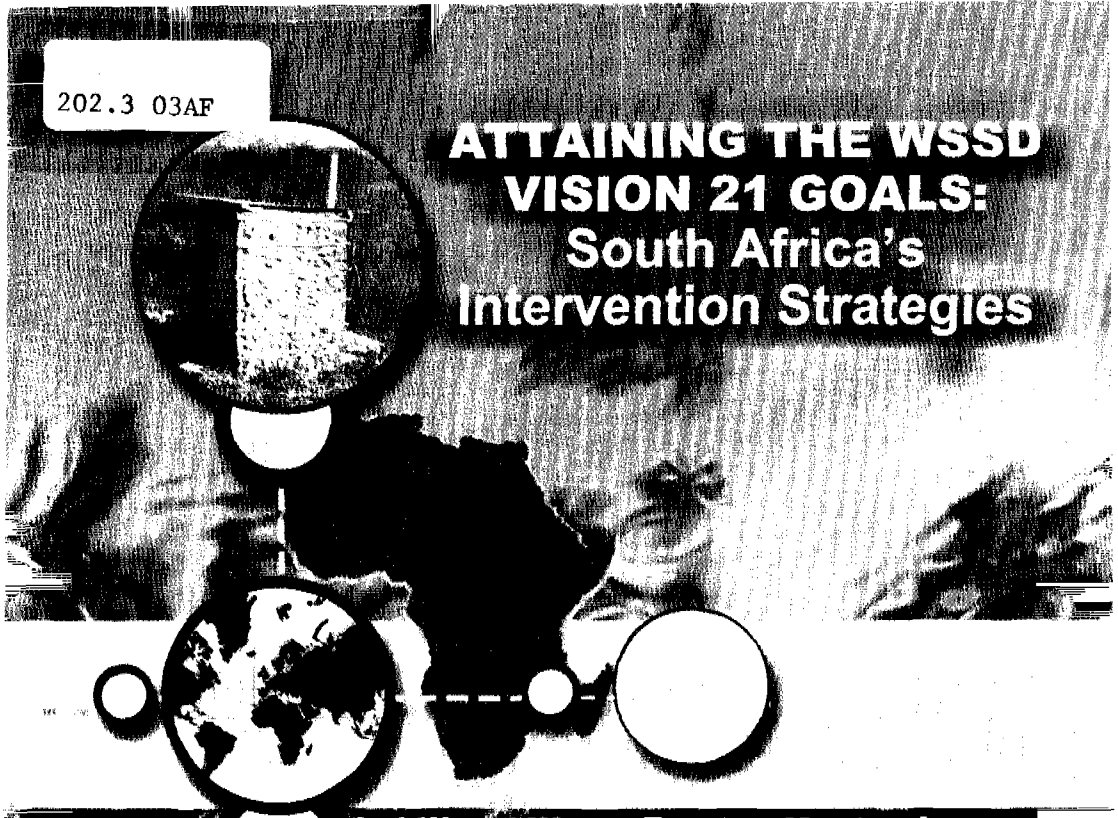
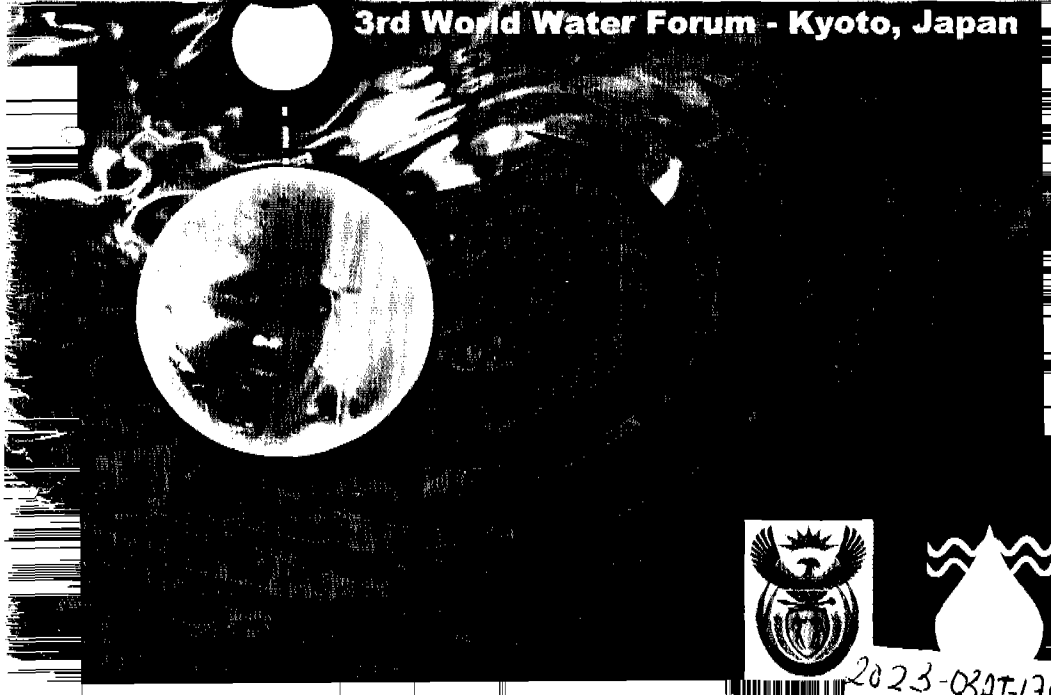
ATTAINING THE WSSD VISION 21 GOALS: South Africa's Intervention Strategies



3rd World Water Forum - Kyoto, Japan



PUTTING AIMS INTO PRACTICE AND MEASURING PROGRESS: SOUTH AFRICA'S APPROACH/ EXPERIENCE WITH SANITATION PROGRAMMES

The South African Context

When South Africa's first democratically elected government came into office in 1994, its Reconstruction and Development Programme set ambitious targets for delivering basic services such as water and sanitation in order to address the backlog left by the apartheid regime. (insert figures) To meet these targets, Department of Water Affairs and Forestry (DWAF) faced the challenge of change in three areas.

First, DWAF's most immediate challenge was to shift its focus from dams and bulk water for agriculture and livestock to community water supply and sanitation. This entailed developing the necessary policy in the form of the White Paper on Water Supply and Sanitation and establishing the Community Water Supply and Sanitation Services Sub-directorate of DWAF (CWSS), with significant responsibility for delivery.

Although government has made substantial progress in improving access to water supply, an estimated 45 percent (nearly 16 million) of people still lack basic sanitation services in South Africa, while an estimated 15 percent (6 million people) do not have access to safe drinking water. The Government has therefore developed policies and programmes to speed up service delivery.

