CONVENTIONAL APPROACHES

1.1 Public sector provision of Urban Infrastructure

Public-sector-based systems for the provision and management of urban infrastructure have often been unable to deliver an adequate standard of service. This is particularly true in relation to the urban poor. Three broad reasons for this state of affairs can be identified:

- Financial constraints - Municipal service providers do not have the resources to finance action on the scale necessary to tackle the backlog of services and at the same time keep pace with the rapid pace of urban growth.
- Lack of capacity - The capacity of public sector organisations to deliver services is constrained by restrictive legislation, low staff salaries, bureaucratic procedures and a lack of management capacity.
- 'Political' considerations, which often keep tariffs well below those required to ensure continued operation of existing services, let alone to provide the additional resources required to expand those services into newly developed areas.

1.2 Limitations of Conventional Wastewater Management Approaches

High levels of pollution in core urban areas are a function of the density of people producing wastes and the high concentration of those wastes. A lot of people producing wastes in a small area would appear to offer opportunities for centralised approaches to the collection and treatment of wastes which may reduce per-capita cost of service provision. However, lower densities of population in peri-urban areas and longer distances required for collection systems means economies of scale outside the urban core are less likely and require disproportionately large investments unaffordable to the population they serve.

The conventional wisdom is that centralised systems are easier to plan and manage than decentralised systems, this appears the case where the population to be served sits within the administrative boundary of the service delivery organisation. However, experience shows that centralised systems have been particularly poor at reaching peri-urban areas that fall outside municipal boundaries. In addition, they have been not adequately responsive to local needs particularly of the poor and those living in informal or slum areas and rarely incorporate or build on local resources.

Another drawback of approaches based on centralisation is that they discourage local innovation and initiative. The reality in many areas of deficiency is that citizens in South Asian countries often respond to deficiencies in public services by taking direct action to make good those deficiencies, sometimes employing small-scale private entrepreneurs to help them.

The examples described below in Boxes 3.1 and 3.2 provide some illustrations of centralised approaches to wastewater management in relation to affordability, sustainability, and equity of resource investments.

The Indian Government's Jamuna Action Plan (Phase II of the Ganga Action plan) (Box 1) has failed to meet the environmental objectives it set itself and that the centralised approach towards project planning, design, and implementation, has marginalised the needs of the poorer communities. As a result, the majority of wastewater from slum areas is discharge untreated into the natural environment.

Sangut Samut Prakarn Wastewater Management Project, Thailand (Box 2) demonstrates the level of investment required for conventional wastewater treatment technology. In implementation, this example also highlights the importance of consulting local stakeholders in the planning and design of the project.

Box.1 Unauthorized settlements overlooked in Yamuna Action Plan

"The aim of the Yamuna Action Plan (YAP) was that only treated wastewater should enter the Indian Yamuna river and millions were spent on creating the requisite infrastructure. Nevertheless, only 48% of the waste that enters the Yamuna is treated and the river is more polluted than ever. A sanitation official said that the oxygen level in the Yamuna is about 17 mg per litre against the prescribed 1 mg per litre and the coliform (bacteria) level is over 200,000 mg per litre against the national limit of 10 mg per litre. The YAP has concentrated on wastewater treatment plants and overlooked other sources of contamination. Most pollution comes from unauthorized settlements, slums and small-scale industries. Even from places where the STPs are functioning, the results are not encouraging. Despite a public interest litigation seeking that only treated wastewater should enter the Yamuna, a Supreme Court rule to curb pollution is hardly being followed". (Times of India, 1 September 2002)

Box 3.2 Sangut Samut Prakarn Wastewater Management Project

The Samut Prakarn Wastewater Management Project (costing about US$750 million and partly financed by ADB) aims to improve the environment in one of Thailand's most polluted provinces. The project is designed to manage industrial, commercial, and residential wastewater that currently flows to the sea through open canals and rivers in a heavily populated area. The project has adopted an integrated approach that tackles wastewater pollution both at the source and final treatment points, representing a significant attempt to proactively minimize wastewater pollution.

However, there has been considerable opposition to the project and allegations have been raised stating that the project has squandered 64 billion Baht of taxpayers' money. The opponents argue that similar wastewater management infrastructure are in a poor condition and have placed a huge burden on local bodies that lack the money and know-how needed to run them. There have also been objections raised by local communities and civil society organisations about the design of the project and the impact that it will have upon their fishing livelihoods.

However, an independent review panel concluded that centralised wastewater treatment is the only viable option in addressing the current pollution situation. The project presents an opportunity for the Royal Thai Government to institute effective regulation and enforcement to control and decrease the gross pollution of waterways in the project catchment area. The project is considered to be a benchmark for the rest of Thailand and much of Southeast Asia in wastewater treatment and pollution reduction.

http://www.adb.org/Projects/SamutPrakarn

1.3 Centralisation – a flawed response

In South Asia responsibility for the management of municipal infrastructure services normally lies with local government. In some cases, departments at the state, provincial or national level assume responsibility for the design and construction of higher-order facilities. Even where this is the case, local government remains the main provider of tertiary services.

One possible response to service deficiencies is to centralise control at the state level. The theory is that this will overcome perceived problems with local government by concentrating scarce skills in state level institutions, such as public health engineering departments, which can then provide technical assistance to municipalities. On the whole, this approach has not worked well for the following reasons:

- Central government agencies are often subject to the same limitations as local government bodies. In particular, they are also likely to be constrained by restrictive procedures and a lack of finance.
- Central agencies are hampered by their remoteness from the people whom they are intended to serve. This is particularly true in relation to local 'tertiary' level services. Those at the 'centre' find it hard to manage the provision of such services in a demand-responsive way and almost impossible to manage their operation and maintenance.