

Building the Pipeline

How circular economy finance reaches the ground

Evidence from GGGI's circular economy and waste portfolio

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Global Green Growth Institute

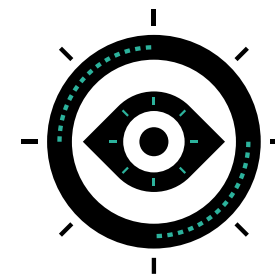
Jeju International Environment Forum 2026 · International Organizations Session



GGGI at a Glance

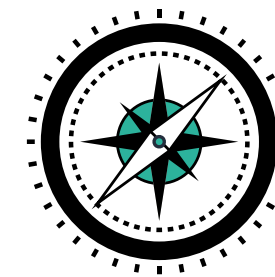
Accelerating Green
Growth in developing
and emerging economies

The **Global Green Growth Institute (GGGI)** is a treaty-based international organization focused on supporting developing and emerging economies to achieve sustainable, inclusive economic growth.



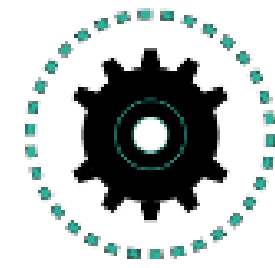
Our Vision

A LOW-CARBON, RESILIENT
WORLD OF STRONG, INCLUSIVE,
AND SUSTAINABLE GROWTH



Our Mission

GGGI SUPPORTS ITS MEMBERS IN
THE TRANSFORMATION OF THEIR
ECONOMIES TO A GREEN
GROWTH ECONOMIC MODEL.



Our Position

A TRUSTED ADVISOR &
DEVELOPMENT PARTNER
EMBEDDED IN MEMBER &
PARTNER GOVERNMENTS

Headquartered in Seoul, Republic of Korea
GGGI currently has 55 Member States and operations in 40 countries.

- GGGI has a unique in-country presence and prominent role as a neutral, trusted advisor and strategic development partner embedded in Member governments.
- GGGI's operating model maximizes the potential to translate green growth strategies and policies into green investment plans, mobilizing green finance commitments needed to bolster support for low-carbon and climate-resilient economic development and strong institutional capacity development.



GGGI's Circular Economy Actions

Asia

Cambodia

- Mechanical and Biological Treatment (MBT) facility in Phnom Penh
- Development of reliable supply chain and business models for recyclable waste in Battambang
- Investigating affordable sanitation solutions for fecal sludge management in Siem Reap
- DEWATS investment project in the city of Kep
- Improving institutional arrangements for sustainable solid waste and wastewater management in Kep city
- DEWATS investment project for the city of Bavet

Lao PDR

- Sustainable Solid Waste Management Strategy for Vientiane
- Waste-to-resource pilot project implementation in Vientiane
- Green investment mobilization for Mechanical Biological Treatment (MBT) facility
- National Urban Sanitation Strategy and associated investment plan and policy guidelines
- City Wastewater Management Strategy and masterplan for Pakse
- Decentralized Wastewater treatment facility in Pakse
- Fecal Sludge Treatment Plant and Fecal Sludge Management solutions in Pakse

Myanmar

- Bio-energy potential of organic waste in Secondary Cities in Myanmar (scoping and prefeasibility studies)

Nepal

- Fiscal incentives development for sanitation
- Incorporation of Sanitation into the NDC
- Development of 20 commercial scale biogas plants using fecal sludge as a feed
- Green city-wide strategies for Mahalaxmi and Itahari

Thailand

- E-waste collection and recycling in Udon Thani, Thailand
- Design of blended financing facility in the Circular Economy Sector

Vietnam

- Municipal Solid Waste to Energy

Asia Regional

- Financial instrument for large scale waste treatment facility with a focus on energy recovery in SE Asia (Publication)
- Creating an enabling environment for BioCNG in Indonesia, India, and Thailand
- ASEAN Municipal Solid Waste Enhancement Project

Africa

Rwanda

- Sustainable Solid and Liquid Waste Management and Valorization in Rwanda's Green Cities

Senegal

- Green city-wide strategies for Kaolack and Kolda
- Fiscal incentives development for sanitation
- Climate change arguments incorporated into Senegal national strategies
- Development of a pipeline of green sustainable business models with the private sector

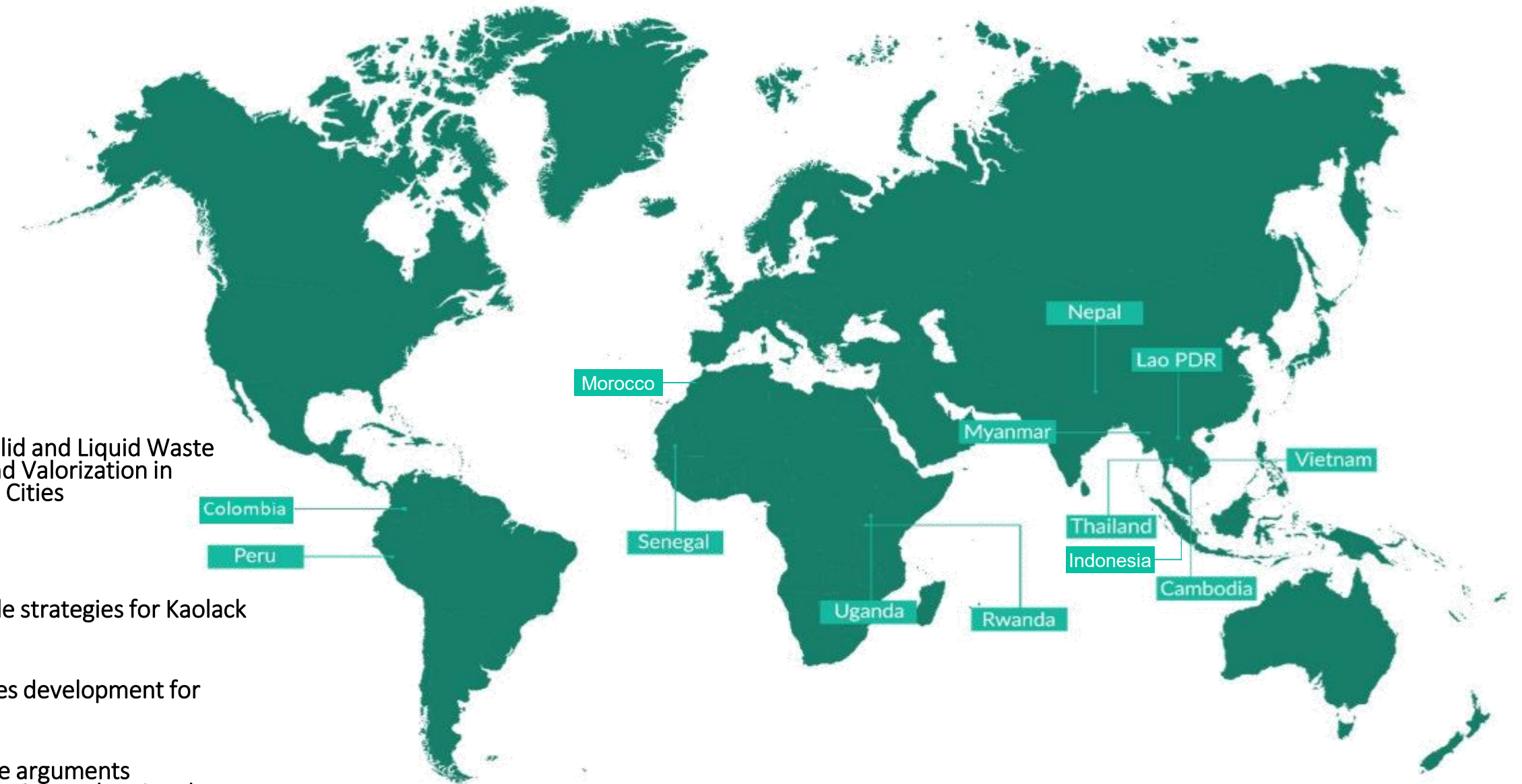
Uganda

- Strengthening Solid Waste and Fecal Sludge Management Capacity of the Greater Kampala Metropolitan Area

