International Labour Organization

Circular Economy Transition

A Just Transition towards Sustainable Economic Development

June 2026

Introduction

The mandate of the International Labour Organization (ILO) to advance decent work and social justice underpins its commitment to promoting circular economic models that place governments, workers' and employers' organizations, at the centre of structural transformation. Through its tripartite approach, the Organization supports economic systems that are environmentally sustainable, socially inclusive and economically productive.

The transition towards environmentally sustainable economies represents a strategic pathway to strengthen economic resilience, promote social justice and advance decent work. By embedding economic transformation within employment creation, social protection, rights at work and social dialogue, the ILO promotes a model of development that generates higher levels of economic and social progress, more productive and resilient enterprises, and greater long term efficiency gains. Circular transition therefore contributes not only to environmental sustainability, but also to stronger labour markets, enhanced competitiveness and more inclusive growth.

Whereas linear economic models have largely relied on the intensive extraction and consumption of natural resources, often generating environmental degradation, economic inefficiencies and social strain, circular approaches reflect a broader reorientation of economic systems towards sustainability and human centred development. This transformation supports long term sustainability while creating opportunities across sectors, territories and value chains.

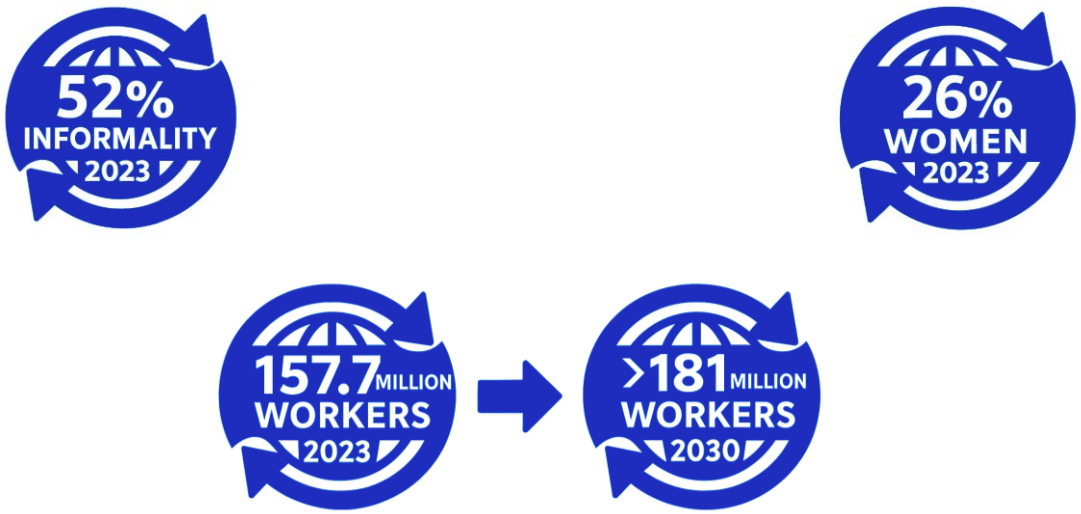
Through the promotion of circular economic models, the ILO advocates for quality employment creation and formalization, the protection of livelihoods, strengthened local economies, enhanced enterprise competitiveness and improved access to international trade. As global markets increasingly integrate sustainability requirements into production and trade frameworks, circular transition enables enterprises and economies to strengthen compliance, improve productivity and enhance their position within evolving global value chains.

The ILO estimates that structural transition to environmentally sustainable economies could generate a net gain of 24 million jobs worldwide by 2030 if supported with appropriate policies. A circular economic transformation anchored in a just transition framework can therefore advance inclusive and sustainable development that leaves no one behind.

