

# ACCELERATING INVESTMENTS FOR PLASTIC CIRCULARITY

26–27 June 2024 • Jakarta, Indonesia



## KEY TAKEAWAYS REPORT

### 1. Rationale

Growing volumes of plastic waste are a major issue in Southeast Asia and collection and recycling rates are relatively low in most countries. Many government agencies are tasked with developing and implementing plans to manage plastic waste through circular interventions. Such interventions require significant financial resources, but most government agencies tasked with managing plastic waste management are not trained or informed about how to increase the number of financial resources to increase plastic circularity. Government agencies require capacity building on the different policy and non-policy actions they can take to accelerate financing for plastics circularity projects and how governments can create de-risking conditions in their respective countries that can increase investments from the private sector.

### 2. Workshop Goal

The workshop aimed to provide government participants with an overview of the financing landscape for plastics circularity projects and the role of government in creating enabling environments for policies, and public investments and catalyzing private sector finance at small, medium, and large scales. The target audience included policy, planning, and program development government officers.

### 3. Learning Objectives

Recognizing these challenges, the Asian Development Bank (ADB), in collaboration with the Coordinating Body on the Seas of East Asia (COBSEA), hosted a regional capacity building workshop: Accelerating Investments for Plastics Circularity, 26-27 June 2024 at Four Points by Sheraton Jakarta. This two-day workshop which included capacity building activities and a half-day site visit, was for government officials from Cambodia, Indonesia, Malaysia, the People’s Republic of China, the Philippines, the Republic of Korea, Singapore, Thailand, and Viet Nam as part of the knowledge program of ADB’s Technical Assistance: Promoting Action on Plastic Pollution from Source to Sea in Asia and the Pacific. Through a series of expert-led presentations, panel discussions and group discussions, the workshop covered the following learning objectives:

1. Understand what policy, regulatory, and economic instruments governments can adopt to support the scaling-up of plastic waste management and how to choose options that suit each country’s needs.
2. Understand what loans, investments, blended finance, and programs governments can implement (such as concessional loans, grants, and credit guarantees) and how to design these types of investments.
3. Understand what finance instruments and mechanisms (such as bonds, venture capital, insurance, microfinance, and impact investment funds) can increase the flow of private capital for plastic circularity and how governments can take action to support this.

### 4. Key Takeaways from Each Session

#### OPENING SESSION

Presentation	Speaker
Opening Remarks	<b>Nani Hendiarti</b> Deputy Coordinating Minister for Forestry and Environmental Management at the Coordinating Ministry for Maritime Affairs and Investment.
Opening Remarks	<b>Anna Fink</b> Senior Country Economist, Indonesia Resident Mission, Asian Development Bank (ADB)
Opening Remarks	<b>Mahesh Pradhan</b> Coordinator, Coordinating Body on the Seas of East Asia (COBSEA)
Scene Setting Presentation: Finance for Plastic Circularity	<b>James Baker</b> Senior Circular Economy Specialist (Plastics), Asian Development Bank (ADB)

#### KEY TAKEAWAYS FROM OPENING REMARKS

**Implementation of the Circular Economy:** This requires innovation in technology, sustainable funding mechanisms, government and private sector investment, capacity building, and technology transfer support. Public-private partnerships (PPPs) are essential to financing this transition. Governments need to encourage the growth of environmentally friendly businesses or startup companies, enabling them to thrive economically and create new job opportunities for people. Alternative financial mechanisms are essential for investing in and operating waste management facilities in districts and cities where the fiscal capacity is very low.

**Role of G20 Bali Global Blended Finance Alliance (GBFA):** Indonesia has initiated the G20 Bali Global Blended Finance Alliance (GBFA) with nine prospective founding members as part of the Indonesia G20 2022. GBFA is expected to bridge the funding gap for developing countries to implement policies and global commitments such as sustainable development goals (SDGs) and climate change mitigation, including waste management. GBFA can provide a greater opportunity for

developing countries to secure the necessary investment for implementing environmental policies and programs. The GBFA platform can also encourage countries and global finance institutions to make clear and appropriate contributions to help achieve the global target. GBFA focuses on how to fill the gaps, especially in transition finance for developing countries.

**Financing Gaps for Plastic Circularity:** Despite the critical need for plastic circularity, significant financing gaps exist. The UNEP 2023 report estimates a global financing gap of between 50-120 billion dollars per year, potentially reaching 1.6 trillion. Bridging the gap requires concerted private and public sector efforts. Many agencies lack effective policies to promote plastic circularity, which are essential to driving investment and innovation. Policies such as extended producer responsibility require stronger enforcement and complementary regulations to drive the circular economy.

**Financing Strategies and Support Mechanisms:** Many agencies also struggle to secure investment due to a lack of tailored financing strategies and support mechanisms. To address this, risk mitigation measures, innovative financing models, and enhanced public-private partnerships to catalyze private capital are needed. Moreover, various financial mechanisms can be leveraged, including support for policies, blended finance, and guarantees.

**ADB's Support for Plastic Circularity:** ADB is supporting countries in addressing the challenges of accelerating plastic circularity by implementing a few key approaches. The key approaches are the following:

- ADB is implementing holistic solutions for plastic circularity through a comprehensive approach that combines policy reform, investments, and technical assistance.

*For example,* ADB has approved a \$500 million policy-based loan to support Indonesia's National Action Plan for Tackling Marine Debris, which aims to reduce plastic waste entering Indonesia's oceans by 70% by 2025. Through this loan, ADB and its financing partners, Agence Française de Développement (AFD) and KfW, will support government policy reforms to improve plastic waste management, reduce production and consumption of problematic plastics, and strengthen the data and monitoring tools for effective policymaking. This effort is complemented by ADB technical assistance to enhance plastic waste management through city-level action planning and roadmaps to digitalize the plastic value chain and investment preparation, which is operating in Indonesia, the Philippines, Thailand, and Viet Nam. ADB also issued certified blue loans to Indorama for operations in India, Indonesia, Philippines, and Thailand and PT ALBA Tridi Plastics Recycling in Indonesia. Through an ADB grant, Alner, an Indonesian social venture, piloted its reusable packaging and refilling solution in Greater Jakarta.

- ADB is mobilizing blended green finance for circular economy initiatives.

*For example,* the ASEAN Catalytic Green Finance Facility provides ASEAN member governments with technical assistance, policy advice, and access to over \$1 billion in loans and concessional financing for green infrastructure investments.

- ADB supports knowledge sharing with partners like the Coordinating Body on the Seas of East Asia (COBSEA), focusing on capacity building and enhancing cooperation within the region.