- Greening Uganda's Urbanization and Industrialization

Morocco

- ITMO Generation through an Organic Waste to Energy program in Morocco



Latin America

Peru

- Organic Waste Valorization with the Lima Municipality

Colombia

- Structuring of a waste treatment plant and a fertilizer production facility in the Municipality of Cali

What we offer

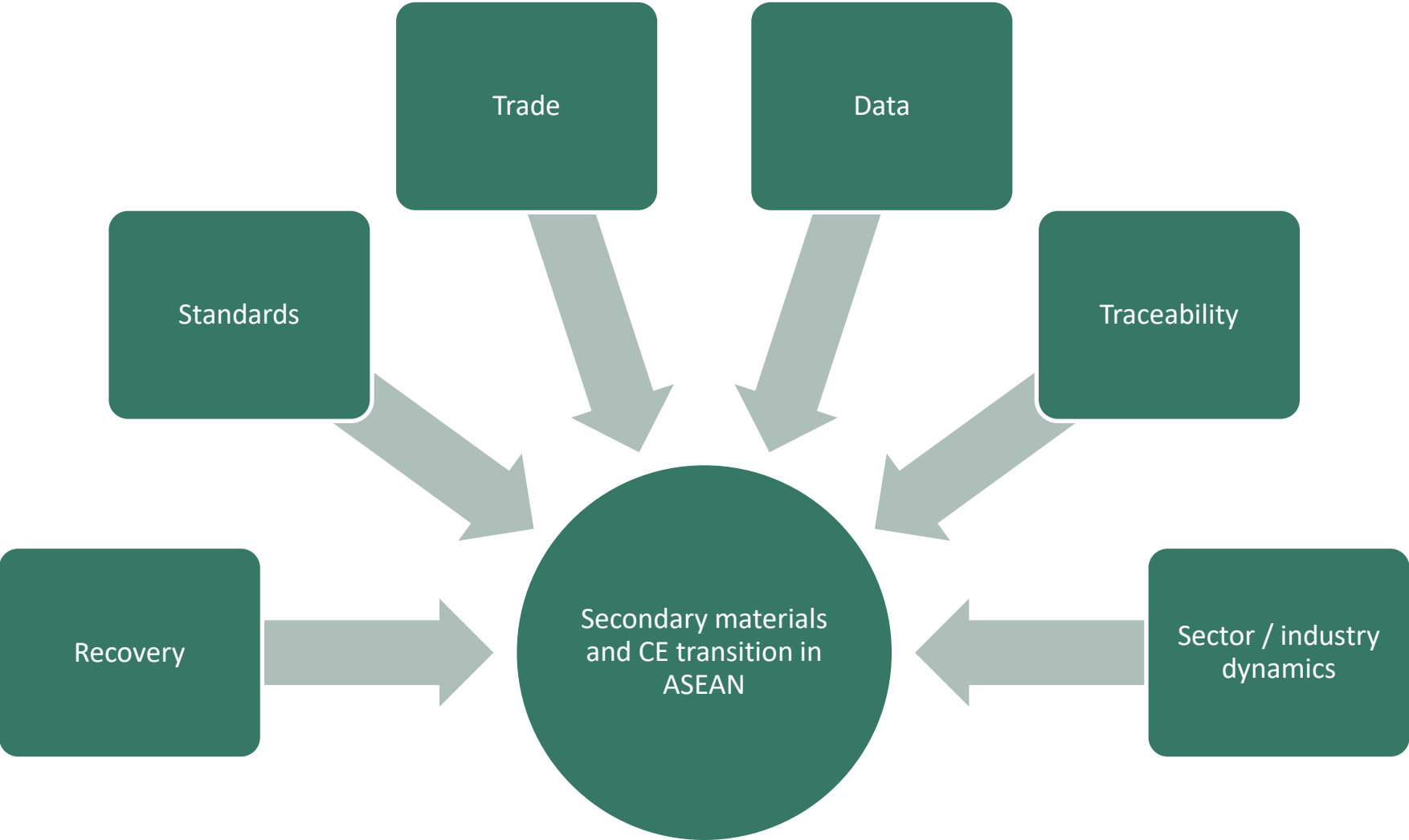
GGGI's work in the waste thematic area aims at providing integrated solutions to municipal solid and liquid waste management based on the circular economy concept. GGGI promotes maximizing waste-to-resource opportunities in the waste value chain while contributing to climate mitigation and creating green jobs. GGGI develops policy, bankable business models, and mobilizes green investment for waste-to-energy and resource recovery facilities in Asia, Africa, and Latin America.

1. Facilitating CE Transition in ASEAN

To support ASEAN Member States in transitioning to a coherent regional circular, climate-neutral, and resource-efficient economy by enabling best-practice policy development and sharing, and by proposing internationally aligned frameworks for the environmentally sound recovery, trade, and use of secondary materials.

Recovery, trade and use of secondary materials

Improved management of secondary materials as an enabler to CE transition in ASEAN. Facilitate secondary materials recovery from prioritized sectors and promote trade and re-integration into the value chains.



- 1

Gaps and opportunities for supporting regional CE transition

Baseline / Benchmarks / Best Practices

Gaps + Need – building a case for harmonisation

Capacity building / Exchange / Benchmarks

Regional value chains – 2 priority sectors

Policy Dialogue / consensus building
- 2

Guidelines for management of secondary materials

Guidelines on waste definitions/standards

Data management and reporting framework

Trade information system / private sector reporting
- 3

Dissemination and partnerships

ASEAN CE Forum 26, 27

Country dialogues / dissemination

Partnerships

2. ASEAN Integrated Solid Waste Management Project

- A. Formulate a strengthened and coherent regional framework for IMSWM in AMS to support ASEAN Vision 2040 and ASCC Blueprint;
- B. Accelerate investment for IMSWM projects in the ASEAN region;
- C. Establish a multi-stakeholder knowledge sharing and collaboration platform for AMS;
- D. Strengthen IMSWM capacity in AMS and Expand AMS-Korea knowledge exchange and collaboration

