

The informal recycling economy of Asian cities



▲ Garbage dump at Stung Meanchey, Phnom Penh, Cambodia.
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Waste recycling in developing countries relies largely on the informal recovery of materials by scavengers or waste pickers. Estimates for cities in Asia and the Pacific reveal that up to 2 per cent of the population survives by recovering materials from waste to sell for reuse or recycling or for its own consumption. In some cities, waste scavengers constitute large communities: approximately 15,000 squatters make their living by sifting through the Smoky Mountain municipal rubbish dump in the Philippines. Similarly, it is estimated that Bangalore has between 20,000 and 30,000 scavengers who make a living from rubbish, while there are between 15,000 and 20,000 waste pickers in Jakarta. Some of these scavenger communities have high levels of organization and have created their own cooperatives.

The presence of sizeable communities making their living from waste has favoured the development of enterprises that form an extensive waste recycling network that has developed without government assistance and without the formation of commercial monopolies. For example, the waste scavengers of Hanoi operate at no cost to the city's municipal authority and provide both financial benefits to the society in the form of avoided costs (such as landfill space, collection

and transport costs, energy, employment generation, and protection of public health) as well as ecological benefits in the form of resource conservation and environmental protection. The recycled materials from waste work their way from the "waste economy" back into the productive economy through an elaborate system of buyers. It is estimated that some 1,500 families make their living by buying and selling waste materials; as a result, a trade network has emerged with clients from Hanoi and the surrounding provinces in Viet Nam regularly visiting individual junk dealers to buy and pre-order specific types of recycled materials. The majority of dumpsite scavengers are women and children, who live in overcrowded, poorly ventilated temporary huts, often on the peripheries of the waste dump. The scavengers seldom have access to public or private latrines, are malnourished and suffer from a range of illnesses, including worm infections, scabies, respiratory tract infections, abdominal pain, fever, and other unspecified diseases.

A similar situation is found in the shantytown of Dharavi in Mumbai, which has been dubbed "India's largest recycling centre". With more than 700,000 people crammed into 175 hectares, Dharavi is the biggest slum in Asia. But Dharavi

can also be defined as a well-organized industrial district with distinct layers of workers dealing with the recycling of waste: scavengers, pickers, waste sorters, specialized waste sorters, and recyclers. Washing and recycling activities are carried out inside the dumps, in unhealthy conditions, using recycled devices. Plastic chopping and smelting operations are also carried out inside the slum district, with serious consequences in terms of disease and pollution.

The economy of Dharavi defies official statistics, as it is self-sustaining and devoid of government bureaucracy. Waste recycling has become an industry in itself and has helped to provide employment to hundreds of people working in some 400 recycling units. It is estimated that Dharavi has as many as 15,000 "factories" where recycled material is converted to products, such as pots and toys. However, all these activities are carried out without any environmental and health protection measures. The price of Dharavi's economy, therefore, is paid in human deaths, diseases and environmental pollution. Moreover, the future of the waste economy is uncertain as plans are underway to resettle the residents to pave way for Mumbai's multibillion-dollar urban redevelopment plan to turn the city into a world-class financial centre by 2015.

Sources: M. Portanuova (2004), *La città della spazzatura*, *Diario*, 13 February.
The Economist (2007), "A flourishing slum", 22 December.