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GRIDLINES

Sharing knowledge, experiences, and innovations in public-private partnerships in infrastructure

The informal recycling sector in developing countries

Organizing waste pickers to enhance their impact

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For the urban poor in developing countries, informal waste recycling is a common way to earn income. There are few reliable estimates of the number of people engaged in waste picking or of its economic and environmental impact. Yet studies suggest that when organized and supported, waste picking can spur grassroots investment by poor people, create jobs, reduce poverty, save municipalities money, improve industrial competitiveness, conserve natural resources, and protect the environment. Three models have been used to organize waste pickers: microenterprises, cooperatives, and public-private partnerships. These can lead to more efficient recycling and more effective poverty reduction.

Waste pickers can be seen at work around the world. In developing countries about 1 percent of the urban population—at least 15 million people—survive by salvaging recyclables from waste (figure 1). The factors that "push" people into waste picking are fundamentally economic. Many poor people, faced with a choice between starving or waste picking, choose the latter.

Many waste pickers belong to vulnerable groups: recent migrants, the unemployed, the disabled, women, children, the elderly. They survive in a hostile social environment, sometimes rejected by society. They work on the streets and in open dumps, where daily contact with all kinds of waste—including hazardous and medical waste—poses risks to their health (Cointreau 2006). Children are especially vulnerable (box 1).

Because industry demands large volumes of materials that are processed—sorted, baled, crushed, or granulated—it does not buy directly from individual waste pickers. Instead, middlemen purchase recyclables recovered by waste pickers, then sell the materials—after some sorting, cleaning, and processing—to scrap dealers, who in turn sell to industry. In these circumstances middlemen often earn large profits, while waste pickers are paid far too little to escape poverty.

Municipalities often consider waste pickers a problem. Indeed, unorganized waste picking can have an adverse impact on neighborhoods and cities. Waste pickers often scatter the contents of garbage bags or bins to salvage anything of value. They do not always put the garbage back, increasing the municipality's costs for waste collection. Their carts may interfere with traffic. And if they use horses or donkeys to pull their carts, the manure may end up on the streets. Municipal authorities often ban waste pickers' activities. But bans only drive the activities underground. Waste pickers adapt by salvaging materials at odd hours or bribing the police. The result is usually lower incomes and more difficult working conditions.

Organizing for empowerment

By getting organized, waste pickers can strengthen their bargaining position with industry and government, become actors in the development process, and overcome poverty through grassroots development. Working together, they can gain stability, higher incomes, and legalization of their activities. They can obtain better prices by circumventing middlemen and adding value to materials sold. Organized into cooperatives, they can enter into contracts with industry or grant agreements with donors.

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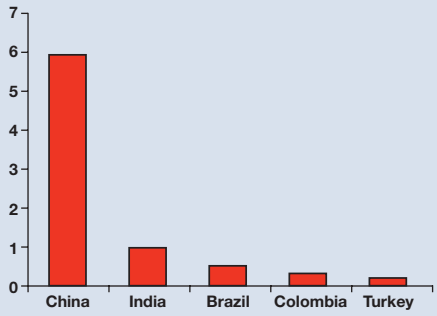
FIGURE 1

Large numbers of people are engaged in waste picking

Estimated number of waste pickers in selected countries, 2007 (millions)



Sources: Dhuy 2008; Liu 2008; Medina 2007.

The change in power relations between waste pickers and government, middlemen, industry, and broader society has led to significant improvements. By working together, these actors have been able to change unfriendly laws, policies, and regulations. In Brazil and Colombia waste-picking activities are now supported by the government. In Brazil waste picking is now recognized as an occupation, and organized waste pickers are seen as legitimate stakeholders who can voice their opinions at the local, state, and national levels. Waste picker organizations enter into informal agreements or formal contracts with businesses, industry, and neighborhood associations to gain access to recyclable materials or to sell materials or manufactured items.

One of the main benefits of formalization is the possibility of entering into agreements or contracts for recycling programs with separation at source. Recovering materials that have been separated at source raises the productivity and incomes of waste pickers by freeing them from having to walk several miles a day in search of materials. By taking their work out of dumpsites, it also greatly reduces health risks from contact with waste. Source-separation programs are becoming increasingly common in schools, businesses, office buildings, and residential neighborhoods. The recyclables gathered are sold or given to waste picker organizations. In some cases, as in Mexico, donations of recyclables to waste picker organizations and charities are tax deductible for businesses (Medina 2007, p. 147).

