Private companies working on door-to-door collection will jeopardize the livelihood and development opportunities for large numbers of waste pickers, and may also try to monopolize waste management in certain communities, thus posing a threat to community waste disposal schemes. In addition, private waste companies often work with costly technologies which do not promote sustainable development.

Conclusion

In the context of this specific voluntary waste disposal scheme, although social stigmas remain, there are grounds for some optimism as support among citizens continues to grow.[2] Nevertheless, this is but one example; there have been a few other case studies in Bangalore, and in Colombia and the Philippines, but none of these have been designed by local government as was the case in Hyderabad. This scheme remains experimental and will need a few more years to develop; in the meantime in order for schemes such as these to survive, it is essential that:

- political backing comes from local municipalities;
- there is social acceptance by communities with regard to waste pickers; and
- there is financial backing, both from local municipalities through possible subsidies (paying for tricycles, uniforms and shoes for the waste pickers, for example) and from citizens.

Overall the integration of the formal and informal sectors through voluntary waste disposal schemes is just one possible connection between the two sectors. Further examples could be schemes set up at dump sites involving waste pickers at the sites, or schemes designed to take place between the transportation of waste and the municipal workers stage.

Many challenges remain as we face the next millennium. Schemes such as that found in Hyderabad reflect true partnership between local government, non-government/community-based organizations and citizens; only through a positive attitude and support from all of these stakeholders for the essential role of the informal sector, will more interlinkages between the two waste management sectors emerge in the future. ■

Privatization in Pune

In Pune, a private municipal waste management entrepreneur negotiated a waste collection contract in an area where an organized group of women waste pickers used to do a house-to-house collection of recyclable materials. The private entrepreneur convinced residents that his company could do a better job of collecting the waste, at a lower cost. At the same time he promised to get rid of the waste pickers in return for being able to carry out the house-to-house collection and acquired the sole right to buy recyclable materials.

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... news from the field

waterpoints

'Tools for Life' kit online

In an unusual electronic experiment, the Baltimore-based Johns Hopkins Center for Communication Programs is using the Internet to pre-test and develop a selection of materials for 'front-line' community healthworkers.

By visiting the site at: http://www.jhuccp.org/tools, you can send feedback to the 'Tools for Life' project designers. 'The idea is to use the Internet as a kind of global pre-test. 'Although the kit is initially designed for healthworkers in Africa, we eventually want healthworkers anywhere in the world to adapt it for their use,' says Susan Krenn, Chief of the JHU/PCS Africa Division.

Following the pre-test, healthworkers in Anglophone and Francophone Africa will use the 'Tools for Life' kit to develop health messages for local communities. The kit, funded by USAID, draws on lessons learned from similar kits developed for Nigeria, Ghana, and Zambia.

'Tools for Life' includes participatory health-education materials for safe motherhood, nutrition and infant health, diarrhoea prevention, and the prevention and treatment of common illnesses and diseases, as well as reproductive health information, including family planning.

Project designers will e-mail replies to specific questions or concerns that people may have about the kit. Internet visitors will be asked to review draft text for 28 health activity cards and 40 information cards. The cards feature questions and key health messages that are designed to generate discussion with community members. Digital photographs and a training guide will be added in coming months.

The kit (in both English and French) and a CD-ROM version — as well as printed copies — will be available in 1999. For more information contact: Joan Tarasevich on: jtarasev@jhuccp.org or Benedict Tisa on: btisa@aed.org

New Water Act for South Africa

South Africa now has a new Water Act, replacing the Water Act of 1954.

What is new? Groundwater is now considered public water, with the Government acting as public trustee of the nation's water resources.

The old act has been revised around areas, including: equity, obligations, protection and conservation of water resources, national water-resources strategy, transparency, and accountability.

For more information contact: http:// www-dwaf.pwv.gov. za/web-pages/Documentation/Legislature/nw_act/nwa.html

Or contact: Dept of Water Affairs and Forestry, Bag X 313, Pretoria 001, South Africa. Fax: + 27 12 328 6397.

Water metering — the new poll tax?

Despite announcements that there will be 'no compulsory metering', December 1998 saw the UK government rushing through legislation in the Water Industry Bill that will introduce wide-spread metering, a move that, it is argued, will hit the poorest and those with special needs and medical conditions.