Overview of Linear and Circular Models	
▶ *Linear Economic models* are based on one-way, top-down relations from **Resource Extraction**, to **Production**, **Consumption,** and **Disposal,** where materials lose value and become a source of cost.	▶ *Circular Economic models* are based on loops relations connecting end-life product, through **Collection,** with **Consumption, Production, Resource Extraction,** and **Resource Regeneration,** preserving material value.
▶ **Limited investment requirements** due to existing equipment, established production systems, conventional financing structures and historically embedded subsidy schemes, **contributing to harmful impacts** on human health and the environment.	▶ **Significant investments required** for equipment, certification, technology, traceability systems and workforce adaptation, **alongside tailored financial mechanisms, targeted public support and enabling policies** for the creation and transition of enterprises.
▶ **Intensive extraction** of resources under *linear models* **leads** industries **to face scarcity**, **forcing relocation at the expense of the local economy**.	▶ The **value of Resources** under *circular models* **are maintained** through self-sufficiency loops, **supporting the development of local economies**.
▶ **Unsustainable production** methods often **face additional taxes** in international trade, such as Cap-and-Trade or Carbon Border Adjustment Mechanisms.	▶ **Sustainable production methods are** often **better valued** in international trade, as they increasingly appeal to eco-conscious consumers and investors.
▶ **Employment** concentrated in lower skilled and resource-oriented activities **tends to be less productive and less resilient** to external shocks and structural change.	▶ **Employment** concentrated in higher skilled and technology-oriented activities **contribute to greater productivity and strengthen the resilience** of workers and enterprises.
▶ **Disposal** under *linear models* **causes ongoing harm** to human health and the environment, **requiring public expenditure financed by taxpayers**.	▶ **Transforming disposal** into valuable resources prevents ongoing harm, resulting in **improved human health and environmental conditions**.

▶ Key Employment Figures

The *Jobs in the Circular Economy* initiative, led jointly by the International Labour Organization, the World Bank Group and Circle Economy, with support and collaboration from the Partnership for Action on Green Economy (UN-PAGE), assesses the scale and scope of circular economy activities across broader economic sectors. Its report, *Employment in the Circular Economy: Leveraging Circularity to Create Decent Work*, presents key figures from 177 countries, providing a comprehensive overview of employment in circular economy activities.



▶ The Linear Economy

A one-way economic model based on resource extraction and waste generation.

Linear Economic Models - Description



Note: Gray arrows represent the production flow in a linear economy model, in which raw materials are extracted, transformed into products, consumed, and ultimately disposed of as waste.

Linear economic models are based on one-way, top-down **sequences** in which resources become disposal costs at the end of the system.

Resources are first **extracted**, then transformed into **products**, **used** for a limited period, and finally **disposed** of as waste.

The economic values are primarily generated through the continuous extraction of raw materials and the sale of new products.

Linear economy strategies are generally short-term and tend to disregard social and environmental spillover effects.

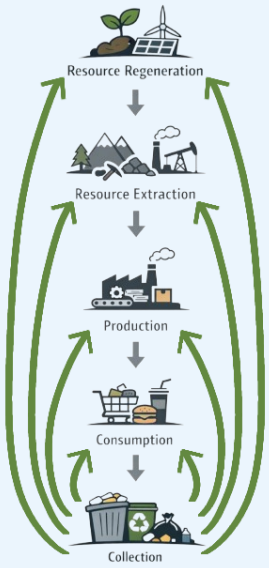
Input	Economic Value	Output
Linear models require continuous extraction of natural resources. This leads to large-scale deforestation, land degradation, water stress, and biodiversity loss. Although profitable in the short-term, resources-intensive industries eventually face scarcity, forcing enterprises to relocate at the expense of the local economy. Unsustainable regional growth undermines decent work, leading to unemployment, and environmental degradation.	Value generation focusses on transforming raw materials into products to sell. Profits maximization often leads enterprises to design product with short lifespans in order to encourage frequent replacement. Standardization of production often prioritizes labour cost reduction over skills development and job quality. Costs reduction often involves mixing materials, which complicates reuse and recycling.	After consumption, products exit the system and are disposed of in landfills or through incineration. This generates negative consequences through the release of pollutants into air, soil and water, including hazardous and toxic substances. These processes turn land into wasteland and contribute significantly to greenhouse gas emissions. The accumulation of these impacts causes ongoing harm to human health and to the environment.

Growth in linear models assumes unlimited availability of natural resources and unlimited capacity to dispose of waste, while requiring the negative consequences affecting women, men, and the environment to be compensated through public policies financed by taxpayers.
The concentration of employment in lower skilled and resource-oriented activities prioritize standardization and labour cost reduction over workforce development and quality jobs.
Furthermore, current resource extraction already exceeds the regenerative capacity of ecosystems. Meanwhile, population growth continues to increase demand for materials, energy, and products. Together, these pressures are pushing planetary boundaries, creating feedback loops that further constrain resource availability.
For these reasons, the linear models are recognized as environmentally and economically unsustainable over the long term.

