



## Strategic approaches to urban sanitation

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THE PROVISION OF sanitation services for low-income settlements in urban areas of developing countries is a key challenge which confronts communities, governments and professionals. Given rapid rates of urbanisation and the increasing proportion of urban populations residing in informal, unserved areas, the provision of such services is an urgent priority.

Addressing urban sanitation requires a strategic approach to service provision which maximises user involvement, identifies and employs appropriate technologies and which functions within an effective institutional framework. The first step in this process is to carry out a diagnostic study of the sector.

A diagnostic study approach produces a 'state of environment' report which provides baseline data upon which future planning can be based. National diagnostic studies reflect national priorities and concerns more comprehensively than those carried by or for external agencies.

National diagnostic studies are used to define key priorities and needs and lay the basis for a strategic response by the sector to urban sanitation problems. This should emphasise the need for interventions to match community needs and preferences. The value and use of diagnostic studies is discussed and illustrated by recent work undertaken in Zambia by the author and colleagues.

### Need for diagnostic studies

In many developing countries, coverage of the population with access to adequate sanitation remains low. This is particularly the case in low-income, informal settlements which are often considered illegal and therefore have no 'rights' to sanitation services. A direct result of this situation, is that morbidity due to preventable water and sanitation related disease remains high. For instance, in Zambia, cholera has become endemic in many urban areas and incidence of diarrhoeal disease remains high (Sitali, 1997; Howard et al, 1994).

Whilst the problems in many urban areas may be only too obvious, the solutions to these have often proved more elusive. Key difficulties have been that there has been limited understanding of the underlying causes of poor sanitation and a piecemeal approach to improvements. A study carried out for the Commonwealth Secretariat (ComSec) in response to a request from the African Ministers of Health, clearly indicated the need for the development of a more strategic approach to service provision (Howard and Bartram, 1993).

In recognition of the problems faced in their urban areas, the Government of the Republic of Zambia (GRZ) requested support from ComSec and the World Health Organization (WHO) to assess the strategic options available to them. The Robens Institute provided the technical support to both organisations in looking at urban sanitation.

### Diagnostic study

It was agreed at the outset of the project that the initial activity was to evaluate the major shortcomings and failures of urban sanitation within the wider context of the water and sanitation sector and the development process in Zambia.

In terms of establishing a strategic response to urban sanitation, this is essential because there are many preconceptions of why urban sanitation has failed to provide the service demanded by the population. For instance, low coverage and poor sustainability have often been seen as technological issues which can be resolved through the selection of appropriate technologies. There has been an assumption that the identification and implementation of a new technology will automatically resolve the problems. It is rare, if ever, that these problems result from a single cause which may be relatively easily overcome. It is far more common to find that numerous factors are contributing to poor sanitation provision.

Therefore, the key to a strategic development of sanitation service provision in urban areas of developing countries is a thorough understanding of all the issues and problems which affect the sector and which may contribute to poor performance. It is only when the problems are clearly understood, that the solutions may be found. This requires a broad approach to identify the major influences on the sector performance and to assess the interaction of different factors and the ways in which these may be overcome (Howard, 1996).

It was clear from the outset that it was important that the approach adopted had to be driven by national, rather than external concerns. Zambia has had numerous assessments of the sector, but these have been carried out by external agencies looking at usually specific funding possibilities. A national assessment has the value of being broader in outlook and thus assessing the factors which govern the sector performance. However, there is a value in including international experience in the assessment as this should facilitate the transfer of the experience from other countries.

### Study team

A study team was formed made up of four professionals: the Chief Health Inspector, Ministry of Health, GRZ; the Community Water Supply Advisor, WHO Lusaka; a member of staff from WHO Geneva; and a consultant from the Robens Institute. This group balanced both the need for the study to be driven by national priorities and access to a broader range of expertise.

### Methodology

The study team first identified the key areas to be evaluated during the study. These are summarised in Box 1 below. As can be seen from this figure, a broad range of issues are addressed in a diagnostic study in order to evaluate the sector performance within the wider developmental context. Thus within the report of the study, each area was extensively discussed, failings and success highlighted and conclusions drawn concerning future actions.

The study identified which were the priority issues to be addressed and made recommendations concerning how these may be overcome. In Zambia, there were two key factors which had to be resolved in order to optimise sector performance: the institutional framework; and, land tenure and service provision in informal settlements. The resolution of these is discussed below.

### Data collection

Good data collection is the core of effective diagnostic studies and unless reliable and accurate information and data can be collected and collated, the value of the study will be reduced. Information will be available in many forms and it is important that these are all accessed during the study and thus a flexible approach should be maintained.

