

## South Africa

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### **I- ENVIRONMENTAL LAW EVOLUTION SINCE 1992**

Over the past few years, there has been an increasing deterioration of environmental quality in South Africa. Land degradation, salination, air pollution, the depletion of natural resources including marine resources and the development of urban sprawl all evidence the trend of environmental degradation.<sup>1</sup>

South African environmental law has been developed in conjunction with international law. International law forms an important basis of our law and its importance is recognised in our Constitution, which confirms that customary international law is recognised as law in South Africa unless it is inconsistent with the Constitution or an act of Parliament. Environmental problems in South Africa have been exacerbated by past apartheid policies. Thus the concept of environmental justice, which provides for the equitable distribution of nature's environmental bounty, takes on a peculiarly acute dimension in view of the past.<sup>2</sup>

Legislative reform since 1992, has been made by the passing of the National Environmental Management Act 107 of 1998 (NEMA) which puts environmental management in South Africa into the framework of co-operative governance as required in Chapter 3 of the Constitution; the National Water Act 36 of 1998 (NWA) which prioritises a right to a basic amount of clean and accessible water supply to all; the Water Services Act 108 of 1997 which deals mainly with the bulk supply of water; the Marine Living Resources Act 18 of 1998 which emphasises the need to grant access to marine resources to historically disadvantaged communities; and the

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<sup>1</sup> J GLAZEWSKI, *Environmental Law in South Africa*, 2000.

<sup>2</sup> J GLAZEWSKI, p.4.

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National Forests Act 84 of 1998 which refers to community forestry.<sup>3</sup> This paper will briefly examine the impacts on the different environmental media as well as the policies and programmes that have been implemented to deal with the issues that arise.

### **Climate and Atmospheric Change**

The status of climatic and atmospheric change in South Africa is that concentrations of carbon dioxide show an overall increase of approximately 0.6% per year. South Africa is sensitive to climate change and contributes about 1.2% to global warming. In general the worst air quality in South Africa occurs when wood, dung or coal is used as fuel inside poorly ventilated dwellings, in informal settlements and rural villages, adversely affecting human health.

There has been a decrease in ambient lead concentrations over the past few years, which can be attributed to the decrease in lead concentrations in petrol. The direct causes of atmospheric change and the enhanced greenhouse effect are human activities such as the burning of fossil fuels and the clearing of natural vegetation for agricultural purposes. The level of these human activities is influenced by population size, income level and distribution between rural and urban locations, and national and other policies regarding economy, energy, land use and development.

The impacts of climatic and atmospheric change are that warmer temperatures may lead to changes in biogeographic distributions and loss of biodiversity; more human deaths, especially among the elderly, due to heat waves and greater risk of epidemic infectious illnesses, such as malaria due to an expansion of suitable habitat for mosquitoes which transmit malaria. Increased ozone levels in the lower atmosphere will lead to respiratory health effects. The depletion of the upper atmosphere will lead to increases in skin cancer and cataracts and possibly a reduction in the effectiveness of the immune system.

Our responses to climatic and atmospheric change have been a massive electrification programme aimed at replacing the use of coal and wood as a domestic energy source, and thus improving indoor air quality in rural areas and informal settlements.

Air quality is currently regulated by the Atmospheric Pollution Prevention Act of 1965, which is widely recognised to be outdated with respect to approaches to air quality management and measurement. The Integrated Pollution Management initiative at National level has delivered a White Paper on Integrated Waste Management and Pollution Control aimed at waste minimisation and at preventing the diversion of pollution from one medium to another. This White Paper was tabled in parliament in August 1998.

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<sup>3</sup> J. GLAZEWSKI, p.5.

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South Africa signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1994 and ratified it in 1997. The Convention addresses the threat of global climate change by urging governments to reduce the sources of greenhouse gases.

