SUSTAINABLE
BUSINESS
COP30

Circular Economy & Materials Working Group

Booklet of Cases

OCTOBER 2025

Introduction

The transition to a circular economy is a fundamental enabler for achieving a low-carbon and climate-resilient future. By rethinking how we produce, consume, and manage resources, circularity offers a pathway to decouple economic growth from environmental degradation — reducing emissions, preserving natural capital, and fostering innovation across value chains. No single fix exists to accelerate circularity, but integrated and objective priorities can drive real progress.

Within the SBCOP Working Group, our Circular Economy pillar recognizes that accelerating this transition requires coordinated action among business, government, academia, and society. To that end, we have identified a set of cases that exemplify practical and scalable circular solutions, aligned with our three strategic priorities:

Regulation and incentives

Robust regulatory frameworks and financial mechanisms are essential to accelerate circular adoption. Key actions include transforming economic systems, improving data transparency, updating policies, and creating credit or reward schemes that stimulate investment in circular solutions.

Circular supply chains

Advancing circularity and reducing GHG emissions depends on developing renewable and recycled materials, minimizing waste, and improving product lifecycle traceability. Public and private capital must be mobilized to support circular business models and infrastructure.

Research, education, and behavior

Consumer education and engagement are vital to scale circular practices. Efforts should focus on raising awareness, promoting sustainable lifestyles, and encouraging long-term behavioral change among individuals and businesses.

Mechanical Biological Treatment (MBT) plants are a key strategy for maximising the recycling rate of mixed domestic waste that is collected in urban areas of Emerging Markets and Developing Economies

South America

Circular Economy and Materials

Overview

Case objectives

Promote a proven technology that separates waste collected in a single bag (all mixed) into 03 streams (recyclables, organics, and residual waste), enabling materials recovery on an industrial scale.

Companies Involved

AIESSE Environmental and Valoriza Residues Institute (Social Organization).

WG Alignment

Regulation and incentives; Materials innovation, waste management and circular supply chain and Research, education and behavior.

Case Maturity

Case Stage

Mature, generating stable results.

Risk Involved

Difficulty in identifying licensable areas; Resistance from public and market managers, lobby against MBT — it's 'easier' to keep transporting waste to remote landfills than to set up MBT plants.

Scalability

MBT plants in urban areas help to reduce the collection trucks' routes and fleets. To divert a significant amount of waste from landfills and avoid GHG emissions while recovering materials, each plant should receive at least 300 t/d of mixed waste.

Impact

Innovative Drive

MBT plants with tunnel aeration systems and bio-filters can be installed on urban perimeters, which reduces transportation costs and makes it possible to produce organic compost and recover recyclable materials on an industrial scale.

Economic Impact

The business plan for implementing a 650 t/d MBT plant confirms the project's economic feasibility, considering a gate fee of USD 31.04/tonne. This would pay back the USD 21,561,269 invested over a 10-year contract, at an interest rate of 7%.

CO2 Impact

Annual reduction of 5,249.47 tons of CO2eq, calculated by the UNFCCC, TOOL04 Methodological tool: Emissions from solid waste disposal sites Version 08.1.

External Links

https://www.aiesse.com.br/tratamento-residuos

https://www.ablp.org.br/associados-ablp/

https://1drv.ms/b/c/e6b07785e69860da/EXZdf8MXglpEhTdGKMOEQ9MB-7J5fpVWJGGV4RH41ifqTw?e=BVUDlF

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CNI Brazilian National Confederation of Industry