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Manila Turns to Recycling

by Andre Lachance

In some developing countries, cumbersome pollution control mechanisms make it impossible to enforce compliance with environmental regulations. This means that hundreds, if not thousands, of pollutants continue to contaminate the water, air and soil of industrial areas in the South, degrading the living conditions of people living around them.

Almost three-quarters of the 15,000 industrial plants in the Philippines are crowded into a single region: Metro Manila. In cooperation with McGill University's Geotechnical Research Centre in Montreal, Canada, the Philippines Ministry of the Environment and Natural Resources has developed an industrial waste exchange system.

INDUSTRIAL RECYCLING

The exchange system, already operating under various guises in Western Europe, North America and Japan, is based on a very simple concept: production waste is actually badly managed raw material, and not really waste as such. Thus, one company's waste could easily be another company's treasure.

With help from IDRC, the Industrial Waste Exchange of the Philippines (IWEP) serves as a link between producers who want to exchange waste. The experiment, a first in Southeast Asia, could be extended to include other countries at a comparable level of industrial development that, like the Philippines, find access to imported raw materials and energy sources difficult. The exchange system reduces environmental pollution, recovers usable resources and cuts the cost of waste disposal, said Geotechnical Research Centre scientist Raymond N. Yong. Mr Yong, of Chinese origin from Singapore, was raised in Malaysia and is thoroughly familiar with the countries of Southeast Asia. He is the project's chief architect. "The biggest hurdle was education. We had to make people see waste as raw material, to make them understand the profit potential there. And we succeeded." A score of large and medium-sized companies are voluntarily exchanging their waste. They gain by being paid for waste they would not otherwise know what to do with, and by saving considerable sums by acquiring raw materials at bargain basement prices.

Though the environmental impact of such exchanges is still minimal, it is likely to grow substantially in the coming years. Of some 1,200 large companies contacted, 420 expressed a keen interest in the system. Dozens of them are now negotiating reciprocity agreements.

WASTE OFFERED AND SOUGHT

Twice a year, a catalogue is published offering at least 600 industrial waste products of all kinds and listing over 130 more that are sought. Each product is assigned a code to ensure that company identity and location remain confidential, and technical information, such as pH and any contaminants present, is provided. Organic and inorganic chemicals, solvents, oils, greases, waxes, acids, alkalis, metals, metallic sludges, plastics, textiles, leather, rubber, wood, paper and glass it's all there. What's more, none of them

will be dumped into a river, landfill or field.

The system kills two birds with one stone; it protects the environment and creates jobs. To cite but a few examples: calcium carbide sludge, which in the past would have been dumped, is now used as a neutralizer in wastewater treatment plants; waste pulp from a pineapple cannery finds a future as animal feed; gypsum waste is recycled as a component in wall and cement finishes; acid is recycled into batteries.

Not all the waste finds a buyer, but at least the information gets around. When two companies come to an agreement, IWEP withdraws, leaving producers and users to negotiate all agreements directly. Some companies are still hesitating, worried about their liability in case of accident. Others are concerned about compatibility and transportation costs. But one thing is certain: IWEP is offering Filipino industries an innovative solution that is economical and profitable on all counts. Everyone benefits: the companies themselves, and the thousands of poor people who have no choice but to live as squatters on the fringes of industrial areas.

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