

CLOSING THE CIRCLE

Reducing Plastic Pollution and Promoting Green Businesses



FULL CIRCLE

A RESOURCE GUIDE FOR THE CIRCULAR
ECONOMY SPRINT SERIES



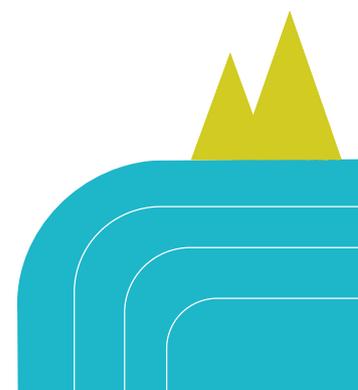
SESSION 2

Enabling and Designing for Circularity

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This document is a resource material for ADB's Circular Economy Sprint Series entitled "Closing the Circle: Reducing Plastic Pollution and Promoting Green Businesses" held from September to November 2021.





WHAT IS A CIRCULAR ECONOMY?

The Circular Economy Sprint Series adopts the widely accepted definition of circular economy by the Ellen MacArthur Foundation (EMF). The EMF defines a circular economy as a system that:

"redefines growth, focusing on positive society-wide benefits. It entails gradually decoupling economic activity from the consumption of finite resources, and designing waste out of the system."

ENABLING FACTORS FOR A CIRCULAR ECONOMY

Several factors can enable and accelerate the adoption of the circular economy model globally. These factors provide an optimal environment for upholding the core circular economy principles such as designing out waste, keeping products in use for as long as possible, and regenerating the natural environment.



Integration of circular economy in national policies and action plans

Inclusion of circular strategies in national action plans, and creation of policies designed to promote transition to circular economy. For instance, circular economy can be embedded in creating the Nationally Determined Contributions for climate change mitigation and adaptation.

[Learn more here](#)



Financing instruments for circularity

Providing loans or subsidies to initiatives or organizations that promote circular economy and divestment from the linear economy. Financing circular economy also helps institutions meet their environmental, social, and governance (ESG) commitments.

[Learn more here](#)



Diverse and inclusive stakeholder engagement

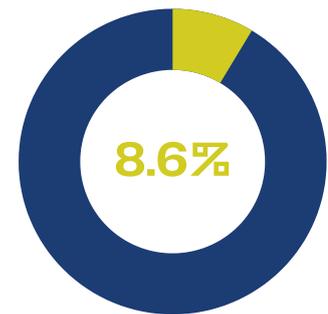
Creating a coalition of communities, businesses, governments, and academics to accelerate societal capacity in implementing circular economy strategies. Building inclusive and diversified alliances also pave the way for an equitable transition by monitoring who are vulnerable to the system changes and creating initiatives to support them.

[Learn more here](#)

DISRUPTING THE CURRENT SYSTEMS TO ENABLE CIRCULAR ECONOMY

Source: [The Circularity Gap 2021](#)

The global consumption built on the take-make-dispose linear model is at 100 billion tons of materials per year and only 8.6% of which are cycled.



The data underscores the growing gap between the finite amount of natural resources available and global consumption patterns. Most importantly, it also emphasized the need to gear towards a circular economy.

DISRUPT MODEL

To establish a circular economy across different sectors and industries, stakeholders can follow the **DISRUPT Model**, which outlines the necessary steps to deviate from the linear economy and transition to circular economy.

Design For the Future

Adopt a systemic perspective during the design process to employ the right materials for appropriate lifetime and extended future use.

Incorporate Digital Technology

Track and optimize resource use and strengthen connections between supply chain actors through digital/online platforms and technologies.

Sustain & Preserve What's Already There

Maintain, repair, and upgrade existing resources to extend their lifetime and give them a second life through take-back strategies, where applicable.

Rethink the Business Model

Create greater value and align incentives through business models that build on the interaction between products and services.

