Republic of Namibia

Ministry of Health and Social Services

National Environmental Health Policy
Ministry of Health and Social Services

National Environmental Health Policy

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Subdivision: Public Hygiene

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MARCH 2002
Foreword

The basic human need for a safe living and working environment, where there is clean air and water, adequate sanitation and waste management, adequate food and shelter, is the same for all of us.

According to the World Health Organisation, it is estimated that poor environmental living and working conditions are directly responsible for about 25% of all preventable illness, while 66% of all preventable ill-health due to environmental conditions occurs among children.

Some of the most common causes of illness in Namibia are preventable through improvements in people's living and working environment. Malaria, Diarrhoea, Acute Respiratory Infections (ARI), accidents at work and exposure to harmful chemicals are just some examples. Furthermore, it is the most vulnerable in our society - the poor, women and children, those suffering from HIV/AIDS, who bear the greatest burden of these environment related diseases.

The Ministry of Health and Social Services together with its partners, and as part of its Primary Health Care strategy, provides an active Environmental Health Service which is focused on preventing and reducing the incidence of environment related diseases. Municipalities and Town Councils also provide a valuable service in this regard.

However, the existing legislative framework, evolved during the pre-independence era, is fragmented and often not relevant to the majority of Namibians’ needs. Fragmentation and outdated legislation is reflected in weak inter-sectoral and community co-operation, two of the most effective means of achieving improvements in environmental living and working conditions.

There will be increasing pressures on the environment as Namibia’s population grows and changes, urbanisation accelerates, economic development proceeds, and with increased pressure on land and water resources. These driving forces will result in the development of new environmental health threats, and changes in the epidemiology of the existing ones.

This policy therefore re-affirms my Ministry’s continuing commitment to improve Namibians’ working and living conditions and to equip the Environmental Health Services to be able to deal with new and evolving hazards and risks, as well as increasing their capacity to tackle the existing “traditional” ones.

The Hon. Dr. L. Amathila
MINISTER
Preface

At the 49th Session of the WHO Regional Committee for Africa, where discussions on promoting environmental health in countries of the Africa Region were held, one of the main recommendations to governments was to develop Environmental Health Policies supported by appropriate legislation.

The Ministry of Health and Social Services, supported by the WHO began development of this policy in September 1999. This document is the result of a process involving a number of consultations with stakeholders throughout the country, culminating in a national workshop in July 2000.

In its objectives, the policy sets out the way forward for the Environmental Health Services in Namibia for short and medium terms. The following are some of the key objective areas which should enable the service to fulfill its potential, and that of the Primary Health Care System, in order to have a significant impact on the health of Namibians:

- Re-orientation into an integrated and holistic service;
- An enforceable and equitable legal framework to protect the living and working environments of all Namibians;
- Increased human resource capacity to deal with both “traditional” and “modern” hazards through training;
- Improved inter-sectoral collaboration and community participation.

As we are well aware, environmental health encompasses those physical, biological, social and psychosocial factors in the environment, which determine human health. It therefore follows that the activities, policies and strategies of all sectors have the potential to have an impact on the environment and health of Namibians. It is then my hope that this document will be widely distributed and read not only by health workers, but also by others who may then appreciate their potential to improve people’s health and environment.

I take this opportunity to express my sincere thanks to all the Environmental Health Policy Task Force members for their valuable contributions towards the development of this policy. My thanks also go to the World Health Organisation for their technical and financial support throughout the development process of this document.

Lastly, I wish to thank Mel Futter for editing, design, DTP and cover photography and Hans Andersen for additional photos.

Dr. K. Shangula
PERMANENT SECRETARY

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<td>Acute Respiratory Infections</td>
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<td>CHW</td>
<td>Community Health Worker</td>
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<td>CORPS</td>
<td>Communities Own Resource Persons</td>
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<td>DCC</td>
<td>District Co-ordinating Committee</td>
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<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>EH</td>
<td>Environmental Health</td>
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<td>EHA</td>
<td>Environmental Health Assistant</td>
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<td>EHIA</td>
<td>Environmental Health Impact Assessment</td>
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<td>EHMS</td>
<td>Environmental Health Management Systems</td>
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<td>Environmental Health Officer</td>
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<td>Food and Agriculture Organisation</td>
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<td>Government of the Republic of Namibia</td>
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<td>HRD</td>
<td>Human Resource Development</td>
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<td>IEC</td>
<td>Information, Education, Communication</td>
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<td>International Labour Organisation</td>
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<td>MOHSS</td>
<td>Ministry of Health and Social Services</td>
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<td>Ministry of Finance</td>
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<td>Ministry of Fisheries and Marine Resources</td>
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<td>Ministry of Regional, Local Government and Housing</td>
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<td>MTI</td>
<td>Ministry of Trade and Industry</td>
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<td>NACEH</td>
<td>National Advisory Committee on Environmental Health (Proposed)</td>
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<td>NFSL</td>
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<td>RDCCs</td>
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<td>SABS</td>
<td>South African Bureau of Standards</td>
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<td>UNED</td>
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1.0 Introduction

Environmental Health comprises those aspects of human health, including quality of life, that are determined by physical, biological, social and psychosocial factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that have the potential to adversely affect the health of present and future generations (WHO, 1997).

The 1992 United Nations Conference on Environment and Development – the “Earth Summit” - made it clear that our health prospects depend on proper and sustainable development of our natural and social environment. It was emphasised that health cannot be separated from a myriad of environmental elements as diverse as air and freshwater, poverty and urban concentration, chemicals and disease vectors, over-consumption and underdevelopment, technology and trade.

Hence, the Principle 1 of the “Rio Declaration on Environment and Development” is clear:

“Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature” (UNED, 1991).

