Environmental Fiscal Reform in Abbottabad

Solid Waste Management

The improper disposal of municipal waste has a serious and dangerous impact on a wide range of areas. Garbage thrown in the street or in open spaces creates a public health hazard, while waste dumped near rivers, lakes and streams contaminates the water supply. Rubbish that is burned in the open rather than disposed of properly creates pollution and releases toxic fumes into the environment. Non-biodegradable materials thrown into open drains make their way into the sewerage system, clogging pipelines and damaging infrastructure. The hazards posed by the dumping of untreated hospital and industrial waste are even greater, with the release of pathogens and toxic compounds posing a grave threat not just to human life but also to plants and animals. Garbage dumped in the countryside is not simply an eyesore; entire landscapes are ruined and unique habitats for flora and fauna are lost.

All of these problems are common in Abbottabad, where vast quantities of solid waste remain uncollected in the streets, along major roads, in empty plots of land, down hill slopes and in illegal dumps.

Issues

There are many challenges facing the effective disposal of solid waste in the district. Budget constraints are a chronic issue. Nearly 87% of the solid waste budget in Abbottabad tehsil and 92% in Havelian goes to pay salaries, leaving scarce resources to improve or expand services. As a result, the garbage collection infrastructure is crumbling and municipal workers have not been issued any new equipment since 1998. Collection vehicles currently in use are too large to pass through narrow streets, and garbage in such areas accumulates. The system is so overburdened that even if collection across the district were to operate at full

capacity (42 tonnes per day), an estimated 28 tonnes of garbage would remain uncollected daily.

Garbage collection services are irregular in some parts of the district and non-existent in others. This is in some cases a matter of jurisdictional conflict. Responsibility for solid waste management in the district falls upon municipal agencies in some areas and cantonment boards in others, but jurisdiction is not clearly defined. As a result, some localities are not served by either municipal or cantonment authorities.

But the problem is not simply one of institutional and financial constraints. As in other parts of the country, the lifestyle and consumption patterns of Abbottabad's residents have changed dramatically in recent years. More goods made of non-biodegradable materials are now commonly in use, not just among relatively prosperous groups but in middle- and low-income households as well. Plastic bags and bottles, disposable diapers, and packaging materials not only increase the volume of waste produced but also alter its composition, making disposal more difficult. This is compounded by the habits and attitudes of communities, where it is common practice to throw waste into the street, in open drains, on empty plots of land, or to simply burn it in the open.

Inequity

There is a marked inequity in Pakistan with regard to budget allocations for municipal services. In remote rural areas, there is no system of waste collection. There is a general and dangerous misconception that rural areas require few or no waste collection and disposal facilities because open spaces exist where garbage can be dumped. Although organic waste can certainly be disposed of by composting, non-biodegradable materials remain in the countryside, with long-term detrimental effects on rural ecosystems.

The situation in densely populated urban localities is no different, where garbage collection is abysmal. In prosperous neighbourhoods, meanwhile, collection can be as high as 90% (Government of Pakistan 2005).

As with most environmental issues and development concerns, it is always the poor who are the most severely affected. In the case of solid waste management, they suffer from the effects of living in squalid conditions. The threat of disease is ever-present, robbing workers of their productivity and keeping children out of school. Chronic disease, repeated bouts of illness, lowered resistance and malaise are common in poor households, putting such families under severe financial strain and depriving them of opportunities to improve their standard of living.

Community perceptions

A survey was conducted of 455 households in selected areas of the district. The results show that while large segments of the population are not served by solid waste management agencies, most communities are acutely aware of the issues associated with the improper disposal of solid waste.

Only 12% of the overall sample is served by door-to-door solid waste collection services. Just 47% of urban households and 3% of rural households report that municipal workers collect garbage in their areas. As a result, 59% of urban households dispose of their garbage in open spaces or on the street, and 12% dump refuse outside their houses. There is no door-to-door collection in rural areas, where 67% of sampled households dump waste in empty plots of land, 19% in garbage dumps and 11% just outside their door. Equally troubling is the risk that is posed to children, given that 39% of rural households participating in the survey and 35% of urban families report that their children play in or around garbage dumps.

What is perhaps surprising is that the survey did not identify a difference in behaviour between poor and non-poor households in terms of the manner in which they dispose of domestic waste. Relatively well-off households use more or less the same methods as low-income groups. The only significant difference is that poorer households tend to dump their waste closer to their places of residence.

Overall, 78% of surveyed households are aware of the issues related to poor waste management, with similar figures in both urban (80.5%) and rural (73.4%) households. But awareness is higher among the non-poor (67.9%), compared to poor families (9.9%). There is, however, a high degree of awareness regarding the risks of disease, with 86% of those surveyed indicating an understanding of the link between poor health and improper garbage disposal.

What is encouraging is that communities are willing to pay for improved solid waste disposal services, although there is a dramatic difference between the responses of urban and rural households. The survey revealed that 82% of respondents in urban areas are willing to pay a fee of 50 rupees a month for garbage collection services, while only 28% in rural areas respond positively to this option.

Understandably, the variations in responses between poor and non-poor households are even more dramatic, with 90% of the non-poor willing to pay a 50 rupee fee, and only 10% of poor households similarly inclined. Fewer households overall are willing to pay a higher rate of 100 rupees monthly (49% urban, 32% rural) but the responses are not discouraging, since

95.8% of the non-poor are willing to pay the higher rate of 100 rupees.

EFR options

The most efficient way to manage solid waste is at the local level, with the involvement of communities (UN 1992). This is borne out by studies and success stories from around the world, and there is every reason to believe that such measures will be effective in the Pakistan context (Bartone et al. 1991, Manandhar 2002, Memon 2002, UNESCAP 2002, Varkkey 2002).