Use Waste as a Resource

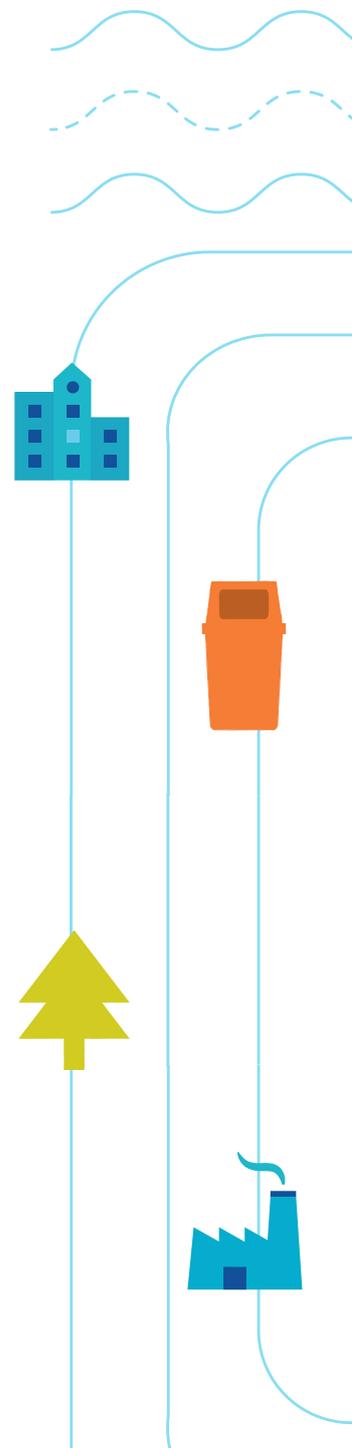
Utilise waste streams as a source of secondary resources and recover waste for reuse and recycling.

Prioritise Regenerative Resources

Ensure renewable, reusable, non-toxic resources are utilised as materials and energy in an efficient way.

Team Up to Create Joint Value

Work together throughout the supply chain, internally within organisations, and with the public sector to increase transparency and create shared value.



STRATEGIES FOR CIRCULAR DESIGN TO REDUCE PLASTIC POLLUTION

Source: [Ellen MacArthur Foundation](#)

The following strategies are used enable circular design:

STRATEGIES	EXAMPLES
 <p>Designing for inner loops Focus on the inner loops such as share, reuse, and remanufacturing, which creates the highest value opportunity.</p>	<p>Loop sells household items in durable, reusable, and refillable packaging that follows the milkman model Learn more here</p>
 <p>From products to services Products are offered to the customer through rental, subscription, sharing, or leasing.</p>	<p>Bundlee offers a clothing rental subscription for babies up to 24 months old. Learn more here</p>
 <p>Product life extension Designing products that last through innovative approaches allowing products to adapt to consumers changing needs as time passes.</p>	<p>Patagonia provides warranties and offers repair services for broken outdoor gear at a fee. Learn more here</p>
 <p>Safe and circular material choices Choosing materials that are not hazardous for both humans and the environment.</p>	<p>Ooho created biodegradable and edible water pouches for liquid products, designing out plastic out of the system. Learn more here</p>
 <p>Dematerialization Delivering utility or creating products using the minimum amount of materials possible or by creating digital products.</p>	<p>Apple removed the chargers and earphones that come with new iPhones to reduce the materials needed per unit. Learn more here</p>
 <p>Modularity Creating modular product design that makes them easy to repair, remanufacture, or upgrade.</p>	<p>Fairphone created a modular smartphone that can be easily repaired by the consumer. Learn more here</p>

PIVOTING URBAN DEVELOPMENT FROM LINEAR TO CIRCULAR

Sources: [Ellen MacArthur Foundation](#), [C4O.org](#)

Maximizing the enabling factors for circular economy, disruption of the current systems, and implementation of circular design strategies can start in cities.

Cities are home to approximately half of the world's population and have altered the natural environment to establish buildings, mobility infrastructures, and systems that support the entire value chain. Most of these existing pillars are fueled by a linear model, resulting in a proportional amount of waste.

According to the World Bank, cities generated 2.1 billion tons of solid waste equivalent to 0.74 kilograms of waste per person per day in 2016.

ADDING CIRCULAR ECONOMY TO PILLARS OF DEVELOPMENT WOULD CREATE:

Thriving cities



Reduction of congestion, elimination of waste, and reduction of cost associated with circular economy boost economic productivity. It also creates an avenue for growth by developing new skills and opportunities for green jobs.

Example: Avfall Sør, a municipality-owned waste company in Norway, launched a second-hand furniture shop. It sold goods valuing €200,000, created job opportunities, and diverted 200 tons of waste from incineration.

