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Case Study

Rural Water Supply and Sanitation in Africa

Global Learning Process on Scaling Up Poverty Reduction

Shanghai Conference, May 25-27, 2004

This case study contributes to the learning process on scaling up poverty reduction by describing and analysing three programmes in rural water and sanitation in Africa.

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Executive Summary

Water, sanitation and hygiene are essential for achieving all the Millennium Development Goals (MDGs)[1] and hence for contributing to poverty eradication globally. This case study contributes to the learning process on scaling up poverty reduction by describing and analysing three programmes in rural water and sanitation in Africa: the national rural water sector reform in Ghana, the national water and sanitation programme in South Africa and the national sanitation programme in Lesotho. These three programmes have achieved, or have the potential to achieve, development results at a national scale exceeding the average rates of progress for Sub-Saharan Africa. The lessons from these programmes, and from other national programmes in Africa that are not described in detail in this case study, are useful for other people around the world. None of them is perfect, but they all demonstrate good work at a large scale.

Over the past decade, the rural water and sanitation sector in Ghana has been transformed from a centralised supply-driven model to a system in which local government and communities plan together, communities operate and maintain their own water services, and the private sector is active in providing goods and services. This reform started with an extended dialogue with the major stakeholders in the sector, which led to a new rural water, sanitation and hygiene education policy. The policy was then implemented in several large pilot projects and finally the lessons from those projects were incorporated into the national programme itself. This reform has accelerated Ghana's progress towards achieving the MDGs, especially for water. The main current challenges are to increase the pace of sanitation, to ensure the poorest people are served, and to improve the capacity of local government to manage the work.

South Africa's national water and sanitation programme, which is one of the largest in Africa, aims to fulfil the human right to water and to achieve full sanitation and water supply coverage well in advance of the MDGs. The key elements of the national water and sanitation programme include a clear policy and legislative framework; an implementation programme which has provided water infrastructure for over 9 million people in less than 10 years; a policy of free basic water, which aims to ensure that affordability is not a barrier to access to safe water; and the devolution of responsibility from national to local government. The government believes that the programme is on course to achieve full coverage of water supply and sanitation by 2010, well in advance of the MDGs, although other observers are less optimistic. The main points of concern in moving forward are the capacity of local government to implement the work and the financial sustainability of the free basic water policy.

Lesotho is one of the few countries that have put sound principles for sanitation into practice at a national scale. Its national sanitation programme dates back 20 years but is not well known outside the country. The programme is a permanent and budgeted part of the government's work, independent of external support agencies. Its financing rules are clear, including zero direct subsidies for building individual household latrines; instead, householders employ private-sector latrine builders, while the government concentrates on promotion and training. The Lesotho programme has been successful in addressing sanitation holistically at a national level, both in urban and rural areas. Rural sanitation coverage has increased very significantly and should easily exceed the sanitation MDG. The main problems ahead are targeting the poorest people and solving the problem of emptying filled latrine pits.

The key message from this three-country study is that strong and sustained political leadership

This case study was presented by Dr. Charles Yaw Brempong-Yeboah, Deputy Minister of Works and Housing, Republic of Ghana, at the 'Scaling Up Poverty Reduction: A Global Learning Process, and Conference' in Shanghai, May 25-27, 2004. This conference allowed key development actors to share their experiences and policy lessons learned from poverty reduction initiatives around the world. A series of case studies, multi-country interactive videoconferences, online dialogues, and field visits culminated in this conference in Shanghai. The activities were sponsored by the World Bank in cooperation with other multilateral and bilateral donors, with the Government of China hosting the conference in Shanghai.

[1] Strictly speaking, drinking water is the subject of one of the MDGs while sanitation is the subject of a goal set by the World Summit on Sustainable Development (WSSD). However, this paper follows normal custom in describing both as MDGs.

augmented by clear legislation, devolution of authority allied to community empowerment, and carefully targeted donor support can achieve poverty reduction at a significant scale through rural water and sanitation.

Background and Context

African rural water and sanitation in the early 1980s

The status of water supply and sanitation in rural areas in Africa in the early 1980s was very poor. Coverage rates were typically 20 to 40 percent for water and 10 to 30 percent for sanitation. Most African societies were agrarian in character, yet rural services of all sorts were underdeveloped. Their political leaders tended to see the provision of basic services, such as water and sanitation, as the duty of the government. So they had established large, centrally managed water supply programmes. These programmes used conventional engineering solutions that resulted in infrastructure that was beyond the people's capability to maintain. This did not seem to be a problem at the time as the governments funded and undertook maintenance centrally, normally providing the water free of charge to those people connected to the service. However, as economic decline affected many African countries, budgets were reduced, water supplies fell into disrepair, and the users were unable or unwilling to maintain them. New projects were delayed, and sanitation neglected. Concepts of community management, human development, human rights and empowerment of the poorest people (Box 1) were not commonly applied within the water sector.

Box 1: Community Management, Human Development, Human Rights and Empowerment

Through ***community management***, poor people own and manage their resources and services, including drinking water and sanitation. Development practitioners around the world are increasingly accepting community management as a broadly applicable and large-scale process, not a simple small-scale project method.

Human development entails people taking their own decisions about their lives, rather than being the passive objects of choices made by others about them. It relates closely to the exercise of people's rights and responsibilities.

The recognition of water as a ***human right***, rather than only a technical or economic issue, is increasingly enshrined in declarations and conventions on human rights. Most recently, the U.N. Committee on Economic, Cultural and Social Rights stated that 'The human right to water entitles everyone to sufficient, affordable, physically accessible, safe and acceptable water for personal and domestic uses.' [2]

Empowerment of the poorest people enables them to make social, political and economic decisions. This is achieved through listening to the people and respecting their existing knowledge, social structures, institutions and leadership; paying special attention to the needs of women and of marginalised, indigenous and the poorest people; and ensuring that governments and support agencies participate in the people's agendas and are accountable to the people, not vice versa.

Ghana: a parastatal that was not coping

The rural water sector in Ghana was typical of that in many African countries. The Ghana Water and Sewerage Corporation (GWSC), a parastatal organisation under the Ministry of Works and Housing, was responsible for both urban and rural water supply and sewerage for a population of approximately 15 million people. Most of GWSC's staff and resources, however, were devoted to the urban sector, with just two or three staff working on rural supplies.

So external support agencies and NGOs wanting to work in rural water and sanitation found themselves setting up large regional projects that were almost independent of the government both in their policies and implementation.

[2] General Comment 15, November 2002.

This combination of health and physical factors motivated the government and external support agencies to take interest in improving sanitation.

