Developments in Environmental Health

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Abstract

The importance of environmental health services in Primary Health Care and health services in general, will be highlighted in this chapter. Outlined will be the developments in environmental health services since 1978, including the impact of various new pieces of legislation, such as the National Health Act. Challenges with the devolution of environmental health services to metropolitan and district municipalities are explored. An assessment of some of the main environmental health components such as water, sanitation, food and malaria is provided. Furthermore, the critical issue of human resources for environmental health will be discussed, and recommendations are made for stronger support to be provided for the delivery of environmental health services, especially by district municipalities.

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Introduction

Environmental health is a critical and integral part of Primary Health Care (PHC), as it contributes to the promotion of wellness and prevention of disease, primarily by controlling environmental factors that negatively impact on health. Investments in the control of hazardous environmental factors, through environmental health, can lead to a reduction in the burden of disease.

In 1999, the South African Health Review described South Africa as following a path addressing both ‘traditional’ and ‘modern’ environmental health issues, due to the history of the country that created two worlds. Since then, additional issues regarding sustainability of the modern environment, such as urbanisation, climate change and food insecurity have gained prominence. South Africa needs to move swiftly to address some of the outstanding ‘traditional’ environmental health issues, such as inappropriate and insufficient sanitation, water, waste management, housing and food quality. These issues may be neglected because of international interest, with developed countries pushing hard for action around long-term, emerging environmental issues (e.g. climate change) and these dominating global agendas.

A key development since 2004 was the policy of devolution of most environmental health services to metropolitan and district municipalities. This was done in terms of the National Health Act (Act 61 of 2003), as part of a district health system that provides uniform, equitable and accessible health services. The legal, financial and staffing arrangements regarding the delivery by municipalities of these environmental health services, have gone through a still-incompleted and protracted period of transition. This process needs to be finalised to ensure that attention shifts to service delivery, and to the development of an equitable service based on the Alma Ata PHC principles of intersectoral collaboration, community participation, appropriate and evidence-based technologies, access, affordability and equity to all.

Background

What is environmental health?

Environmental health is a diverse science, and its primary objective is to prevent disease and create health-supportive environments. The World Health Organization (WHO) perceives environmental health as addressing: “all the physical, chemical, and biological factors external to a person, and all the related factors impacting behaviours. It encompasses the assessment and control of those environmental factors that can potentially affect health”.

Globally, environmental health issues have evolved over time to encompass a more holistic approach, as reflected in the Report of the WHO Commission on Health and Environment. Sustainable development took centre stage and the effects of environmental degradation, due to human activity, were included on the agenda as important contributors to poor health.

Rapid urbanisation, climate change, globalisation, air pollution, poverty and inequity are now additional concerns for environmental health practitioners. Climate change is one of the major challenges to health due to its effects on access and quality of water supplies in the world, food insecurity resulting from a reduction in arable land, and its contribution to emerging and re-emerging infectious diseases, such as dengue fever and malaria. Globalisation is also adding to the rapid transmission of infectious diseases, such as influenza, around the world, and the potential transmission of diseases including severe acute respiratory syndrome (SARS) and avian flu.

The link between environmental health and disease is well established, with ill-health being directly related to environmental hygiene and conversely, improvements to environmental hygiene contributing to better health. Medical therapy alone is not sustainable as a public health intervention, if environmental exposures that are associated with diseases are not also addressed and prevented. The burden of disease from environmental factors has been quantified by the WHO (see Box 1).

Environmental health in South Africa before 1994

Environmental health in South Africa was influenced by its origins in England, in the early to middle nineteenth century. Since the early 1800s local government played a key role in the delivery of environmental health services in South Africa.

