

CESO: composting and cooperation

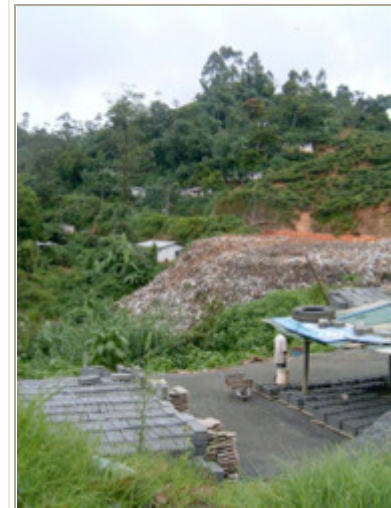
Global Citizens for Change
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Bill Goodings

Judging by the smell of the ancient dump from miles away, Canadian volunteer Bill Goodings suspected that he would face a tough job. You weren't supposed to smell a dump from that far away.

The 80-year-old, retired civil engineer and his Bolivian counterpart arrived at the massive garbage site outside of San Borja, Bolivia, got out of the car and stood among insect swarms, vultures and toxic gases at the dump.

Goodings had decades of experience in waste management in Canada and overseas, but he had emerged from a long plane ride from Toronto, and the sight of children and adults poking around in the rodent-filled debris was surreal. The children were collecting aluminum, steel and anything they could sell. They lived near the site with their families.

Standing on a hill overlooking the dump, Goodings' partner, a Bolivian municipal official, turned to him: "Bill, what can we do about this?" With only a couple of weeks in Bolivia and practically no budget, a less-experienced expert would have wilted perhaps, but Goodings had stood knee deep in garbage heaps countless times before. The international-development organization Canadian Executive Service Organization (CESO) had sent him to work on more than a dozen projects related to solid-waste management. Since retiring in 1995, he'd tackled smelly garbage heaps in the Philippines, Honduras and Sri Lanka.



A common, waste-management practice in the South is to dump garbage over hills and banks in impoverished neighbourhoods, like this one in Sri Lanka. Canadian, CESO volunteers worked with municipal partners to improve solid-waste dumps there.



In many municipalities, such as in Minero, Bolivia, families live near dumps and sift through garbage looking for trinkets and recyclables to sell. These 10-year-olds in Minero are scavenging for metals, plastics, bottles, cloth and corrugated cardboard. Each family can make a few dollars a day. CESO has completed several projects for this growing town.

"We'll turn these into compost piles," Goodings suggested. The municipal official thought it was worth a try. The vultures, goats and chickens that lived off the garbage – the "disposal team," as Goodings called it – was doing its job, but the high levels of toxic gas, insects and rodents were dangerous. And the situation had to improve for

the people who worked with the garbage.

Later, Goodings and the official interviewed dozens of village residents to determine the nature and final destination of the trash. Goodings discovered that 90 per cent of the dump was organic, unlike dumps in Canada, which contain much more plastic, metal, inorganic material that often doesn't biodegrade.



In Anuradhapura, Sri Lanka, CESO volunteer Bill Goodings (on right) and his counterpart, manager of a waste-management site, measure the temperature of garbage piles that they'd covered with rice hull. High temperatures indicate that rotten garbage is turning into compost.

"Garbage can be very telling," Goodings says. "The amount and type of garbage is indicative of prosperity. A village in an emerging nation will have about a third of the garbage, on a per capita basis, as we do."

On one of his first CESO assignments in the Philippines, he had experimented with converting waste into a compost pile. The key was to loosely pile the garbage, so that it could aerate, then cover it with sawdust, rice hull, palm branches or something as a barrier to flies and animals and as a way for the right bacteria – oxygen-loving bacteria -- to thrive. He and his Filipino partners accomplished this during the CESO assignment in the Philippines, and it was time to try on a larger scale, in San Borja.



Goodings brought a couple of \$8 thermometers from Canada, inserted one into a pipe, and inserted both about a foot and half into this covered garbage pile. The meter read 50-degrees Celsius (on a day that was less than 30 degrees), an indicator that bacteria were turning the garbage into soil. Within six months, 80 per cent of this massive pile would become soil.

With the compost idea, he had followed his gut instinct, which comes only after a lifetime of experience in the industry. Goodings is a founding member of the Composting Council of Canada. Many of CESO's volunteers are like this, volunteering decades of experience to work with local experts on solving local problems.

Goodings and his partner placed the garbage into long rows about six feet high and covered them with a six-inch layer of discarded rice hulls. They had negotiated with local factories to obtain the rice hulls for free.

Much to their amazement, the internal temperature of the garbage rose on the first day, eventually reaching 55 degrees Celsius, which proved that right bacteria was thriving and natural composting was occurring. Within three days, the high temperature caused the flies and larvae to die off, and the rodents moved out, because of the heat. The odor of rotting garbage disappeared — that in itself was a sizeable boost in the quality of life for the communities living next to the dump.



In Honduras, Goodings and his counterpart worked on a waste-management project similar to the ones in Bolivia and Sri Lanka. They used free sawdust from local factories, instead of costly rice hulls, to cover the garbage piles. Composting occurred soon after.

Within six months, the pile transformed into mature black compost. An assortment of non-recyclables -- bags, tires, bottles, wood -- littered it, but they could be screened out and the soil added to gardens.

Goodings ended up applying the composting methodology in many communities around the world, replacing rice hull with whatever local material was available. He found satisfaction in helping municipalities to improve their dumps and solid-waste systems.

“There’s a joy that one derives from being capable of doing something like this,” Goodings says. “The communities share with me, as I share with them. We humbly learn about the wonderful and different heritages and cultures in which we find ourselves, and for me, that often begins with finding myself right in the middle of a smelly garbage dump.”

The Canadian Executive Service Organization (CESO) sent Bill Goodings, one of 2,800 professionals on its roster, to work with Bolivian municipalities on improving their waste programs. San Borja was only one of many sites.

CESO is a non-profit organization that delivers programs in 13 countries in Africa, Asia, the Americas and Eastern Europe—and in Aboriginal communities in Canada. For more than 40 years, CESO and its partners have helped to build strong, independent communities and to strengthen socio-economic well-being at home and abroad.



Wherever he works overseas, Goodings trains municipal partners, making projects sustainable long after he leaves.

Photos by CESO | SACO volunteer Bill Goodings. August 26, 2009