GWSC was responsible for maintaining over 8,000 rural point sources, mostly handpumps, and over 200 small-town piped schemes. In theory, GWSC sent out staff to maintain and repair the supplies. In practice, this was beyond GWSC's capacity — partly because it focused its attention on urban rather than rural supplies, and partly because it collected only enough revenue from rural users to cover a fraction of the maintenance costs. Consequently, both handpumps and piped systems suffered frequent breakdowns and supply interruptions. As these problems worsened, the Ghanaian politicians became increasingly concerned about the water and sanitation sector.

South Africa: racially divided services

In South Africa, a country of some 40 million people in 1994, the situation was complex. Until that year, the country was governed in accordance with racist apartheid principles. Responsibility for water supply and sanitation was fragmented and allocated to local governments in four provinces and to 10 nominally autonomous homelands, resulting in very different levels of service. The overall statistics masked extreme contrasts between the different sectors of society. Most of the white-ruled local government areas offered standards equal to those in industrialised countries. In the rural areas where black people lived there were often no services, while in black urban areas the situation was mixed. This situation was exacerbated by the absence of any coherent national policies, guidelines or support structures. In the years leading up to the democratic change in 1994, some preparatory work had started in anticipation of the people's expectations of change in many areas, including water and sanitation.

Lesotho: a sanitation problem

Lesotho is a much smaller country than Ghana or South Africa, with a population of approximately 2 million people, 90 percent of whom live in rural areas. In the early 1980s Lesotho had many water- and sanitation-related health problems. Rural water supply was being addressed, but sanitation work had hardly started: only 15 percent of the rural population had any sort of sanitation, the remainder using open defecation. The increasing population density and decreasing number of trees led, as would be expected, to a potentially high demand for latrines. This combination of health and physical factors motivated the government and external support agencies to take interest in improving sanitation.

Overview of the Cases

These three cases have been chosen for this study because their political and professional leaders took decisive action to improve water and sanitation, which addressed poverty reduction on a significant scale and generated lessons that are applicable elsewhere.

The three national programmes are described here in turn, followed by brief reference to other similar programmes in Africa.

Ghana: a major change in both policy and structure

By the mid-1980s the government of Ghana was in a dilemma regarding water. On the one hand it regarded water as a social good so it did not want to impose cost recovery on consumers. On the other hand it could not afford either the capital or operating costs necessary for equitable provision of water and sanitation to all. The unintended consequence of this situation was that poor people had no water, while rich people enjoyed cheap water.

In 1986, prompted by GWSC's concerns on operating costs, the government made a one-off increase in water tariffs. The tariffs rose tenfold and people complained but paid them; this started to give a cross-subsidy from rich to poor. Meanwhile the government was monitoring the innovations associated with the International Drinking Water Supply and Sanitation Decade (1981-1990), and established a stakeholder group to adopt the best practice from the Decade. This led to a broad, consultative process of policy development during the early 1990s (Box 2). In this process, many issues were raised by Ghanaian people and agencies and debated and resolved with support from external support agencies, notably the World Bank and the Water and Sanitation Program (WSP). This process produced a draft sector strategy that was discussed and refined by representatives from line ministries, local government, the private sector, external support agencies and civil society. This broad participation gave all the groups a voice in the reform

process. The policy discussions also drew on the experiences of pilot projects that were already under way. For example, WSP worked with the government to test community-managed handpumps, the international NGO WaterAid tested community management of whole projects, and Catholic organisations experimented with community cash contributions.

Once the national policy for rural water supply, sanitation and hygiene education was finalised, it was implemented at a pilot scale in a project in Volta Region supported by the United Nations Development Programme (UNDP) and the Dutch government. Then it was scaled up in the form of the World Bank-supported First Community Water and Sanitation Project (CWSP-1), a US$20 million programme managed by the newly formed Community Water and Sanitation Division of GWSC. CWSP-1 implemented the new policy in 26 out of Ghana's 110 districts. When it ended in 1999, the national policy was enacted across the whole country.

The Community Water and Sanitation Agency was created out of GWSC in stages. First, the functions related to rural community water supplies were placed in a separate division within GWSC; this enabled donors' grants for water and sanitation for poor people to be monitored more clearly. Later, in 1998, that division was made into an independent agency and renamed the Community Water and Sanitation Agency (CWSA). It had a fundamentally different approach from that of GWSC: to be a coordinator and facilitator of community-managed water supplies, not an implementer. Whereas GWSC had had a poor reputation among the communities, CWSA immediately started to gain a good reputation as it encouraged their sense of ownership.

At the same time that CWSA was being created, the government was also devolving certain core responsibilities from the national level to districts and communities. The district assemblies, an important tier of elected local government, were made responsible for processing and prioritising community applications for water supplies, awarding contracts for hand-dug wells and latrine construction, and running a latrine subsidy programme. Communities, in order to be eligible for assistance, had to establish gender-balanced water and sanitation committees, complete plans detailing how they would manage their systems, and contribute cash equivalent to 5 percent of the capital costs. In line with the new national policy, communities also had to pay for all operation and maintenance costs. The final element of the strategy was private-sector provision of goods and services to an unprecedented extent, covering not only borehole drilling, operation and maintenance and latrine construction but even community mobilisation (which is carried out by partner organisations that are sometimes described as NGOs but actually function as commercial organisations, working to precise contracts and timescales).

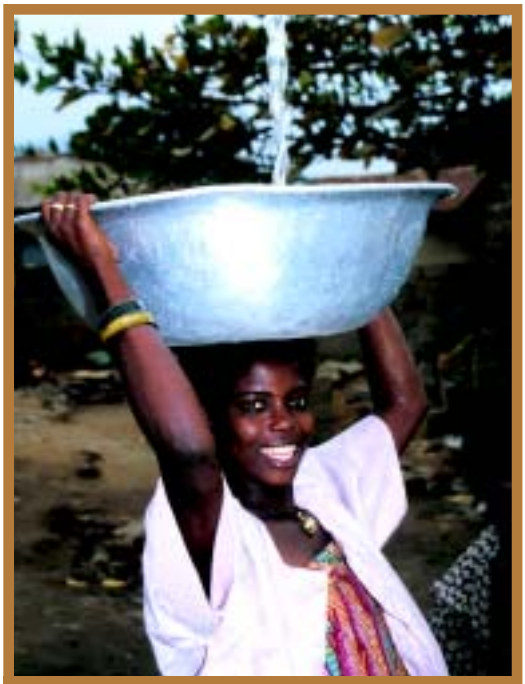
By 2000, the reforms were complete and CWSA had settled into its allotted role. This is principally to support the district assemblies to implement the national community water and sanitation programme. It also formulates strategies, standards and guidelines for the sector, coordinates the work of NGOs and external support agencies and encourages private-sector activity in the sector. The communities themselves have primary responsibility for managing their water and sanitation services, while the small-scale private sector is active in such areas as repairs and spare parts supply.