Abbottabad's solid waste management issues can be tackled both effectively and efficiently through local authorities and municipal agencies, whose operations can benefit significantly from environmental fiscal reform (EFR) measures in the sector.

EFR involves the introduction of user fees and taxes, as well as incentives for those engaged in collection. The preliminary assessment provided by the household survey conducted for this study indicates that introducing waste collection fees is a viable option. Based on these assessments, a nominal charge of 35 rupees per month per household can be levied, raising more than 10 million rupees annually for the district administration. In devising a structure of user fees, the requirements of the poorest communities will need to be kept in mind, to ensure that they are not burdened financially.

Taxes to discourage certain practices can also prove beneficial. They can be applied, for example, to discourage the indiscriminate and illegal dumping of solid waste, as well as to penalise hospitals, other commercial establishments and industries from releasing untreated waste. Mechanisms for pollution charges exist in environmental protection laws and penalties are also prescribed in provincial local government legislation. These mechanisms must be properly enforced and implemented.

Along with charges and taxes, incentives should be provided to those already involved in the collection of solid waste. This includes scrap dealers (*kabaris*) who purchase recyclable materials and reusable goods directly from households, as well as scavengers who wade through garbage dumps collecting anything that can be sold. These groups have long been an informal part of the domestic economy and serve an important purpose that should be recognised, regularised and rewarded.

At the same time, measures are needed to restore the trust of communities in the local municipal agencies. Funds raised through user charges and taxes must be applied directly, and transparently, to improve services already provided and to extend services to areas not covered. When communities see their financial contributions being put to good use, resistance to paying for improved services is likely to decline dramatically. This form of involvement can create ownership among communities, and also help to make municipal agencies more accountable to the people.

Similarly, while many of those who participated in the survey conducted for this study are acutely aware of the problems and risks created by the improper disposal of waste, this awareness is by no means universal. A successful EFR initiative will need to include an education and awareness-raising component, to ensure that appropriate disposal of garbage and waste is no longer thought to be optional.

New types of programmes should be given consideration, such as 'buying' waste and recyclable materials from municipal workers. This can serve as a powerful incentive to improve the efficiency of overburdened municipal staff. Similarly, a coordinated system of garbage sorting and recycling can be developed, to reduce the burden on landfill sites and to generate additional revenues.

Initial estimates suggest that earnings generated from user fees alone will be able to fund significant improvements in the existing system, as long as these revenues are ploughed back into the sector. In this regard, structural reform of the fiscal system is a critical step, without which no EFR initiative has a chance of long-term success.

Recommendations

Solid waste management is one area where EFR measures hold the potential to bring significant, visible and long-term improvements to the lives of all segments of Abbottabad's population. The poor are particularly vulnerable to the risks of improper waste disposal and will benefit from improved services.

Recommendations for EFR in Abbottabad's solid waste management sector are as follows:

- User fees and pollution taxes need to be introduced, to generate funds for the municipal authorities and to serve as a disincentive for illegal and unsafe practices.
- Fiscal arrangements currently in place must be reviewed, to ensure that revenues generated in the sector are retained and used to improve service delivery. This includes proper equipment for municipal staff, the installation of waste bins and investment in smaller collection vehicles that can access congested neighbourhoods.
- Innovative solutions should be pursued, so that systemic changes can be brought about not only in terms of how waste is collected but also with respect to the manner in which waste is disposed

of. Landfill sites are already close to capacity, and it is not feasible to find new locations, particularly in a mountainous district such as Abbottabad.

- The installation of a composting plant will prove to be invaluable and is highly recommended. Composting at the farm level should also be encouraged. Similarly, garbage sorting should be introduced at the collection stage, and options explored to set up recycling facilities within the district. These measure will not only ease the burden on landfill sites but will help to generate revenues as well.
- Existing waste treatment facilities that have fallen into disrepair or are not used efficiently must be brought back on line and refurbished, to reduce the pressure on overburdened municipal services. The incinerator at the Ayub Medical Complex and the waste water treatment plant at Kakul, both of which are currently non-functional, need to be brought back into service immediately.
- Private sector involvement in waste collection should be considered. While the activities of scrap dealers and scavengers should be mainstreamed into the waste collection system, options should also be investigated to encourage other private-sector operators.
- Improved supervision and proper coordination between various municipal authorities and other agencies is required. There is a need to clearly define the roles and responsibilities of various stakeholders, and to do more to empower local-level agencies. It is not enough simply to devolve to local governments responsibilities for providing municipal services such as waste collection. Fiscal authority also needs to be devolved so that decisions can be taken at the local level by those who are best able to judge local needs and priorities.
- Awareness and capacity are endemic issues and measures will also be required in this area. Municipal workers and local government officials need training, while among communities it is important to ensure awareness of key issues.
- Equity is a concern that cannot be ignored in any EFR initiative that is introduced. It has already been noted that the poor are disadvantaged not only in terms of access to services but also in terms of bearing the brunt of adverse effects. Pro-poor strategies will need to be devised so that while revenues are raised to improve services, the poor are able to benefit without being burdened excessively.

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In 2006, the International Union for Conservation of Nature, with financial support from the Swiss Agency for Development and Cooperation, launched a pilot EFR intervention in Abbottabad. This fact sheet and the others in this series present the findings of preliminary assessments that were conducted by IUCN and PIDE to determine the feasibility of implementing EFR in Abbottabad.

IUCN Pakistan
Islamabad Office
House 9, Street 64
Sector F-8/4, Islamabad
Pakistan

Tel +92 (51) 2850250
Fax +92 (51) 2850249
mail@isb.iucnp.org
www.iucnp.org