Some other benefits of organization and formalization are less tangible. Working as part of a cooperative and wearing a uniform boosts waste pickers' self-esteem. In a recent survey in six Latin American countries more than 90 percent of waste pickers reported that they liked what they did and considered it decent work (Medina 2008).

Governments can support this process of formalization. Legalizing waste-picking activities, preferably at the national level, is usually a first significant step toward improving the lot of waste pickers. This could be followed by a sequence of measures. A careful analysis of waste pickers' activities would provide reliable estimates of the number of people involved and their economic impact. A consultation process involving waste pickers and other key stakeholders could help design waste management systems that are inclusive, socially desirable, economically viable, and environmentally sound. Finally, supportive programs such as that being launched in Brazil could be designed to include the informal sector in waste management and recycling programs (box 2).

The move to empower waste pickers is gaining momentum worldwide. There has been explosive

By getting organized, waste pickers become empowered

BOX 1. REDUCING CHILD LABOR IN WASTE PICKING

Children often engage in waste picking, to contribute to the family income or to survive on their own. Waste picking, particularly at open dumps, is among the worst forms of child labor. It can damage children's health and stunt their development.

Brazil has had the most success in reducing this form of child labor, through a national campaign. Parents of child waste pickers were enrolled in *Bolsa Familia*, a conditional cash transfer program that gives parents a monthly stipend as long as they send their children to school, get them vaccinated, and obtain prenatal care. The stipend compensates families for the loss of income from child labor. Thanks to this program, supported by World Bank credits, more than 40,000 children left waste picking and now attend school.

Sometimes this outcome is unexpected. In Cairo informal refuse collectors used donkey carts. Because the carts could be stolen if left unattended, children had to guard them while their parents or older brothers worked. In 1987 the Cairo authorities banned the use of donkey carts for waste collection. The collectors purchased pickup trucks instead. Pickup trucks do not need to be guarded—and children could be sent to school.

Sources: Dias 2008; Medina 2007.

BOX 2. INTEGRATING WASTE PICKERS IN BRAZIL

A national program to improve municipal solid waste management in Brazil, the Integrated Solid Waste and Carbon Finance Project, is developing strategies for incorporating waste pickers into local waste management systems. This effort involves multiple stakeholders—activists, academics, waste picker organizations, other affected groups, nongovernmental organizations, and federal, state, and local government. The project is among the first World Bank–financed operations to include the issue of waste picking so early in the design phase—and as a central part of its basic objectives. A key focus is careful definition of the roles and responsibilities of the actors involved, including the municipality, the service provider, the financing institution, and the waste pickers. PPIAF support has been requested for developing new contractual models that will include obligations for concessionaires with respect to waste pickers.

Brazil has one of the most progressive policy and institutional frameworks for waste-picking activities—and a vast range of municipal settings for investigating the dynamics of incorporating waste pickers into municipal solid waste management. If successful, the project will serve as a model for Bank operations worldwide.

Source: Peter Cohen, World Bank consultant, personal communication, 2008.

Informal recycling has a significant economic impact

growth in the number of cooperatives in recent years, especially in South America. Brazilian waste pickers have formed a national movement. National associations of waste picker groups also exist in Argentina, Colombia, India, and Uruguay. In South America the waste picker movement is consolidating and developing links with waste picker organizations in Africa and Asia.

Economic and environmental benefits

In many developing countries these organization and support activities not only benefit waste pickers as a group; they also generate significant economic benefits for the society as a whole (box 3). Through their informal recycling activities, waste pickers broaden their sources of income and lower the costs of recycling for municipalities. They also contribute to national industrial competitiveness and benefit the environment.

Informal recycling improves industrial competitiveness in two main ways. First, materials recovered by waste pickers are generally cheaper than virgin materials. Second, recycling requires less energy than obtaining virgin raw materials, lowering industry's operating costs. In Mexico, for example, wastepaper recovered by waste pickers is seven times cheaper than imported wood pulp. Mexican paper mills have strengthened their backward links with waste pickers to lower their costs and survive the competition with Canadian and U.S. papermakers resulting from NAFTA (Medina 2005).