## KEY TAKEAWAYS FROM THE SCENE SETTING PRESENTATION

**Scale of the Challenge in Asia-Pacific:** Financing Gap, Asia as a Hotspot, Upstream vs Downstream, Global Plastic Treaty and Role of Government

- **Financing Gap:** A [2023 UNEP report](#) estimates the global financing gap for plastic pollution is between \$50 billion-\$120 billion per year, potentially reaching \$1.64 trillion.
- **Asia as a Hotspot:** Asia is the global hotspot for plastic pollution. Region only accounted for 8% (US\$12 billion) of plastic circularity investments. 90% (US\$142 billion) went to North America and Europe ([TCI, 2023](#)).
- **Upstream Vs Downstream:** 85% of investments went to plastic recovery and recycling while reuse and refill (plastic reduction) received very little investment (5%) ([TCI, 2023](#)).

- **Global Plastic Treaty:** Financing to address plastic pollution has become a significant topic of discussion for the development of a global plastics treaty.
- **Role of Government:** Governments at all levels play a key role in catalyzing investment in plastics circularity.

**Financing and Other Related Terms:** There are various terms that are used in financing. For the purpose of this workshop, James Baker reviewed all the frequently used terms and provided definitions for a common understanding in the room. The finance and other related terms are following:

- **Project Financing:** Funds required to construct or operate a facility or business.
- **Stakeholder vs Partner**
  - » **Partner:** Person/entity has a stake in the project or business (i.e. funding invested).
  - » **Stakeholder:** Person/entity affected or can affect a business or project
- **Mechanism vs Instrument**
  - » **Mechanism:** How is the cash transferred and managed
  - » **Instrument:** Product (i.e. type of loan)
- **Donor vs Investor**
  - » **Donor:** Organizations (i.e. governments, philanthropies) that provide funds and have a more diverse expectation of return
  - » **Investor:** Entity (individuals or companies) that provide funds with an expectation of a financial or asset return
- **Public vs Private Finance**
  - » **Public Finance:** Funding that comes from budgets of governments that are usually generated through taxes or fees.
  - » **Private Finance:** Funding that comes directly from capital markets and institutions
- **De-risking:** Pre-research, designing, structuring, or managing a project so that it achieves the objectives

**Institutional Capacity Needs:** There are a wide range of options to secure more funding from public and private sources to fund plastic circularity activities in Asia. Each financing option has different intended objectives/outcomes and pros/cons. Governments are tasked with developing and implementing plans to manage plastic waste through circular interventions, which require significant financial resources. Capacity building needed about the policy and non-policy actions that governments can take to accelerate financing for plastics circularity projects and how to de-risk projects and businesses.



# SESSION 1: POLICY INITIATIVES AT THE GLOBAL AND REGIONAL LEVELS TO FINANCE PLASTICS CIRCULARITY

Presentation	Speaker
Re-cap of Global Plastics Treaty INC4 and Implications for Financing and Investments	<b>Roger Joseph (Rocky) Guzman</b> International Governance, Legal and Policy Specialist (Consultant), Asian Development Bank
Regional Initiatives for Accelerating Investments in Plastics Circularity	<b>Dr. Elviyani Nasution</b> Indonesia Chief Representative / Country Manager, ING (UNEP FI member)

## KEY TAKEAWAYS FROM SESSION 1

### Presentation Title: Re-cap of Global Plastics Treaty INC4 and Implications for Financing and Investments

- 1. Formation and Progress of the Global Plastics Treaty:**
  - a. The Global Plastics Treaty, formally known as the International Legally Binding Instrument (ILBI) to end plastic pollution, includes marine environments and aims to address plastic pollution comprehensively.
  - b. The treaty process began in March 2022 with the UN Environment Assembly’s resolution. Since then, the International Negotiating Committee (INC) has held four sessions, with the fifth and final session planned for November 2024 in Busan, South Korea. The treaty is expected to be finalized and adopted in 2025.
- 2. Focus on Financing and Investment:**
  - a. ADB and other stakeholders are focusing on financing and investment to support the treaty’s implementation.
  - b. The financing discussion includes establishing a multilateral fund, exploring outcomes-based financing, and implementing plastic pollution fees and national plans.
- 3. Establishment of a Multilateral Fund:**
  - a. Key options under discussion include creating a standalone independent fund, adopting a hybrid approach utilizing existing funds, or leveraging mechanisms like the Global Environment Facility to prevent fragmentation in the financing landscape.
- 4. Plastic Pollution Fee and Extended Producer Responsibility (EPR):**
  - a. A proposed plastic pollution fee would target manufacturers and producers, potentially implemented as a standalone mechanism or integrated into EPR frameworks. This fee would operationalize the polluter-pays principle and is still under negotiation.
- 5. Implementation and Compliance Mechanisms:**
  - a. The treaty is expected to include national plans (NAPs) to facilitate compliance based on each country’s circumstances and capabilities
  - b. An implementation and compliance committee is proposed to support countries in meeting their commitments, focusing on facilitation and respect for national sovereignty rather than punitive measures.

## INSIGHTS FROM DISCUSSIONS AND/OR Q&A:

### Divergent Views on a Successful Treaty:

- The definition of a successful treaty varies among different countries. For some, it focuses solely on downstream measures, while others want it to encompass the entire life cycle of plastics, which is more challenging to negotiate within the given timeline.

### Mandate and Timeline Pressure:

- The current narrative emphasizes the need to complete the treaty by 2024, as mandated by resolution 514, with five INC sessions and adoption at the diplomatic conference next year for ratification. However, there is concern that the six days allocated for the INC-5 in Korea are insufficient to address all necessary elements in detail, particularly those related to the full plastics life cycle and upstream issues like primary plastic polymers and chemicals of concern.

### Possibility of Extension:

- Given the tight timeline and the extensive topics that need thorough discussion, there is an underlying possibility that the timeline might be extended. This decision would likely be deliberated by UNEP, potentially in upcoming meetings in India. This possibility is a shared concern among member states.

## Presentation Title: Regional Initiatives for Accelerating Investments in Plastics Circularity

- 1. ING's Role in Sustainability:** ING Bank, active in Indonesia since the 1980s, is part of the finance leadership on plastic within the UNEP FI initiative and has been involved in sustainable lending for four decades.
- 2. Three-Step Approach to Ending Plastic Pollution:** The strategy involves closing the tap (reducing plastic production), closing the loop (promoting circular economy practices), and closing the gap (accelerating investment).
- 3. Significant Financial Redirection Needed:** To combat plastic pollution, financial flows must be redirected, including reducing investment in virgin plastic, raising at least \$600 billion for reuse initiatives, mobilizing \$230 billion for collection and sorting processes, and securing \$1.7 trillion for sustainable substitute materials.
- 4. Global Collaborative Efforts:** Addressing plastic pollution requires a value chain approach and collaboration among various stakeholders, including multilateral institutions, private entities, insurance companies, and governments. Key challenges include the supply of high-quality recycled plastic and the implementation of extended producer responsibility (EPR) schemes.
- 5. ING's Sustainable Finance Initiatives:** ING has successfully executed several sustainable finance transactions related to plastics, such as providing a green loan in Romania for a public-private entity managing a deposit return system for packaging products.





