

Reinvent Impact

Turning Haiti's mountains of plastic garbage into high-tech printer gear



With innovative designs and a recycling solution, HP and its partners help create new revenue streams for a recovering community.



In Haiti after the devastating 2010 earthquake, piles of plastic bottles littering the island mushroomed into mountains.

It was an unintended consequence of relief efforts. The country's already weak trash-collection system buckled. Bottled water and other supplies shipped in to help Haitians wound up everywhere—in canals, on beaches, and lining the streets.

Now, those bottles are finding a second life as printer cartridges. All through a radical recycling project started by the [First Mile Coalition](#)—a collaboration between HP, [Thread International](#) (a social enterprise that turns plastic waste bottles into new products), [Timberland](#), [Work](#) (a nonprofit in Haiti), and the [Association des Collecteurs des Objets en Plastique](#). Together, they're creating market opportunities to generate new jobs, offer health and safety training, and provide education for hundreds of children who once spent their days collecting trash to help support their families.

In June 2017, HP started selling the [first ink cartridges](#) made from Haiti's plastic bottles and other sources. So far, 380,000 pounds of plastic have been recycled and moved through the HP material pipeline. And HP is exploring ways to use the recycled material in other products besides ink cartridges.

"This initiative supports our overall efforts to reinvent the way we design, manufacture, and recover our products as we shift toward a circular and low-carbon economy," said Nate Hurst, HP Chief Sustainability and Social Impact Officer.

"It supports our long-standing commitments to responsibly source materials for our products and treat all workers in our supply chain with dignity and respect." At the center of the program is [Environmental Cleaning Solutions S.A. \(ECSSA\)](#), a company founded seven years ago by Edouard Carrie, a young Haitian who lived through the earthquake. "It was terrifying, but the real tragedy was the aftermath," says Carrie. "Once you realize the impact, you immediately start feeling that need to help others."

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Nate Hurst,
HP Chief Sustainability and
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After returning to college at the University of Tampa, Carrie's experience inspired him to create a recycling business as part of his senior project. Carrie wrangled an internship from a classmate's father who ran a recycling company in Connecticut and then returned home to Haiti to start his own business at age 23.

Thread began working with ECSSA in 2015, creating plastic-based fabrics for apparel makers, including Timberland. But Thread was unable to use all of the types of plastics and colors that were used in many of these recycled bottles. After discovering that HP used PET plastics, along with a

broader array of colors, ECSSA approached HP about teaming up. With HP using 1 million plastic bottles a day in its closed-loop cartridge manufacturing, even sourcing a small portion of that from Haiti would be huge.





Turning plastic waste into resources

By design, the new program's impact is much broader than ramping up supply for Original HP ink cartridges. The goal is to improve nearly every aspect of the lives of the recycling workers, from providing education for children to upgrading the recycling systems so Thread and ECSSA can sell more plastics, not just to HP but to other companies, and employ more people.

A major goal of the coalition, which focuses on the "first mile" of global supply chains, is to give a better life to the children in the community of 2,000 people who live on the Truitier landfill—the largest in Haiti at 530 acres. Children often work alongside their parents to support the family. And because Haiti's schools are private, many of the bottle-collecting families don't have enough money to send their children to school.

Work conducted a census to document the needs and ages of what turned out to be more than 300 children working at the landfill. By the beginning of the year, every child under 15 is expected to receive scholarships and be in school, while the older teens will get remedial education and soft skills training. The children also receive mentoring, food stipends, and health care to ensure that they have the support they need to thrive and excel.

Providing opportunities for Haitians

To help bottle suppliers and collectors, Thread offers safety instruction, micro-loans for buying sacks, and other financing needs, plus guidance on managing cash flow during quarterly meetings that provide professional training and business development. There's also a peer-to-peer mentoring program. Ian Rosenberger, an earthquake-relief worker, founded Thread to help pull Haiti's people out of poverty and give them more control over their lives. "If Haiti could figure out how to turn trash into money = good," he wrote in his diary at the time.



Recycling gave Rosette and her family a new lease on life after Haiti's earthquake.

To scale up supply, Ellen Jackowski, HP's head of Global Programs, Environmental Sustainability, flew down to Haiti with Jean-Luc Lavergne, the president of Lavergne, the recycling company that helped create HP's closed-loop recycling system. Together they investigated to see what it would take to bring ECSSA's operations in line with the standards HP requires for its suppliers.



All of these steps add up to big changes for recycling on the island and more opportunities for Haitian families. One bottle at a time, HP and its partners are improving lives and livelihoods, while cleaning up Haiti.



Learn more about [Original HP ink cartridges](#), and how [the company](#) lowered its carbon footprint.

Overcoming safety challenges

The initial shifts were small but critical: ECSSA needed to make safety improvements on the recycling line, such as replacing the concrete blocks that workers stood on with the safer platforms, painted yellow, that HP mandates.

The deeper, longer-term changes involved bringing HP's expertise and knowledge to bear on ECSSA's processes to raise the quality of its output and enable ECSSA to handle more materials processing in-house. ECSSA collects several types of plastic, some of which HP cannot use because it would contaminate the plastic in its cartridges. So the partners developed systems to create squeaky-clean streams of material to ensure that the plastics stay separate.

Dirt was another issue. Bottles in Haiti are often tossed on the ground due to a lack of sanitation and recycling infrastructure. So they're sandy or muddy when bottle collectors pick them up. In the past, ECSSA would sort, compact, and ship the bottles to the US, where they'd be ground up, washed, and sent to Lavergne in Canada for further processing before being shipped back to HP to be turned into cartridges. With HP's help, ECSSA is investing in a system that will clean the bottles and grind them into flake material in Haiti. That will cut costs of shipping bottles to the US for processing, bringing more revenue to ECSSA—and its collectors. The clean plastic also improves the quality of the shred, which can drive increased demand from other buyers. This, in turn, will help create even more opportunities for collectors and accelerates waste removal on the island.

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