Before 1994, environmental health services were provided by different administrative authorities. In each homeland, environmental health services were run by the homeland’s health department, with a few capable local municipalities (e.g. Umtata Municipality in the Transkei homeland and Mmabatho Municipality in the former Bophuthatswana homeland) providing services in their area of jurisdiction. In the rest of South Africa, most environmental health services
Box 1: Facts on disease and the environment

- Worldwide, 13 million deaths could be prevented every year by making our environment healthier.
- In children under the age of five, one third of all disease is caused by environmental factors such as unsafe water and air pollution.
- Every year, the lives of four million children under the age of five (mostly in developing countries) could be saved by preventing environmental risks such as unsafe water and air pollution.
- In developing countries, the main environmentally caused diseases are diarrhoeal disease, lower respiratory infections, unintentional injuries and malaria.
- Better environmental management could prevent 40% of deaths from malaria, 41% of deaths from lower respiratory infections and 94% of deaths from diarrhoeal disease; three of the world's biggest childhood killers.
- In the least developed countries, one third of deaths and disease is a direct result of environmental causes.

Environmental factors influence 85 out of 102 categories of diseases and injuries listed in the World Health Report.


were provided by local municipalities. District municipalities, then called regional services councils, provided environmental health services to rural and urban communities in small towns, which could not afford their own environmental health services. Environmental health practitioners from the Department of Health (DoH) rendered environmental health services mainly to government premises (i.e. hospitals) and monitored hazardous substances in urban and rural areas. These environmental health practitioners also provided general environmental health services to towns where there were no local government environmental health services available.

The dominance of allopathic medicine in health service delivery impacted negatively on environmental health services, to the extent that environmental health practitioners were involved in other activities that were not directly related to environmental health. Environmental health practitioners without transport became drivers for PHC staff who had access to transport, but who did not have drivers’ licenses. In other cases, environmental health practitioners became acting managers of administration and technical services, neglecting their own priority environmental health issues and only focusing on environmental health-related complaints for 10% of their time. Therefore, before 1994 environmental health services were fragmented and resources depended a great deal on the resource levels of their administrative authority.

Developments in environmental health services after 1994

The legal framework for the establishment of environmental health services is rooted in the Constitution of the Republic of South Africa (Act 108 of 1996), the Municipal Structures Act (Act 117 of 1998) and the National Health Act. The Constitution promulgated three categories of municipalities; namely metropolitan (category A), local (category B) and district (category C). It gave municipalities from categories A and C executive authority to deliver municipal health services, as defined by the Municipal Structures Act and the National Health Act, promulgated in 2005. The National Health Act defines municipal health services as including a range of environmental health services (see Box 2), but excludes port health services, control of hazardous substances and malaria control, which have become provincial functions.

Box 2: Municipal health services as defined by the National Health Act, 2003

- Water quality monitoring
- Food control
- Waste management
- Health surveillance of premises
- Surveillance and prevention of communicable diseases, excluding immunisations
- Vector control
- Environmental pollution control
- Disposal of the dead
- Chemical safety

metropolitan municipalities, as these were already providing environmental health services, and were mostly well resourced entities. For district municipalities, the implementation of the decision was fraught with challenges, as these were newly established entities, with little revenue generating powers, and were lacking in staff to oversee the process. Progress at this level was thus slow, as it was also seen as an unfunded mandate. In 2006, the National Treasury provided limited financial resources for environmental health services, as part of the equitable share funding process (basic services component) to district municipalities. The High Court of South Africa, on 10 April 2008, made a ruling regarding the interpretation of the definition for municipal health services, as stipulated in the National Health Act, to embrace PHC, which was rendered by municipalities before the Act was enacted. This has far reaching implications for municipalities and creates further challenges to district municipalities with regard to the availability of resources, as well as organisational and administrative arrangements.

A number of studies have shown that the devolution of municipal health services has been uneven; while some provinces such as the Eastern Cape, the Free State and the Western Cape were doing well, others were struggling. By February 2007, two thirds of the district municipalities provided municipal health services, with the other third of local municipalities (category B) still playing a significant role in rendering environmental health services. There were signs of progress, as municipal health services were fairly well integrated into municipal planning processes (especially long-term processes). Furthermore, resources for services were deemed to have improved at a macro level (i.e. national and provincial) since devolution of service, but at micro level (i.e. metropolitan and district municipal) significant differences continued to occur.