## INSIGHTS FROM DISCUSSIONS AND/OR Q&A:

- Diverse Perspectives on Treaty Objectives:** There is a divergence in perspectives among countries regarding what constitutes a successful treaty on plastics. For some, focusing only on downstream measures (likely waste management and cleanup) might suffice. However, many others advocate for a comprehensive approach covering the entire lifecycle of plastics, which includes upstream elements like primary plastic polymers and chemicals of concern. This disparity could pose challenges in negotiations, potentially affecting the treaty's scope and ambition.
- Time Constraints and Negotiation Challenges:** There is a significant concern about the limited time available for negotiations. The current timeline, set to conclude by 2024 with specific milestones, such as the 5 INC sessions and subsequent diplomatic conference, is seen as ambitious. However, stakeholders fear that the allocated six days for the INC sessions might not be adequate to address all critical elements comprehensively. This time constraint raises the possibility of extending the negotiation period, which adds uncertainty to the process.
- Role of Non-State Actors in Capacity Building:** In the context of preparing for intersessional sessions and the broader negotiation process, there is recognition of the role non-state actors can play. These actors, including NGOs and intergovernmental organizations, are essential in supporting governments to enhance their capacities. This support involves providing information on funding sources, finance mechanisms, and technical expertise. Despite the primarily governmental focus of formal sessions, there's acknowledgment of the need for broader engagement to ensure informed and effective participation in the negotiations.

# SESSION 2: NATIONAL POLICY SOLUTIONS AND INITIATIVES TO SUPPORT FINANCING OF PLASTICS CIRCULARITY

Presentation	Speaker
Regulatory and Economic Instruments to Support Plastic Circularity	<b>Dr. Panate Manomaivibool</b> Assistant Professor, Mae Fah Luang University
Roundtable Update: Government Plastic Circularity Financing Initiatives	<b>Government officials</b> (Cambodia, Indonesia, Malaysia, the People’s Republic of China, the Philippines, the Republic of Korea, Thailand, and Viet Nam)

## KEY TAKEAWAYS FROM SESSION 2

### Presentation Title: Regulatory and Economic Instruments to Support Plastic Circularity

**Purpose of Economic Instruments:** Economic instruments, such as taxes and subsidies, aim to address externalities like plastic pollution by altering economic behavior through financial incentives rather than strict regulation.

**Flexibility and Decision-making:** Unlike regulatory approaches, economic instruments empower economic actors to decide how they will respond—whether by continuing current practices, adapting to new regulations, or adjusting their behavior to avoid financial penalties.

**Diverse Instrumentation:** Various economic instruments, including taxes, subsidies for recycling, deposit refund systems, and green public procurement policies, are discussed as tools governments can use depending on their specific goals and contexts.

**Challenges in Implementation:** Implementing economic instruments requires careful consideration of local conditions. Factors like retail infrastructure, consumer behavior, and administrative capacity must be taken into account to ensure effectiveness and minimize unintended consequences.

**Potential for Public Financing:** These instruments not only aim to address environmental issues but also have the potential to generate revenue that can be earmarked for environmental cleanup, recycling infrastructure, or other related projects, thereby enhancing public financing in these areas.

**Considerations for Policy Adoption:** When adopting policies as an economic instrument, key considerations will be required. The following considerations are:

- **Effectiveness:** Does the economic instrument lead to intended outputs, outcomes, and impacts?
  - » Establish mechanisms for ongoing monitoring and evaluation of policy effectiveness.
  - » Adjust policies based on feedback and observed outcomes to enhance their impact.
  - » For example:
    - Will it address the problem of plastic leakage into the ocean?
    - Will it address the pain point of the plastic value chain?
- **Equity:** Is the economic instrument reaching out to certain beneficiaries or addressing specific needs?
  - » Carefully evaluate potential impacts on smaller businesses and other vulnerable groups.
  - » Develop mechanisms to mitigate negative effects and support affected stakeholders.
- **Enforcement:** Are the resources required for implementation within the authority’s capacity?
  - » Enforcement is the mechanism that needs to be introduced in a country.
- **Local Context:**
  - » Policies must be tailored to local economic, cultural, and retail landscapes.
  - » Assess the feasibility and practicality of different economic instruments in the local context.



- **Flexibility and Adaptation:**
  - » Economic actors need flexibility to choose whether to adapt their practices or face financial consequences.
  - » Consider the diverse cost structures and capabilities of different actors.
- **Revenue Allocation:**
  - » Revenues from economic instruments should be earmarked for specific environmental initiatives.
  - » Ensure transparency and accountability in the use of funds.
- **Stakeholder Engagement:**
  - » Involve key stakeholders, including businesses, government agencies, and the public, in the policy development process.
  - » Foster collaboration and build consensus to ensure successful implementation.

## Roundtable Update: Government Plastic Circularity Financing Initiatives

### Government Plastic Circularity Financing Initiatives

The participating government agencies provided a short update or summary of what the government agency has done about supporting financing or investments for plastics circularity. Below is a summary of each government agency's initiatives related to plastic circularity financing.

#### Cambodia

**Department of Marine and Coastal Zone Conservation, General Department of Natural Protected Area, Ministry of Environment:** Cambodia has established comprehensive regulations to manage plastic pollution, emphasizing both regulatory measures and financial provisions to support these efforts. Cambodia has identified potential funding sources that could aid in reducing plastic pollution, such as the national budget and funds allocated for environmental development. The funding initiatives in Cambodia include the Green Climate Fund under the United Nations Framework Convention on Climate Change, Global Environment Facility (GEF) System for Transparent Allocation of Resources (STAR) Fund and the Cambodia Institution for Green Financing. The financing initiatives also encompass development partners and bilateral agreements, including those with the World Bank, ADB, AFD, and other UN agencies. Moreover, Cambodia also encourages private sector involvement in sustainable practices to reduce plastic pollution, leveraging market opportunities and innovation. Cambodia employs various revenue streams, including taxes and fees on waste collection, user fees, and additional charges on single-use plastic bags. Cambodia highlighted the critical role of supportive policy frameworks and enhanced public-private sector collaboration. Effective frameworks are needed to ensure sustainability in plastic management and attract investments.

#### Indonesia

**Cirebon City Government:** The Cirebon City government is actively seeking information from other countries about the implementation of pollution taxes or fees to address the issue of plastic pollution, as well as how they can effectively access the funds from these taxes. Currently, the Cirebon city government only receives funding from the city regional budget, which accounts for a meager 0.91% of the waste management budget. This budget covers not only plastic waste management, but also solid waste management. The Cirebon City Government has a challenge in terms of financing the acceleration of addressing the plastic pollution program given its low budget.

**Coordinating Ministry for Maritime Affairs and Investments:** The local government budget is less than 1% for solid waste management activities. In Indonesia, a specific project collaboration with ADB focuses on complex plastic waste to establish a market for plastic recycling activities, with the aim of implementing the first project in Cirebon City. They aim to minimize the amount of plastic that ends up in landfills. This project is basically trying to supplement the local budget.

