

National Environmental Health Strategy

2016-2020



health

Department:
Health

REPUBLIC OF SOUTH AFRICA

Foreword by the Minister

Environmental Health transects several areas of human interaction and existence and is defined by the WHO as addressing 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.

In South Africa, it is still an unfortunate reality that a large proportion of the burden of disease can be attributed to preventable environmental health conditions, and it is often the most deprived and marginalized communities who tend to be the worst affected. Diarrhoea alone causes nearly 21% of deaths in children under-five years, which can be related to unsafe water, inadequate sanitation and poor hygiene. In addition mortality caused by indoor air pollution is still unacceptably high. Protecting the public's health through the protection of the environment is one of government's basic functions.

To ensure the protection of the environment in the country, it is essential that effective environmental health services are implemented in the country. To ensure effective rendering of environmental health services in the country, the Department of Health has published a National Environmental Health Policy in 2013 that provided a framework within which effective Environmental Health Services in South Africa must be rendered. In addition, a delegation of professionals has worked together to provide a South African Country Situational Analysis and Needs Assessment with regards to Environmental Health exposures and services. We now have a good understanding of the context, the extent of the problems and the gaps that exist within the Environmental Health sphere, and further we recognize that new and evolving risks and exposures continuously place demands on our environmental health services, requiring them to be proactive, prepared and responsive. It is with this in mind that this National Environmental Health Strategy has been developed.

The strategy aims to ensure strengthened environmental health systems and provides direction to environmental health management across the country. The strategy provides an evidence-based action plan, with specific, measurable, achievable, realistic and timely goals at appropriate levels, which will advance the aims and objectives of the National Environmental Health Policy.

The National Environmental Health Strategy identifies three key means of improving environmental health in South Africa, which are strategic management, capacity building and improving service delivery and practice.



DR A MOTSOALEDI, MP

MINISTER OF HEALTH

DATE: 14 Sept 2014

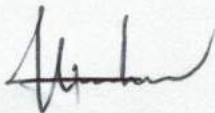
Acknowledgements

The National Environmental Health Strategy has been created through a process of consultation with various stakeholders, including the WHO, environmental health at various levels of government, practitioners working at the coalface, and various key stakeholders.

A special thank you to Ms Mary-Anne Groepe of the World Health Organisation, Dr Leegail Adonis and officials of the Environmental and Port Health Services Sub-programme, for driving the strategy to its finalisation.

The strategy provides a practical guide to all stakeholders charged with the responsibility of provision of environmental health services at a community or individual level. It will assist with the realisation of the objectives of the National Environmental Health Policy, and strategic goal of the National Department of Health to strengthen the provision of environmental health services in the country.

We acknowledge that there is much work to be done to fully evaluate and understand the social determinants of health that impacts on environmental health outcomes. This strategy focuses on ensuring that environmental health systems are in place at all levels of government, to ensure the provision of contextualized, proactive environmental health services. The strategy further attempts to improve the effectiveness of service delivery, and contribution towards the development of a society that is aware and involved with creating healthy environments.



MS MP MATSOSO
DIRECTOR-GENERAL: HEALTH
DATE: 16/5/2016

Contents

FOREWORD BY THE MINISTER	2
ACKNOWLEDGEMENT.....	3
GLOSSARY OF TERMS AND ABBREVIATIONS.....	5
EXECUTIVE SUMMARY.....	6
CHAPTER ONE	7
1.1 INTRODUCTION.....	7
1.1.1. <i>South African Burden of Disease</i>	
1.1.2. <i>Causes of death</i>	
1.2 BACKGROUND	9
1.2.1 <i>Role of the Environmental Health Practitioner</i>	
1.3 PURPOSE	10
1.4 VISION	10
1.5 MISSION.....	10
CHAPTER TWO	10
2.1 STRATEGIC GOALS	10
2.2 INTERACTION BETWEEN STRATEGI GOALS.....	11
2.3 INDIVIDUAL STRATEGIC GOALS	11
2.3.1 <i>Ensure Effective Institutional Capacity for Rendering Environmental Health Services</i>	12
2.3.2 <i>Strengthen programme based environmental health services monitoring</i>	13
2.3.3 <i>Strengthen evidence base in environmental health</i>	13
2.3.4 <i>Strengthen coordination of effective environmental health management information systems</i>	13
2.3.5 <i>Adopt a partnership approach to facilitate holistic and integrated planning in environmental health.</i>	14
2.3.6 <i>Empower and mobilize individuals and communities through environmental health education, awareness and participation</i>	14
CHAPTER THREE	16
3.1 SWOT ANALYSIS.....	
CHAPTER FOUR	15
4.1 STRATEGY ACTION PLAN.....	156
REFERENCES.....	25

Glossary of Terms and Abbreviations

BOD	Burden of Disease
COGTA	Cooperative Governance and Traditional Affairs
CSIR	Centre for Scientific and Industrial Research
DAFF	Department of Fisheries and Forestry
DALY	Disability Adjusted Life in Years
DEA	Department of Environmental Affairs
DHP	District Health Plan
DOH	Department of Health
DOT	Department of Transport
DM	District Municipality
DMR	Department of Mineral Resources
DTI	Department of Trade and Industry
DWS	Department of Water and Sanitation
EH	Environmental Health
EHP	Environmental Health Practitioner. Subject to the provisions of the Health Professions Act, 1974 (Act No. 56 of 1974) as amended, any person registered as such with the Health Professions Council of South Africa; and includes a) Environmental Health Practitioner b) Environmental Health Practitioner doing compulsory community service c) Health officers appointed under the National Health Act, 2003 (Act No.6`1 of 2003)
HEAD	Health, Environment and Development Study
HIA	Health Impact Assessment
HPCSA	Health Professions Council of South Africa
HRA	Health Risk Assessment
IDP	Integrated Development Plan
MM	Metropolitan Municipality
MRC	Medical research Commission
NDOH	National Department of Health
NICD	National Institute of Communicable Diseases
NT	National Treasury
PDOH	Provincial Department of Health
PHCWOTs	Primary Health Care Ward Based Outreach Teams
SADC	South African Development Countries
SALGA	South African Local Government Association
SAMHS	South African Military Health Services
WHO	World Health Organisation

Executive Summary

The practice of Environmental Health seeks to identify and prevent those health conditions that may be caused by people's interactions with and exposures to their environment. It aims to promote health by improving the environments in which people are born, live and work through the identification, assessment and control of those factors in the environment that may constitute a health hazard and risks. There is no doubt that environmental health interventions can make a positive impact on health outcomes, its role has long been recognized. As such, environmental health services as part of a comprehensive preventive care model are tantamount in the quest towards equity creation and sustainable development in South Africa.

