

ALLIANCE  
TO END  
PLASTIC  
WASTE 

 REDUCE REUSE  
GREECYCLE  
INNOVATIVE SOLUTIONS INC.

# EVOLVING FOR *IMPACT*

PROGRESS REPORT 2024



Plastic waste is a global challenge that demands a fundamental shift in how we manage it. At the Alliance, we develop solutions to this challenge with the intention that they scale and drive lasting change.

We combine cutting-edge technology, ecosystem expertise, and innovative financial models with hands-on project experience to unlock impact where it is needed most. By using our own capital to attract larger external investments, we help fund higher risk, higher impact initiatives.

While we cannot solve the plastic waste problem alone, we can lead by example—demonstrating what works and why. Through partnerships with national and local governments, companies, communities, NGOs, experts, and development finance institutions, we aim to accelerate the adoption of proven solutions to solve for plastic circularity around the world.

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# CHAIR'S MESSAGE



**JIM FITTERLING**

Chair, Alliance to End Plastic Waste  
Chair & CEO, Dow Inc.

The Alliance has continuously sought to expand and deepen its global network of like-minded partners. In 2024, the Alliance directly engaged over 740 organisations to support a multitude of projects with financial and technical expertise. The Alliance unlocked significant co-financing from third parties to accelerate many of these projects. Of the US\$445 million of total revenue collected since inception, US\$299 million was allocated to mission-related activities, which catalysed another US\$610 million of funding commitments by other parties and impact investors.

Achieving full plastics circularity remains a highly complex and difficult task. While the Alliance continues to develop, deploy, and de-risk solutions that advance its goals, its leadership team recognises the need to evolve the way the entity operates, amid a changing external environment. Five years since its establishment in 2019, the Alliance has reached an important juncture, marked by an increasing maturity of approach and a tightening of its focus to best position the organisation to deliver impact at speed and scale.

A [new strategy](#) was approved by the Alliance's Board members in May 2024. The Alliance will continue to work on improving the collection, sorting, and recycling of plastic waste—including the trialling of refill and reuse models—by developing and investing in the necessary infrastructure,

“

In 2024, the Alliance remained firmly focused on its purpose to lead the creation of a circular economy for plastics, thereby eliminating plastic waste. Since its inception, the Alliance has used its unique convening ability to bring together stakeholders from the private sector, governments, financial institutions, and non-government organisations to identify, fund, and implement solutions that improve plastic waste management and recycling.

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technology, and innovation. Moving forward, Alliance programmes will now be larger in scale, tackling systems issues aligned with national priorities or other substantive systemic challenges that hinder plastics circularity.

Some of these programmes will focus on countries with underdeveloped waste management systems, resulting in high rates of environmental leakage. These programmes are intended to support and encourage countries to progress along the waste management maturity curve as outlined in the Alliance's [Plastic Waste Management Framework](#).

Other projects will focus on closing some of the biggest gaps for plastic circularity by testing cutting-edge solutions and systems-change levers. These programmes will tackle systemic issues not likely to be addressed by the country-specific programmes and will be multi-market efforts that take place in both developed and emerging economies.

As part of its Strategy 2030, the Alliance has also revamped its [governance structure](#) to streamline decision-making, while ensuring balanced representation from across the plastics value chain. The Alliance is looking to bring in respected voices from outside the organisation who can expand its collective perspectives, skills, and expertise.

Having served the Alliance as its Chair since January 2022, I am handing over my role to Tracey Campbell, Executive Vice President of Sustainability and Corporate Affairs at LyondellBasell, to lead us in 2025 and beyond. I have no doubt Tracey, alongside the new Governing Council, will ably provide guidance and oversight as the Alliance navigates its transition.

During my tenure as Chair, it was clear that one of the Alliance's greatest strengths is the diversity of its membership. This remains true today. The systems change necessary to achieve a circular economy requires the participation of the entire plastics value chain, alongside a wide range of like-minded partners.

The Alliance's strategic evolution is logical and timely. The challenges it aims to solve are becoming a top priority on the global agenda, interconnected with other critical environmental and development imperatives.

In many ways, this is a pivotal moment for the plastic waste issue and global efforts to create a circular economy for plastics. The Dow team and I wish Tracey and the Alliance every success in taking this agenda forward, and we remain fully committed to supporting this important ambition.



# PRESIDENT & CEO'S MESSAGE



**JACOB DUER**

President & CEO,  
Alliance to End Plastic Waste

## Driving the Future of a Circular Economy for Plastics

The Alliance to End Plastic Waste is at a pivotal moment in the global effort to end plastic waste and pollution. As we continue to evolve and mature, we are transforming how we fulfil our purpose by deepening our impact and accelerating progress towards a circular economy for plastics.

## Our Progress So Far

Since 2019, Alliance-supported projects have diverted nearly 240,000 tonnes of plastic waste from the environment and recovered over 253,000 tonnes for valorisation, primarily through recycling. These efforts have also created more than 2,100 new jobs, demonstrating the economic potential of circular solutions.

Behind these numbers sit more than 80 innovative projects that test, refine, and scale solutions to improve plastic waste management and recycling. These initiatives often operate at the frontier of what is possible—whether in regions with high waste leakage, emerging economies with limited infrastructure, or with cutting-edge technologies, novel business models, and creative financing mechanisms.

## Innovative Solutions in Action: The ParikraM Initiative

One such example is the ParikraM initiative in the sacred cities of Mathura-Vrindavan, India. With thousands of pilgrims and tourists generating significant plastic waste, the challenge is immense.

Led by Recity, a plastic waste management solutions provider, and supported by the Alliance, ParikraM has established a large material recovery facility. Owned by the municipality and operated by Recity, this facility uses advanced sorting systems to separate mixed municipal solid waste into recyclable and non-recyclable streams. Recyclables are recovered, while non-recyclables are converted into refuse-derived fuel, reducing landfill use and environmental impact.

## Strategic Shift: Alliance Strategy 2030

While projects like ParikraM are making meaningful progress, we recognise that faster, broader action is needed to truly tip the scale against plastic pollution. Our experience has shown that systems-level change is essential to eliminate plastic waste leakage and achieve full circularity.

In 2024, we launched the Alliance Strategy 2030, a bold new direction that shifts our focus from a wide array of smaller projects to larger-scale, integrated programmes designed to drive systemic change. This strategy, endorsed by our members, is backed by a clear implementation plan and a commitment to long-term impact.

## Scaling Impact Through Partnerships and Financing

Our new programmes will be co-developed with governments and key stakeholders, each supported by more than US\$100 million in collective financing. These multi-year ventures will address both national and systemic barriers to effective plastic waste management and recycling.

Partnerships are central to this transformation. We are working closely with Development Finance Institutions (DFIs) and other financial partners to unlock the capital needed for infrastructure upgrades, especially in emerging economies. DFIs bring not only funding but also deep integration with national governments—ensuring our programmes align with local priorities and deliver lasting change.

## Looking Ahead: Enabling Global Circularity

We are also adapting our governance and operations to support this new approach, enabling greater cross-value chain participation and strategic alignment.

The conclusion of the intergovernmental negotiations for an International Legally Binding Instrument (ILBI) on plastic pollution will be a critical milestone. The Alliance stands ready to support governments in implementing national policies and the ILBI itself.

Through knowledge-sharing, capacity-building, and infrastructure development, we aim to help countries advance up the waste management maturity curve—especially in regions where the need is greatest.

## Our Purpose, Our Commitment

New solutions are being tested every day. But the systems change required to end plastic waste and build a circular economy for plastics demands collective will and coordinated action.

At the Alliance, we are committed to leading this transformation—by building a united ecosystem to make plastic a truly circular material.

# MEMBER'S MESSAGE



**ROGER KEARNS**

President and CEO,  
NOVA Chemicals



For 40 years, NOVA Chemicals has proudly upheld the principles of Responsible Care®—a commitment that continues to guide how we produce, use, and manage plastics with the well-being of people and our planet in mind.

We are pleased to share our 2024 progress in advancing a circular economy of plastics and fulfilling our purpose of reshaping plastics:

- We began operating our first North American mechanical recycling facility in Connersville, Indiana, USA, positioning us to deliver an estimated 110 million pounds of recycled polyethylene (rPE) annually by 2026. Notably, it is the first facility of its kind to receive a U.S. Food and Drug Administration Letter of Non-Objection confirming our processes for broad food-contact applications.
- We established our Circular Solutions Business to accelerate the adoption of our SYNDIGO™ rPE resins. This business is dedicated to supporting our customers in prioritising recycled content and recyclability in food and non-food applications.
- As with our other polyethylene sites, we implemented Operation Clean Sweep programmes at our new Rokeby polyethylene and Connersville mechanical recycling facilities to prevent resin releases to the environment and drive continuous improvement in resin management.
- We launched our Centre of Excellence for Plastics Circularity—a hub for knowledge exchange and technology development—and kicked off a research challenge to engage researchers in overcoming common barriers to circularity.
- We continued to provide our financial support and subject matter expertise for the Alliance to End Plastic Waste, Great Lakes Plastic Cleanup, Closed Loop Circular Plastics Fund, and Canada Plastics Pact. These partnerships are important in global efforts to reducing plastic waste and scaling circular solutions.
- We advanced the development of our resins to incorporate higher levels of rPE while enhancing performance and quality.
- Through our membership in the Alliance to End Plastic Waste, we continue to support collective action.

I'm incredibly proud of the strides we made in 2024—advancing circularity while protecting people and the environment. I look forward to continuing this momentum as we work to make our vision of leading the circular economy a reality.



# Look-Back at 2024



As the Alliance grows and evolves to meet the challenges of ending plastic waste and pollution, we take stock of the progress we have made in our work since 2019

Photo: Recicleiros, Brazil



Look-Back at 2024

Impact Metrics at a Glance

Developing & Testing Solutions

Enabling the Ecosystem

Catalysing Capital

Equity & the Informal Sector



# IMPACT METRICS AT A GLANCE

## An Overview of Our Progress

In 2024, our impact continued to increase. Understanding and accurately measuring the effects of our work is integral to providing an accurate view of our progress. It informs dialogue and enables trusted engagement with stakeholders to fulfil our purpose. We remain committed to further strengthening our impact reporting to meet a stringent and independent limited assurance process, so that the impact presented is more accurate, robust, and aligns to international reporting standards.

### ALLIANCE-FUNDED PROJECTS<sup>1</sup> (Cumulative impact since 2019)



**10 PROJECTS**  
demonstrating Solution Models<sup>2</sup>



**239,985.48 TONNES**  
of unmanaged plastic waste reduced



**253,211.80 TONNES**  
of plastic waste valorised



**2,134 JOBS**  
formal jobs created



**US\$445.13 MILLION**  
of total revenue collected

**US\$299.54 MILLION**  
has been allocated to mission-related activities



**740 ORGANISATIONS**  
engaged to enable systems change, finance, develop and/or implement our projects and broader initiatives in 2024<sup>3</sup>

**763,245 PARTICIPANTS**  
reached through education programmes

### CATALYSED CAPITAL<sup>4</sup> (Cumulative impact since 2019)



**US\$610.89 MILLION**  
of funding commitments by other parties and impact investors

**US\$540.39 MILLION**  
of catalysed funding that have been allocated to mission-related activities

<sup>1</sup> Assured by DNV. Exceptions noted separately.

<sup>2</sup> Assured for up to 2023 reporting period.

<sup>3</sup> Assured for 2024 reporting period.

<sup>4</sup> Assured by DNV.

