



# SOIL (SUSTAINABLE ORGANIC INTEGRATED LIVELIHOODS)

Lush Spring Prize 2017: **Established Project**  
Haiti **Project started: 2006**

## Project Summary

SOIL has been working since 2006 to develop a restorative urban sanitation solution, as nearly 75% of people in Haiti do not have access to improved sanitation. SOIL's toilets require no water to flush and provide a dignified and affordable household toilet service for thousands of people in Haiti's two largest cities.



Photo Vic Hinterlang



Photo Melissa Schilling

SOIL employs an ecological sanitation approach to safely treat and transform human waste into rich, fertile compost.

## SOIL's Permaculture & Regenerative Development Lessons

SOIL is a fantastic project for demonstrating how well combined social, environmental and economic benefits can be designed into a project, and taken to a significant scale. SOIL's work is in a country with some of the highest rates of poverty in the western hemisphere, in communities with severe vulnerability to environmental and public health crises.

- SOIL's solutions have been thoroughly tested and are ready to be responsibly and effectively scaled.
- Their technical solution transforms multiple problems to multiple solutions, by creating safe, high quality compost from human waste.
- Their technical and organisational solutions are highly replicable, and are informing the work of sanitation practitioners around the world.



## The Changes Achieved (High Level Outputs & Outcomes)

- 6,500+ people using a household container-based composting toilet
- 40+ metric tons of waste transformed each month
- 430+ metric tons of agricultural grade compost produced
- Providing jobs to 70+ people in Haiti
- 97% of users report their families' health and safety have improved since joining the service.
- Over 125 tons of compost produced per year

## Key Project Information (at 2018):

Climate: hot and humid tropical climate.

Key words: compost toilets; cities; WASH; poverty; economy; climate resilience.

Beneficiary audience: urban populations.

Number of beneficiaries: 6,500+ service users

Core Activity: delivering an ecological sanitation service to vulnerable communities in Haiti through a social enterprise business model, with community education built in.

Size: two composting waste treatment facilities serving communities in Haiti's two largest cities, Port-au-Prince and Cap Haitien.

## Naderge's Story, a SOIL Beneficiary

Naderge and her family of six have had a SOIL toilet, branded locally as EkoLakay, in their Cap-Haitien home for over two years.

She shared that "before there were toilets like this, the street was full of waste. Now our situation is changing as more and more people are signing up for EkoLakay. Someday everyone will have a toilet like this, and our community will be clean!"



## An IPEN Case Study

International Permaculture Education Network (IPEN)

IPEN Case Studies have been enabled by the **Lush Spring Prize**

Case Study date:

September 2018



Photo Vic Hinterlang

Frantz Jean Louis, SOIL Sales & Marketing Director

## Frantz's Story – a SOIL Team Member

*"I'm proud to work with SOIL as we reduce the risk of disease in Haiti. Now people are learning about the risks of untreated waste and have an option for a toilet in their home. As we do this, we're also supporting agriculture and making a more secure future for the environment as we amend the country's soils with our compost, Konpòs Lakay."*

Frantz has worked for SOIL since 2014 when he first joined the organization as a student intern while he completed his degree in agronomy and certificate in accounting. Since then, he's served as the Administrative Director of SOIL's Port-au-Prince office and now manages marketing for SOIL's organic compost and sanitation service as the Sales and Marketing Director.



Photo Tony Marcelli

Safe processing systems ensure good quality work for 70+ Haitians

## The SOIL Project's story (in brief!)

Alongside fellow ecologists and human rights advocates, SOIL's Executive Director Dr. Sasha Kramer co-founded SOIL, building the first composting toilet in Haiti, in the northern town of Milot. In 2009 SOIL built the first waste treatment facility in Haiti – a composting waste treatment site. In 2010, in response to the devastating January 12th earthquake, SOIL implemented an emergency sanitation program which earned international recognition for being a safe, cost-effective, user-approved, environmentally-friendly emergency sanitation response. In 2011, SOIL celebrated the first sale of its compost in Haiti and then in 2012, launched a household toilet social business pilot to create a sustainable model for providing sanitation services in the world's most impoverished communities. Fast-forward to 2018 and SOIL has hit a new milestone, treating over 100,000 containers of waste throughout the last fiscal year.

*"... to the people of Cap-Haitien and Port-au-Prince, Haiti who helped us develop this seed of an idea into a vision and a dream, we say thank you. The work we have done together in Haiti is yet another example of how, despite unimaginable hardship, Haiti continues to serve as a model for innovation and social change."*

Sasha Kramer, Founder and Executive Director.

## SOIL Goals & Objectives

### SOIL's Mission:

To promote dignity, health, and sustainable livelihoods through the transformation of wastes into resources. SOIL achieves this through designing and developing innovative social business models for safe and affordable urban sanitation systems, using an ecological process in which nutrients from human wastes return to the soil as compost rather than polluting precious fresh water resources.