This strategic framework sets out practical steps that focus on strengthening institutional capacity to enable rendering of effective environmental health services, through ensuring the improvement of skills and capacity of the labour workforce on amongst others, environmental health legislative framework. A specific strategic direction the action plan aims to take is to enhance programs-based environmental health activities, which will provide a platform for environmental health activities such as monitoring, audits, inspections, and risk assessment to promote a focused and streamlined approach. The strategic framework recognizes the critical role Environmental Health Practitioners (EHPs) in assisting government in achieving its overall health objectives; through prevention of ill health and health promotion that can potentially help reshape primary health care re-engineering.

The strategy highlights the need to strengthen environmental health information systems by collecting and formulating the appropriate data within the sphere of environmental health that could inform research priorities as well as future policy review and reform, which is necessary for sustainable national development. The strategy highlights the mobilization and empowerment of communities through education and awareness, which is a critical strategy in ensuring community involvement and participation in environmental health for promotion own health. A community mobilization approach is valuable as it fulfills people's rights to participate and to determine their own future – an in realization of the right to a healthy environment. It enables groups to create local solutions to local problems.

Given the diverse range of stakeholders influencing environmental health, the success of the Strategy rests on these stakeholders recognising their role and embracing new and actively collaborative approaches to environmental health management. The strategy therefore, further highlights the pursuance of strategic partnerships to ensure ongoing coordination and cooperation with various stakeholders in the delivery of environmental health services.

This strategy action plan primarily aims at ensuring the development of effective and efficient environmental health systems, and therefore identifies three key means of improving environmental health in South Africa, i.e. strategic management; capacity building; and improving practice and service delivery. It is hoped that environmental health managers will utilise the strategy document as their basis for planning, organising and providing leadership in own particular areas.

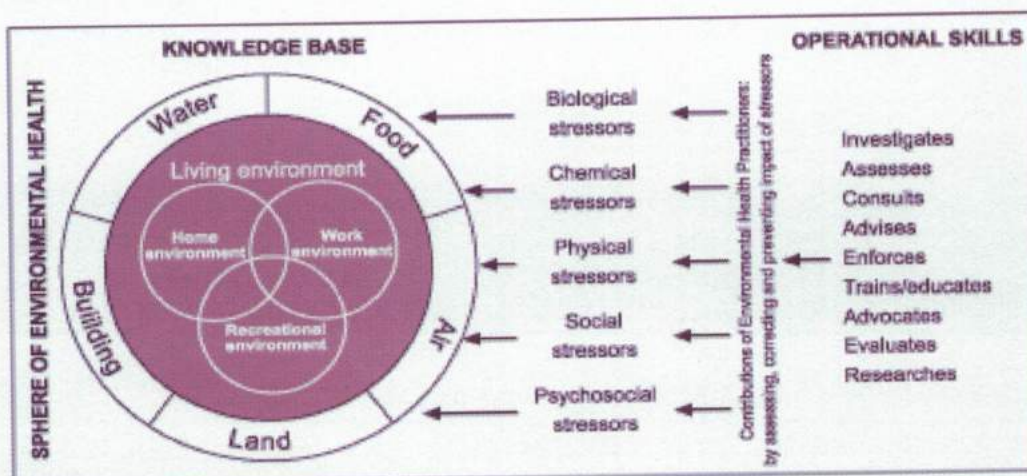
CHAPTER 1

1.1 INTRODUCTION

Environmental Health is inextricably embedded in our social world, the built environment, and the impacts of our physical and biological contexts. The environment that we live in can be an important determinant of health. As such the South African government has the responsibility to provide coordinated environmental health services in accordance with legislation and community requirements so as to create equitable, sustainable health for all.

Environmental exposures affect health outcomes through several pathways including biological, physical, and chemical.

Figure 1: The Sphere of Environmental Health.



Source: Chartered Institute of Environmental Health, 2012

1.1.1 Burden of diseases in South Africa

South Africa is one of the most inequitable countries in the world with marked differences in rates of morbidity and mortality along racial, gender, provincial and urban-rural divides as a consequence of the previous Apartheid regime. According to the Comparative Risk Factor study, the risk factor profile of South Africans overall depicts two distinct types of risk factors: those usually associated with more affluent lifestyles, such as tobacco smoking, diabetes, high BMI and high cholesterol as well as those related to poverty and under-development, such as unsafe water; sanitation and hygiene; and indoor air pollution from solid fuels (Medical Research Council, 2008). When looking at the mortality related to environmental risk factors, according to Norman et. al., almost 24 000 deaths in the year 2000 were attributable to the joint effect of four environmental risk factors (unsafe water, inadequate sanitation and hygiene; indoor air pollution from household use of solid fuels; urban outdoor air pollution and lead exposure), accounting for 4.6% of all deaths in South Africa in 2000. Overall the burden due to these environmental risks was equivalent to 3.7% of the total disease burden for South Africa, with unsafe water, sanitation, and hygiene as the main contributors to the joint burden.

The joint attributable burden was especially high in children under five years of age, accounting for 10.8% of total deaths in this age group and 9.7% of burden of disease (Norman et. al., 2010). A further study conducted by the World Health Organization (WHO)

