

**Community Participation – Solid Waste Management in Low–Income Housing Projects: The Scope for Community Participation**



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# Community Participation – Solid Waste Management in Low–Income Housing Projects: The Scope for Community Participation

United Nations Centre for Human Settlements (Habitat)  
Nairobi, 1989

## Guidelines for the instructor

This module has been prepared as a general introduction to community participation in waste management. It provides background information on the facilities and systems used in urban–waste collection and disposal, on storage and transport facilities and on waste–disposal methods. As local conditions of city management and settlement development determine the relevant options, the final choice of community involvement depends on community–specific factors. The instructor should, therefore, collect information on specific local practices. The instructor must collect, beforehand, the answers to the specified questions.

### Target group

Project staff (project managers, engineers, community development officers).

### Number of participants

10 –20 people

### Duration

Five days

### Location

Easy access to low–income community, dump site and, if relevant, small industrial area (informal–sector recycling).

### Equipment

Chalkboard, slide projector, overhead projector. A set of overhead sheets, based on the drawings in this module, can be obtained from the United Nations Centre for Human Settlements (Habitat).

### Films

“Garbage Boy”, a television film on life on a municipal refuse dump (Bangkok, Asian Institute of Technology, Human Settlements Division, Information Project 808).

### Preparation

- (a) A local case study analysing conditions in residential areas is essential to put the module's material in local perspective.
- (b) Basic information about the actual performance and cost of municipal service is equally important. This should include data on the social and political aspects of waste collection in low–income and high–income areas, as mentioned in the module.
- (c) Information on attitudes towards waste management in communities is essential for the discussion on community involvement.

## Introduction

The urbanization of developing countries and the growth of spontaneous settlements are taking place on such a scale that national and local governments cannot cope with the demand for decent shelter conditions. At the city level, this is most noticeable in the sphere of infrastructure. Services often fail to reach new low-income areas, while existing municipal services rapidly deteriorate.

A municipal service that seems to fail most strikingly is waste collection. This is likely to be seen as a problem of inadequate means of transport, as far as the municipality is concerned. This training module aims at showing that a reorganization of waste-management procedures, including community participation, is more likely to provide durable solutions than purely technical approaches.

Many municipalities see solid-waste management as a problem of equipment: how to obtain and maintain technologically advanced compactor trucks, hydraulic-compressor containers, transportable containers and transport vehicles. In developing countries, with insufficient technical services, spare parts and maintenance budgets, when such technically sophisticated equipment breaks down the entire system fails.

Waste-management systems which include community participation and do not require high technology and inappropriate machinery might prove to be sustainable at the community level, since income-generating waste-management systems can be maintained by low-income communities. This manual will show the possible scope of community participation in solid-waste management.

### Considerations of community participation In waste management

#### Waste disposal

Waste disposal is often seen as simply removing waste from human settlements. Nowadays, waste is also seen as a resource that should benefit the community: resource recovery (reuse or recycling) is a basic element in waste management. This factor plays an important role in the planning of waste-disposal systems. The main benefit that waste management will yield is a clean environment, but other benefits can be:

- The production of fertilizer through composting;
- The recovery of energy through biogas or incineration;
- Recycling of the various materials in waste;
- Land reclamation.

Since the largest cost factors in waste disposal are transport and collection, reduction of the quantities, through early separation and recycling, is a very effective means for achieving savings. Reductions in the volume of waste and decentralized processing are some of the approaches which could be followed and from which an organized community could benefit.

Community participation in waste disposal can be a catalyst in community-development work, because it gives residents a feeling of self-esteem. It can lead to the possibility of income generation through recycling which will also reduce the quantities of material that have to be transported for disposal.

Solid-waste disposal follows several steps:

The **waste-production** cycle is inside the house, market, industry etc. Easy separation can be made at the source where the waste is not yet mixed (bottles, paper, food remains, plastics, metals etc.).

The **primary-collection** cycle is at the community level where wastes of the same sort are collected.

The **secondary-collection cycle** is at city level where dumping at a communal depot or recycling takes place.

Community-managed waste disposal consists of the following elements:

1. Primary waste collection (neighbourhood – wide collection and storage);
2. A waste-management system, administering and financing the primary collection system;

3. Planned co-operation with municipal service agencies, to ensure a reliable transfer of waste from the primary to the secondary collection cycle;
4. The development of recycling activities within the community;
5. The development of income-generation activities, through processing and upgrading of waste material and development of local industries.

### **Example**

A university in Europe held a competition to design the best waste-management system. Most entries were highly complicated machines to separate the waste and sort out the different materials in order to recycle them by type. One entrant, however, presented a system with five different small containers for paper, plastics, glass, metals and organic materials, respectively. Apparently, all other systems were based on mixing everything first, compacting it and, then, trying to separate it again. The system with the five containers proved to be the least expensive but required community organization.