South Africa has established a National Committee on Climate Change (NCCC), comprising of representatives from a number of affected sectors and government departments as well as non-governmental organisations, to advise the Minister of Environmental Affairs and Tourism on the issue. The NCCC is overseeing a process whereby studies are being undertaken on the emission of gases which contribute to global warming by South Africa; the impacts which climate change may have on agriculture, water resources, biodiversity, human health and other sectors; and the options for adaptation to and mitigation of these impacts. It is also overseeing a process of climate change policy development and public communication policy process. As a result of being a signatory to the Montreal Protocol, production and use of Chloro-Fluoro-Carbons and halons (CFCs) in products has almost been completely eliminated.

### **Marine and Coastal Systems and Resources**

The South African coastline stretches for about 3000 km between Namibia in the west and Mozambique in the east. The east coast is characterised by relatively warm waters, the west by colder Atlantic waters and the south by intermediate temperatures. The nutrient rich Benguela current off the southwest coast supports large numbers of marine animals. The Agulhas current off the east coast has a smaller quantity of fish, but a greater diversity of species. These resources offer massive opportunities for tourism, recreation, food, export and associated economic development. Thus their sustainable use and development is critical to the country's future development. The single greatest driving force for environmental change in the coastal zone is population growth and associated development. Fishing is a primary economic activity in South Africa but some fish stocks have been over-harvested and several species face local extinction.

Pressures are put on the marine and coastal environment by population growth in the form of a growing demand for land for housing and infrastructure, dependence on living resources for food and requirements for fresh water. Such pressures are mostly associated with urban centres along the coast, although high rates of harvesting of fish, mussels, crayfish and abalone also occur in rural areas where the communities depend on these resources for their subsistence. Urban development along the coast creates various environmental pressures on the landscape through habitat transformation. Coastal ecosystems are also damaged by sewage and storm water discharge. Pressures associated with shipping include oil spills and the discharge of ballast water and waste from vessels. These lower marine water quality, making it less suitable for marine life and human use, particularly around commercial ports.

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The current status of marine and coastal ecosystems is that bays along the coastline tend to serve as major nodes of urban development and settlement. These bays have all suffered severe degradation of ecological functioning due to habitat loss and fragmentation, extensive pollution and resource exploitation. For most, ecosystem damage is irreversible and has severely depleted the productivity of the systems and their important role in the overall productivity of the coast.

The main impact on the natural coastal environment is the loss of ecosystem integrity because of the deterioration in marine water quality as a result of pollution; resource decline due to over-exploitation, habitat elimination and fragmentation; reduced freshwater inflow into estuaries; and the combined effect of all of these.

Past policies and laws regarding environmental management have been fragmented both in implementation and responsibility. Over the past five years changes in environmental legislation and policy have resulted in new laws with a national focus. These laws and policies promise more effective and efficient management of not only the coastal and marine resources and systems but all the natural resources in the country. International trends and public pressure have largely contributed to the development and implementation of various legislation, policies and guidelines which aim to minimise or prevent the deterioration of the South African coastal and marine environment as a result of the driving forces established.

The national priorities include meeting basic needs and ensuring fair access to resources for all South Africans. This may increase the demand for resources in the short term and makes the need for far-sighted and sustainable management all the more imperative if these resources are to continue to be productive. A radical improvement in the effectiveness of policy and legislation is expected in the near future, provided the necessary funding; research and capacity building are made available.

### **Freshwater Systems and Resources**

South Africa is a semi-arid country and freshwater is our most limiting resource. There are three main driving forces affecting our freshwater environment. These are the natural conditions, particularly climate which is characterised by low rainfall and high evaporation rates; rapid population growth; and the need for economic development and meeting of basic needs, these socio-economic activities drive water use and lead to greater water demand and increased pollution of available resources; and the policy pertaining to national management of water resources, which determines the approach taken by relevant authorities at all levels of government to managing our freshwater resources.

The pressures of human activity on our freshwater resources are population growth, increased economic activity and intensification of land

use practices. These all lead to increased water demand and the increasing degradation of the resource.

The current status of our freshwater systems and resources is the South Africa is an arid country with only 8.6% of the rainfall available as surface water. The scarcity of freshwater resources and highly variable hydrological conditions have led to every major river being regulated in order to ensure adequate water supply for development. The scarcity of water is compounded by pollution of the surface and ground water resources. Typical pollutants include industrial effluents, domestic and commercial sewage, acid mine drainage, agricultural runoff and litter.

