

Forum: Sustainable Development Commission

Issue: Promoting sustainable consumption and production patterns for the implementation of the 2030 Agenda for Sustainable Development [SDG 12]

Student Officer: Akshara Dalan

Position: President

Introduction:

The global economy is only 8.6% circular (UNEP, 2021). This statistic highlights the extent to which global consumption and production patterns remain largely linear and dependent on extracting finite resources and generating waste. The linear economy model, consumer culture, and underpricing of resources often perpetuate this unsustainable use of resources: humanity is using natural resources 1.7 times faster than the planet's biocapacity can regenerate (Global Footprint Network, 2022) while fossil fuels are being underpriced relative to their full social costs by \$6.7 trillion (Black et al., 2026). These figures underscore the urgency of transitioning towards circular economy models that streamline waste disposal, reduce wastage, and adopt product stewardship. In light of these developments, delegates of the Sustainable Development Commission are expected to evaluate the root causes of unsustainable production and consumption patterns and propose relevant, multi-disciplinary solutions to address them.

Definition of key terms:

Circular economy

A model of consumption and production, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible, thereby extending the life cycle of products (European Parliament, 2023).

Extended Producer Responsibility

A policy approach that makes producers responsible for their products along the entire lifecycle, including at the post-consumer stage, shifting the burden on managing certain end-of-life products from municipalities and taxpayers to producers (UN Environment, 2024).

Product Stewardship

An environmental management approach where everyone involved in a product's lifecycle shares responsibility for reducing its health, safety, and environmental impacts from creation to disposal.

Background information:

The linear economy, resource depletion, and waste generation

The linear economy, also referred to as the take-make-waste economy, is a system where resources are extracted to make products that eventually end up as waste or are thrown away. Therefore, these products are not used to their full potential and, as the name suggests, move in one direction: from raw material to waste (Ellen MacArthur Foundation, 2023). This framework has historically been associated with economic growth since the onset of the Industrial Revolution. As this system increased the world's reliance on finite resources, its significant gaps were made evident through environmental crises and resource shortages (Bauer, 2025). As a result of such an economic system, resource extraction and waste have been on the rise with global waste generation expected to increase by 70% by 2050 (Knight, 2023).

An obvious case study of such a phenomenon is the fast fashion industry. Rapidly evolving changes in consumer tastes and preferences have caused clothing production to approximately double in the last 15 years, with clothing use actually falling by 40% (Ellen MacArthur Foundation, 2023). This is a clear representation of the linear economy: more non-renewable resources are being used as more waste is generated. Interestingly, despite such an economic structure being associated with economic progress, research shows that by transitioning to a circular economy, the fashion industry can unlock a USD 560 billion economic opportunity (Ellen MacArthur Foundation, 2023).

The circular economy

An economic structure that could reduce resource extraction and waste generation while still allowing for economic growth is the circular economy. Switching to a circular model could bring US\$4.5 trillion in economic benefits by 2030, cut emissions, create stable jobs, and open new green markets (Nato, 2023). In a circular economy, products and materials are kept in circulation through processes like refurbishment, recycling, and composting (Ellen MacArthur Foundation, 2023). Measures to promote a circular economy remain somewhat limited, with the global economy being only 8.6% circular. In 2023, circular economy-related taxes (market-based instruments, such as taxes and tradable permits, which aim to maximise resource efficiency while reducing waste generation and environmental pollution of the production and consumption of material goods) generated USD 152 billion across OECD countries, representing 0.9% of total tax revenue, compared to 1.0% in the early 2000s (OECD, 2025).

That being said, certain innovative measures have revolutionised the sphere of circular practices:

ColdHubs: Nigeria-based ColdHubs is a solar-powered, cooling-as-a-service solution that reduces food waste and lowers emissions. Established in 2015 by entrepreneur Nnaemeka Ikegwuonu, ColdHubs are square-metre storage units that preserve fresh food for up to 21 days. In 2020, ColdHubs' 54 units saved more than 42,000 tonnes of food from going to waste – equivalent to over 1 million kilograms of CO₂ (Murdie, 2023).

Friendship Hospital, Bangladesh: Labelled the world's best new building by the RIBA International Prize 2021, this hospital was built using local, sustainable materials. By adapting to the surrounding riverine landscape, the hospital premises houses a canal that provides natural cooling and separates inpatients for outpatients. In addition, it features water tanks that can hold rainwater harvested on-site (Murdie, 2023).

A plethora of economic solutions to facilitate the shift to a circular economy have also shown equal promise, particularly on the consumer side:

European Union's Deposit Refund Scheme: Primarily focused at promoting sustainable consumption patterns, this scheme charges users an extra fee when they buy a product, which is refunded if the product packaging is returned for recycling or reuse (European Union, 2021). 237 million European citizens actively use DRS with countries exhibiting impressive PET bottle collection rates: Germany (98%), Finland (97%), and Denmark (93%) (Sensoneo, 2025).

Implementation challenges

Despite the predicted gains from a transition to a circular economy, many implementation challenges persist:

High Upfront Costs: Circular production may require investment in redesigning products, repair infrastructure, and recycling facilities that firms may want to avoid in order to remain competitive. Research also shows that consumers may not be willing to pick up the cost burden of eco-friendly products: only 59% of EU consumers showed willingness to pay for sustainable products in 2024, down from 75% in 2014 (European Environment Agency, 2024).

Rebound Effect: The rebound effect occurs when resource-saving practices lower costs and stimulate extra production and consumption, which partially or fully offsets the expected environmental benefit. For instance, a study on smartphone reuse in the U.S. showed an average rebound effect of 29% (Banico, 2024).

Organisations and major countries involved:

United Nations Environment Programme

As the leading global environmental authority, UNEP promotes international environmental law, publishes environmental reports, and provides policy guidance.

European Union

The EU is one of the global leaders in a transition towards circularity with its circularity rate being at 12% (European Union, 2025). It has a dedicated Circular Economy Act and Circular Economy Action Plan alongside various other policies and regulations including Ecodesign for Sustainable Products Regulation, European Circular Economy Stakeholder Platform, and Regulation on Packaging Waste (European Union, 2025).

Singapore

Singapore is also an industry leader in the transitions towards circularity, with various effective waste management policies. Singapore successfully achieved a recycling rate of 99% in 2018 for its construction industry (Centre for Liveable Cities, 2025).

Possible solutions

Digital Product Passports: In order to reduce information asymmetry and encourage eco-friendly consumer behaviour, products could potentially be required to carry a digital record of their materials, durability, and end-of-life options via a QR code.

Circulatory Credits: The model of cap-and-trade systems could be adapted to encompass circularity as well. A tradable credit system could be created where firms with better, measurable circularity practices (recycled inputs or extended product lifespans) could sell credits to those without.

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