OPINION

Landfills are not the answer to the garbage problem

DITCHING THE DUMP

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THE ECOLOGICAL WAY OF ADDRESSING THE GARBAGE PROBLEM IS NOT THROUGH A LANDFILL—THAT ONLY ENDS UP AS A "GLORIFIED" DUMPSITE—BUT THROUGH THE ECOLOGY CENTER SYSTEM OF RESPONSIBLE PRODUCERS, CLEAN PRODUCTION, AND PEOPLE IN HOUSEHOLDS AND THE COMMUNITY WHO PROMOTE AND PRACTICE WASTE PREVENTION AND REDUCTION, SORTING AND SEGREGATION AT SOURCE, REUSE, RECYCLING AND COMPOSTING.

The heart and soul of Republic Act 9003, or the Ecological Solid Waste Management Act, depends on the people—whom the local authorities should harness instead of the dump truck; and to whom they should give the land for habitation and livelihood.

Unfortunately, the authorities do not seem to understand ecological waste and resource management as they push instead for "sanitary" landfills (is there such a thing?). A draft paper which came out in January 2006 on behalf of the League of Cities and League of Municipalities of the Philippines entitled "Making RA 9003 Work," recognizes the unreasonable expense and demanding requirements of RA 9003 for "sanitary" landfills, but it nevertheless focuses on the need for "final disposal facilities" and recommends, well, "modified" or "hybrid" landfills.

"Final disposal facilities" (read: landfills) are not the answer to the problem. The law states that every household and establishment in a community should protect the environment and promote public health through resource consciousness, waste prevention, waste sorting and segregation at source, recycling, composting, and use of special, environment-friendly technologies to process residual wastes including hazardous, infectious, and toxic wastes.

The law further mandates a nationwide information, education, and communication effort led by the Department of Environment and Natural Resources with the active participation of other government agencies, non-government organizations, and other groups.

The success of such an effort—provided that information, education, and communication (IEC) programs and implementation are faithful to the full ecological framework that the essence of the law invokes—could in fact ease the burden on the need for "disposal" facilities.

On "sanitary" landfills, it is clear in the law that it is not the next alternative to a controlled dump as is now being asserted by certain vested interests—such as those who have succeeded in having this provision on "sanitary" landfills included in RA 9003—after all the efforts that had been taken to put in the ecological provisions.

The paper "Making RA 9003 Work," asserts the following: Most Philippine LGUs are poor (4th to 6th class) and cannot support an effective solid waste management (SWM) system in the country; the cost of operating an effective SWM system is high; technical and financial support systems for the local implementing bodies are weak; "infirmities" and "realities" must be considered, such as "competition" between SWM and other development priorities; a need for "economies of scale" and "efficiency factors" for an effective SWM; "high-end and state-of-the-art SWM system in a low-end, low-tech local economy;" and conflicting and incomplete implementing guidelines.

There is no quarrel with the fact of the state of poverty in the country. It does not follow, however, that the "poor" LGUs cannot help in contributing significantly to an effective ecological resource management.

BARANGAY WITHOUT A DUMP

Barangay Tuktukan in Guiguinto, Bulacan, has two tricycles with sidecars for collecting biodegradable waste everyday from a population of about 10,000. The collection is composted in a shed. The product becomes soil enhancer for the community's vegetable garden and for the collectors' own plots; in another community, the compost is sold in bulk to a fishpond operator who finds the product more beneficial than the commercially produced feeds.

Most non-biodegradable wastes are sold as soon as the household segregates its waste, and these hardly see the collection day. Those not sold are being kept for the granulator or pulverizer that the municipal government has promised to buy which will turn the "residuals" into fillers for concrete products, or as raw material for livelihood crafts.

Also, there is no more dumpsite in Tuktukan. Before, all 14 municipalities of Guiguinto dumped their garbage in a one-and-a half hectare property in the barangay, right along MacArthur Highway. Today, the area is overgrown with wild grass and a building has been constructed beside it.

More than the financial profit to be gained is the immeasurable "revenue" that an empowered community gains from the waste-turned-compost-turned-money; and from the preservation of the environment.

What is needed is adequate and timely information, education, and communication on environment and ecology. Too bad many authorities have often used that lame and condescending excuse,"ayaw matuto ang mga tao, ang titigas ng mga ulo" (the people do not want to learn; they are stubborn).