ASEAN Integrated Municipal Solid Waste Management Project



ASEAN

**Strategy &
Guidelines**

Integrating Climate
change and Circular
economy perspectives



3

Capacity Building

Knowledge Sharing

Technical Expertise
Development



AMS

Partnerships

Expanded Cooperation

Collaboration between AMS
and Korean Players



6

mtCO₂eq

GHG Reduction

Carbon Emissions Reduction



1,300

jobs

Indirect Green Jobs

Employment Creation



\$100M

USD

IMSWM Investment

Value of Projects
Facilitated



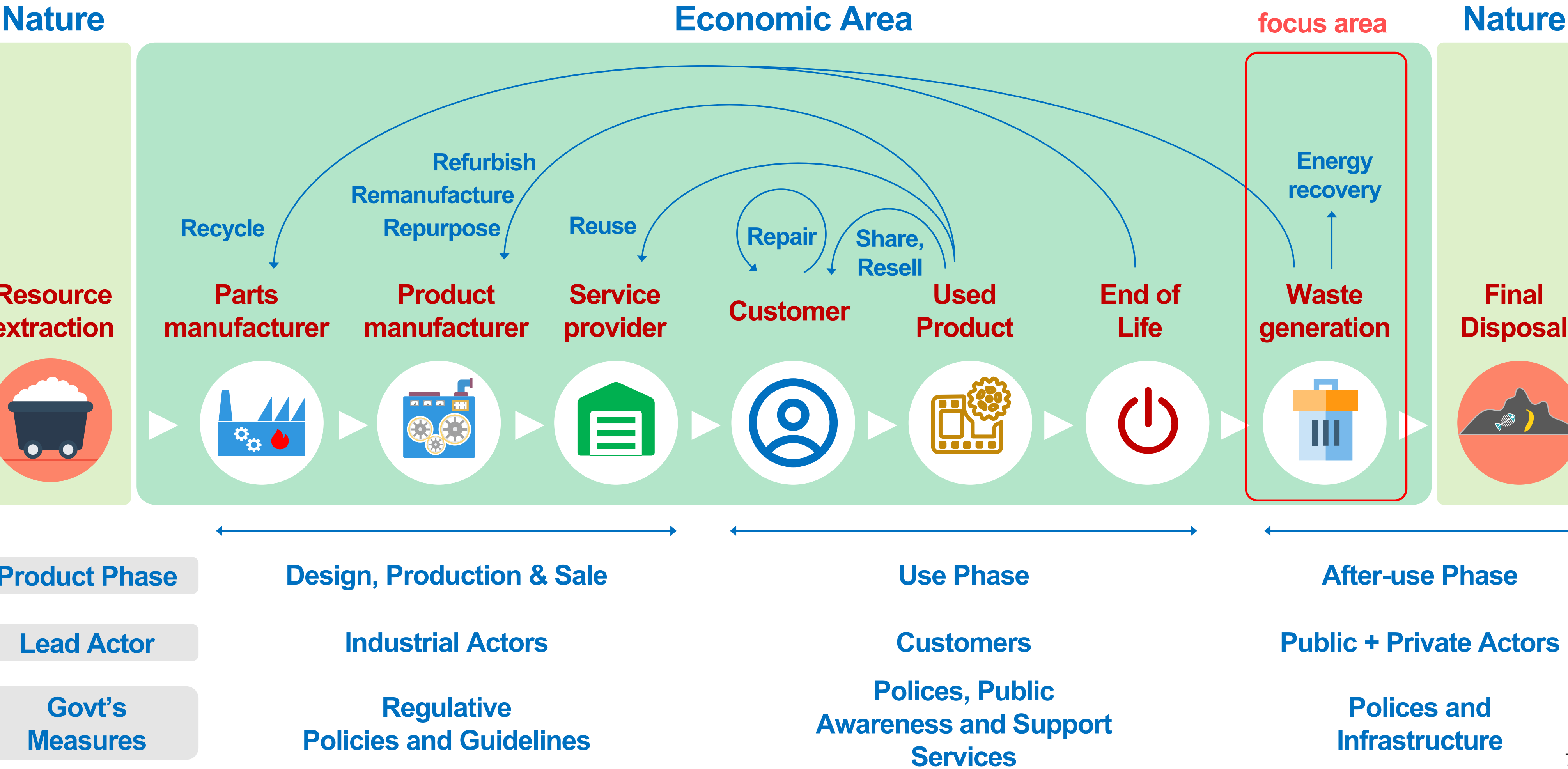
4M

people

IMSWM Beneficiaries

Population in AMS

Key Circular Practices in Value Chain

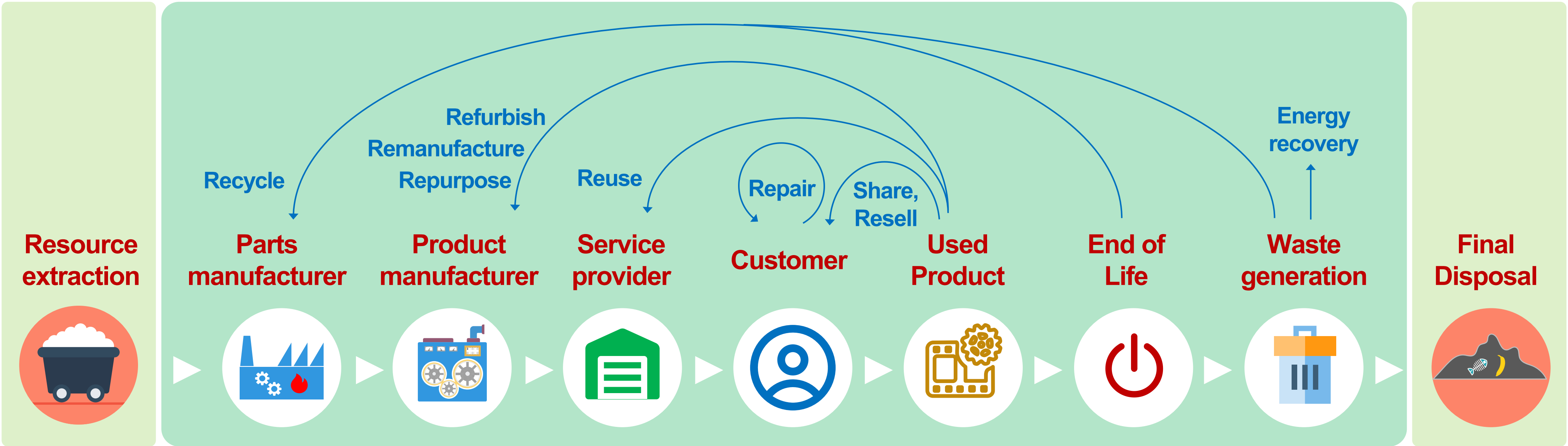


Key Circular Practices in Plastics Value Chain

Nature

Economic Area

Nature



Innovative & regenerative material development

Sustainable Design & Extended Producer Responsibility (EPR)

Promotion of the purchase of circular products

Source separation and exclusive collection of the used plastics

Promotion for the use of regenerative & recycled plastics for production and packaging

