Field Note

Community-based Action Planning for Effective Solid Waste Management

KUPPAM
Andhra Pradesh

"In Kuppam Town the ideas and enthusiasm of field level sanitary workers and local residents have been tapped to plan for a viable town-wide system of waste segregation, re-use, re-sale and disposal with full co-operation of users, who are willing to pay for improved services."

KUPPAM FACTS

<table>
<thead>
<tr>
<th>Population</th>
<th>25,000</th>
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<tbody>
<tr>
<td>Area</td>
<td>1832 sq.kms.</td>
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<tr>
<td>No. of Households</td>
<td>5,000</td>
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<tr>
<td>Average family size</td>
<td>5</td>
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<tr>
<td>Average family income</td>
<td>2600/-p.m.</td>
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<td>Agency responsible for solid waste management (KTP)</td>
<td>Kuppam Town Panchayat (KTP)</td>
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<tr>
<td>No. of Sanitary Workers</td>
<td>23</td>
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This field note documents the process and findings of a situational analysis undertaken in Kuppam and the consequent development of an action plan for improving the solid waste disposal system with active participation of the local residents.

Kuppam is located in Chittoor district in the Rayalseema region of Andhra Pradesh. It is closer to the cities of Bangalore (130 kms) and Chennai (250 kms) than it is to its state capital Hyderabad (700 kms). Dynamic political leadership coupled with strong administrative support has drawn enormous technical and financial resources to the town, leading to multi-sectoral interventions in Kuppam. Due to rapid urbanization the town is in transition and Kuppam manifests 'rural' culture with 'urban' infrastructure.
Kuppam is undergoing a major face-lift and several infrastructure development projects are underway. These include construction of roads, drainage, market complex, hospital, a marriage hall etc. In addition, Kuppam Town Panchayat (KTP) has received a loan from HUDCO for the purchase of hardware to improve solid waste disposal. In order to avoid being swamped by its own garbage, like thousands of other small towns in India, KTP and the district administration felt the need for technical assistance to develop an efficient system of solid waste disposal. For this, they approached the UNDP-World Bank-Water and Sanitation Program-South Asia (WSP-SA). WSP-SA through consultancy services of the Asian Centre for Organization Research and Development (ACORD) developed a feasible plan to improve the system of solid waste management with the participation of the local residents. Kuppam Town Panchayat is currently responsible for all the operations regarding solid waste disposal in addition to other services. KTP is in the process of upgrading its status to that of a municipality. However this shift, in the absence of personnel with appropriate technical capacity, will not benefit the local residents.

**SOLID WASTE MANAGEMENT SCENARIO IN KUPPAM**

In-depth qualitative and quantitative data obtained (from households (406), shops (62), restaurants (15), religious institutions (15), educational institutions (14), hospital/clinics (5), cinema halls (2)) provided information on waste composition and the prevailing methods of waste storage and disposal.

Not everyone in Kuppam maintains dustbins. Only one third of the households, 19% shops, 20% religious institutions, 50% educational institutions & restaurants and 75% hospitals & clinics use bins. The disposal of household waste is primarily the responsibility of women. The residents dispose of their waste 1 to 5 times a day. On an average, waste from 10-15 households is collected in small heaps on the streets. Twenty cylindrical bins (without base) provided by KTP remain overfilled, and uncleaned. The waste collection is erratic and one-third of the garage never gets lifted, attracting rodents and animals and results in clogged drains. KTP owns four bullock carts (of which three are non-functional) and one tiller for waste collection. In addition, it also hires a tractor once or twice a month, which can ply only on the
he following three alternatives for improving solid waste management were proposed and explained to the local residents during the workshop:

- Source disposal and recycling of waste;
- Door to door household collection of waste; and
- Three Containers/Bins system.

The residents collectively debated the options in small groups and opted for the third alternative. The residents, the KTP staff and the ward members jointly worked out the implementation arrangement for the solid waste management system they opted for. This facilitated the fine-tuning of the system. The design of the proposed system takes into account the prevailing attitudes and practices with respect to waste storage and disposal at the primary level, suggestions of the local people and KTP members, existing resources (human and financial capacity) of the KTP, spatial arrangement of various wards and the future growth of the town.

