

**REPUBLIC OF ZAMBIA  
MINISTRY OF HEALTH**

**DRAFT  
NATIONAL ENVIRONMENTAL HEALTH POLICY**

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<b>1.</b>	<b>INTRODUCTION</b>	

The aspirations of the Health Reforms are “a society in which Zambians create environments conducive to health, learn the art of being well, and provide basic level health care for all.”

In order to achieve this goal, a systematic and enhanced promotion of environmental health is critical.

Environmental Health is defined as “comprising those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social and psycho-social factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that can potentially affect adversely the health of the present and future generation.”(WHO, Sofia, 1993). Functionally, it is a wide ranging field and constitutes, among others, components such as water supply, sanitation and hygiene practices, excreta disposal, liquid and solid wastes disposal and disposal of the dead, food hygiene and safety, insect and rodent vector and vermin control, environmental health diseases control, air pollution, water pollution, human habitat and safe housing, occupational and industrial health and port health activities.

The economic problems faced during the 1990s and subsequent decline in the standard of living of the population have had a negative impact on environmental health in Zambia. Most environmental health services virtually collapsed due to resource constraints and ineffective delivery systems. The deterioration of the public infrastructure, human resource capacity problems amongst stakeholder institutional and a rising disease burden due to HIV/AIDS have all contributed to a decline in the scope and quality of environmental health services. Consequently, there has been a drastic increase in environmental health related disease incidence and mortality.

Nevertheless, significant initiatives aiming at addressing a number of the critical environmental health concerns have been undertaken. National water supply and sanitation programmes were for example conceived and executed. Mechanisms were also set up to ensure:-

- adequate planning and development of water supply and sanitation systems,
- use of appropriate technology,
- adequate disposal of wastes (solid, domestic, industrial and particularly human),
- development of water supply monitoring and surveillance measures,
- control of mosquitoes and other vectors' breeding,

- establish and conduct training programmes, community participation and health education aspects.

The impact of these interventions on health has, however, been minimal. Several constraints accounted for this:

- (a) Budgetary and resource constraints still persist and have not been adequately addressed through the various interventions.
- (b) Lack of institutional capacities at all levels, more especially at the district and community level.
- (c) Ineffective co-ordination amongst the various stakeholders impacting on environmental health.
- (d) Adoption of risk behaviors and poor hygiene practices by households due to declining real incomes.
- (e) Lack of and ineffective enforcement of existing environmental health legislation.

This policy therefore aims at providing a framework for dealing with the mentioned challenges and concerns. It is also meant to complement the National Water Policy, the National Environmental Policy, National Gender Policy and other policies related or relevant to environmental health.

## **2. SITUATION ANALYSIS**

Zambia with total area of 752,620 square kilometers, and population of 9.5 million is divided into 9 provinces with 72 districts, and it is one of the most urbanized countries in the sub-Saharan Africa, with 42% of its population living in urban areas.

Zambia has over the last three decades been experiencing deterioration in health indicators and is faced with a number of environmental health problems that negatively affect human health.

### **2.1 Environmental Burden of Disease**

Over 70 percent of the country's disease burden is due to environmental conditions. Most of these environmental health hazards and risks are largely preventable.

The list includes malaria, bacterial and viral infections (diarrhoea, cholera, dysentery, typhoid, poliomyelitis and hepatitis A), parasitic infections (amoeba and giardia, roundworms, whipworm, hookworms, bilharzias) and other diseases like trachoma, tuberculosis, cancers, allergies and scabies.

Added to this list are casualties and emergencies arising out of road traffic accidents, home accidents, food poisoning, fires, etc.

### **2.2 Food Safety and Hygiene**

The objectives of food safety and hygiene are to protect the health of consumers by ensure high health standards in the production, collection, preparation, processing, storage, sale and consumption of foodstuffs.

Zoonotic and foodborne diseases (tuberculosis, anthrax, taeniasis, and diarrhoeal diseases, etc.) have been on the increase in the country due to laxity and capacity constraints in food safety controls.

Reported cases of (bacteriological and chemical) food poisoning in food establishments and related institutions have also been on the increase. The poor hygiene standards in food establishments (restaurants, kitchens, hotels, butcheries, boarding schools, etc.) have contributed to the maladies.

The Food and Drugs Act Cap 303 of the Laws of Zambia has given comprehensive control in terms of food hygiene but inadequate

enforcement of this and other public health laws have contributed to declining hygienic standards in food establishments.

### **2.3 Water Supply and Pollution**

Safe drinking water is available to only 40% of the Zambian population. This low level of coverage for water supply is of great concern. In particular provision of water is needed to reduce the burden of time devoted to carrying water by rural women and children, and limiting water-related diseases that have very high prevalence rates in the country.

Pollution of ground and surface water has also increased with practices that include dumping wastes in borrow-pits and on river banks. The deterioration of drinking water quality is under these circumstances unavoidable. The following are the main sources of water pollution:-

### **2.4 Air Pollution**

World Health Organisation (WHO) asserts that sound air quality management is also a proven way of enhancing public health, since air pollution is associated with increases in outpatient visits due to respiratory and cardiovascular diseases, in hospital admissions and daily mortality.