Although DWAF made notable strides in delivering water services to communities, the South African government has developed a Free Basic Water Policy, which provides each

household with six kilolitres of free water per month, to help meet the goal of access to a basic water service for all. The premise was that there was a need for a safety net to ensure that the poorest of the poor, who are the hardest hit by unemployment and HIV/AIDs, would not be denied access to water due to an inability to pay. Costs incurred by municipalities are subsidised by central government based on the number of poor households requiring basic services. In addition, two tiers of tariffs for water over six kilolitres first recover costs and then penalise heavy users. South Africa is also in the process of developing a Free Basic Sanitation Policy that intends to ensure that all households obtain at least a basic level of service.

Second, the top-down, highly technical approach formerly used by DWAF was replaced by a more participative and ultimately decentralised approach. This meant working with the non-governmental organisations (NGOs) and the private sector to expand implementation capacity. From 1995, it also entailed supporting the establishment of new local government municipalities and helping to build their capacity to gradually adopt responsibility for water and sanitation schemes and their management, funding and implementation as specified in South Africa's Constitution and developed in the Water Services Act formulated by DWAF in 1997.

Finally, DWAF had to overcome institutional fragmentation and its reflection in the separate, uncoordinated treatment of water, sanitation, and health and hygiene by various government departments. Building on already substantial progress in facing the first two challenges, DWAF formulated an innovative approach in its Masibambane Programme. With DWAF as a leading department, Masibambane builds an integrated approach by government departments, works with local government to adopt tools permitting it to fulfil its new responsibilities, and ensures that donor funding is not compartmentalised into individual, add-on type programmes but supports DWAF's primary objectives.

Since 1994, DWAF has strengthened itself institutionally, made progress and gained experience in delivering water services, pursued a process of decentralisation to local municipalities, and improved the integration of water, sanitation, and health and hygiene through innovative approaches. DWAF is in the position

to act as the leading institution in pursuing the targets set by the South African Water Service Sector. However national, provincial and local government, and all water service institutions and stakeholders have a responsibility to contribute to the realisation of the following targets set by the South African Water Service Sector:

Apply the free basic water service policy to all people with access to basic service by 2004

Basic water services to all schools and clinics by 2005

Education on hygiene and wise use of water at all schools by 2005

The provision of 8 million more people with at least basic water supply services by 2008

The provision of an additional 18 million people (3 million households) with at least a basic sanitation service by 2010

Education to 3 million households receiving basic sanitation service by 2010

In addition, South Africa has agreed to the Millennium Development Goals of halving the backlog people without water services by 2015 and the World Summit on Sustainable Development (WSSD) goals of halving the sanitation backlog by 2015.

South Africa has already addressed the goal of water provision by supplying over seven million people with basic water services. Still, sanitation lags behind in delivery and the country will have to significantly accelerate the present expenditure and delivery rate to reach any of the targets mentioned above. Traditionally, South Africa has accorded a low priority to sanitation services. Previous government budget allocations for sanitation interventions were limited to a small percentage of the total annual water budget. Sanitation was the "poor relative" to water delivery services. The government was focussed on supplying sanitation facilities to newly constructed schools, while limiting the budget for the repair and renovations of existing schools. Sanitation programmes funded through other channels predominantly focussed on the provision of sanitation in urban areas through the supply of bulk infrastructure.

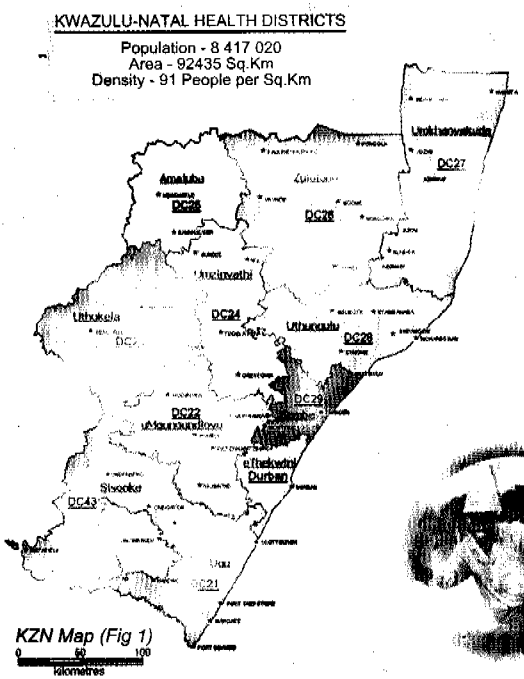
This brochure begins by outlining how South Africa's approach to sanitation has developed, particularly in response to the outbreak of cholera in 2000/2001. It then describes a pilot study that was conducted in the KwaZulu-Natal Province to test and further develop a means of measuring progress. Finally, it identifies lessons learned.

CHOLERA AS A CATALYST FOR THE IMPLEMENTATION OF SANITATION PROGRAMMES

Background to Cholera in South Africa

The World Health Organisation (WHO) considers cholera to be a global threat and a key indicator of a country's lack of social development. The disease remains a challenge to countries where access to safe drinking water and adequate sanitation are still lacking. Since 1800, cholera has spread throughout the world in seven large waves. The seventh pandemic reached Africa in 1970, when cholera appeared in East, North, and West Africa simultaneously. By the end of 1971, twenty-five African countries reported more than 72,000 cases and 11,000 deaths that year and the overall case fatality rate was 16 percent. Since 1982, Africa has reported the highest incidence rates of cholera in the world. According to the WHO statistics on reported cholera cases, South Africa falls within the top twenty countries recording cases of the disease.

Cholera is an endemic disease in South Africa. Although cholera was made a notifiable disease in 1965, there is no evidence of any known cases of cholera acquired locally in South Africa until 30 September 1980. The first major outbreak of cholera in KwaZulu-Natal (KZN) Province was in 1982 with a total of 12,263 reported cases and 24 deaths. During 2000/2001 South Africa experienced one of the worst cholera outbreaks in history, peaking at 106,151 reported cases during 2001. This represented a ten-fold increase on the 20-year provincial incidence of the disease in a span of just 13 months. Most of the reported cases were located in KZN, although the disease spread rapidly to other provinces. Due to its rapid response to the outbreak, South Africa recorded a low Case Fatality Rate of 0.22 percent in 2001. This extremely low rate contributed to the decline in the overall global Case Fatality Rate from 3.6 percent in 2000 to 1.48 percent in 2001.