In 1998, the Ministry of Health and Social Services produced a new and up-dated policy framework which incorporated preventive, promotional and disease control strategies for achieving health for all Namibians. One of the specific objectives of the policy is:

“To maintain and support the health and social well-being of the population through preventive, promotive and disease control efforts in collaboration with relevant partners, in particular the communities concerned” (GRN, 1998).

Preventive intervention services, of which Environmental Health Services is one, are key components for achieving this objective of the Ministry policy framework. The policy also set out seven guiding principles for health and social services, that are: Equity; Availability and Accessibility; Affordability; Community Involvement; Sustainability; Intersectoral Collaboration and Quality of Care.

In September 1998, MOHSS officials attended the 48th Session of the Regional Committee for Africa and held technical discussions on “Promoting Environmental Health in countries of the WHO Africa Region - the role of Ministries of Health”. One of the main recommendations to governments made by the technical working group was to develop Environmental Health Policies supported by appropriate legislation.

The Ministry of Health and Social Services and the local authorities are the principal providers of Environmental Health services in Namibia. The MOHSS Environmental Health Service is part of the holistic Primary Health Care system adopted after Independence, which is intended to be decentralised to the regions under the government’s decentralisation policy. This new organisational and service delivery orientation with a focus on preventive health care for all Namibians, together with emerging environmental health hazards, has and will continue to pose new challenges and require the setting of new national and regional priorities.

The development and implementation of an environmental health policy is intended to
provide a framework and guidelines to prevent and control environmental health hazards and risks that may adversely affect health and quality of life for all the people in Namibia.

This policy was developed in two stages, beginning in September 1999, co-ordinated by a MOHSS Task Force and assisted by a WHO short-term consultant. It was preceded by a study tour to Botswana to examine the development of their National Environmental Health Policy.

The first stage involved meetings for information gathering and consultations with various stakeholders in all the Regions. A first draft was proposed by the consultant in consultation with the Task Force, and was distributed widely for comment.

The second stage involved a National Workshop held in July 2000, where participants from MOHSS, Local Authorities, other Ministries and NGOs further scrutinised the draft. Recommendations were made to form the Final Draft. Additional alterations have been applied during passage of the draft through the MOHSS policy approval system.

2.0 Situation Analysis

2.1 Background and conceptual framework of analysis
The quality of people’s environment is known to directly or indirectly determine a population’s health status and well-being. Poor quality of life, overcrowded dwellings, unsafe drinking water, inadequate sanitation, poor waste management practices, exposure to hazardous substances in the workplace, radiation hazards and contaminated foodstuffs are just some of the many different environmental health problems facing Namibia.

The environmental threats faced by Namibia are numerous and can be divided into “traditional hazards” associated with under-development, and “modern hazards” associated with unsustainable development. Many of the environmental hazards faced today are the legacies of pre-independence neglect of primary health care and basic environmental health needs such as rural sanitation and hygiene promotion.

2.1.1 Traditional Hazards
Traditional hazards related to poverty and under-development in Namibia include insufficient and safe domestic water supply, food contamination, inadequate basic sanitation and waste disposal, indoor air pollution, natural disasters and vector-borne diseases.

According to the MOHSS Health Information System (HIS) diarrhoea in young children continues to rank as one of the top five causes of morbidity in Namibia. Other major causes of childhood illness in Namibia, which can be environmentally related include Malaria, Acute Respiratory Infections (ARI) associated with indoor air pollution, Tuberculosis and Schistosomiasis.
Whilst sanitation coverage (% population having access to adequate sanitation by the year 2000) in urban areas is around 85%, the coverage in rural areas is an unacceptably low 18.9%, one of the lowest in Africa. Access to safe drinking water was reported to be 70% in the same period for rural populations as compared with 98.1% in urban areas (GRN, 2000).

Meanwhile, water and sanitation related illnesses (diarrhoea in particular) continue to be a major cause of illness and death. This has been partly attributed to lack of resources and to the absence of effective sanitation and hygiene promotion programme focussed on stimulating household demand for sanitation, and addressing the link between sanitation, hygiene and health improvements. In addition, while access to safe drinking water has improved, efforts to provide awareness about water point environmental hygiene, and hygienic storage and use of water between collection at the tap and consumption at home, has been limited.

Although much effort has gone into tackling malaria and other vector-borne diseases, malaria remains a major health problem in the Northern Regions. There is some evidence that drug resistance is on the increase, and spraying has been hampered by a lack of resources (especially transport). Furthermore, effective community mobilisation for malaria prevention work has also been weak, and environmental factors are receiving less attention.

2.1.2 Modern Hazards
Modern hazards are related to development that lacks health-and-environment safeguards and to unsustainable consumption of natural resources, such as:

- Agricultural practices;
- Solid and hazardous waste accumulation;
- Chemical and radiation hazards;
- Emerging and re-emerging infectious disease hazards;
- Deforestation and land degradation;
- Climate change.

Additionally, injury and ill-health related to unsafe work places are also a cause for concern.

As Namibia moves into the 21st Century, it continues to face the challenge of balancing socio-economic development, with its positive benefits of improved wealth and health status and with the negative health effects that unfettered development and use of resources can have.

2.1.2.1 Health and Environment Planning
New development has the potential to introduce unforeseen health hazards, such as chemical and industrial wastes discharged to air, water and land, or provide breeding areas for insect vectors of disease. As the rate of population and economic growth in urban areas accelerates in Namibia, there are increasing pressures on environmental safety and quality, necessitating the need for new strategies to mitigate those negative effects of development. New developments, whatever the scale, can have unforeseen negative environmental and health effects if their impacts are not first considered and mitigating measures implemented.
2.1.2.2 Radiation protection
Potential sources of radiation from peaceful uses of nuclear energy are from mining activities and medical services. A National Radiation policy was approved in 1994 and a regulatory framework and new law are being drafted. A programme of baseline data collection is also in the process.

