CLOSING THE CIRCLE

Reducing Plastic Pollution and Promoting Green Businesses

FULL CIRCLE

A RESOURCE GUIDE FOR THE CIRCULAR ECONOMY SPRINT SERIES

SESSION 3

Purpose, Plastics, and the Private Sector: Green businesses and supply chains

CONTENTS

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?

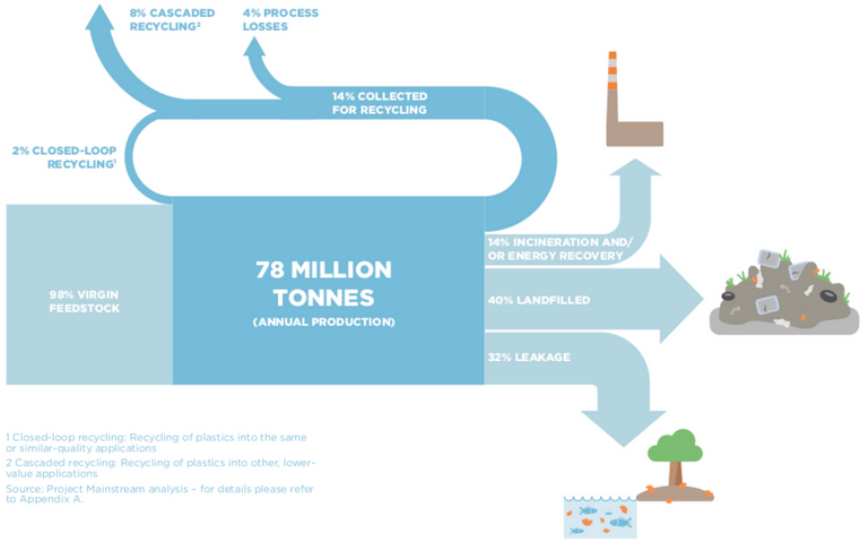
The Circular Economy Sprint Series adopts the widely accepted definition of circular economy by the Ellen MacArthur Foundation (EMF). The EMF defines a circular economy as a system that:

"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."

01 BUSINESSES AND THE GROWING PLASTIC PROBLEM

Economic growth and industrialization are directly proportional to the demand for more goods and services to sustain the needs of the growing population.

Existing supply chains' reliance on the take-make-dispose linear model adds immense pressure to the natural environment in two ways: (i) excessive extraction of raw materials and (ii) generation of waste by-products. This is especially true in the plastic supply chain.



Source: Rethinking the Future of Plastics 2017 - Ellen MacArthur Foundation

Plastics are made by extracting fossil fuels and manufacturing them to polymers that are later converted into different products that fuels the progress and the development of different sectors and industries, from medicine to technology.

Due to its durability, flexibility, and relatively low production costs, plastic became the go-to solution for many manufacturing needs. Consequently, due to the lack of efficient systems and infrastructure, plastic has become one of the biggest problems in the 21st century.

In 2013,manufacturers generated 78 million tons of plastic packaging globally. 14% of which are collected for recycling, another 14% is incinerated or used for energy, 40% are landfilled, and 30% leaks to the environment.

Source: Rethinking the Future of Plastics 2017 - Ellen MacArthur Foundation

02 ROLE OF THE PRIVATE SECTOR IN CIRCULAR ECONOMY

Source: Ellen MacArthur Foundation

The role of the private sector in building a circular plastics economy could be summarized into three key principles:

Eliminate

Elimination of all problematic and unnecessary plastic items. The process is not limited to the reduction of packaging materials. It also rethinks how goods and services are produced all while leaving only the essential plastic components.

Example: Apeel aims to reduce food waste while also lessening the amount of plastic used to prolong the shelf life of produce in supermarkets by coating fruits and vegetables with a spray made of organic substances.
Learn more

Innovate

Innovate to ensure that the essential plastics are reusable in practice and would fit the real-world system, including its bounds and limitations.

Example: Unilever aims to reduce their reliance on multi-layered sachet packaging by using mono-material packaging that is easier to recycle.
Learn more

Circulate

Circulate all the plastic items we use to keep them in the economy for as long as possible and out of the environment by extending businesses' responsibility beyond product development and use of their packaging.

Example: Fairphone, creators of modular smartphones, created a take-back program that encourages customers to send back their old phones in exchange for gift cards.
Learn more

Applying the three main principles above turns the private sector into enablers of the circular plastic economy by designing waste out of the system and turning waste into a resource.

