



Transforming Waste Into Resources: **Deploying an Off-Grid Model of Dignified Sanitation for Haiti**

September 2024



A member of SOIL's team finishes construction of an EkoLakay household toilet
Photo credit: Bernard Chereus/ SOIL

This case was prepared by Cynthia Rayner, a Visiting Fellow at the Skoll Centre, University of Oxford. It was reviewed and approved before publication by a company designate. Funding for the development of this case study was provided by the World Intellectual Property Organization (WIPO) in the context of the [Global Innovation Index 2024](#): Unlocking the Promises of Social Entrepreneurship. The case was developed for research and learning purposes. It is not intended to serve as an endorsement, source of primary data, or illustration of effective or ineffective management. Copyright © 2024 Skoll Centre for Social Entrepreneurship

CASE STUDY

Transforming Waste Into Resources:
Deploying an Off-Grid Model of Dignified Sanitation for Haiti

AT A GLANCE

Company	Sustainable Organic Integrated Livelihoods (SOIL)
Social theme(s)	Agriculture/Food Security/Rural Development; Energy/Climate Change/ Environment; Health; WASH
Geography	Haiti
Year founded	2006
Revenues	€2-3 million
Legal structure	Nonprofit organisation
Clients	Households living in vulnerable communities without centralised sanitation services
Business model	Earned income (4%); Donations (25%); Government, foundations & multilateral agencies (71%)
Product/services	SOIL develops and deploys container-based toilets to individual households, then services these toilets with collection and waste treatment that produces rich, organic compost
Impact reach	SOIL currently serves 3.074 households including over 18,000 individuals, producing 225+ tons of compost annually

Background

Nearly half of the world's population (43%) lack access to safe sanitation, and a significant portion of these households lack any basic sanitation services (1.5 million people)!¹ The World Bank defines safe sanitation as private facilities not shared with other households combined with appropriate collection, treatment, and disposal (in-situ or off-site).² Lack of safe sanitation is linked to poor health outcomes, risk of sexual assault, and reduced well-being.

Due to a combination of political instability, natural disasters, and colonial legacy, Haiti has the lowest access to water and sanitation in the Americas. Currently, only 17% of the population has access to improved sanitation facilities.³ Although government and development banks are investing in public infrastructure, there is an urgent need for immediate sanitation services to serve the population immediately, providing a bridge to long-term solutions.

¹ <https://www.who.int/news-room/fact-sheets/detail/sanitation#>

² <https://databank.worldbank.org/metadataglossary/health-nutrition-and-population-statistics/series/SH.STA.SMSS.RU.ZS#>

³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3795096/>

About the Company

SOIL was founded by **Dr. Sasha Kramer**, an ecologist who first moved to Haiti as a human rights observer in 2004. Recognising the intersection of health, human rights, and ecological issues that sanitation represented in the country, she co-founded SOIL with **Sarah Brownell**, starting with early self-contained concrete public toilets. After Haiti's 2010 earthquake, the company developed household models connected to 5-gallon drums that were easier to empty and transport and able to meet the needs of individual households. Today, SOIL has grown into a full-cycle sanitation service, safely treating human waste and transforming it into compost that can support the reforestation of Haiti's denuded soils.



Sanitation workers in Cap-Haitien, Haiti collect waste from SOIL's EkoLakay household toilets for safe treatment and transformation into compost
Photo credit: Centre Impact/ Sakapfet Okap/ SOIL

Sources of Impact

Customers: Who is served?

SOIL serves **households who do not have access to central sewer systems**. SOIL also serves the **agricultural sector** to support farming and reforestation

Workforce: Who is employed?

SOIL employs **69 staff members** who work across the operations, sanitation, treatment, sales, management, and research teams

Product/Service: What is delivered?

SOIL offers a **full-cycle sanitation service** to households who receive a private toilet and collection services for a monthly fee. SOIL also markets its compost under the **Kopos Lakay brand**

Eco-System: What relationships are developed?

SOIL partners with the **Haitian government, international, development banks, and private funders**. It aspires to foster a new public private partnership model for sanitation provision in Haiti

Innovation Activities

SOIL engages in several activities that drive innovation, both in their network as well as the larger eco-system:

INNOVATION ACTIVITIES



Dedicating research capacity for sanitation innovation: SOIL has a dedicated research team conducting initiatives to better understand the sanitation situation in Haiti and how to better deliver essential services in urban, low-resource communities

Testing new financing options for public services: SOIL is collaborating with government and international partners to investigate the viability of new financing tools, such as household subsidies, carbon financing, and results-based financing

Continually improving product and service delivery: SOIL's operations team is continually adapting and improving its toilet and service delivery model to better respond to client expectations and needs

Key Innovation Challenges & Learnings

SOIL is working in a volatile context, where public infrastructure and governance is limited. Operating in this environment has involved numerous challenges and learnings:

- **Innovating in the private provision of a public good:** SOIL believes that public goods like sanitation require public investment to be financially viable. Founder Sasha Kramer explains: *"We spent some years pushing the social enterprise narrative, believing we could cover the cost of a public good with a private sector model. But as we dug into the numbers, there was a period of reckoning. We looked at global examples and recognised that even in the wealthiest contexts, the public sector bears a significant portion, if not the majority, of the costs of sanitation provision and regulates it to make sure that there is universal access. SOIL now works to integrate private sector practices into a public-private partnership model which combines the efficiency of the private sector with the equity of the public sector."*
- **Honoring the expertise of all employees:** SOIL explored the idea of contracting waste collection, but realised this model could create perverse incentives for unsafe dumping. Instead, SOIL employs all its staff with full benefits and pay, while honoring everyone's contribution. Erica Lloyd, Board Member, describes this: *"Twice a year, our entire staff go to the treatment site and the waste treatment guys are the bosses for the day, and we empty containers, we wash; it is incredibly difficult manual labor, plus you're head to toe in protective gear and 95 degree heat. These guys do it every day, and we are trying to honor the expertise that all of our staff have."*

Featured Partnership: IDB Lab’s Outcomes for Change Fund

SOIL has recently partnered with the Inter-American Development Bank, Vitol Foundation, and Levoca Impact Labs, as well as key Haitian government ministries, to launch a results-based financing facility to ramp up service capacity to support more households with its private, container-based sanitation service. The partnership began with a baseline survey in highly vulnerable neighborhoods in Cap-Haitien, Limonade and Caracol. The financing facility will subsidise household services and will pay SOIL quarterly based on the number of households signing up for the service, providing a model for future public sector contracts.



A member of SOIL's sales team signs a new client to the EkoLakay service
Photo credit: SOIL