Regarding sanitation, the district assemblies start by subcontracting hygiene promotion to the same partner organisations as the community

Box 2: The Chronology of Rural Water Sector Reform in Ghana

1965	Water Act governing role of GWSC
1982	Decentralisation Act
1986	Tariff increases
1991-92	National water policy being drafted
1992-93	Policy refined through series of strategy planning workshops
1994	CWSP-1 started
1998	Act created CWSA
1999	CWSP-1 ended
2000	Reforms and decentralisation completed

The complete change in rural water and sanitation in South Africa was triggered by the political change from the apartheid era to the democratic era in 1994.



CWSA has achieved a measure of success in devolving management of water supplies to local communities in Ghana.

mobilisation; demand is created, to which the district assemblies (with financial support from external donors through CWSA) respond by providing subsidised latrine slabs, vent pipes and fly screens upon request. Meanwhile CWSA broadcasts advertisements and jingles on local radio stations to complement the promotional work. Traditionally, Ghanaian people do not talk to each other about latrines, and behaviour change takes a long time. It is hardly surprising, therefore, that the progress of sanitation and hygiene promotion has lagged behind that of water supply in Ghana. Until recently, the sanitation progress was also allegedly hampered by the World Bank's stipulation that over half the households in a community must request latrines before the district assembly can start to supply any item, but this guideline has now been relaxed.

The national government in Ghana has a crucial role in policy but is not involved in implementation. The Ministry of Works and Housing (the parent ministry of CWSA) sets overall policy for the sector, and is indeed trying to change its name to include Water to emphasise its importance. This ministry sees poverty reduction and the achievement of the water and sanitation MDGs as vital parts of government policy. The Ministry of Local Government and Rural Development supports district assemblies in general, and water is a part of its portfolio. It also tries to mediate between district assemblies and the line ministries such as Works and Housing. The Ministry of Finance does not yet give water and sanitation sufficient priority in the eyes of the line ministries, as is indicated by the low percentage allocation to water and sanitation in the Ghana Poverty Reduction Strategy Paper.

South Africa: turning the right to water into a reality

The complete change in rural water and sanitation in South Africa was triggered by the political change from the apartheid era to the democratic era in 1994. The country's population was then just under 40 million people. Of these, an estimated 15 million (12 million of whom lived in rural areas) lacked access to basic water supply and 20 million lacked basic sanitation. Water – though not yet sanitation – was one of the people's top concerns, and expectations were high that the new democratic government would deliver equitable water services quickly.

In 1994 the new government made the Department of Water Affairs and Forestry (DWAF) responsible for ensuring that all South Africans had equitable access to water supply and sanitation. DWAF had previously been a technical organisation focused on water

Box 3: The Chronology of the National Water Sanitation Programme in South Africa

1994	First democratic elections, water sector policy paper
1995	Reconstruction and Development Programme
1996	New Constitution of the Republic of South Africa
1997	Water Services Act
1998-2000	Various local government acts
1999	Free basic water policy promulgated
2003	Strategic framework for water

resources and forestry management. Its historically apolitical character was a positive asset in approaching its new task, as was the involvement of a number of progressive activists who moved into this sector of government. DWAF consulted a range of interested parties and produced a policy on community water supply and sanitation in November 1994. This policy provided the foundation for the legislative and regulatory framework (subsequently enacted in the Water Services Act of 1997) governing the water sector, and for the national water and sanitation programme (Box 3). The policy recognised that local governments would eventually take responsibility for service provision. It also referred to the right of access to basic water and to an environment not harmful to health or well-being (Box 4). Both this decentralisation and the right to water were formally stated in the country's new Constitution in 1996.

In 1994, the government knew that it must quickly start work to meet the high demand for rural development, including water supply and sanitation. It launched a top-priority programme entitled the Reconstruction and Development Programme (RDP), from which US$340 million was allocated to DWAF for water and sanitation. Since the decentralised institutional framework for water and sanitation was not ready, DWAF itself took the lead to use the RDP funds to scale up its work rapidly. It involved all organisations that could do the work, mobilising water boards, NGOs (notably the Mvula Trust), some transitional local government bodies and private-sector companies as partners in delivery. At the project level, community-based project steering committees were set up and provided with guidelines by DWAF on the implementation and maintenance of their projects. By these means, between 1994 and 2003, new water services have been constructed for a design population of 9 million people. This is one of the largest and most rapid programmes of service provision in Africa.

During the late 1990s local government was reformed, culminating in democratically elected local municipalities throughout the country. These municipalities are now responsible for implementing the rural water and sanitation services, and the local politicians are becoming actively involved. So DWAF is changing its role from an implementer to a facilitator and regulator. This will take some time, as many municipalities are still weak, but the Ministry of Finance has given leadership by indicating budgets years ahead to show DWAF's reducing role

Box 4: Equity of Access, and the Free Basic Water Policy

Under the 1994 policy, the government funded the capital costs of water and sanitation infrastructure while the users covered operation and maintenance costs – a financial division that applies in many other countries. Towards the end of the 1990s, however, it became clear that the high operation and maintenance costs of many schemes meant that poorer people could not afford the charges and so they were not benefiting from the new water and sanitation services. In response, the government developed a free basic water policy. This policy, which is a more sophisticated version of a concept followed by many other African countries in the early post-colonial era, encourages water services authorities to provide the first 6,000 litres per household per month free of charge. The operation and maintenance costs are intended to be covered by a combination of a rising block tariff above that consumption and a subsidy from the national budget to the local government specifically for basic service provision.

The free basic water policy is controversial. On the one hand it has enacted a powerful political message and aims to ensure that people's right of access to basic water supply – and hence to the health and social benefits arising from it – is not limited by affordability. On the other hand its critics argue that it has weakened poor people's sense of ownership, increased their dependency on the government, and reduced the accountability of the water services providers to the users who do not pay. The impact of the free basic water policy on the national economy is of particular interest. The subsidy needed from the national budget is clearly identifiable, whereas the health and economic benefits of the water are not immediately quantifiable but almost certainly much larger. So in theory it benefits the national economy, while in practice it may be vulnerable to the economic policies of future governments.

In South Africa the right to basic sanitation, and indeed to receive hygiene education, is constitutionally enshrined alongside that to water.

and local government's increasing role. As for the private sector, whose involvement is a contentious topic in South Africa, it is deeply involved in research, design, manufacture and even social mobilisation and training, but scarcely involved at all as a water service provider.