Cholera Monitoring and Surveillance in South Africa

According to the WHO, responses to cholera outbreaks tend to be reactive - a well-organized emergency response. While this can prevent many deaths, it fails to prevent future outbreaks of the disease. The WHO also emphasizes the importance of continued incorporation of medium and long-term prevention measures in cholera control activities.

A resilient disease surveillance system is the foundation of an effective prevention and control programme. According to the South African Guidelines for Disease Outbreak Response and Epidemics, environmental surveillance requires monitoring the risk of a cholera outbreak by periodically sampling strategic sewage effluent (hospitals, hostels, sewage purification works) as an early warning system.

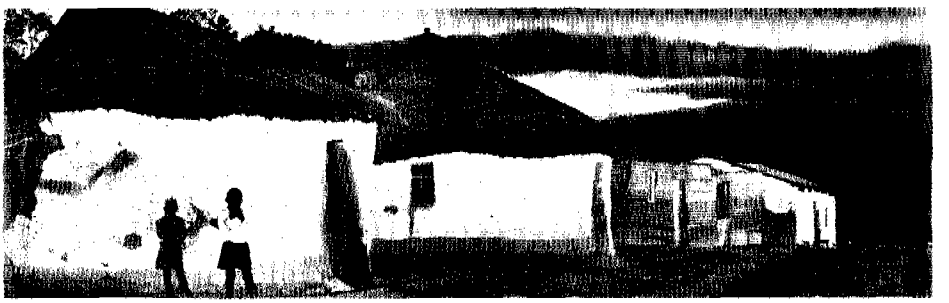
Although South Africa has implemented water resource quality monitoring programmes for a number of years, namely the National Chemical Water Quality Programme and the National Bio-monitoring Programme, the country did not have a central source of information to assess the potential health risks relating to faecal pollution of surface water prior to 1994.

In terms of the South African National Water Act, the Department of Water Affairs and Forestry (DWAF) is responsible for the coordination, organization, control and further development of national water resource quality monitoring programmes. DWAF designed the National Microbial Water Quality Monitoring Programme (NMMP) to supplement the existing national water resource quality monitoring programmes. The NMMP provides information to assess and manage the potential health risks to water users relating to the faecal pollution of South Africa's water resources. Using their 1994 status, catchments throughout South Africa were prioritised according to their level of microbial pollution of surface water. Those areas that

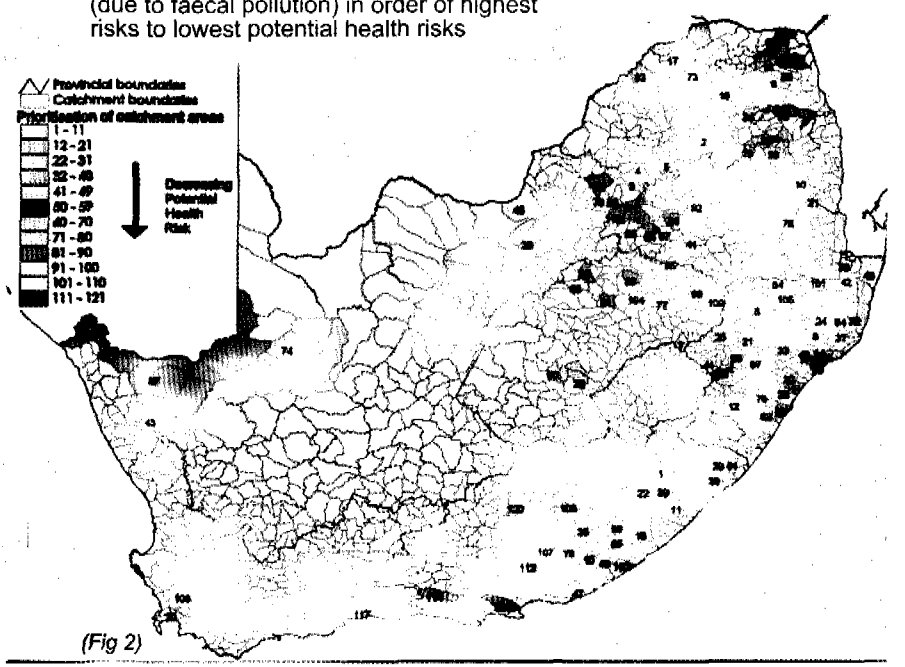
were short-listed, as potentially high-risk areas would be the first to implement the National Microbial Water Quality Monitoring programme. Two of the areas that reported cholera cases in the 2000/2001 cholera outbreak were listed in the top ten priority areas.

Prioritised potential health risk areas.

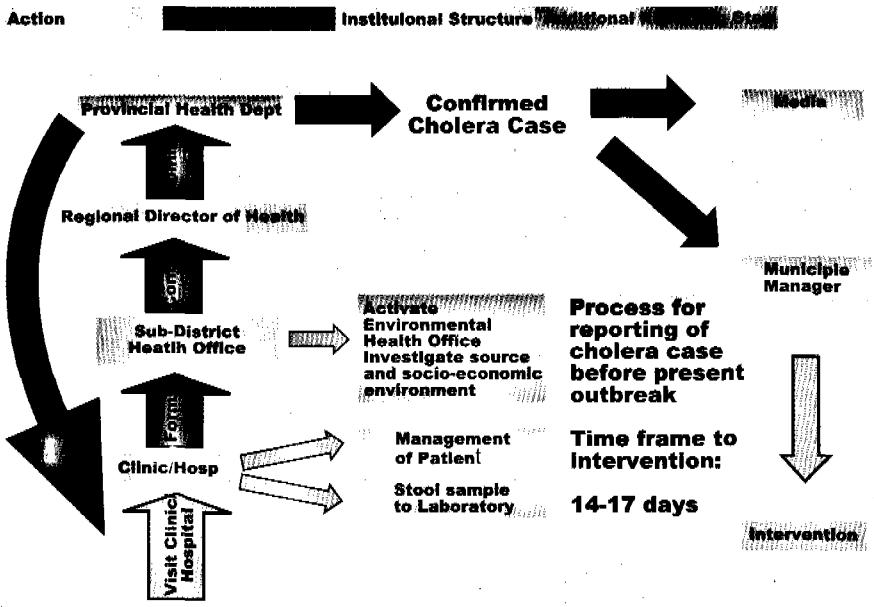
According to WHO Guidelines, an adequate disease surveillance programme involves keeping daily records of diarrhoea cases seen in health facilities and by health workers in the community. In South Africa early detection of any infectious disease is reported by health care providers at Primary Health Care level, community health centres and hospitals. The probable cases are reported to the District Communicable Disease Coordinators; the provincial Communicable Disease Coordinator is informed of the outbreak and triggers a response.