2.1.2.3 Waste Management
Solid wastes in the urban environment manifest itself in the form of litter and indiscriminate dumping. Local authorities in urban areas are required to undertake solid waste collection and disposal on a systematic and cost-recovery basis. In many cases, the disposal of hazardous and medical waste at the general dumping sites continues. While the effectiveness and safety of solid waste disposal systems varies depending on the local authority and region, in many cases, uncontrolled dumping takes place. Hence, improvements are required in the planning, selection and management of waste disposal systems. A number of newly-established towns are experiencing problems with solid waste collection, particularly in informal settlements. There is currently no integrated planning and control system to deal with the environmental and health hazards and impacts from waste collection and disposal.

2.1.2.4 Air pollution
As there are few industrial plants in Namibia, it is considered that outdoor air pollution is not a serious threat. However, local emissions have been experienced from mining and other dust generating activities, while in Windhoek, the increasing amount of traffic is of concern. Furthermore, there is no data available on pollutant levels on which to base a rational judgement. Indoor pollution from household fuels, particularly in rural areas, is potentially a serious health risk. Evidence from other developing countries suggests that indoor air pollution from burning fuels contributes substantially to acute respiratory infections, which is one of the top five causes of illness in Namibia. There has not been any research carried out in Namibia to determine whether there is a link.

2.1.2.5 Food Quality Assurance and Control
Businesses continue to be regularly inspected by Ministry of Health and Social Services and Local Authorities Environmental Health staff, but outdated legislation often hampers improvements. The focus of the programme is traditional inspection of food establishments and removal of unfit food from the food chain. Of some concern is the inadequate level of control over importation of foodstuffs and infectious disease at some border posts.

2.1.2.6 Occupational Health Safety
This service is shared among the Ministry of Health and Social Services, Ministry of Labour, and Ministry of Mines and Energy. The MOHSS, by presidential proclamation are responsible for enforcement of the Labour Act Regulations relating to Hazardous Substances. The service is currently developing a framework for enforcement, and is undertaking a training programme for personnel.
2.2 General Management of Environmental Health Services

2.2.1 Legislation, Norms and Standards
Legislation, regulations and standards exist but most originate from the pre-independence era, are out-dated, prescriptive, often irrelevant, and difficult to enforce. The exception is the Labour Act of 1992 and Regulations made under proclamation, which concern occupational health and safety.

Administration is fragmented between different government sectors e.g. Mines and Energy, Ministry of Labour.

2.2.2 Inter-sectoral Co-ordination and Co-operation
Inter-sectoral co-operation and co-ordination between the Ministry of Health and Social Services and other government and non-government agencies is currently weak and needs to be strengthened at different levels.

The assessment and mitigation of the Environmental Health impacts of new developments, policies or programmes in other sectors are carried out on an ad hoc basis, and integration of environmental health considerations as a principal is not formally recognised.

2.2.3 Community Participation
Community involvement and participation in the planning and implementation of environmental health projects and programmes is currently weak.

The capacities of communities to improve and manage their environmental living conditions and health status is improving but requires strengthening.

2.2.4 Training
Training of Environmental Health Officers can only be undertaken at institutions outside Namibia. Environmental Health Assistants are trained at the National Health Training Centre in Windhoek, Namibia.

There is no planned in-service training provided for Environmental Health personnel.

There is no co-ordinated training programme in environmental health offered to personnel in other sectors.

2.2.5 Programme Policies, Strategies and Guidelines
Several environmental health programmes are without policies, strategies and appropriate guidelines.

2.2.6 Technical Services
Available laboratory and analytical support services provided to MOHSS and some Local Authorities require strengthening.

2.2.7 Environmental Health Data Collection and Analysis
There is a shortage of good quality data on environmental health. Capacity for the systematic collection, analysis and use of data and information on environmental
health hazards, risks and impacts is weak, and is required for rational planning, implementation, monitoring and evaluation at all levels.

2.2.8 Environmental Health Impact Assessment
There is no formal system for the assessment of environmental health hazards, risks and impacts of new and existing projects and programmes.

2.2.9 Emergency Preparedness
The capacity and readiness of environmental health services to respond to emergencies or disasters requires to be strengthened. Meanwhile, the MOHSS has established a National Emergency Management Committee to co-ordinate and respond to emergencies.

2.3 Service Levels

2.3.1 Environmental Health Functions of the Ministry of Health and Social Services
Environmental Health Services are currently provided by each MOHSS Region and District PHC and by the Local Authorities. Environmental Health Officers and Environmental Health Assistants are the principal personnel engaged in service delivery, together with support staff and in co-ordination with other PHC staff.

The Public and Environmental Health Services Division of the Directorate of PHC at National Level is organised into the following sub divisions and programmes:

- **Public Hygiene** (Water and sanitation (includes waste management) programme, Food hygiene, safety and quality assurance programme, Port health, Prevention of environmental pollution)
- **Vector-borne Disease Control Programme** (Vector control, Disease management)
- **Occupational Health Services** (Occupational hygiene, includes Chemical Safety, Occupational Medicine)
- **Radiation Protection** (Licensing and inspection, Personal dosimetry and environmental monitoring)

The Division is also supported by the **Division of Disease Control** who co-ordinates National disease surveillance and response, disease control and the National Health Information System.