# IMPACT METRICS ASSURANCE



## Independent Limited Assurance Report to the Management of Alliance to End Plastic Waste

Alliance to End Plastic Waste (“AEPW”) commissioned DNV Business Assurance Services UK Limited (“DNV”, “us” or “we”) to conduct a limited assurance engagement over Selected Information presented in the Progress Report 2024 (the “Report”) for the reporting year ended 31 December 2024.

### Our Qualified Conclusion

On the basis of the work undertaken, except for the matters described in our Basis of Qualified Conclusion and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Selected Information is not fairly stated and has not been prepared, in all material respects, in accordance with the Criteria.

This conclusion relates only to the Selected Information, and is to be read in the context of this Independent Limited Assurance Report, in particular the inherent limitations explained overleaf.

Our observations and areas for improvement will be raised in a separate report to AEPW’s management. These observations do not affect Our Qualified Conclusion.

### Basis of our Qualified Conclusion

- During on-site visits to funding recipients’ facilities, instances of non-compliance with local laws and regulations were identified. DNV reported these findings to AEPW, which in turn provided the funding recipients with an opportunity to respond. DNV understands that the recipients have since developed corrective action plans to address the issues raised. To ensure the effectiveness of these remedial measures, DNV recommends establishing a structured process for periodic review of implementation progress.
- We were not able to conclude from the material projects not visited for the metric ‘Informal sector workers operating under responsible working conditions’ that evidence requirements aligned with the Criteria in the current reporting period. To meet the Criteria necessary for future independent assurance, material projects under this

metric will require further development of supporting evidence including documentation and verification.

- Material projects reporting data for the metric ‘Technical capacity to recover/use plastic waste’ provided insufficient evidence to demonstrate alignment with the Criteria in the current reporting period. Supporting documentation for reported technical capacity requires further development to meet the evidence requirements necessary for future independent assurance.
- Material projects reporting data for the metric ‘People with new or improved access to waste management’ provided insufficient evidence to demonstrate alignment with the Criteria in the current reporting period. Supporting documentation for this metric requires further development to meet the evidence requirements necessary for future independent assurance.
- For Project X002D – Inclusive Plastic Waste Management in Johannesburg and Mpumalanga, which contributes to the metrics ‘Total Reduction in Unmanaged Plastic Waste’ and ‘Total Plastic Waste Valorised’, AEPW

provided additional instructions to enable independent reconciliation of reported data. Data collection at source is manual, using handwritten records submitted by informal sector buyers of collected recyclables, which introduces a risk of human error and inconsistent values. The funding recipient has recently implemented a digital platform and is in the process of migrating existing records to the system.

### Selected Information

The scope and boundary of our work are limited to the selected Impact Metrics included within the Report for the specified reporting periods listed in the Appendix of this Independent Limited Assurance Report.

To assess the Selected Information, which includes an assessment of the risk of material misstatement in the Report, we have used AEPW’s 2024 Basis of Reporting (the “Criteria”), which can be found in the [Basis of Reporting 2024](#).

We have not performed any work, and do not express any conclusion, on any other information that may be published in the Report or on AEPW’s website for the current reporting period or for previous periods.

### Standard and Level of Assurance

We performed a **limited** assurance engagement of specified data and information using international assurance best practice including the International Standard on Assurance Engagements (ISAE) 3000 – ‘Assurance Engagements other than Audits and Reviews of Historical Financial Information’ (revised) issued by the International Auditing and Assurance Standards Board.

# IMPACT METRICS ASSURANCE



To ensure consistency in our assurance process, we conducted our work in accordance with DNV's assurance methodology, Verisustain™, applying only the pertinent sections of the protocol relevant to the specific purpose of the activity. This methodology ensures compliance with ethical requirements and mandates planning and execution of the assurance engagement to obtain the desired level of assurance.

DNV applies its own management standards and compliance policies for quality control, which are based on the principles enclosed within ISO IEC 17029:2019 - Conformity Assessment - General principles and requirements for validation and verification bodies and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

The procedures performed in a limited assurance engagement vary in nature and are shorter in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained if a reasonable assurance engagement had been performed.

## Basis of our Conclusion

We are required to plan and perform our work in order to consider the risk of material misstatement of the Selected Information; our work included, but was not restricted to:

- Conducting interviews with AEPW's Senior Management, Topic Owners,

Project Managers and Funding Recipients to obtain an understanding of the key processes, systems and controls in place to generate, aggregate and report the Selected Information;

- Performing limited substantive testing on a selective basis of the Selected Impact Metrics to check that data had been appropriately measured, recorded, collated and reported;
- Eight site visits to AEPW projects. DNV selected four projects based on the risk of material misstatements and material contributions. The remaining four projects were selected by AEPW. These eight projects were:
  - South Africa: X002D Inclusive Plastic Waste Management in Johannesburg and Mpumalanga\*,
  - Kenya: K105 Flex Plastic Waste Recycling in Kenya TKTK,
  - Malaysia: J234 BIN-IT for Clean Energy,
  - Philippines: K118A, K118B & K118-GC Fuel from Low Value Plastic.
  - Nepal: K114-GC Prayaash,
  - India: K117-GC Giving MLP New Life,
  - China: K009 LoveRe (Xi'an facility only),
  - Brazil: J030 Cicades+Recicleiros.
- The site visits were also attended by a local social auditor conducting a Human Rights Due Diligence review. Social auditors conducted their reviews against local laws and regulations, using their expertise in the field.
- Reviewing that the evidence, measurements and their scope provided to us by AEPW for the Selected Information is prepared in line with the Criteria;
- Assessing the appropriateness of the Criteria for the Selected Information; and

- Reading the Report and narrative accompanying the Selected Information within it with regard to the Criteria.

We found a limited number of material and non-material errors and these were corrected prior to inclusion in the Report.

## Disclaimers

The assurance provided by DNV is limited to the selected indicators and information specified in the scope of the engagement. DNV has not conducted an assessment of AEPW's overall adherence to any reporting principles or the preparation of the Report. Therefore, no conclusions should be drawn regarding the reporting organization's compliance with reporting principles or the quality of the overall Report. The assurance provided by DNV is based on the selected indicators and information made available to us at the time of the engagement. DNV assumes no responsibility for any changes or updates made to the indicators or information after the completion of the assurance engagement.

## For DNV Business Assurance Services UK Limited

London, UK  
5 August 2025

Digitally signed by  
**Sugumar,  
Deepthi Kumar**

**Deepthi Sugumar**  
Lead Verifier  
DNV Business Assurance  
Australia Pty Limited

Digitally signed by  
**Shashank Saxena**

**Shashank Saxena**  
Technical Reviewer  
DNV Business Assurance  
Services UK Limited

\* Due to travel risk, the data testing for Inclusive Plastic Waste Management in Johannesburg and Mpumalanga was conducted remotely. A certified APSCA social auditor visited the project to perform the Human Rights Due Diligence review.

# IMPACT METRICS ASSURANCE



## Inherent Limitations

DNV's assurance engagements are based on the assumption that the data and information provided by AEPW to us as part of our review have been provided in good faith, are true, and are free from material misstatements. Because of the selected nature (sampling) and other inherent limitation of both procedures and systems of internal control, there remains the unavoidable risk that errors or irregularities, possibly significant, may not have been detected. The engagement excludes the sustainability management, performance, and reporting practices of AEPW's suppliers, contractors, and any third parties mentioned in the Report. We understand that the reported financial data, governance and related information are based on statutory disclosures and Audited Financial Statements, which are subject to a separate independent statutory audit process.

The assessment is limited to data and information in scope within the defined reporting period. Any data outside this period is not considered within the scope of assurance. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Independent Limited Assurance Report.

## Responsibilities of the Management of AEPW and DNV

The Management of AEPW have sole responsibility for:

- Preparing and presenting the Selected information in accordance with the Criteria;
- Designing, implementing and maintaining effective internal controls over the information and data, resulting in the preparation of the Selected Information that is free from material misstatements;
- Measuring and reporting the Selected Information based on their established Criteria; and
- Contents and statements contained within the Report and the Criteria.

Our responsibility is to plan and perform our work to obtain limited assurance about whether the Selected Information has been prepared in accordance with the Criteria and to report to AEPW in the form of an independent limited assurance conclusion, based on the work performed and the evidence obtained. Our Independent Limited Assurance Report represents our independent conclusion and is intended to inform all stakeholders. DNV was not involved in the preparation of any statements or data included in the Report except for this Independent Limited Assurance Report.

## Our Competence, Independence and Quality Control

DNV established policies and procedures are designed to ensure that DNV, its personnel and, where applicable, others are subject to independence requirements (including personnel of other entities of DNV) and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV did not provide any services to AEPW in the reporting period that could compromise the independence or impartiality of our work. Our multi-disciplinary team consisted of professionals with a combination of environmental and sustainability assurance experience.

## DNV Supply Chain and Product Assurance

DNV Business Assurance Services UK Limited is part of DNV – Supply Chain and Product Assurance, a global provider of certification, verification, assessment and training services, enabling customers and stakeholders to make critical decisions with confidence.



# IMPACT METRICS ASSURANCE



## Appendix: Selected Information

The scope and boundary of our work is restricted to the Selection Information, listed below.

Topic	Selected L1 Impact Metrics	Reporting period	Reported value	Unit
<b>Reduced Unmanaged Waste</b>	Total reduction in unmanaged plastic waste	Total since inception (FY19)	239,985.48	Tonnes
		1 <sup>st</sup> January 2024 – 31 <sup>st</sup> December 2024	122,440.76	Tonnes
	Technical capacity installed to collect and properly manage municipal solid waste*	Total since inception (FY19)	149,024.20	Tonnes/year
		1 <sup>st</sup> January 2024 – 31 <sup>st</sup> December 2024	44,624.20	Tonnes/year
<b>Capture Value from Waste</b>	Total plastic waste valorised	Total since inception (FY19)	253,211.80	Tonnes
		1 <sup>st</sup> January 2024 – 31 <sup>st</sup> December 2024	124,971.87	Tonnes
<b>Enable the Ecosystem</b>	Organisations engaged	1 <sup>st</sup> January 2024 – 31 <sup>st</sup> December 2024	740	Number of entities
	Participants reached through education programmes	Total since inception (FY19)	763,245	Number of individuals
		1 <sup>st</sup> January 2024 – 31 <sup>st</sup> December 2024	492,694	Number of individuals
<b>Mobilise Capital*</b>	Total funding commitments	Total since inception (FY19)	1,181.02	US\$M
		1 <sup>st</sup> January 2024 – 31 <sup>st</sup> December 2024	331.72	US\$M
	Total member revenue collected**	Total since inception (FY19)	445.13	US\$M
		1 <sup>st</sup> January 2024 – 31 <sup>st</sup> December 2024	69.86	US\$M
	Total funding allocated	Total since inception (FY19)	839.93	US\$M
		1 <sup>st</sup> January 2024 – 31 <sup>st</sup> December 2024	271.60	US\$M
<b>Create Social Benefit</b>	New formal jobs created	Total since inception (FY19)	2,134	Number of jobs
		1 <sup>st</sup> January 2024 – 31 <sup>st</sup> December 2024	412	Number of jobs

\* Our Independent Limited Assurance Opinion of the forward-looking information marked with (\*) only covers the evaluation of its preparation according to the Criteria, rather than the actual outcome values. It is intended to assure stakeholders that the information has been prepared in compliance with the Criteria, however it does not guarantee its accuracy and realisation in the future.

\*\* DNV has verified Total Member Revenue Collected using the audited financial statements supplied by AEPW as the basis for assessment.