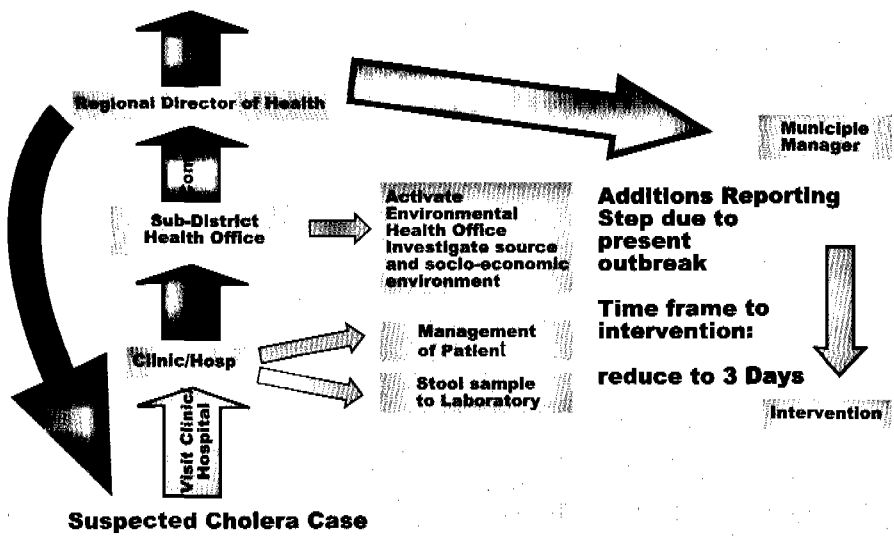
Map 4: Prioritised potential high health risk areas (due to faecal pollution) in order of highest risks to lowest potential health risks



(Fig 2)



A number of government departments and institutions play a key role in the management and prevention of a cholera outbreak. With the South Africa's local government elections in 2000, the local government transformation process reached its final phase and local government assumed full operational responsibility for water and sanitation service provision. Experience from the cholera outbreaks in KZN has shown that multi-sector, inter-departmental interventions have the greatest impact on the prevention and control of cholera. As a result, the **Provincial Disaster Management Centre** has recommended a process for the flow of communication during an outbreak, the activation of institutions and



structure, and for the co-ordination of interventions. This process shows clearly the roles and responsibilities of each role-player in the cholera outbreak. The significance of this process is that is can be implemented for all manner of disasters.

Non-governmental organizations have also assisted communities and government institutions in the management and prevention of cholera through the provision of toilets and the drilling of boreholes.

Red Cross water pump (Fig 6)

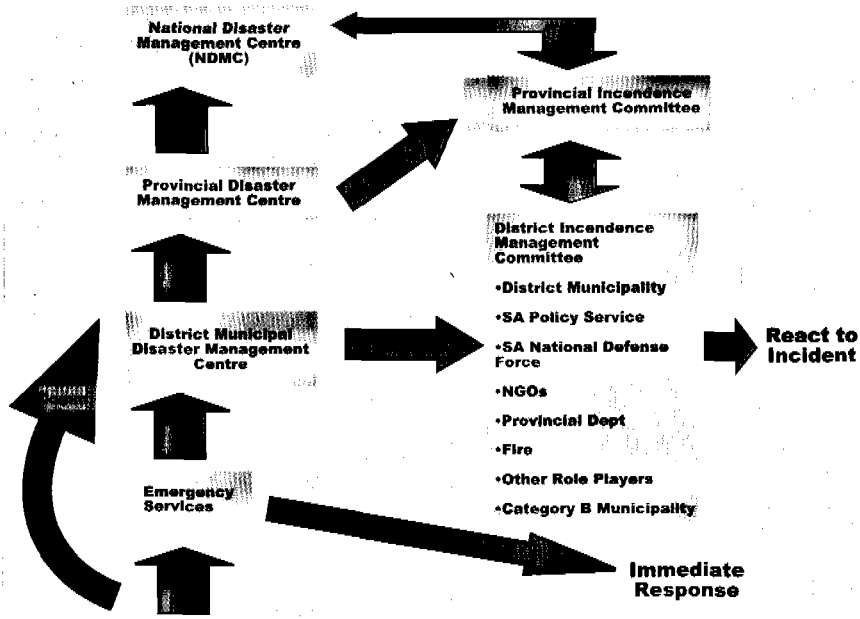


Fig 4 **Incedent reported**

Cholera strategies in South Africa and KwaZulu-Natal Province

Since the lack of adequate sanitation and potable water were major contributing factors to the spread of cholera, the National Cholera Strategy has recognised the importance of linking cholera initiatives to the national poverty alleviation programme. The key programmes in this regard were the Urban Renewal, the Rural Development and the Consolidated Municipal Infrastructure Programmes. The National Cholera Strategy has the following objectives:

The National Cholera Strategy has the following objectives:

Reduce the rate of cholera infections through implementation of immediate interventions

Prevent further spread through short term interventions

Prevent recurrence of the epidemic through medium and long term interventions

South Africa has developed guidelines for the management of cholera cases, including an immediate reaction to a suspected cholera case and three levels of intervention. The immediate reaction to a suspected cholera case is the Treatment of Patients to minimise the fatality rate. These types of interventions are important as they assist in containing the spread of cholera as quickly as possible. However, since they do not provide for a long term solution, funds expended on such activities need to be carefully monitored. The Short Term, Medium Term, and Long Term Interventions describe any project less than one year, between one and three years, or over three years in duration respectively that contribute to the level of a specific service.

Many rural and urban communities in KZN have a limited or, in some instances, no reasonable access to sources of reliable and safe drinking water. Instead communities draw their domestic water requirements from unprotected springs, streams and rivers.

There are usually no formal sanitation facilities available in these settlements and, as a result, the water sources down gradient of these settled areas are highly vulnerable to contamination from human and animal waste.