**The School and Adolescent Health Programme, IEC, IMCI, Nutrition and Community Based Health Programme** all have inter-linking roles with environmental health programmes. The services they provide overlap and complement those provided by environmental services at all levels.

2.3.2 Environmental Health Functions of other Sectors
Other organisations with functions related to environmental health include:
Ministry of Agriculture, Water and Rural Development (MAWRD) is responsible for:

(a) managing Namibia’s water resources, provision of water for domestic use in rural areas, and also exercises certain aspects of water quality and water pollution monitoring (Department of Water Affairs)

(b) Codex Alimentarius Contact Point, food standards, import and export controls over primary agricultural, fish and animal products, monitoring of pesticide residues and veterinary medicines in meat through the Central Veterinary Laboratory.

Ministry of Environment and Tourism (MET) has the mandate for protection of the environment and management of natural resources (other than water). It also co-ordinates administration of the National Policy on Environmental Assessment (EA).

Ministry of Regional and Local Government and Housing (MRLGH) is responsible for Municipalities and Town Councils who carry out environmental health functions in designated urban areas.

Ministry of Mines and Energy (MME) enforces legislation and standards related to environmental health at mining operations.

Ministry of Trade and Industry (MTI) carries out its own inspections and issues export certificates for food processing and manufacturing establishments who wish to be approved for European Union (EU) export. It also administers an agreement between the Namibian Government and the South African Bureau of Standards (SABS) to monitor establishments approved by the EU to export food products (usually meat or fish products).

Ministry of Labour (ML) enforces most legislation regarding health and safety at work, except those relating to hazardous substances and medical examinations, which are carried out by the MOHSS.

Ministry of Finance Directorate of Customs and Exercise liaise with the MOHSS Health Inspectors over imports of foodstuffs at ports of entry.

Ministry of Home Affairs, through its National Forensic Science Laboratory (NFSL), provides certain analytical services.

Namibia Institute of Pathology analysis of food and water samples on behalf of the MOHSS.

Namibia Water Corporation Limited develops and operates sources of water and transfer schemes, bulk suppliers of water to rural water supply schemes, Local Authorities and the private sector; monitoring of safety and quality, sampling and bacteriological analysis of drinking water samples on behalf of the MOHSS.
2.4 **Policy Recommendations**

In order to achieve more clarity and unity of purpose that will further enhance the planning, implementation, monitoring and evaluation of Environmental Health in Namibia, this policy will address the following areas:

1. Review and development of appropriate and enforceable environmental health legislation and standards.
2. Strengthening of human resource capacity in environmental health service delivery.
3. Development of Environmental Health Tools (EHT) for assessment and impact analysis.
4. Strengthening inter-sectoral collaboration and co-ordination of environmental health activities.
5. Promotion of community participation and involvement.
6. Creation of Public Awareness with regards to environmental health hazards and risks.
7. Strengthening of Port Health and Trans-Boundary services.

### 3.0 The Policy Framework

#### 3.1 Policy Goals

The Ministry of Health and Social Services is committed to achieving environmental health for all people in Namibia based on the principles of Primary Health Care (PHC) and shall aim to:

1. Facilitate the improvement of the living and working environments of all Namibians, through pro-active preventive means, health education and promotion and control of environmental health hazards and risks that could result in ill-health; and

2. Ensure provision of a pro-active and accessible integrated and co-ordinated environmental health services at national, regional, district and local levels including delegated or shared responsibilities with relevant government agencies, NGOs and the private sector.

#### 3.2 Policy Principles

The goals, objectives and implementing strategies of this policy shall mainly be guided by the principles as outlined in the Ministry of Health and Social Services’ Policy Framework.
3.2.1 Equity
All Namibians shall have equitable access to basic environmental health care services provided by the Ministry of Health and Social Services. Particular attention shall be paid to resource distribution patterns in Namibia to identify and accelerate the correction of any disparities.

3.2.2 Availability and accessibility
Environmental health services shall be progressively extended to reach all communities in Namibia. Special attention shall be given to the disadvantaged regions and underserved communities with special emphasis paid to vulnerable groups in our country.

3.2.3 Affordability
Environmental Health Services shall be provided at a cost which shall make provision for the wide ranging abilities of Namibians to pay.

3.2.4 Community Participation
The active participation and involvement of communities during the initiation, planning, setting of priorities and implementation of environmental health services will be essential in order to promote sustainability of environmental health projects and programmes.

3.2.5 Sustainability
To have a lasting impact on health and well being of our communities, any new environmental health programme will be subjected to sustainability assessment before implementation.

3.2.6 Inter sectoral collaboration
Other government and non-government sectors will be consulted and involved in the planning, implementation, monitoring and evaluation of environmental health programmes at all levels.

3.3 Policy Objectives

3.3.1 To review and formulate legislation and standards, relating to environmental health services

3.3.2 To establish a pro-active integrated environmental health services at national, regional, district and local levels with delegated or shared responsibilities with relevant government agencies, NGOs and the private sector.

3.3.3 To develop a national information data-base which shall provide for mechanisms to collect, analyse and compile essential data for use in planning and implementation of environmental health interventions.
3.3.1 To evaluate and strengthen the capacities and technical competencies of personnel involved at every level in implementing the environmental health interventions.

3.3.2 To empower and motivate communities to improve their living environment, working conditions and health status.

3.3.3 To promote the use of environmental health impact assessment and audit at all levels and sectors, as tools to identify and prioritise environmental hazards to health.

3.3.4 To strengthen the existing laboratory and technical support services.

3.3.5 To ensure the provision of adequate financial, material, and human and technical support for purposes of planning and executing uniformly environmental health services for the benefit of all the people.