**The Provincial Government of Bali:** First, the governor has already issued a regulation banning single-use plastics. Secondly, there is a regulation in place for managing waste at the source. In Bali, there is a separation facility, and the truck needs to collect the waste according to the schedule. There are different collection days for organic waste and inorganic waste. The next step involves the implementation of packaging regulations for manufacturers, who will assume responsibility for their packaging waste management. The government has learned best practices from Germany, such as the deposit refund system. Bali will initiate this mandatory packaging regulation. There are 15 companies, including the Indonesia Packaging Recovery Organization (IPRO), that want to join that initiative. The provincial government wants to first create an extended producer responsibility (EPR) regulation for packaging companies and then develop it for plastic circularity financing activities.

## Malaysia

**Circular Economy Unit, Environmental Management Division, Ministry of Natural Resources and Environmental Sustainability:** Malaysia incorporates the Agenda for Plastic Circularity into its roadmap to eliminate single-use plastic. The Malaysian government, under the Ministry of Natural Resources and Environmental Sustainability, introduced two key programs to support plastics circularity and green initiatives:

**Green Technology Financing Scheme:** This scheme provides financial support to industries investing in green technologies, including those aimed at reducing plastic usage and enhancing sustainability.

**Green Investment Tax Allowance (GITA) and Green Income Tax Exemption (GITE):** These tax incentives encourage businesses to invest in green initiatives and sustainable practices, including plastic circularity.

## People's Republic of China

**Marine Debris and Microplastic Research Center, National Marine Environmental Monitoring Center:** People's Republic of China is recognized for its global leadership in transitioning to a circular economy for plastics, aligned with its broader environmental agenda. The Ministry of Ecology and Environment has implemented comprehensive measures and actions to tackle marine litter and plastic pollution issues. While specific details on financing sources were not outlined, People's Republic of China welcomes stakeholder contributions on financing solutions for plastic circularity and is willing to share these suggestions/solutions with relevant authorities.

## Philippines

**Department of Public Services, Manila:** They collaborate with both national government agencies and non-governmental organizations. They have donated plastic recycling equipment, including bio composters and plastic melters that can convert plastic into plastic chairs and tables that can be sold.

**Environmental Management Bureau, Department of Environment and Natural Resources:** The Department of Environment and Natural Resources has provided equipment for managing solid waste, such as bio composters and plastic recycling equipment to make chairs. Schools and communities use these chairs made from recycled plastic. The government encourages the private sector and government agencies to purchase products or supplies from suppliers or recycling facilities with recycled content per item or product. The Philippine government also allocated funds as financial assistance or government subsidies to the barangays in local government units for the establishment of material recovery facilities.

## Republic of Korea

**Korea Maritime Institute (KMI), designated by the Ministry of Oceans and Fisheries (MOF):** There are two policies for the collection and disposal stages of fishing gear. During the collection phase, the Ministry of Oceans and Fisheries implemented a fishing gear deposit system. Fishermen must pay a deposit fee as an additional fee for purchasing the fishing gear. Once the fishermen return the fishing gear to the designated location, they will receive their deposit back. This implementation provides an incentive for fishermen to return their fishing gear to land. This deposit system has been in place since January 2024. Producers and importers of fishing gear and aquaculture tools, who bear full responsibility for their products' recycling, participate in the EPR system during the disposal stage. They must assist with fishing gear collection and recycling. They need to expel the pieces of fishing gear to be recycled.

## Thailand

**Department of Marine and Coastal Resources (DMCR), Ministry of Natural Resources and Environment:** Under the Marine Debris Management Project, DMCR has a monitoring and research program, including waste collection in marine and coastal environments and collaboration with coastal communities, local government, the private sector, and academic institutions. In addition, DMCR has conducted research on the importance of marine debris, including (1) the study of floating plastic debris in the main river mouth in the upper gulf of Thailand to estimate the amount of marine debris that enters the waterway; (2) the study of the effects of marine debris on marine endangered species and coral reefs; and (3) the study of micro plastics in marine and coastal environments. Policymakers can utilize the research results to tackle the issue of plastic waste in Thailand.

**Pollution Control Department (PCD), Ministry of Natural Resources and Environment:** PCD has established mandatory standards on plastic products such as post-consumer recycled (PCR) and recycled content of plastics. PCD is drafting a law on sustainable packaging waste with EPR, which is now under public hearing and is expected to be enforced in 2026 at the earliest. There are many programs currently running in parallel in Thailand such as awareness raising programs for citizens to reduce single-use plastics and coordinating programs with local authorities to separate waste in accordance with final treatment operations. There will be many programs and projects under the global plastics treaty and Thailand will require support from the ADB in the near future.

## Viet Nam

**Department of Natural Resources and Environment, Long An - Environmental Management Division:** Local communities in Long An support waste separation practices that bring plastic waste to the waste collection station. Long An province will begin implementing waste separation at the source in January 2025, classifying waste into three categories: organic waste, recycled waste (including plastic waste), and other waste. To implement this waste separation practice, Long An needs funds to create an awareness-raising and education program and a pilot program for waste separation.

**Viet Nam Administration of Seas and Islands, Ministry of Natural Resources and Environment:** In general, the agency is responsible for dealing with marine plastic. In 2019, research in Viet Nam revealed that 33% of plastic waste was circular, while 67% was not yet fully circular. 67% of that plastic waste may be being treated by burning, dumping, or being transported into the ocean. This resulted in a loss of \$2.9 million. From that experience, the Government of Viet Nam developed a policy to promote plastic circularity, known as the EPR scheme. The Government of Viet Nam received funding from plastic companies and producers and is currently determining how to allocate this funding to promote more circular practices in Viet Nam.



# SESSION 3: SUCCESS STORIES AND LESSONS LEARNED IN FINANCING PLASTICS CIRCULARITY

Presentation/ Panel Discussion	Speaker/ Panelist
De-risking Plastics Circularity Projects and Needs of The Private Sector	<b>Andreas Thermann</b> Environmental Finance and Partnership Specialist, Asian Development Bank
Implementing Plastics Recycling at Scale with the Informal Sector	<b>Dian Kuniawati</b> Vice President, PT ALBA Tridi Plastics Recycling Indonesia
Behind-the-scenes of the ADB \$44.2 Million Blue Loan with ALBA Tridi	<u>Moderator:</u> <b>Erin Sinogba</b> Project and Knowledge Management Lead, TA 6669, Asian Development Bank  <u>Panelists:</u> <b>James Baker</b> Senior Circular Economy Specialist (Plastic Wastes), Asian Development Bank <b>Dian Kuniawati</b> Vice President, PT ALBA Tridi Plastics Recycling Indonesia <b>David Dovan</b> Senior Investment Specialist, Asian Development Bank

## KEY TAKEAWAYS FROM SESSION 3

### Presentation Title: De-risking Plastics Circularity Projects and Needs of the Private Sector

**Importance of a Solid Taxonomy for Financing:** Establishing a clear and robust taxonomy for green, blue, and circular economy projects is crucial for attracting financing. This helps investors and donors align the use of proceeds with their objectives and facilitates better monitoring of financial flows into prioritized sub-sectors.