The impacts are that the indigenous aquatic fauna and flora are well adapted to the variable climatic conditions and many are reproductively opportunistic as a result. The high levels of natural variability ensure that high biological diversity and habitat integrity are maintained. Ecological changes to freshwater ecosystems occur because of catchments degradation; regulation of flow by impoundments; pollution; over-extraction of water; and the breakdown of natural biogeographical barriers typically through interbasin transfers. The primary results are extensive habitat loss, a decrease in biodiversity and an increase in invasive and pest species.

There are various responses at different levels in order to manage our water resources in a sustainable manner, including developing and adhering to international initiatives, setting relevant policy through legislation, implementing policy at an operational level and implementation of special programmes to combat specific problems. South Africa is a signatory to and abides by several international protocols that are important to water management. The most important legislation is the Water Services Act of 1997 and the National Water Act and 1998.

### **Terrestrial Ecosystems**

South Africa has the third highest level of biological diversity in the world. This high level of diversity is due to the broad range of climatic, geological, soil and landscape forms in the country.

Rapid population growth has led to urbanisation, intensification of agricultural production and industrialisation in order to meet the demand for food, energy and other commodities. These processes impact terrestrial ecosystems through degradation, alteration of processes or transformation.

Pressures on the environment are caused by the large amounts of waste and pollution created. This places pressure on the environment in terms of suitable waste disposal sites, pollution and changes to the atmospheric composition, with knock-on effects for climate stability. Exploitation of resources can lead to deforestation and bush encroachment. Changes in the climate, which result from atmospheric pollution, can alter the distribution of species and communities. Alien invasive organisms put pressure on terrestrial ecosystems because they dominate the indigenous species.

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The state of the terrestrial ecosystem is that 25% of the land area has been transformed. Over 8% of the country has been invaded by alien vegetation and millions of hectares are affected by bush encroachment. South Africa has two internationally recognised areas of high species richness and species diversity. These are the Cape Floral Kingdom and the Succulent Karoo.

South Africa has ratified several international conventions, which aim to improve the sustainability of terrestrial ecosystems internationally. These include;

the Convention on Biodiversity, which aims to effect international cooperation in the conservation of biological diversity and to promote the sustainable use of living natural resources worldwide.

the Convention to Combat Desertification, which was ratified by South Africa in 1997 and has as its primary objective “to combat desertification and mitigate the effects of drought in countries experiencing serious drought and or desertification.

the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

South Africa has also developed policies and passed a number of laws, which promote conservation, and sustainable use of natural resources. Other initiatives include schemes to reduce grazing and cultivation pressures, restore and maintain healthy soils and promote sustainable management of plantation forests.

Involvement of communities in decision-making and sharing benefits from conservation areas, together with education, extension and research, and a balance between addressing social and environmental issues will enhance feelings of ownership, and contribute to the success of schemes to promote sustainable development.

## **II- SPECIFIC TOPICS**

### **The soils**

Both mining and agricultural activities have caused considerable impact on the environment and drastically changed its landscape. Land degradation remains one of South Africa’s most serious long-term environmental problems.

The 1990’s saw a number of important policy development initiatives regarding both the land reform and agricultural sectors. Land reform as well as the maintenance of the long-term integrity of agricultural resources is essential to the future well being of South Africa and its people.

Three principles govern the promotion of sustainable resources use viz.:

- That it is governments responsibility to promote sustainable use of natural resources in agriculture and to ensure that resources are used within their capacity for renewal, maintaining and enhancing the

ecological integrity of natural systems, and minimising or avoiding risks that will lead to irreversible damage,

- That the primary custodian of the land is the resource user, whose actions have an impact on the environment. Thus the government will design policy and enact legislation that will strengthen the rights of land users and facilitate their assumption of responsibility for conservation, sustainability and maintenance of biodiversity,
- Those responsible for all forms of environmental damage should pay the cost of remedial measures in respect of the impact of such damage on the environment and human health. It will be required of land users whose activities may have an impact on the environment to institute measures to prevent pollution and environmental damage.