# IMPACT METRICS AT A GLANCE

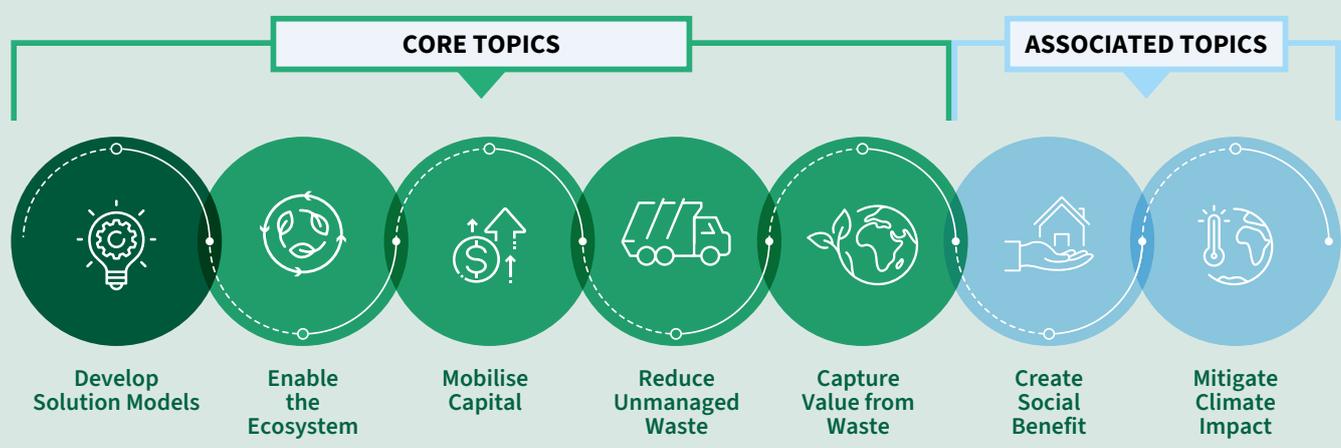
## The Way Forward

Since 2022, we have worked to strengthen the metrics we report through limited assurance against ISAE 3000 standards. Our Impact Metrics Framework is designed to represent the most relevant impact areas from our activities, including tracking

and reporting key 'enabling' metrics to influence systems change. This includes topics such as Enable the Ecosystem and Mobilise Capital, as well as core collection and valorisation tonnage metrics. We intend to effect lasting positive change on society as captured through the Create Social Benefits metrics, which includes

job creation. More details on the Impact Metrics Framework can be found in our [Basis of Reporting 2024](#).

In line with the implementation of our new strategy, we will be reviewing our impact metrics to ensure that they continue to reflect our priorities.





# DEVELOPING & TESTING SOLUTIONS

74 projects received funding from the Alliance in 2024



Photo: TakaTaka Solutions, Nairobi, Kenya.



Look-Back at 2024

Impact Metrics at a Glance

Developing & Testing Solutions

Enabling the Ecosystem

Catalysing Capital

Equity & the Informal Sector

# DEVELOPING & TESTING SOLUTIONS

Through its portfolio of projects around the world, the Alliance enables the development of practical solutions to the plastic waste challenge that can potentially be replicated.



At a material recovery facility in Kathmandu, Nepal, workers sort through collected PET bottles.

A circular economy for plastics will not be possible without recycling. Increasing recycling rates will make a key contribution to reducing, and eventually eliminating, plastic waste in many countries. However, a solution that works in one context may not work in another. We test, iterate, and replicate solutions and believe that documenting and sharing that experience contributes to our long-term goal of achieving a circular economy for plastics.

The Alliance supports a range of projects around the world in countries that are at different levels of plastic recycling maturity, as outlined in the [Plastic Waste Management Framework](#). The majority are in geographies where waste management infrastructure is less mature and unmanaged plastic waste poses serious challenges. Beyond providing financial and technical support, our view is that integrated waste management and recycling systems require the business models behind these solutions to be economically viable.

The projects featured in this chapter highlight these important facets in different geographies. Many also focus on improving conditions for the informal sector, given how critical this group is to waste collection.

All projects featured are attempting to break through assumptions of what is currently possible within their local context, prioritising economic as well as technical viability.

# DEVELOPING & TESTING SOLUTIONS

Africa: ARO

Location: Johannesburg, South Africa

Recipient: African Reclaimers Organisation (ARO)

 **14,338.40** Tonnes

total plastic waste collected and diverted to managed streams for valorisation<sup>1</sup>

 **12,815.96** Tonnes

total plastic waste supplied to or directly utilised in mechanical recycling processes to produce high-quality plastic recyclates<sup>1</sup>

 **11** Organisations

engaged in 2024<sup>1</sup>

 **80** Participants

reached through Alliance education programmes<sup>1</sup>

 **27** Jobs

new formal jobs created<sup>1</sup>

 **US\$1.10** Million

total catalysed funding committed and allocated<sup>2</sup>

## Gaining Recognition in an Invisible Trade

Mantoa Khoali steps onto her trolley and pushes off through the pre-dawn darkness of Auckland Park and Brixton in Johannesburg. The 45-year-old single mother is among an estimated 90,000 informal waste workers in South Africa who make their living scavenging recyclable items from garbage bins.

It is tough and dangerous work requiring long hours to make ends meet, but Khoali and the other reclaimers, as these workers are called in South Africa, are essential to the country's waste management. South Africa faces an escalating waste management problem. The country generates around 107.7 million tonnes of waste annually,

of which only 21 per cent is diverted from landfills.

The reclaimers play a vital role in minimising waste that enters the environment, collecting around 80 to 90 per cent of post-consumer packaging waste in South Africa. Yet, they face discrimination because informal waste picking is not an officially recognised occupation.

“There are some residents who don't understand what we do. They call us names and insult us when we come to take waste from their bins. They think we are criminals,” says Khoali. Reclaimers, especially women, also face the threat of physical violence.

## Uplifting Reclaimers

This is where the African Reclaimers Organisation (ARO), a non-profit founded in 2018, comes in. ARO seeks to address several of the challenges reclaimers face, for example, by helping them to manage operational risks, by providing training, and by educating householders about their work.

The informal workers had in the past used a makeshift base of operations under a highway overpass as a site to sort the trash they had collected. ARO has provided more secure facilities where they can safely sort out the valuable recyclable items. With more space, they can also sort in bigger volumes. The project also provides sturdier trolleys to make collecting the waste easier.



Top: Newly upgraded trolley with improved design and features. Bottom: Bins designated for home recycling pick-up.



Mantoa Khoali has been working as a reclaimer for nine years.

<sup>1</sup> Assured for 2024 reporting period.

<sup>2</sup> External funding attracted through initial Alliance enablement; assured for 2024 reporting period.

# DEVELOPING & TESTING SOLUTIONS

## Africa: ARO



“In South Africa, municipalities collect recyclable waste from households about once a week, but they do not separate waste at the collection point; residents have to do it themselves,” says Noluthando Tutani, Programme Manager at ARO.

That means the reclaimers only have a small window to collect recyclable waste at households before the scheduled waste collection trucks arrive to empty the bins.

To get around this problem, ARO organised community engagement sessions for residents to educate them about separating their waste at source. It also makes the process easier for residents by providing them with reusable bags to deposit their recyclables.

### From the Margins to the Mainstream

South Africa has a mature recycling industry, but faces many difficult challenges with waste management due to the lack of resources and bureaucratic inefficiencies.

Recognising ARO’s ambitious goals and hurdles, the Alliance partnered with the organisation to provide operational and financial support. This included funding two collection trucks and three balers to increase plastic waste collection.

The Alliance also helped ARO develop a safer working environment by encouraging them to implement health and safety rules and by providing personal protective equipment.

Aside from helping informal workers, ARO is also building closer working relationships with municipalities and Producer Responsibility Organisations (PROs).

The latter are key stakeholders in promoting circularity as they have been tasked to develop collection and recycling infrastructure and pay collection service fees to reclaimers registered in the South African Waste Picker Registration System (SAWPRS).

The PROs channel funds to affiliated buyback centres, which then disburse collection service fees to SAWPRS-registered



At a safety session, reclaimers are trained on how to protect themselves on the job.

reclaimers. These reclaimers receive a service fee of 0.15 ZAR (US\$0.0085) per kilogramme of recyclables collected, in addition to the income from selling their materials.

SAWPRS also issues identification cards to registered reclaimers, which formally recognises them as waste pickers within the national waste management framework.

With support from the Alliance and the World Bank, ARO registered 3,000 of its reclaimers with SAWPRS.

### Elevating Lives

ARO’s success is driving a just transition for the reclaimers and offers a model that can be potentially replicated.

“The reclaimers are bringing in larger volumes of waste and waste that is of higher value. Through the reclaimers’ work and ARO’s efforts in encouraging residents to sort their waste, we diverted over 14,300 tonnes of waste in 2024,” says Tutani.

She adds that the Alliance’s support has also enabled ARO to buy waste from reclaimers at prices above the prevailing market rates during the downturn in December.

Tutani acknowledges that more can still be done—for instance, stronger legislation to empower informal waste pickers and better enforcement of Extended Producer Responsibility (EPR) schemes. ARO is also seeking to reach more communities

and launch more sorting facilities to help more reclaimers.

For reclaimers like Khoali, there is much to feel optimistic about. She is now more confident when approaching residents. “By wearing the ARO uniform, I feel more comfortable than before when I’m at work. It gives you dignity,” she says.

Tutani has observed that the residents are now more welcoming to reclaimers.

“Some provide drinks and water... A few even allow reclaimers to use the toilets in their houses,” she says. “Reclaimers also no longer have to compete with the collection trucks because the residents would have already sorted the waste beforehand.”



Sorted waste arrives at the material recovery facility in Johannesburg.

# DEVELOPING & TESTING SOLUTIONS

## Africa: TakaTaka

**Location: Nairobi, Kenya**

**Recipient: Taka Taka Solutions Limited**

 **7,393.20** Tonnes  
total plastic waste collected and diverted to managed streams for valorisation<sup>1</sup>

 **5,508** Tonnes  
total plastic waste supplied to or directly utilised in mechanical recycling processes to produce high-quality plastic recyclates<sup>2</sup>

 **100** Organisations  
engaged in 2024<sup>3</sup>

 **518** Participants  
reached through Alliance education programmes<sup>4</sup>

 **373** Jobs  
new formal jobs created<sup>5</sup>

### Tackling Low-Value Plastics and Empowering Communities

In Kenya's capital, Nairobi, lies the sprawling 46-hectare Dandora dumpsite, where much of the city's daily household and industrial waste ends up.

Nairobi generates around 3,500 tonnes of waste daily, and the city's waste management infrastructure struggles to keep up.

Growing up in Mombasa, a coastal city in Kenya, German-born Daniel Paffenholz witnessed firsthand the pernicious effects of poor waste disposal methods. In 2011, he founded TakaTaka Solutions (which means "rubbish" in Swahili) to improve

waste management and sorting in Kenya and, in turn, boost recycling rates.

TakaTaka is not the only private firm in Kenya offering waste management services. What sets it apart, however, is its breadth of services.

Most waste collectors in the country operate on a 'collect-to-dispose' model. This means the waste they collect primarily ends up at dumpsites, and only high-value items like cardboard and Polyethylene Terephthalate (PET) bottles are cherry-picked and sold to recyclers.

To increase recycling rates, Paffenholz needed TakaTaka's services to be more comprehensive and integrated into the waste management value chain.

TakaTaka emphasises sorting waste more efficiently at the source—households and commercial buildings—so that both organic and recyclable waste can be collected and diverted from landfills.

Organic waste is composted or sold to pig farmers. Plastic waste is converted into pellets and sold to recyclers. TakaTaka also collects and sells materials like metal, glass, and cardboard to third-party recyclers.