**Role of Domestic Financial Institutions:** Domestic development banks and financial institutions are pivotal in supporting investments in the circular economy. Enabling these institutions to lend more towards relevant sub-sectors is essential for building a strong investable deal pipeline.

**Integration of Different Credits in Capital Markets:** The inclusion of various credits, such as carbon and plastic credits, can significantly enhance capital markets. Effective regulatory integration of these credits is necessary to maximize their value.

**Diverse Financial Instruments in Climate Financing:** Debt financing constitutes about 70% of climate finance, with equity finance making up around 25%, and grants from governments and donors only 5%. The impact of grants is greatly amplified when they are used to unlock other financing instruments.

**Leveraging Various Financing Solutions:** Multiple financing solutions, including bonds focused on circular themes, technical assistance for financial intermediaries, structured funds with first-loss tranches, and public programs to enhance profitability, are critical for increasing private finance for circular economy projects. These solutions help attract and protect investors while driving sustainable investments.

**Collaboration for Circular Economy:** Dian highlighted the importance of collaboration between various stakeholders, including international companies, local businesses, and financial institutions, to advance plastic circularity. The joint venture between Alba Group Asia and PT Tridi Oasis Group, supported by a significant non-sovereign blue loan from ADB, exemplifies this collaborative approach.

**Transforming Waste into Resources:** The core value of PT Tridi Oasis is to view waste as a misplaced resource. This philosophy underpins their efforts to transform plastic waste into new materials, emphasizing the potential value of recycling and reusing waste products.

**Investment and Recognition:** The company received around \$44.2 million in blue loans from ADB and was awarded the Asset Triple A Sustainable Infrastructure Award. This financial support and recognition are crucial in advancing their mission of plastic recycling and circularity.

**Focus on Informal Sector and Social Impact:** Dian emphasized the significant role of the informal sector in the waste collection supply chain in Indonesia. The company works closely with waste pickers and small aggregators, providing training and support to improve their operations. This collaboration not only enhances efficiency but also creates a social impact by increasing the income of these workers, many of whom are women.

**Strategic Location and Market Focus:** The establishment of the recycling facility in Central Java was a strategic decision to improve the collection rate of plastic waste in the region. The facility's focus on producing high-quality, food-grade recycled PET (rPET) aims to meet the demands of both local and international markets, thus supporting global brands in achieving their recycled content pledges.

**ADB Blue Loan Criteria:** Blue loans are financing instruments that aim to safeguard access to clean ocean resources, protect and restore marine and coastal environments, and invest in a sustainable blue economy. These focus areas for ADB's blue projects are based on criteria in the Ocean Finance Framework.

Support for blue loans is available through the Blue SEA Finance Hub. This is an initiative that provides technical assistance for the preparation of bankable blue projects in Southeast Asia.

**ADB De-risks Plastic Recycling Project to Empower the Informal Sector:** In June 2023, ADB signed a \$44.2 million blue loan with PT ALBA Tridi Plastics Recycling Indonesia to establish a PET recycling facility in Central Java. This plant aims to recycle 48,000 tonnes of PET bottles annually, preventing them from polluting landfills and oceans. The facility will produce 36,000 tonnes of recycled PET, offsetting up to 30,500 tonnes of CO<sub>2</sub>.

The project faced two key risks:

- **Technology Risk:** While PET crystallization technology has existed for 16-17 years, scaling it in Indonesia was new. The technology requires clean PET as input, which is limited due to specific feedstock needs..
- **Feedstock Supply Risk:** Securing a reliable supply of clean PET bottles is challenging due to competition and the need for efficient processes to source from the informal sector, which requires quick cash payments and extensive transportation logistics.

ADB and ALBA Tridi took the following actions to de-risk the project:

- **Technology Modification:** The project added a front-end sorting system to allow a wider range of materials to be processed, ensuring compatibility with the crystallization technology.
- **Harness the informal sector through commitment and capacity building:** ADB and ALBA Tridi analyzed and committed to purchasing feedstock from the informal sector. They provided training to meet ADB's requirements, ensuring a stable supply.
- **Collaboration and Trust Building:** Both parties agreed to resolve major issues through discussion rather than termination, exemplified by a joint plan to boost PET bottle collection.



The ALBA Tridi experience with large-scale recycling and informal sector feedstock in Asia can be replicated with the following actions:

- **Development Banks:** Allocate more funds specifically for plastic circularity projects.
- **Government Policy-Makers:** Implement policies to boost demand for recycled plastics, like the EU's requirement for minimum recycled content in products.
- **Informal Sector:** NGOs and social organizations can help formalize informal waste workers through training and capacity building, providing them with legal recognition and access to resources.

**How ALBA Tridi Harmonizes Environmental and Business Concerns:** The project highlighted a dual commitment to environmental sustainability and business viability. It emphasized that while profitability is important, the primary goal is to advance environmental sustainability through effective recycling practices.

# SESSION 4: ACTIONABLE STEPS TO MOVE MONEY TOWARDS PLASTICS CIRCULARITY WHILE BEING INCLUSIVE

Presentation	Speaker
Innovative Financing and Bonds to Accelerate Plastic Circularity	<b>Regula Schegg</b> Founding Partner, Circulate Capital
Gender Lens in Accessing Financing for Plastics Circularity	<b>Caterina Meloni</b> Lead Gender Finance and Climate Advisor, Connecting Founders
Supporting Small-medium Enterprises Access Financing for Plastic Circularity Projects	<b>Rocky Pairunan</b> Manager, National Plastics Action Partnership (NPAP) Indonesia

## KEY TAKEAWAYS FROM SESSION 4

### Presentation Title: Innovative Financing and Bonds to Accelerate Plastic Circularity

- 1. Capital Gap in Plastic Recycling:** There is a significant gap in capital needed to prevent plastic leakage into the ocean, estimated at \$18 billion by 2040 in Indonesia alone.
- 2. Challenges in the Financial Sector:** Historically, the plastic recycling industry has been considered unbankable with limited investment opportunities and insufficient data to support financial returns.
- 3. Role of Blended Finance:** Innovative financing mechanisms such as blended finance (public-private partnerships) are crucial in catalyzing investment across the lifecycle of recycling businesses.
- 4. Importance of Bonds:** Bonds, including green bonds, blue bonds, and sustainability bonds, play a critical role in financing projects with positive environmental and social impacts.
- 5. Flexibility and Tailored Solutions:** There is a need for bonds that are flexible and tailored to the diverse financial needs of recycling businesses, including smaller ticket sizes and specific terms.