### SOIL's Vision:

- \* Safe, dignified, sustainable sanitation that is accessible to all Haitians – and all those living in impoverished communities around the world
- \* An environment that is restored to its life-giving potential
- \* People that are empowered to transform wastes into productive resources for our world.

## SOIL's Examples of Good Practise: What It Has Done

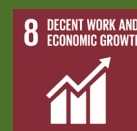
Even where people have access to toilets in Haiti, those toilets are rarely connected to a waste treatment system. SOIL currently operates the only functioning waste treatment sites in the whole of Haiti. As a direct result, cholera and other preventable waterborne diseases continue to wreak havoc on Haitian communities. SOIL collects and treats all of the wastes through a process that exceeds World Health Organization standards, keeping dangerous pathogens out of communities and ground water sources.

SOIL employs an ecological sanitation approach to safely treat and transform human waste into rich, fertile compost – a process that is affordable, sustainable, and environmentally friendly. As a pioneer in Container Based Sanitation (CBS) systems, SOIL is transforming one of Haiti's greatest public health problems into an environmental resource critical for improving agricultural production, reforestation and resilience to climate change in one of the most damaged ecosystems on earth.

SOIL is researching and developing truly long-lasting solutions. Through creating sanitation social businesses that generate local jobs and economic opportunities, SOIL believes that Haiti can begin to repair the environmental and economic damage that has so long crippled the country's development.



SOIL contributes to these SDGs (Sustainable Development Goals) being achieved:



## SOIL's Ways of Achieving Good Practise: **OUTCOMES SOIL Has Achieved** How It Is Done

It is clear that SOIL uses data-driven, effective strategies which are based on:

**Safe Technical Solution:** released in February 2011, the 144-page SOIL Guide to EcoSan is based on SOIL's findings from over six years of ecological sanitation experience in Haiti. Truly revolutionary, the Guide covers topics such as toilet designs, management strategies, composting techniques and lessons learned. The SOIL Guide is available in English and Haitian Creole. To download a copy of the SOIL Guide to EcoSan, fill out the short request form at:

<https://www.oursoil.org/resources/the-soil-guide-to-ecosan/>

The comprehensive SOIL Guide to EcoSan has been shared over 1,300 times across 97 countries.

**Thorough Research & Testing:** throughout the project's evolution, SOIL has implemented a rigorous approach to research, working alongside global experts and public health institutions, to confirm the effectiveness and safety of the waste treatment and transformation processes.

**An Appropriate and Effective Social Business Model:** SOIL's social business model is a fundamental aspect of its success to date, enabling it to operate with a high degree of independence and cost-effectiveness, thus allowing them to deliver a responsive, dynamic service where traditional aid models often have proved ineffective. SOIL operates in a country where too many organizations have struggled to deliver on their goals, and too many billions of dollars have been spent on failed projects. SOIL sees their unusual success as the result of their commitments to:

**Cultural Fluency:** Over 85% of SOIL staff members are Haitian. All staff speak the local language (Haitian Creole) to facilitate communication and understanding with the communities where they operate.

**Local Sourcing:** SOIL purchases supplies locally and contracts with local businesses whenever possible, keeping their costs down while investing in the long-term growth of Haiti's economy. You can learn how SOIL works with local contractors for their toilet construction [here](#).

**Inclusivity:** Beneficiaries are consulted at every step of project design and implementation, ensuring that SOIL's programs are community-driven and responding to real, not simply perceived, needs.

**Expertise:** SOIL values knowledge gained through both formal training and life experience, and because their dedicated employees live and work in the communities SOIL serves, they are truly experts in local solutions for sanitation, agriculture, public health, business development and community organizing.

For example, Jose "Leno" Philistin, SOIL's lab coordinator in Northern Haiti got his start as an intern in a hospital, where he saw first-hand the devastation caused by preventable waterborne disease. Read his story [here](#)