Studies also show that most of the key national and provincial role players, such as the South African Local Government Association (SALGA), the national Department of Health (NDoH) and the Department of Provincial and Local Government (DPLG), designated to lead the devolution of municipal health services, played a very limited role in giving support and direction to metropolitan and district municipalities.

The following are key challenges for district municipalities in implementing municipal health services.

- **Overlaps and conflict in the allocation of powers and functions**
  This is well illustrated with pollution control, where local and district municipalities, as well as the Department of Environmental Affairs and Tourism have pollution control functions. The various powers, functions and responsibilities for the different categories of local government have been determined. However, there is still uncertainty with regard to some environmental health services activities that are divided between local and district municipalities. This should be viewed against the legislative backdrop that has given the function for rendering municipal health services exclusively to metropolitan and district municipalities (see Box 3). Most problems with powers and functions between local and district municipalities are being sorted out through consultation. Yet the split in provision of environmental health services is regrettable, as it makes planning for the services unnecessarily complex.

- **Legal compliance**
  District municipalities have to comply with different legislation, which addresses a vast array of issues to facilitate appropriate service delivery. The Municipal Systems Act (Act 32 of 2000) requires in sections 76, 77 and 78, that all municipalities should carry out investigations (so called section 78 investigations) into their current and future capacity, when receiving a new municipal service or when a municipal service is extended significantly. The metropolitan and district municipalities should also be statutorily authorised by the Ministry of Health under the Foodstuffs, Cosmetics and Disinfectants Act (Act 54 of 1972) to enforce this Act.

  However, a study by the Development Bank of Southern Africa showed that the section 78 requirement was not adhered to by 40% of district municipalities. Additionally, nearly 60% of district municipalities had not been authorised by the Ministry of Health (section 23(1) of the Foodstuffs, Cosmetics and Disinfectants Act) by September 2007, to enforce the Foodstuffs, Cosmetics and Disinfectants Act in their respective areas of jurisdiction, to control food quality issues. Opportunities for improving the quality of municipal health services rendered were thus missed as section 78 investigations gauge the capacity of the municipality to render any municipal service.

- **Staffing levels**
  Environmental health staffing levels have decreased in a number of provinces, following the devolution of environmental health services to district municipalities. Transfer of environmental health staff from most provincial health departments and some local municipalities, has yet to take place. The reason for this is due to the uncertainty around...
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Responsibility for the provision of the service. This has led to the loss of many practitioners, legal challenges to the transfer of staff from local municipalities, local municipalities keeping staff for their own services and municipalities freezing posts. The ability to recruit more staff by district municipalities will largely depend on the resources available to each municipality, including funding located within the provincial departments of health that could be transferred.

Funding levels

Funding for municipal health services was a concern in 2002. This was however partly addressed by the National Treasury. According to the Division of Revenue Act (Act 2 of 2006), environmental health services are basic services, which are funded through the local government equitable share, together with other basic services, including provision of water, basic sanitation, refuse removal and electricity supply. The continuing concern is that the amount of the equitable share allocated for this is inadequate, as it was set at R12 per household per annum (R3.25 per capita) in 2006 and R18 per household per annum in 2008. This allocation was made despite the DoH recommendation that R13 per capita should be spent on the service.

Despite this alleged inadequacy, not all district municipalities had accessed, or planned to access the available National Treasury funding by February 2007. A comprehensive costing of environmental health services is long overdue, as this will guide municipalities and National Treasury in budgeting sufficiently for the service.

Environmental health functions provided by provincial health departments, including port health services and malaria control are relatively well established throughout the country. An active Inter-provincial Port Health Committee coordinates activities from the national level. Part of the success can be attributed to the fact that powers and functions are clearly defined and some of these services were already being rendered by provinces.

As can be observed, a framework has been put in place for the delivery of municipal health services. Although not perfect, there is scope for improvement, if there are concerted efforts and coordination by all relevant stakeholders in environmental health. These include the NDoH, the DPLG, SALGA, the South African Institute of Environmental Health (SAIEH), municipalities and tertiary institutions.