▶ The Circular Economy

A loop-based economic model focused on resource conservation and regeneration.

Circular Economic Models - Description



Note: Green arrows represent the renewal flow in which materials and products are reintegrated into the production cycle through reuse, recycling, remanufacturing, and recovery processes.

Circular economy models are based on **loops** that keep resources continuously maintained within the system.

After the initial sequence from extraction to consumption, products are collected and reintegrated into the system. They may return for **consumption**, re-enter **production**, replace newly **extracted resources**, or support **resources regeneration**.

The economic values are primarily generated though human activities at each phase, such as collecting, repairing, redesigning, and processing materials.

Circular economy strategies are generally long-term and require planning across all phases to maintain resources in circulation through multiple loops.

Input	Economic Value	Output
Circular models require continuous reintroduction of materials to remain sustainable over time. This leads to have mixed input of newly extracted resources with recovered and recycled resources. Although profitable in the long term, conservation of materials in loops requires substantial initial investment in equipment, traceability systems, technology, certification, and skills adaptation.	Value generation focusses on human activities that maintain materials across multiple loops. Effective loops require enterprises to dedicate resources for eco-design, restauration, and adapted production processes. New practices are associated with higher-skilled and technology-oriented workforce. The conservation of materials favours more resilient and locally anchored economic development.	After consumption, products are collected and reintroduced into the system. They may be shared or reused for direct consumption, returned to production for repair or remanufacturing, dismantled and recycled to replace newly extracted resources, or bio-transformed to support resource regeneration. Materials keep circulating within the system, preserving value instead of generating disposal costs.

Growth in circular models is based on maintaining resource value through conservation and recovery loops. Production under this model keeps materials in circulation, thereby limiting the generation of negative impact and contributing to the reduction of ongoing harm from existing waste on women, men, and the environment. The concentration of employment in higher-skilled and technology-oriented activities enhance productivity, strengthens the resilience of workers and enterprises, thereby fostering to sustainable long-term economic growth.

Priority sectors have been identified for the deployment of the circular economy: paper, plastic, rubber, wood, organic waste and biomass, chemical and toxic waste, e-waste, Tetra Pak, and iron and steel.

The resource self-sufficiency of circular models favours the development of local economies by reducing dependence on imported raw materials and by strengthening local value chains.

For these reasons, circular models are recognized as environmentally and economically sustainable.

▶ Advancing Decent Work through Circular Transition

Circular economic models generate significant opportunities for **employment creation** across sectors and territories. Activities related to **value conservation and recovery loops** tend to be more labour intensive and innovation driven. Harnessing this potential requires **strong investment in re-skilling and up-skilling**, to **enable workers to adapt** to evolving technologies and new business models. Technical and vocational education and training systems play a central role in equipping women and men with the competencies needed for **emerging occupations** and in facilitating smooth labour market transitions.

Beyond employment quantity, improving **employment quality** and advancing **formalization** are essential. Circular transition offers an opportunity to **address informality**, **strengthen occupational safety and health**, **extend social protection floors** and **promote rights at work**. By embedding circular strategies within national employment and social protection systems, countries can ensure that **productivity gains** translate into improved working conditions, income security and greater equity.

Circular transformation also supports the development of micro, small and medium sized enterprises (MSMEs), cooperatives and local entrepreneurial ecosystems. **MSMEs and cooperatives** are often at the forefront of repair services, recycling initiatives, local production and community based economic activities. Strengthening their access to finance, skills, innovation and markets enhances inclusive growth, stimulates **local economic diversification** and **reinforces territorial resilience**.

At the industrial level, circular transition encourages **industrial symbiosis**, fostering **cooperation among enterprises** to **optimize resource** use and **create mutual value**. Such collaboration enhances resource productivity, reduces operational costs and stimulates technological innovation. Increased productivity strengthens enterprise competitiveness while reinforcing resilience to supply chain disruptions, market volatility and external shocks.

Financial institutions, public entities and guarantee mechanisms play a pivotal role in enabling the development of circular economic models. They **support enterprise creation** and **transition** towards more sustainable and resource-efficient production processes. At the same time, they **strengthen enterprise resilience** by enhancing the capacity of enterprises to **adapt to market disruptions** and **comply with evolving sustainability standards and regulatory requirements** in international markets.