The three most important elements required to contain the spread of an epidemic are: access to potable water, sanitation, and health and hygiene education. Consequently, it became the joint responsibility of the Department of Health (DoH), local government municipalities, and the Department of Water Affairs and Forestry (DWAF) to manage and control the cholera outbreak in KZN. Intervention measures emphasised treatment of reported cases, providing potable water, sanitation facilities and

health and hygiene education to the affected areas. The DoH spent approximately $1 million US dollars on medical interventions in KwaZulu-Natal to treat patients in the existing 68 hospitals and 340 clinics and in temporary treatment facilities/ rehydration centres that were erected in remote areas reporting cases of cholera. Municipalities together with provincial and national departments took the following specific actions to combat cholera subsequent to the outbreak in August 2001:

- **re-hydration centres;**
- **Deployment of mobile water tankers;**
- **Installation of additional fixed water tanks; and**
- **Deployment of additional staff, inter alia, the South African National Defence Force.**

Red cross toilets (Fig 5)

The outbreak of cholera highlighted the low levels of water and sanitation supply in the rural areas of KZN. The aim of the KZN Provincial Strategy is to work through district municipalities to effectively contain and prevent future epidemics in the most cost effective manner. It has attempted to integrate, co-ordinate and facilitate service delivery in the water and sanitation sectors of KZN to overcome cholera epidemics. The following section discusses sanitation programmes implemented in KZN.

EMERGENCY SANITATION PILOT IN KWAZULU-NATAL

Prior to the outbreak on cholera, a much greater emphasis had been placed on water supply than on sanitation provision in KwaZulu-Natal. The fast track sanitation programme made a significant impact on the delivery of sanitation facilities to rural areas in the Province. Through this programme, 27 304 household structures were constructed between 2000 and early 2001, while the standard sanitation approach constructed only 5 165 sanitation facilities between 1997 and early 2002.

Prior to the 2000/2001 cholera outbreak, sanitation programmes in KZN were funded through DWAF's Community Water Supply and Sanitation (CWSS) programme and through NGOs. The CWSS programmes were implemented in two phases. Phase A included capacity building of the project management structures to administer projects, the development and execution of a health and hygiene awareness campaign, the training of key role players in the programme and the construction of demonstration toilets. Phase B entailed the continuation of the health education programme (with reduced inputs from the consultants) and the provision of latrine facilities, which met the government's basic standards (Ventilated Improved Pit Latrines or their equivalent). The health and hygiene awareness programme was continued in phase B, aimed at promoting community participation and ownership and creating a long-term sanitary health monitoring programme within communities.

The cholera outbreak in August 2000 focussed the government's attention on addressing sanitation issues.

In KwaZulu-Natal, two districts (Ugu and uThungulu) were allocated emergency funding for the implementation of fast-track sanitation programmes, based on the high incidence of cholera in these areas and the urgent need for sanitation facilities. The aim of the programmes was to implement an emergency sanitation programme to help prevent the spread of cholera by promoting community awareness about sanitation and health and hygiene and by constructing toilet facilities in cholera-affected areas. Fast-track programmes combined the two phases; awareness, capacity building, training, construction and health and hygiene activities were implemented as a single stream within these programmes.

Key features resulting from the fast track approach are:

Delivery of Sanitation Facilities: The fast track sanitation programme has made a significant impact on the delivery of sanitation facilities to rural areas in KwaZulu-Natal. Fast-track sanitation programmes delivered over five times more sanitation facilities in almost half the timeframe of a standard sanitation programme.

Cost of Delivery: The cost per household for the standard sanitation programme (approximately R3 200) is higher than that of the fast-track intervention programmes (approximately R2 700).

Compromising Health and Hygiene Programmes: Since the focus was on infrastructure delivery rather than on behaviour modification, the fast-tracking of sanitation delivery during the cholera outbreak may have compromised the health and hygiene components of the programme. An evaluation of these programmes recommended that a fast-track sanitation programme be implemented only where no other options are available. Although this type of intervention is ideal for the rapid construction of sanitation facilities, key areas of intervention, as sanitation habits and hygiene behaviours, tend to be ignored.

Single Phased Sanitation Delivery: The fast-tracking process combines the different phases of a project, expedites sanitation delivery and reduces sanitation costs.

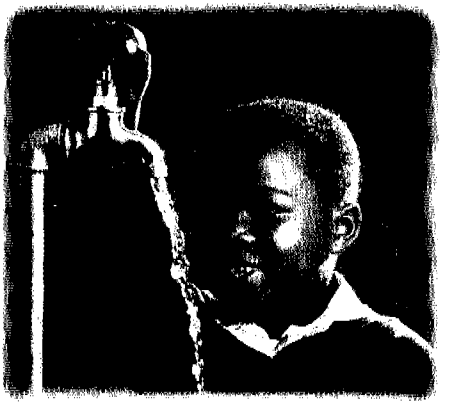
Local Technologies: The use of local materials in the construction of technologies vastly reduces the cost of a sanitation unit, and hence the projects were able to reach the poorest of the poor.

Combining Projects: The implementing of more than one project within the same District/Municipality/area greatly reduced the cost of implementation.

New Sanitation Policies: The cholera outbreak has prompted the design and development of the Provincial Sanitation Strategy, including a Health and Hygiene Strategy.

Lessons Learned from the KZN Cholera Interventions

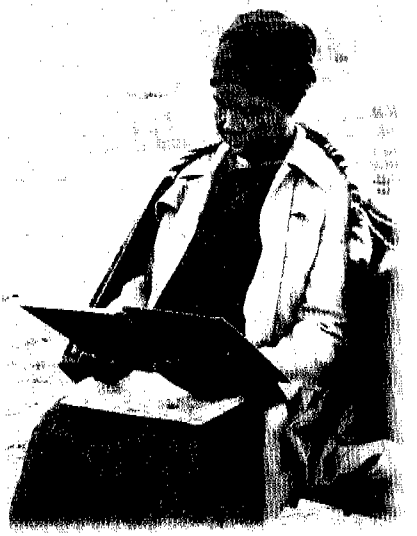
Cholera has a relative simple transmission, is capable of being contained, and has a relatively uncomplicated treatment. The recent epidemic had considerable effects on water and health services and the lessons learned are as follows:



Improving Systems and Responses

Early detection warnings

As has been learned elsewhere, an early detection system is critical to interventions that lead to preparation, containment, and the ending of the epidemic. For example, a scientific study conducted before the outbreak of the epidemic found evidence of cholera in the effluent from a number of hospitals in northern KwaZulu-Natal.



Longer-term solutions

It is critically important for all information and project data gathered during the epidemic (such as the cost of tankers, deployment of rehydration tents, etc) to be made available for research and for assessing ways to improve the effectiveness of interventions in a future epidemic.

Regional and international coordination

There should be collective action within the Southern African region and internationally to improve the response to cholera epidemics and to provide a global warning system.