Less Packaging

Promotion of plastics upcycling

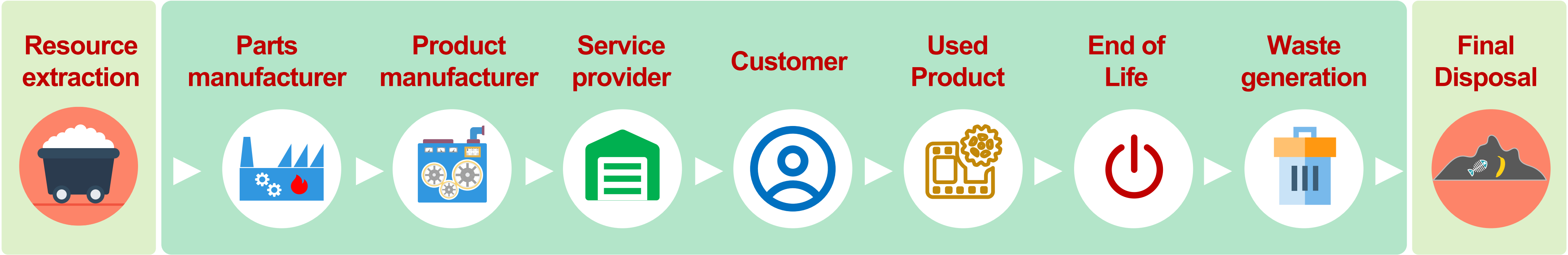
Thermal, Physical, Chemical recycling of plastics

Key Investment Opportunities in Plastics Value Chain

Nature

Economic Area

Nature



Joint research project on innovative & regenerative materials

Innovative BMs such as Product-as-a-service and Sharing platforms

Upcycling and Repurposing businesses & facilities

Production facility for regenerative and recycled materials

Resell market platforms

Reusable packaging reward platforms

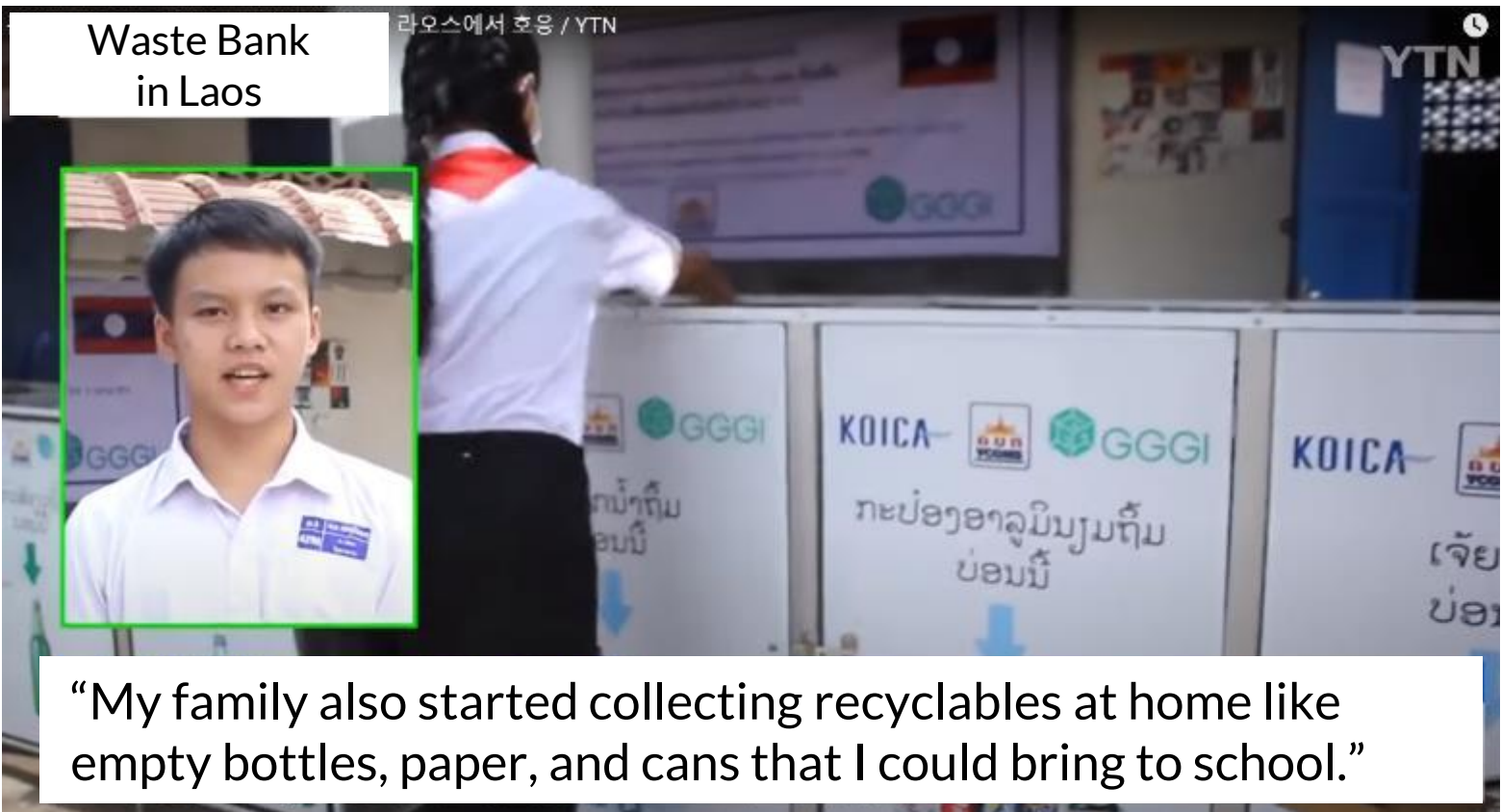
Separation, collection and recycling businesses & facilities