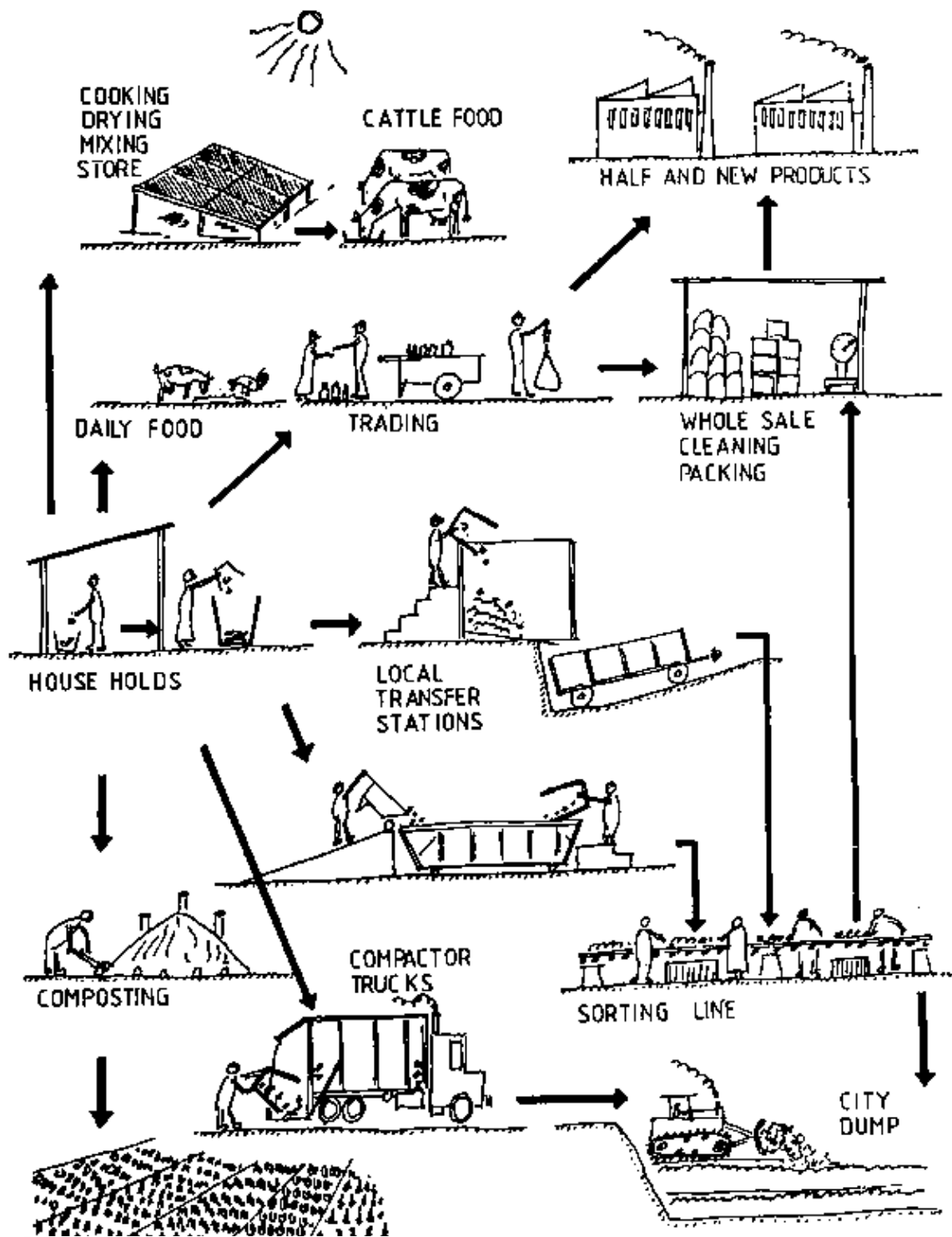
Community participation in the field of waste disposal does not come easily, and much consciousness-raising is required in order to create a feeling of responsibility. It is not uncommon for slum-dwellers to keep their own houses very clean and, yet, throw all waste on the nearest street. In some countries, there is a tradition of caring for areas around and between dwellings, whilst, in others, this is not the case. Such general attitudes affect the willingness to participate locally.

### **Low-income versus high-income**

The amount of waste produced per inhabitant in high-income areas is a multiple of the amount of waste produced by low-income households. Yet, it can be observed that, while it seems possible to keep high-income areas clean, low-income areas remain unclean. There are two factors which contribute to this common situation:

- Registered households in high-income areas pay sewerage taxes, waste-collection taxes and, possibly, land taxes, all sources for financing municipal services. Households in low-income areas are often not registered and do not pay these taxes.
- Senior governmental officials, diplomats and politicians and their acquaintances tend to inform and pressurize the municipality when, in their residential areas, excessive waste accumulation occurs. In low-income areas, communities often do not have the influence.

Community participation is essential in the choice of methods, in co-operation, in storage and in decisions about separation and recovery of resources, as will be explained later.



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