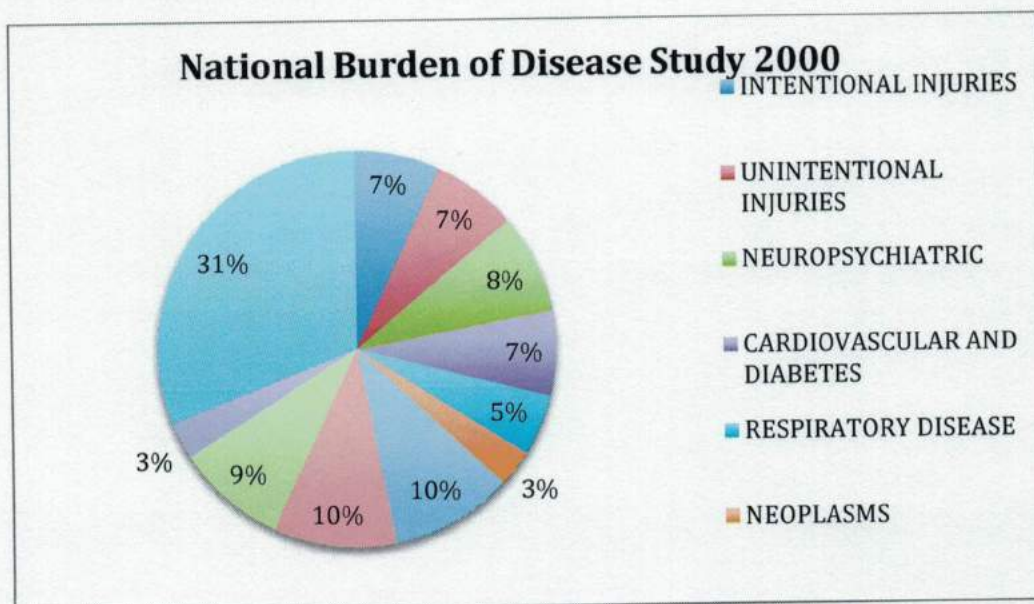
found that approximately 16% of all deaths in the country are estimated to be related to the state of the environment, with an estimated 69 DALYs per 1 000 persons lost due to the environmental burden of disease every year (WHO, 2006). Currently the three main diseases influenced by environmental factors are diarrhoea, respiratory diseases and vector-borne diseases.

Environmental exposure affects health outcomes through several pathways including biological, physical, and chemical. The South African government has made considerable inroads in formulating legal frameworks for the management of hazardous environmental exposures and improving the social determinants of health. Progress has been made towards providing basic services that are linked to the physical environment, which include provision of RDP housing, provision of basic water supply and sanitation services to indigent households and free primary health care. However, much potential still exists to better these. As many South Africans still live in settlements, where the risk of diseases is high due to the lack of basic services, the housing backlog grew from 1.5 million in 1994 to 2.1 million in 2010. In addition, according to the Health, Environment and Development Study (HEAD), South Africans still face growing hunger and food insecurity, high levels of violence, widespread mental ill health, low levels of physical activity, and high levels of chronic diseases (Mathee, 2011). However, the current legislative framework presents an opportunity to improve health outcomes through the prevention and management of preventable environmental exposures.

1.1.2 Causes of Death in South Africa

The Burden of Disease (BOD) Estimates 2000 study commissioned by the Medical Research Council of South Africa outlined for the first time the pattern of disease burdens in South Africa (Bradshaw et al., 2003). It determined causes of premature mortality (years of life lost or YLL) as well as the burden associated with morbidity and disability in order to establish disability-adjusted life years (DALYs). Although the authors cited several challenges in the quality and completeness of available data, the study provided a first glimpse of the highest burdens of diseases with far-reaching implications for planning and priority-setting purposes.

Figure 2: National Burden of Disease Study 2000 (Normal et al., 2006)



1.2 BACKGROUND

1.2.1. The role of an Environmental Health Practitioner

The National Health Act, 2003 (Act 61 of 2003) defines environmental health services to include the nine (9) municipal health services functions performed by District and Metropolitan Municipalities, as well as functions performed by the national and provincial departments of health, which are further outlined in the Scope of Profession for Environmental Health, Regulation 888 of 26 April 1991, as amended, as follows:

- Food control;
- Waste management and general hygiene monitoring;
- Surveillance and Prevention of communicable diseases;
- Water quality monitoring;
- Chemical safety;
- Health surveillance of premises;
- Disposal of the dead;
- Vector Control Monitoring;
- Environmental Pollution Control;
- Port Health Services;
- Hazardous substances control;
- Malaria Control.

In addition to the functions as outlined in the National Health Act, 2003 (Act 61 of 2003) and the Scope of Profession for Environmental Health, environmental health services entails and is responsible for climate change and health matters, infection control, occupational health and health education and promotion functions.

Environmental Health Practitioners (EHPs) form the backbone of environmental health services. EHPs working with and alongside other public health professionals are key partners in local and national efforts to protect and improve the health and quality of the lives of individuals and communities, and to reduce health inequalities. They maintain a direct relationship with the general public, and apply their expertise in responding to the needs of individuals, while also tackling the wider determinants of the population's health by identifying, assessing and controlling risks to human health. They play lead roles in local authority development, co-ordination, and implementation of community health and well-being strategies through local strategic partnerships, and actively contribute to the public health agenda of the National Government. They also contribute to tackling public health issues at regional, national, and international levels (Chartered Institute of Environmental Health, 2012).

The National Environmental Health Policy dictates the formulation and staffing of environmental health structures at National, Provincial and local level to ensure adequate and effective provision of environmental health services. The policy further dictates the provision of 1(one) operational EHP for every ten thousand (10 000) members of the population. In South Africa, a lot still has to be done and resources prioritised in order to ensure the attainment of these policy objectives.

Environmental health services in South Africa are fragmented at various government departments and in some cases have led to the duplication of functions due to a lack of role clarification within the environmental health sector. This is mainly due to the diverse, cross-

sectoral training of Environmental Health Practitioners, which is relevant to numerous sectors, such as in areas of waste management, air quality management, water quality management, environmental management, and occupational health and safety. Improving environmental health in South Africa will require a well planned and sustained intersectoral effort from all stakeholders.

The non-prioritisation of environmental health at implementation level has led to a reactive approach to the provision of environmental health services in the country; and an inability to be proactive in disease prevention. A shift is required towards a comprehensive, integrated, preventive management of the environment for health.

The serious threat of climate change to health is a reality and the control of communicable diseases through preparedness and response become critical in ensuring health adaptation. Coordination and collaboration across sectors is critical if prevention services are to be effective. Service such as Port Health management is critical in the country's ability prepare and respond to transboundary movement of diseases such as Ebola and other disease outbreaks require sound organization and coordinated efforts.

1.3 PURPOSE OF THE NATIONAL ENVIRONMENTAL HEALTH STRATEGY

The National Environmental Health Strategy provides a practical guide towards strengthening of the provision of Environmental Health services in the country, in an effort to contribute to the attainment of equitable and sustainable health outcomes for all South Africans.

This strategy implementation plan guides actions at appropriate levels to be carried out over a set period of time, which can be measured and evaluated for effectiveness towards the advancement of the aims and objectives of the National Environmental Health policy.

1.4 VISION

Enhancement of environmental health to ensure accessible, caring and quality Environmental Health Services.

1.5 MISSION

To contribute to the attainment of an environment that is not harmful to the health and well being of all South Africans as set out in the Bill of Rights in the South African Constitution, through a sustainable, co-ordinated, integrated, comprehensive, and proactive Environmental Health Service at all spheres of government.