### INSIGHTS FROM DISCUSSIONS AND/OR Q&A:

- Regula Schegg emphasized that ethical supply chain management in waste management investments. They invest selectively in businesses that uphold human rights, ensuring fair wages and no violations. Using digital platforms, Circulate Capital enhances transparency in financial transactions to prevent unethical practices like cash payments.
- They prioritize partnerships with aligned values, ensuring consistency in ethical standards throughout their operations. This approach not only mitigates risks associated with the diverse waste management sector but also promotes sustainable and socially responsible business practices, contributing positively to environmental and ethical goals.
- Ms. Schegg also underscores the need to formalize the waste management industry to safeguard human rights and ensure ethical practices. By digitizing transactions and enhancing traceability across the supply chain, they aim to eliminate exploitative practices like cash payments and ensure fair wages for waste workers. This formalization also empowers recyclers to build their own collection networks, thereby exerting control over supply chains and maintaining transparency.
- Ms. Schegg believes that integrating these measures will mitigate issues like informal waste mafias and uphold ethical standards throughout the waste management process. Their approach seeks to establish a sustainable and responsible framework for the industry moving forward.

## KEY TAKEAWAYS

### Presentation Title: Gender Lens in Accessing Financing for Plastics Circularity

#### 1. Importance of Women in the Plastic Value Chain:

- a. Women make the majority of purchasing decisions within households, influencing plastic consumption choices significantly.
- b. They also play a primary role in managing waste in many Southeast Asian countries, making them crucial in waste reduction and recycling efforts.

#### 2. Challenges in Informal Waste Collection:

- a. Women in informal waste collection often face economic vulnerabilities, earning less than their male counterparts due to restrictions on when and where they can collect waste.

#### 3. Gender Lens in Funding Sources:

- a. There is a lack of sufficient financing with a gender lens, specifically aimed at creating value and supporting women in the plastic value chain.

#### 4. Gender Bonds as a Financial Instrument:

- a. Gender bonds are a specific type of social bonds where proceeds finance projects benefiting women, including those involved in waste management and plastic recycling.





## INSIGHTS FROM DISCUSSIONS AND/OR Q&A:

- The prevalent use of e-wallets in Indonesia, which can serve as substitutes for bank accounts due to their easier KYC (Know Your Customer) requirements. This adoption is especially significant in the waste management sector, where waste apps have successfully integrated e-wallets to bring the informal sector on board without major issues.
- This illustrates the potential for financial technology to bridge gaps in financial inclusion and formalization within the waste management industry.

## Presentation Title: Supporting Small-medium Enterprises Access Financing for Plastic Circularity Projects

- 1. Role and Establishment of NPAP Indonesia:** The National Plastic Action Partnership (NPAP) in Indonesia, established in 2020, is part of a global initiative led by the World Economic Forum. It aims to tackle plastic pollution through multi-stakeholder collaboration across Southeast Asia.
- 2. Government and NGO Collaboration:** NPAP Indonesia operates under the guidance of Indonesia's Ministry of Maritime Affairs and Investment and is supported by the World Resources Institute (WRI), focusing on sustainability. This partnership aligns closely with Indonesia's goal to reduce marine debris leakage into the ocean by 70%.
- 3. Challenges for SMEs in the Plastic Circular Economy:** SMEs in Indonesia face significant challenges in accessing financing for plastic circularity projects. These challenges include a lack of investor interest, unclear regulatory frameworks, and the need for comprehensive enabling conditions to support their growth.
- 4. Sectoral Focus and Innovation:** SMEs categorized as "green innovators" and "green performers" are pivotal in driving plastic circularity. They focus on product redesign, waste management, and consumer engagement to achieve positive environmental impacts while enhancing their competitiveness.
- 5. Need for Comprehensive Support and Research:** Addressing the challenges SMEs face requires comprehensive support, including capacity building and clearer regulatory frameworks. Further research is needed to understand underlying issues and enhance financing opportunities within the circular economy.

## INSIGHTS FROM DISCUSSIONS AND/OR Q&A:

- Identification of a "waste mafia" that exists due to the lack of social protections for those working in environmental sectors. This "waste mafia" fills a critical financial support gap for people in need, as they cannot access traditional financial institutions like banks.
- Highlights the importance of formalizing the waste management industry to protect workers' rights and ensure fair compensation. Formalization includes digitizing transactions, ensuring traceability and transparency throughout the supply chain, and addressing violations of workers' rights.
- The text also emphasizes the power held by those with access to feedstock in the recycling process and suggests that vertical integration and building internal collection systems can enhance traceability and control within the industry.

# SESSION 5: MOVING FORWARD TO ADDRESSING NEEDS, BUILDING OPPORTUNITIES, AND WORKING WITH PARTNERS TO SUPPORT PLASTICS CIRCULARITY FINANCING

Panel Discussion	Panelist
Resources to Support Acceleration of Plastics Circularity Investments	Representatives from: <ol style="list-style-type: none"> <li>1. Circulate Capital: Regula Schegg, Founding Partner</li> <li>2. KfW: Olaf Goerke, Portfolio Manager</li> <li>3. NPAP Indonesia: Rocky Pairunan, Manager</li> <li>4. The Circulate Initiative: Umesh Madhavan, Research Director</li> <li>5. United Nations Environment Programme Finance Initiative (UNEP FI): Jan Raes, Finance and Plastics Lead</li> <li>6. Verra: Komal Sinha, Senior Director, Plastics and Sustainable Development Policy and Markets</li> </ol>

## Circulate Capital

### KEY TAKEAWAYS

- 1. Focus on Plastic Circularity Investment:** Circulate Capital, based in Singapore, is a leading investor in South and Southeast Asia and Latin America, specifically targeting investments in businesses along the plastic circularity supply chain. They emphasize innovations that enhance material retrieval and recycling, aiming to integrate recycled materials back into the economy.
- 2. Impact and Financial Growth:** Circulate Capital started five years ago to address the capital needs in regions with significant plastic leakage. They have successfully raised \$257 million and attracted additional core investments, demonstrating financial viability while achieving substantial environmental and social impact.
- 3. Partnerships for Scaling Impact:** To scale their impact further, Circulate Capital collaborates with corporations, DFIs, multilateral organizations, and financial institutions. They aim to attract more capital into the industry to prevent plastic leakage into the ocean and promote sustainability.

## KfW

### KEY TAKEAWAYS

- 1. German Development Bank’s Role:** The German Development Bank (KfW) works according to the directives of the German government, focusing on development financing and financial cooperation. They collaborate with national governments, ministries, and public institutions in agreed-upon countries to support various sectors, including environmental protection and urban development.
- 2. Focus on End of Value Chain:** KfW’s activities often target the end of the value chain, involving measures like landfill management, sorting, collecting, recycling, and waste-to-energy projects. These infrastructure investments are primarily financed through loans, supplemented by grants for capacity development and data management.
- 3. Policy Reforms and Framework Support:** KfW provides significant support for policy reforms and frameworks that influence the value chain. For instance, they collaborate with ADB and the French government to provide substantial loans for policy reforms in sectors relevant to plastic circularity in Indonesia.
- 4. Interest in National and Regional Funds:** The bank is keen on working with national banks to finance numerous small projects that are too small for international development banks. They also express interest in regional and national climate-focused or green funds, seeking entry points in these areas.
- 5. Historical Environmental Initiatives:** KfW highlights Germany’s long-standing environmental initiatives, such as the Green Dot program, introduced 35 years ago to charge producers and users of plastic packaging. This well-established system in Germany is a model for effective plastic packaging management.

