Working with the Waste Pickers

Asian Approaches to Urban Solid Waste Management

Christine Furedy

A new philosophy of resource management is beginning to transform solid waste management worldwide. It is grounded in "resource recognition" — the idea that most waste material can be regarded as unused resources. Environmentally sound waste management now entails the reduction of waste in production and distribution processes and the enhancement of reuse and recycling. In wealthy nations these principles are being translated into practice through government regulation, stakeholder co-operation and citizens' initiatives. In poorer countries, however, urban solid waste management is still wedded to the conventional engineering systems and city cleansing departments tend to look to higher technology and privatization for solutions to the environmental problems of uncollected and unsafely dumped wastes.

The kind of Canadian initiatives described in other articles in this issue of *Alternatives* — the development of comprehensive decision-making structures, changes in economic thinking, and the co-ordination of strategies — are only just starting to be discussed in the more affluent Asian countries such as Malaysia and Hong Kong. In most other parts of Asia even the well-established environmental movements show little interest in the resource recognition concept. More innovative thinking about solid waste problems goes on in smaller, community-based organizations.

The motivations of Asians who have become activists for reform of waste management systems are often more complex than those of their Canadian counterparts. While we in Canada are mostly concerned about ineffective municipal solid waste management (MSW[illegible]l reasons suc[illegible] source depletion, waste management in Asian cities is intimately linked with the lives of street dwellers and many other very disadvantaged people. In response, many Asian community action groups look beyond the ecological implications of resource recognition and consider their programmes as social action for the poor.

All the community-based projects presented here have some general social and ecological goals and a potential to change the simple collect-transport-dispose organization of waste services. Their broader goals link resource recognition to social betterment and changes in attitude at the local level. These initiatives include assisting poor people whose livelihoods depend on wastes to do safer, more acceptable work; promoting the separation of wastes to facilitate more thorough or more efficient recycling (including decentralized composting), and developing community/private-sector/municipal partnerships. Concern for waste workers and incorporation of widespread informal waste recovery and recycling activities are important components of Asian municipal solid waste reform and distinguish these community movements from citizen groups' actions on solid waste management in more developed countries.

Informal waste economies

The factors promoting resource recovery from municipal solid waste in Asian cities differ from those in Canada. In resource-scarce developing cities, much consumption is frugal and wastes of all kinds are exploited by poor people and by small and large industry.

Asian cities have extensive waste economies, based on the activities of itinerant waste buyers, waste pickers, small waste shops, second-hand markets, dealers, transporters, and a range of recycling industries. How these informal systems work is affected by socio-economic change as cities grow and are better regulated. In modernizing cities the collecting and trading of clean wastes (those kept separate at the source of generation) becomes difficult because the operations of collectors are more restricted and more costly. At the same time, modern consumption by the more affluent generally renders their residual wastes more attractive both to pickers and to the municipal collection crews. Certainly the increase of recyclables in the final waste streams makes dump picking more worthwhile. But, picking (gathering recyclables from mixed wastes on streets and dumps) is also becoming more hazardous, as Asian urban refuse now contains more broken glass and cans, more toxic materials, and more biomedical waste.

During downturns in the economy more people resort to waste picking as a survival strategy. While poor and inaccessible areas are plagued by pollution from uncollected wastes, many inhabitants of these areas depend upon waste recovery and recycling to meet some of their basic needs for shelter, food and employment. They desire access to good wastes as close as possible to the sources in better-off residential and commercial areas.[1] When cities try to increase the efficiency of waste services with more mechanization, friction between formal and informal waste systems increases.

There is no societal recognition of the importance of waste recycling to the economy, and waste pickers usually have no concept of the pivotal role their work plays in resource recovery. As a result, the social status of waste pickers is very low.

Street children, who lack access to schooling since they have no permanent home, pick waste for a living. Community-based projects strive to improve pickers' earnings, health, living

Proponents of community-based approaches argue that there must be co-ordination of formal and informal MSWM practices. Some suggest that waste picking could be regularized and improved through licensing. More advanced projects seek community co-operation in waste separation and collection that can dovetail with both the regular waste system and private-sector recycling. Those described below depend upon a linking of the resources of better-off neighbourhoods with people who want access to wastes as raw materials. The supporters of these initiatives are beginning to develop an ethic that combines social and ecological motivations for co-operation in solid waste management. The examples explore relationships that can be exploited to enhance community participation and encourage partnerships among city officials, citizens' groups and the private sector.