In South Africa the right to basic sanitation, and indeed to receive hygiene education, is constitutionally enshrined alongside that to water. However, as in many other countries, sanitation had lagged behind water supply. This was partly because the communities themselves had always strongly prioritised water supply, and also because there was not a good system for promoting improved sanitation at community level. In 2000, South Africa experienced a dangerous outbreak of cholera, which provided a huge stimulus to address the country's slow rate of progress in sanitation. In the short term, latrine construction programmes were given high priority. To ensure longer-term attention to sanitation, the government designated DWAF as the lead agency in sanitation. DWAF now provides strong political leadership for sanitation and hygiene promotion and has created a dedicated sanitation programme to implement the work.

Lesotho: consistent policies achieving long-term results in sanitation

The national sanitation programme in Lesotho is much older than the programmes in Ghana or South Africa. By 1980, Lesotho already had a national water supply programme. But the professionals working in the sector identified a gap in sanitation, initially in urban infrastructure and subsequently in rural areas. So, after a series of technical studies by various international organisations, in the early 1980s the government started a two-part national sanitation improvement programme covering the urban and rural sectors of Lesotho (Box 5).

From the beginning, the sanitation programme was carried out by government organisations: specifically by Urban and Rural Sanitation Improvement Teams. These teams worked within the government's regular programme of public-sector development work. The two teams were designed to create the minimum necessary number of permanent government posts, complemented by a larger number of short-term donor-funded posts to start the programme and engage and train the private sector. This is exactly what has happened: donor funding has tapered out as planned, and the local private sector organisations have been active in sanitation to the present day.

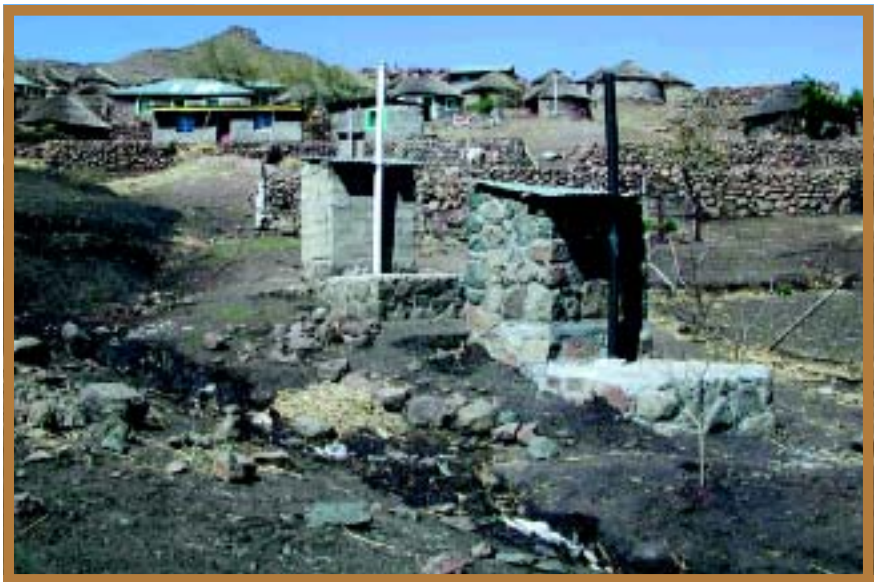
In both the urban and rural work, pilot projects were launched before scaling the work up to the full national programme. The pilot projects enabled ideas to be tried locally before applying them nationally, and informed the design of the full-scale work that followed.

The rural sanitation programme adopted a consistent set of principles. It ensured proper institutional arrangements at national and district level, involved the communities in planning and management, and prioritised the government's efforts on education and promotion. It insisted on full cost recovery from the users – the government did not subsidise latrine costs. It promoted use of the small-scale private sector to build latrines and itself trained the builders. Each of these principles is well known to professionals in the sanitation sector. The important point about Lesotho is that they have all been put into practice together, consistently and for a long time; this may be unique in Africa.

Regarding technology, from the start the Lesotho sanitation programme adopted the ventilated improved pit (VIP) latrine, suitably adapted to local conditions, construction techniques and preferences. This decision had an important effect on the whole nature of the programme. While sanitation programmes typically begin with a strong technical bias due to the need to

Box 5: The Chronology of the Rural Sanitation Programme in Lesotho

1980	Urban Sanitation Improvement Team started work on a project basis
1983	Rural Sanitation Improvement Team started pilot phase
1984	Urban Sanitation Improvement Team became a permanent government department within the Ministry of the Interior
1987	Rural pilot phase ended, national rural sanitation programme started within the Ministry of Health



The VIP latrine, depicted here in Mokhotlong District, has been the technology of choice from the inception of the Lesotho sanitation programme.

test a range of technologies and select one or more to use, the Lesotho programme was always more concerned with broader social issues such as community participation, health and hygiene promotion, and finance.

The government put most of its own effort into promoting sanitation and training sanitation professionals. The media used for promotion include printed matter, radio, tape-slide presentations and videos. Most of this is targeted at potential latrine owners. The use of radio has been particularly strong and has resulted in a significant take-up of improved sanitation in terms of behaviour and construction of latrines. The use of two key messages (improved health and improved status) in the promotion programme appears to have increased the impact.

From the beginning, the design of the programme deliberately avoided the possible stigma of a VIP latrine being perceived as a poor person's latrine. Middle-income people were targeted in promotions as they could easily buy latrines without direct subsidies.

The private sector, in the form of small contractors who build latrines, has been involved in the programme since the beginning. These contractors were trained by the Rural Sanitation Improvement Team and make a living from building unsubsidised latrines for householders, which is a benchmark of sustainability for which many sanitation programmes strive (Box 6).

Other African examples

Ghana, South Africa and Lesotho are not isolated successes. Several other countries in Africa have made notable progress in their national rural water and sanitation programmes.

A leading example is Uganda, whose water and sanitation sector has been reformed in accordance with its overall poverty eradication plans. The reform process has been actively led by the government itself, with wide participation from external support agencies and other stakeholders. The reforms include decentralisation, increased local private-sector

Box 6: A Latrine Builder's Story[3]

A quarter of the trained latrine builders in Lesotho are women, including Mrs Monnanyane of Tsime, Butha-Buthe District. She pursues latrine building full-time, actively marketing her skills by travelling from house-to-house or visiting local traditional leaders in neighbouring towns and villages. She explains to people the importance of having a latrine, and finds that the resulting demand is so great that she has trained five other people, four of them women, as latrine builders in the same area.