## NPAP

### KEY TAKEAWAYS

- 1. National Plastic Action Partnership (NPAP) Indonesia:** The NPAP Indonesia was established in 2020 under the Global Plastic Action Partnership, managed by the World Economic Forum. It aims to reduce marine plastic leakage by 70% through collaboration among various stakeholders.
- 2. Matchmaking Platform:** NPAP serves as a matchmaking platform for stakeholders, including innovators and project leaders, facilitating easier collaboration and information sharing. This platform helps stakeholders to connect and work together on projects and understand the policy context of waste management in Indonesia.
- 3. Task Forces and Working Groups:** NPAP has five task forces focused on policy, finance, innovation, behavior change, and metrics. These task forces often overlap in discussions, particularly on topics like Extended Producer Responsibility (EPR), which is still under development in Indonesia.
- 4. EPR Development:** Indonesia is working on a roadmap for waste reduction by producers, aiming for mandatory regulatory-based EPR. This approach is inspired by strong governance models like those in Germany and aims to create an equal playing field for all industries.
- 5. Impact of Global Plastic Treaty:** The Global Plastic Treaty is expected to influence legislation and industry practices in Indonesia. NPAP aims to proactively align national companies with the treaty's requirements to avoid delayed responses similar to those seen with climate change initiatives.

## UNEP FI

### KEY TAKEAWAYS

- 1. UNEP FI's Role:** The United Nations Environment Programme Finance Initiative (UNEP FI) works globally with over 500 financial institutions to address finance and plastic pollution. Their goal is to align economic activities with UN Sustainable Development Goals and multilateral environmental agreements.
- 2. Global Plastics Treaty Engagement:** UNEP FI is actively involved in the negotiation process of the Global Plastics Treaty. They provide insights and facilitate the involvement of financial institutions to ensure private finance is integrated into the treaty's framework.
- 3. Institutional and Systemic Change:** UNEP FI promotes institutional change within financial institutions to align their portfolios with new governance structures from treaties like the Global Plastics Treaty. This also feeds into systemic change, influencing financial regulators and policies.
- 4. Private Sector Involvement:** Emphasizing the significant role of private finance, which constitutes 90% of the funding in the plastics value chain, UNEP FI works to ensure that the private sector's voice is heard in treaty negotiations. They have developed key messages and principles to be included in the treaty to enable more private investment.
- 5. Differentiated Financial Needs:** UNEP FI aims to create a nuanced understanding of financial needs across different countries, considering their income levels and infrastructure. They focus on aligning financial flows and fiscal regimes to support the implementation of the Global Plastics Treaty.

## Verra

### KEY TAKEAWAYS

- 1. Acceleration of Investments and Support for Government Policies:** The Verra plastic program and plastic credits accelerate investments in local plastic waste management, supporting national policies like EPR schemes by connecting producers to certified projects, and reducing administrative burdens through standardized protocols.
- 2. Attractive Investment Opportunities:** Plastic credits make waste management projects appealing to private investors by integrating with innovative financial instruments and ensuring robust environmental and social safeguards, which build investor confidence.
- 3. Collaboration and Impact:** Effective collaboration with regional initiatives and creating a virtuous cycle of investment and innovation are essential for achieving large-scale impact and supporting the vision of no plastic waste in nature.

## 4. OUTPUTS FROM THE WORKSHOP DAY 2

### Site visit to Alner (A Returnable and Reusable Packaging System Provider)

The visit at Alner included a presentation by their team members and a guided tour around the facility. Alner is a refill business that was established with the goal to promote reuse practices and reduce single-use plastic packaging in Indonesia, starting in Jakarta. The company partners with fast moving consumer goods product suppliers and provides alternative refill services for their brands. Their business model is based on a deposit-return scheme and has covered a wide range of products including personal care products, detergents, cooking oil, dry food, and beverages. The products are easily accessible through retailers or through direct delivery to the end consumers. As of 2023, Alner has generated up to \$66,000 in revenue and is expected to reach \$13 million by 2028. The success of their business is rooted in the financial model, price competitiveness, and environmental awareness of the consumers in recent years. The company received funding from ADB to upgrade their facility and increase their capacity with automated machines such as bottle cleaning machines, a water purification system, and a packaging return machine, which was newly piloted this year.

In addition to the tour of the Alner business, their team also presented Enviu, a social impact builder who aims to scale up reuse solutions within Indonesia and across Southeast Asia through the Zero Waste Living Lab program. The program empowers micro-entrepreneurs and builds supporting ecosystems with local governments.

### KEY TAKEAWAYS FROM SITE VISIT TO ALNER

Interesting discussions among the participants included whether each ASEAN country has existing national funding to support businesses like Alner. The Philippines and Thailand addressed the lack of funding in their countries while Viet Nam addressed the availability of their Environmental Fund where environmentally friendly businesses can apply for funding or loans. Another discussion subject was about the factors influencing manufacturers to switch to reusables, which could be a combination of non-government organization (NGO) pressures, market drivers, and government policies.



## Ideas Marketplace Activity

The workshop conducted an activity called “The Ideas Marketplace.” This activity involved a series of idea exchanges between all participants at the workshop regarding investments in plastic circularity. Each participating government agency’s representative shared and discussed ideas about how their agency and country can support plastic circularity investments in the coming year, as well as how to apply the knowledge and learnings from the workshop. Participants at the workshop had a chance to meet and talk with different government agencies.

## KEY TAKEAWAYS FROM IDEAS MARKETPLACE ACTIVITY

The following key points were discussed among participants during the activity.

**Role of Government:** Government subsidies (e.g., taxes, land use priority) could provide funding for plastic circularity. Moreover, detailed guidelines and strengthened institutional arrangements should be implemented for plastic circularity funding.

**Role of Private Sector, NGO, and Academia:** Country-specific workshops or forums should be held to discuss how to raise the funds and how to implement the plastic circularity initiatives, identify the parts that the government should intervene in and also provide recommendations to the government to change or adopt the new policies. There should be more partnerships and collaboration with the private sector, capacity building, and training workshops to raise the public’s awareness.

**How to Accelerate Funding for Sustainability Start-ups:** For example, in Indonesia, some start-ups can receive support or funds from Coca-Cola enterprises to promote plastic circularity. Some participants discussed how more of this can be done.

**Challenge:** Plastic issues touch upon the responsibilities of different entities and therefore require multiple ministries and organizations to work together, which is highly challenging.

## KEY TAKEAWAYS FROM LEARNING OBJECTIVES

**Learning Objective 1:** Understand what policy, regulatory, and economic instruments governments can adopt to support the scaling-up of plastic waste management and how to choose options that suit each country’s needs.