A number of likely key information sources can be identified as follows:

*Published literature.* This is often scarce. In Zambia, the study team found very little in the way of published formal literature regarding sanitation in urban areas. Thus during the desk top study, little emphasis and time was spent in reviewing this.

*'Grey' or unpublished literature.* This is likely to be a far more productive source of information and often provides a good insight to the causes of sector failings. This type of information is not, and is never likely to be, published and as a result, is often plainer speaking than published literature which must pay more attention to sensibilities. In Zambia, much of the primary information used to build up a picture of the sector was drawn from Government reports, donor reports and evaluations and training materials.

*Discussions with sector staff.* This is important as sector staff will understand the environment within which they work and the shortfalls and constraints they face. In particular, senior staff will have clear ideas about the causes of poor performance and the ways in which the

#### Basic country information

(geography, health priorities, urban environment)

#### Water and sanitation policy and planning

(planning mechanisms; legislative framework; past investments and trends; policies and investment priorities; constraints and resource requirements)

#### Institutional framework

(sector overview; present institutional framework; proposed restructuring and discussion)

#### Urban sanitation provision

(existing coverage levels by urban area)

#### Sanitation technologies

(on-site and off-site technologies used; treatment technologies; possible alternatives and improved designs)

#### Urban sanitation improvements

(rehabilitation; cost-recovery)

#### Information systems

(information management systems; inventories; information exchange)

#### Monitoring

(coverage levels; public health; effluent quality)

#### Health and hygiene education

(programmes; staff; community participation)

#### Community participation

(community based programmes; NGO involvement; promotion of community participation)

#### Human resource development

(current training opportunities - in-house, colleges; improvements - formal, in-service, community)

#### Conclusions

strategic; institutional; technical; HRD)

#### Future actions

(strategy for immediate action)

### Box 1. Issues addressed in the diagnostic study of urban sanitation in Zambia, 1994

sector could be optimised. This information is not held in any documentation but provides a clear insight to how the services are implemented and problems faced. For instance, in Zambia staff highlighted that because current sector investment was focused on water supply, already overloaded sewer systems were expected to cope with increased return flows, a situation which led to increasing breaks and flooding of raw sewage.

*Field visits.* These are invaluable as they provide opportunities to assess real conditions and put the issues and constraints highlighted in grey literature and in discussion with staff into their real-life context. In Zambia this involved visits to low-income areas, treatment plants and sanitation projects in Lusaka, Kitwe, Ndola and Luanshya.

### The link to strategy

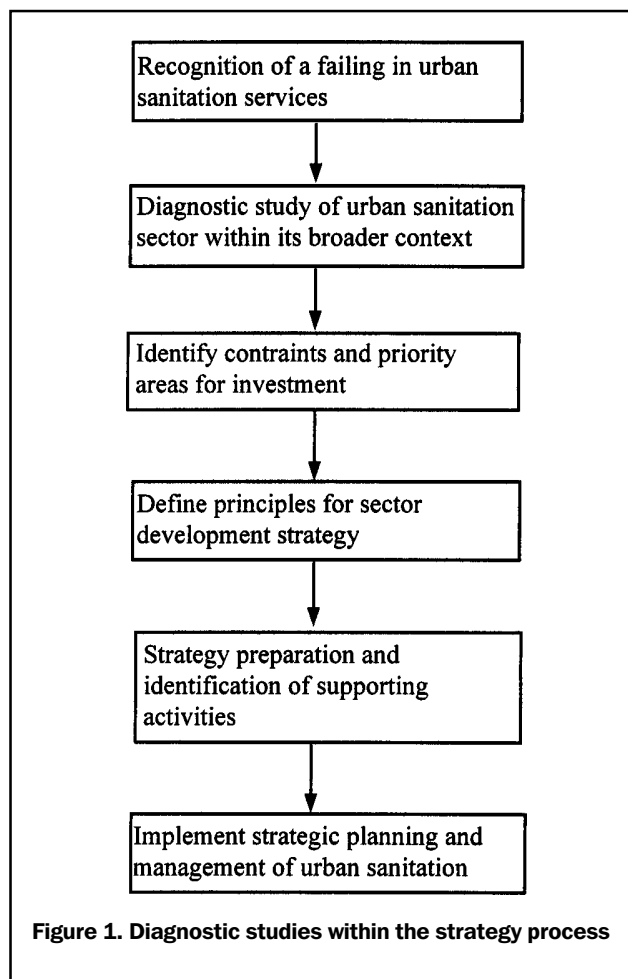
A diagnostic study provides a situation analysis of the sector and assesses strengths and weakness and highlights the key areas which should be addressed. The study can be used to prioritise particular settlements, groups and actions that will have greatest short term impact. It also evaluates long-term needs for sustainability in the sector and highlights those issues which are most problematic and require resolution if they sustainable services are to be provided.