In Zambia, the problem of air pollution is largely concentrated in the cities, which show high incidences of bronchopneumonia. The extent of air pollution and harmful effects of the pollutant is largely with concentration, exposure and degree of toxicity.

The population in developing countries like Zambia is exposed to enhanced concentrations of gaseous and particle compounds in the air they breathe. The air pollution is generated from a wide range of sources including industrial activity and power generation, road traffic, agriculture, domestic burning of wastes and open burning of wastes and vegetable matter.

Due to the fact that Zambia's population will continue to grow especially in low-income areas, obviously stressing already inadequate infrastructures and technical and financial capacities, the creation of dense centre for anthropogenic emissions will definitely increase.

## **2.5 Noise Pollution**

- Direct discharge of waste effluent to rivers or wetlands, lakes and underground water industries.
- Indirect discharge of agrochemicals into the environment
- Spillages and overflow from pollution control facilities
- Accidental spillages of chemicals including oil

The absence of national drinking water quality standards has further compounded the already difficult situation. Water supply utilities, institutions and companies are therefore not operating according to uniform standards of water quality.

## **2.6 Sanitation and Hygiene Education**

The life styles and hygiene practices of the majority of the Zambian population are also not conducive for good health. Littering, indiscriminate dumping of refuse and unhygienic public cleansing are widespread even in areas where the requisite infrastructure has been put in place. This points to low levels of basic cleanliness and hygiene awareness in the country's population.

## **2.7 Liquid and Solid Waste Disposal**

The situation regarding liquid and solid waste disposal is as follows:

- There are no designated dumping sites for domestic, industrial and clinical waste in most towns and cities
- Refuse removal vehicles, where available, are largely old, unreliable ..... refuse.
- The sewer collection has largely been the responsibility of the local authorities. Where local authorities cannot provide services, waste is discharged in open pits. This has resulted in accumulation of refuse on street verges and at transfer storage stations because refuse removal schedules cannot be adhered to. Cases of proliferation of rats and mice are many and worrying and can lead to an epidemic of bubonic plague.
- Domestic waste is currently indiscriminately disposed into open spaces, roads, drainage's etc. Industrial waste and clinical waste is sometimes disposed of at sites meant for domestic waste thereby posing serious health hazards and pollution threats to both the soil and ground water.



## **2.8 Excreta Disposal**

Human faeces are potentially dangerous, malodorous and have been incriminated in spreading faecal oral diseases. In fact a large number of diseases are spread directly through man's contact with human excrement, indirectly through water, food and soil, or via carriers and vectors like flies, cockroaches etc.

In Zambia, as observed in the National Environmental Sanitation Strategy for rural and peri-urban areas (1997) the necessary package of better disposal of faecal waste receives little attention.

Hygiene excreta disposal facilities, which are classified as dry and wet systems, are only available to approximately 23% of the country's population. The rest of the population lives under environments characterised by inadequate or insanitary excreta disposal.

This situation significantly contributes to the increase in environmental health related diseases. In fact the incidence of some 80% of preventable disease in Zambia is related to poor environmental sanitation.

## **2.9 Human Habitat and Safe Housing**

Adequate and decent housing plays a fundamental role in health promotion and the quality of life of humans. At independence in 1964, Zambia experienced an unprecedented rural-urban migration. This migration increased the urban population to proportions beyond the absorptive capacities of urban areas and created a severe shortage of housing and urban services. The shortage of housing and urban services has persisted to this day.

The existing situation in Zambia is as follows:-

- Of the total housing stock, 31% meets the minimum development and health standards and 69% is informal or non-compliant to housing standards, poorly serviced, and made of inappropriate materials, overcrowded and often chocking due to poor sanitary conditions.
- Only 31% of the national housing stock is considered to be formal and meeting the minimum development and health standards; the remaining 69% is informal and non compliant.
- More than 70% of the urban housing is poorly serviced while the dispersed settlement pattern in rural areas makes it difficult to provide

suitable services. Houses in the rural areas are also mainly made of mud and wattle and only semi-permanent.

- In some situations, settlements have been developed in disaster prone areas (e.g. due to over-flooding, persistence drought or destruction of crops by wild animals) and therefore increased the possibilities of environmental hazards and risks.

Other salient statistics on housing from the 1996 Demographic Health survey include, 36% of the housing stock use piped water supply, 38% draw water from wells and boreholes whilst 26% depend on surface water from rivers and streams; 17% of households use flush toilets, about 54% use pit latrines and the remaining 29% do not have toilet facilities.

These poor statistics signify the inadequacy in safe and healthy housing that includes basic services. This problem is exacerbated by the bulk of development still taking place in unplanned settlements.

## **2.10 Public Sanitary Inspections and Abatement Of Statutory Nuisances in Premises**

Given the ever widening scope of environmental health issues, often generated by a combination of population and industrial growth, routine sanitary inspections become an essential of public health administration. They enable the regulatory authorities to identify statutory nuisances and offer solutions swiftly before dangers could arise.