During downturns in the economy more people resort to waste picking as a survival strategy. Inhabitants of poor areas meet some of their basic needs for shelter, food and employment through recovery and recycling.

The Garbage and Human Concern project

The history of the Waste Wise pilot project named "Garbage and Human Concern" shows how a comprehensive view of local solid waste problems can evolve from a social concern for waste pickers.

The idea grew out of the Ragpickers' Education and Development Scheme (REDS), supported by the Catholic Church in Bangalore, south India, which helped waste-picking street children. REDS' director, Anselm Rosario, was convinced that improvements for waste pickers depended upon creating a legitimate role for them in the waste management system. Waste pickers could increase their status by becoming waste collectors if households would co-operate in separating their wastes and handing them over to door-to-door collectors.

In 1990 the Waste Wise project was launched by Rosario, aided by Asha de Souza, through Mythri Trust (formed to carry on REDS). They had funding for one year from Terre Des Hommes of Switzerland. The general goal was to explore alternatives to the conventional solid waste system, based on waste reduction, separation of compostable, recyclable and other wastes, and decentralization. Socially, the goal was to improve conditions for waste pickers by lending legitimacy to informal waste work, improving earnings, and creating opportunities for upward mobility. Benefits to city authorities were to include job creation and cost reductions in collection and transportation of wastes due to waste reduction and decentralization of some waste treatment through composting. As well, the curtailment of picking from streets and dumps would limit associated health and legal problems, and mess, and partially remove the activity that most clearly symbolizes the abject poverty of many city residents.

Waste Wise carried out their pilot project in an affluent residential area, Jayanagar IV Block, which also has some offices, shops, institutions and auto repair workshops. Considerable quantities of recyclables are generated in the neighbourhood, there are a number of waste dealers' shops, and contact with existing waste workers is well established since Mythri has been working with the street pickers in the area for some time.

The Bangalore Corporation agreed to make land available in the local park for the composting and vermiculture. The participating households use bamboo baskets to hold the dry wastes. They separate out dry and wet wastes, and leave unsanitary waste for city collection. Former waste pickers operate as a waste collecting team, picking up the separated wastes from the project households. They are equipped with handcarts and baskets, and are trained by a supervisor paid by Waste Wise. The collectors visit each house daily, take the organics to the compost site, sell the dry recyclables and dispose of residues in communal bins. The 300 participating households pay a small fee per month for this service and since there is no municipal curbside service this saves them having to carry their wastes to street bins.

The collectors, who are 10 to 16 year-old street dwellers, are ineligable to attend school since they have no fixed address. They are paid about $14 per month from the fees collected, and receive payments for tea and food. Collectors only get the residual wastes as most recyclables are sold or bartered to itinerant buyers by householders, but they earn about $0.70 a day through the sale of recyclables to local waste shops. Between 150 and 180 kg of waste are being diverted to composting each day, with 25 to 30 kg of paper, plastics and other dry wastes being sold for recycling.

Waste Wise is still a shoe-string organization headed by Rosario and helped by a few volunteers and one or two part-time assistants. They are frank about the problems they have encountered.[2] Some households are not prepared to pay anything for this convenience since they consider that their property rates should cover waste services. About 70 percent of the households are, however, paying as agreed. There is a tendency of residents to be suspicious of the waste collectors, who are still perceived as street people. And there are not enough staff or volunteers to respond to a number of requests to organize this work in other areas of the city.

Street dwellers to source collectors

Among the projects of the Metro Manila Council of the Women Balikatan Movement, Inc. (MMWBM), a regional women's organization, is one for source-separation of dry recyclable materials in San Juan City, Metro Manila. The Linis-Ganda "Clean-Green" project was begun in 1983 by Leonarda Comacho who noted that city authorities were harassing the traditional collectors at a time when recyclables were rapidly increasing. The city administration showed no interest in encouraging the separation of household wastes.[3]

An important part of the undertaking is that the collecting and trading of the recyclables is done through existing waste dealers, not by setting up official "redemption centres", an approach which had

Résumé

DANS LES VILLES du Sud, les motivations pour réduire les déchets diffèrent de celles prévalant dans les villes du Nord. Alors que dans ces dernières les principales considérations sont d'ordre écologique, comme le manque d'espace pour disposer des déchets et l'épuisement des ressources, dans les villes d'Asie, ce sont davantage des considérations d'ordre social qui priment. Ainsi, certains organismes communautaires, motivés par leur souci d'aider ceux qui vivent dans les rues et qui ramassent des déchets pour survivre, innovent en mettant sur pied des plans destinés à réduire les déchets. Quelques études de cas dans des villes asiatiques mettent en lumière des projets de ce genre qui, tout en tenant compte des considérations sociales, viennent se greffer aux activités de recyclage et de récupération déjà en place, et ce, avec le support des communautés. On vise entre autres, avec ces projets, à améliorer le statut social des personnes qui ramassent les déchets (parmi lesquels on compte plusieurs enfants), à promouvoir leur avancement social et leur éducation, ainsi qu'à créer des conditions de travail plus sécuritaires. L'auteur fait ici un compte rendu détaillé de trois projets existant en Inde et en Indonésie dans ce domaine.