Technology Transfer and Joint Greenpreneurships

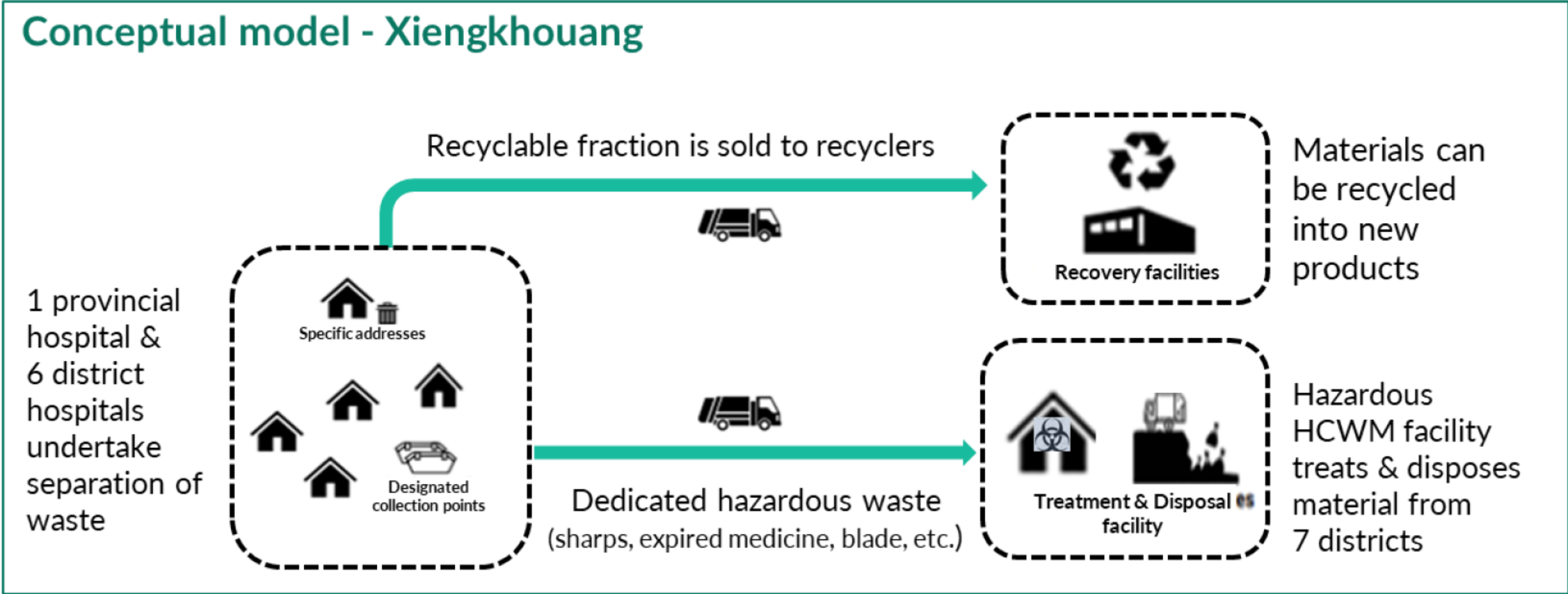
Advanced Recycling System

GGGI has actively supported the establishment of [technologically advanced recycling centers](#), aimed at replacing the existing manual waste recycling system. GGGI focuses on customizing recycling technologies to suit the specific characteristics and requirements of partner cities. Simultaneously, we prioritize effective communication with [local communities](#) and foster their [voluntary engagement](#).

Vietnam	Cambodia	Thailand	Laos
MBT Bac Ninh	MBT Phnom Phen	MBT Chachoengsao	MBT Vientiane
USD64mn	USD15mn	USD17mn	(USD15mn)
COD 2023	Permitting	Civil works	Ongoing



Circular Economy Infrastructure for Healthcare Operations (Lao PDR)



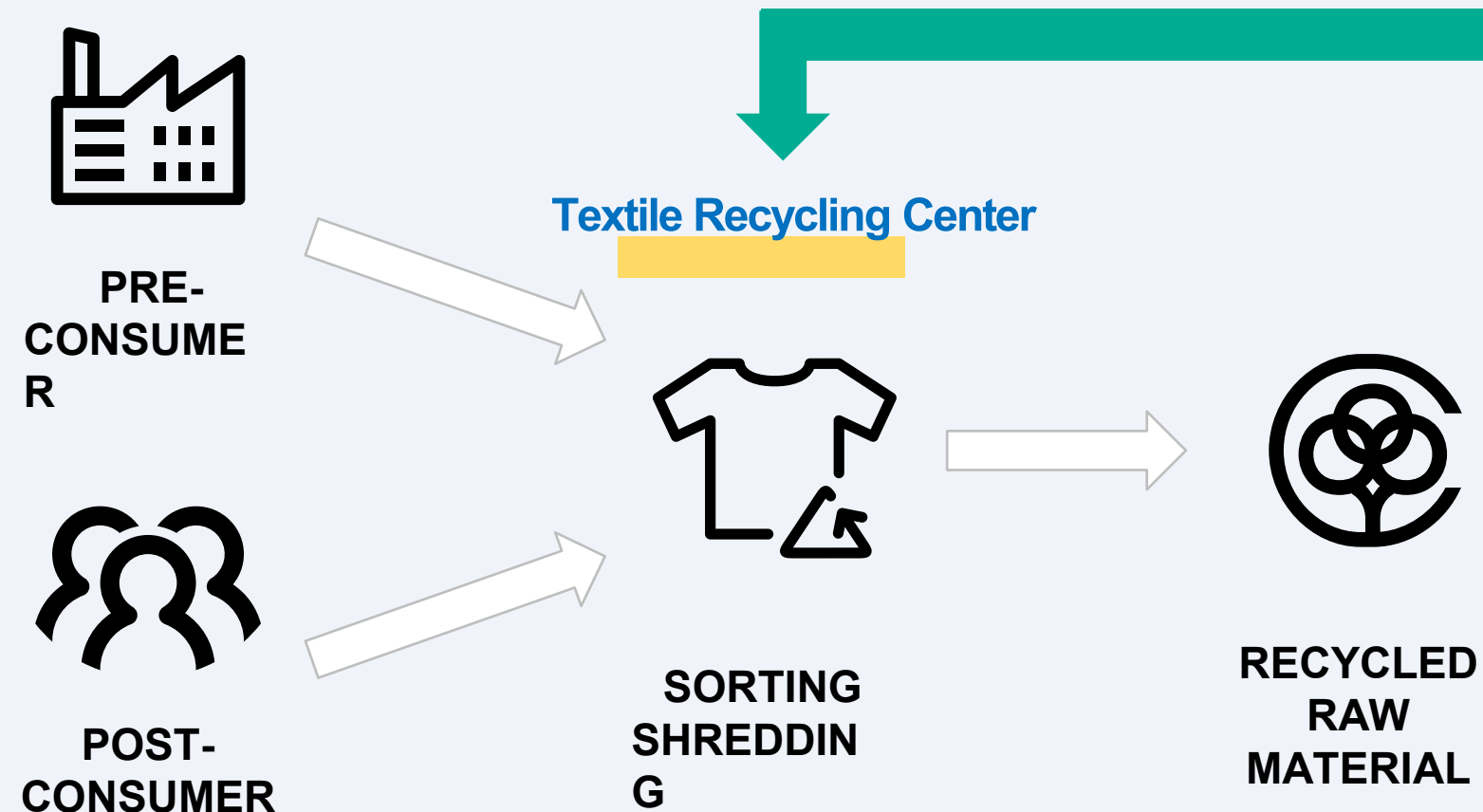
Project Owner	Ministry of Health – Department of Hygiene & Health Promotion
Implementing partner	GGGI, World Health Organization (WHO), Ministry of Health
Project Site	Xieng Khouang province, Lao PDR
Sector	Solid Waste Management; Public health; Circular economy
Donor	KOFIH
Duration	December 2025 – December 2027
Amount (USD)	560,000

Global Partnership Cases (Mongolia)

In the partnership with Mongolia, KOICA and Kolon FnC plan to establish a [circulation center for regenerating discarded cashmere](#) collecting and sorting garments, fabric scraps, and unsold clothing for reuse through [Textile-to-Textile solutions](#). This center will serve as a [textile recycling hub](#). They will also provide educational programs to raise awareness of circular fashion among local fashion workers and support related academic courses. This initiative is part of Kolon FnC's circular fashion business under its [ESG philosophy, 'Rebirth,'](#) showcasing sustainability through their brand RE;CODE.

📍 MONGOLIA

Improving environmental pollution
through collection of discarded fabrics and clothing



📍 KOREA

Securing raw materials and
ensuring quality of recycled plastics

Buy-back & Return

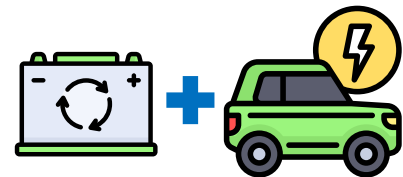


EV Battery Recycling Value Chain Improvement (Indonesia)

GGGI is committed to formulating policy frameworks that enable innovative business models in the private sector and to developing investment projects for the sustainable management of EV batteries.