NEED FOR ECOLOGY CENTERS

With respect to the other points brought up in the paper, "Making RA 9003 Work:" The paper refers only to "SWM" not "ESWM." Without the Ecological premise in "development", no significant transformation can take place, much less be sustained.

"Economies of scale" is more akin to centralized, not barangay-based management.

"High-end" or "state-of-the art" what? No man-made technology can beat composting with soil, cocodust, leaves, and the like; plus the heat of the sun; and the action of air, water, and microorganisms. Simple non-biodegradables can be recycled with simple know-how or simple equipment.

It is the hazardous, infectious and toxic (HIT) wastes that for now must be dealt with—but at the provincial or city level—with the use of special, environment-friendly technologies that could cost some amount, but only initially. Still, this is less than the cost of establishing and operating a landfill, even just a "hybrid" one. Besides, this portion of the waste is minimal compared to what can be composted and immediately recycled. It could be further reduced if the advocacy for extended producer responsibility and clean production technologies will succeed.

What we need are Ecology Centers (or Materials Recovery Facilities as referred to in the law, though we prefer the former because we are not only dealing with materials; we are dealing with values).

The recommendations in the paper are anchored on the conclusion that there is a need for disposal facilities because of waste volumes. Recommendations include the "upgrading" of requirements for controlled dumps, and coming out with a "hybrid" sanitary disposal facility much like an "engineered" landfill with less expensive features.

Landfills do not make for a waste-free environment. Waste volumes are synonymous with hauling, dumping, and tipping fees.

We need education for as many people in communities at the shortest time possible. There are no socio-economic boundaries in people's capabilities to understand and do what is right, given an "even playing field" of opportunities for enlightenment and with the proper, not necessarily expensive, support. Thus, the people themselves will know how to prevent and reduce their wastes right in their own homes and in the Barangay Ecology Center. ■

ALL ABOUT LANDFILLS
Compiled by Patti Sales

WHAT IS A SANITARY LANDFILL?
RA 9003 or the Ecological Solid Waste Management Act of 2000 mandates the closure of open dumpsites, and the use of a long term storage facility, or a sanitary landfill, for the residual (non-recyclable) waste after mixed waste has undergone sorting, segregation, composting, and recycling.

A sanitary landfill is an engineered way of storing and disposing of residual waste. In a sanitary landfill, wastes are spread in layers on a piece of property, usually on marginal or submarginal land. Each layer is covered with soil and compacted to minimize the volume of the waste and increase the rate of decomposition.

The engineered landfill systematically addresses the three forms of waste bi-products: residual solid waste after decomposition; gaseous waste evolving from the decomposition process; and the liquid leachate. Gaseous waste is addressed by a specially designed dome that collects or harvests gaseous waste bi-products, recycles it, and converts it into fuel that may be used to generate heat or other forms of energy.

The flooring of an engineered landfill is composed of a non-permeable material that prevents the seepage of leachate, liquid waste which is potentially 100 times more potent than raw sewage in polluting the soil and water table. A special chamber incorporated within the landfill collects the leachate and treats it with chemicals so that it can be safely disposed.

WHERE SHOULD IT BE LOCATED?
According to RA 9003, a site selected for a landfill must be:
- Consistent with the overall plan of the LGU
- Accessible to major roadways
- With adequate amount of earth needed for post closure
- Located in such a way that it will not affect environmentally sensitive resources such as the aquifer, groundwater reservoir or watershed areas
- Sufficient to accommodate the community's waste for a period of 5 years

A landfill must also fulfill the following requirements for site design and operation:
- Full or partial hyrdrogeological isolation: Naturally, the sited landfill should have semi-permeable soil to secure against the seeping through of the leachate. As standard procedure, a soil or synthetic liner is installed to minimize contamination of groundwater. But even with the presence of a liner, there is still a need for the collection and treatment of the leachate.
- Formal engineering preparations: A systematic and engineered plan should be prepared with intensive and comprehensive research by professional geologists, architects and engineers.
- Permanent control: Knowledgeable and trained staff should always be at the site to regulate the preparation, construction and maintenance of the landfill, and the disposal of wastes as well.
- Planned waste placement and covering