3.3.6 To strengthen regional co-operation on inter-country movement with regard to, inspection and control of foods, infectious disease and hazardous substances at all the designated entry post/ports.

3.3.10 To promote accountability among organisations, professional groups, communities and individuals to accept their health responsibilities towards others and to be publicly accountable for their impact on health and environment.

3.4 Policy Strategies

3.4.1 Sector Programme Strategy Development
To ensure that the objectives of the national environmental health policy are achieved, strategies and guidelines to implement each of the environmental health programmes shall be formulated and developed in consultation with stakeholders and with community involvement and participation.

3.4.2 Information and Data Management
3.4.2.1 A National Environmental Health Profile and Action Plan shall be developed, which shall include a comprehensive profile of environmental health in Namibia as to identify and prioritise environmental health problems and interventions.

3.4.2.2 An environmental health information and data-base management systems shall be established, linked to the National Health Information System, to assist with the determination of priority problems, making of risk management decisions at national, regional and local levels, and to inform programme planning.

3.4.2.3 Regulatory Authority Information Systems (RAIS) for environmental health shall be developed and decentralised to the Regions, and linked to existing databases.
3.4.3 Institutional Capacity and Human Resource Development

3.4.3.1 A training programme in environmental health aimed at strengthening the capacity and technical competencies of Environmental Health Officers shall be designed at diploma and degree levels, and offered locally in collaboration with local institutions of tertiary education. The existing Certificate in Environmental Health, currently offered to Environmental Health Assistants through the National Health Training Centre, shall be evaluated and reviewed with regard to future environmental health human resource needs in Namibia. An upgrading training programme to allow EHAs to qualify as EHOs shall be developed.

3.4.3.2 Environmental Health Officers, Environmental Health Assistants and support staff will require to undergo specialized in-service training and for some staff, external fellowship training in environmental health, to assist them in building up and improving technical and managerial competencies, shall be provided.

3.4.3.3 The capacity and readiness of environmental health services to respond to emergencies at National and Regional levels shall be reviewed and strengthened.

3.4.4 To Promote Community Involvement and Participation

3.4.4.1 Multi-sectoral and community based management committees, where they do not exist, shall be established and shall be encouraged to participate in the selection, planning, co-ordination, implementation, monitoring and evaluation of environmental health programmes and projects. Clear guidance shall be given to these committees on their roles and responsibilities. Where available, existing Communities Own Resource Persons (CORPS) and Community Health Workers (CHW) shall be provided with basic training by EH operational personnel.

3.4.4.2 Public awareness of environmental health hazards and risks should be raised using mass media and IEC at national and local level.

3.4.4.3 Environmental Health Impact Assessment (EHIA), Management and Audit. EHIA and audit are essential tools for identifying and evaluating environmental health hazards and risks to health of new development projects, existing facilities and processes. Guidelines on how to carry out this environmental health impact assessment and audit shall be developed.

3.4.5 Technical Support Services

A network of laboratories providing prompt technical support to environmental health services for the monitoring and analysis of food, water, milk, entomological, biological, chemical and environmental samples shall be identified; focussing on the existing government laboratories, including the National Forensic Science Laboratory. The participating laboratories shall operate appropriate quality control systems.

3.4.6 Inter-sectoral Collaboration and Co-ordination

3.4.6.1 A multi-sectoral committee, with clear terms of reference, to advise and co-ordinate between sectors on environmental health functions and in particular the incorporation of environmental health considerations into policies and programmes, shall be established.
3.4.6.2 At Region and District level, inter sectoral collaboration and co-ordination shall be facilitated through the respective development committees.

3.4.6.3 Linkages between environmental health and other PHC programmes at all levels shall be strengthened.

3.4.7 Financial and Other Resources
3.4.7.1 High priority shall be given to the allocation of necessary financial and material resources, based on identified priorities, for the effective and efficient implementation of environmental health programmes at all levels.

3.4.7.2 Strategic plans linked to the budget shall be developed at all levels of operation.

3.4.8 International and Regional Co-operation
3.4.8.1 International and Regional instruments and protocols on particular environmental health issues may be adopted after thorough assessment and review of the practical implications on the national legislation, regulations and practices of environmental health.

3.4.8.2 Active participation will take place in international and regional processes (e.g. SADC and WTO) for the development and implementation of international and regional environmental health related protocols and inter-country trade agreements.

3.4.9 Outsourcing of Certain Environmental Health Services
The Ministry of Health and Social Services may identify Environmental Health Services which could be outsourced or decentralised in terms of the relevant legislative provisions, or review existing legislation to provide for outsourcing or decentralisation of services, where existing services are not provided or inadequate.

3.4.10 Monitoring, Reporting and Evaluation
3.4.10.1 Environmental Health indicators shall be used to determine, measure and assess whether the environmental health services are effective and adequately address the goals and objectives of the policy.

3.4.10.2 The carrying out of simple, practical and applied research surveys, as tools for identifying and evaluating environmental health hazards and assessing risks to health shall be encouraged.

3.4.10.3 The environmental health indicators and data collected need to be continuously up-dated, reviewed and evaluated for improvement in the health status and quality of people’s lives. A Report on the status of environmental health in Namibia shall be compiled annually.
4.0 Institutional Framework for Policy Implementation

4.1 Institutional Organisations
The Ministry of Health and Social Services through the Directorate of Primary Health Care Services shall take the lead in co-ordination of integrated planning and development of environmental health policies and programmes with other institutions within the Ministry of Health and Social Services and with relevant government agencies, NGOs and in the private sector.

4.2 Structure of Environmental Health Services
4.2.1 The Directorate of Primary Health Care Services shall implement the environmental health policy through the Division of Public and Environmental Health Services and the Division of Disease Control at national level. The Regional Management teams (RMT), DCC and Constituency Development Committees shall carry out the implementation of the environmental health policy at regional, district and community levels, respectively.