Mrs Monnanyane's background as a village health worker was a logical starting point to becoming a latrine builder. She works for everyone's health, especially that of children. "I want to make an impression on the village," she says. "There is competition when I go to other villages, but people request me [to build their latrines] because I have a good reputation. That is my work."

[3] From Evans, Pollard and Narayan-Parker 1990.

Better sanitation also provides greater privacy, convenience, safety and dignity; these aspects are particularly important for women.

An independent financial operator in Uganda.

participation, recovery of operation and maintenance costs, and no subsidy for domestic latrines. A corresponding 15-year investment plan, financed partly by debt relief funds, is leading logically towards a sector-wide approach.

In Benin, the government and external support agencies have adopted a national rural water and sanitation strategy whose main features include community management of water services, decentralisation from national to local government, variable levels of service in accordance with the people's demands and affordability, and private-sector provision of goods and services. In Mozambique, a pioneering programme of peri-urban sanitation served more than 1.3 million people in a country that was just emerging from decades of destructive civil war. In Burkina Faso, sanitation in both urban and rural areas has been addressed systematically using innovative ideas such as cross-subsidies from water supply tariffs.

Analysis of Results

Achievements of the three programmes

In all three cases the main achievement is poverty reduction through increased provision of water and sanitation services to the rural poor (Box 7).

In Ghana, coverage in rural water and sanitation was, until recently, behind the average for Sub-Saharan Africa but is now being extended at a rate of approximately 200,000 people (over 1 percent of the population) per year and accelerating. The government and other commentators feel that good progress is being made. CWSA is now fully established and functioning with the active support of several bilateral support agencies, the European Union and the World Bank. CWSA intends to move to a sector-wide approach, in which all external support agencies pool their resources to support a single national programme rather than separate projects as at present. CWSA's own projections, based on the current level of work and the reforms described above, indicate that the MDG for water will be achieved, though it is difficult to find coverage figures to verify this yet. Attaining the MDG for sanitation will be more difficult.

In less than 10 years, the South African national programme has constructed water supply schemes designed to serve over 9 million people (over 20 percent of the population). This has helped to redress the social inequity of the past.

The programme is continuing to extend rural water coverage at the rate of 1 million people per year. Decentralisation is proceeding and DWAF is changing its function from implementation to support and regulation. Sanitation, while still lagging behind water, is receiving much more attention than before. DWAF expects to achieve its own targets, in advance of the MDGs.

In Lesotho, tens of thousands of new VIP latrines have been built in the rural areas and a similar number of ordinary pit latrines have been upgraded to VIP latrines. This corresponds to an increase in sanitation coverage from 15 percent to over 50 percent in rural areas in 20 years. The rural sanitation programme remains fully active within the Ministry of Health. Lesotho is reaping the benefits of its long engagement in sanitation development, and is on track to achieve the sanitation MDG (the water MDG has already been achieved).

Box 7: Coverage Figures and Targets

The relevant Millennium Development and WSSD Goals are to halve the proportion of people who lack water and sanitation from the base year of 1990 to the target year of 2015. All three governments have signed up to these goals, and the South African government has gone further and set its own more ambitious goals to provide water for all by 2008 and sanitation for all by 2010.

It is difficult to confirm what the coverage figures actually were in 1990, because some countries have changed their criteria for measurement while others used different baseline years. Current best estimates, collated from various sources in-country and the WHO/UNICEF Joint Monitoring Program, are:

Rural water coverage (%)

Country	1980	1990	2000	2008 target	2015 target
Ghana	30	35	41	–	68
South Africa	–	39	63	100	100
Sub-Saharan Africa average	35	40	45	–	70

Rural sanitation coverage (%)

Country	1980	1990	2000	2008 target	2015 target
Ghana	–	15	28	–	68
South Africa	–	24	44	100	100
Lesotho	15	–	55	–	66
Sub-Saharan Africa average	–	46	42	–	73

Note: – *indicates data unavailable.*

Health and social impact of the programmes

Water-related diseases are the single largest cause of human sickness and death in the world, and disproportionately affect poor people. So the main impact of water and sanitation on human development is by improving health. For example, studies from around the world have shown that provision of safe water and basic sanitation accompanied by hygiene promotion can reduce the incidence of diarrhoeal diseases by as much as 25 percent.[4] Better sanitation also provides greater privacy, convenience, safety and dignity; these aspects are particularly important for women.

Considering the World Development Report pillar on social inclusion, rural

[4] From Evans, Pollard and Narayan-Parker 1990.

These economic factors make a strong case for governments to intervene in water and sanitation, either by regulation or investment.

water and sanitation promote access to assets and services. They also advance social development through their community management systems, which enable people to work together equitably for their own development. The water sector contains many examples of innovative and successful community management.

All these general health and social impacts of water and sanitation should apply in Ghana, South Africa and Lesotho, although only a few specific studies have been made there. For example, research in Lesotho suggested a significant reduction in the incidence of sanitation-related diseases in areas where water and sanitation projects had been implemented. These findings are typical of those from around the world, indicating that health impact derives from the combination of improved hygiene, sanitation and water supply.

Regarding social impact, empowerment and accountability to the poor have been extremely important features in both the Lesotho and Ghana programmes. In South Africa, the national programme has been centrally led and the free basic water policy arguably reduces empowerment of the poorer people because the water service providers are more accountable to their paymaster (the national government) than to their users. The government disputes this argument, but at least one independent survey[5] seems to confirm that the relationship between the people and the water service provider changes negatively when they cease to pay for the water.

[5] Palmer Development Group 2000.

Gender-sensitive community involvement can have a powerful positive impact on health; community health club members celebrate the production of home-made soap in Zimbabwe.

So accountability must then be exercised through the ballot box.

Economic impact of the programmes

Around the world, poor people themselves give a high priority to drinking water and, albeit to a lesser degree, to sanitation. There is considerable evidence that improved water and sanitation generate substantial economic benefits, mainly through saving large amounts of people's time and energy. For example, fetching even a family's basic water requirement can be both time-consuming and physically exhausting, a burden that falls disproportionately on women and children. Seeking privacy for open defecation can also be time-consuming, typically causing many women to wake up an hour early every day of their lives. Being ill with a water-related disease, or caring for an ill family member, also consumes much time and money. The time and energy saved by improved water supply and sanitation can be used in many economically productive or educational activities. Water and sanitation programmes also contribute to economic development by creating jobs, although this has a relatively modest impact as the number of permanent jobs created is small at the community level where the people are poorest.

These economic factors make a strong case for governments to intervene in water and sanitation, either by regulation or investment. All these factors apply in Ghana, South Africa and Lesotho, although few rigorous studies of the economic impact of improved

water and sanitation have been carried out in these countries. In South Africa, job creation is an overt stated benefit of the national water and sanitation programme and DWAF monitors the number of jobs created by it. In Lesotho, the latrines themselves are all built by local private-sector builders; people with latrine construction skills have a direct economic incentive to promote improved sanitation.