The Government agencies with capacities tasked to carry out environmental surveillance that ensures maintenance of ambient environmental standards, have not performed to expectation due to a wide range of constraints, which include and not limited to lack of capacity in legal prosecution, field transport and financial resources.

This has resulted in illegal and uncontrolled dwelling and food premises in most peri-urban and rural areas. The resultant outbreaks of bloody and non-bloody diarrhoea can be attributed to these statutory nuisances, which in parts of the country are almost assumed endemic proportions.

Cap 303 of the Laws of Zambia also empowers the “authorized officers” (medical officer, health inspector or any suitably qualified officer) to control the environmental health standards of general premises, including housing. This function is however poorly carried out. As a result, there has been illegal and uncontrolled development in most peri-urban and rural areas giving rise to proliferation of statutory nuisances detailed under the Public health Act Cap 303, section 67.

The resultant outbreaks of diarrhoeal disease (cholera, dysentery, typhoid, etc) can be attributed to these nuisances, which have remained unabated for long.

### **2.11 Disposal of the Dead**

The organisation of an efficient and decent disposal of the human remains in appointed cemeteries has been a challenging function for most of the local authorities in the country.

Due to capacity problems in institutions charged with the function of providing burial services and the increased mortality arising out of a combination of factors such as poverty, HIV/AIDS, malaria and high incidence of preventable diseases, the disposal of the dead has become a critical environmental health issue.

The resultant of this problem means that the number of bodies tends to outstrip the available mortuary space in most health facilities, bodies are deposited and remain uncollected for long periods in the mortuaries. The other factor is the lack of land for burial of the dead is making cemeteries unmanageable.

Re-organisation of this public health function, now also being threatened by possible underground water pollution, should be done to ensure that burials are decent.

### **2.12 Vector and Rodent Control**

The control of vectors and rodents of medical importance is another important environmental health intervention. The rodents, in particular, are a source of food insecurity, damage structures and transmit disease.

The past fifteen years has however witnessed an increase and frequency of vector and rodent related diseases such as malaria, epidemic bubonic plague, schistosomiasis and trypanosomiasis. This has come about due partly to financial constraints faced by local authorities that are charged with the task of carrying out the control functions. The low priority given to measures for the monitoring and control activities against vectors and rodents has also worsened the situation.

At the moment there is lack of comprehensive national health legislation capable of providing a basis for the development of surveillance and control activities against vectors and rodents.

Another compounding factor in the control strategy is the reported cases of insecticide resistance against the vector that transmit malaria.

### **2.13 Occupational and Industrial Health**

Problems of occupational health and industrial hygiene due to local ambient air contamination as well as work in mines are identified to be serious. Problems of the uses of hazardous substances (chemicals, pesticides and radioactive materials) that contaminate the environment are also of increasing concern. Government machinery to address these issues is fragmented and co-ordination and collaboration by the stakeholders relatively weak. Consequently there is a duplication of programmes by Ministries and stakeholders, which does not allow for effective implementation of activities.

At the moment, there is no clear occupational health policy and strategic plans nor there are establish formal focal point for occupational health and care at the Ministry of Health/Central Board of Health.

There however, exists an occupational health safety and research bureau on the Copperbelt whose functions range from occupational medical examinations, occupational physiology, laboratory investigations and certifications for compensation claims.

There seen to be difficulties in retrieving data as each stakeholder maintains the data on injuries and facilities.

### **2.14 Recreational Facilities**

Public and residential recreational facilities are not only inadequate throughout the country, but are also mostly in a state of disrepair, poorly equipped and operated/managed by poorly trained personnel. A number have degenerated to a point where they are serving as illegal dumping sites for household and industrial waste, which poses a health risk to the few remaining users (more especially children).

### **2.15 Community Participation**

Over the past ten years, communities have participated actively in environmental health activities with varying degrees of success in water and sanitation. However due to poor community mobilisation and lack of empowerment, community participation around environmental health activities is an area, which has not been fully realised in the country. Financing for environmental health interventions at community levels is not available. Where financing has been availed, it is on a pilot basis through Community Health innovation Funds. Due to lack of focus on the community, most environmental health interventions have been at the central and local Government levels.. The active participation of local

communities is however a crucial requirement for sustainable, demand-led and effective interventions.

## **2.16 Inadequate Financing**

Inadequate financing of the health sector has affected implementation of environmental health related programs. This changes the mix of technological options open in the provision of environmental health services. It also necessitates the need to define the appropriate capabilities - understood as factors in determining which environmental health services can be provided to the people and what the users/consumers can provide in return.

## **2.17 Human Resources**

The current estimates in the MoH 10 year Human Resource Plan are that there are 977 health inspectors, Environmental Health Technicians and technologists; that represent 7.4% of the total health workers (13,155 - 2001). WHO recommends a ratio of 1:20,000 for environmental health officers (health inspectors) and 1:10,000 for environmental health technologists. The natural coverage for health inspectors and environmental health technician/technologist are estimated to be 1:100,000 and 1:10,000 respectively.

