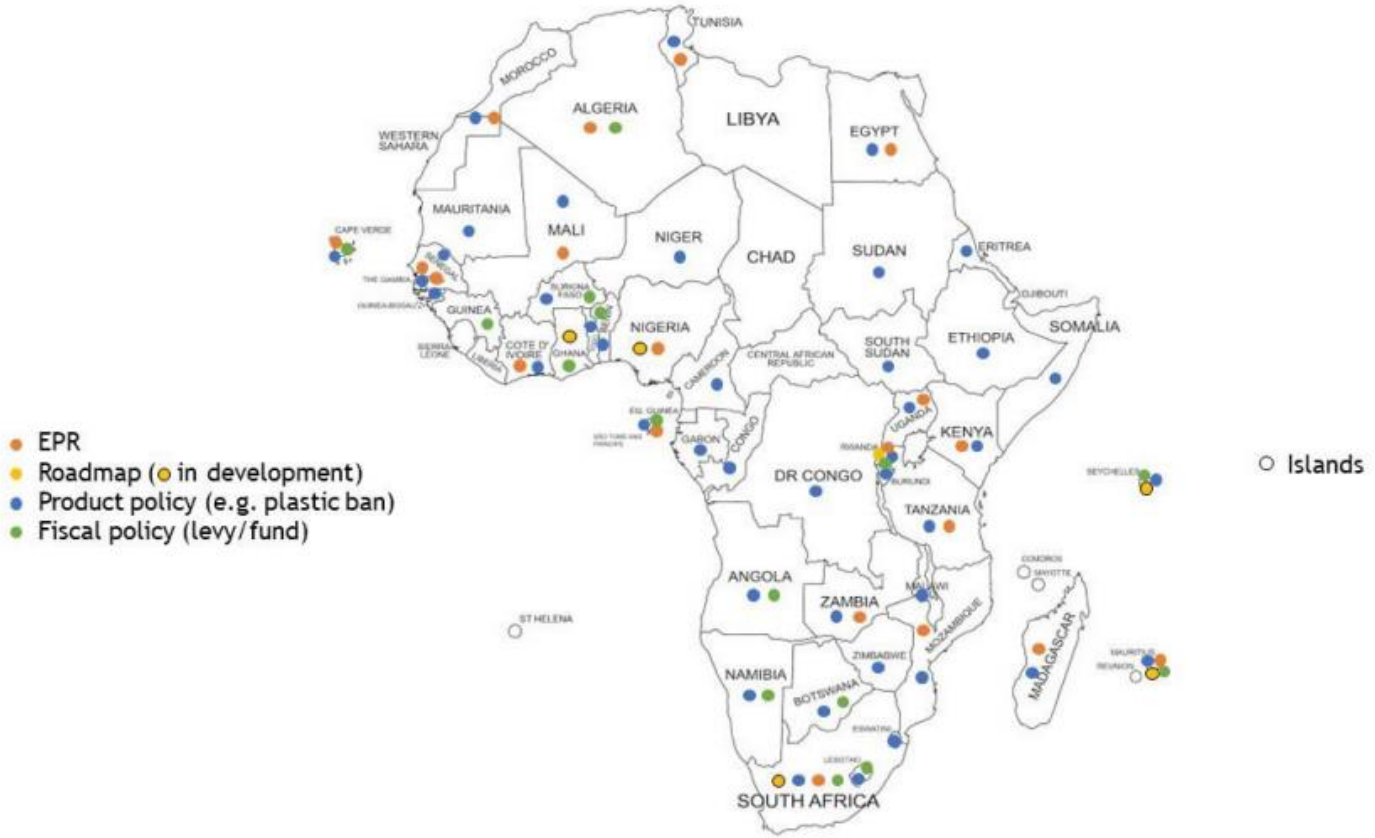
- **Joint action plan**: UNECA and IOC co-developed the **African and Indian Ocean Island States Circular Economy Action Plan**, providing a common roadmap for regional circular economy transformation in island States.

- **Innovative Financing**: UNECA and IOC co-designed a dedicated mechanism to mobilize investment and accelerate implementation of circular economy and blue economy solutions across member states.