CHAPTER 2

2.1 STRATEGIC GOALS

The overarching goal of the National Environmental Health Strategy is to "Strengthen Environmental Health Service Delivery Systems in the country.

The strategy has six strategic goals, which are aligned to the goals of the National Environmental Health Policy.

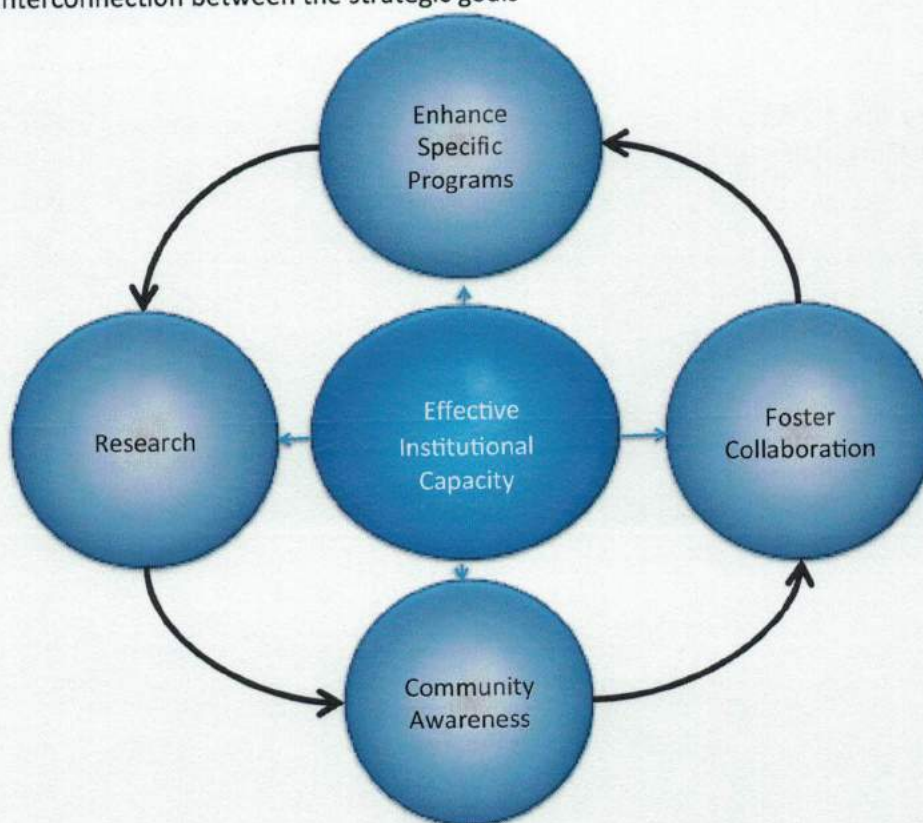
- Goal 1:** To ensure effective institutional capacity for rendering environmental health services;
- Goal 2:** To strengthen programme based environmental health services monitoring;
- Goal 3:** To strengthen evidence base in environmental health;
- Goal 4:** To strengthen the management of effective environmental health management information systems;
- Goal 5:** To adopt a partnership approach to facilitate holistic and integrated planning in environmental health; and
- Goal 6:** To Empower and mobilize individuals and communities through environmental health education, awareness and participation.

2.2 INTERACTION BETWEEN STRATEGIC GOALS

The strategic goals have been set out as an interconnecting group of activities that centres on strengthening environmental service delivery as a core goal. The interaction between the goals is outlined in Figure 1.

The expected outcomes of the successful implementation of this National Environmental Health Strategic plan include an improvement in the efficiency within the current system, and the creation of a more organized, collaborative and responsive Environmental Health service system. This, in time will ultimately help assure that emerging as well as existing environmental health issues are more adequately addressed. Ultimately, the improved service delivery system should result in a healthier population through improved dissemination of timely environmental health information, reduction in environmental hazards and enhanced environmental health interventions (Rumba, 2008).

Figure 3: Interconnection between the strategic goals



2.3 INDIVIDUAL STRATEGIC GOALS

2.3.1 Ensure effective institutional capacity for rendering environmental health services

Traditional institutional capacity development focuses on what an organization has in terms of resources and structure, and on how it performs its various functions (Bhagavan and Virgin, 2004). According to Bhagavan, it concentrates on improving administrative procedures through the supply of training, technical assistance and some systems development.

Environmental health services can only be successfully rendered in a functional health system. The definition of a health system, adopted in the Tallinn Charter in 2008 is therefore adopted for implementation of this strategy (WHO, 2008):

Within the political and institutional framework of each country, a health system is the ensemble of all public and private organizations, institutions and resources mandated to improve or restore health. Health systems encompasses both personal and population services, as well as activities to influence the policies and actions of other sectors to address the social, environmental, and economic determinants of health.

There is currently great recognition of environmental health as an integral part of public health, and that shared services often results in better health outcomes. The environmental health system should be grounded in the fundamental values of core public health functions, essential public health services, and science (Minnesota Department of Health, 2002).

Strong systems that deliver quality health care are crucial to maintaining a healthy population. The building blocks that make up a strong system: include, service delivery; health workforce; information; financing; and leadership and governance/stewardship (WHO, 2010). The following elements have been identified as critical in strengthening the South African Environmental Health service delivery system:

Workforce: Based on the Scope of Profession of Environmental Health, there exists a need to ensure that an adequate number and appropriately qualified workforce of Environmental Health professionals are appointed in each sphere of Environmental health services. Consequently, congruous resource allocation to support this need is pertinent.

Monitoring: Continuous evaluation and monitoring of Environmental Health Services is a regulated function of government. Municipalities and province are expected to provide reports relating to Environmental Health Services on a quarterly basis. This function will ensure creation of a department that is proactive and responsive to environmental needs and services.

Diagnose and Identify: Environmental risks and hazards remain a threat to community health if not identified, assessed, diagnosed, and eliminated in a timely manner. Environmental Health Practitioners should be adequately skilled, have the necessary tools, as well as have a reporting system that allows for 'sense-of-urgency' reactions, at their disposal.

Enforce Law and Regulations: The performance of a regulatory framework is only as effective as the mechanism in which it is implemented and enforced. Strict consequences for disregard for Environmental Health laws and regulations should be applicable to all

offenders, in all spheres.

Interdepartmental coordination: Shared responsibility between various governmental departments and agencies is keenly recognized as a strategic operational objective. Coordinated collaborative interaction between government and various stakeholders in the arena of environmental health is vital in achieving sustainable and equitable health for all.