03 KNOW YOUR LINGO
ECO-LABELS USED IN THE MARKET

The push for sustainable alternatives and innovation to solve the growing plastic waste problem has led to several initiatives both from the public and private sectors. Alongside these initiatives are product labels designed to help a conscious consumer make an informed purchasing decision. Listed below are some of the labels commonly used by the private sector in the market.

Ocean-bound plastic
Also known as ocean-diverted plastic are plastic waste found within 50 kilometers of a coastline. Some companies are collecting these ocean-bound plastics as a resource in manufacturing new plastic packaging or products.

Learn more

Oxo-degradable
This label is sometimes referred to as oxo-biodegradable and are commonly printed on plastic films. These are made from conventional plastics combined with additives to mimic how materials biodegrade. However, oxo-degradables do not biodegrade. Instead they turn to very small fragments that stay in the environment.

Learn more

Compostable in a facility
The product or the packaging used can be composted with the aid of mechanical or chemical processes or by controlling the pressure or temperature of the composting facility.

Learn more

Home compostable
These products or packaging do not require any machinery or special process to be composted. These materials can be added in home compost bins together with fruits and vegetables.
Learn more

PROBLEMATIC AND UNNECESSARY PLASTIC

Source: Australian Packaging Covenant Organisation

Problematic plastics are materials that are difficult to collect or recover for reuse and recycling given the current technologies available. These plastics often contain health and environmental hazards.

Unnecessary plastics are those that can easily be designed out of the product with the use of non-plastic fit-for-purpose alternatives without compromising consumers' access to products, health and safety regulations, or causing harm to the environment.

04 INVESTMENT OPPORTUNITIES ALONG THE PLASTIC VALUE CHAIN AND KEY SECTORS

Source: UN Principles for Responsible Investment

The plastic value chain casts a wide net over different industries in the private sector. To deliver the biggest possible impact at the earliest opportunity, financial institutions and investors are encouraged to tap the following four key sectors in the plastic value chain.

GUIDANCE IN ENGAGING 4 KEY SECTORS

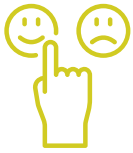
1. Fast-moving consumer goods (FMCG)

Most of the FMCGs in the market are sold in single-use packaging due to the functional benefits associated with them such as health and safety, shelf-life extension, and product preservation.

CONSIDERATIONS

Business model
Most FMCG companies heavily rely on existing linear models that in turn creates more waste. A thorough assessment of the prevailing business model to identify circular economy entry points is essential.

Local infrastructure
Companies' efforts to improve recyclability/compostability may not easily translate to higher recycling rates which are dependent on the availability of local waste management infrastructures.



Consumer preferences
Consumer values price, shelf-life, hygiene, quality, and convenience. All these considerations must also be addressed by the single-use plastic alternatives.

Click here for the complete guidance of engagement for FMCGs

2. Containers and packaging producers

Packaging producers have a wide reach in the plastic value chain by providing packaging solutions to a wide range of companies within the consumer goods sector.

CONSIDERATIONS

Packaging types
This sector is often categorized into two: rigid and flexible packaging. Rigid plastics (e.g., PET bottles used for bottled water or soda) often have a higher collection rate compared to their flexible counterparts. Rigid packaging can also be manufactured with a relatively higher recycled content.

Business model
Most FMCG companies heavily rely on existing linear models that in turn creates more waste. A thorough assessment of the prevailing business model to identify circular economy entry points is essential.

Influencing customers and clients
Producers act as a bridge between the petrochemical companies (i.e., raw material provider) and brands and they are in the perfect position to influence their client's decisions by offering practical and CE-aligned solutions.

Data gaps
Creating statistic-backed strategies may be a challenge due to the lack of high quality data on plastic use and differences in how industries define terms as recyclable and compostable.

Click here to access the complete guidance of engagement for packaging producers

3. Petrochemicals

Plastic production is dominated by large chemical and oil companies. Some companies have boosted their research and development to meet the demand for alternatives to fossil-based virgin plastics.

CONSIDERATIONS

Business model
The sector relies on selling increased volumes of virgin plastic products. Plastic has also become one of important revenue streams for gas and oil companies. As the call to divest from fossil fuel for energy increases, the plastic industry is also expected to grow.

Mechanical and chemical recycling
Mechanical recycling supports circularity and is commercially viable. On the other hand, chemical recycling is a complementary effort to recycle plastics unsuitable for mechanical means. It is crucial that these efforts be scaled up while increasing recycling's efficiency to better support CE.

