

# MOBILISING LARGE-SCALE CAPITAL EQUITABLY ACROSS BORDERS TO ACCELERATE IMPACT

**Ellen Martin**  
Chief Impact Officer,  
Circulate Capital

**Amandine Joy**  
External Affairs and Investor  
Relations Director, Circulate Capital



Plastic waste remains a global environmental challenge for oceans and waterways.  
Source: Circulate Capital.

Ellen Martin is Circulate Capital's Chief Impact Officer. In her role, Ellen is responsible for driving impact and insights for Circulate Capital and managing ESG through the investment process. As a member of Circulate's leadership and investment teams, Ellen is focused on ensuring the firm's collective strategies, assets, and relationships deliver impact as it grows.

As External Affairs and Investor Relations Director, Amandine leads Circulate Capital's communications strategy and implementation. Amandine brings with her ten years of strategic communications expertise in stakeholder engagement, reputation management and public affairs. Amandine has been working for a wide range of actors, supporting each of them to define and implement impactful engagement strategies to address social and environmental challenges.

Circular economy solutions have the potential to address pollution, the climate crisis, health and livelihoods, and inequality. Circulate Capital was launched in 2018 to invest in solutions for the ocean plastic crisis in South and Southeast Asia, and has since broadened its investment focus to plastics circularity, including disruptive innovations across value chains, throughout high-growth markets globally. It partners with global brands and institutional investors and leverages development finance to transform circular plastic supply chains at scale. This article outlines the steps that Circulate Capital takes and which investors might consider to effectively mobilise capital at scale for ecological transformation and positive impact.

If there is a hallmark of the Anthropocene, the epoch in which everything on earth is shaped by human activity, it might be plastic. Today, the oceans are choked with plastic pollution, which can entangle or suffocate marine species, and which releases microplastics and endocrine-disrupting chemicals into the food chain.

Physical and chemical pollution is not the only problem that today's plastics create. In 2022, global greenhouse gas emissions from plastic were an estimated 1.8Bt, contributing to climate change.<sup>1</sup>

So, can plastic pollution be halted at its source and prevented from reaching the ocean – or better yet, can demand for plastics be addressed so pollution need never arise? Addressing this systemic challenge requires capital to be mobilised at scale, and applied across the value chain.

Impact investment firm Circulate Capital was started in 2018 to tackle the issue by investing in solutions that prevent plastic pollution from entering the ocean. Since then, it has broadened its investment focus to plastics circularity, including disruptive innovations across value chains, throughout high-growth markets globally. To date, Circulate Capital has invested some \$80M and avoided 200,000T of CO<sub>2</sub> emissions, and aims to unlock \$1B to prevent 150 million tonnes of plastic pollution. Here are three steps that it takes to effectively mobilise capital at scale for ecological transformation.

## ONE, UNDERSTAND THE SYSTEM AND ITS LEVERAGE POINTS

When Circulate Capital was started in 2018, its primary impact focus was to address the ocean plastics challenge and 'turn off the tap'. Its key metric was the amount of plastic pollution prevented from entering the ocean.

<sup>1</sup> OECD. Plastic leakage and greenhouse gas emissions are increasing. <https://www.oecd.org/environment/plastics/increased-plastic-leakage-and-greenhouse-gas-emissions.htm>. Accessed July 8 2023.



Arzeda's circular technology facility. Source: Arzeda via Circulate Capital.

Quickly, conversations around managing plastic pollution grew to encompass social and environmental factors: *how* to build inclusive, circular supply chains that also curb climate change. “At the beginning, we had separate conversations about how to fight the plastics crisis on one hand and the climate crisis on the other. Now, the circular economy is seen as a pathway to accelerate the transition to a net-zero economy,” says Circulate Capital external affairs and investor relations director Amandine Joly.

Today, while ocean plastic pollution continues to be a primary focus and it still aims to avert 150 million tonnes of plastic pollution by 2030, Circulate Capital invests end-to-end along the full value chain. That means thinking holistically to tackle pollution, facilitate the shift to circularity, mitigate climate change and boost climate resilience, and improve livelihoods.

Circulate Capital invests through two complementary strategies. *Recycling Supply Chains* invests in high-potential solutions along the recycling and waste management supply chains, while *Circulate Capital Disrupt* targets disruptive innovations such as novel re-usable materials, alternative delivery models, with great potential for technology transfer. The *Circulate Capital Disrupt* portfolio includes Circ., an advanced recycling technology innovator with patented technology that returns clothes to the raw materials from which they were made, and Arzeda, an industry-leading protein design company.