Another focus of TakaTaka is low-density polyethylene (LDPE) material, one of Kenya's largest untapped recycling resources. Flexible plastic packaging, such as food wrappers and milk sachets, is usually made of LDPE.

"Although flexible packaging makes up close to half of all plastics produced and used in Kenya, only one per cent is recycled," says Paffenholz. Most recyclers shun flexibles as they are usually of lower quality than rigid plastics. Many flexibles are printed on, which is considered contamination, making them difficult to recycle.

Cost is another concern.



Workers at TakaTaka's facility stand proud among the day's plastic haul.

<sup>1</sup> Total since inception of the project with 4,047 tonnes assured for 2024 reporting period.  
<sup>2</sup> Total since inception of the project with 3,252 tonnes assured for 2024 reporting period.  
<sup>3</sup> Assured for 2024 reporting period.  
<sup>4</sup> Total since inception of the project with 238 participants assured for 2024 reporting period.  
<sup>5</sup> Total since inception of the project with 167 assured in 2024 reporting period.

# DEVELOPING & TESTING SOLUTIONS

## Africa: TakaTaka

“Because these materials are often highly contaminated, have a large surface area, and their low weight per piece makes it costly to recover them from the dump site, flexible recycling is economically very challenging,” shares Paffenholz.

To manage costs, TakaTaka is trying to improve quality control at the sourcing stage and is working to reduce loss rates during production. It is also exploring higher-value applications for low-value recycled materials.

TakaTaka piloted a facility to recycle lower-value materials like flexible and contaminated hard plastics. They are washed, processed into pellets, and reintroduced into the local plastic production system as an alternative to virgin plastic feedstock.

TakaTaka sells its pellets to manufacturing firms to generate revenue.

Paffenholz says that TakaTaka’s efforts have paid off. TakaTaka boasts a 90 per cent recovery rate of its collection. The company has seven centres in Kenya, including its main buyback location near Dandora. Today, TakaTaka processes up to 300 tonnes of plastic bales per month.

### Powering Recycling Through Engagement

To boost the volume of feedstock, TakaTaka has to increase collection rates.

As part of that effort, the company regularly conducts community engagement campaigns to teach residents the importance and value of separating waste and provides them with the resources to do so. For instance, residents are given colour-coded bin liners along with instructions on which types of waste to place in each bag.

TakaTaka also actively reaches out to informal waste workers to improve their circumstances. Most informal waste workers in Kenya are self-employed, have limited formal education, and rely on waste picking as their primary source of income.



They lack all the benefits and protection that come with a formal job.

With the Alliance’s support, TakaTaka has been improving the social safety nets for these workers by providing regular health checkups, protective equipment, and even establishing two kindergartens near the dumpsites for children to go to school. In addition, TakaTaka subsidises the kindergarten fees and provides stationery.

### Overcoming Challenges

The biggest challenge for initiatives such as this is economic viability. TakaTaka’s work is difficult because there are no government subsidies and regulations to incentivise recycling or encourage manufacturers to use recycled material.

To scale its impact, TakaTaka had to find the right partners who understood the waste management sector. The Alliance backed TakaTaka’s vision and funded almost half of the construction of a new flexible plastic processing plant through a loan.

TakaTaka is unique because it is one of the few projects that deals with all types of waste in an integrated manner, from collecting waste to sorting, recycling, and selling it. The organisation also collects waste from landfills, especially from Dandora.

But the journey has not always been smooth sailing. There are several pain points that TakaTaka has had to manage. For instance,

getting a reliable source of waste materials from informal waste workers, especially flexibles, can be an issue.

Some of the waste materials that the suppliers deliver are dirty and wet, which adds to the weight. So even though TakaTaka pays for all the material received, it might only be able to process part of that collection and discard the rest. This problem could potentially impact the organisation’s cash flow.

To deal with this, TakaTaka uses a compressor to remove the water to obtain the exact weight of the collection and takes out the dirty material before paying the suppliers.

TakaTaka also faced issues in maintaining the processing line equipment. One of its units frequently malfunctioned, impacting the recycling process.

With the loan provided by the Alliance, TakaTaka was able to purchase state-of-the-art equipment, including an extruder, pelletiser, washing line, and wastewater treatment system. As a result, it can now improve quality control in its recycling process and increase pellet production.

From improving a flawed waste management system to creating fresh demand for plastic recyclables, TakaTaka has shown that while the plastic waste crisis can be challenging, circular waste management is possible even in difficult markets.

# DEVELOPING & TESTING SOLUTIONS

## South America: Reciclerios

**Location: Multiple Cities, Brazil**

**Recipient: Instituto Reciclerios**



**182.20** Tonnes

total plastic waste collected and diverted to managed streams for valorisation<sup>1</sup>



**4,440.10** Tonnes

total plastic waste supplied to or directly utilised in mechanical recycling processes to produce high-quality plastic recyclates<sup>2</sup>



**27** Organisations

engaged in 2024<sup>3</sup>



**26,192** Participants

reached through Alliance education programmes<sup>4</sup>



**US\$1.94** Million

total catalysed funding committed and allocated<sup>5</sup>



At a sorting centre in Naviraí, Brazil, mixed materials are manually separated at a conveyor belt.

### Helping Brazil's Cities Make Recycling Pay

Recycling in Brazil is often seen as an economically unviable activity. Prices for Post-Consumer Recyclable (PCR) materials are too low to cover collection and processing costs. Reciclerios, an Alliance-funded NGO, is working to shift this perception. For nearly two decades, it has been at the forefront of developing systemic solutions for recycling in Brazil—exploring new business models that make waste management more inclusive and sustainable.

Since 2019, Reciclerios has established 14 public recycling systems across small and medium-sized cities in Brazil, bringing recycling programmes to these communities for the first time.

It started with a pilot in Ceará and has since developed into a tried-and-tested waste management model. The organisation intends to grow this model to reach 60 cities throughout Brazil, with goals to generate 3,000 new jobs and process at least 30,000 tonnes of plastic waste annually.

Another important component of Reciclerios' work is integrating waste pickers into formal recycling systems—empowering them by formalising their roles and offering better working conditions. This includes providing waste pickers with training, technical support, and resources.

Reciclerios has also launched the Waste Worker Development Centre (*Núcleo de Desenvolvimento do Catador*), establishing the Reciclerios Waste Worker Academy

<sup>1</sup> Total since inception of the project with 73.20 tonnes assured for 2024 reporting period.

<sup>2</sup> Total since inception of the project with 1,644 tonnes assured for 2024 reporting period.

<sup>3</sup> Assured for 2024 reporting period.

<sup>4</sup> Total since inception of the project with 26,176 assured for 2024 reporting period.

<sup>5</sup> External funding attracted through initial Alliance enablement; assured for 2024 reporting period.

# DEVELOPING & TESTING SOLUTIONS

## South America: Reciclerios



Waste sorters in full personal protective gear.

(*Academia do Catador*), a free online learning platform that offers technical and professional training paths for informal waste pickers organised in co-operatives.

For the general public, Recicleiros runs behaviour change programmes to raise awareness of recycling best practices, including educating local communities about the importance of proper waste sorting and segregation. This community education is based on the philosophy that recycling is an act of belonging—actions residents can take to have cleaner neighbourhoods.

In 2024, Recicleiros focused on building economically sustainable sorting centres. These centres recover recyclable materials from household and municipal waste streams, bringing them to the market for recycling. While the project made progress, it also faced significant challenges. The cost of maintaining these centres, including paying minimum wages and providing Personal Protective Equipment (PPE), is high,

while prices for recyclable materials have remained stagnant.

To address these challenges, Recicleiros has been working on establishing contracts with municipalities to fund recycling services. Recicleiros combines waste collection service fees with revenue from the sale of recyclates to create an economically-viable business model.

By convening the actors in the plastics value chain, the project helps local authorities create inclusive, high-impact, and economically viable recycling systems at speed and scale. Cities must apply to be involved, passing a rigorous qualification process that takes into account their infrastructure, resources, capability, as well as their long-term commitment.

Despite funding challenges, the project has made some progress. Its future success relies on continued cooperation between municipalities and the private sector to ensure fair pricing and adequate funding for recycling.



Recyclable materials are manually separated into recycling streams on the sorting line.

# DEVELOPING & TESTING SOLUTIONS

## Asia: Greencycle

Location: Greater Manila, Philippines

Recipient: Greencycle Innovative Solutions Inc. (GIS)

 **16,391.10** Tonnes  
total plastic waste collected and diverted to managed streams for valorisation<sup>1</sup>

 **16,962.46** Tonnes  
total plastic waste supplied to or directly utilised in mechanical recycling processes to produce high-quality plastic recyclates<sup>2</sup>

### The Island Nation with Big Goals to Cut Plastic Waste

With around 7,600 islands forming the sprawling archipelago that makes up the Philippines, the island nation's beautiful beaches are a much-loved tourist destination for people from all over the world.

But the Philippines is also a big consumer of plastic with inadequate waste management infrastructure and a heavy reliance on single-use plastics. Substantial quantities of plastic waste arriving in the ocean threaten that image of pristine white-sand beaches.

With support from the Alliance, Quezon City-based Greencycle Innovative Solutions (GIS) continued its efforts in 2024 to tackle the plastic waste issue by bolstering waste management infrastructure and practices. The project operates predominantly in Metro Manila to collect and recover low-value flexible plastic waste. To process the collected waste, GIS works with junk shops and cement plants in the Greater Manila Area. Last year, GIS successfully established and developed an additional facility in Imus, in the Cavite province south of Metro Manila.

The Quezon City facility, which began operations in May 2023, has already accomplished its target of collecting 6,000 tonnes of low-value plastic waste and converting it into Refuse-Derived Fuel (RDF). That was completed in 2023, six months ahead of schedule. Operations at the Imus facility commenced in May 2024, collecting and recycling more than 2,500 tonnes by December 2024.



Plastic waste is converted into RDF and then baled for transportation.

These facilities represent a strategic shift in GIS' approach, expanding beyond Metro Manila, home to around 13.5 million people, to address plastic waste challenges in provincial areas where support is urgently needed.

In 2024, GIS also intensified its work with the informal sector, including local junk shops, alongside partnerships with local governmental units (LGUs) and small administrative divisions called *barangays*. This work to bolster the informal sector includes providing equipment and working capital for waste pickers.

The project also looks into providing safer working conditions for women workers, including providing separate washing areas and bathrooms. This grassroots engagement is part of an effort to address social welfare issues as well as environmental concerns.

Despite making steady progress toward its 2024 targets, GIS encountered challenges—most notably a decline in demand from the cement industry for plastic waste as alternative fuel, driven by an economic slowdown. This highlighted the need for diversified end markets for collected plastic waste.

With its expanded facilities, strategic partnerships, and innovative approaches, GIS is making significant contributions to addressing the Philippines' plastic waste challenges, demonstrating how targeted investments can drive meaningful progress toward a circular economy.



Bales of plastic scrap, soon to be turned into RDF for cement kilns.

<sup>1</sup> Total since inception of the project with 10,184.50 tonnes assured for 2024 reporting period.

<sup>2</sup> Total since inception of the project with 10,556.36 tonnes assured for 2024 reporting period.

# DEVELOPING & TESTING SOLUTIONS

## Asia: Prayaash

Location: Multiple Provinces, Nepal

Recipient: Creasion Ventures Inc. Pvt. Ltd.

 **4,812.10** Tonnes

total plastic waste collected and diverted to managed streams for valorisation<sup>1</sup>

 **4,812.10** Tonnes

total plastic waste supplied to or directly utilised in mechanical recycling processes to produce high-quality plastic recyclates<sup>1</sup>



Finalised PET bales are picked up by partner aggregators and recyclers.