Mining has historically been the mainstay of the South African economy. It has also shaped the urban and industrial South African landscape. The various mining methods used cause different forms of pollution and environmental degradation.

The last few decades have seen a move towards dump reclamation, where remnant minerals are extracted from old mine tailings. Such activities can affect the land surface, including the soil, vegetation and wildlife, as well as surface and underground water systems.

The environmental impacts of mining differ between the various stages of the mining process. The prospecting and exploration phase has the lowest impact level. The extraction phase can cause destruction of vegetative cover; loss of topsoil through removal and erosion; permanent loss of other natural resources; major land-form changes; human safety hazards from excavations; slope failures and landslides, cave-ins, subsidence to name but a few.

The metallurgical stage can generate additional environmental risks including air pollution emissions; toxic metal particulates; fossil fuel by-products; hazardous gases and dusts in the workplace and acidic deposition causing acid rain.

The closure, post-closure and reclamation phases can exacerbate the impacts of the other methods.

### **International trade, environment and biodiversity**

South Africa is blessed with a rich biodiversity heritage. The legal regime for the conservation and sustainable use of biodiversity is centred on the 1992 Convention on Biological Diversity.

This Convention came into force on 29 December 1993 and its primary focus is the conservation of biodiversity and equitable distribution of its benefits. South Africa ratified the Convention in 1995 and during 1997 published a draft White Paper on the Conservation and Sustainable Use of Biological Diversity. Biodiversity has been described as including flora and fauna and the variety among living organisms and the ecological communities, which they inhabit. Related to the conservation of biodiversity

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is its utilisation. The reasons for conserving nature and biodiversity is essentially threefold:

- Biodiversity provides an actual and potential source of biological resources,
- Biodiversity contributes to the maintenance of the biosphere in conditions which support human and other life,
- Biodiversity is worth maintaining for non-scientific reasons namely for ethical or aesthetic considerations.

In the past a number of developing countries have argued against the inclusion of environmental issues in world trade agreements. The main reason for the objection is the fear that the inevitable consequence of allowing developed countries to use environmental concerns and measures to protect natural resources as a barrier to trade will further inhibit developing countries ability to access those markets.

Critical issues of interest include:

- South Africa's policy response to addressing the opportunities and treats of rapid globalisation on environment and social justice in South Africa,
- WTO rules to take account of sustainable development and poverty eradication,
- The need for greater and fairer access to developed world markets for developing world products,
- More equitable engagement for developing countries in the WTO multilateral rounds.

### **Forest and the prospect for a international convention**

Due to the significant contribution that the commercial forestry sector has made to the South African economy, the administration and legal control of forests and trees falls under the national level of government. South Africa has a lucrative, rich and flourishing commercial forestry sector which has developed into one of the largest human-made forestry resource sectors in the world.

The heavy exploitation of South African indigenous forests in the past led to a policy of protection and the explicit recognition in the Constitution that the « nistration of indigenous forests » a matter of concurrent national and provincial jurisdiction.

The National Forests Act 84 of 1998 was preceded by a White Paper on a National Forest Policy. This White Paper set out the overall goal of government as being to promote a thriving forestry sector, to be utilised for the lasting benefit of the nation, and developed and managed to protect the environment. Chapter three of this Act provides for the special measures to protect forests and trees and states that no person may cut, disturb, damage, or destroy any indigenous living tree in or remove or receive any such tree from a natural forest...unless a licence to do so has been issued or an

exemption published in the government Gazette. The Chapter further provides for special measures to protect trees by empowering the Minister to declare a particular tree, a particular group of trees, a particular woodland, or trees belonging to a particular species to be protected having regard to the principles of the act. This chapter also provides for controlling and remedying deforestation.

The use of forests is restricted to three broad types viz.: recreational uses; commercial uses of State forests and commercial forestry. There is also provision for community forestry. The act provides for three types of institutions viz.: the National Forests Advisory Council; the National Forest Recreation and Access Trust and a Panel of facilitators, mediators and arbitrators.