- SOIL significantly increased the amount of waste being treated at their composting waste treatment sites each month, from 32 metric tons in July 2016 to 50 metric tons in July 2017.
- SOIL produced nearly 100 metric tons of compost in 2017
- SOIL brought in more than \$22,000 USD in revenue from compost sales in 2017, helping to support their composting waste treatment operations.
- Through EkoMobil, a portable ecological sanitation social business, SOIL provides safe, dignified toilets and waste treatment services for community fairs, schools, construction sites, and other events. In the 2017 fiscal year, EkoMobil generated \$59,522 USD in revenue.
- Nearly 9,000 people accessed SOIL's educational programming in Haiti in the 2017 fiscal year.
- SOIL is continuing to provide capacity-building seminars on ecological sanitation throughout Haiti.
- Over 2,700 people access one of SOIL's three public toilets in the Shada community Northern Haiti each month. SOIL has worked in Shada for ten years and is determined to continue providing safe sanitation to one of Haiti's most vulnerable communities.
- SOIL's composting waste treatment system emits 40-92% fewer greenhouse gases than traditional waste treatment methods, and SOIL is engaged in several research collaborations with US universities, including University of California Merced and Stanford University, to evaluate the climate implications of composting waste treatment.
- SOIL is developing research driven open-source solutions to offer a model that will be suitable for global replication. SOIL has provided consultancy services to dozens of projects in Haiti as well as supporting work in Madagascar, Benin, Sierra Leone, and Kenya. Components of SOIL's toilet model have been adopted for use in Kenya and the United States, and SOIL's composting facilities have helped inform work in Ghana, Peru, and Kenya.
- SOIL is a founding member of the Container Based Sanitation Alliance, a coalition of practitioners developing container-based sanitation (CBS) services around the world. The Alliance coalesced to formally establish CBS as a viable alternative to traditional sanitation technologies, the goal is to bring CBS services to scale and achieve lasting impact for families and communities in urban areas around the world.
- SOIL's outreach encompasses everything from educating communities on health and hygiene to coordinating a national Sustainable Sanitation conference for key players in the sanitation sector. SOIL provides periodic open training workshops about EcoSan, and have a wealth of online resources their [SOIL Resources page](#)
- SOIL joined together with Haitian-led community organizations to deliver over \$60,000 of immediate relief supplies immediately after Hurricane Matthew struck Haiti in October 2016.



## Permaculture Principles & Design in Action

SOIL is a fantastic demonstration of the use and value of the permaculture principle: *the problem is the solution*.

By confronting one of the major social and environmental problems in Haiti head-on, SOIL has generated significant social, environmental and economic solutions, that benefit many thousands of people, with the potential to be taken much further.

Removal of Limiting Factors: by carefully designing an ecologically based social business model, SOIL is developing an innovative financial model aiming to overcome the financial limitations that make this global crisis particularly tough to tackle, enabling a more dynamic, effective and creative organisation and product-service solution to emerge.

Permaculture Principles in Action: the problem is the solution; multi-function; small change for big effects; relative location; observe & interact; removal of limiting factors.

## From Inspiration to Action

SOIL's solutions are supported and fed by their community education programmes.

Together these have multiplied and grown the diversity of beneficial impacts they produce. What experience from SOIL could help your project, community or network in relation to:

- Delivering community education programmes that support and expand the delivery of practical solutions?
- Developing effective social business models?
- Delivering and scaling up ecological sanitation solutions?
- Developing regenerative permaculture and agroecology education, teacher training and demonstration projects that relates to local needs?
- Project development and evolution, to scale-up in valuable ways at the local level?

## The Impact of the Lush Spring Prize on SOIL

Although SOIL's implementation efforts are limited to Haiti, its ultimate goal is to prove that **regenerative sanitation solutions** can produce resources, restore ecosystems, nurture solidarity, create dignified livelihoods, and build health and resilience.

The Lush Spring Prize is helping SOIL to continue to expand its work in Haiti, whilst at the same time supporting its work to make safe, affordable sanitation solutions available to some of the most impoverished communities around the world, in ways that regenerate people's lives and communities, the soil and wider local environment, and local economies.

## Legal Status, Structure & Size: Project start date: 2006

SOIL is a 501(c)(3) non-governmental organization that has been working in Haiti since 2006. SOIL's team is led by six directors who report to a volunteer Board of Directors made up of members of the community of donors, volunteers and allies of the organization who display the professional experience, dedication, and responsibility needed to lead SOIL. SOIL has 77 staff - over 85% of SOIL's staff are Haitian and local to the neighborhoods served by SOIL.

## Funding, Finance, Resources

In 2017 SOIL's income was derived from the following sources: Foundation grants (53.3%); Individual contributions (23.5%); Religious, civic & partner organisations (16.1%); earned income (6.9%); corporate giving (0.2%) - within this income, individual contributions nearly doubled, and the percentage of SOIL's revenue coming from earned income was increased by around 50% in 2017. You can learn more about SOIL and make a contribution to their work at [www.oursoil.org/donate](http://www.oursoil.org/donate)

## Potential Areas for Collaboration with Project (Local, Regional, National or International)

**Projects Needs:** SOIL's work in Haiti depends on the contributions of generous individuals. To help cultivate their regenerative sanitation solutions, visit [oursoil.org/donate](http://oursoil.org/donate)

**SOIL's Offers:** model approaches to Container Based Sanitation systems - the SOIL Guide to EcoSan is available via: <https://www.oursoil.org/resources/the-soil-guide-to-ecosan/> and further online resources at [SOIL Resources page](#)

**Other Collaboration opportunities:** feel free to reach out to [info@oursoil.org](mailto:info@oursoil.org) with collaboration proposals.

## Contact Information

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### International Permaculture Education Network (IPEN)

Increasing the effectiveness and coherence of permaculture education internationally

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IPEN website: <https://www.permaculture.org.uk/ipen>