Battery-as-a-Service and Sustainable Use of EV Batteries

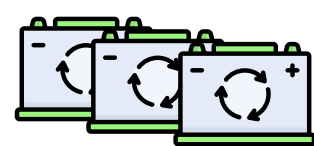
Rental Service of EV Batteries



EV Battery Monitoring Platform



After-use Battery Quality Assessment



EV Charging Station



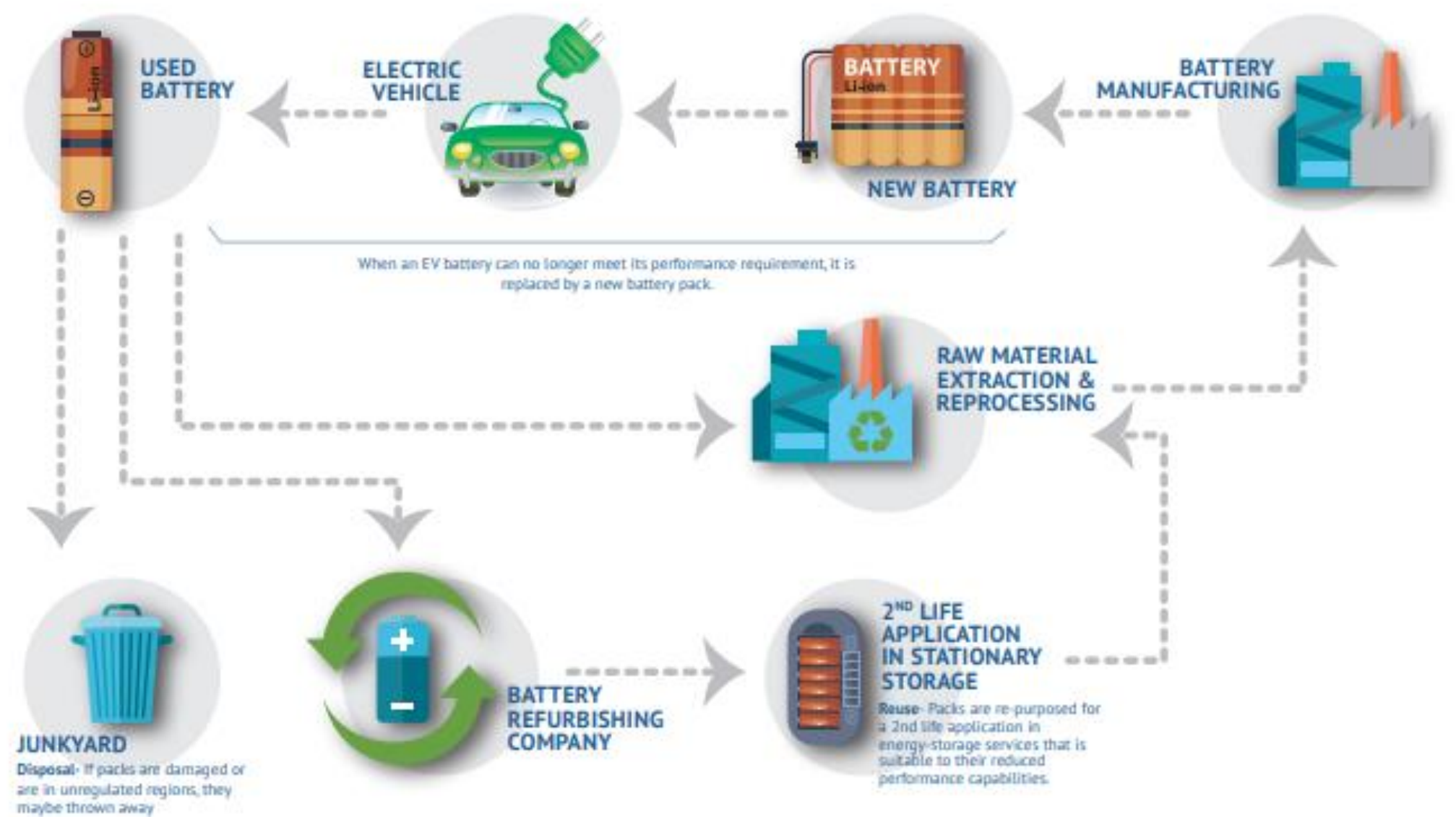
ESS Manufacturing



(ESS: Energy Storage System)



Electric Vehicle Battery Life Cycle



Source: JMK Research

(Figure : auto.economictimes.indiatimes.com/news/auto-components/evs-battery-waste-and-million-dollar-opportunity/77215015)

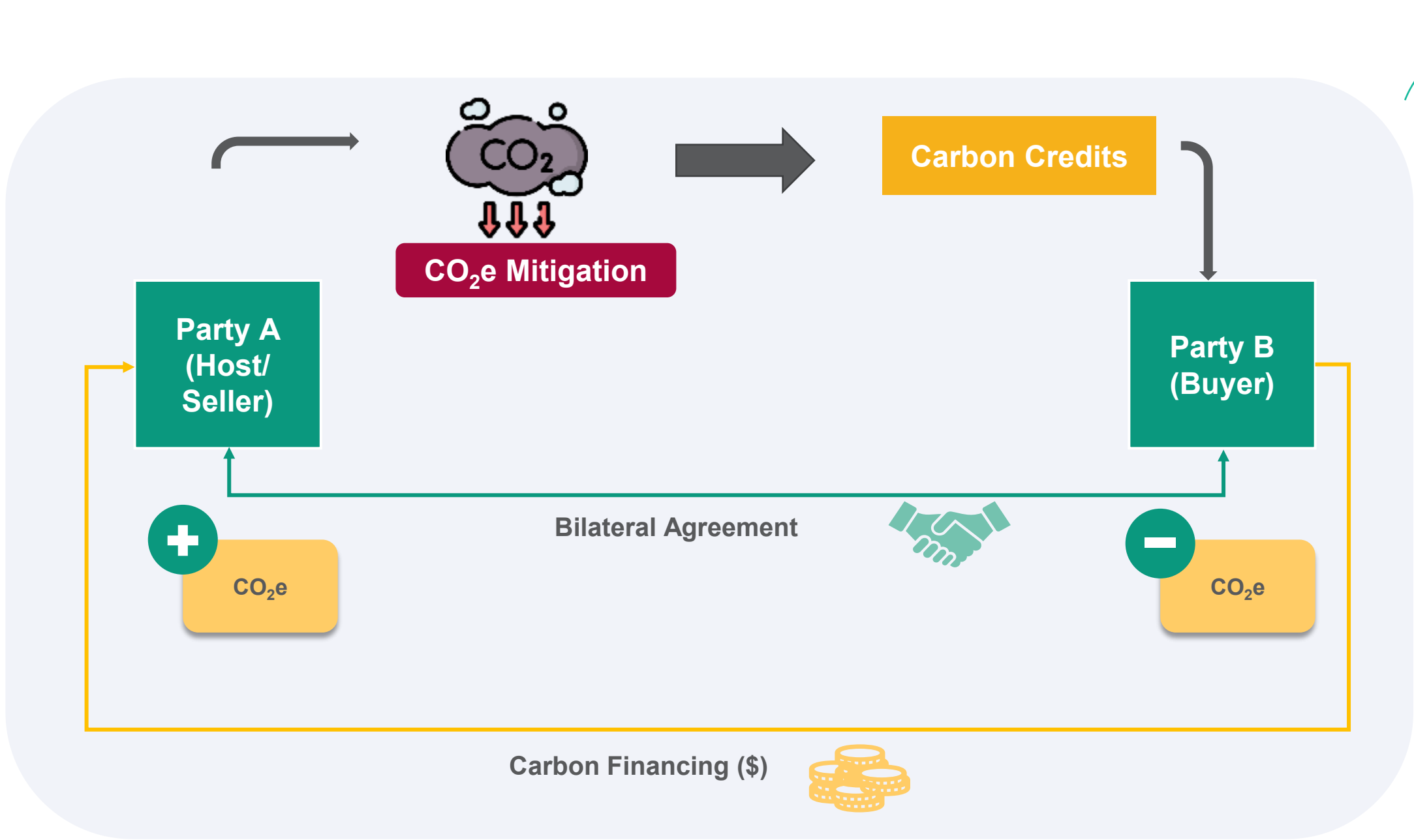
Global Partnership Cases (Côte d'Ivoire)