Other forest and trees related legislation includes the National Veld and Forest Fire Act 101 of 1998; the National Parks Act 57 of 1976; the Mountain Catchment Areas Act 63 of 1970 and the Management of State Forests Act 128 of 1992.

#### **New rights and the pact ant-poverty**

The most important step in the development of environmental law jurisprudence in South Africa has been the inclusion of an environmental clause in the Bill of Rights Chapter of the South African Constitution 108 of 1996. This clause states that everyone has a right to an environment that is not harmful to their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

The recent decision of *Government of the Republic of South Africa and others v Grootboom and others 2001(1) SA 46 (CC)* broadened the concept of socio-economic rights by holding that it included not just a dwelling but access to land, services including electricity and refuse collection and market facilitating devices including non-discriminatory finance and municipal planning<sup>4</sup>.

The Grootboom judgement made it clear that social and economic programmes designed to meet constitutional obligations cannot pass muster if they leave the poorest people and those in intolerable or crisis situations from their purview. It is not enough, to point to a long-term programme that provides relief for people eventually. Programmes must be tailored to provide some sort of immediate relief for the people who need it most<sup>5</sup>.

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<sup>4</sup> S. FLYNN, right to essential services - A Constitutional analysis of water and electricity policy in the new South Africa.

<sup>5</sup> op. cit.

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Socio-economic rights tend to be positive in character and impose positive duties on the State. There was much debate as to whether it would be appropriate to include socio-economic rights in the final Constitution<sup>6</sup>. It has been affirmed that socio-economic rights are at least to some extent justiciable in that they can be 'negatively protected from improper invasion.'<sup>7</sup> Violation of these rights occurs when the state, through legislation or administrative conduct, deprives people of the access they enjoy to socio-economic rights. The duty to promote and fulfil socio-economic rights requires the State to take positive measures to assist those who currently lack access to the rights to gain access to them.<sup>8</sup>

The Constitution provides that the State must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of the right to sufficient food and water<sup>9</sup>. It further provides an independent guarantee against conduct that interferes with peoples' access to housing, health care, food, water and social security<sup>10</sup>. To this end numerous poverty relief programmes and legislation have been implemented. This includes a programme known as Working for Water. Its main objective is the clearing of invasive species but it also has many social objectives, which include poverty relief.

#### **Democracy, access to justice and environment**

South Africa became a democracy in 1994 when the first democratic elections were held. The South African Constitution 108 of 1996, is the supreme law of the land and all acts of parliament must be consistent with it and promote its objectives.

The Constitution recognises the rights to just administrative action and to access to information. The Promotion of access to information Act 2 of 2000 and the Promotion of Administrative Justice Act 3 of 2000 give effect to these rights.

The purpose of the Promotion of Administrative Justice Act is to give effect to the right to administrative action that is lawful, reasonable and procedurally fair and to the right to written reasons for administrative action. This Act was enacted in order to promote an efficient administration and good government, and create a culture of accountability, openness and transparency in the public administration or in the exercise of a public power or the performance of a public function, by giving effect to the right to just administrative action.

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<sup>6</sup> J. GLAZEWSKI, *Environmental Law in South Africa*, 2000.

<sup>7</sup> *Certification of the Constitution*, 1996 at para 78.

<sup>8</sup> CHASKALSON, *Constitutional Law of South Africa* p. 41-33.

<sup>9</sup> Section 27(2).

<sup>10</sup> ss 26 and 27.

In terms of section 3, administrative action which materially and adversely affects the rights or legitimate expectations of any person must be procedurally fair. However, in order to give effect to the right to procedurally fair administrative action an administration should give a person:

- Adequate notice of the nature and purpose of the proposed administrative action,
- A reasonable opportunity to make representations,
- A clear statement of the administrative action,
- Adequate notice of any right of review or internal appeal, where applicable; and adequate notice of the right to request reasons.

In order to give effect to the right to procedurally fair administrative action, an administrator may, in his or her or its discretion, also give a person an opportunity to:

- Obtain assistance and, in serious or complex cases, legal representation,
- Present and dispute information and argument; and appear in person.