2.3.2 Strengthen programme based environmental health services monitoring

Environmental Health Programmes regularly delivers services based on the needs of the communities. In order to strengthen environmental health service delivery systems, it is critical to ensure improvement of programme-based monitoring, which will allow for the enhancement, implementation and enforcement of environmental conditions that may impact on environment and human health; this include

- Food Control;
- Water Quality Monitoring;
- Vector Control;
- Waste Management;
- Port Health;
- Environmental Pollution Control ;
- Chemicals Management and Hazardous Substances Management ;
- Climate Change and Health;
- Waste Management and General Hygiene Monitoring;
- Prevention and Control of Communicable Diseases;
- Health Surveillance of Premises;
- Vector Control Management;
- Health promotion and education.

An advantage of structuring a programmes-based approach for the implementation of environmental health activities is that monitoring, audits, inspections, and risk assessment can be done in a focused and streamlined fashion.

2.3.3 Strengthen evidence base in environmental health

Creating health-promoting environments is complex and relies on continuing research to understand more fully the effects of exposure to environmental hazards on people's health (Healthy People 2020, 2014). A system that allows for not only collation of data, but also being able to identify aberrant or potentially dangerous elements, is critical in the management of environmental health exposures and the consequent effect on population health.

2.3.4 Strengthen the coordination of Environmental Health Management Information Systems

Information empowers decision-making. It establishes baselines, reveals trends, enables performance evaluation leading to identification of best practice, informs resource allocation and identifies new or re-emerging issues.

The Strategy acknowledges that in order to support environmental health management in the country, quality data and information is required to: Assist identify and prioritise current

and emerging problems; help specify safe environmental hazards exposure limits; assist in the development of guidelines and standards where necessary; define, evaluate and compare environmental health interventions; meet the needs and expectations of the community; inform the community and stakeholders; provide a rational framework for discussion and debate; and guide the research and development needed for the future.

Gathering data and obtaining assessment results does not guarantee impact. Acquiring meaningful results, using those results, and, most importantly, leveraging resources can ensure successful implementation of action plans and produce tangible results (Centers for Disease Control and Prevention, 2014). It is thus imperative that EHPs are reactive and proactive in responding to environmental health monitoring and assessment. Collecting and formulating the appropriate data within the sphere of environmental health, that could inform research priorities as well as future policy review and reform is imperative for sustainable national development.

2.3.5 Adopt a partnership approach to facilitate holistic and integrated planning in environmental health

Virtually all sectors of society and the economy are increasing their emphasis on teamwork, reflecting growing evidence that when individuals with different knowledge, training, experience and attitudes find new ways of working together, the result is increased innovation, productivity and synergy (Nolte, 2005). Inter-sectoral collaboration requires the creation of a shared vision of the future, identification and ranking of key issues, development of action plans, mobilization of resources and ways of increasing public support (WHO, 2015). Key stakeholders, the roles they are to play, as well as the specific leaders within each organization should be identified within the collaborative framework. The team should appropriately represent the breadth of individuals or agencies involved with providing the relevant environmental health services.

Given that inter-sectoral collaboration is valuable only if it leads to action, it is important to identify the specific issues of concern, the geographical parameters of the initiatives, the relevant actions and actors, the time frame and the availability of resources. Initiatives often fail because those responsible make them too comprehensive, not fully realizing the type or amount of resources needed to implement plans (WHO, 2015).

2.2.6 Empower and mobilize individuals and communities through environmental health education, awareness and participation

Community mobilization has been defined as a capacity building process through which communities, individuals, groups, or organizations, plan, carries out, and evaluates activities on a participatory and sustained basis to improve health and other needs on their own initiative or stimulated by others (Florida Department of Health, Date Unknown). Mobilization increases the participatory decision-making processes by bringing diverse stakeholders to the table. It brings those people to the table who may not normally be involved in the decision making process. Mobilization also fosters strong relationships between local governments, businesses, and community members.

A community mobilization approach is valuable because it fulfills people's rights to participate and to determine their own future. It enables groups to create local solutions to local problems. These local solutions will be more sustainable than external solutions that do not fit well with the local situation, culture, and practices. When communities define the

problem, set common goals and work together on their own programs, to achieve the goals, the communities change in ways that will last after the project ends.

Community engagement involves dynamic relationships and dialogue between community members and local health department staff, with varying degrees of community and health department involvement, decision-making, and control (Morgan, 2006).

Several methods for engaging communities exist; however, according to the Centers for Disease Control and Prevention, this service should include (CDC, 2014):

- Communicating the status of environmental health and environmentally related illness, disease, and injury to the community.
- Designing culturally appropriate environmental health information, environmental health education, and environmental health promotion activities to reduce environmental health risk and promote better health.
- Maintaining accessible environmental health information and educational resources.
- Targeting environmental health education activities to specific groups as necessary (children, septic tank installers and owners, community water systems operators, etc.).
- Establishing emergency risk communication processes designed to inform and mobilize the community regarding environmental health threats or crises.

According to the CDC (2014), there should be a plan and system in place to routinely educate and inform the community about environmental health issues. The system recognizes the important role of health education and promotion in ensuring that all community members have the opportunity to become informed about and participate in environmental health decisions. Effective community-based environmental health education uses targeted and culturally appropriate language, materials, and processes. Health communications activities should include media campaigns, social marketing, entertainment education, and interactive health communication. Programs could choose among a variety of communication channels including interpersonal, small group, organizational, community and mass media to most effectively reach specific segments of the community.

CHAPTER THREE

3.1 SWOT Analysis

An essential part in the development of an environmental health plan is the identification of **Strengths/Weaknesses, Opportunities/Threats** as an understanding of these will be useful in implementing the plan.

This SWOT analysis is a basic, straightforward model that was used to assess environmental health services in the country, in terms of what it can and cannot do, as well as its potential, opportunities and threats. The method of SWOT analysis is to take the information from an environmental analysis and separate it into internal (strengths and weaknesses) and external issues (opportunities and threats). The SWOT analysis will determine what may assist the rendering of environmental health services in accomplishing its objectives, and what obstacles must be overcome or minimized to achieve desired results.

Strengths

The creation of the Chief Directorate Environmental Health within the National Department of Health;

The existence of a Board of Environmental Health in the Health Professions Council of South Africa, that ensures professionalization of the service;
Extensive environmental health related legislation promulgated by the government since 1994;
The country is signatory to appropriate environment and health international treaties and agreements;
The existence of a National Policy and Norms and Standards for environmental health, that provides a framework and guide in the rendering and standardisation of services in the country;
Political will - the Minister of Health's intense interest in environmental health.