Recycling by waste pickers saves municipalities money by reducing the volume of waste that needs to be collected, transported, and disposed of. In Jakarta it has been estimated that waste pickers reduce the volume of waste by 30 percent, saving the municipality fuel, equipment, and labor costs and extending the life span of dumps and sanitary landfills.

Recycling has obvious environmental benefits, and the involvement of waste pickers in recycling programs can enhance those. The recovery and recycling of inorganic material by waste pickers saves energy. Recycling aluminum, for example, requires only 3–5 percent of the energy needed to obtain aluminum from bauxite. Waste pickers' composting activities also divert organic waste away from dumps and landfills, reducing the generation of methane.

Models for organizing waste pickers

Three models for organizing waste pickers have proved to be successful: microenterprises, cooperatives, and public-private partnerships.

Thousands of microenterprises across the developing world serve neighborhoods that lack municipal waste collection services while providing income opportunities for entrepreneurial individuals. A study in three Mexican cities found that nearly 3,000 informal refuse collectors collect 353,000 tons of waste a year, earning up to five times the minimum wage. Informal collectors invest in pushcarts, donkey carts, horse carts, and pickup trucks to transport waste. They usually recover recyclables in the waste before disposal (Medina 2007, p. 147).

Cooperatives are most numerous in Latin America. Brazil alone has about 500 waste picker cooperatives, with about 60,000 members. Belo Horizonte is home to one of the first groups that incorporated former street waste pickers into a program, ASMARE (Associação dos Catadores de Papel, Papelão e Material Reaprovitável). Today ASMARE has 380 members, 55 percent of them women, and

BOX 3. A SUBSTANTIAL ECONOMIC IMPACT

There is scant knowledge of the size and importance of the informal recycling sector in developing and transition economies. But some recent estimates suggest that its economic impact is larger than previously believed.

- In Mumbai more than 30,000 waste pickers recover reusable and recyclable items from the waste stream. They have created more than 400 microenterprises that process waste materials and make consumer products from them. The economic impact of these activities: an estimated $650 million–1 billion a year.
- In Buenos Aires more than 40,000 waste pickers recover cardboard and other recyclables on the streets. Their economic impact is estimated at $178 million a year.
- In Jakarta 37,000 waste pickers recover 25 percent of the city's waste (378,000 tons a year), saving the city $300,000 a month and producing an economic impact of more than $50 million a year.

Source: Medina 2007.

recycles 500 tons of material a month. Another well-known cooperative is COOPAMARE (Cooperativa de Catadores Autônomos de Papel, Aparas e Materiais Reprovitáveis), founded in São Paulo in 1989. It has 80 members along with about 200 independent waste pickers who sell it materials. COOPAMARE collects and sells about 100 tons of recyclables a month, at a lower cost than the city recycling program. Its members earn $300 a month, twice the minimum wage.

Public-private partnerships for collecting waste and recyclables can benefit waste picker groups and the broader society. In partnerships in several Colombian cities, the municipality provides infrastructure and equipment while waste pickers provide labor. In Bogotá a partnership has been formed to operate a recycling plant, managed by the Bogotá Association of Waste Pickers, where the municipality takes recyclables separated at source.

International development organizations are working to support the formalization and organization of waste pickers in several regions. With the financial support of the Austrian government, for example, the International Finance Corporation (IFC) is implementing a program to support recycling businesses in Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Montenegro, and Serbia. Waste pickers supply at least 40 percent of the raw materials that industry recycles in the region. Most are Roma, a population facing high rates of poverty and illiteracy. IFC is providing technical assistance and capacity development throughout the supply chain, from waste pickers to middlemen, scrap dealers, and industry. The program is expected to benefit about 6 mills, 100 small and micro enterprises, and more than 2,000 waste pickers.

Conclusion

Incorporating waste pickers into waste management and recycling programs can in many cases be socially desirable, economically viable, and environmentally sound. To do so, however, decision makers need to recognize that waste pickers can be an asset, and municipalities need to engage with them as potential partners. Waste pickers have already started to organize themselves using different business models. In some countries governments have launched programs to support this formalization. Similarly, international donors are increasingly integrating waste pickers into programs to foster urban development, promote a cleaner environment, and increase recycling activities.

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