## **2.18 Infrastructure**

Most water supplies and wastewater disposal systems in the urban areas lack maintenance or are inadequate for the population being served. As a result, sewer overloads, blockages and spills of obnoxious sewer materials in residential areas is common occurrence. The lack of capacity to provide adequate safe water supplies therefore exposes residents to the risks of communicable diseases and compromises their health.

## **2.19 Environmental Health in Schools, Health facilities and Public Places**

Lack of compliance to environmental health standards as enshrined in the public health regulations pertaining to sanitary facilities, solid waste, drainage, overcrowding, lighting, ventilation in these premises have become a source of public health hazards. Poor co-ordination of agencies that have the responsibility for promoting and protecting environmental health has compounded the problem.

## **2.20 Utilisation of Appropriate Technologies**

For environmental health interventions to be appropriate, there ought to be acceptable, affordable, sustainable and demand driven technological options. The scenario where various actors push for implementation of environmental health programmes without due regard to the appropriateness of the applied technologies is not promising.

Sanitary facilities, water provision, hand washing facilities, solid waste disposal, and drainage are some of the areas where appropriate and sustainable technological options should be explored.

## **2.21 Gender and Environmental Health**

Lack of access to basic health services, inadequate reproductive health facilities and maternal child health care are some of the gender issues particularly affecting negatively on women and girls. Others include lack of access by women and girls to adequate food, safe water and sanitation. These concerns impinge on environmental health.

Through the National Gender Policy, the government intends to improve the provision of accessible, affordable and quality social welfare services in areas such as water and sanitation, health and housing.

## **2.22 Data on Environmental Health**

Inadequate data on aspects of environmental health make it extremely difficult to design well impacting interventions for the environment. The lack of data is at all levels (community, district, provincial and national). Existing data tends to be scattered, fragmented or not comprehensive enough to provide the required insights of environmental health issues. Environmental Health Data is not consistently collected and collated because of the absence of data banks and agreed partner.

## **2.23 Environmental Health Impact Assessment**

Environmental health impact assessment aim at determining the current and future health consequences of planned developmental programmes and activities. It is therefore an essential tool for prevention and minimizing environmental hazards and risks. The current developmental practice in the country does not however consistently apply this tool. The health consequences of planned and ongoing programmes, projects and activities are therefore hardly taken in consideration.

## **2.24 Port Health Services**

Port Health Services, which encompass air, land and seaports are administered under WHO International Regulations (1969). The objective of the Regulations is ensure maximum security against international spread of quarantinable diseases (cholera, yellow fever and plague).

Currently there are no services provided for disinfecting, disinfesting and deratting of vessels and ships used for transportation. This has resulted in epidemiological problems related to vectors and rodents such as cholera, yellow fever and plague

Outbreaks of these quarantinable diseases have become a common feature with unacceptably high mortality and morbidity records in the country. Despite statutory instrument No. 13 of 1994 (Control of air and other Traffic within and Entering Zambia from Certain places Notice) under the Public Health Act cap 295 of the Laws of Zambia, there are no comprehensive port health services put in place at the designated sanitary land, sea and airports. The need for organised port health services, which conform, to the International Health Regulations (1969) cannot therefore be overemphasised.

## **2.25 Chemical Safety**

Chemicals exist as solid, liquids and gases with varying toxicity levels. Chemicals are known to enter the body through the skin, inhalation and through ingestion. Some are carcinogenic. The damage caused by any chemical is directly proportional to the amount of the substance to which one is exposed to, the duration of exposure, age, sex and health status of the person at risk. The exposure to chemicals occur through any of the following:-

- Occupational exposure due to lack of protective clothing
- Living near an industrial facility emitting gases or other pollutants
- During use in food stuffs, consumer products (e.g. detergents, cosmetics, agriculture.
- Discharges from industry to households due to poor town and country planning
- Unintended exposure
- Over use/misuse due to lack of awareness on chemical safety
- Use of certain classes of traditional medicine
- Substance abuse

The above risk factors are prevalent due to inadequate information on chemical safety to both the general and medical personnel on chemical poisoning incidences.

## **2.26 Existing Institutional Arrangements**

Environmental health issues and concerns in Zambia are multi-sectoral institutionalized with different sector agencies of the Government, private organizations, parastatals with distinctive values and perspectives.

The Ministry of Health is a major player in policy formulation, planning and co-ordination in respect of environmental health issues. The Central Board of Health is responsible for implementation of environmental health policies through the collective support of the provincial, district and health center environmental health personnel and their respective Health Management Boards.

The Ministry of Environment and Natural Resources has the responsibility for the environmental protection and natural resources management. The Ministry through the Environmental Council of Zambia addresses the issues of water, air, waste, noise, and ionizing radiation and environmental impact assessments studies as reflected in the Environmental Protection and Pollution Control Act Cap. 204. The Ministry published its National Environmental Action Plan in December 1994. this plan and a proposed environmental policy will provide a framework for collaboration and co-ordination of environmental health activities especially with the Ministry of Health.