Review of main environmental health components

Developments in a number of specific environmental health components will be reviewed, including water and sanitation as well as food and malaria control. Highlighted will be how these services have evolved, as well as the successes and challenges that have arisen.

Water and sanitation

The provision of sufficient quantities of safe water, facilities for the sanitary disposal of excreta and promotion of sound hygiene behaviours can lead to significant improvements in health. Over 9% of the global burden of disease could be prevented through better management of water, sanitation and hygiene. Bartram also states that better management

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Box 3: Illustration of overlaps in powers and functions

- Air pollution can be categorised into ambient and indoor air pollution. Each requires specific interventions from a variety of role players at different levels. Ambient air pollution control is mainly the responsibility of the Department of Environment Affairs and Tourism and through the National Environmental Management: Air Quality Act (Act 39 of 2004) is enforced by national and provincial Air Quality Officers. In section 14(3) of the same Act each municipality is expected to designate an Air Quality Officer to coordinate air quality management within the respective municipal area.

- Metropolitan and district municipalities are responsible for implementing the atmospheric emission licensing system by issuing atmospheric emission licenses in their respective areas, as required by section 36(1) of the National Environmental Management: Air Quality Act. At the same time, for metropolitan and district municipalities, environmental pollution control is a municipal health service function, legislated by the National Health Act that addresses air, water and land pollution.

- As part of their powers and functions under section 83(1) of the Municipal Structures Act, local municipalities are responsible for air pollution control in their respective areas. However, the Municipal Demarcation Board of South Africa interprets district municipality’s powers and functions for municipal health services to include air quality control in their respective areas.

- These examples show how legislation leads to confusion around the exact roles of each entity regarding ambient and indoor air pollution control.

Source: Compiled by the authors, originating from different documents.
of water, sanitation and hygiene, in turn, could lead to reductions of diarrhoeal disease incidence of between 25 to 37%.25

Water

Since 1994, South Africa has made major strides in increasing access to basic water to all communities in the country, and prioritised the areas with the greatest need. Access to ‘basic water infrastructure’ improved from a coverage of 59% in 1994 to 94% in March 2007.26 Aggregated at a national level, much progress is being made in improving access to ‘basic water infrastructure’, but there are still localities with persisting low safe water coverage. An emerging issue for access to safe water, which is of direct relevance to environmental health practitioners, is the declining quality of water provided by municipalities.21,27 South Africa has always been renowned for high standards of water quality, but this is no longer the case.27,28 The quality of South Africa’s surface and ground water is declining, with chemical and biological contamination, as well as rising salinity as the major causes of this decline.29 Poor investments and maintenance of waste water, and effluent infrastructure has led to the illegal discharging of effluent with high faecal coliform loads into rivers and streams.30,31 In addition to the pollution of water sources, water treatment is also not up to standard. A study in 2004 showed that only 43% of municipalities adhere to drinking water quality standards.32

Although the monitoring of water quality is the responsibility of water service authorities and the Department of Water Affairs and Forestry (DWAF), environmental health practitioners play a significant role in monitoring water quality as part of their mandate related to municipal health services delivery, with the aim of protecting the health of the population.2,16,24 Environmental health practitioners conduct tests on water quality at the point of use (i.e. the tap) and report back to the municipality, the provincial DoH, and to DWAF. Environmental health practitioners are also required to promote health and hygiene awareness, including hygiene around water issues.21

Sanitation

In 2008, on the occasion of the International Year of Sanitation, the Director-General of the WHO was quoted as saying: “Lack of sanitation kills. It degrades health - especially that of children - and undermines education. It affects whole communities but consistently those most severely affected are the poor and disadvantaged”.32 Initially government followed a developmental approach in the provision of sanitation services. In 2000, the NDoH envisaged water and sanitation services that involved communities in the planning, design, financing and maintenance of services. They also defined competencies for the involvement of environmental health practitioners. The developmental approach to the provision of sanitation emphasises demand-driven, community-led and participatory methods for the delivery of sanitation services. However, this developmental approach takes time, but the benefits outweigh the time taken to deliver services.