As part of its *Recycling Supply Chains* strategy, Circulate Capital is expanding the supply of recycled materials to cater to growing demand. A key goal is to support portfolio companies to produce high-quality recycled materials in quantities that enable them to supply global brands. For example, its investment supported plastic recycler Srichakra Polyplast to build India's first food grade polyethylene terephthalate

(PET) bottle-to-bottle recycling facility. It recently entered into agreements with Coca-Cola India and PepsiCo India to supply high-quality plastic resin for the companies' 100% rPET bottles. This growing demand and commitment from global brands, alongside Circulate Capital's investment, has supported Srichakra to successfully scale its recycling capacity sixfold since 2020.

Similarly, investment into Dalmia Polypro supported its growth as one of the largest PET flake and polyolefin granules recycler in India. The company is advancing developments in food-grade applications, building the country's most advanced and largest single-location recycling facility to supply food-grade recycled plastics to global companies for use in packaging.

Besides plastic recovery and recycling solutions, Circulate Capital invests in companies like waste-commerce company Recykal, which connects waste generators, processors, recyclers and brand owners to facilitate material flows and transparency across the recycling value chain. In addition, Circulate Capital's investments are also directed toward processing methods and technologies, like flexible-plastic recycler Lucro, to help recovered materials find their way into circular supply chains.

“We have the opportunity to solve the problem not just for plastic but for other materials as well,” says Circulate Capital chief impact officer Ellen Martin. That boosts capacity to address not just single-use plastic packaging challenges, but other waste streams and material types too.

Circulate Capital's corporate partners engage actively with portfolio companies to help them scale. One corporate partner, material science company Dow, has partnered with Lucro to develop recycled flexible films and scale their use across various sectors.

*Investors often need to build trust and educate SMEs and family businesses as part of the investment process before a deal that will help them scale can be negotiated*



A woman working at a waste treatment facility. Source: Circulate Capital.

By offering technical help, redesigning their packaging to make it more sustainable and recyclable, and implementing recycled material requirements for procurement, partner corporations create demand for the materials that portfolio companies provide. “All of that support builds a more holistic system,” Ellen Martin says. “If we were just building one end or the other of the value chain, it wouldn’t scale.”

The other part of Circulate Capital’s strategy is longer-term, disruptive innovation at the intersection of climate tech and circular solutions. Some of its portfolio companies, like Arzeda, are creating novel, bio-based materials to become scalable alternatives to plastic, while others like recycling-technology company Circ develop new methods for separating and recovering mixed polyester-cotton textiles.

*Philanthropic and patient capital from family offices, high-net-worth individuals and development finance institutions can help de-risk investments for more mainstream investors and catalyse further investment at scale*

## TWO, UNDERSTAND AND EMBRACE THE CONTEXT

Roughly half the world’s ocean plastic pollution comes from emerging markets where the development of waste management infrastructure has lagged behind economic growth and plastic use.<sup>2,3</sup> In striving to maximise its impact, Circulate Capital initially focused on high-growth markets like Indonesia, where a population dispersed across a vast archipelago makes waste management a challenge.

In such emerging markets, recycling activities are typically carried out by waste pickers and other informal entrepreneurs, who can help avert a significant proportion of ocean plastic pollution. For example, a study in India estimated that 50 to 80% of generated plastic waste is recovered by garbage collectors, waste pickers, and waste dealers in the informal sector, and is thus kept out of the environment.<sup>4</sup> The sorting and processing of waste is then done by small and medium enterprises (SMEs) including small family businesses.

The informal workforce needs enabling infrastructure and other support, says Ellen Martin. “When we invest, we’re not thinking about disrupting those workers’ livelihoods, but creating models that will be beneficial to those at the very first point of collection.” Meanwhile, SMEs and family businesses often require extensive engagement, trust-building and investor education before agreeing to a deal that will help them scale. Circulate Capital connects SMEs with large corporations for commercial agreements and technical partnerships, helping connect organisations across what is otherwise a very fragmented waste-and-recycling value chain.

Embracing the existing context also means paying attention to intersectional areas such as gender. For example, women make up a high proportion of waste collectors and processors in some markets, as informal work can provide the flexibility and income they need. Around the world, women are also major consumers of products that are made from recycled

<sup>2</sup> Jambeck, J.R. et al. (2015). “Plastic waste inputs from land into the ocean”, *Science* 347, p. 768-771. DOI: 10.1126/science.126035.

<sup>3</sup> Borrelle, S.B. et al. (2020) “Predicted growth in plastic waste exceeds efforts to mitigate plastic pollution”, *Science* 369, p1515-1518. DOI:10.1126/science.aba3656.

<sup>4</sup> B. Nandy et. Al. (2015). “Recovery of consumer waste in India – A mass flow analysis for paper, plastic and glass and the contribution of households and the informal sector”, *Resources, Conservation and Recycling* 101:167-181. <https://doi.org/10.1016/j.resconrec.2015.05.012>

plastics or plastic alternatives, or plastic products that can end up as waste. As consumers, they make important decisions about where these materials go at the end of their lifespan.