Weaknesses

Resource constraints, both financial and human resources to ensure effective service delivery at implementation level;
Incomplete transfer of Municipal Health Services process to District and Metropolitan Municipalities;
Lack of prioritisation of the service at implementation level;
Fragmented policy framework and lack of synergy between sectors;
Poor implementation of national policies and legislation;
Poor national environmental health information systems;
Poor communication between various levels of government;
Lack of appropriate and sufficient documented national and local best practices;
Inadequate and uncoordinated scientific research that inform interventions.

Opportunities

Various sectors implement environmental health related aspects; provide opportunity for resource maximisation;
Potential for revenue generation;
Potential for commercialised services;
Incorporation of environmental health services into the standard primary health care package;
Specialization.

Threats

Fragmentation of Environmental Health functions;
Professional encroachment;
Staff movement to other sectors for specialization;
Poor recognition of the profession by stakeholders;
Poor perceived authority of EHP's at service delivery levels;
Possible corruption at service delivery points;
Political interference at local level;

CHAPTER FOUR

4. STRATEGY ACTION PLAN

Developing and implementing action plans to address identified gaps and needs ensures findings result in meaningful change (CDC, 2014). The Table below provides an action plan for the implementation of the strategic goals, and specific with specific objectives, operational indicators, timeframes and relevant actors.

GOAL 1: ENSURE EFFECTIVE INSTITUTIONAL CAPACITY FOR RENDERING ENVIRONMENTAL HEALTH SERVICES

OBJECTIVES	ACTIONS	ROLE PLAYERS	OUTPUTS	INDICATOR	TIME FRAME
<p>1.1. Strengthen environmental health human resources capacity to ensure the realisation of the norm of 1:10 000 operational EHP per population.</p>	<ul style="list-style-type: none"> ▪ Provide a national guide for development of organisational structures for EHS, in line with national policy and norms and standards; ▪ Develop and implement comprehensive human resource plans for environmental health to address HR shortages. 	<p>NDOH; PDOH</p>	<ul style="list-style-type: none"> ▪ National organisational guide. ▪ 5 year HR plans. 	<ul style="list-style-type: none"> ▪ National organisational structure guide available. ▪ # of Municipalities where the ratio has been met. ▪ Proportion of new posts created and filled per annum. 	<p>2016</p> <p>2016-2020</p>
<p>1.2 Ensure adequate financial capacity in rendering EHS</p>	<ul style="list-style-type: none"> ▪ Undertake a costing exercise for rendering of EHS; ▪ Ensure monitoring and evaluation systems for EHS budget allocations within Municipalities to ensure accountability; ▪ Lobby for adequate resources allocation at ground level for EHS; 	<p>NDOH; PDOH; COGTA; SALGA; National Treasury DMs and MMs</p>	<ul style="list-style-type: none"> ▪ Effective budget monitoring systems. ▪ Availability of budget plans. 	<ul style="list-style-type: none"> ▪ EHS costed. ▪ # of municipalities with budget plans for EHS. 	<p>2016-2018</p>
<p>1.3 Ensure that the Environmental Health Workers are fully</p>	<ul style="list-style-type: none"> ▪ Development of mechanisms for regular updating of training 	<p>Institutions of Higher learning; HPCSA;</p>	<ul style="list-style-type: none"> ▪ Training business plans for EHPs; ▪ Annual meetings 	<ul style="list-style-type: none"> ▪ # of EHPs that meet CPD requirements annually; 	<p>2016-2020</p>

<p>capacitated and best equipped to meet current and future EH challenges and needs.</p>	<p>programs for EHPs to ensure continued relevance.</p> <ul style="list-style-type: none"> ▪ Review existing CPD program and recommend strategies to expand or revise the program. ▪ Broaden awareness and capacity of EHPs on environmental health issues; ▪ Develop training plans for EHPs within Municipalities over the MTEF; ▪ Increase the capacity of EHPs to respond to environmental health related emergencies and disasters; ▪ Capacitate EHPs on existing and new legislation; 	<p>NDOH; PDOH; DMs and MMs.</p>	<p>held with academia and other stakeholder on EH curricula to ensure relevance;</p> <ul style="list-style-type: none"> ▪ CPD programme review report. ▪ EHPs competent in emergency and disaster response; 	<ul style="list-style-type: none"> ▪ EH training relevant to meet current and emerging environmental health challenges ▪ # Municipalities with training plans to ensure ongoing capacity building for EHPs; 	
<p>1.4 Ensure a regulatory framework and enforcement capacity for environmental health.</p>	<ul style="list-style-type: none"> ▪ Conduct a review of existing environmental Health policy and legislative framework and identify gaps; ▪ Develop a regulatory framework that will support the rendering of EHS in the country, to give powers to the health ministry and 	<p>NDOH PDOH; DMs and MMs;</p>	<ul style="list-style-type: none"> ▪ National Environmental Health Act; EHPs capacitated on law enforcement; ▪ National EH norms and standards implemented in rendering EH 	<ul style="list-style-type: none"> ▪ EH legislation and regulations in place; ▪ # EHPs trained on law enforcement; ▪ # Municipalities with By-Laws in place and effective law enforcement systems in place; ▪ # of Municipalities 	

	<p>EHPs on issues of environmental health;</p> <ul style="list-style-type: none"> Build enforcement capacity of EHP's; Monitor the Implementation of national norms and standards for environmental health; Ensure the availability of SOPs at implementation level; 		<ul style="list-style-type: none"> EHS SOPs available at implementation level; 	<p>that meet the national EH norms and standards in rendering EHS;</p>	
1.5 Ensure effective planning for environmental health at implementation level.	<ul style="list-style-type: none"> Ensure that EHS planning forms part of Municipal Integrated Development Plans (IDPs) and District Health Plans (DHPs); Ensure availability and implementation of EH Service delivery plans; Compile annual EH status report and for submission to province and national office; 	DMs and MMs; PDOH;	<ul style="list-style-type: none"> EHS forms part of IDPs and DHPs; EH service delivery plans; Annual status reports produced and submitted. 	<ul style="list-style-type: none"> # of DHPs with IDP indicator incorporated; # of IDPs that incorporated and DHPs; EH service delivery plans; Annual status reports produced and submitted. 	2016-2020
GOAL 2: STRENGTHEN PROGRAMME BASED ENVIRONMENTAL HEALTH SERVICES MONITORING					
OBJECTIVES	ACTION	ROLE PLAYERS	OUTPUTS	INDICATOR	TIME FRAME
2.1 Improve Environmental Health Monitoring and Surveillance;	<ul style="list-style-type: none"> Define EHS full package of services; Plan and implement environmental health 	NDOH; PDOH; DMs and MMs	<ul style="list-style-type: none"> EHS full package of services defined; EHS functional 	<ul style="list-style-type: none"> EHS full package of services; # of Municipalities and Provinces with 	2016-2020