4.2.2 The statutory responsibility for enforcing, monitoring and promoting preventive environmental health intervention measures shall be carried out at the regional, district and local levels. Environmental Health Officers and other designated persons have legal mandate and authority to enforce relevant legislation and standards on environmental health.

4.2.3 The management of environmental health activities and programmes shall be guided by the principles of integration and decentralisation of services at the regional level through the strengthening of capacity and where appropriate, establishing new structures of environmental health services at all levels.

4.2.4 Regional environmental health activities and programmes shall essentially be preventive, control and promotional in approach and seek co-ordination and co-operation with relevant government agencies, private sector, non-governmental organisations and local communities.

4.3 Roles and Responsibilities of Different Levels of Environmental Health Services
4.3.1 National Level
The role and responsibility of the Public and Environmental Health Services at National Level shall be to:-

4.3.1.1 Initiate the review and development of legislation, standards, policies and guidelines on environmental health.

4.3.1.2 Establish and develop mechanisms for inter sectoral co-ordination and collaboration, gender balance and community participation in the formulation of
strategies, for assessment, monitoring, reporting and evaluation of environmental health intervention measures.

4.3.1.3 Develop clear targets for environmental health through strategic planning.

4.3.1.4 Identify, in consultation with Regional Management Teams, major environmental health issues for priority intervention.

4.3.1.5 Develop guidelines for the integration and decentralisation of Environmental Health.

4.3.1.6 Design environmental management systems, including environmental health impact assessment, risk assessment, audit and action plans.

4.3.1.7 Establish environmental health indicators for monitoring and evaluation of the effectiveness of the policies and strategies.

4.3.1.8 Collect data and surveillance of environment related diseases and the implementation of a National Environmental Health Profile.

4.3.1.9 Assist the Regional Management Teams in acquiring adequate financial and material resources for the effective management of environmental health at regional level.

4.3.1.10 Define responsibilities and lines of authority at different levels.

4.3.1.11 Identify and promote, in collaboration with the Director of Policy, Planning and HRD, the development of appropriate training programmes for Environmental Health and other designated personnel.

4.4.1.12 Develop an environmental health database information system.

4.4.1.13 Promote and co-ordinate improved national awareness on environmental health issues.

4.4.1.14 Establish and develop mechanisms for an effective work performance evaluation and assessment program

4.3.2 Regional, District and Local Authority Level

The role and responsibilities of the environmental units of the above levels shall be to:-

4.3.2.1 Carry out Audits of environmental health, develop action plans to mitigate or abate identified environmental health hazards and risks.

4.3.2.2 Ensure integration of environmental health considerations into local and urban development plans.

4.3.2.3 Participate in Regional Management Teams (RMTs), and relevant inter sectoral committees e.g. Regional Development Co-ordinating Committees (RDCCs), Local Authority Development Committees, Village Development Committees.

4.3.2.4 Monitor and evaluate environmental health projects and programmes, and conduct regular work performance assessment.
4.4.2.5 Review and approve environmental health impact assessment reports and action plans.

4.4.2.6 Provide technical support for campaigns or other interventions, and promotion of environmental health.

4.4.2.7 Maintain a database and information network on environmental health.

4.4.2.8 Ensure timely response to emergencies and management of epidemics.

4.4.2.9 Enforce and ensure compliance with statutory regulations and standards on environmental health.

4.4.2.10 Promote inter sectoral collaboration and co-operation; gender balance and community participation.

4.4.2.11 Co-ordinate, monitors and evaluate local implementation of national policies and strategies on environmental health.

4.4.2.12 Prepare periodic reports on the state of environmental health in the region, district or local authority.

4.3.3 Enterprise Level (Private Sector: Trade and Business Enterprises)

The role and responsibility of the enterprise level shall be, to:-

4.3.3.1 Formulate sector specific environmental health policies, procedures and codes of practice.

4.3.3.2 Ensure compliance with all statutory regulations and standards on environmental health.

4.3.3.3 Conduct environmental health impact assessments, risk assessments and audit of trade and business activities and prepare environmental health action plans.

4.3.3.4 Establish training and information programmes for workers and surrounding communities.

4.3.3.5 Carry out surveillance of workers' health and working environment.

4.3.3.6 When required, submit periodic reports on environmental health to the Minister.

4.3.3.7 Prepare emergency response plans and procedures and train workers in their implementation.

4.4.4 Community Level

The responsibility and role of the community level shall be, to:-

4.4.4.1 Promote the participation of existing committees for community development or health in co-ordinating and monitoring the implementation of environmental health programmes.

4.4.4.2 Promote inter sectoral co-operation and involvement.
4.3.4.3 Participate in policy decisions to identify and determine local priorities, resources, developmental projects and services in environmental health.

4.3.4.4 Participate in the planning and implementation of environmental health impact assessment process and environmental health action plans.

4.3.4.5 Support and participate in public information campaigns of the national environmental health policy and programmes.

4.3.4.6 Participate in the development of plans and mobilise the community for timely response to emergencies and management of epidemics.

4.3.4.7 Participate in the monitoring and evaluation of effectiveness of environmental health intervention measures.

5.0 Resource Implications

5.1 Resources
The resources required for implementation of this policy at the different levels are summarised in Table 1.