The 2001 White Paper on Basic Household Sanitation advocated for: community participation in sanitation; provision of sanitation that was responsive to the demands of people; a strong emphasis on health and hygiene; and local government supporting households in improving their own sanitation.28 With local government taking over responsibility for provision of sanitation and its inclusion in basic services delivered by municipalities, there was a shift from the demand-driven approach to a more supply led approach. Pressure was exerted on municipalities to fast-track the delivery of basic services, including sanitation. The developmental approach to the provision of sanitation was thus abandoned as municipalities were more concerned with meeting targets for infrastructure delivery.27

The institutional mechanisms outlined in the White Paper on Basic Household Sanitation regarding the provision of sanitation are very complex, with roles for DWAF, the NDoH, the Department of Housing and Public Works, as well as for municipalities. It was envisaged that, with the involvement of municipalities, environmental health practitioners would play a more significant role in sanitation advocacy and hygiene promotion, which are coordinated by the NDoH. Regrettably, these expectations came at a time when the restructuring of municipal health services was also taking place. There was also uncertainty about the future of these services, resulting in under-investment in the service by municipalities and no guidance and support from the NDoH, the DPLG, SALGA and National Treasury.7,12,21,27 Other challenges emerging from the sanitation programme are inappropriate technology, design and management. There are cases, for example, where ventilated pit latrines (VIPs) are full, but municipalities have inadequate knowledge or equipment to empty these. This, coupled with contamination of ground water through badly placed VIPs is posing a major health hazard.27

Improvements in the delivery of sanitation have been slower than that of water. The current situation, based on data from the 2007 Community Survey is presented in Figure 1.

b The Department of Water Affairs and Forestry describes ‘basic water infrastructure’ as availability of infrastructure, without taking into account quality considerations.
Although there is some overall improvement, in the areas where sanitation is worst, there has been relatively little change in levels of sanitation. The map also shows areas that still have very high levels of ‘inadequate sanitation’.5

A 2006 survey found that hygiene awareness is low in South Africa, with almost half the population underestimating the effectiveness of hand washing in preventing the spread of disease.24 The result of poor hygiene education is that South Africa experiences episodic outbreaks of diarrhoea, and in a number of cases, person-to-person transmission (rather than water being the main route of transmission).27,28,34

Much progress has been made in the provision of infrastructure for both water and sanitation. However, what is lacking is a more developmental and sustainable approach, which integrates environmental health practitioners more integrally to ensure that hygiene education is a major part of water and sanitation programmes. Cholera, typhoid and diarrhoeal outbreaks in Mpumalanga, KwaZulu-Natal, the Eastern Cape and the North West provinces serve as a reminder, that more still needs to be done in this area.21

**Figure 1: Percentage of households with inadequate sanitation, 2007**

![Map showing percentage of households with inadequate sanitation](image)


‘inadequate sanitation’ includes: no toilet, bucket toilets or pit latrines without ventilation.

**Food control**

Food control is a mandatory regulatory activity of enforcement by national and local authorities to provide consumer protection, and to ensure that all foods are safe during production, handling, storage, processing and distribution. It also ensures that foods are wholesome, that they are fit for human consumption, that they conform to quality and safety requirements, and are honestly and accurately labelled as prescribed by law.25

Through the Foodstuffs, Cosmetics and Disinfectants Act, the Directorate for Food Control at the NDoH is responsible for the safety of food for all South Africans. Enforcement of the Act is at local level for foodstuffs manufactured and sold locally, and at provincial level for imported foodstuffs covered by the provisions of the Act and the related Regulations published by the Minister of Health.7,19,25

Historically, most local authorities (local municipalities and forerunners of district and metropolitan municipalities) were authorised to enforce the stipulations of the...
Foodstuffs, Cosmetics and Disinfectants Act, but since 1 July 2004 this responsibility was shifted to district municipalities and metros. The activities of district municipalities and metros regarding food hygiene control include: evaluation of food premises and sampling of foodstuffs; health education of food processors, handlers and consumers; advising existing and prospective entrepreneurs on requirements relating to food premises; and the safe handling of food and controlling illegally imported foodstuffs offered for sale.