The waste-to-brick initiative in Côte d'Ivoire, a collaboration between UNICEF and Conceptos Plasticos, a Colombia-based company, recycles difficult-to-process plastics into interlocking bricks for building. The program not only reduces plastic waste but also provides waste collectors with higher earnings and fosters job creation by establishing the brick production facility in Abidjan. With the support of the Ivorian government for its swift building methods, the project addresses the educational infrastructure gap by building schools.

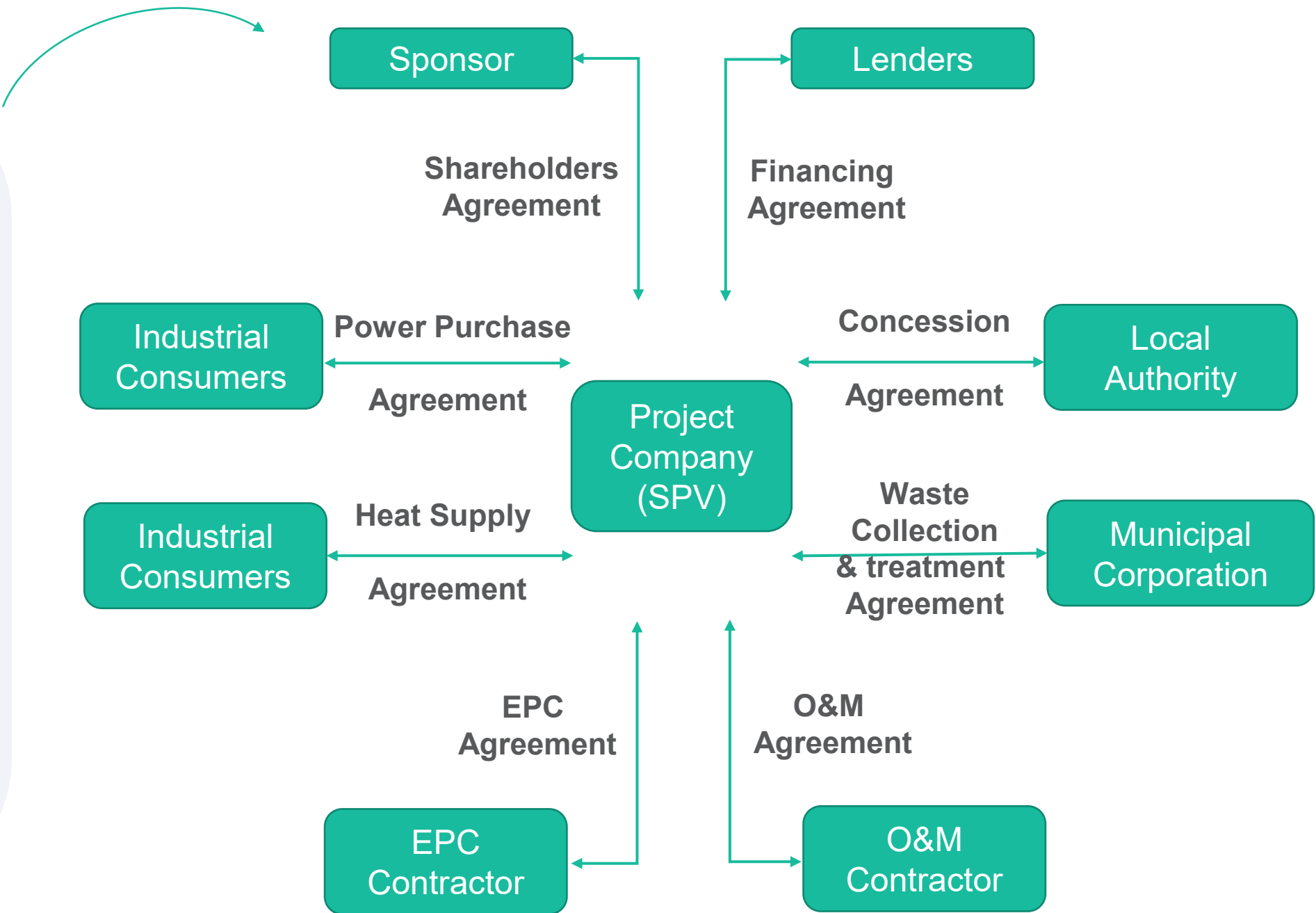


Carbon Financing for Waste-to-Energy Projects

Carbon financing is the key to facilitate the execution of projects aimed at employing waste-to-energy and energy-saving solutions. Mainly, it can be implemented under a Public-Private Partnership scheme, wherein carbon finance plays a pivotal role as a crucial financing source.



(Figure source : GGGI CPU)