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Right: *Street children gain work and the opportunity for advancement as collectors in the Garbage and Human Concern project.*
Below: *Overflowing street bins, common in India, are a nuisance that can be reduced by collection from households and source separation of recyclables, as the projects in Bangalore and Madras are demonstrating.*

failed earlier partly due to the opposition of established small dealers.[4] Eight major dealers in San Juan participate. The project supplies identity cards and a uniform for the push cart collectors who are recruited by the dealers. There are 60 registered workers, who are dubbed "eco-aides." The collection carts are jointly funded by the dealers and the project. The dealers advance the money each collector needs to buy waste materials (mainly bottles, plastics, cans and paper) each day. The MMWBM organizes the routes and schedules for collection and the educational campaigns in San Juan to sustain householders' interest.[5]

To encourage co-operation from the dealers, the project organizers researched the markets for the new kinds of wastes coming from households (e.g., styrofoam and tetrapacks) and put the dealers in touch with prospective buyers, helping them to expand their scope of business. Householders benefit by earning money from the convenient sale of their recyclables.

About 60 percent of the 18,000 households in San Juan participate in separating and selling wastes. From time to time, flyers are circulated to remind households of the importance of supporting the collection system.

In general, the police have recognized the project eco-aides and they work without harassment, under improved conditions. They collect about 50 tonnes of recyclables per month for most of the year. (During the wet season, it is difficult for them to do collections and for this period the workers may look for other jobs). They are paid a fixed price for each type of material, regardless of the market price fluctuations. Some of the junk shop dealers have built dormitory accommodation for these workers, and 14 of the youths are attending school regularly.

The MMWBM continues to argue that wet/dry separation should be required by municipalities and that the organic wastes should be composted as part of a comprehensive solution to the urban area's solid waste crisis. In the meantime the group has demonstrated how a non-government organization can work for social and environmental goals by adapting to the ongoing informal waste system.

Street beautifiers in Madras

In Madras, south India, an organization called Civic Exnora has mounted a successful street and neighbourhood clean-up drive with social and environmental goals similar to those of Waste Wise in Bangalore. This is a project of Exnora International, which was founded by M.B. Nirmal, a branch manager of the Indian Overseas Bank in Madras. The clean-up drive has helped residents in elite and middle-class areas to form Civic Exnora units.[6] The units "adopt" roads for cleaning and other improvements, such as tree-planting.

Collectors, known as "street beautifiers", who may be former waste pickers, are selected and trained to collect wastes from households and either deliver them to municipal vehicles or deposit them at transfer points. They are paid by the households, through the street organizations. The street units use small bank loans to buy or rent bicycle carts for the collectors.[7] Sometimes, donations are sought from local businesses to buy equipment. Households pay a small monthly fee, depending on the wealth of the location. One street unit might collect $37 each month. Of this $28 will go in wages, $4.70 will be for paying off the bank loan, and the remainder will go into a sinking fund in case of defaulters.[8]

More than 60,000 people are now receiving waste services on some 500 roads in about 80 neighbourhoods, organized by 150 Civic Exnora units — an impressive achievement.[9]

There is discussion of expanding clean-ups and waste removal to slum and squatter areas with extra donations from participants in well-to-do neighbourhoods.[10] The goal of social advancement for people who have suffered discrimination (the waste pickers) was not an initial concern, but it is becoming important in some areas. Besides the regular work, basic literacy classes are arranged for the street beautifiers by some of the units.

The system can work effectively if most households keep up their payments.

Where too many have defaulted, the street unit has lapsed. In some cases the breakdown has occurred because the Madras Corporation has not kept to its side of the bargain and picked up the wastes from the transfer points. As the Civic Exnora units have no means of transporting wastes to dumps, the transfer points rapidly become a nuisance without regular service from the municipality.