The Ministry of Local Government and Housing is mandated to carry out the decentralization process, i.e. handing over powers of management and administration to the local authorities from the central Ministries. The 72 local authorities are presently of varying development status and continue to provide environmental health services of varying coverage and quality.

The Ministry of Energy and Water Development, through the Department of Water Affairs, administers the National Water and Sanitation Act No. 28 of 1997 that establishes the National Water Supply and Sanitation Council (NWASCO). The Council's mandate provides for establishment by local authorities of water supply and sanitation utilities/companies and services handed over by the Department of Water Affairs.

Other stakeholders involved in environmental health interventions in Zambia are the Ministry of Works and Supply; Labour and Social Security (Factories Inspectorate) Community Development and Social Services;



Agriculture Food and Fisheries (Veterinary Services Department); Education; Finance and Economic Development.

A number of inter-ministerial committees also exist; e.g. the Project Co-ordination Unit (CPU), and its secretariat the Reform Support Unit (RSU), the National Water Supply and Sanitation and Hygiene Education (WASHE) Co-ordination and Training Teams. The MOH/CBOH is permanent member of over 30 national standing committees that attend to a wide variety of environmental health issues. The bureaucratic channels of operations of some of the existing co-coordinating inter-ministerial committees have however not improved co-ordination of environmental health.

The Ministry of Health and the Central Board of Health through its national water supply, sanitation and health education committees (N-WASHE) have encouraged similar committees at the district level (D- WASHE) and village level (V- WASHE) so that environmental health issues can be attended to effectively. Such issues would include water supply, sanitation, hygiene education, Participatory Hygiene and Sanitation Transformation (PHAST) and Village Level Operation and Maintenance (VLOM) methodologies that are now being considered in most environmental health programmes.

## **2.27 Existing Legal Framework (Environmental Health Legislation)**

Given the diversity of environmental health concerns and sectoral responsibilities, the national legal framework is shared out along specific ministerial portfolios. The health sector retains the role of promulgating health related laws, regulating environmental conduct in the suppression of disease, promoting health and maintenance of clean environments. The following are environmental laws associated with the ministry of health:

- The National Health Services Act
- The Public Health Act
- The Food and Drugs Act
- The Ionizing Radiation Act
- The Extermination of Mosquitoes Act
- The Pneumoconiosis Act
- The National Food and Nutrition Act
- The Tropical Diseases Research Center Act

Other laws with direct relevance to environmental health include:

- The Local Government Act
- The Town and Country Planning Act
- The Mines and Minerals Act

- The Water Supply and Sanitation Act
- The Environmental Protection and Pollution Control Act
- The Factories Act
- The Water Act
- Prisons Act
- Education Act

Lack of and ineffective enforcement of these laws is a major constraint. Another problem is that a number of these laws are outdated and require considerable review and updating in order to be meaningful to the current situation and challenges.

### **3. VISION**

A safe and conducive physical, working and living environment as well as life styles and practices that promote and sustain good health and improved quality of life for all Zambians.

## **4. POLICY OBJECTIVES AND MEASURES**

### **4.1 Consistency with International and Regional Declarations**

In order to ensure consistency with the international health environmental declarations and agreements the country identifies itself with, environmental health activities and approaches shall be based on and will observe the principles as contained in the following:

- 1) Alma Ata Declaration of the United Nations in 1978 on primary health care.
- 2) The International Drinking Water Supply and Sanitation Decade 1981- 1990;
- 3) Agenda 21 on 'Sustainable Development' in Rio de Janeiro in 1992;
- 4) Africa 2000 initiatives on International Programme for Water Supply and Sanitation - WHO Regional Meeting of Africa Ministers of Health, Brazzaville in 1993; and
- 5) The Pretoria Declaration on Health and Environment in Africa in 1997.

### **4.2 Priority Areas**

Given the broad range and issues concerning environmental health, public interventions and resources will be directed to the following priority areas in order to achieve maximum impact

- 1) Water supply and quality
- 2) Sanitation,
- 3) Food safety and hygiene,
- 4) Occupational health risks
- 5) Port facility services
- 6) Air pollution

### **4.3 Food Safety and Hygiene**

In order to control food borne diseases and to protect the public against health hazards and fraud in the sale of food, the Government shall:

1. Introduce a Food Safety Program to be integrated in the overall national food safety programme
2. Promote the voluntary quality assurance and introduce Hazard Analysis Critical Control point system to ensure that the public obtain foods of better quality and safety.
3. Strengthen institutional structures responsible for enforcement of food legislation for both locally produced and imported food stuffs
4. To strengthen the Central Food and Drugs Control Laboratory and establishment of satellite Laboratories in the provinces
5. Ensure regular epidemiological investigations regarding food borne disease prevalence and incidence and perform research to identify hazardous food preparation practices at food outlets.
6. Strengthen the monitoring of food at different points in the food chain, including raw agricultural products, processed foods, street foods, foods served in food service establishments, and at household level
7. Introduce a consumer food awareness program aimed at raising awareness and educating consumers on matters related to food safety and also to deal with complaints

#### **4.4 Supply of Drinking Water**

In order to ensure that drinking water is safe and not detrimental to good health, the government, through the health sector agencies and institutions shall

- 1) Demand and ensure the water suppliers conform to the WHO – International drinking water quality guidelines.
- 2) Strengthen institutional capacities for monitoring and enforcing drinking water quality.
- 3) Support and facilitate wider access to clean drinking water for the majority of the people in rural areas.