### Transforming Waste Management in Mountainous Nepal

Nepal struggles with plastic waste recovery because of its rugged terrain and lack of infrastructure for collecting and transferring waste.

The Alliance has partnered with Creasion—a leader in plastic waste recycling in Nepal since 2005—to strengthen the country’s waste management ecosystem through Prayaash, a project focused on expanding the informal collection network and establishing more formalised systems.

The Prayaash project operates in two main provinces of Nepal: Bagmati and Madhesh. Research on Kathmandu Valley and Chitwan showed these areas are ideal for collecting and recovering PET and other plastics. The project targets remote areas of Nepal where challenging terrain and limited infrastructure have long

hindered plastic waste recovery. Prayaash aims to change this by connecting existing infrastructure with new initiatives. This includes integrating both formal and informal collection systems to improve efficiency, reduce pollution, and encourage sustainable habits. It is hoped that these actions will address the current reality where, in the absence of proper systems, plastic waste is often burnt or discarded, causing environmental harm.

The approach focuses on expanding the recovery of PET and other types of plastics, enhancing the capacity of current recovery equipment and reaching more communities. A key objective is to create jobs through a strengthened informal waste collection network—delivering both environmental and economic benefits to local communities.

The project has already reached important milestones. In July 2024, Phase II was successfully completed, with 2,081 tonnes

of plastic waste collected and recycled, surpassing the initial commitment of 1,700 tonnes. Phase III began in October 2024, and so far over 1,000 tonnes of plastic waste have been collected and recycled. This phase aims to collect and recycle a total of 2,300 tonnes. In addition, the Alliance also co-funded equipment and a collection vehicle at a Material Recovery Facility (MRF) constructed and operated by Creasion.

Another important aspect of the Prayaash project is to boost the social status and improve the lives of informal waste workers. Their labour is critical to diverting recyclable plastic waste from the environment and landfills in the difficult Nepalese terrain. Measures to support workers have included improving working conditions at waste facilities with segregated changing rooms and lactation rooms for female employees. Broader social inclusion initiatives benefiting over 300 informal workers have resulted in fairer wages and, in some cases, insurance coverage. The project has also provided training on safety and occupational health.



Sorting PET bottles in a MRF in Kathmandu.

<sup>1</sup> Total since inception of the project with 2,251.10 tonnes assured for 2024 reporting period.

# DEVELOPING & TESTING SOLUTIONS

## Asia: LOVERE

Location: Multiple Cities, China

Recipient: Aifenlei Hongkong Limited

 **15,377** Tonnes  
total plastic waste valorised<sup>1</sup>

 **393,194** Participants  
reached through education programmes<sup>2</sup>

### A Tech-Enabled Recycling Revolution

LOVERE's distinctive lime-green smart bins are now a familiar sight to residents living in parts of Chengdu and Xi'an in China, and their innovative technology is helping users separate their trash more effectively.

The number of bins installed in the two cities rose to 3,007 in 2024, representing a major step forward in the company's goal to increase recycling rates from 15 to 35 per cent by 2030 in these cities.

The bins do more than just offer a receptacle for recyclables. Shanghai-based LOVERE has pioneered an innovative plastics recycling system that incentivises residents by providing micropayments directly into their WeChat account for their recycling efforts—the popular Chinese social media and payments app—in reward for their recycling efforts.

Started in 2019, the LOVERE project is part of China's Internet Plus Recycling strategy, which leverages digital technology to develop new collection models for recyclables—integrating recovery, collection, sorting, and distribution. At the core of the system are AI-powered smart cameras that classify each deposited item based on its weight and shape to determine its recyclability. If a resident makes an incorrect deposit, LOVERE can even follow up via their WeChat account to explain which items the system can accept. This direct feedback loop has proven effective, with approximately 90 per cent of materials collected being properly recycled.



Rows of LOVERE Smart Bins stand along a street, their AI-powered cameras scanning deposited materials to instantly reward recyclers with WeChat credits.

This technology-driven approach to recycling education and promotion is yielding strong results for LOVERE, which processes over 679,000 tonnes of household recyclables each year in China.

By the first quarter of 2024, the recycling project has started to transition toward financial sustainability. The target of installing 3,000 smart bins across Chengdu and Xi'an was achieved despite some challenging conditions, including the impact of Covid-19 in 2022 and urban renovation projects in downtown Chengdu.

A major milestone on the plastics processing front was the launch of LOVERE's new sorting centre in Xi'an, complementing its Chengdu facility, which began operations in late 2023. These centres are central to LOVERE's growing capacity, allowing it to process more recyclable materials as operations expand into additional districts.

The sorting centres serve as sophisticated waste management hubs where collected materials are separated into as many as 80 individual streams before being sold to recycling companies.

While the Alliance-funded project focused on Chengdu and Xi'an, LOVERE's innovative business model has already scaled nationwide—now operating in approximately 38 cities with a network of around 31,000 intelligent recycling machines in Mainland China.

LOVERE continues to work toward its ultimate target to recycle 50,000 tonnes of plastic by 2030. The completion of the business-to-consumer infrastructure in 2024 sets the stage for ramping up the business-to-business model, which will engage office buildings, hotels, and other commercial partners.

<sup>1</sup> Total since inception of the project with 5,778 tonnes assured for 2024 reporting period.

<sup>2</sup> Assured for 2024 reporting period.

# ENABLING THE ECOSYSTEM

In addition to developing real-world solutions to the plastic waste challenge, the Alliance convenes a range of like-minded actors to share perspectives and experiences.

No one organisation can achieve the shift to circularity for plastics alone. Collaboration and information exchange are vital. Drawing on our practical experience, the Alliance is well-placed to convene diverse stakeholders to share perspectives and experiences on addressing plastic waste in the environment. We bring together stakeholders from across sectors and geographies to bridge gaps in understanding, facilitate partnerships, and enable the exchange of ideas. We call this enabling the ecosystem.

In 2024, we engaged with 740 organisations, directly as well as through our network of funding recipients, strategic allies, and supporters to fulfil our purpose. Through our behaviour change and education programmes that we have developed with the support of these recipients since 2019, we have reached more than 763,000 people in the communities where we operate.

Similarly, the Alliance held a series of roundtable sessions on the sidelines of the Intergovernmental Negotiating Committee (INC) process for an International Legally Binding Instrument for plastic pollution in Ottawa, Bangkok, and Busan. Participants included representatives from governments, industry, intergovernmental



From left: James Law, President of the International Solid Waste Association, and Jacob Duer, President & CEO of the Alliance to End Plastic Waste, at the Solutions for Change Summit in New York.

organisations, Development Finance Institutions (DFIs), civil society, and the informal sector. The sessions covered topics ranging from waste collection systems to Extended Producer Responsibility (EPR) and financing approaches, contributing to our broader goal of fostering open and candid dialogue on practical challenges and potential solutions.

In parallel with these convening efforts, the Alliance provides technical input based on real-world experience to governments that may be seeking support in developing National Action Plans to address plastic waste in their respective countries. At INC-5.1 in Busan, the Alliance signed a Memorandum of Understanding (MoU) with South Africa's Department of Forestry, Fisheries and the Environment (DFFE) to explore solutions to tackle plastic pollution, including initiatives involving the informal waste sector.



Left: Jacob Duer, President & CEO of the Alliance to End Plastic Waste; Right: Mamogala Musekene, Deputy Director-General of the Department of Forestry, Fisheries and the Environment, Republic of South Africa, at the MoU signing.

# ENABLING THE ECOSYSTEM



## Demonstrating Solutions That Drive Circularity

Solving plastic waste at scale may be an uphill task but solutions are either already available or are being tested. We wanted to share our practical experiences documenting the challenges and critical success factors behind initiatives to increase plastic recycling rates.

During INC-4 in Ottawa, we held the Circularity in Action: Solutions for Change showcase that featured more than 40 existing and innovative solutions being implemented around the world to reduce plastic waste leakage and improve circularity.

The entrepreneurs, funding recipients, NGOs, and businesses driving these solutions were present to share their work with INC attendees. Some 600 visitors visited the showcase. Owing to the positive response, a digital twin of the showcase was launched during INC-5.1 at Busan.

The continuation of our efforts to build and facilitate the inter-industry collaboration necessary for systems change resulted in a Solutions for Change Summit held in New York on 6 December 2024.

More than 120 global decision-makers came together to explore innovative ideas—from nature-based solutions to climate mitigation technologies—and examine how these approaches could help address the plastic waste challenge. The aim was to bring business leaders together to shape an action agenda for advancing corporate sustainability.



Visitors at the Solutions Showcase held during INC-4 in Ottawa.



Industry leaders, government representatives, and experts convened to share and debate practical strategies for advancing circularity in plastics.



Participants interacted and engaged with one of more than 40 existing solutions.



At the Solutions for Change Summit in New York, industry leaders shared insights during a live panel discussion.



Experts across industry, government, and academia provided their viewpoints and proposed solutions for a circular future.



Participants convened in "Leader Enclaves" to collaboratively draft an action agenda for corporate sustainability.

# CATALYSING CAPITAL

There is a clear opportunity to further broaden capital participation and build creative financing mechanisms that bring the public and private sectors together in new, impactful ways.

## Catalysing Capital

The global plastic waste challenge demands urgent and substantial financial investment, with some estimates suggesting a need for US\$2.1 trillion by 2040. While innovative solutions to address plastic leakage exist, many operate at the frontier of what is possible, making it difficult for them to obtain capital through traditional investment channels. The risk-return profile of many plastic waste mitigation initiatives makes them less attractive to conventional investors. These projects often involve emerging technologies, nascent business models, or untested market applications, increasing perceived financial risk. Without sufficient funding, promising innovations struggle to move from concept to commercial viability, limiting their potential to create lasting impact.

The Alliance is committed to bridging this gap by championing innovative financing solutions that unlock the urgently needed capital to scale solutions and drive systems change.

## Blended Finance as a Catalyst

The Alliance advocates for innovative financing models that align with the complexity of the plastic waste challenge. One key approach is blended finance, which strategically combines both concessional and commercial capital from governments, multi-lateral development organisations, DFIs, and philanthropic entities with private sector investments.

## Unlocking the Funding Necessary for Plastics Circularity



[Click here to watch the video](#)

By 2040, US\$1.2 to 2.1 trillion is needed to build waste systems that stop plastic leakage, because 2.7 billion people still lack basic services. This video shows how the Alliance deploys catalytic capital—through blended finance, outcome-based bonds, and early-risk funding—to de-risk projects and unlock large-scale investment for a circular plastics economy.

Blended finance plays a crucial role in mitigating the risk and improving the financial viability of projects that deliver significant social and environmental benefits but might otherwise be overlooked by traditional investors. By carefully structuring diverse funding sources, this approach can generate a multiplier effect, mobilising increasing amounts of capital into critical sustainability initiatives and expanding market participation where conventional financing is scarce.

Blended finance has yet to be utilised to its full potential because it requires greater collaboration among stakeholders, clear risk-sharing mechanisms, and well-defined impact measurement frameworks to provide investors with the confidence required to participate at scale.

To unlock blended finance initiatives, innovative capital structuring vehicles are necessary, and this necessitates risk sharing mechanisms that are understood by all stakeholders.

# CATALYSING CAPITAL

## The Alliance's Role

The Alliance is committed to catalysing capital and accelerating the transition to a circular economy for plastics. Our envisaged role is multi-dimensional, encompassing financial support, technical expertise, and strategic partnerships that create an enabling environment for investment.

At a high level, we provide:

- Concessional capital to de-risk solutions and attract private investment;

- Expert technical guidance to enhance project design and execution;
- Access to a global network of public and private stakeholders to foster collaboration and market development.