Neighbourhood composting

Because the solid wastes of Asian cities are typically comprised of 70 to 85 percent organics, dirt and dust, composting has long been considered a way to reduce waste volumes for municipal disposal. Centralized compost making through mechanical plants has generally failed, so attention is now being given to decentralized approaches and dump-site composting.

Experimentation with neighbourhood composting has been particularly ambitious in Jakarta. For about three months in 1990-91, composting was done at five sites contributed by the Cleansing Department in a project conceived by the Environmental Studies Department of the Institute of Technology in Bandung, supervised by the Technology Development Centre, and supported by the Department of Public Cleansing of Jakarta.[11] There is also combined composting of zoo and household wastes at the Rangunan Zoo.

The Urban and Environment Project of the Centre for Policy and Implementation Studies in Jakarta has a project in which a waste dealer is being supported to branch into composting, employing waste pickers as workers. These collect both synthetic recyclables and household organics. Some materials are bought from households but most are collected from mixed wastes at neighbourhood transfer points. The main goal of this project is to improve solid waste management in neighbourhoods.[12] In areas where waste dealers have premises suitable to composting, this approach seems more feasible than acquiring special sites for this purpose.

Because the most immediate social problems of solid waste management in poorer Asian cities relate to the recovery of resources by poor people, community-based organizations seeking improved methods of resource recovery are finding ways in which street people can become legitimate waste collectors, and informal waste traders can be contributors to community projects.

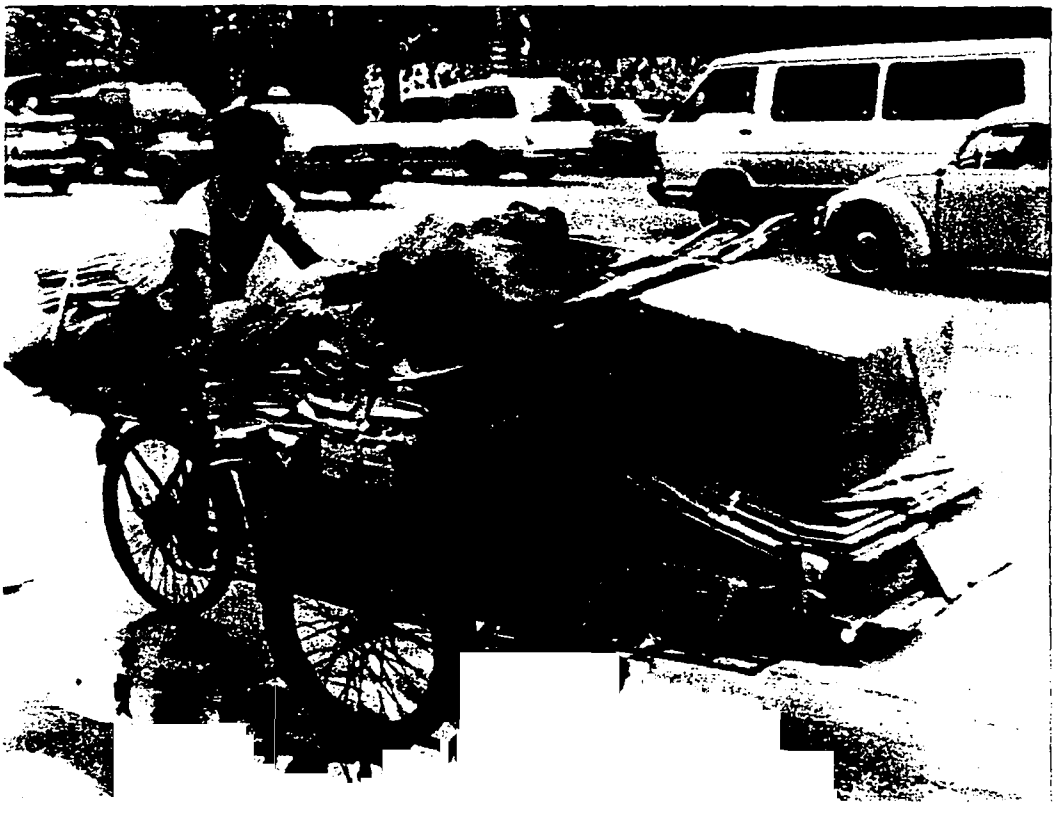
The pilot projects in Indonesia have established that community-based compost making is technically feasible, given appropriate sites and some technical training but only in rare cases will there be ready markets that would allow the compost to be sold at a price adequate to meet costs. The Jakarta project's cheapest compost cost $1.17 per kilo to produce whereas it was estimated that only a price of $0.47 would assure a secure market. Those who promote the concept now argue that compost should be subsidized, perhaps by city parks departments.[13]