The purpose of the Promotion of Access to Information Act is to give effect to the constitutional right of access to any information held by the state and any information that is held by another person and it is required for the exercise or protection of any rights.

The State must respect, protect, promote and fulfil, at least, all the rights in the Bill of Rights which is the cornerstone of democracy in South Africa. The right of access to any information held by a public or private body may be limited to the extent that the limitations are reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom as contemplated in Section 36 of the Constitution.

Section 3 provides that the Act applies to a record of a public body and a record of a private body, regardless of when the record came into existence.

Section 9 of the Promotion of Access to Information Act contains the objects of the Act.

### **Legal conditions of the integrated management of the environment**

The Minister for Environmental Affairs and Tourism (“the Minister”) has published a White Paper on integrated pollution and waste management for South Africa (“the White Paper”). This is a policy document and will lead to the development of a new pollution prevention, waste minimisation, and impact management and remediation legislation. Chapter 5 of the White Paper deals with strategic goals and objectives of the policy. These goals chart the direction in which the Government will follow in meeting its commitment to integrated pollution and waste management.

The overarching goal of the policy is to ensure that pollution and waste are managed in an integrated way. The intention is to move from a previous situation of fragmented and uncoordinated pollution control and

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waste management to integrated pollution and waste management and waste minimisation. In order to ensure that this policy is translated into practice, the National Departments of Environmental Affairs and Tourism and Water Affairs and Forestry have developed a national waste management strategy. This strategy deals with the problems of waste and associated pollution and details strategies, action plans and set time frames and targets.

The seven strategic goals of the policy are as follows:

- Effective Institutional Framework and Legislation,
- Pollution Prevention, Waste Minimisation, Impact Management and Remediation,
- Holistic and Integrated Planning,
- Participation and Partnership in Integrated Pollution and Waste Management Governance,
- Empowerment and Education in Integrated Pollution and Waste Management,
- Information Management,.
- International Co-operation

Once the Government has approved this White Paper, a policy implementation phase will be initiated which will address urgent administrative issues, the National Waste Management Strategy and legislative measures.

The following administrative actions will be attended to as a matter of urgency:

- Initiating a skills audit to investigate and subsequently develop capacity within the Department of Environmental Affairs and Tourism to undertake the new functions associated with the lead agency for integrated pollution and waste management,
- Appoint the National Environmental Advisory Forum,
- Establish formal working agreements through structured consultations and negotiations to ensure that the waste management function is exercised efficiently and effectively, without duplication and in the spirit of co-operative governance,
- Investigate the administrative, legal and contractual arrangement necessary to give effect to allocating and sharing the waste management function and to building the capacity of the appropriate authorities,
- Initiate the process of integrating pollution and waste management related functions within all the spheres of Government,
- Promote and give effect to the objectives of Agenda 21 with regard to integrated pollution and waste management issues,
- Launch the programme of pilot projects for the practical implementation of integrated pollution and waste management to improve the quality of life of all South Africans,

- Review the Integrated Pollution and Waste Management Policy on an ongoing basis.

#### **Dangerous substances and activities**

In South Africa dangerous substances are termed as “hazardous substances”. The principal legislation dealing with hazardous substances is the Hazardous Substances Act 15 of 1973. The Act was promulgated:

- To provide for the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances, and for the control of certain electronic products,
- To provide for the division of such substances or products into groups in relation to the degree of danger,
- To provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances and products; and to provide for matters connected therewith.

The Minister of National Health has the power in terms of section 2 of the Act to declare any substance, mixture of substances, product or material as a hazardous substance. Hazardous substances are grouped and termed Group I, Group II and Group III. Group IV hazardous substance is radioactive material which is outside a nuclear installation and is not material which forms part of or is used or intended to be used in the nuclear fuel cycle. It must have an activity concentration of more than 100 becquerels per gram and a total activity of more than 4 000 becquerels or an activity of 100 becquerels or less or a total activity of 4 000 becquerels or less and which the Minister has declared to be a Group IV hazardous substance. Lastly, the substance must be used or intended to be used for medical, scientific, agricultural, commercial or industrial purposes, and any radioactive waste arising from such radioactive material is considered to be a Group IV hazardous substance.