Outstanding issues regarding food control are related to the authorisation of municipalities and environmental health practitioners, under the Foodstuffs, Cosmetics and Disinfectants Act and the National Health Act. Authorisations for local authorities, that existed prior to 2004, should be repealed by the Minister of Health in terms of the Foodstuffs, Cosmetics and Disinfectants Act. They should also be replaced by authorisations of the current metro and district municipalities.

A study conducted by Agenbag in September 2007, showed that all metros were authorised, while 58.7% of district municipalities had not been authorised in accordance with section 23(1) of the Foodstuffs, Cosmetics and Disinfectants Act. This does not, however, mean that none of the other district municipalities had applied to the Minister of Health, but rather that some applications still needed to be processed by offices of the relevant provincial health departments.

It is also the requirement, under the Foodstuffs, Cosmetics and Disinfectants Act, that there should be authorised officers who are mainly environmental health practitioners. The same study by Agenbag found that 64% of municipalities indicated that functional environmental health practitioners were authorised by the municipalities. A similar situation pertains to authorisations under the National Health Act. Two studies, one in 2006 and the other in 2007, revealed that only a quarter of the municipalities could confirm that their environmental health practitioners were authorised under the National Health Act.

Food safety is receiving much attention worldwide, as consumers become more educated and conscious about the subject. It will become even more important as South Africa prepares to host the 2010 FIFA World Cup, and municipalities will need to ensure that all their authorisations, as well as those of their staff are in place.

**Malaria control**

Large parts of South Africa were historically affected by malaria, with epidemics spreading as far south as Port St Johns on the east coast in 1927, and as far as Gauteng in the early 1930s. During bad years, these epidemics resulted in up to 20 000 deaths in a single season. Residual spraying with insecticides (dichlorodiphenyltrichloroethane (DDT) and later pyrethrroids) and surveillance were the main control interventions introduced in 1946. These interventions reduced malaria to low levels associated with seasonal focal outbreaks, following favourable climatic conditions and the movements of infected migrants. Indoor residual spraying with DDT eliminated malaria from large areas of the country and reduced it to low levels in three provinces, such as eastern parts of Limpopo and Mpumalanga and the north eastern parts of KwaZulu-Natal, where it continues to occur. Occasionally, small malaria outbreaks develop in the Northern Cape and North West provinces. During these mentioned interventions, eliminated were the Anopheles funestus mosquito and greatly reduced was the density and distribution of Anopheles arabiensis, which is the main vector of malaria in the country.

Annual reported malaria cases varied between 2 000 and 13 000 during the 1975 to 1995 period. However, reported infections increased significantly to a peak of 64 222 cases and 458 deaths in 2000. These increases have been attributed to climatic conditions, as well as resistance to the parasite drug and insecticide. There has been a sustained decrease in the number of nationally reported malaria cases and deaths, between 2001 and 2007.

This success is a result of a combination of effective vector control, good case management and sustained political and financial support. Sustained control has been achieved through the ongoing strengthening of health systems, with strong monitoring capabilities and evaluating results. This has ensured that malaria mortality and morbidity stay low. With control at the current levels, within the borders of South Africa, it might now be feasible to achieve malaria elimination by reducing malaria transmission to zero. Environmental management played an important role during the eradication phase historically. This application remains under-utilised today and needs to be further explored.

**Human resources in environmental health**

Environmental health services are service delivery orientated, and are therefore mainly dependent on human resources for effective delivery. In 1999, the NDoH adjusted the national norm away from the WHO norm of, one environmental health practitioner per 10 000 population for developing countries, to one environmental health practitioner per 15 000 population. This led to an apparent
improvement in the environmental health practitioner to population ratio from a national perspective, because the shortfall of environmental health practitioners was less.\textsuperscript{2,20,21}