Costs of the programmes

In most countries, expenditures on water and sanitation are usually included under other general headings such as health. It is thus difficult to give national figures for money spent on water and sanitation,[6] but it is possible to estimate costs from individual programmes.

In Ghana, CWSP-1 supplied water for over 300,000 people at a direct cost of US$26 per person. This unit cost doubles to $50 if the indirect costs of institutional capacity-building are included. These costs are fairly typical of other African countries.

The South African national programme is well documented and supplies water at an average cost per person of approximately US$90. This is regarded by some observers as high for rural water supply. Many of the schemes use comparatively high, engineering-driven design standards and technologies that may be difficult for local governments to maintain and too expensive for the users to fund. An alternative approach could have been to involve the communities in choosing service levels and to build systems that the communities themselves could afford and maintain. But this has not happened, mainly because the Constitution states that water must be available within 200 metres of every person's house, which in scattered rural populations dictates high-cost technologies such as piped systems rather than simpler and cheaper technologies such as handpumps and wells as commonly used elsewhere in Africa. When the civil servants raised this question, the politicians in Parliament reaffirmed the policy.

[6] One study (WSP 2004) estimates expenditure on water and sanitation in Ethiopia, Kenya and Uganda as ranging from 0.5 to 1 percent of GDP. South Africa has a policy of allocating 0.75 percent of its GDP to water and sanitation; the actual allocation has reached the level of 0.4 to 0.5 percent.

Box 8: National Economic Context of the Programmes

The rural water and sanitation programme in Ghana has been implemented against a background of generally steady national economic growth. This has not benefited CWSA's programme directly because the Ministry of Finance has not allocated more money to it from the government budget. However, CWSA has benefited indirectly because external support agencies have put more money into the country, including CWSA. (Approximately 90 percent of CWSA's investment, training and consultancy budget comes from external support agencies, and only 10 percent from central government and from a small but innovative cross-subsidy from urban water tariffs.)

The national economy of South Africa is inherently stronger than that of most African countries. Its GDP per person is an order of magnitude higher than that of Ghana or Lesotho, for example. Using that context of economic strength, the post-1994 government has chosen to construct water supply systems at comparatively high capital and operating costs. This strategy relies on both the continuing strength of the national economy and the continuing willingness of national politicians, who have many other pressing needs to fund. In other African countries' experience in the 1970s and 80s both these factors caused problems and many water services collapsed. In South Africa in the 2000s, the current government is confident that they will not.

In Lesotho, the macroeconomic climate has always been difficult. So the sanitation programme was designed to minimise the drain on national economic resources through avoiding subsidies to household latrines, generating demand through promotional work, and encouraging the private sector to meet the demand on a commercial basis. This strategy has worked well and successive governments have found the cost acceptable, as shown by the fact that the programme is still working as a part of the government system after 20 years. There is, however, one difficulty arising from mainstreaming the sanitation budget into the district health budgets. It now competes with curative work, and many of the district-level decision-makers view the latter as a higher priority.

In South Africa, the whole concept of the national water and sanitation programme is derived from the nation's politics.

The Lesotho sanitation programme does not include any subsidy for latrine construction: each household pays for the construction of its latrine by a private-sector builder. In rural areas a latrine costs approximately one month's salary, although people can reduce costs by collecting and using local materials for building.

Cost recovery policies and practices

Recovering the costs of water and sanitation services is an important issue for governments around the world that want to achieve the water and sanitation MDGs. While it is easy to argue that investments in water and sanitation more than pay for themselves in improved health and saved time, those benefits are intangible and governments want to ensure that the actual costs will be covered. Cost recovery is also important for the sustainability of the water and sanitation services. For the purpose of analysis, the costs are subdivided into the capital costs and the operation and maintenance costs.

Regarding capital costs, in Ghana the official policy specifies that the community must pay 5 percent of capital costs and local government another 5 percent (see Box 9 for Ghanaians' opinions on this and related matters). The balance of 90 percent is provided from CWSA's (largely donor-funded) budget. In South Africa, the government provides 100 percent of the capital costs for both water and sanitation. In Lesotho, for sanitation the householders provide 100 percent of the capital costs. These are markedly different policies, and there is no absolute right or wrong. The Ghanaian policy, in which the community contribution is intended to generate a sense of ownership, is typical of many countries. It seems sensible enough but does have some problems in practice: the rigid application of the policy is perceived by some observers as an imposition by the World Bank; and the policy may discriminate against the poorest people, so communities and local governments find ways to circumvent the policy if the poorest people are to be served. The South African policy is unusual among poorer countries but typical of middle-income countries. The Lesotho policy was innovative 20 years ago and remains at the cutting edge even today, and it seems likely that many other countries will need to adopt this policy in order to achieve the sanitation MDG. However,

Box 9: People's Opinions about Water and Sanitation in Ghana

In 2000, the Community Water and Sanitation Agency commissioned a beneficiary assessment study in communities whose water facilities had been improved during CWSP-1. The study's report[7] describes the people's own views about their improved water and sanitation services.

- Over 90 percent of people were satisfied with the location, quantity and quality of the water.
- 97 percent of people used the improved water source and people did not feel that poverty had constrained their access to improved water.
- 92 percent had contributed to the capital costs, and 85 percent were paying towards the operation and maintenance costs. The vast majority felt that the principle of payment was fair, and intended to continue paying.
- Over 80 percent of people had adopted improved hygiene practices such as keeping water in a clean container, and washing their hands after using the latrine and before cooking.
- However, people did not seem to prioritise their spending on latrines: only some 20 percent of people constructed new latrines, although almost 70 percent were aware of the sanitation component of the programme.
- Over 90 percent of water and sanitation committees had received training, opened bank accounts, and held regular meetings. It was notable that women played active and influential roles on these committees.
- Latrine builders, well diggers, mechanics and health workers all received training through the programme; however, 60 percent of latrine builders dropped out due to lack of demand for latrines.

[7] Baah 2000.

even this policy is not faultless because the poorest households have been unable or reluctant to construct latrines. Some NGOs have offered subsidies to such households in the rural areas, and the government itself may soon do so.