This holistic approach helps deepen and de-risk investible project pipelines, encouraging the scaling of greenfield innovations and increasing confidence among investors. By fostering a vibrant capital ecosystem, we not only address the immediate financial barriers facing plastic waste solutions but also lay the groundwork for long-term sustainability and resilience.

Looking ahead, impact finance will not only remain relevant in the Alliance Strategy 2030, but it will also form one of its three core pillars. We are poised to intensify our collaboration with DFIs and other key stakeholders. Expanding these partnerships will be integral to scaling impact at a broader, country level, ensuring that financing solutions reach the areas of greatest need. By working collectively with financial institutions, policymakers, and industry leaders to put the right capital structures in place, we can unlock innovation, mobilise investment, and drive lasting change in addressing plastic waste.



Dian Lestari, Director of Grants and Loans, Ministry of Finance, and Ariadi Kurniawan, Senior Representative of Indonesia's Ministry for National Development Planning, joined by Jacob Duer, President and CEO of the Alliance to End Plastic Waste, and Rajat Misra, Asian Infrastructure Investment Bank Acting Vice President for Investment Clients Region 1 and Financial Institutions and Funds, Global, launching a co-financing initiative between AIIB and the Alliance for integrated solid waste management services and solutions in Indonesia.

Case Study:

## Pioneering a Public-Private-Philanthropic Financing Model to Boost Solid Waste Management in Indonesia

In 2024, the Alliance became the first private partner to contribute concessional resources into the Solid Waste Management for Sustainable Urban Development (SWM-SUD) project in Indonesia, via the Asian Infrastructure Investment Bank's (AIIB) Project-Specific Window<sup>1</sup>. The SWM-SUD aims to provide solid waste management services to select cities and districts in Indonesia. This includes focusing on waste management infrastructure, building the capacity of sub-sovereign entities, and

driving behavioural change within the community, while addressing livelihood concerns faced by the informal sector. Over nine million people across major cities and provinces are expected to benefit from the project.

The Alliance remains fully committed to leveraging concessional capital to unlock and scale investment from other funding partners, driving long-term impact in Indonesia's waste management sector.

<sup>1</sup> <https://www.aiib.org/en/news-events/news/2024/AIIB-Alliance-to-End-Plastic-Waste-to-Invest-in-Solid-Waste-Management-Solutions-Across-Indonesia.html>

*Case Study:*

## Enabling Funding for Plastic Waste Reduction in Ghana and Indonesia

The Alliance continues to support results-based blended finance structures being developed and deployed for countries to replicate. We strongly believe these financing solutions are part of a diverse toolkit of resources crucial for mobilising the capital needed to fund initiatives to combat the issue of plastic pollution.

Often, these projects need capital in the early stages of development and implementation, when the future of many greenfield ventures is uncertain. While not all initiatives will have the same level

of success, the Alliance's initial funding support and provision of technical expertise play a critical role in enabling innovative business models to take shape and scale. One such example is the issuance of the World Bank's principle-protected Plastic Waste Reduction-Linked Bond, announced in January 2024 in partnership with Citi, the lead manager for the transaction<sup>2</sup>.

Listed on the Luxembourg Stock Exchange, the funding facility has been structured as a US\$100 million seven-year principal-protected bond with a unique mechanism, whereby the return for investors is linked to the issuance and monetisation of Plastic Waste Recycling Credits, Plastic Waste Collection Credits (collectively known as Plastic Credits), and Verified Carbon Units ("VCUs"). Outcomes and impact are

measured through the generation of these verified plastic and carbon credits issued on the Verra Registry, supporting clear and transparent disclosures around the actual impact of financing provided to recipients.

The two projects selected as the first funding recipients of the bond were Alliance beneficiaries, the ASASE Foundation in Ghana and SEArcular by Greencore Resources in Indonesia. These organisations have been supported by the Alliance's direct involvement throughout the early development stages with technical inputs and concessional capital towards their project operations, thereby reducing technology risk vis-à-vis other peer set operations. In doing so, these projects now have the opportunity to advance their circularity ambitions across the plastic lifecycle.

*Case Study:*

## ASASE Foundation – Closing the Loop in Ghana

Dana Mosora and Hilda Addah founded the ASASE Foundation in 2017 to help empower entrepreneurial women in Ghana by creating new income streams through collecting, processing, and recycling plastic waste.

Recognising the potential of their simple yet effective end-to-end business model in addressing plastic waste management issues in one of the most populous communities in Africa, the Alliance sought to partner with the ASASE Foundation in 2020.

Our initial involvement focused on scaling up the processing capacity of their first CASH IT! facility to 500 tonnes of plastic waste annually. At the start of 2021, based on a co-financed grant with the European Union and replicating the success of the operating model achieved by the foundation to date, this partnership expanded to develop two new recycling



Through its CASH IT! social enterprise, the ASASE Foundation hires and empowers Ghanaian women—providing them with meaningful employment as they sort, wash, and process discarded plastic into reusable flakes.

facilities by the end of 2023. Furthermore, to help process rising volumes of collected waste and improve the long-term sustainability of the recycling business, extruders were installed in the CASH IT! facilities, turning collected plastic waste into pellets for sale at a higher value.

Today, the ASASE Foundation has three operating facilities in Accra, with the launch of the Weija Plastic Lumber Plant in October 2024.

<sup>2</sup> <https://www.worldbank.org/en/news/press-release/2024/01/24/world-bank-s-new-outcome-bond-helps-communities-remove-and-recycle-plastic-waste>

*Case Study:*

## SEArcular by Greencore— Enabling Circular Solutions for Ocean-Bound Plastics in Indonesia

SEArcular, an initiative by Greencore Resources, is dedicated to tackling ocean-bound plastic waste in Indonesia by integrating waste pickers into the circular economy. Operating primarily in Surabaya, SEArcular collects and recycles various plastics—including low-value flexible packaging that often escapes traditional waste management systems—transforming them into high-quality recycled materials.

In Indonesia, where more than 346 kilotonnes of plastic waste flow into waterways annually, flexible plastics like bags, films, and sachets are particularly challenging to recover. Unlike Polyethylene Terephthalates

(PETs), which have an established market, these lower-value plastics are often left uncollected due to poor economics. Waste pickers, a critical part of Indonesia’s and many other developing countries’ informal waste ecosystems, rely on immediate cash payments from *pengepuls* (local collection centres). However, *pengepuls* typically focus on high-value plastics, as they lack the cash flow to stockpile flexibles until they reach viable trade volumes.

Through its partnership with SEArcular, the Alliance helped address this financial barrier by providing a targeted grant to Greencore. This working capital allowed *pengepuls* to pay waste pickers upfront for collecting flexible plastics without immediate pressure to sell. As a result, waste pickers could expand their collection efforts, ensuring a steady supply of flexibles for recycling. Almost all of it was processed into Ocean Bound Plastic (OBP)-certified recycled raw materials, such as recycled

Low-Density Polyethylene (rLDPE) and Linear Low-Density Polyethylene (rLLDPE), which are now being used to manufacture plastic sheets, bags, and bin liners.

Beyond the project’s conclusion, *pengepuls* have continued to sell flexible plastics to Greencore, demonstrating the sustainability of the model. SEArcular now recovers and recycles hundreds of tonnes of Code #7 plastics alongside PET, Polypropylene (PP), Polystyrene (PS), Polyethylene (PE)-based plastics from ocean-bound plastics areas.

SEArcular is now exploring new ways of scaling these financial incentives, integrating more waste pickers into the value chain, and expanding collection networks across Indonesia. This model highlights how targeted financial solutions can unlock new recycling streams, providing both environmental and economic benefits for local communities.

*Case Study:*

## Partnership in Action: Lombard Odier Investment Managers Plastic Circularity Fund

The Plastic Circularity Fund is a pioneering initiative aimed at addressing the growing global challenge of plastic pollution. Managed by Lombard Odier Investment Managers (LOIM), it focuses on promoting the transition to a circular economy by investing in businesses that offer scalable and economically viable solutions, enabling the reduction of virgin plastic production and the creation of closed-loop systems.

The Alliance was a seed investor with a US\$10 million capital contribution to the Fund and continues to be a technical advisor to the Fund through a team of experienced professionals providing industry-led expert advice on the technical feasibility, commercial viability and scalability of plastic circularity solutions, as well as waste management technology and infrastructure.

In end-2023, the Alliance welcomed the successful first close of the Fund. In 2024, the Fund invested in four organisations working around the globe to improve sustainability.



# CATALYSING CAPITAL



Look-Back at 2024

Impact Metrics at a Glance

Developing & Testing Solutions

Enabling the Ecosystem

Catalysing Capital

Equity & the Informal Sector



900.care's refillable personal hygiene products.

## 900.care

In 2023, French direct-to-consumer refillable cosmetic products company 900.care completed a €21 million funding round, led by LOIM.

In 2023 alone, the company generated €10 million in revenue with 90,000 subscribers. By emphasising the reuse, refill, and recycling of everyday products, 900.care helps extend product lifecycles and minimise environmental impact.

The organisation works to engage communities and businesses in adopting sustainable habits, offering practical tools and systems that make sustainable living more accessible. Through its efforts, 900.care not only reduces reliance on single-use items but also fosters a culture of shared responsibility for the planet.

Since its inception, the initiative has helped divert over 500,000 kilograms of waste from landfills through refill and reuse programmes. Its refill and reuse initiatives have extended the lifespan of existing products, significantly reducing the demand for new resource extraction and manufacturing.

## Watttron

In 2024, the Fund invested in German precision heating solutions company Watttron in a €10 million Series B funding round led by LOIM.

The company has developed advanced heating systems that use pixel-level control

to deliver heat with pinpoint accuracy, reducing energy consumption and improving process efficiency. Watttron's technology is particularly transformative in sectors such as packaging, automotive, and medical, where precise thermal management can lead to significant material savings and lower carbon footprints. Its patented digital heating technology enables precise temperature control, which can lead to energy savings of up to 30 per cent compared to traditional heating methods.

In industries such as packaging, where uniform and controlled heating is critical, Watttron's systems not only cut energy usage but also save up to 50 per cent of plastic material, while minimising overheating and improving product quality. Additionally, the company's technology shortens production times by improving thermal efficiency, further lowering energy requirements and operational costs.

The Plastic Circularity Fund invested in Watttron alongside the Circular Innovation Fund and the European Circular Bioeconomy Fund.



Watttron's cera2seal and cera2heat modules used for high-precision packaging.

## AMCS

In 2024, AMCS Group, a global leader in performance sustainability, completed a large buyout funding round led by EQT where the Plastic Circularity Fund was one of the investors.

AMCS helps companies and resource-intensive industries balance profitability with environmental and social responsibility. With cloud-based solutions tailored for resources

and recycling, transport and logistics, as well as safety (EHS) and sustainability (ESG), businesses can maximise resource efficiency, improve safety, and reduce their environmental impact.

To date, AMCS' technology has tracked 9.4 billion tonnes of carbon emissions and managed 600 million tonnes of material annually across 37 countries. AMCS believes that sustainability and profitability go hand in hand, supporting companies to deliver on their business goals while making a positive impact on the planet.

## Calyxia

In 2024, Calyxia secured US\$35 million in funding, co-led by LOIM, to scale its innovative microencapsulation technology. Founded by scientists, the company develops and manufactures sustainable, high-performance solutions for industries such as agriculture, cosmetics, homecare, and advanced materials for energy and automotive applications.