The Western Cape, with an average of just over 13 600 population per functional environmental health practitioner, is the only province achieving the national coverage goal, while the Eastern Cape has over the past few years moved closer to the national norm, with an average of 22 479 population per functional environmental health practitioner (see Figure 2).\textsuperscript{7} National environmental health practitioner to population figures normally include environmental health practitioners, such as those at management level in municipalities, who fill environmental health practitioner posts, but are utilised in areas not related to environmental / municipal health services. These national environmental health practitioner to population figures, also include the ‘community service year’ of environmental health practitioners, who are contractually appointed by provincial departments of health only for a period of a year.\textsuperscript{7,9,20,22}

Figure 2: Comparison of functional environmental health practitioners (EHP) per population in South Africa, 2006/07

![Graph showing comparison of EHP per population in South Africa, 2006/07](image)

Source: Agenbag, 2008.\textsuperscript{7}

Community health service for environmental health practitioners was initiated in 2003, with 206 environmental health officers participating in the programme in 2006.\textsuperscript{62} Provincial health departments have benefited most as placing of new environmental health practitioners was not a problem. The Eastern Cape DoH’s strategy to absorb environmental health practitioners, who receive a bursary from the department, has lead to the Eastern Cape moving closer to the national norm of one environmental health practitioner per 15 000 of the population.\textsuperscript{7} This holds its own challenges when calculating the availability of environmental health practitioner staff for the implementation of municipal health services at district and metropolitan levels.\textsuperscript{7} The placing of environmental health practitioners in municipalities requires more planning. This planning includes budgets and resources, such as equipment, transport and offices, which need to be made available at a municipal level.

**Conclusion**

Environmental health services are at the core of PHC services and the prevention of disease. Major health benefits are possible when these services are running well.

Current problems regarding the devolution of the service to district municipalities arose due to a lack of strong leadership, support and guidance to district municipalities, many of which were grappling with the provision of several other new services when they were required to take on this function. This led to the uneven devolution of the service as local leadership and resources determined how much support was provided to the establishment of environmental health services. This is likely to impact on the future equitable provision of the service.

There are many lessons to be learnt from municipalities who managed this process well; lessons which should be shared with those who are struggling. Hence, a need exists for relevant role players to assist in documenting and sharing such lessons.

The restructuring of environmental health services into municipal health services, mostly provided by metropolitan and district municipalities, will improve coordination of the service and will make it possible to provide it in a more equitable manner to all localities.

**Recommendations**

The process of devolution and consolidation of municipal health services needs to be finalised speedily, through more support and leadership from the NDoH, provincial and local governments, as well as from other key stakeholders such as SALGA and SAIEH. More coordination and monitoring with clear targets and responsibilities between these bodies will fast track the establishment of the service.

A need exists for the development of a section 78 investigation guideline (current and future capacity assessment) that can be used by municipalities that have not yet done their section 78 investigations, and such a guideline could be used as a monitoring tool for those municipalities that have previously completed it.
A suggestion for such a guideline was tabled at the Eastern Cape municipal health summit in 2006.\textsuperscript{24,43}

Municipalities need to plan for and support environmental health services, as with any other municipal services. The period of uncertainty around the devolution of the service is mostly over, and strengthening it through adequate resources and standardised systems is now required.

Stronger leadership and stability in the National Environmental Health Directorate is required. This leadership will ensure the establishment of a proper coordination body, which can give direction to, as well as evaluate and monitor the programme to influence national policy direction, resource allocation, facilitate role players to support systems development, and to standardise environmental health in South Africa.

Arising from a Development Bank of Southern Africa dialogue, where the results from a national study were shared with key relevant role players such as the NDoH, the DPLG, National Treasury and municipalities a number of issues were raised. One of the most important was that municipal health services should be debated at a MINMEC (committee consisting of the National Ministers and Provincial Members of the Executive Councils) level and that the NDoH, supported by the DPLG, should facilitate such interaction to determine the way forward.

Another critical issue requiring intervention is the establishment of a national environmental health forum. In the absence of support and national leadership for municipal health services, the environmental health fraternity, at local and provincial levels, has approached SALGA to establish a national municipal health services working group. This group, which was in principle approved by the national Executive Committee of SALGA towards the end of 2007, has not met as yet.

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