#### **4.5 Water Pollution**

In order to reduce pollution water sources, Government shall:

- Ensure there is regular monitoring of water sources in accordance with the relevant regulations.
- Promote the adoption of cleaner technologies which emphasize reduction of pollutants at source before discharge of effluent into water sources.
- Set standards for quality management of water intended for domestic, industrial, agricultural and recreational use.

#### **4.6 Air Pollution**

To ensure that the public is protected from the effects of air pollution and to eliminate or minimise exposure to hazardous pollutants, Government shall:

1. Review and strengthen the existing legal framework aimed at eliminating or reducing the effects of environmental pollutants through environmental sound strategies.
2. Develop appropriate pollution control technology on the basis of risk assessments and epidemiological research for the introduction of environmentally sound production processes
3. Develop air pollution control capacities in large cities and the Copperbelt, emphasising enforcement programmes and using monitoring networks.

Support research and development programmes for applying prevention and control methods for reducing indoor air pollution

#### **4.7 Noise Pollution**

To ensure that the public is protected from adverse health effects emanating from undue exposure of community noise, the Government shall:

1. Review and develop a legal framework to provide a context for community noise management.
2. To develop fundamental goals of community noise and to promote noise assessment and control as part of environmental health program.
3. Ensure that measures are put in place for noise level monitoring, noise exposure mapping and mitigation and precautionary measures

4. Develop and implement an integrated strategy for the indoor environment.
5. Establish a 'National Plan for a sustainable Noise Indoor Environment' that applies both to new construction as well as to existing buildings.

#### **4.8 Sanitation and Hygiene Education**

In order to improve the levels of environmental health knowledge and appropriate practices in the general population, the Government, through the Ministry of Health and the Central Board of Health shall

- a) Take measures to ensure effective (management) environmental sanitation and promote hygiene education in communities.
- b) Promote information, education and communication initiatives targeting positive behavioural change. **[look at NHSP goals on behavioural change]**
- c) Intergrate environmental health concerns in infrastructure development, management and design to meet various physical needs

#### **4.9 Liquid and Solid Waste Disposal**

In order to ensure proper management of solid and liquid wastes, Government shall:

- a) Establish designated dumping sites for solid wastes
- b) Provide adequate resources to local authorities for collection and disposal of liquid and solid wastes
- c) Develop a regulatory framework to ensure proper management of solid and liquid wastes

#### **4.10 Excreta Disposal**

In an effort to improve national access to appropriate, acceptable and affordable excreta disposal facilities through sustainable approaches that are demand driven, the Government shall:

1. Assume its role as facilitator, motivator and researcher and promote excreta disposal through technical and financial support in terms of information and co-ordination.

2. Create an enabling environment with support mechanisms to facilitate individuals, households and communities to effectively improve their excreta disposal facilities and hygiene practices to prevent the transmission of faecal-oral diseases.
3. Promote schools to give them key roles as bridges to communities, centres of dissemination and collection of information, and potential demonstration centres for new ideas.
4. Develop guidelines to clarify the institutional framework for the promotion of environmental sanitation in general and excreta disposal in particular.
5. Develop a mechanism for local authorities and other enforcement agents of Government to concentrate on enforcing the critical pieces of legislation relating to drainage and latrines.
6. Ensure that Government institutions should include participatory and community development techniques in the training of workers as a capacity building strategy.
7. Ensure that technology options in the field of excreta disposal are to be technically, culturally and environmentally appropriate and acceptable.

#### **4.11 Human Habitat and Safe Housing**

In order to ensure the availability of safe, healthy and adequate housing Government shall:-

- (a) Ensure that all housing stock meets the set minimum development and health standards by allocating resources for enforcing relevant housing legislation by local authorities.
- (b) Provide resources to all local authorities for undertaking forward planning and effective implementation of developments through stringent development control.
- (c) Promote an enabling regulatory framework for development of safe housing.
- (d) Promote appraisal of hygiene in sub-standard settlements for necessary improvements rehabilitation.
- (e) Promote housing improvements and considerations for low income housing assistance.