- After organizing the regional validation workshop (Port Louis, Mauritius, January 2025), the Action Plan and Financing Mechanism are now being finalized for publication, translation, and formal approval, **paving the way for national implementation**.

Promoting Circular Economy at the National Level

- **52 African countries have at least one CE-related policy** (climate, environment, product policy, EPR, waste/recycling, fiscal measures).
- Focus is mostly on **product policies**, such as bans on single-use plastics, and waste management and recycling policies.
- But **enforcement and implementation** levels still vary significantly.



Source:
AU Circular Economy Continental Action Plan

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Why reliable data is essential for Circular Economy policies?

Reliable circular economy data is essential since the **growing wave of Circular Economy policy initiatives has created urgent demand for robust information, exposing major gaps in existing statistics and indicators** needed to effectively guide national policies and international cooperation.

Track waste flows: Standardized systems supports the measurement of sources, types, volumes, and composition of waste.

Enable financing: Reliable data attracts structured and innovative financing for waste management and circular economy initiatives.

Quantify costs of inaction: Data helps assess socio-economic and environmental impacts of poor waste management and linear economic models.

Support evidence-based policy: Research, development, and innovation (RDI) provide the foundation for effective policy design.

Strengthen capacity: Data-driven approaches require investments in skills, infrastructure, and awareness-raising at national and regional levels.

Guide implementation: Accurate evidence allows monitoring, adjustment, and scaling of solutions across countries and communities.

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Circular Economy Data Challenges

- **New and complex sector**: Circular Economy indicators are hard to define, methodologies remain unclear, and existing data are scattered.
- **Capacity gap**: Countries need training and tools to strengthen data collection, treatment, and dissemination, aligned with international standards.
- **Policy relevance**: Regular data collection is essential to track progress, enable evidence-based policymaking, and design targeted national and sub-national policies.

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A proposed conceptual framework for Circular Economy monitoring

Policy responses & actions

- Measure effectiveness of policies, innovation, financing, education, and waste management.

Material life-cycle & value chains

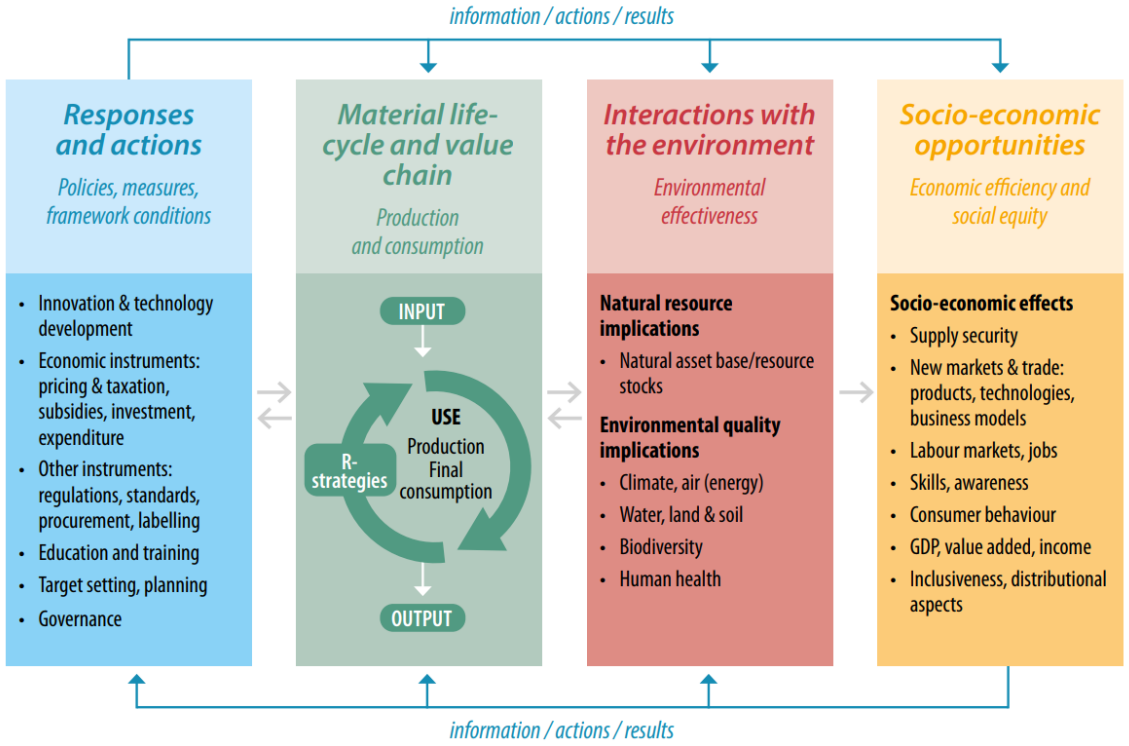
- Track resource use, waste flows, recycling, and trade in materials.