Interdepartmental Cooperation and Coordination

Although weak at the beginning of the 2000/2001 cholera outbreak, interdepartmental cooperation and coordination improved as the effects of the outbreak increased. Initially there was no clarity on the roles and responsibilities of different stakeholders, however, this problem was partly addressed with the development of a National and Provincial Disaster Management Strategy and through the documents produced by DWAF. However, combined documentation to facilitate an integrated approach to the management of a cholera outbreak is still required.

Improving the Approach to Water, Sanitation, and Health and Hygiene

Supply of Sanitation Services

The cholera outbreak played a key role in advocating the supply of sanitation service to households and schools and in highlighting the importance of comprehensive sanitation and hygiene programmes. The outbreak effected a significant acceleration in Sanitation Supply Programmes to households and schools and resulted in the development and designing of coordinated health and hygiene materials that advocated a single sanitation and hygiene message from all role-players in this sector i.e. DWAF, DoH, NGOs.

Specific sanitation lessons included: Sanitation should receive a higher level of priority within the water services implementation programme.

Water and sanitation delivery should be implemented simultaneously.

Long-term sanitation programmes should be designed and planned.

School and community sanitation programmes should be implemented by one agency under the responsibility of local authorities.

Sanitation programmes should draw on local labour and bring the widest possible range of benefits to the community.

The system of Community Health Workers (CHW) should be strengthened and expanded.

Health and hygiene promotion should involve advocacy and education.

Community Involvement

Other countries that have experienced cholera outbreaks have found that the supply of water and sanitation services alone does not prevent a future outbreak of the disease and that an extensive health and hygiene education programme is also required. A strong network of Community Health Workers (CHW) operating at village level significantly helps change

household behaviour patterns relating to sanitation and hygiene. The CHW have the ability to provide appropriate messages to rural communities and should be more strongly supported and their campaigns closely linked to health and water interventions.

The 2000/2001 cholera interventions in South Africa focused on the treatment of patients rather than on the changing and influencing of community sanitation and hygiene behaviours and practices. Some concern was expressed due to the limited involvement of communities in dealing with the epidemic. In most instances, recommendations were that Community Health Workers play a greater role in cholera interventions.

Community Involvement

In response to the cholera outbreak in KZN, the Provincial Master Plan has assigned an additional level of service to those stipulated in the Water Service Act. The Water Service Act defines the minimum level of service as the minimum standard of water supply services necessary for the reliable supply of a sufficient quantity and quality of water to households, including informal households, to support life and personal hygiene. The additional level is known as the survival level of service and is an interim measure for the provision of five to eight litres of water per person per day.

Close Links between Sanitation and Water Initiatives

Urgent remedial action should not cut across or undermine the existing initiatives in communities, but should strengthen the provision of existing clean water and sanitation projects. It is generally agreed that one of the most important lessons and by-products of the cholera has been the need for greater attention to be given to sanitation.

Health and hygiene education should combine both short term (hand-washing) and long term (service delivery) messages on the provision of appropriate health and water services.

Accelerating Sanitation Delivery meet targets

The cholera outbreak of 2000/2001 helped shift the focus from the delivery of water toward the

delivery of sanitation. Sanitation has become a government priority with expenditure and delivery in the sector sharply increasing in the last three years. Lessons from KwaZulu Natal suggest that acceleration of sanitation delivery can be achieved by:

Ensuring participation of communities

Encouraging some form of contribution (not money) from households

Controlling the management, finances and technology choices at community level

Using technology that encourages the use of local materials and is affordable to all

Developing human resources and capacity for the management and implementation of programmes

Making financial resources available for the implementation process

Supporting a scaling-up period of two to three years to build the capacity to implement the fast-track programmes

Strengthening the health and hygiene component of the programme

Monitoring and evaluating programmes to document lessons learned and best practice For South Africa to meet the Water Service Sector target, it will have to continue in the present manner of fast-tracking sanitation in all provinces and will have to incorporate lessons learned to improve on delivery. If the South African government is serious about reaching these goals, it will need to support and develop a two to three year capacity building programme that will ensure that all sectors and stakeholders involved in the sanitation field have the human and financial resources to implement the accelerated programmes.

MEASURING PROGRESS: PILOTING THE INDICATOR TOOLKIT IN KZN

Measurement of Vision 21 Goals

Vision 21 has five water, sanitation and health and hygiene targets to be reached by 2015 and 2025. In order for countries around the globe to ascertain where they are placed along the development continuum vis-‡-vis attaining these targets, a standardised measurement tool was designed. The London School of Hygiene and Tropical Medicine, in conjunction with the Water and Sanitation Collaborative Council (WSSCC) designed an Indicator Toolkit to measure the five water, sanitation, and health and hygiene targets set by Vision 21 to be reached by 2015 and 2025. The application tool was designed as a summative assessment instrument, with the aim of measuring the five quantitative indicators to determine whether the targets have been achieved.

	Vision suggested targets for 2015	for 2025
Target 1	Universal public awareness of hygiene	Good hygiene practices universally applied
In line with Target 1, the survey results show that the survey area has a long way to go in order to reach this target		

	Vision suggested targets for 2015	for 2025
Target 2	Percentage of people who lack adequate sanitation halved	Adequate sanitation for everyone
Considering the high percentage of people with adequate sanitation in the survey are, Target 2 is attainable		

	Vision suggested targets for 2015	for 2025
Target 3	Percentage of people who lack safe water halved	safe water for everyone
The low percentage of households with adequate access to safe water in the survey is an indication that Target3 is a long way from being acheived		

	Vision suggested targets for 2015	for 2025
Target 4	Percentage of people who lack adequate sanitation halved	Adequate sanitation for everyone
It is clear from the low percentage of children educated about hygiene in the survey area that much still has to be done to acheive Target 4		

	Vision suggested targets for 2015	for 2025
Target 5	All schools equipped with facilities for sanitation and hand-washing	
This negligible percentage of schools equipped with hand washing and sanitation facilities in the survey area ia an indication that school sanitation has to be stepped up massively if the area is to acheive Target5		

Targets 1 to 3 are set to conclude whether or not households have:

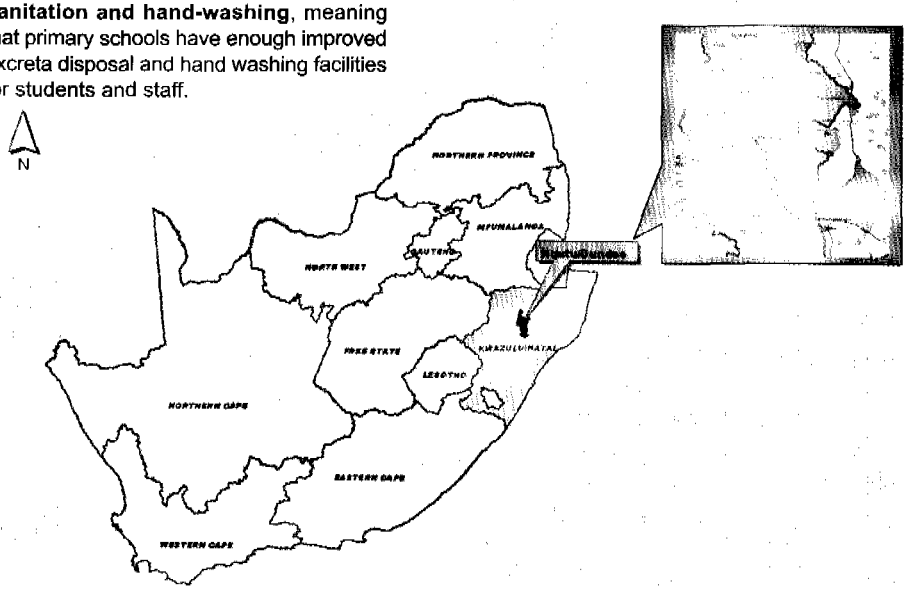
1. **Good hygiene practices;** meaning that the behaviour of the household is such that it reduces the risk of pathogenic transmission. In the pilot villages the researchers found that what members of the household told the surveyor and what the observer saw was not always compatible.
2. **Access to adequate sanitation;** meaning that excreta are disposed of in such a way that it reduces the risk of faecal-oral transmission to its users and the environment. This target is directly related to the infrastructure provision in the pilot villages.
3. **Access to improved water supply;** meaning that they have access to sufficient drinking water of acceptable quality as well as sufficient quantity of water for hygiene purposes. This target is related to the toolkit questions pertaining to access to water from a tap or handpump and the distances that people have to walk to get to the water. Targets 4 and 5 assess school sanitation properties, in terms of whether:
4. **School children knows about hygiene** meaning that primary school children have most likely being taught about hygiene at school, but more important have gained a basic understanding on hygiene practices.
5. **Schools are equipped with facilities for sanitation and hand-washing**, meaning that primary schools have enough improved excreta disposal and hand washing facilities for students and staff.

In terms of the targets set for 2015, the results of the South African pilot testing were as follows:

1. **Universal public awareness of hygiene:** the pilot outcome shows that 43.21% of the households complied with good hygiene practices.
2. **The percentage of people who lack adequate sanitation globally should be halved:** the pilot shows that 60.08% of households had access to improved sanitation.

Indicator Survey in KwaZulu-Natal

3. **The percentage of people who lack safe water should be halved:** the pilot shows that 42.39% of households had access to improved water sources.
4. **Eighty percent of children are educated in hygiene practices:** the pilot shows that 45.79% of school children had adequate hygiene education at school.
5. **All schools are equipped with adequate sanitation and hand washing facilities:** the pilot shows that only 8.42% of children had access to improved sanitation and hand washing facilities at their schools.



An identified cholera area in a remote rural part of northern Kwazulu-Natal Province was selected for testing the toolkit. Three village clusters comprising seven villages were identified and the following characteristics of each village were noted:

Three village clusters – seven villages – were identified within an accessible geographical area, with the following characteristics:

Name of Village	Population (total)	No of households	Services available
Ndatshana	8,099	1,256	VIP sanitation, water (hand pumps), 0.6% electricity, 0.6% landline telephones
Ndindindi	4,500 est.	644	1.6% landline telephones, 0.5% electricity, no sanitation, limited access to water
Nqutu 4 Cluster	8,500 est.	1248	Approximately 50% VIP sanitation & water (hand pumps), 0.8% landline telephones, 0.9%electricity

Note: The information above is fluid as infrastructure provision in this area is an active process and some areas currently without water and sanitation will have full services by the end of 2003.

1.Ndatshana:

A village with a **completed sanitation programme** (completed meaning Ventilated Pit Toilets were installed at each household in the village and as part of the contractor obligations, health and hygiene training took place.) a.In Ndatshana there are five (5) primary schools, of which two (2) were randomly selected.

2.Nqutu 4:

A village cluster with **partial sanitation facilities** provided (partial meaning some homes have VIP toilets, some have pit latrines and some have no toilets at all). According to official documentation health and hygiene training formed part of the contractor obligations in the villages where VIP toilets were being built or completed. This cluster of villages consist of the following communities: b.In the Nqutu 4 cluster there are three (3) primary schools, of which one (1) was randomly selected.

3.Ndindindi:

A village with **no sanitation facilities** provided (none meaning that there was no formalised sanitation programme, although a few homes have dug their own pit latrines.) c.In Ndindindi there are two (2) primary schools, of which one (1) was sampled.

A total sample of 454 entities were surveyed over an eight week period. These included:

260 households: 17 of the 260 survey forms were discarded because of corrupted data.

190 school children: All the data forms were used. The bulk of the children were surveyed at the schools to ensure that a reasonable size sample was used. 38 of the 190 children were surveyed in their home environments.

4 schools: in each school, the principal or senior teacher in charge was surveyed.

Survey Results

The outcomes of the KwaZulu-Natal survey show the following results in line with the Vision 21 targets:

Instead of looking at the five outcomes as isolated figures, they should be considered within a larger context and balanced against the Vision 21 targets. In terms of the targets set for 2015, the results of the South African pilot testing were as follows:

General Household Questionnaire

Target 1:	Target 2:	Target 3:
Appropriate Household Practises	Use-Access to Improved Sanitation	Use-Access of improved Water sources
Percentage of Households with good hygiene practises = 43.21%	Percentage of Households with Use-Access to improved Sanitation = 60.08%	Percentage of Households with Use-Access to Improved Water sources = 42.39%
105 respondents out of the sample of 234 households had good hygiene practices	146 respondents out of the sample of 234 households had access to improved sanitation	103 respondents out of the sample of 234 households had access to Improved Water sources

School Sanitation Questionnaire

Target 4:	Target 5:
Hygiene Education in Schools	Access to Improved Sanitation In Schools
Percentage of Adequate Hygiene Education In Schools = 45.79%	Percentage of Access to improved Sanitation in Schools = 8.42%
87 out of the 190 children interviewed showed signs of Adequate Hygiene Education at school level	Only 16 out of the 190 children interviewed perceived their access to sanitation in their schools as adequate

Formative Assessment Summary

The research was required to test and pilot the WSSCC WASH Indicators Toolkit and questionnaire in KwaZulu-Natal, to apply the questionnaire to projects, capture and synthesize the data generated, and link the outputs of this exercise to the international WSSCC initiative and produce the results.