Living cities



Improvement of air quality, reduction of pollution, and enhanced social interactions.

Example: The Seoul Metropolitan Government started the Sharing City Seoul Program to minimize waste and the city's underused capacity. Examples of resources being shared are cars, bikes, toys, homes, and books.

Resilient cities



Less reliance on raw materials by keeping products and their components in use and balancing local production with global supply chains.

Example: The Tokyo 2020 Olympics incorporated circular economy, the UN Sustainable Development Goals, and the Paris Agreement principles in its plan. The event leveraged renewable, waste, and recyclable materials to support the games.

Cities are not the only areas of development that can benefit from circular economy. The increasing population is already urbanizing rural regions, evident in the increase of suburban areas. These regions can employ circular economy principles in their growth strategies to leapfrog to circular urban settings and deviate from the planning templates of their megacity predecessors.

CASE STUDIES FOR ENABLING AND DESIGNING CIRCULARITY

ASPIRING FOR GLOBAL LEADERSHIP IN CIRCULAR ECONOMY

People's Republic of China (PRC)

The PRC, the world's leading manufacturer, is transitioning to become a world leader in the circular economy. In 2006, the Chinese recycling industry reduced greenhouse gas emissions by 14.57 million tons. The reduction of greenhouse gases is expected to grow by 35.12 million tons by 2030. Aside from downstream solutions, PRC is also ensuring that the various stakeholders are innovating to solve the growing waste problem at its core, launching a five-year phased implementation that regulates the sale and production of plastic enabling manufacturers to rethink and redesign their current systems.

Click this [link](#) to learn more

REDUCE PLASTIC WASTE UP TO 70% BY 2025 - INDONESIA

Indonesia

Indonesia produces 3.2 million tons of improperly managed plastic annually, 1.29 million tons of which end up in the ocean. The increasing consumption of goods and services, lack of waste infrastructure, and the country's archipelagic topography contributed to Indonesia's growing waste problem. The national government created a five-year action plan to address this problem to mitigate plastic waste from leaking to the environment, increase plastic waste recovery and recycling rates, and integrate eco-design initiatives while pushing behavior change towards more sustainable lifestyles.

Click this [link](#) to learn more or visit www.systemiq.earth

SLOWING DOWN WASTE GENERATION FROM FAST-MOVING CONSUMER GOODS

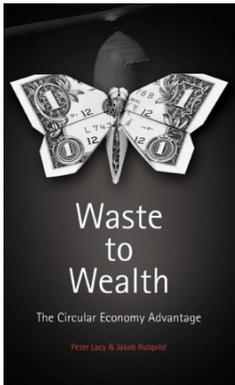
Nestlé

Tons of plastic packaging waste is produced from fast-moving consumer goods. Nestlé aims to change that by transitioning to 100% recyclable or reusable packaging by 2025. The global company aims to eliminate the use of non-recyclable plastics, use plastics that allow better recycling rates, and veering away from complex packaging materials combinations. To support their commitment, Nestlé plans to establish well-functioning collection and recycling schemes, work with value chain partners, ensure proper labels in the packaging they use, and promote a market for recycled plastics across all the countries they operate in.

Click this [link](#) to learn more or visit www.nestle.com

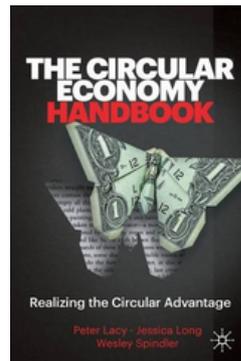
NOW READING: CIRCULARITY TOP PICKS

BOOKS



Waste to Wealth: The Circular Economy Advantage

This presents the advantages of the circular economy for tackling the current challenges against the backdrop of shrinking resources.



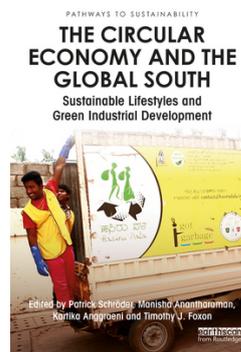
The Circular Economy Handbook: Realizing the Circular Advantage

This offers a practical view on how organizations can take transformative steps toward circularity and create new opportunities for sustainable prosperity.