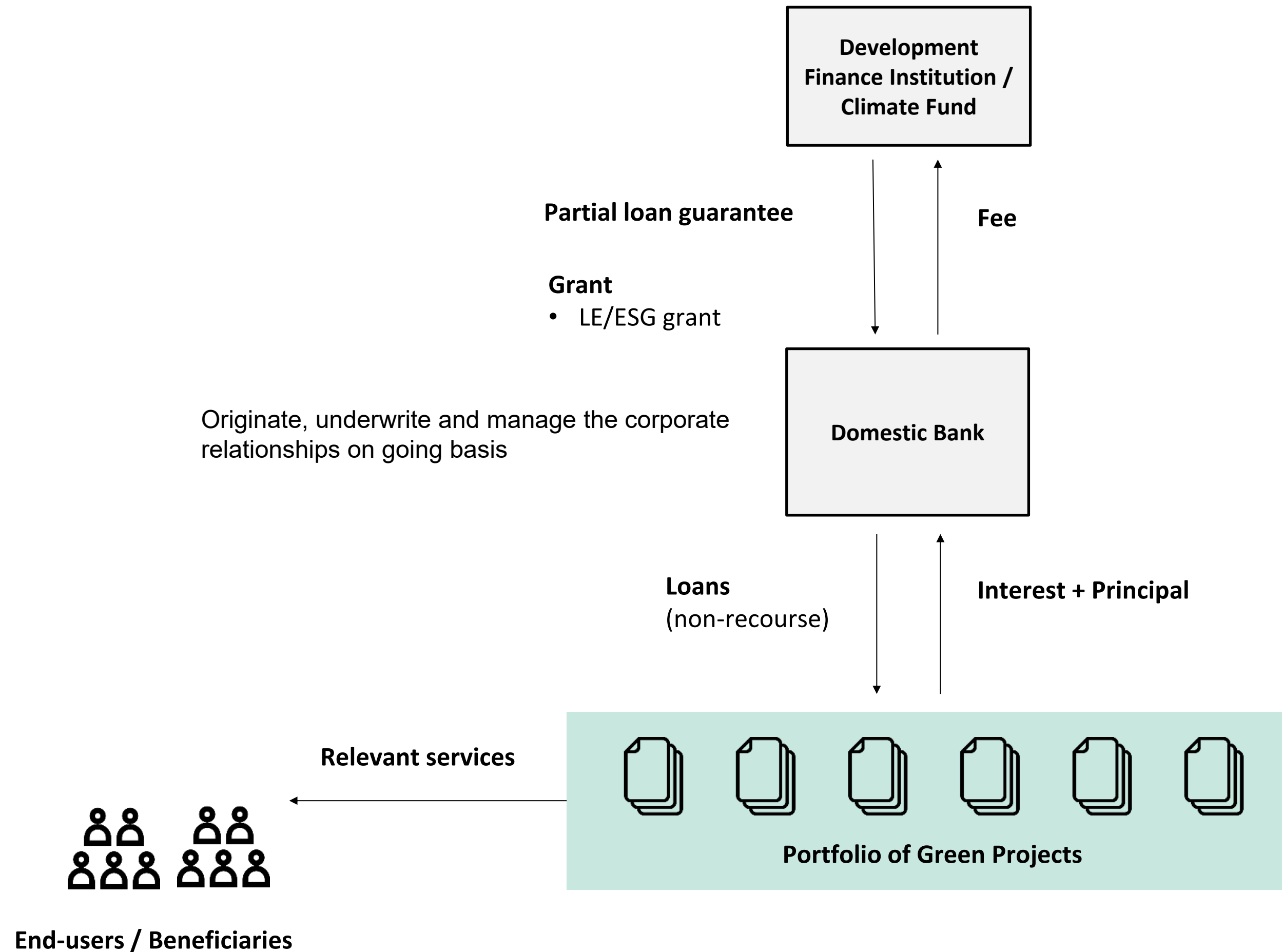


(Figure source : GGGI Morocco Office)

Map of Morocco showing the locations of the six study sites. The sites are marked with red dots and labeled: Fes, Tangier, Babat-Sale#, Menitra, Asablanca*, Marrakesh, and Agadir. Dashed red lines connect the labels to their respective locations on the map.



Circular Economy Financing Facility: Thailand Circular Economy Financing Facility (T-CEFF)



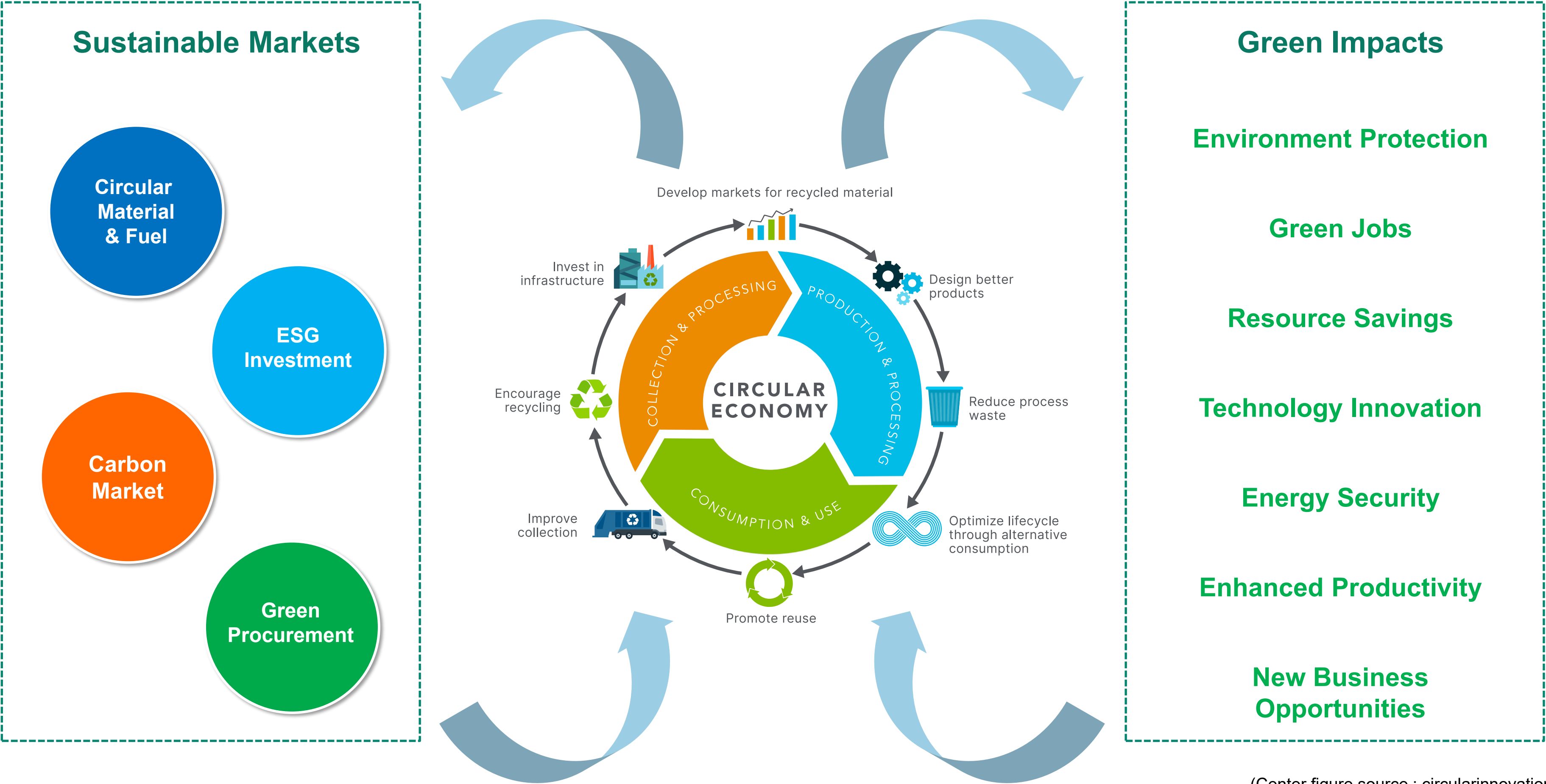
Loan appraisal and portfolio tools

- Appraisal and portfolio management hosted by the domestic bank as accredited entity, with GCF technical assistance at inception
- Technical assessment: site, design and technology, waste and energy yield, construction contracts, PPA and waste supply agreements
- ESG assessment: management systems, labour, pollution prevention, community health and safety, land acquisition, biodiversity
- Programmatic portfolios analysed and stress-tested

ESG safeguard considerations

- Risks identified and mitigated: vulnerable communities such as waste pickers left out, land grabbing, deforestation, uncontrolled emissions
- GCF safeguard principles: avoid then mitigate; equitable access to benefits; due consideration to vulnerable and marginalised groups
- Co-benefits: green jobs, improved health and safety, better air, soil and water quality, market pull for collection and separation
- ISO TC 323: internationally agreed principles, terminology and measurement of circularity

GGGI's Competitive Circular Economy Approach



(Center figure source : circularinnovation.ca)



Thank you

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