	<ul style="list-style-type: none"> priority programmes; Implement and enforce legislation for protection of public health; Monitor Climate Change and Health impacts and empower communities on adaptation strategies; Strengthen surveillance capacity within the environmental health workforce; 		<ul style="list-style-type: none"> area monitoring plans in place, with specific targets and budgets; and EHPs capacitated on EH surveillance; 	<ul style="list-style-type: none"> monitoring plans in place for all EH functional areas; # of EHPs capacitated on health surveillance and Climate Change and adaptation strategies; 	
GOAL 3: STRENGTHEN EVIDENCE BASE IN ENVIRONMENTAL HEALTH					
OBJECTIVES	ACTION	ROLE PLAYERS	OUTPUTS	INDICATOR	TIME FRAME
3.1 Increase environmental health research capacity to provide for evidence based environmental health interventions and management.	<ul style="list-style-type: none"> Identify EH research gaps and priorities, and create a Research Agenda for EH policy review; Promote a research literate EH workforce through awareness raising; Facilitate the coordination of effective management of the EH research effort and effective engagement with the non-health sectors on EH research issues; Strengthen international 	NDOH, PDOH; MMs and DMs; Institutions of Higher Learning; Research Institutions.	<ul style="list-style-type: none"> EH research committee and task team establish to coordinate EH related research; Research needs identified and priorities highlighted; 	<ul style="list-style-type: none"> Research studies commissioned and reports available; Research recommendations implemented ; Polices reviewed based on data collected; 	2016-2020

	research collaborations, to learn from best practice and draw on the widest evidence base.					
GOAL 4: STRENGTHEN THE COORDINATION OF EFFECTIVE ENVIRONMENTAL HEALTH INFORMATION SYSTEMS						
OBJECTIVES	ACTION	ROLE PLAYERS	OUTPUTS	INDICATOR	TIME FRAME	
4.1 Facilitate the improvement of Environmental Health Information Systems	<ul style="list-style-type: none"> ▪ Evaluate current short comings of the health Information System for EH related data; ▪ Improve the management of EH information at all levels; ▪ Identify and prioritise data information needs and create a red flag system for data that requires urgent attention; ▪ Develop and implement comprehensive EH indicators; ▪ Collect prioritised data for management purposes; ▪ Facilitate the linkage with other sectors on information systems collecting EH related data; ▪ Develop and implement SOPs to strengthen governance of EH reporting system. 	<p>NDOH PDOH MMs and DMs Research Institutions DEA DRLR, DSD, STASSA, NRF; Institutions of higher learning.</p>	<ul style="list-style-type: none"> ▪ Baseline data of current information systems reviewed; ▪ Data information needs identified and prioritised; ▪ Data management SOPs developed and implemented; ▪ Sectors collecting EH data identified; ▪ Data collected through other sectors or systems accessed and utilised; ▪ EH data collected, analyzed and used at local, province and national level. 	<ul style="list-style-type: none"> ▪ # of DMs and MMs reporting on the EH data. ▪ # of provinces reporting to national. ▪ Database of all relevant information systems and sectors collecting EH data developed. ▪ Data from other systems or sectors accessed and applied. ▪ Data information needs identified and prioritised 	2016-2020	

GOAL 5: ADOPT A PARTNERSHIP APPROACH TO FACILITATE HOLISTIC AND INTEGRATED PLANNING IN ENVIRONMENTAL HEALTH

OBJECTIVES	ACTION	ROLE PLAYERS	OUTPUTS	INDICATOR	TIME FRAME
<p>5.1 Strengthen partnership and intersectoral collaboration for environmental health.</p>	<ul style="list-style-type: none"> ▪ Establish an EH strategic alliance structure, and set up consultative terms and agreements for cooperation and collaboration with relevant sectors; ▪ Ensure representation of EH in other intergovernmental structures; ▪ Strengthen international co-operation on issues affecting environmental health. 	<p>NDOH, Province, DMs and MMs, DEA, DWS, DAFF, DSD, DRDLR, DOT, DMR; DHS; NT; SALGA, COGTA, SAMHS.</p>	<ul style="list-style-type: none"> ▪ Alliance in place with clear operating objectives. ▪ Formal agreements signed as required by mutual interventions on environmental matters of interest. 	<ul style="list-style-type: none"> ▪ # of meetings held ▪ # national MOUs and MOA in place 	<p>2016-2020</p>
<p>5.2 Develop an Inter-Sectoral Framework for the rendering of Environmental Health Services.</p>	<ul style="list-style-type: none"> ▪ Ensure integrated planning at all spheres; ▪ Create standard operating procedures for joint; <ul style="list-style-type: none"> ○ Needs assessment; ○ Data collection; ○ Establishing priorities and action plans; and ○ Resource allocation. ▪ Assess and identify environmental gaps in existing sector policies. ▪ Advocate and lobby for 	<p>All identified stakeholders NDOH, PDOH, MMs, DMs, stakeholders</p>	<ul style="list-style-type: none"> ▪ SOPs in place and implemented. 	<ul style="list-style-type: none"> ▪ Joint action plans. 	<p>2016-2020</p>
<p>5.3 Advocate for inclusion of health management in other public policies.</p>	<ul style="list-style-type: none"> ▪ Assess and identify environmental gaps in existing sector policies. ▪ Advocate and lobby for 	<p>NDOH, PDOH All relevant sectors (DWS, DEA, DOT, DMR, DAFF)</p>	<ul style="list-style-type: none"> ▪ Sector policies and objectives aligned; 	<ul style="list-style-type: none"> ▪ # of sector policies with health incorporated, such as HIA and HRA. 	