Cradle to Cradle

This advocates for an industrial model that consists of designing products from the outset with a view to endlessly recycling them.

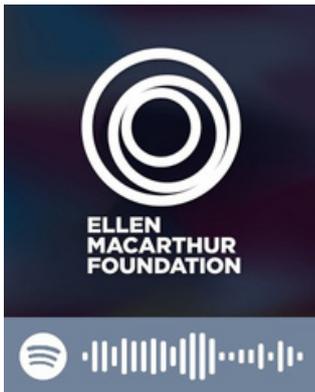


The Circular Economy and the Global South

This volume presents examples of circular economy practices in relation to small and medium enterprises, informal sector recycling and national policy approaches.

NOW PLAYING: CIRCULARITY TOP PICKS

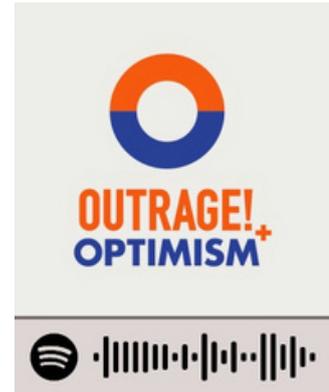
PODCASTS



The Circular Economy Show
by Ellen MacArthur
Foundation



How to Save a Planet
Episode: Recycling!



Outrage + Optimism
Episode: New Systems
and New Power



Tap the title to play the podcast or scan the Spotify QR codes in your Spotify app by clicking the camera icon in the Search tab.

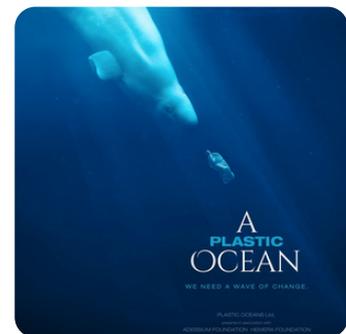
DOCUMENTARIES



Blue Planet II Finale
Watch the trailer here



Closing the Loop (Full Film)
Available for free on YouTube



A Plastic Ocean
Available on Netflix

NOW BROWSING: CIRCULARITY IN ADB

PAPERS AND GUIDEBOOKS

Universal circular economy policy goals

Ellen MacArthur Foundation

Five CE policy goals that provide a framework for national governments, cities and businesses.

Access [here](#)

Circular Design Guide

Ellen MacArthur Foundation, Cradle to Cradle Products Innovation Institute, MAVA Foundation

A tool kit on circular design that expounds on innovative methodologies.

Access [here](#)

Municipality-led circular economy case studies

C40 Cities

A collection of urban circularity case studies on five different CE categories.

Access [here](#)

Financing the circular economy

Ellen MacArthur Foundation

Explores how CE supports value creation for financial institutions

Access [here](#)

Circular Design

Ellen MacArthur Foundation

A comprehensive 13-point walkthrough on circular design.

Access [here](#)

Financing Circularity: Demystifying Finance for Circular Economies

UN Environment Programme

Outlines how financing can accelerate the transition to circular business models.

Access [here](#)

The Circularity Gap Report 2021

Circle Economy

The connection of climate change and CE.

Access [here](#)

Breaking the Plastic Wave

Pew Trusts Organization

A modeling analysis describing actions needed to stop marine plastic waste.

Access [here](#)

ADB ARTICLES AND RESOURCES

Blog: [Five shifts can drive a circular economy for a sustainable plastic future](#) by Marianne Bigum and Anna Oposa

ADB Policy Brief: [Implementing a Green Recovery in Southeast Asia](#)

Publication: [Greening Markets: Market-Based Approaches for Environmental Management in Asia](#)

ADB COVID-19 Policy Database:
[Green Recovery](#)

ADB PROJECTS

People's Republic of China: [Green Circular Economy Zero Waste Cities](#)

Greater Mekong Subregion: [Climate Change and Environmental Sustainability Program](#)

Regional: [Promoting Action on Plastic Pollution from Source to Sea in Asia and the Pacific](#)

RESOURCE GUIDE COMPILED BY:

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Dave is currently leading the implementation of projects focused on reducing ocean plastic funded by USAID, GIZ, and the EU. Activities include advocating for zero-waste and circular enterprises, including micro businesses that are innovating to reduce single-use plastic waste from their operations.

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