### KEY TAKEAWAYS

- National action/implementation plans
- **Government initiatives:** Bonds, economic and regulatory instruments, green procurement policies
- Challenges: Budget constraints, stakeholder concerns, implementation and enforcement, liquidity

**Learning Objective 2:** Understand what loans, investments, blended finance, and programs governments can implement (such as concessional loans, grants, and credit guarantees) and how to design these types of investments.

### KEY TAKEAWAYS

- **Fund sources:** Blended financing (public finance and private capital), grant financing, technical assistance
- Financing instruments can be designed to address key issues (ocean health, gender, marginalized communities, informal sector, SME capacity) in addition to hurdle rates
- **Challenges:** Lack of supporting policies, human resources, traceability, additionality political will

**Learning Objective 3:** Understand what finance instruments and mechanisms (such as bonds, venture capital, insurance, microfinance, and impact investment funds) can increase the flow of private capital for plastic circularity and how governments can take action to support this.

## KEY TAKEAWAYS

- Thematic bonds (green, climate, blue, sustainability) and outcome-based or -linked (social impact bonds, development impact bonds)
- Corporate bonds (PepsiCo or Natura bonds for circularity)
- Governments play a key role in de-risking investments from the private sector (e.g., creating a level playing field, incentivizing policies)

## 5. SUMMARY OF OUTCOMES FROM THE GROUP DISCUSSIONS

### Indonesia's Plastic Circularity Financing Updates and Challenges

**Limited Funding:** Local governments allocate less than 1% of their budget to waste management; funds are insufficient to support comprehensive waste management programs.

**Legal and Structural Reforms:** Recycling Centers need to be transformed into Regional Public Service Agencies to legally trade recycled materials and generate income for waste management.

**Revenue Collection:** Identifying and increasing the number of waste levy taxpayers is crucial to boost Regional Original Income for waste management.

**Funding Challenges:** City-level governments have limited access to funding sources, relying on minimal regional budgets and donor grants for plastic pollution management.

**Public-Private Partnerships (PPP):** Cities like Cirebon and Bali are exploring PPPs, but face challenges in proving the business case for private sector collaboration.

**Foreign Loans and Credits:** City-level governments are considering foreign loans, but need national approval for financing terms.

**Blended Financing Example:** Bali uses PPP schemes, supported by World Bank loans, for infrastructure projects like TPS3R, with long-term contracts with private operators.

**Central Government Role:** The central government must fund high-capital infrastructure projects like TPS3R, while district or city governments need to establish PPP mechanisms for operations.

**Challenges in Implementation:** Difficulties include developing appealing proposals, raising financing, and finding experienced individuals to execute projects.

### Philippines's Plastic Circularity Financing Updates and Challenges

**Landbank as a Funding Source:** The Landbank of the Philippines offers loans for waste management facilities and remains a viable option for funding under the Extended Producer Responsibility (EPR) law.

**Co-Financing Opportunities:** Private industries, NGOs, and international organizations can co-finance circular economy initiatives. The Global Environment Facility and international institutions like UNIDO provide additional funding and technical assistance.

**Local Government Units (LGUs) Access:** LGUs can access financing for circular economy solutions, with the private sector contributing through corporate social responsibility initiatives.

**Material Recovery Facility (MRF) Initiatives:** The National Government Agency focuses on establishing MRFs, while LGUs manage operations, maintenance, and funding through the sale of recyclables. Private companies handle MRF operations, and partnerships with recycling facilities ensure compliance with the Solid Waste Management Law.

**Challenges in Implementation:**

- **Human Resource and Infrastructure Shortages:** There is a lack of personnel and appropriate locations for infrastructure.
- **Policy Gaps:** Inconsistent policies hinder private sector engagement, and LGUs struggle with segregation and regulatory controls in EPR implementation.
- **Lack of Financial Incentives:** Barangays are mandated to implement MRFs without financial incentives, creating additional strain on resources.

## Thailand's Plastic Circularity Financing Updates and Challenges

**Funding Sources:**

- Mobilizing funds from the Global Environment Facility (GEF), GIZ, World Bank, and exploring private funding from Circulate Capital.
- Existing programs mainly focus on capacity building and technical assistance rather than direct investment (e.g., JICA and ICC programs).

**Government Budget Constraints:** Environmental management budgets are decreasing annually, limiting the effectiveness of available funding sources.

**Program Outputs:** Examples include waste flow analysis for Thailand's National Plan for Plastic Waste Management (JICA) and the establishment of a Smart Recycling Hub (World Bank).

**Challenges:**

- **Transparency and Traceability:** Ensuring that funds genuinely reduce plastic waste rather than benefiting intermediaries or large companies.
- **Inadequate Budget:** Despite multiple funding sources, overall budgets remain insufficient.

**Key Departments and Initiatives:**

- **Department of Marine and Coastal Resources (DMCR):** Operates monitoring, marine waste collection, and community collaboration programs. Conducted studies on floating plastic debris, impacts on marine species, and microplastics.
- **Pollution Control Department (PCD):** Established standards for post-consumer recycled plastics and is drafting a law on sustainable packaging waste with EPR, expected by 2026. Runs awareness and waste separation programs with local authorities.

**Department of Marine and Coastal Resources (DMCR):** The Department has done, or is currently operating, monitoring programs, marine waste collection programs, and collaboration programs between communities, local government, academic, and private sector. The Department has also conducted three studies to support policymakers in addressing plastic waste issues:

- Floating plastic debris estimation (i.e. quantitative estimation of floating plastic debris entering the oceans via waterways.)
- Effects of plastic pollution on marine endangered species
- Effects of micro plastics.

**The Pollution Control Department (PCD):** The Department has established a mandatory standard for post-consumer recycled (PCR) and recycled content of plastics. The Department is drafting a law on sustainable packaging waste with EPR, which is now under public hearing and is expected to be enforced in 2026 at the earliest. There are many programs currently running in parallel in Thailand such as awareness raising programs for citizens to reduce single-use plastics, and coordinating programs with local authorities to separate waste in accordance with final treatment operations.

## Viet Nam's Plastic Circularity Financing Updates and Challenges

**Vietnam Environment Protection Fund (VEPF):** A state financial agency that offers concessional loans, receives donations, and provides financial support for environmental protection and plastic pollution reduction projects.

**Provincial Budgets:** Each province allocates specific budgets for addressing plastic pollution as part of the government budget.

### Law on Environmental Protection 2020:

- Introduces circular economy principles through extended producer responsibility (EPR) policies.
- Emphasizes the responsibilities of ministries and localities to incorporate circular economy strategies in planning, waste management, and recycling.
- Mandates producers and importers to recycle products and packaging, with future policies to leverage polluters' financial resources.

### Local Initiatives:

- **Long An Province:** Established "greenhouses" for collecting plastic bottles and will allocate funds starting in 2025 for waste separation, including plastic waste for recycling.

## 6. ACKNOWLEDGMENT

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