#### **4.12 Public Sanitary Inspections and Abatement of Statutory Nuisance in Premises**

In an effort to ensure the maintenance of ambient environmental health standard in the country, which will lead to quick identification of nuisances, the Government, through the Ministry of Health shall:-

- (a) Ensure that the regulatory authorities are given the necessary requisites to effectively carry out their mandate of suppressing diseases and promoting good health.
- (b) Review and strengthen some pieces of the public health legislation dealing with the abatement of statutory nuisances arising from illegal dwelling and food premises.
- (c) Encourage and promote Inter-Ministerial collaboration on all policy matters relating to and affecting environmental health.
- (d) Decentralise the regulatory and enforcement systems to the district and sub district level

#### **4.13 Disposal of the Dead**

To ensure that the burial and cremation of the dead are conducted in a humane, organised and efficient manner, the Government shall:

1. Review and strengthen the legislation to regulate the conduct and management of cemeteries or crematorium.
2. Create a mechanism of approving newly appointed cemeteries and crematoria by the local authority that take into account environmental health concerns
3. Ensure that standards are prescribed for cremating human remains in accordance with public health conditions
4. Ensure that land is made available through long term planning by the relevant local authority for the siting of cemeteries and crematoria

#### **4.14 Vector and Rodent Control**

In order to reduce vector and rodent transmitted diseases to a level where they cease to become a public health problem, the Government, through the relevant institutions:-



- (a) Promote and research into the integrated physical, chemical and biological vector and rodent control methods.
- (b) In close cooperation with the research institutions, monitor and recommend new interventions as regard reported insecticide/rodenticide resistance.
- (c) Ensure that most of the control measures employed at various levels are environmentally friendly to promote and preserve living creatures, fauna and flora.
- (d) Review and reinforce the national public health laws to enact legislation providing the legal framework for the development of surveillance and control activities against vectors and rodents.
- (e) Provide resources for vector and rodent control to local authorities

#### **4.15 Occupational and Industrial Health**

In an effort to mitigate known adverse effects of working environments and ensure that they are free from any hazards to health, the Government through the Ministry of Health and other stakeholders shall:-

- (a) Shall formulate the preventive occupational health and care policy and strategic plan
- (b) Ensure regulatory and monitoring authorities are established to safeguard workers health
- (c) Ensure that legislation is in place to regulate hygiene and environmental working conditions.
- (d) Formation of national occupational health safety and care Advisory Council (OHSAC) to advise and foster intersectoral collaboration.
- (e) Shall promote worker education on matters of occupational safety to prevent industrial accidents.

#### **4.16 Recreational Facilities**

In a bid to ensure the promotion of tenets of good health which impinge on social, physical and mental well being, the Government through the relevant institutions shall:-

- a) Promote the establishment of multi-faceted recreation facilities

always meeting physical needs of beneficiaries.

- b) Enact legislation that facilitates private participation in the provision and management of both public and private recreational facilities.
- c) Promote recreational facilities for all different age groups bearing in mind gender consideration.

#### **4.17 Community Participation**

In order to ensure active participation of local communities in environmental health interventions, the government, through the various ministries and partner NGOs, shall:-

- (a) Legalise community-based institutions like NHCs Adult literacy committees and water and sanitation committee in order to reduce duplication of functions and engender power play.
- (b) Promote and encourage community participation as a basic right of people, and a prerequisite for service sustainability and a catalyst for community self-reliance.
- (c) Empower communities to self manage community based environmental health interventions, and their involvement from the project conceptualisation stage to monitoring and evaluation.
- (d) Strengthen and support Community Based Organisations and the local leadership, and provide resources for financing community initiated projects
- (e) Encourage and demand that the urban population pay for the provision of services (water supplies, wastewater treatment and disposal, refuse collection),and facilitate the provision of subsidised (utility) services to the urban poor where possible and necessary.
- (f) Support and provide incentives for users/consumers' initiatives to invest in the improvement of their environmental health facilities.
- (g) Encourage users/consumers in protection of environmental health infrastructure and services from vandalism and natural damage.
- (h) Encourage and support associations responsible for representing and defending the interest of users/consumers of environmental health facilities.

#### **4.18 Mobilisation of Financial Resources {See financing of policy implementation}**

#### **4.19 Human Resources**

In order to strengthen the human resource capacity for effective environmental health interventions, the government, through the Ministry of Health, Central Board of Health and co-operating partners, shall

- (a) Take primary responsibility of training environmental health staff, support the upgrading of the various training programmes to meet the national needs for environmental health services.
- (b) Encourage and support both public and private employers to provide refresher, on the job, continuing and distant education to environmental health personnel in order to ensure the maintenance of their basic skills and introduce them to new approaches in the discipline.
- (c) Ensure that qualified, authorised officers (environmental health officers and environmental health technicians/technologists) supervise environmental health activities.
- (d) Ensure that local authorities employ qualified environmental health staff to provide efficient services.
- (e) Allocate adequate resources to facilitate the provision of essential requisites for implementing environmental health

#### **4.20 Infrastructure**

#### **4.21 Appropriate Technologies**

#### **4.22 Gender and Environment**

In order to resolve problems of community participation in environmental health activities, Government will:-

- (a) Legalize community-based institutions involved in environmental health activities in order to reduce duplication of functions and engender power play.
- (b) Promote and encourage community participation as a basic right of people, and a prerequisite for service sustainability and a catalyst for community self-reliance.

- (c) Ensure community involvement from the conceptualisation stage of environmental health activities to monitoring and evaluation.