Calyxia's microcapsules are designed to fully protect and precisely deliver active ingredients, reducing waste and environmental impact while maximising efficiency. By enabling targeted release, they can cut active ingredient use in industrial applications by up to 90 per cent, ensuring only the necessary amount is deployed at the right time and place. This approach helps mitigate global challenges like excessive pesticide run-off and inefficient chemical use in manufacturing. Additionally, Calyxia is able to produce biodegradable microcapsules compliant with tightening regulation against microplastic leakage.

Calyxia's technology is commercially proven by global players across its different verticals. With LOIM's backing, the company aims to establish itself as a leader in a sector that in market opportunity is projected to exceed US\$10 billion by 2030.

# EQUITY & THE INFORMAL SECTOR

Informal waste workers are the backbone of waste management in many developing economies, especially where formal systems are lacking. Often operating in difficult and dangerous conditions, they collect, sort, and trade waste, preventing it from entering the environment.



The World Bank estimates that more than 15 million people work in this informal sector. In the 60 countries classified as having ‘Undeveloped’ or ‘Incipient’ systems (Categories I and II in the [Plastic Waste Management Framework](#)), up to 80 per cent of plastic collection is carried out by waste pickers. A Pew study<sup>1</sup> estimates that globally, they collect nearly 60 per cent of all the plastic that is recycled. In 2016 alone, this informal sector collected an estimated 27 million tonnes of plastic.

Despite their critical role, these workers are often marginalised within their communities. Many are women, often engaging in what is considered the lowest value work.

The Alliance is committed to working with informal sector workers to recognise their important contribution, elevate their status, improve their working conditions and remuneration, and ensure a just transition as waste management systems evolve. Across our current portfolio, we support 13 projects in eight countries that engage informal workers—many of which focus on improving workers’ working conditions and welfare.

One such project is [TakaTaka Solutions](#) in Nairobi, Kenya, which works with informal waste workers. With the Alliance’s support, TakaTaka has been providing regular health checkups and even establishing two kindergartens near the

dumpsites for children to go to school. In addition, TakaTaka subsidises the kindergarten fees and provides stationery.

[Prayaash](#), another Alliance-supported project in two provinces of Nepal, is improving the lives of informal waste workers by delivering vital training in safety and occupational health, as well as upgrading waste facilities with segregated changing rooms and lactation spaces.

Alongside social equity, the Alliance is focused on advancing gender equity. In 2022, we formed a strategic partnership with WEConnect International, a leading global network that connects women-owned businesses with reputable buyers worldwide.

<sup>1</sup> <https://www.pewtrusts.org/en/research-and-analysis/articles/2020/07/23/breaking-the-plastic-wave-top-findings>

# EQUITY & THE INFORMAL SECTOR



Phung Thi Lan hoists a heavy bundle of mixed waste on her bicycle, her daily labour powering neighbourhood recycling efforts.

Despite the vital role these workers play, they are often highly vulnerable, coming from marginalised groups and operating in unsafe working conditions. The Alliance continues to work closely with the informal sector to address these issues and ensure a **just transition** for workers as waste management systems evolve.

Together, we are identifying and registering women-owned waste management businesses, providing technical and financial support, as well as researching effective interventions to empower women entrepreneurs in waste management.

We have also supported the ASASE Foundation in Ghana, a social enterprise that is building cleaner communities and economic opportunities. ASASE has established three CASH IT! recycling plants. These are community-based social enterprises that actively recruit informal workers, especially women. CASH IT!'s

employees receive uniforms, social security contributions, steady salaries, and other benefits like maternity leave, giving them legitimacy in the public eye.

Social and gender equity continue to remain high on our agenda beyond 2025. Our existing projects have taught us much about how to make change happen and we will continue to build on our experience to create social benefit at a greater scale. Ultimately, there is no complete solution to the plastic waste challenge without a just transition for informal workers and gender equity.

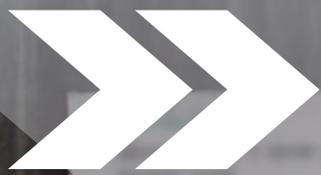
## Case Study:

## Everyday Heroes Powering Mozambique's Recycling Sector



Rosa Cumbe is one of several suppliers who sells recyclables to Topack's rPET processing plant in Mozambique. She acts as a middleperson between the informal waste workers and the processing plant. Until late every evening, Cumbe meets with the waste pickers, weighing their collections before purchasing them. Initially, her family did not support her as they felt her job was undignified, and neighbours complained about the noise

and dirt. But Cumbe won them over through her conscientiousness. She took steps to maintain a clean house every morning and actively worked to minimise plastic litter around the neighbourhood. Through selling recyclables, Cumbe was able to afford a new queen-sized bed and sofa. Beyond feeling like she has achieved some level of financial stability, Cumbe is proud that she is also helping to keep her city clean.



# The Way Forward— Strategy 2030



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Five years since our inception, the Alliance is evolving our strategic focus. Our purpose is to drive and effect the systems change necessary to increase plastic recycling rates and achieve a circular economy for plastics

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Photo: Project Prayaash, Nepal.





# STRATEGY 2030



Project Let's Transform, Multiple Cities, India.

In 2024, we made an important decision to evolve our strategic focus. Our role as a global laboratory investing in new technologies and solutions as well as developing financial models to end plastic waste and pollution has yielded significant progress and will not change. Nor will our purpose to lead the creation of a global circular economy for plastics. But building on the knowledge and experience we have gained from projects from around the world, it is clear there are greater opportunities to build a united ecosystem to achieve impact at speed and scale.

Our new strategic focus responds to an imperative for accelerated impact through systems change. It was undertaken in close consultation with our members and the projects we sponsor.

We are shifting from smaller projects to larger-scale integrated programmes. These programmes are anticipated to be co-developed with a wide range of partners, including governments and development banks, garnering US\$100 million in collective financing each. Programme design will fall into two categories, country-specific ones or thematic. This represents the logical next step in our evolution and a pathway to accelerated and scaled impact.

Our work in countries is focused on areas with less mature plastic waste management systems, where there is significant unmanaged waste. Our efforts will be aligned with national priorities to tackle the systems change needed to decrease plastic pollution and increase recycling rates. It will support each country in moving up the recycling maturity curve and address the market gaps that are currently acting as roadblocks to achieving plastics circularity.

Our thematic work encompasses activities that nurture solutions and identify the levers for systems change to address some of the most persistent challenges preventing plastics circularity. These programmes may be multi-market initiatives, including countries with more mature waste collection and plastic recycling systems.

Three country programmes were approved in December—Indonesia, South Africa, and India—along with one thematic programme focused on flexibles, where we see an urgent need to make the technical progress needed to close the circularity gap. Others will follow, but the current portfolio was chosen in part because of their potential for impact, but also because of the expertise and experience we have gained from existing projects.

To support this deeper focus and greater impact, we're advancing our collaboration with co-funders, including DFIs and private-sector financial institutions. These partnerships will be critical to unlocking the funds required to create systems change at scale.

The transition to fulfil the new strategy has already started, and we will not abandon existing projects that are in active delivery. The scale of the new programmes mean they will take time to ramp up. Considering this evolved strategic focus, we are also reviewing how best to report on our impact and which metrics are most relevant and robust.

Another important aspect of our strategy evolution is the shift in our governance structure. More details can be found in the [Governance chapter](#) of this report, but the motivation behind these changes is to ensure better representation across the plastics value chain and to incorporate input from respected international experts outside of our membership.

This evolved direction acknowledges our transformational role as a source of solutions and knowledge at this critical time. By leveraging collective capabilities across the plastics value chain, we are accelerating progress toward circularity and the elimination of plastic waste.

## Malang Regency's Pilot Project



The Malang Regency pilot programme involves household sorting, with door-to-door collection, encouraging communities to manage organic and inorganic waste at the source.

This video captures how government bodies, NGOs, village heads, and local residents are working together to pilot an end-to-end waste management system in the Malang Regency. It shows that coordinated action across the entire value chain is key to developing scalable solutions where formal infrastructure is still emerging.

### Case Study:

#### Trialling End-to-End Waste Management in East Java

Every year, Indonesia produces 3.2 million tonnes of unmanaged plastic waste, according to the UN, and more than one-third of it ends up in the ocean. Ensuring that this waste does not enter the environment and extracting value from it requires a step up in waste management infrastructure supported by sustainable business models.

The Alliance developed an integrated waste management project in the Malang Regency in East Java and is currently running a pilot. The project covers household collection, safe disposal, and recycling. The Alliance provides technical support to the project and funding for infrastructure development and equipment, such as waste collection vehicles, while the regency government will provide the land for construction, the workforce for the integrated system to run, and will cover the operating costs of the system.

“Although it is still in its early stages, the project is already reshaping residents’ approach to waste disposal. Instead of the original tendency to throw their garbage into the gutter, at the side of the house, or even the wider neighbourhood area in general, this behaviour has changed... it has now started to decrease.”

**MULYO SISWANTO,**  
Village Head, Duwet Krajan Village



A fleet of customised waste tricycles used to collect household waste.



At home, a resident carefully sorts organic and inorganic waste before collection.



A waste collector loads residents' pre-sorted inorganic waste into his tricycle, ferrying it back to the MRF for further processing.

Typically, plastic accounts for 15 to 20 per cent of municipal solid waste, and once this has been sorted, the recyclable plastic along with other recyclable materials can then be sold to local recyclers. This generates revenue for the waste management system. The other stream of revenue comes from household waste collection fees. For domestic waste, one key aspect is for householders to see benefit in paying these fees rather than burning or dumping the waste in the environment.

In collaboration with the regency's Department of Environment, the Alliance has embarked on a behaviour change campaign to educate residents about these benefits, encouraging them to sort the household waste into organic and non-organic fractions to enable more efficient downstream sorting.

This paves the way for a *Badan Layanan Umum Daerah* (BLUD), a public utility that will be able to sell the different sorted fractions of waste collected from the regency's households. The funds from the sale of these recyclables and waste collection fees can be used to drive longer-term sustainability of the integrated waste management system.

The trial in Malang was launched on 17 March 2025 in four villages (Tulus Besar, Duwet Krajan, Wringin Anom, and Kenongo), and 2,300 households had pre-registered to take part in it. Residents participating in the pilot will have their household waste collected twice every week.

This is just the beginning. The pilot should reach up to 12 villages, or around 18,000 households. Economic modelling shows

that 80 per cent of the households in the covered area must take part for the pilot to succeed.

By providing the waste collection and sorting of household waste, the project will be creating 75 jobs. Once fully operational, the team expects that the scheme will collect 750 tonnes of municipal waste per month and recycle around 20 tonnes of plastic.

The Malang Regency project hopes to highlight how government, private sector, and communities can collaborate to effect systems-level change. It offers the residents of Malang a viable alternative to dumping and burning their waste, reducing pollution.

If successful, the regency hopes to develop a sustainable model that other regencies can replicate.



# DEVELOPING SOLUTION MODELS

Drawing on Alliance-tested projects and industry experience, our BCG-backed Solution Model playbooks outline practical, scalable approaches—highlighting success factors, challenges, and enabling conditions for circular solutions in diverse contexts.

## Solutions for Change

Pathways to Enable Plastic Circularity

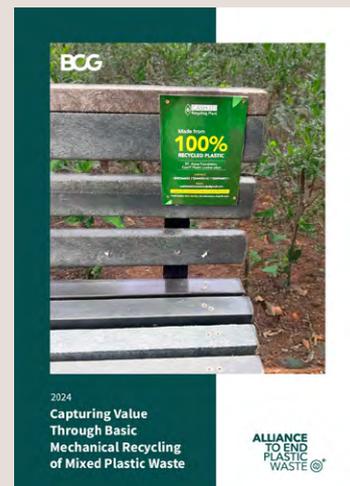


[Click here to watch the video](#)

**Solution Models** draw on our experience with over 80 projects around the world to catalogue the challenges, lessons learnt, and enabling conditions necessary for success. Their value is in breaking down a broader issue—for example, how to capture value of plastic waste through basic mechanical recycling—into a chain of custody of waste. For each component, such as collection, sorting, and recycling, the Solution Model lays out critical success factors and inhibitors, be they economic, technological, behavioural, or policy related. By allowing analysis of the conditions for specific business models to be viable and effective, they help enable successful replication.