5.2 Costs.
Much of the costs of implementing the policy will be met from the recurrent budget, but some of the investment costs such as training, capital costs of equipment (e.g. Border Posts, Information data base and computer hardware/software, field analytical equipment), National Environmental Health Profile, will need to be met through the development budget or directly by the donor community.
<table>
<thead>
<tr>
<th>Resources</th>
<th>National</th>
<th>Regional and District</th>
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<tbody>
<tr>
<td><strong>Human Resources</strong></td>
<td>Training of EH Personnel:</td>
<td>Training of Personnel</td>
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<tr>
<td></td>
<td>• Post-graduate training of all heads of Sub-divisions (Public and EH Division)</td>
<td>• 4 year Degree for Regional heads</td>
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<td></td>
<td>• Specialised training of specific EH programme Managers</td>
<td>• Further Training (Post-graduate and specialised) to be encouraged at both levels</td>
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<td></td>
<td>• Training in management for all staff, including computer skills.</td>
<td>• Training in basic management</td>
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<td></td>
<td>• Training in Environmental health Impact Assessment,</td>
<td>• Computer skills training at both levels</td>
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<td></td>
<td>• Information Database use and maintenance</td>
<td>• In-service training in key EH care delivery services at both levels</td>
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<td></td>
<td>• Short term consultancies</td>
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<tr>
<td><strong>Information Resources</strong></td>
<td>Development of Guidance Materials on Regional Action Plans, Environmental Health Impact Assessment, EH Community Participation; Inter-sectoral collaboration and co-ordination</td>
<td>Development of guidelines on community participation</td>
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<td></td>
<td>• Development of Programme guidelines and Strategies.</td>
<td>• Availability of relevant IEC materials</td>
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<td></td>
<td>• Computer Hardware and software package for National integrated Information Data Base and communications</td>
<td>• Mass media accessibility</td>
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<td></td>
<td>• IEC Materials and Mass media campaigns</td>
<td>• Computer Hardware and software package</td>
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<td></td>
<td>• National Environmental Health Profile and Action Plan</td>
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<tr>
<td><strong>Logistics resources</strong></td>
<td>• Analytical reference capability</td>
<td>Reliable Transport and mobile accommodation</td>
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<td></td>
<td></td>
<td>• Analytical facilities and Equipment</td>
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<td></td>
<td></td>
<td>• Adequate insecticides and applied equipment</td>
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<td></td>
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<td>• Sanitation materials</td>
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**TABLE 5.1: Outline of Resources Required for Environmental Health Policy Implementation**
Strategic Implementation Plan Overview

The strategic implementation plan will need to be developed in consultation with other stakeholders within the MOHSS and in other sectors. Table 2 provides a brief overview of a time frame for key implementation activities.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time Frame for activities implementation</th>
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<tbody>
<tr>
<td>Advocacy of the Policy to all stakeholders</td>
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<tr>
<td>Development of a National Environmental Health Profile and Action Plan</td>
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<tr>
<td>Review and formulate legislation and standards on Environmental health</td>
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<tr>
<td>Development and finalisation of Public and Environmental Health Services Division Programme Guidelines and Strategies</td>
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<tr>
<td>Assessment and implementation of in-service training of staff and development of diploma / degree level course in Environmental Health in Namibia</td>
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<tr>
<td>Post-graduate training of staff</td>
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<tr>
<td>Strengthen Analytical capacities and collaboration</td>
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<tr>
<td>Review and strengthen port health services</td>
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<tr>
<td>Provide and facilitate adequate sanitation facilities to all Public places (schools, clinics, churches etc.)</td>
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<tr>
<td>Development of Environmental Health methods of measurement, monitoring and evaluation</td>
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<tr>
<td>Strengthen Public Awareness Campaigns</td>
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<td>Development of Information Database</td>
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<tr>
<td>Establishment of a multi-sectoral advisory committee on Environmental Health Services</td>
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<tr>
<td>Periodic review in terms of the current Environmental Health Profile of the country</td>
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<tr>
<td>Review of the Environmental Health Policy</td>
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</table>

**TABLE 5.2: Possible Time Frame for Implementation of Activities**
7.0 Monitoring and Evaluation

7.1 The scope of what is to be monitored and evaluated are outlined below. These areas form the core elements of this policy.

1. **Legislation**: the extent to which legislation and standards on environmental health has been updated to meet Namibia's current socio-economic needs.

2. **Degree of inter sectoral and collaboration of activities** with other sectors;

3. **Degree of incorporation of environmental health considerations into sector policies, strategies and programmes**.

4. **Environmental Impact**: extent to which new developments, projects and programmes are assessed for their environmental health impact.

5. **Human Resource Development**: degree to which Namibian institutes of education meet the training needs of environmental health personnel in Namibia; training activities at all levels should be monitored and evaluated at the time to measure increase in knowledge, understanding and level of skill acquisition. In addition there should be follow up activities 6 – 12 months after training to establish effectiveness.

6. **Level of community participation and involvement** in programmes and projects; are individuals in communities merely beneficiaries or do they have varying degrees of control over them?

7. **Data and Information**: The degree to which information and data on environment and health are available at national and regional levels.

8. **Technical Services**: The availability of adequate monitoring and analytical services for environmental health programmes.

9. **Level of public awareness** on environmental health hazards and risk.

10. **Extent of regional co-operation** on environmental health.

11. **Port Health**: Level of health controls over movement of goods and people implemented at all Namibian ports of entry.

12. **Resources**: monitoring and evaluation should measure the resources to implement this policy (financial, material, equipment, personnel, infrastructures) and aim to establish whether it is sufficient for the policy to be implemented effectively and efficiently.

7.2 Monitoring and evaluation shall be conducted at all levels. Monitoring will be ongoing, while evaluation will need to be conducted at regular intervals.