#### **4.23 Environmental health in Schools, Health Facilities, Public Places and Households**

In order to ensure compliance to environmental health standards in schools, health facilities and public premises, government shall through the Ministry of Health:

- a) Promote interdepartmental collaboration through co-ordinating committees at levels of Government structures
- b) Make provisions for sound sanitary facilities in public institutions
- c) Develop and harmonise legislation dealing with environmental health issues in schools and public places

#### **4.24 Data on Environmental Health**

In order to ensure that data on environmental Health is consistently collected and collated Government shall:

- a) Promote/enhance collection and compilation of environmental health data at various levels as it pertains to different special groups, (e.g. elderly, disabled etc).
- b) Establishment of data banks for environmental health at various levels of health delivery system

#### **4.25 Chemical Safety**

In order to ensure the minimisation of damage caused by chemicals on individuals and the environment, Government shall:

- (a) Ensure that all chemical substances for use in the country are registered by appropriate authorities
- (a) Develop and promote chemical safety education programs through the relevant institutions
- (b) Develop and enforce chemical safety standards, and provide sites for safe disposal of toxic substances

#### **4.26 Port Health Services**

In order to ensure maximum security against the international spread of quarantinable and other emerging diseases, which assume epidemic proportions, the Government, through the Ministry of Health, shall:

- (a) Organise and manage an efficient port health service for air, land and water as enshrined in the International Health Regulations at various port entry points.
- (b) Review the current national legal framework on port health in a bid to control diseases likely to be transmitted through traffic entering Zambia from certain places.
- (c) Provide resources to effectively manage frontiers with personnel for the management of port health services.

#### **5. INSTITUTIONAL ARRANGEMENTS**

In order to formulate policies/strategies, network, collaborate and coordinate the various environmental health concerns in Zambia, which are multi-sectoral in nature, the Government, through the Ministry of Health shall:-

- 5.1 Formulate and articulate environmental health strategic plans with the stakeholders consultations and implementation.
- 5.2 Strengthen the organs to implement Environmental Health Programmes at all levels of health service delivery system especially at district and sub-district level.
- 5.3 Promote and support the intersectoral/interministerial linkage with other stakeholders and harmonise the fragmented interventions in Environmental Health.
- 5.4 Strengthen and support the capacity of Local Government Public/Health/Environmental Health Departments to carry out the promote and preventive health functions as enshrined in the Public Health act and other status of the Land.
- 5.5 Support the community/subdistrict/district based WASHE (Water Supply Sanitation and Hygiene Education) institutional arrangements for the promotion of Environmental Health.

## **6. LEGAL FRAMEWORK**

In order to ensure that the visions and principles of health reforms are in line with Government aspirations and role of promulgate health related laws, regulation environmental conduct in suppression of diseases, promoting health and maintenance of clean environments, the Government through the Ministry of Health shall:-

To address the problem of environmental Government shall:

- (a) Amend the Public Health Act, the Food and Drugs Act, the Ionising Radiation Act, Extermination of Mosquitoes Act, Pneumoconiosis Act and other pieces of legislation related to public health.
  - (b) Harmonise all pieces of legislation with direct relevance to environmental health to ensure a well co-ordinated multi-sectorial approach to enforcement of environmental health laws.
  - (c) New laws will be enacted to support the following:
    - i. pollution control of surface and ground water,
    - ii. controlled disposal of solid and liquid waste,
    - iii. human habitat and safe housing,
    - iv. rodent and vector control,
    - v. chemical safety,
    - vi. industrial hygiene; and
    - vii. port health.
- 6.1 Periodically review and update where necessary. The Public Health Act and other health related Laws to safeguard the health of Zambians.
- 6.2 Support the enforcement of various health status through regular capacity building progress of enforcement personnel.
- 6.3 Enact new legislation as demanded by environmental health circumstances in order to be meaningful to the current situation and challenges.
- 6.4 Promote constant interventions with other stakeholders for effective dissemination of health related legal provisions.

## **7. IMPLEMENTATION FRAMEWORK**

The implementation of this policy will be facilitated by:

- (a) Annual action plans developed and implemented by the Districts Health Boards.
- (b) The Basic Health Care Package recommendations.
- (c) The environmental health relevant aspects of the National Health Strategic Plans.
- (d) Health relevant Interventions of the National Environmental Sanitation Action Plan for Rural and Peri-Urban Areas.

## **8. FINANCING THE POLICY IMPLEMENTATION**

To ensure that the policy is effectively implemented in a sustainable manner, there will be need for resources to be earmarked for environmental health activities. In this regard, the Government shall make annual budgetary allocations in the annual budget to fund environmental health activities related to the policy. Government will also raise resources from other sources such as:-

- (a) Co-operating Partners
- (b) Contributions through community participation
- (c) The private sector
- (d) Earmarked tax on industries that emit environmental hazards into the environment

## **9. MONITORING AND EVALUATION**

There shall be a program to monitor and evaluate the implementation of the National Environmental Health Policy which shall take into account the WHO indicators for monitoring the impact of environmental health interventions.