To be characterised as a Solution Model, an approach must exhibit a number of key characteristics. It must:

- Demonstrate significant potential impact in terms of outcome, such as diverting plastic waste from the environment, bringing improved waste management services to communities, or reducing virgin plastic volume through recycling.
- Be environmentally and socially positive.
- Be economically viable and ideally investible.
- Be replicable within a three-to-five-year timeframe.



# DEVELOPING SOLUTION MODELS



An ASASE worker feeds plastic flakes into an extruder.

In addition, a degree of originality and innovation either in a technical sense or in terms of the context in which a solution is being developed is also a plus.

The Alliance has partnered with the Boston Consulting Group (BCG) to document specific Solution Models as so-called playbooks. We published two of these in 2024:

[Engaging Households in Segregated Municipal Waste Collection](#) addresses the approach to identifying and separating various types of solid waste within households. This is a priority activity since household waste segregation improves the volume and quality of material collected for recycling, while reducing sorting costs and decreasing use of landfill for disposal. The playbook maps the steps Alliance funding recipients have taken to encourage households to separate the waste at source in projects implemented in Argentina, China, India, and Indonesia.

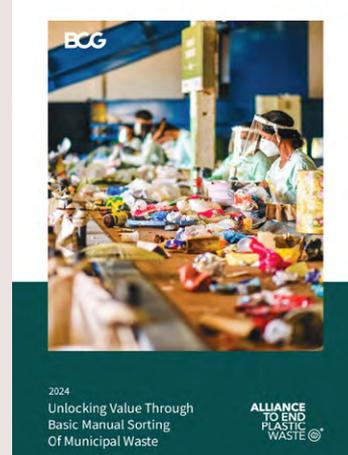
[Unlocking Value Through Basic Manual Sorting of Municipal Waste](#) highlights the improved value recovery of plastic waste for recycling, including the use of simple and low-cost equipment to

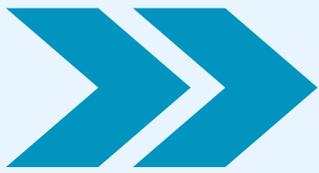
improve the ergonomics and speed of basic manual sorting. This playbook is especially relevant to countries with a basic regulatory framework but limited collection and treatment infrastructure, or those with early-stage recycling systems driven by market opportunities but that lack additional financial support mechanisms for more complex recycling. Alliance projects in Brazil, China, Indonesia, and Kenya underpin this playbook.

Tackling the plastic waste problem in this way provides the Alliance with a framework for deciding which projects are most worthy of selection. By analysing the barriers to success within waste management systems, they help to identify where progress is most needed.

Our aim is to bring together and share the experience and lessons that the Alliance has gained from its projects in a way that can be replicated and built on by others.

The Alliance and BCG intend to publish more [Solution Model playbooks](#) in 2025 and continue to share knowledge and experience in other ways to speed up the spread of effective solutions to the plastic waste problem.





# EVOLVING OUR GOVERNANCE FRAMEWORK

As part of the Alliance Strategy 2030, we updated our governance structure [NS1] to enable us to better leverage global, cross-value chain input from a wide range of stakeholders, including those from beyond the Alliance membership. The aim is to ensure balanced representation across the plastics value chain as well as address gaps in thought leadership, skills, and expertise.

The new governance structure includes a Governing Council (including Officers) and a Leadership Board.

## A. Governing Council

The governing body of the Alliance with fiduciary duties and the power to authorise key Alliance activities through resolutions. There are three types of Directors on the Governing Council: Qualifying Directors, Appointed Directors, and Independent Directors.

**Qualifying Directors** are appointed by members that elect to join the Governing Council.

**Appointed Directors** are representatives of members who join the Leadership Board and are asked to join the Governing Council to help ensure cross-sector, and industry balance and perspectives in decision-making.

**Independent Directors** are professionals who may be from a non-governmental organisation or similar institution and are intended to enhance diversity of thought and bring new perspectives to the Governing Council. There can be up to two Independent Directors on the Governing Council at any one time.

## B. Leadership Board

The Leadership Board is comprised of member representatives who do not have fiduciary responsibilities. Participants in Leadership Board meetings focus on providing strategic guidance and input to the Alliance and engage in thought leadership activities.

## C. Committees

The Governing Council may establish committees, as needed, to support the work of the Alliance.

# EVOLVING OUR GOVERNANCE FRAMEWORK

As of 31 December 2024

## Leadership Team



**JACOB DUER**  
President & CEO



**SOPHIA PORCELLI**  
CFO & Vice President of Operations



**ALLISON LIM**  
Vice President of Corporate & Public Affairs



**BRIAN SAVARIDAS**  
General Counsel, Secretary, & Vice President of Risk, Compliance & Legal



**TED TOTH**  
Vice President of Global Programmes & Circularity



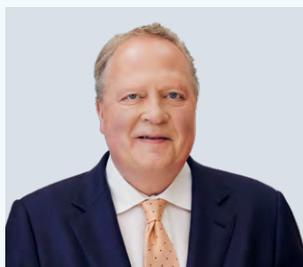
**JUSTIN WOOD**  
Vice President of Growth & Engagement

## Officers

The Officers guide our strategic direction.



**JIM FITTERLING**  
Chair, Alliance to End Plastic Waste;  
Chair & CEO, Dow Inc.



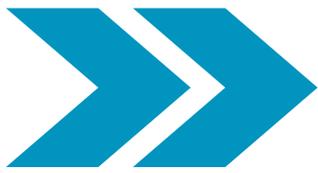
**JON MOELLER**  
Chairman of the Board,  
President & CEO,  
Procter & Gamble



**KEVIN BAUDHUIN**  
Chairman & CEO,  
Pregis Corporation



**VISHAL GORADIA**  
President & CEO, Vinmar  
International



# GLOBAL NETWORK & GOVERNANCE

For the year ended 31 December 2024

The Alliance was started by engaged business leaders with a clear mission to end plastic waste entering the environment. Today, we are focused on developing a circular economy for plastics and convene companies across the plastics value chain, working closely with national, and local governments, civil society organisations, DFIs, and many others.



The Way Forward

Strategy 2030

Developing Solution Models

Evolving our Governance Framework

Global Network & Governance

Financials

# GLOBAL NETWORK & GOVERNANCE

For the year ended 31 December 2024



The Way Forward

Strategy 2030

Developing Solution Models

Evolving our Governance Framework

Global Network & Governance

Financials



Integrated waste management pilot project in Malang Regency, East Java, Indonesia.

## Strategic Allies

Our strategic allies are leaders in their fields, helping us inform, identify, and execute our projects at scale.



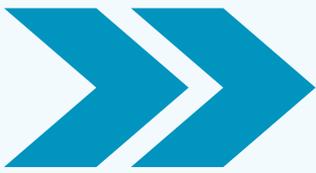
Clean Ocean Material Alliance



## Supporters

Our supporters are passionate about our work. They bring expertise, insight, and fresh perspectives that enable us to maximise our global impact.



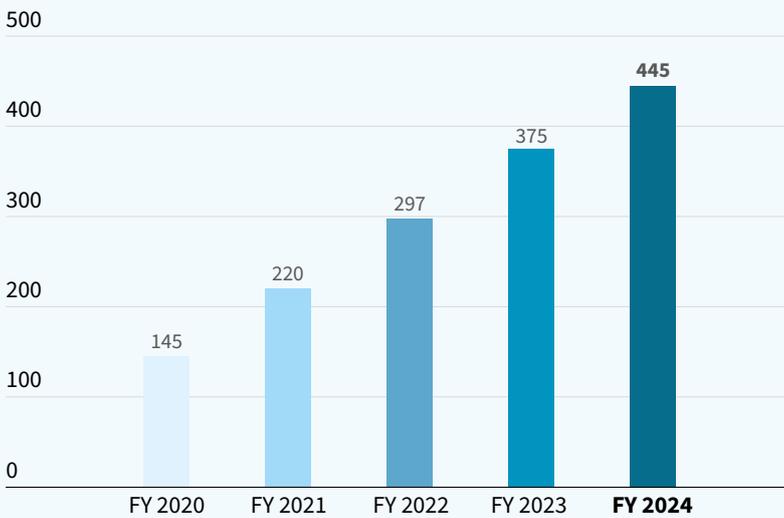


# FINANCIALS

For the year ended 31 December 2024

In 2024, we generated US\$70 million in revenue, bringing our cumulative total revenue since our start in 2019 to US\$445 million. Of this, US\$299 million has been allocated to projects and other mission-related activities.

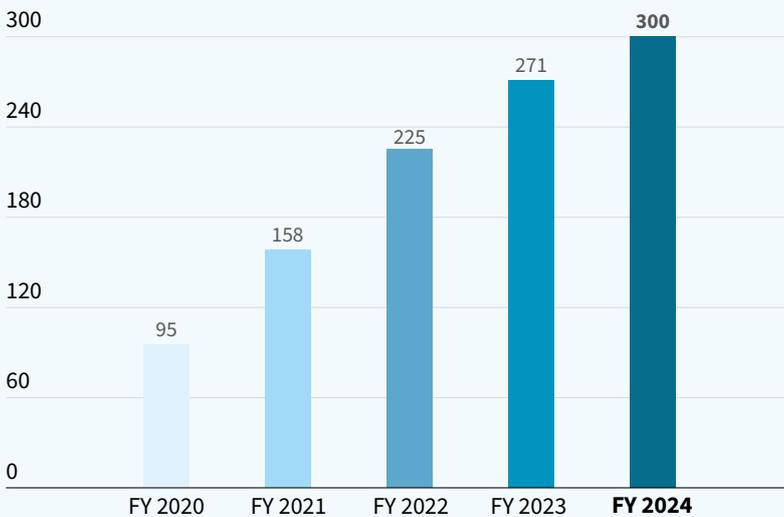
## TOTAL REVENUE, SOLUTION ACCELERATOR FUND (cumulative, in US\$M)



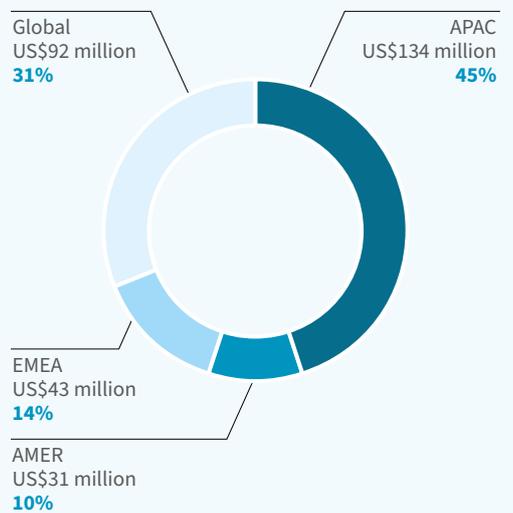
## CUMULATIVE CAPITAL ALLOCATION (cumulative since inception in 2019)



## TOTAL ALLOCATED CAPITAL, MISSION-RELATED (cumulative, in US\$M)



## REGIONAL ALLOCATION OF CAPITAL, MISSION-RELATED (cumulative since inception in 2019)



**You can be part of the solution.  
To find out more, visit [endplasticwaste.org](https://endplasticwaste.org)**

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