Social dialogue is fundamental throughout this transformation. Tripartite cooperation among **governments, employers and workers** enables anticipation of change, management of restructuring processes and development of policies tailored to national contexts. There is no single model applicable to all countries. Circular transition strategies must reflect specific economic structures, institutional capacities and cultural contexts. A systemic and holistic approach is therefore essential to ensure coherence across employment, industrial, education and social policies.

International trade dynamics further reinforce the importance of circular transformation. **Global markets** increasingly value sustainable production methods, with consumers and investors demonstrating higher willingness to pay for responsibly produced goods. At the same time, non sustainable production may face additional costs through regulatory mechanisms such as carbon pricing instruments and border adjustment measures. Enterprises that align with circular principles are better positioned to comply with evolving **international standards** and maintain access to **competitive markets**.

By reducing dependency on imported raw materials and fostering diversified local value chains, circular economic models contribute to **economic sovereignty** and **long term stability**. They strengthen domestic productive capacities while improving compliance with emerging environmental and social requirements in international trade.

▶ Support to Tripartite Constituents for Circular Transition

The promotion of well-designed circular economic models advances a **structural transformation** that integrates economic development with **decent work**, **sustainable enterprise growth** and **social justice**. The circular transition represent a potential strategic pathway to **enhance productivity growth**, **strengthen economic resilience** and **diversified value chains,** while **fostering enterprise innovation**, **technological upgrading** and **workforce adaptation**. Circular systems create **significant opportunities for quality employment generation**, **enterprise formalization**, and **skills development**.

The circular transition is fully aligned with the mandate of the **ILO** to pro**mote decent work** and **social justice** through **quality employment creation**, **rights at work**, **social protection** and **social dialogue**. Ensuring equitable distribution of the benefits and costs of this transition require **inclusive policy frameworks**, **strong labour market institutions, effective social protection systems,** and **robust occupational safety and health measures**. **Tripartite cooperation** among governments, employers and workers are critical to **supporting a coherent and effective transformation of the economy**. Anchored in a **just transition framework**, the circular economy seeks to **ensure that environmental sustainability**, **economic competitiveness** and **social inclusion** advance together, while **leaving no one behind**.

The ILO **supports governments in designing and implementing coherent policy frameworks** that align employment, industrial and sectorial policies, education, social protection and macroeconomic and growth policies with circular transition objectives. This includes technical support and assistance on **national employment strategies**, **skills systems reform**, **technical and vocational education and training**, **labour market governance**, **social protection floors** and **formalization strategies**. The ILO also provides expertise in **labour law**, **labour inspection** and institutional **capacity building** to ensure that regulatory frameworks foster both sustainable enterprise development and productive employment.

The ILO **supports Employers' organizations in strengthening competitiveness, improving productivity and fostering innovation**. Particular attention is given to MSMEs and cooperatives, which represent the large majority of enterprises with almost half of the total workforce. The Office **promotes industrial symbiosis** and collaboration among enterprises to optimize resource use and create mutual value. By **enhancing managerial skills**, **supporting access to finance** and **facilitating compliance with evolving sustainability standards**, enterprises are better positioned to access international markets where environmental and social requirements are increasingly decisive.

The ILO **supports Workers' organizations in strengthening their capacity to engage in social dialogue, anticipate restructuring, negotiate fair outcomes and advance decent work**. It promotes their role as agents of change by **developing high-quality inputs** to inform policy formulation, and by enhancing resilience through **re-training and up-skilling** to adapt to technological change and emerging occupations. This transformation requires strengthened and updated **social protection** systems**,** safeguards for **labour rights**, and robust **occupational safety and health frameworks,** ensuring that productivity gains translate into improved **working conditions**, **income security** and **equitable opportunities** for women and men.

Circular economy activities employed approximately 157.7 million people globally in 2023, and the transition towards environmentally sustainable economies could **generate an additional net 24 million jobs** worldwide by 2030 **if supported by coherent policies and strong social dialogue**. Nevertheless, significant progress is still needed to address the **high level of informality** in the sector estimated at 52% and the persistent **underrepresentation of women**, who account for only 26% of the circular economy workforce. Through its expertise across employment, enterprise development, social protection and labour standards, **the ILO supports governments, employers and workers in preparing for the world of tomorrow**.

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