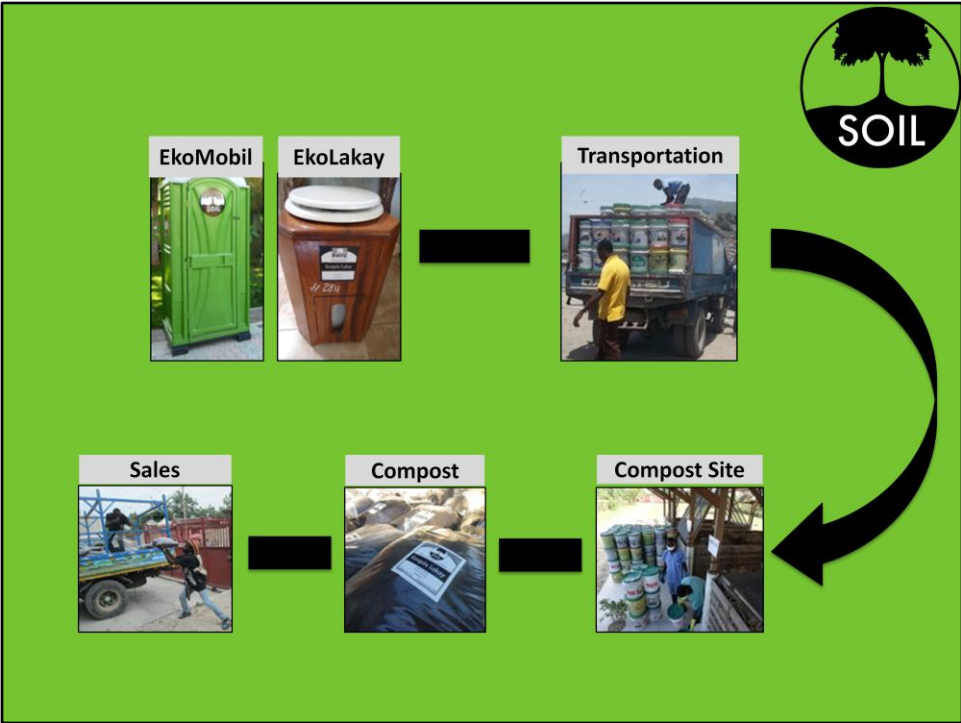
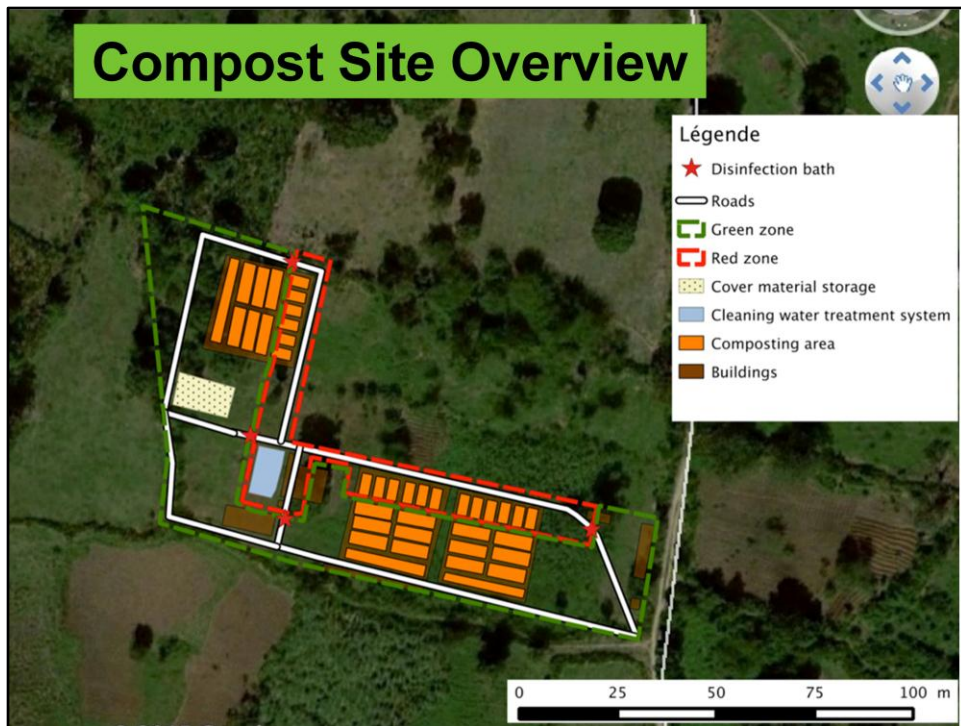