Indonesia's self-reliant brigade

In most large Asian cities one can find a non-governmental organization with a project that has something to do with the collection and/or recycling of solid wastes. Usually these projects started with the wish to assist street and dump pickers to improve their earnings, health, living conditions, and security, or to help small entrepreneurs working in recycling. Now the promotion of waste recovery and recycling is recognized as a way to improve solid waste management for the city while serving social development. This view has gained some acceptance in Indonesia since President Suharto, learning of work being done in academic institutes, referred to waste gatherers as a "self reliant brigade" in 1989. Faculty at some research and development centres have been encouraged to do action research projects with waste pickers and dealers.

The leading centre is the Institute for Development Studies (Lembaga Studi Pembangunan — LSP) in Jakarta. An approach favoured by LSP is the encouragement of co-operatives of waste pickers and collectors, in order to improve their bargaining power *vis-à-vis* the waste dealers who control the prices of materials and are able to exploit the base workers in the informal waste management system. Recently, German Technical Assistance has given funds for "Scavengers in Indonesia — A Human Development Programme," for which LSP is the co-ordinating agency, working with the Development Technology Centre of the Institute of Technology of Bandung and Yayasan, a community development organization in Surabaya.

Projects in Jakarta, Surabaya and Bandung in Java will undertake research, education, community development, technical and business training, and will facilitate political dialogue to improve the productivity and status of waste pickers, to legitimize their work and to encourage their participation in local decision making. Cleansing departments and government agencies are to co-operate with the institutions in each city.[14] This is the most prominent example in Asia of international aid being given to non-governmental organizations to address issues of waste workers and the relations of informal to conventional solid waste management. These projects could incorporate source separa-



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In Asian cities, waste pickers play an important role in resource recovery, yet their contribution is often unrecognized and their social status is low.

tion of wet and dry wastes and thus reduce waste picking.

Multiple motivations for waste management

Worldwide, solid waste management is being transformed by national planning for waste reduction, promotion of recycling, and stakeholder co-operation. But there is no large city in the developing countries of Asia that has yet applied these principles to solid waste management. What this review of some community-based projects suggests is that the ways in which new approaches will emerge in poorer Asian cities may differ from the patterns seen in the past decade in the Western nations and Japan, although some community-based waste management projects in Canada are enjoying success as well (see "Community-based waste management in Halton Hills").

Although the physical and political problems of overflowing dumps and lack of sites for new ones are real and often very urgent, these have not so far created a general interest in waste issues in Asian cities. Even the pressing waste removal needs of poor neighbourhoods have prompted effective action only in scattered instances. Until the call for national solid waste planning is heeded,[15] creative thinking in urban solid waste management seems likely to emerge from the experiments of community-based organizations.

Because the most immediate social problems of solid waste management in poorer Asian cities relate to the recovery of resources by poor people, the social orientation leads community-based organizations to seek improvements in methods of resource recovery. Their orientation to employment and social advancement for underprivileged people has prompted them to find ways in which street people can become legitimate waste collectors, and informal waste traders can contribute to community projects. Because their financial resources are minimal, the organizations' social purposes are adjusted to market realities. Their educational aims are to change attitudes towards waste workers and waste work as well as to change waste management habits.

These efforts suffer from the typical limitations of small-scale community projects: shortfalls in funds, volunteers and expertise, and difficulties in making an impact on official thinking. The projects described in this article received no encouragement or actual support from city or national authorities.

It is only very recently that multinational and bilateral aid agencies have taken any notice of community initiatives for solid waste management and this has yet to result in any change in the way foreign funds and advice are given to solid waste departments in Asia. Official aid continues to supply costly and inappropriate equipment while neglecting to provide assistance to community participation and education. However, voluntary aid organizations, by giving advice and funds, can raise the profile of small-scale projects and influence the thinking of large aid agencies. And project participants are developing an understanding of the complex resource and waste issues in modernizing societies and are helping to develop diverse motivations for environmental improvement.

Partnerships of city authorities, non-governmental organizations, private enterprises, and local citizens' groups are emerging. By building upon diverse motivations for social welfare, convenience, earnings, and cleanliness these partnerships have the potential to further the environmental awareness and community involvement that are essential if sound practices in solid waste management are to become routine in Asian cities. ❑

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Notes

Unless otherwise noted, the information on projects in Bangalore, Manila and Kathmandu was obtained during field visits in 1990 and 1991.

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