Regarding operation and maintenance costs, the policy in Ghana and Lesotho, which is typical of many poor countries, is that these must be paid by the users. In Ghana each community fixes the tariff based on guidelines circulated from CWSA through local government. The decisions of the communities are endorsed by the water and sanitation development boards of each community and approved by local government. In South Africa, the basic level of water and sanitation service is free to the users, while higher levels should be paid by the users and the balance of operation and maintenance costs is covered by a subsidy from the national budget. In fact the applications of these policies are more flexible than the policies themselves appear. For example, in Ghana at the community level the poor people are often identified and not required to pay (a form of community-managed cross-subsidy). In Lesotho, the government subsidises the latrine pit-emptying service. Meanwhile in South Africa, evidence is mounting that many users are not paying even for higher levels of service, and therefore operation and maintenance costs rely wholly on the national subsidy. Only in a few richer and/or better-managed places[8] do enough people pay the higher tariffs to achieve full operation and maintenance cost recovery from users overall.

[8] The Mvula Trust estimates these to be 10 to 20 percent of local government muncipalities.

Integration of hygiene, sanitation and water

In recent years it has become clear that higher health benefits come from the combination of improved hygiene, sanitation and water supply than from water alone. This integration of the three activities is therefore vital for achieving poverty reduction through water and sanitation. In Lesotho especially, the professionals working on the national programme knew that this integration must underpin any national water and sanitation programme. Hygiene promotion played a particularly important role in generating the demand for improved sanitation. Both in Ghana and in South Africa, the lag of sanitation behind water has been identified as an ongoing problem that must be solved.

Learning and experimentation

Learning and experimentation have not been central features of these national water and sanitation programmes; indeed it is arguable that innovation for its own sake is not appropriate in a nationwide programme of basic services. The main application of learning and experimentation has been the use of pilot projects. In Lesotho and Ghana, in particular, the new ideas were first implemented on a pilot scale, to gain experience on which to base the national programme. The national programmes then evolved step-by-step from the pilot stages. The strength of all three programmes has been in putting sound principles into practice consistently. For example, the Lesotho programme put into practice a complete set of policy ideas that were themselves comparatively new in the 1980s, but its main characteristic has been in the combined application of those ideas rather than in the innovation itself. The South Africa programme is also based on a strongly articulated set of political beliefs, not on innovations for their own sake.

Analysis of Key Factors for Successful Implementation

Strong political leadership

The commitment of political leaders has been a strong factor in the success of all three country programmes.

In Ghana, the national mood in the 1980s favoured reform and innovation. The rural water sector reform fitted well with the other changes in the country's political economy, although its immediate drivers were more pragmatic considerations. Rural water was neglected, and the sector as a whole was stuck in a downward spiral of inadequate cost recovery and poor service. The politicians made a conscious decision to reverse that trend by increasing tariffs, seeking grants and loans, and separating the rural from the urban sector. Successive governments of different parties have all seen water and sanitation as an important contributor to social and economic development, and it has not been used as a party political issue.

In South Africa, the whole concept of the national water and sanitation programme derived from the nation's politics. After the apartheid era ended,

Key factors contributing to successful implementation are strong political commitment to water and sanitation service delivery programmes, decentralisation and clear legislation.

Community members dig trenches to lay water pipes, South Africa.

the new government was elected democratically in 1994 on the promise of 'a better life for all'. So there was a strong political commitment to programmes of service delivery; the national water and sanitation programme was part of a shared vision of a nation in which people would have opportunities to develop their skills and to use them productively to work for an income with which they could meet their basic needs. Successive ministers of water have given energetic and determined leadership to the sector (Box 10). The water programme is one of the government's most popular achievements, which naturally reinforces the politicians' enthusiasm for it. Local political leaders also play an active role, setting budget priorities and service delivery standards and approving projects, and have a positive influence on the success of the programme.

In Lesotho, the politicians played a different, though still important, leadership role. The original impetus for the sanitation programme came from sector professionals and external agencies which stressed the importance of fitting their work into the mainstream government structure. The politicians for their part recognised this, and for many years have allocated significant sums to sanitation through the government's regular budget.

In all three countries, the government's priority to water and sanitation has not changed over time. Even when different political parties have been elected, as in Ghana, the impetus for water and sanitation work has been maintained. This long-term commitment has underpinned the success of all three programmes. It is important because water and sanitation, and especially hygiene promotion, are activities that must be sustained over a long period in order to achieve success.

Clear legislation

Legislation has played an important role. South Africa provides the best example of this. Its 1996 Constitution encompassed extensive social, economic and environmental rights, including the right to basic water and sanitation. The national rural water supply and sanitation programme thus became not just a short-term activity by DWAF but an integral element of the whole nation's legislated human rights programme. An independent Constitutional Court holds the government accountable for adherence to the Constitution. The Constitution is complemented by successive acts of Parliament that have stated very clearly the policies and their application. So every organisation involved in the water programme knows its role.

In Ghana, there are also clear laws, notably various acts of Parliament dating from 1988 to 1998 that define the policies and the roles of most of the sector agencies. Local government is the subject of a bill that will soon become law: by defining district assemblies' roles and responsibilities, it will help them to recruit better calibre staff and hence to implement the national water and sanitation programme more effectively.

In Lesotho, the legal framework evolved as the sanitation programme progressed from the pilot stage to a nationwide operation, notably through the formation of the national rural sanitation programme in 1987. This evolving legal framework gave legitimacy to the sanitation programme's position as a regular part of the public sector's work.

Box 10: A Politician's Story

Professor Kader Asmal is a lawyer and educationalist by profession, and a veteran of the struggle against apartheid. Before the democratic change in South Africa in 1994, he had been instrumental in drafting the Bill of Rights on which the new Constitution was based, including the human right to water. President Nelson Mandela then appointed him Minister for Water Affairs and Forestry, a post that he held from 1994 until 1999.

Minister Asmal provided vigorous political leadership to the national water and sanitation programme in South Africa. At a time when many other issues competed for attention, he championed the cause of water and sanitation at cabinet level within the government and he obtained substantial financial allocations for the water sector. He galvanised his own department and other sector players into action, driven by his passionate belief in the people's right to water.

In 2000, Minister Asmal received the prestigious Stockholm Water Prize in recognition of his leadership of the South African national programme. He himself saw the award as 'a celebration of the democratic gains in South Africa which have enabled us to carry out the far-reaching changes to our body politic'.[9]

Decentralisation to local government

The devolution of authority from national to local government is a governance trend that has been widely adopted in developing countries in recent years, and applies much more broadly than just to the water sector. Its merits include increased accountability to the people and flexibility to tailor development work to meet local needs. Other sectors, such as health, have pioneered this devolution. In the water sector all three countries studied here have applied this devolution of authority and recognise many positive benefits, although they have also encountered problems with it.