Interactions with the environment

- Assess impacts on natural assets, ecosystems, and human well-being.

Socio-economic opportunities

- Monitor green jobs, new business models, trade shifts, skills, and inclusiveness.



Source:
Guidelines for Measuring Circular Economy (Part A: Conceptual Framework, Indicators and Measurement Framework), UNECE and OECD

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Indicator framework

Indicators bring the framework to life by:

- Providing core, comparable metrics across countries
- Adding complementary, **sector-specific indicators**
- Adapting contextual indicators to **national realities**
- **Tracking baseline, progress, and outcomes**
- Enabling **learning, comparison, and policy design**
- Examples of indicators: raw material consumption (RMC), waste generation per capita, recycling rates, share of secondary raw materials, green jobs, financial flows into CE

Framework	Themes	Proposed core indicators
Material life-cycle and value chain	The material basis of the economy	• Material consumption & productivity (DMC, RMC): trends and mix
	The circularity of material flows and the management efficiency of materials & waste (with reference to R strategies and CE mechanisms)	• Total waste generation: trends; intensity per GDP and per capita • Circular material use rate • National recycling rate • Waste going to final disposal
	Interactions with trade	none
Interactions with the environment	Natural resource implications (physical evolution of natural assets)	• Natural resource index / depletion ratios: energy & mineral resources • Intensity of use of renewable freshwater resources
	Environmental quality implications (effects of materials extraction, processing, use and end of life management on environmental conditions and on human health)	• GHG emissions from production activities • Pollutant discharges from production activities to water bodies and proportion safely treated • Placeholder: Impacts on human health
Responses and actions	Support circular use of materials, promote recycling markets and optimise design	• Taxes and government support for circular business models
	Improve the efficiency of waste management and close leakage pathways	• Investment in waste management infrastructure, waste collection and sorting (government, businesses)
	Boost innovation & orient technological change for more circular material lifecycles	• R&D expenditure on CE technologies (government, businesses)
	Target setting and planning	none
	Strengthen financial flows for a circular economy and reduced leakage	• Business investment in CE activities
	Inform, educate, train	Placeholder: education and training
Socio-economic opportunities for a just transition	Market developments and new business models	• Gross value added of CE sectors • Jobs in CE sectors
	Trade developments	none
	Skills, awareness and behaviour	Placeholder: Behaviour
	Inclusiveness of the transition	Placeholder: Distributional aspects & socio-economic inequality of CE policies

Source: Guidelines for Measuring Circular Economy (Part A: Conceptual Framework, Indicators and Measurement Framework), UNECE and OECD

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Example of the M&E framework of the AU CEAP

- **Macro indicators:** economic, social, environmental, governance
- **Micro indicators:** sector-specific outputs and outcomes
- **Outputs:** policies, facilities, programs implemented
- **Outcomes:** resources saved, jobs created, emissions reduced
- **Link to national implementation:** aligns continental priorities with country-level action