	<p>policies that focus on reducing environmental risks and exposures to human health, such as Health Impact Assessment and Health Risk Assessment.</p> <ul style="list-style-type: none"> Establish an implementation plan for aligning environmental health objectives with other departments' objectives, through consultation with sector departments. 					
GOAL 6: EMPOWER AND MOBILIZE INDIVIDUALS AND COMMUNITIES THROUGH ENVIRONMENTAL HEALTH EDUCATION, AWARENESS AND PARTICIPATION.						
OBJECTIVES	ACTION	ROLE PLAYERS	OUTPUTS	INDICATOR	TIME FRAME	
6.1 Improve environmental health literacy.	<ul style="list-style-type: none"> Develop and implement targeted environmental hygiene education and awareness strategies based on needs. Develop and implement communication and marketing plans for EHS. Create awareness of EHPs to include emerging priority issues into ongoing education campaigns and to facilitate the distribution of 	NDOH, PDOH, MMs and DMs	<ul style="list-style-type: none"> Education and awareness strategies in place and implemented. Communication plans in place and implemented. IEC material available and distributed. 	<ul style="list-style-type: none"> # of Municipalities and provinces with EH communication and marketing plans. # of Municipalities and provinces implementing community environmental education strategies. 	2016-2020	

6.2 Improve collaboration with community on EH related matters.	<p>appropriate information when emerging environmental issues occur.</p> <ul style="list-style-type: none"> ▪ Conduct an assessment of EH focused NGOs and CBOs and their objectives. ▪ Strengthen partnership with community structures and civil society; ▪ Strengthen linkages with existing forums and facilitate the establishment of new forums; ▪ Develop policies and plans that support individual and community environmental health initiatives; ▪ Strengthen EH involvement in PHC Ward Based Outreach teams for community outreach. 	NDOH, PDOH, MMs and DMs. Identified; CBOs, NGOs.	<ul style="list-style-type: none"> ▪ Improved community participation in EH initiatives; ▪ New Forums established; ▪ MOUs in place with relevant existing organisations; 	<ul style="list-style-type: none"> ▪ # of coordinated community EH related campaigns; ▪ MOUs in place with various CBOs and NGOs. ▪ # of new forums established. ▪ # of EH policies and plans that promote community initiatives; ▪ # of EHPs that form part of PHCWBOs. 	2016-2020
---	---	--	---	---	-----------

REFERENCES

- Bhagavan, M. R and Virgin. I (2004). *Generic Aspects of Institutional Capacity Development in Developing Countries*. Stockholm Environment Institute.
- Bradshaw, D., Nannan, N., Laubscher, R., Groenewald, P., Nojilana, B., Norman, R., Pieterse, D. and Schneider, M. (2003) *Initial Burden of Diseases Estimates for South Africa, 2000. Pretoria, South Africa: Burden of Disease Research Unit, Medical Research Council of South Africa.*
- Centers for Disease Control and Prevention (2014). *Environmental Public Health Performance Standards*. National Centre for Environmental Health. Division of Emergency and Environmental Health Services URL: <http://www.cdc.gov/nceh/ehs/envphps/>
- Chartered Institute of Environmental Health (2012). *Environmental Health*. URL: www.cieh.org/policy/environment_health_2012.html
- DoH, 2013, *National Environmental Health Policy*, Gazette Number 37112 of 04 December 2013.
- Florida Department of Health (Date Unknown). *Community Mobilization*. URL: <http://myctb.org/wst/floridacommunityprevention/mobilization/default.aspx>
- Gee, G.C, Payne-Sturges. D.C (2004). *Environmental Health Disparities: A Framework Integrating Psychosocial and Environmental Factors*, *Environmental Health Perspectives*, 112 (17)
- Investopedia (Date Unknown). *SWOT Analysis*. URL: <http://www.investopedia.com/terms/s/swot.asp#ixzz3a7MOv3Ms>
- Healthy People 2020 (2014). *Environmental Health*. URL:<http://www.healthypeople.gov/2020/topics-objectives/topic/environmental-health>
- Mathee. A. (2011). *Environment and health in South Africa: gains, losses, and opportunities*. *Journal of Public Health Policy* (2011) 32, S37–S43.doi:10.1057/jphp.2011.21
- Mayosi, B.M., Flisher, A.J., Lalloo, U.G., Sitas, F., Tollman, S.M. and Bradshaw, D. (2009) *The burden of non-communicable diseases in South Africa. The Lancet*. Series. Health in South Africa, doi:10.1016/S0140-6736(09)61087-4.
- Medical Research Council (2008). *Comparative Risk Factor Study*. URL: <http://www.mrc.ac.za/bod/crasumrpt.pdf>
- Morgan. M.A, Lifshay. J. (2006). *Community Engagement in Public Health*. Public Health Outreach, Education and Collaborations Unit, 597 Centre Avenue, Suite 315, Martinez, California, 94553
- Minnesota Department of Health (2002). *Strengthening Environmental Health in Minnesota*. Minnesota Department of Health. Community Health Division. Community Development Section.

Nannan N, Dorrington RE, Laubscher R, Zinyakatira N, Prinsloo M, Darikwa TB, Matzopoulos R, Bradshaw D. Under-5 mortality statistics in South Africa: Shedding some light on the trends and causes 1997-2007. Cape Town: South African Medical Research Council, 2012.

National Environmental Health Strategy Implementation Plan, enHealth Council, 2000.

Nolte. J. (2005). Enhancing Interdisciplinary Collaboration in Primary Health Care in Canada.

Norman. R, Bradshaw. D, Lewin. S, Cairncross. E, Nannan. N, Vos. T, South African Comparative Risk Assessment Collaborating Group. (2010). Estimating the burden of disease attributable to four selected environmental risk factors in South Africa. *Rev Environ Health*, 25(2):87-119

Owolabi, M.O., Mensah, G.A., Kimmel, P.L., Adu, D., Ramsay, M., Waddy, S.P., Ovbiagele, B., Rabadan-Diehl, C., Rasooly, R., Akarolo-Anthony, S.N. and Rotimi, C. (2014). Understanding the rise in cardiovascular diseases in Africa: harmonizing H3Africa genomic epidemiological teams and tools. *Cardiovascular Journal of Africa*, vol. 25, no. 3, pp. 134.

Rumba. R.G. (2008). Developing and Implementing a Coordinated Environmental Health Services Delivery System in New Hampshire.

Statistics South Africa. (2015). Mid-year Population Estimates.

World Health Organization (2015). Health in Sustainable Development Planning: The Role of Indicators. Chapter 5, Intersectoral Planning

World Health Organization (2010). Monitoring the building blocks of health systems: A handbook of indicators and their measurement strategies

World Health Organization (2006). Preventing disease through healthy environments: towards an estimate of the environmental burden of disease.

World Health Organization (2008). The Tallinn Charter: Health Systems for Health and Wealth.