Environmental impacts
Decoupling plastic from fossil-based resources requires the reduction of the need for virgin plastics by designing out waste from the system and the reuse and use of recycled plastic.

Click here for the complete guidance of engagement for petrochemical companies

4. Waste Management

This sector includes waste collection, sorting, recycling, incineration, treatment, and disposal. Effectively transitioning to CE requires that collection, sorting, and recycling be scaled up to reduce the need for incineration facilities and landfills.

CONSIDERATIONS

Infrastructure
Solid waste management infrastructures are often reliant on local policies that promote extended producer responsibility schemes, sustainable and fair funding, partnerships, and investments.

Mechanical and chemical recycling
Mechanical recycling supports circularity and is commercially viable. On the other hand, chemical recycling is a complementary effort to recycle plastics unsuitable for mechanical means. It is crucial that these efforts be scaled up while increasing recycling's efficiency to better support CE.

Vertical integration and collaboration
The effective inclusion of the sector to CE relies on the strengthened partnership between waste management, petrochemical, FMCGs, and packaging producer sectors to ensure that the circular value chain is established.

Click here for the complete guidance of engagement for waste management

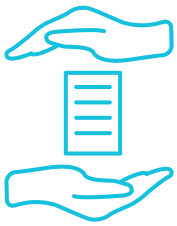
These are some of the high-potential sectors that can be tapped to establish a circular plastics economy. Other sectors such as agribusinesses, food and beverage, and hospitality also have their respective entry points and industry-specific considerations.

05 CREATING REGENERATIVE CIRCULAR ECONOMY DEALS FOR THE ECONOMY AND THE ENVIRONMENT

Further integrating circularity in ADB's projects can help transform deals into regenerative investments by ensuring that the efforts to design waste out of the system, keep products and its components in use, and regeneration of natural systems are supported and proliferated.

Regenerative deals also help financial institutions hit their climate change and environmental, social, and governance (ESG) goals by reducing global greenhouse gas emissions and waste generation.

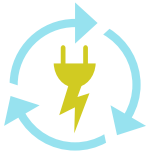
Asking the right questions is critical in decision-making. Based on **UN Principles for Responsible Investment's Engagement Guidelines**, here are some guide questions that could help identify high-potential investment opportunities to usher circularity:

KEY EXPECTATIONS	INITIAL QUESTIONS
Commitment 	**Has the company made a formal commitment to eliminate unnecessary or problematic plastic packaging?** **Is the company transitioning to reusable packaging whenever applicable?** **Is there an increase of recycled content in the company's plastic packaging?**
Risk assessment and management 	**How much virgin plastic (in metric tons) does the business use annually?** **Did the company assess the risks presented by plastic to their business which include existing and future regulations, reputational issues, climate change impacts, and environmental pollution?** **Has the company assessed the opportunities associated with product and business model innovations to transition to CE?**
Objectives, targets, and action plans 	**Did the company set time bound and measurable targets connected to plastic use?** **What resources has the company allocated to achieve these targets (e.g., proportion of research and development and capital expenses)?** **Is there a dedicated person/division overseeing plastic-related commitments, objectives, and targets?**
Reporting 	**Is the company reporting their plastic use?** **What metrics is the company using to track their performance against plastic-related commitments?**

To access the complete list of questions and performance indicators that financial institutions can use to assess a business' commitment to circularity, visit UN Principles for Responsible Investment's engagement guidelines.

06 KEY CIRCULARITY CONCEPTS INTEGRATED IN REGENERATIVE DEALS

Understanding key circularity and environmental concepts are essential in creating regenerative deals. Here are some of the concepts that support the circular economy:

CONCEPT	EXAMPLE
 **Energy efficiency** Energy fuels economies and the entire supply chain. The same energy that propels economic growth also results in global environmental and social issues. Divestment from fossil fuels should be accompanied by improvement on energy efficiency.	**Apple aims to improve energy efficiency across its global supply chain by imposing standards to its suppliers and increasing renewable energy targets.** Learn more
 **Carbon footprint** Carbon footprint is the amount of greenhouse gases (GHGs) generated in the entire value chain. These GHGs accelerate human-induced climate change. Carbon footprint must be a part of the equation to prevent plastic alternatives that lead to higher GHGs.	**Paper is a common alternative to plastic. However, the production of paper, depending on the process and the source of raw materials, is also resource intensive.** Learn more
 **Life Cycle Assessment (LCA)** The cradle-to-cradle assessment made to assess environmental impacts associated with all the stages of a product's life. Conducting an LCA is a crucial element in identifying circular economy entry points in the supply chain.	**Levi's is changing the resource-intensive process in denim production. Through LCA, Levi's identified their environmental impact, in the product's life cycle.** Learn more
 **Extended Producer Responsibility (EPR)** A policy measure that gives significant responsibilities or incentives to the producers, may they be financial or physical, for the treatment and/or disposal of post-consumer products.	**Philippine legislators filed a house bill that would institutionalize EPR. One of the proponents of the bill is Nestlè Philippines.** Learn more
 **Eco-labelling** Eco-labels allow consumers make informed purchasing decisions by giving them an idea on the efforts the producers to minimize their environmental impacts.	**Nordic Swan Ecolabel promotes the use of renewable, recycled, and sustainable raw materials that a brand or company must adhere to.** Learn more

CASE STUDIES: GREEN BUSINESSES AND SUPPLY CHAINS

FINANCIAL INSTITUTION INSTITUTIONALIZING THE CIRCULAR ECONOMY

Intesa Sanpaolo Group - Italy

Intesa Sanpaulo is an Italian international banking group that has been supporting sustainable economic development and is committed to social and environmental responsibility. One of their key focuses is to promote a circular economy to accelerate their ESG commitments, assess the risk and growth potential of companies, and the impacts of these companies to the local community and the environment. They support existing and new customers in their circular economy journey by allocating EUR 750 million green bonds.

Click this link to learn more* or visit *www.group.intesasanpaolo.com

USING SEAWEEDS TO TURN THE TIDE AGAINST PLASTIC WASTE

Ooho - England

Single-use plastics are the go to packaging material for most daily commodities, from bottled waters to condiments. Ooho, a biodegradable and edible packaging made from seaweeds is changing the system's reliance to single-use plastics one pouch at a time. In the start-up's pilot run, they tapped 10 restaurants and served 46,000 sauce in edible pouches. It was also used in the 2019 London Marathon effectively eliminating more than 30,000 bottles and plastic cups.

Click this link to learn more or visit www.notpla.com

FROM GREEN PACKAGING TO CLEAR AND SUSTAINABLE PACKAGING

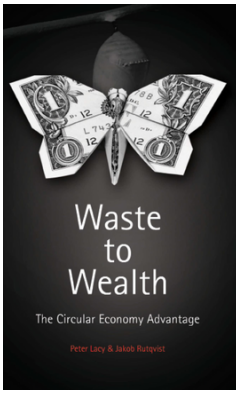
The Coca-cola Company - United States of America

Green is not always associated with sustainability. This is the case for one of the most iconic sodas packed in green plastic bottles - Sprite. The company has started its transition from green plastic bottles to clear plastic bottles to curb plastic waste as part of their World Without Waste Campaign. Colored plastics are harder to recycle compared to their clear counterparts. Additionally, recycled colored plastics do have a much limited use. Sprite also reported that their 500 mL bottles are now made from 100% recycled plastic.

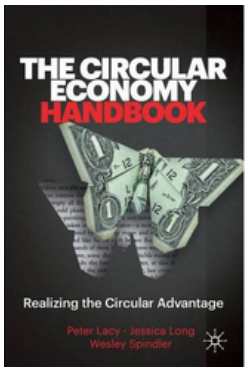
Click this link to learn more or visit www.cocacola.co.id

NOW READING: CIRCULARITY TOP PICKS

NOW READING



Waste to Wealth: The Circular Economy Advantage
The 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.

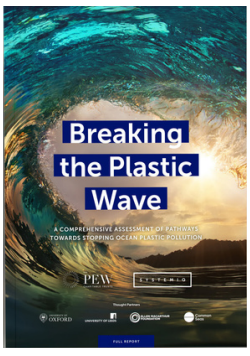
Cradle to Cradle
This advocates for an industrial model that consists of designing products from the outset with a view to endlessly recycling them.

'Biodegradable, compostable, eco-plastic' – but is it better?
By Merrin Pearse

The article helps in navigating the circular economy by defining key terminologies used to describe packaging materials.
Read here

How to ban single-use plastics
By Merrin Pearse

An article on the key considerations and actions an organization needs to factor in before announcing a plastic ban.
Read here



Breaking the Plastic Wave Pew Trusts Organization
A modeling analysis describing actions needed to stop marine plastic waste.
Access here

RESOURCE GUIDE COMPILED BY:

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DAVE ALBAO

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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