7.3 The findings of monitoring and evaluation activities if they are to be useful, must be shared with those who can make use of them. Therefore findings shall be recorded in report format and distributed for action and information to the appropriate personnel and level of supervision and management. At the operational level,
results of monitoring and evaluation shall be fed back to the community.

7.4 **Responsibility for monitoring and evaluation** will rest with all levels of the Ministry of Health and Social Services. The policy indicators require data collection and report writing from National, regions and operational level.

7.5 **Environmental Health managers**, in collaboration with the Primary Health Care Co-ordinators and the respective management, team shall be responsible for monitoring and evaluation at regional and district level, and ensuring that the data is collected, analyzed and made available. At National level, data collection, analysis and availability will be the responsibility of the respective National Programme Officer. Local Authority Environmental Health Managers and personnel will be responsible for data collection from local authorities and sharing the information with the Ministry of Health and Social Services.
8.0 Bibliography


GRN (2000). *Namibia Demographic and Health Survey (Preliminary Report)*. MOHSS, Windhoek
ANNEX I: List Of Government Policies Relating To Environmental Health

1. Food and Nutrition Policy for Namibia (National Food Security and Nutrition Council)
2. Control of Acute Respiratory Infections (ARI) Programme (MOHSS)
3. National Agricultural Policy (MAWRD)
4. Towards Achieving Health and Social Well Being For All Namibians: A Policy Framework, Ministry of Health and Social Services
5. The National Water Supply and Sanitation Sector Policy (WASP) (MAWRD, Directorate of Rural Water Supply)
7. The National Housing Policy (MRLGH)
8. Decentralisation Policy for Namibia (MRLGH)
9. Poverty Reduction Policy
11. Namibia Water Policy (Draft) May 2000 (NWRMR)
12. National Policy and Strategy for Malaria Control (MOHSS)
14. Occupational Health Services Policy (Draft) MOHSS
15. Science and Technology Policy
17. The Official National Primary Health Care / Community Based Health Care Guidelines, MOHSS, 1992
ANNEX II: List Of Environmental Health Legislation in Force and Proposed / In Progress

1. The Public Health Act 1919
2. The Labour Act 1992
4. The General Health Regulations 1969
5. The Foodstuffs, Cosmetics and Disinfectants Ordinance 1979
6. The Hazardous Substances Ordinance 1964
7. The Atmospheric Pollution Prevention Ordinance No. 11 1976
8. Regulations Relating to the Keeping of Poultry 1955
9. Meat and Abattoir Regulations 1959
11. Regulations Relating to the Standards of Foods, Drugs and Disinfectants 1968
12. Offensive Trades Regulations 1926
13. Regulations on Small Pox 1965
14. Regulations on Plague 1965
15. Regulations on Typhus Fever 1965
16. Control of Formidable Epidemic Diseases Regulations 1971
17. Regulations for the Prevention of Malaria and other Mosquito-Borne Diseases and for the Destruction of Mosquitoes 1967
18. Regulations Regarding the Prevention of Rodent Infestation and the Storage of Grain, Forage etc. in Urban and Rural Areas 1968
19. Regulations on the Extermination of Rodents and the Elimination or Improvement of Conditions in the Storage of Grain, Fodder or any other Article which Permits or Promotes the Harbourage of Rodents 1973
20. Public Health Regulations: Unsound Foodstuffs 1937
21. Regulations Relating to Food Inspection 1968
22. Regulations Relating to Crematoria and the Cremation of Human Remains 1975
23. Provisions Applicable in Relations to the Prevention of Unlawful Squatting and Matters Incidental thereto Proclamation AG No. 21 1985
24. Water Act 54, of 1956
25. Local Authorities Act 1992
27. Draft Water Bill
29. Draft Pollution Control and Waste Management Bill
30. Food Quality and Security Bill
31. Pesticide Bill
32. Draft Biosafety Bill
ANNEX III: List of Relevant International Treaties

1. Convention on Biological Diversity


3. Vienna Convention (in particular, the Montreal Protocol) on the Protection of the Ozone Layer

4. Climate Change Convention
ANNEX IV: Glossary of Terms

Biological Diversity: "means the variability among living organisms from all sources including, inter alia, terrestrial ecosystems and aquatic ecosystems and the ecological complexes of which they are part and this includes diversity within species and of ecosystems".  
(Treaty, Convention on Biological Diversity)

Environmental Health: "Environmental Health comprises those aspects of human health, including quality of life, that are determined by physical, biological, social and psychosocial 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 present and future generations." (WHO 1997)

Environmental Impact Assessment (EIA): A formal analysis of the potential environmental impacts and their magnitude of projects or activities which are planned for the future; impacts identified and assessed are usually concerning the biophysical environment. The process consists of identifying, assessing and mitigation of environmental impacts, and is similar to that used in risk assessment.

Environmental Health Impact Assessment (EHIA): As for EIA but also assessing Health Effects of proposed projects or activities.

Environmental Health Indicators (EHI): An expression of the link between environment and health, targeted at an issue of specific policy or management concern, and presented in a form which facilitates interpretation for effective decision-making.

Hazard: An environmental factor or agent which has the potential to cause harm / adversely affect health; factors and agents may be biological (e.g. exposure to pathogenic micro-organisms), chemical (e.g. exposure to pesticides), physical (exposure to dangerous machinery, ionising radiation) or psychosocial (e.g. Stress).

Risk: The Probability (or likelihood) that an event will occur e.g. that an individual or population will suffer illness within a stated period of time or age following exposure to a hazard. Can be expressed quantitatively and qualitatively.

Risk Assessment: The process of analysing the possible effects on people of exposure to substances and other potential hazards; the steps in risk assessment include Hazard Identification, Dose-response and Exposure assessment.

Sustainable Development: "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs."  
UNED (1991)