Around 12 per cent of households in the UK have already been metered. In Bradford, families saw their bills soar to four times those of their unmetered neighbours. Trials in the early 1990s found one in 12 households claiming difficulty in affording water bills; only 11 per cent of these said they had difficulty before metering. In addition, the trials saw 18 per cent of those metered saying they needed more water than they could afford; this rose to 62 per cent for people with medical conditions.

The bill says that there will be 'no compulsory metering'; that people will remain unmeasured while they stay in their present homes; that consumers have the right to choose to be metered; and that meters will be installed free of charge. However, meters cost about £200 and cost more to bill; these costs will be recouped from unmetered consumers. It is argued that the more affluent will opt for metering and see bills fall, whereas the poor will see bills rise and will have to cut back and those with special needs must face the humiliation of registering to pay on an unmeasured basis.

Extracts from a piece which appeared in The Guardian, *December 9, 1998.*

Plans for water and environment in the UK

In a programme costing between £8-8.5 billion, guidelines on drinking water and environmental improvements were published in September 1998 by UK's Deputy Prime Minister John Prescott. Ministers want the water industry to make improvements between 2000 and 2005, and stressed that there should also be scope for substantially cutting the average household bill — by an average of 10 per cent, although industry regulator Ian Byatt is demanding that some water companies make cuts by as much as 15 per cent. Other measures in the programme include meeting drinking water standards specified in the new EC Water Directive; accelerating the improvement of unsatisfactory sewer outflows; improving sewage treatment; increasing bathing water standards; and making faster progress in meeting River Quality Objectives.

For more information contact: DETR Public Enquiries. Tel: +44 171 890 3333. www.detr.gov.uk

Caveat report on Mark Osola's article 'A few buckets more — reducing sand-invasion and siltation in Angola' (*Waterlines* 17.2)

There are two aspects to sand invasion of boreholes:

- Entry and accumulation of sand in the borehole itself — this leads eventually to the clogging of the screen slots, blocking inflow of water;
- Movement of sand within the borehole into the pump intake, causing wear on impellers or piston seals, leaking foot valves and disconnection of pump rods.

Both cause reductions in yield from the well which finally becomes non-operational, and both caused problems in the systems described in the article.

Entry and accumulation of sand

Where the outer gravel pack is of unsuitable-sized particles, or is not well distributed around the screen, fine sand from the surrounding aquifer may pass into the borehole, if the screen slots are of larger diameter than the particles in suspension. In emergency situations such a condition is likely to occur, with suitable pack difficult to obtain and installation often having to be done in a hurry. Entry of sand into the borehole depends on the velocity of water being drawn in, the distribution of particle sizes outside the screen, and the size and number of slots (open area) in the screen. All these affect the ability of in-flowing water to pick up particles and carry them into the well. Since none of these factors appear to be altered by the remedial measures mentioned, the tendency for sand to enter the borehole may be expected to continue.

Movement of sand into the pump intake

The inner pack suggested would seem to act simply as a filter to protect the pump, not as a system to protect the borehole itself. Such protection of the pump could also be achieved by:

- Reducing intake velocity by increasing and dispersing the area for the intake of water to the pump cylinder;
- Making a filter for the intake itself;
- Setting the pump intake above the screen and so away from the point at which sand is entering the borehole, or the level at which it is accumulating.

In the case of Kuito in Angola, pump cylinders appear to have been set originally within the screened section and then raised above the screen as part of the rehabilitation. The latter is the usually recommended position to allow any sand entering the well to drop out of suspension, rather than passing directly into the pump, and to encourage water to flow in more regularly from the whole screened area. Raising the intake into the blank casing may have played an important part in the noted reduction of pumped sand observed immediately afterwards.

In Sept/Oct, 1997 some three to six months after installation of the internal gravel pack, 50 per cent of Kuito boreholes were observed to provide clear water but 50 per cent were already sanding again. Those with high use were sanding heavily[1] (though it is not known what proportion of boreholes were sanding before the remedial action was carried out).

The actions described by Mark in his article are interesting as a way to provide short-term protection to handpumps in an emergency situation. However, as a remedy for sanding/silting boreholes, the internal gravel pack does not seem to provide the solution. Such boreholes will still need regular cleaning out, or better still from an economic aspect, proper replacement as soon as practicable.

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1. Internal Review of Oxfam Bié Environmental Health Programme. Bié Project Staff, Oxfam Angola Advisory Team, SWL Consultants October 1997. Kuito