The proposed improved system of waste disposal as illustrated in the following page will entail waste segregation at the household level. Three bins will be provided for a unit of 15-20 households – green, yellow, and red for organic, inorganic and toxic waste respectively. Households will pay Rs. 5/- per household as payment for waste removal from these bins. Responsibility for segregation and placing waste in the appropriate bin will rest with individual households. Organic waste will be recycled into compost, recyclable inorganic waste will be sold, hospital and toxic waste will be incinerated and inert/construction matter will be disposed off in a pre-designated site.

The next step is to facilitate the implementation of a financially viable and sustainable solid waste management system as developed by Kuppam Town with the state and district administration, the KTP and the local residents. It was jointly decided to form three committees to oversee the successful implementation, an Advisory committee to guide and support the KTP, an Awareness Education Committee to execute town wide awareness education activities, and a Users’ Committee responsible for collection of household payments and engage with the KTP.

LE S S O N S L E A R N E D S O F A R

☐ In small towns, technical inputs act as catalysts enabling the local residents to express their needs. The key lies in explaining and exposing local residents to a range of technical and institutional options. This enables the local residents to discuss options and choose the appropriate system. Having done so they are ready to share in costs, irrespective of their socio-economic strata.

☐ It is essential to directly interact with and involve operational level staff to plan and implement sanitation initiatives, as they are often responsive, and willing to change even if the senior management are not. It is of utmost importance, therefore, to identify such individuals right at the outset of any intervention. Their involvement with the facilitating organization can activate and sustain the process initiated by the former.
The intervention in Kuppam which started in October 1998, was greatly facilitated by several local people in their official as well as personal capacity. Among them were state and district officials, elected ward members, sanitary supervisors, local artists, women thrift and credit group leaders, NGO representatives and several women residents of the town. The self-motivated support and involvement of the local residents in Kuppam was extremely encouraging and greatly facilitated the situational analysis and development of an action plan for implementation for solid waste management. The interventions in Kuppam included the following:

**Data Collection** through focus group discussions and one-to-one meetings which helped in a) building rapport with the local people, b) generating awareness and sensitivity on waste management issues and c) preparing a situational analysis of the solid waste disposal system in Kuppam.

**Awareness Building** to illustrate and promote understanding of different kinds of waste, separation of waste at source, the existing situation of waste disposal and the associated hazards in Kuppam. The activities included wall writings, school children’s rally and group meetings with women. An exposure visit to Bangalore, was also organized for the local residents to show them house-to-house collection, segregation of waste at the household level, and composting.

**Action Planning** during a two day workshop with the local residents, KTP sanitary workers, elected ward members, NGO representatives, and community leaders discussed alternatives for improving the solid waste disposal and formulated and agreed upon a plan for efficient solid waste management in Kuppam. The community interventions and awareness generation activities enabled the residents to develop a plan for implementation of solid waste disposal, which is appropriate and viable in the socio-economic context of Kuppam.
The waste collection is erratic & one-third of the garage never get lifted, attracting rodents, animals & results in clogged drains.

The waste is indeed also encouraging that a high proportion of the elected members of KTP are very open to improvement in the existing system of solid waste management. They enjoy local support, trust and confidence and have been fully involved in community consultations on solid waste management.

However, the KTP staff at all levels need intensive training inputs in technical, managerial and financial aspects of sanitation services. KTP also needs to develop an integrated approach to sanitation where SWM is but one component.

There is great potential and desire for active participation by the local people to manage an improved solid waste system on their own. At the user end, women play a lead role in solid waste storage and disposal. The community consultations resulted in increased awareness and the identification of waste disposal as one of their main concerns. Women in most cases are willing to form users' groups and pay between Rs. 2 to Rs. 30 a month per household for improved services. Youth and children too are inclined to extend full support by way of building awareness and monitoring the improved system of solid waste management.

Representatives of local NGOs, educational institutions, religious and other agencies are also keen to take up awareness education programs for the local residents.
IMPROVED SOLID WASTE MANAGEMENT PLAN FOR KUPPAM

HOSPITAL / TOXIC WASTE (BY KTP)*

HOUSEHOLD WASTE (BY KTP)*

CONSTRUCTION MATERIAL WASTE (BY CONTRACTOR / BUILDING OWNER)*

TOXIC WASTE AND NON-SALEABLE INORGANIC WASTE IN BAGS TAKEN TO PANCHAYAT OFFICE

SALEABLE INORGANIC

COMPOST GENERATION AND SALE SITE BY KTP

INCINERATOR

* Prime responsibility

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