However, a diagnostic study however, is only of real use for the sector if it is seen as the first step in strategy development (Howard 1996). The process is shown in Figure 1.

The strategy developed should address issues such as cost-recovery, technologies to be employed, human resources development and mechanisms for promoting community-based approaches to sanitation provision. In particular, the strategy must address the resources required by the sector and the source of finance required to promote improvements.

In addition to identifying weaknesses, the diagnostic study must identify possible solutions to the issues raised. For instance, in Zambia, recommendations were made to review tenure systems and investigate ways of promoting service improvements in the short-term. This in essence argued for a separation of service provision from land tenure issues. Whilst it is often argued that any form of service provision is a recognition of right to abode, (Payne, 1997) this need not be the case and workable solutions to service provision in these areas can be found.

A suggested model for extending coverage into low-income areas was developed which promoted a more community-based approach and which proposed the use of loans and grant systems to fund improvements. The



- **Strategy**
  - linked sanitation improvements with health reforms
  - addressed urban and peri-urban areas
  - linked sanitation to other sectors
  - outlined implementation and set proposals in a strategic context
- **Human resources development**
  - training needs assessment
  - develop HRD strategy based on assessment
  - develop and deliver training courses
  - strengthen existing training opportunities
- **Research and development of appropriate technologies for low-income areas**
  - inventory of existing infrastructure
  - selection of technologies for testing (assess successful technologies from other countries)
  - pilot projects with communities to evaluate technologies
  - definition of appropriate technologies and supporting activities
- **Community participation and community-based approaches**
  - assessment of existing programmes
  - training of trainers in agencies and community
  - mass communication

**Box 2. Strategy and proposals developed in Zambia**

active participation of the private sector was also encouraged in activities such as desludging latrine pits with government (national and local) playing a regulatory and facilitating role, rather than being a service provider.

The study also identified a range of other issues where urgent attention was required. This included resolving the institutional framework, for which an outline model was developed. In addition, guidance was provided on possible technologies that had not been used which had been successful elsewhere and recommended research into their potential use in the country.

**Strategy development**

In order to develop a workable strategy, it was felt essential that key sector professionals could review the findings of the diagnostic study and identify the key principles that should underpin the strategic development of the sub-sector. This was achieved through holding a review workshop for senior sector staff and by identifying a small group of professionals to develop a strategy statement, supported by facilitating actions required.

The workshop was a participatory event which outlined the key issues to be covered within the strategy, the principles underpinning the strategy and identified three key areas where proposals should be prepared for activities to be funded. These were: human resource development; research and development of appropriate technology; and the promotion of community-based approaches.

Following this workshop, a small working group met to prepare the strategy and proposals for projects. This group was composed of senior national staff and an external facilitator. The group prepared the strategy statement which focused on the need to provide sustainable services to the entire urban population and identified how priority issues should be resolved. To support this strategy statement, proposals were developed in the areas identified above which included concrete actions and were linked to

developing sustainable approaches to urban sanitation. The strategy statement and proposals were presented to Government and donors and met with a positive response. It is now incumbent on the Government of Zambia to follow these approaches up through official channels.

The key components of the strategy developed and the proposals prepared to support the strategy are shown in Box 2. It is important to note that urban sanitation improvement was clearly set within the context of the health sector reform as this process emphasised the need for preventative health measures and the decentralisation of health care to within easy reach of every household and community. The proposals developed were seen as key in promoting sustainable sanitation improvements in strategic way. Thus, it was accepted that a longer time scale was necessary in order to define an approach which led to lasting solutions to all the urban population in Zambia.

### **Conclusion**

Diagnostic studies allow the sector to critically appraise its performance and identify where failures are occurring. Only by a thorough understanding of the problems and their causes can the sector hope to overcome the constraints it faces and provide adequate sanitation services to all its population. In 1994 a diagnostic study was undertaken of urban sanitation in Zambia, which was part of a process of strengthening the strategic development of sanitation service provision and the role of the Ministry of Health in promoting and supporting sanitation improvement.

It is believed that the approach adopted in Zambia can provide a model for other countries wishing to address their urban sanitation concerns. Subsequent dissemination of the approach adopted in Zambia (Howard, 1996) and a presentation to the West African Health Ministers Meeting in Banjul in 1995, demonstrated an interest in the

model. Such studies greatly assist countries in identifying the causes of sanitation problems in urban areas and provides governments with information which they can use to develop strategic response to these problems and lobby for funds from the donor community. They can also provide the basis of more structured development of sanitation and provision of guidelines on acceptable technologies, training programmes and community involvement.

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