Investing in women, therefore, is key to accelerating circularity in the plastics value chain. As of 2022, the Circulate Capital Ocean Fund is 2X qualified, meaning it is part of the 2X Challenge and its organisation and portfolio investments meet specific gender criteria.<sup>5</sup> Portfolio companies are often at stages of their growth where they are thinking about how to attract and retain talent and better manage their workforce, says Martin, and this is a good starting-point for companies to think about gender diversity and inclusion in hiring, retention and other organisational policies.

### THREE, IDENTIFY ENABLERS OF SCALE

Even as efforts continue apace to address plastic pollution, global plastic production is still on track to increase, driven by growing populations and rising incomes. Without radical action to curb demand, increase product lifespans and improve waste management and recyclability, the OECD estimates plastic production will triple by 2060.<sup>6</sup>

The Circulate Initiative, which monitors investment in plastics circularity, estimates that some US\$1.2 trillion is needed globally to fully transition and scale the plastics circular economy to the level of infrastructure required for sustainable development.<sup>7</sup>

How might investors like Circulate Capital contribute to helping circular-economy services and infrastructure reach the scale needed to tackle the volume of plastic waste and the emissions from plastic? Data and a visible pipeline of investable opportunities are key. “At the beginning we had to do our own landscape analysis because the pipeline was not clear. But we’re starting to see a track record of exits,” Ellen Martin says. Circulate Capital also worked with the world’s leading environmental NGOs and researchers to develop its own set of environmental, operational and social impact metrics relevant to the places where it invests.

Another aspect is addressing risk: Helping other investors understand how to manage and mitigate the risks of investing in circular economy solutions. Philanthropic and patient capital from family offices, high-net-worth individuals or development finance institutions can help de-risk investments for others and catalyse further investment at scale. The Circulate Capital Ocean Fund was backed by corporate partners and development finance agencies, such as the United States Agency for International Development (USAID) and the U.S. International Development Finance Corporation (DFC).

Fortunately, since Circulate Capital’s inception, the risk landscape has shifted thanks to global and national policy signals. In 2022, at the United Nations Environment Assembly in Nairobi, countries agreed to negotiate a legally binding agreement on plastic pollution by 2024. At the regional and national levels, the European Union has extended producer responsibility (EPR) rules for single-use plastic, while India, the Philippines and Vietnam have implemented or are adopting EPR requirements for plastic packaging. These policies increase demand for circular solutions and send a signal to innovators to meet the challenge.

“This space has been evolving so quickly over the last few years,” says Ellen Martin. “We’re pretty optimistic that we’ll continue to see many actors respond to the challenge.”

### USAID AND PREVENTED OCEAN PLASTIC SOUTHEAST ASIA: HARNESSING THE POWER OF BLENDED FINANCE AND TECHNICAL ASSISTANCE

Addressing ocean plastic pollution has long been a high-priority development outcome for the United States Agency for International Development, or USAID. In 2019, in a blended finance partnership with Circulate Capital, USAID provided a partial loan guarantee to de-risk up to \$35 million worth of investments and encourage private capital and new business development to scale the recycling value chain in South and Southeast Asia. By the end of that year, that guarantee helped Circulate Capital raise some \$106 million from private-sector companies for the Circulate Capital Ocean Fund.

Following the success of the partnership, USAID joined Circulate Capital and portfolio company Prevented Ocean Plastic Southeast Asia (POPSEA) in a 2022 partnership to expand waste collection and recycling infrastructure in the coastal Indonesian city of Semarang. The partnership benefits from USAID’s technical assistance and experience with the Clean Cities, Blue Ocean initiative; Circulate Capital’s expertise in scaling innovation and driving growth; and Prevented Ocean Plastic’s sector experience, access to global markets, and proven traceability model.

In June 2023, POPSEA opened a new waste collection centre that can process 500 tonnes of plastic a month. Its output is high-quality, traceable plastic bound for global markets. The centre creates some 40 direct jobs, supports the livelihoods of about 100 employees and waste collectors in all, and helps grow a profitable, self-sustaining market for plastic recycling in Indonesia.

5 Circulate Capital Commits to the 2X Challenge, Setting a New Standard for Gender Smart Investment in the Circular Economy for Plastics. (2022). 2X Challenge. March 3, 2022. <https://www.2xchallenge.org/new-blog/2022/7/21/circulate-capital-commits-to-the-2x-challenge-setting-a-new-standard-for-gender-smart-investment-in-the-circular-economy-for-plastics>

6 OECD (2022), *Global Plastics Outlook: Policy Scenarios to 2060*, OECD Publishing, Paris, <https://doi.org/10.1787/aa1edf33-en>

7 The Circulate Initiative. Plastics Circularity Investment Tracker. <https://www.thecirculateinitiative.org/plastics-circularity-investment-tracker>. Accessed July 31, 2023.