In relation to the South African rural population of 21 million (50% of the total population of 42, 801 million) people, where the service provision backlogs are most prevalent, the sample was too small to extract a national pattern. However, the results are encouraging for the pilot communities, located in an extremely poor and under-resourced area of KwaZulu-Natal, since they shows clearly that the targets are attainable for their area.

In the case of target 2 (adequate access to sanitation), the 2015 target has already been surpassed. The only glaring problem in the area is reflected in the outcome of target 5 (all schools should be equipped with adequate sanitation), where only 8.42% of the school children had access to improved sanitation at their school.

Critique of the Toolkit

General Issues / critiques:

As a concept the Indicator Toolkit is excellent, however the Indicator Toolkit in its present form is an academic exercise and widespread application is questionable.

Data interpretation and analysis is complex, making widespread application questionable.

Sample size versus cost: widespread surveying may not be possible.Assessing the five outcomes on their own reduces the value of the information if one expects a formative, qualitative set of outcomes.
For individual country use a formative analysis component should be added.

Methodological issues:

Observations as per validation criteria near impossible due to cultural and social barriers

Estimated survey times were massively underestimated by the toolkit designers and researchers – distances and social habits of households were barriers

Questionnaire construction created survey problems: makes applicability questionable. Questionnaire sequencing is cumbersome and Duplication of questions is unnecessary. To replicate would mean a lot more work on the questionnaire structureThe Indicator Toolkit was piloted without backup computer software

To replicate the data capturing and analysis, software should be tested widely

Overall Lessons Learned

The following lessons have been extracted from South Africa's experience responding to the cholera outbreak, particularly through sanitation programmes:

Policy

Early warning systems required for disaster prevention. Improvements are needed to ensure that relevant scientific information is applied and communicated.

Sanitation must receive high prioritisation and be back by political will. The effect of the cholera crisis was to force government to review its policy.

Household, clinic and school sanitation must be integrated.

It is necessary to allow for progressive attainment of basic levels of service (allowing for initial level to be lower than the stipulated service level).

A combined approach to sanitation is more efficient and cost effective than the two phase approach.

The Community Health Worker Programme should be formalised.

Sustainability

Health and hygiene awareness and promotion programmes should be sustained over the long term. Integration into school curriculum is taking place.

International best practice emphasises the importance of demand-driven processes, however the poor demand for sanitation means that this approach has the effect of increasing the existing backlog.

Institutional Implications

Roles and responsibilities should be clearly defined and collaborative structures should enable improved coordination. The cholera outbreak highlighted the need for a sector wide approach.

Decentralisation of responsibility as well as authority in the form of decision-making and financial control to local government is critical. Sensitivity is needed where dual authority exists in the form of Traditional Authorities.

Partnerships with the private sector and with NGOs, are important for delivery in rural areas and for drawing in local community based organisations. The private sector is also involved in marketing and sponsoring water tanks, etc.

A mechanism is required to coordinate activities between all stakeholders and all spheres of government.

Management

Clear communication channels are needed to ensure that early detection of disasters reach decision makers expediently. There is a need to cut through bureaucratic procedures.

Planning for Disaster Management is required.

A programme approach should be adopted.

Accelerated programmes require exceptionally strong project management and coordination. This is particularly important to ensure integration of all elements so that community involvement and health and hygiene are not compromised.

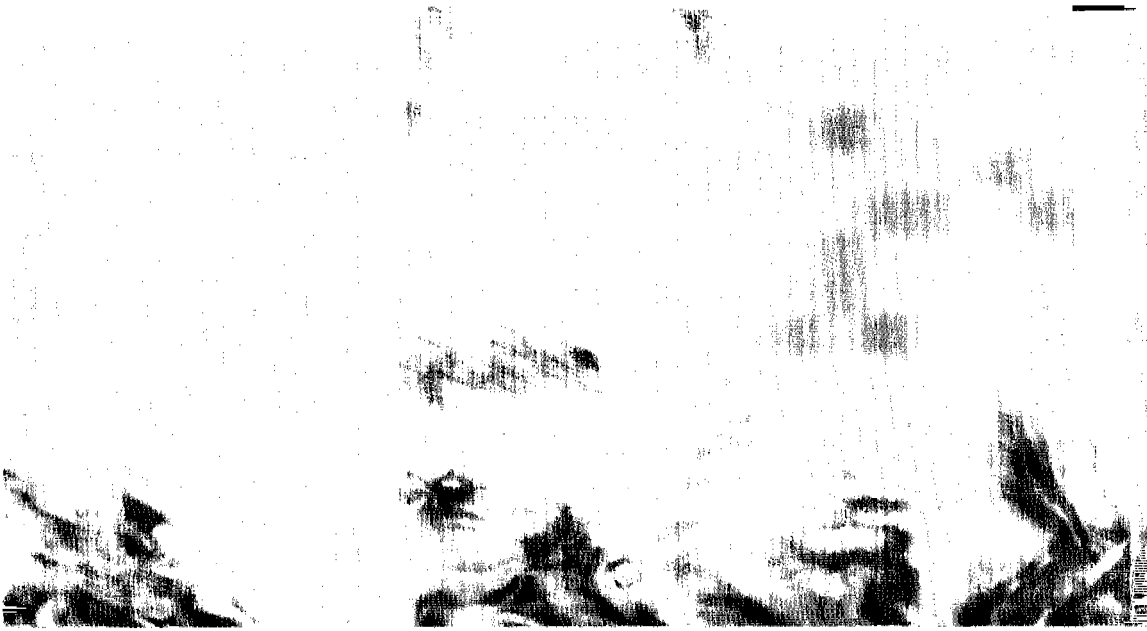
Technical and Financial

Technologies should be appropriate for an area and use local resources where possible.

Choice of technology tends to be determined by affordability.

Uniform contracts need to be adjusted to meet local conditions.

Implementing lessons from the cholera outbreak and fast track sanitation pilots have the potential to strengthen South Africa's overall approach to water, sanitation, and health and hygiene. By assisting the country to meet the water sector, Millenium, and WSSD targets, South Africa will be in a strong position to prevent and manage potential disasters such as cholera, drought or floods in the future.



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