The two main problems have been the long time needed to build up the expertise of local government organisations to fulfil their new role (which may in turn cause a temporary reduction in coverage rates), and their natural inclination to revert to supply-driven centralised approaches and technologies. Both Ghana and South Africa are experiencing these problems, and it is still too early to state how they will be solved. In Ghana, for example, the devolution process has been wisely slowed by the government to a pace slower than the external support agencies would have liked, while CWSA still has to implement water programmes on behalf of many local governments as a temporary measure. In South Africa, a significant proportion of local governments are not yet ready to take on their legal obligations for water and sanitation, mainly because they lack the financial and operational capacity.

The corollary to the successful transfer of power to local government is the existence of a strong central agency to support local government. This is precisely CWSA's role in Ghana. While it was the implementing agency in the early stages, it is now principally helping and supporting local government to take on this work. In South Africa DWAF is following a similar path, handing over responsibility for implementation to local governments, and it will take on a regulatory and support role. In Lesotho, the devolution to local government took place at the start of the programme, with district sanitation teams taking the main role in implementing the programme, supported by the Rural Sanitation Improvement Team.

Strong communities, civil society and media

This case study has consistently emphasised the leadership role of the national governments. However, the communities themselves, local civil society organisations and the mass media have also played important roles.

Community management principles have been important in Ghana and Lesotho, and in a few aspects (notably sanitation) of the South African programme. They are crucial to the sustainability of water and sanitation services. One important corollary of community management is that communities cannot manage their water and sanitation services in a vacuum but need long-term technical and professional support from intermediary organisations. In Ghana and Lesotho, this

[9] Personal communication to the author, April 2000.

Local governments need professional support from strong central public-sector organisations in order to implement their work programmes effectively.

In Lesotho, water and sanitation options are discussed at an open community meeting.

role is largely filled by small-scale private sector companies, whose role has not been well documented or acknowledged. In South Africa, this support is provided by government agencies. Civil society organisations, on the other hand, are particularly active in South Africa. For example, many human rights organisations were influential in the debates that led to the constitutional right to water and have even taken cases of water disconnections to the Constitutional Court for decisions in favour of the users. South Africa also has NGOs that work in water service delivery, notably the Mvula Trust. The Trust was influential both in policy and implementation of sanitation in particular. The South African media have also played an important role in ensuring public scrutiny and transparency of the water programme.

In Ghana, the media provide lively coverage of water issues, mainly relating to private-sector participation in urban water. In rural water they see some progress, though less in sanitation. They believe that their role is to communicate people's views to the politicians – meanwhile the politicians feel that the media are often careless or negative in their coverage. The Ghanaian NGOs were initially helpful and constructive in their contributions to the policy debate, but recently CWSA has perceived them as more antagonistic in relation to possible private-sector participation, apparently as a result of influence from international social justice and anti-globalisation organisations.

In Lesotho, the sanitation programme was wholly implemented by the government. NGOs played only a minor role. The media were, however, important for the hygiene promotion that generated people's demand for sanitation.

Active support from external agencies

External support agencies have played different supporting roles in the three countries.

In Ghana, they have played a secondary role in policy-making but are vital in financing the water and sanitation sector and hence in Ghana's ability to achieve the water and sanitation MDGs. Several bilateral and multilateral donors had been active in the water sector for years, and had recognised the weaknesses of the centralised government-run implementation and maintenance system. So the new policy process, while driven by Ghanaians themselves, was one with which most of the external agencies felt empathy. These agencies continue to provide the vast majority of funds for CWSA's capital investments, and this dependence on external finance seems likely to continue for many years. This pattern is typical of a low-income country. The role of the World Bank in the Ghana programme attracts a range of comments. On the one hand, it has made loans available and supported the sector reforms and decentralisation. On the other hand, some sector players in Ghana have the impression that the Bank is stipulating certain conditions (for example, fixed percentage contributions to capital costs, minimum proportion of people demanding latrines in a community, private-sector involvement) in order to access those loans. The Bank denies any

such conditionality, but there is still a feeling in Ghana that it has a disproportionate influence on sector policies.

In Lesotho, the external support agencies were instrumental in starting the national sanitation programme, but worked with the government to design the whole programme specifically to avoid financial dependence on them in the long term. Initially they supplied expert personnel who helped to develop the programme in close cooperation with national staff within government, and handed over all management responsibilities to the government staff. The external support agencies also gave funds to develop the national programme as a whole and in particular to train private-sector builders, but not to subsidise latrines.

In South Africa, the external support agencies have had little influence on the policy process, and provide only a small percentage of the funding for the national programme.

The South African government appreciates their support, but it is clear that the programme is overwhelmingly a South African one and would have progressed almost as quickly without external support. This pattern is typical of a middle-income country.

Conclusions

These three national programmes have achieved significant progress towards poverty elimination through improved water and sanitation. Although they are all different, there are several general conclusions that can validly be drawn from them:

- Top-level political commitment to water and sanitation, sustained consistently over a long time period, is critically important to the success of national sector programmes.
- Clear legislation is necessary to give guidance and confidence to all the agencies working in the sector to determine their own policies and plans and to advance their activities as quickly and as well as they can.
- Devolution of authority from national to local government and communities improves the accountability of water and sanitation programmes. Local governments need professional support from strong central public-sector organisations in order to implement their work programmes effectively.
- The involvement of a wide range of local institutions – social, economic, civil society, and media – empowers communities and stimulates development at the local scale.
- The sensitive, flexible and country-specific support of external agencies can add significant momentum to progress in the water and sanitation sector.

In all three countries, there are still problems to be solved in order to achieve the water and sanitation MDGs and hence eliminate poverty:

- The main institutional concerns in both Ghana and South Africa relate to local government. It is difficult to delegate operational responsibility for water services in the poorest areas of a country from a relatively well-resourced national department to often weak local governments. Since this institutional change is regarded as a central feature in the national programmes, it is vital that it is carried out successfully. The success of the process will only be measured by the sustainability of services over the long term.
- The main financial concerns are different in each case. Ghana is typical of many low-income countries in that the achievement of the MDGs will depend on continuing external financial support. South Africa is a richer country and does not need external support, but there is a concern about the financial sustainability of water supplies whose users do not pay for the service. This reliance on funding from general taxation depends on the strength of the national economy and the continued commitment of politicians to the programme.
- The biggest remaining technical and financial problem in Lesotho is latrine pit emptying. Any latrine pit will eventually become full, and it can only be described as a genuinely sustainable sanitation system if the pit can be economically emptied. To date, the only viable method still in use is emptying by conventional suction tankers, which is relatively expensive and is subsidised out of the national budget. Many other countries (including South Africa) are beginning to encounter the same problem of pit emptying; Lesotho has already encountered it because its national sanitation programme is comparatively old.

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