Economic		Social		Environmental		Governance	
Indicator	**Target**	**Indicator**	**Target**	**Indicator**	**Target**	**Indicator**	**Target**
Number of circular economy businesses[170]	10,000 [171]	Average share of circular jobs (%)	25 [172]	Recycling rate (%)	30 [173]	Number of countries with a Circular Economy Action Plan/Roadmap	55
Non-energy material productivity per GDP (USD per kg) [174]	1.25 [175]		TDB [176]	Collection rate (% waste generated)	Urban: 90 Rural: 60	Number of countries with an enabling policy environment for the CE177	55
Share of the governmental budget dedicated to supporting CE (% GDP)	2 [178]	Number of citizens graduating from a CE course, training, or programme	50	Circular Material Use Rate [179]	TDB [180]	Number of countries with a dedicated unit for CE implementation	55
Economic Complexity Index (ECI) [181]	>0 [181]	Share of circular businesses owned by women (%)	95 [182]	Landfilling rate (%)	45 [183]	Number of government institutions trained on the circular economy	10 [184]
Amount of funding directed towards circular businesses and initiatives (USD)	TBD [180]			Post-harvest food loss (%)	10 [186]	Number of government institutions trained on the circular economy	110 [184]
Amount of funding received by governments for circular economy projects (USD	TBD [180]			Water reuse rate (%)	40 [186]		
				Biodiversity footprint of production (million MSA loss ha/year)	TBD [180]		
				Reduction in CO2 emissions linked to material consumption (%)	20		

Sector	Number	Goals and actions	Indicators			
			Economic	Social	Environmental	Other
Waste	1	Strengthen policy and strategic frameworks on circular economy and align policy related to waste management	Share of national budgets invested in waste management Contribution of waste sector to GDP Revenues generated from fines and levies Cost of MSW waste i) collection, ii) disposal, iii) treatment	Creation of enforcement unit Number of enforcement officers trained on circular economy matter Share of households separating their waste (%) Perception of households on: (i) waste separation (ii) waste management Number of households with access to waste collection service Average distance travelled to waste collection/transfer points	Share of waste diverted from landfills (%) Rate of : (i) Landfilling of hazardous waste (ii) Collection of solid waste (iii) Recycling (iv) Landfilling of solid waste GHG emissions of the waste sector	Waste management policies, regulations and strategies updated AUC strategic guiding document on basic elements that should be part of every national waste management strategy/plan RECs guidelines on standards of waste management Number of countries adopting waste separation Number of sites created for the management of hazardous waste
	2	Continue to invest into infrastructure provisions that enable the circulation and proper/safe treatment of waste and secondary resources	Value of investment in waste management infrastructure by national government and international partners Number of newly constructed waste collection and transfer centres Number of newly constructed recycling facilities Number of waste transfer stations per district Average distance between households and waste collection/transfer stations Increase in number of businesses active in the waste sector related to CE (recycling, reuse, etc.)	Health levels of communities living near landfills (asthma cases, malaria cases..) Average distance between waste collection centres and transfer stations	Share of collected waste that is properly treated Share of recycled waste as a percentage of total waste generated Share of waste leaked from landfills Air quality levels around waste disposal sites	Creation of reverse logistics networks
	3	Implementation of an efficient environmental statistics framework on waste generation and management	Regional targets for waste management National environmental statistics framework on waste generation and management Continental and regional registries for waste trade flows trial symbiosis for resource-efficient and cleaner production Value added of companies operating in wastewater recycling		Continental characterisation study by AUC Regional waste registries	
	4	Strengthen and support the informal sector to increase their recognition and role in waste management and recycling activities	Value of contracts awarded to the informal sector Number of informal waste operators recognised by Metropolitan, Municipal and District Authorities for waste trade flows trial symbiosis for resource-efficient and cleaner production Value added of companies operating in wastewater recycling	Income levels of informal waste sector workers Number of informal waste workers cooperative Share of informal workers suffering from illnesses due to their work Number of CE jobs created	Share of waste diverted from the environment by informal waste sector workers	Overview of existing sustainable informal sector integration models by AUC

Source:
AU Circular Economy Continental Action Plan

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Call for action: **National Statistical Officers - The Backbone of Circular Economy policies**

Integrate	Circular Economy indicators into official statistics & national accounts
Ensure	reliable, comparable data across ministries and sectors
Develop	sector-specific data strategies to support Circular Economy implementation
Invest in	data systems & human capacity
Produce	evidence for Circular Economy policy, finance & accountability

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