**Transforming Wastes to Resources**  
**SOIL's experiences in Haiti**

**Nick Preneta, MPH**  
**SOIL Operational Consultant**





Our compost site in Limonade, northern Haiti, is approximately 6000m<sup>2</sup> and was selected in coordination with local authorities. It is located in an agricultural area and is across the road from a planned municipal dump site. Within the site, compost bins receiving fresh waste are located adjacent to the windrow areas to limit movement of the material within the site. Red and green lines mark the dirty and clean zones, respectively. Movement between the areas require adhering to SOIL's protocols regarding hygiene and disinfection (handwashing points, tire disinfection, PPE, etc.).



The bins that receive fresh waste are made with all local materials. A sloped cement foundation prevents leachate from touching the ground, instead diverting it to a collection point. The walls are built up with modified pallets and stuffed with sugarcane bagas, providing insulation but also allowing air flow. A mesh cover over the bin that functions on a pulley system enables SOIL staff to have access to the material for monitoring but keeps vectors like birds out. The metal roof protects against the elements and there is enough clear space to allow SOIL staff to monitor the bins from above. Each bin is approximately 18.75m<sup>3</sup>.



Emptying of the containers happens from above the bin at compost sites, filling it from back to front. Prior to any dumping, a layer of 6" of sugarcane bagas is put on the foundation to help soak up any excess leachate. For every 3 containers emptied, 1 container of only sugarcane bagas is added in order to reduce smells and flies but also to work as a bulking agent and increase carbon content within the pile. At the end of each day where emptying occurs, another layer of bagas is applied to the pile. Currently SOIL is emptying more than 20,000 gallons of waste/bagas mixture each month.



Once emptied, drums and the lids are moved immediately to the washing area. A pressure washer is first used to remove any solids and this wastewater drains into a septic tank. Drums and lids are then submerged into a 0.05% chlorine solution for a contact time of 1 minute. Drums and lids are then moved into the sun to dry before being closed and stored for redistribution.



SOIL follows the WHO standards of maintaining temperatures of 50°C for 1 week throughout the pile to eliminate the most resistant pathogens. SOIL monitors the temperature in the middle and in two corners every 2 days so as to track any variation of temperatures within each pile.



Piles are left in the static bins for two months before being turned into the roofed windrow area. At this point, windrows are then turned every month for another 4-6 months to ensure rapid decomposition of all the material. Average time from when a pile is filled to when the compost is ready to be sieved and re-used is currently 9 months.



## Co-Composting Materials



Drums coming into the compost site are a mixture of poop and what we call “bonzodè,” which is a mixture of ground peanut shells and fine sugarcane bagas. For a bulking agent in the composting process, we use coarser bagas. Bagas is sourced from local rum production facilities, while the peanut shells are sourced from companies that are producing enriched peanut butter.



SOIL tests every compost pile for E.coli prior to moving the material into the windrows (at the 2month mark) and then again prior to sieving the compost and making it ready for re-use. Any batch that fails these tests is turned back into the beginning of the compost process. In 2012, SOIL collaborated with the US CDC and Emory University to test for ascaris, as this is not possible in Haiti. This study found that ascaris died off within SOIL's composting system within 8 weeks while acceptable E.coli levels were met within 14 weeks.



SOIL has branded the final product as “Konpos Lakay” and currently sells it in bulk as well as in 5 gallon bags. Our current price is 250USD/metric ton, and we have sold over 100,000 gallons since 2012. Customers range from nurseries and individuals doing private gardens to large agricultural programs, NGOs, and a significant purchase by Heineken in 2013. SOIL is currently undertaking a market survey so as to better define how we will market and sell this compost.



**Thank you!**

**[npreneta@oursoil.org](mailto:npreneta@oursoil.org)**