Group I and II hazardous substances are substances declared by the Minister, which in the course of customary or reasonable handling or use, including ingestion, might by reason of its toxic, corrosive, irritant, strongly sensitising or flammable nature or because it generates pressure through decomposition, heat or other means, cause injury, ill-health or death to human beings.

Group II is any electronic product declared as such.

No person may sell any Group I substance unless he/she is the holder of a licence and this may be in terms of conditions prescribed or determined by the Director-General. The same applies to the sale, letting, use, operation or application, or installation of any Group III hazardous substance.

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The Act does make provision for inspectors for Group I and II hazardous substances and for Group III and IV hazardous substances. An inspector is given the power to inspect or search premises; examine, extract, take and remove samples of substance suspected to be hazardous and to demand for any information regarding any substance, appliance or object from any person in whose possession or charge it is or from the owner or person in charge of the premises. The inspectors also have seizure powers.

There is also provision for differing penalties depending on the severity of the offence. This ranges from a imprisonment of six months to ten years.

The transport of hazardous substances is regulated under Regulations promulgated under the National Road Act and Regulations promulgated under the Occupational Health and Safety Act.

#### **The financing of the environment**

Environmental governance falls within the auspices of both the national and provincial government. The lead agent with respect to the environment is the Department of Environmental Affairs and Tourism. There are however programmes in place which require the administration of more than one department which relate to environmental issues. One such programme in the Working for Water programme, which deals primarily with the eradication of invasive alien species.

The environment is therefore funded through National Treasury in the countries budgetary process. The Department of Environmental Affairs and Tourism is allocated a budget, which it then utilises for the environment.

At the Rio Conference a funding agency, the Global Environment Facility (GEF), was approved. This is a collaboration involving the World Bank, the United Nations Environmental Programme and its Development programme. By the end of 2000 the GEF had an active fund of approximately \$5.16 billion to fund projects to deal with biodiversity, international waters, climate change and the management of integrated eco-systems.

#### **Legal mechanisms of control and follow-up of environmental measures**

The National Environmental Management Act 107 of 1998 (NEMA) was enacted to provide for co-operative environmental governance by establishing principals for decision making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state.

The principles set out in section 2 of NEMA apply throughout the Republic to the actions of all organs of state that may significantly affect the environment and:

- Shall apply alongside all other appropriate and relevant considerations,

- Serve as the general framework in which the environmental framework management and implementation plans must be formulated,
- Serve as guidelines and as a reference to which any organ of state must exercise any function when taking any decision in terms of the National Environmental Management Act,
- Serve as principles by reference to which a conciliator appointed under the National Environmental Management Act must make recommendations and Guide the interpretation, administration and implementation of the Act.

Environmental management must place people and their needs at the forefront. Development must be socially, environmentally and economically sustainable. Section 28 of the National Environmental Management Act provides that every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or insofar as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment.

The persons on whom these obligations are imposed to take reasonable measures, include an owner of land or premises, a person in control of land or premises or a person that has a right to the use the land or premises on which or in which any activity or process is or was performed or undertaken or any other situation exists which causes, has caused or is likely to cause significant pollution or degradation of the environment.

The measures required may include measures to:

- Investigate, assess and evaluate the impact on the environment,
- Inform and educate employees about environment risks of the work and the manner in which the tasks must be performed in order to avoid significant pollution or degradation of the environment,
- Cease, modify or control any act, activity or any process causing the pollution or degradation,
- Contain or prevent the movement of pollutants or causant of degradation,
- Eliminate any source of the pollution or degradation,
- Remedy the effects of pollution or degradation.

The Director-General or provincial head of department may in respect of the recovery of costs claim proportionally from any other person who benefited from the measures undertaken by him.

Section 35 of NEMA provides that the Minister and every member of the executive council (MEC) and municipality, may enter into environmental management co-operation agreements with any person or community for the purpose of promoting compliance with the principles laid down in NEMA.

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### **The local management of the environment**

The period after the first democratic elections in South Africa in 1994 witnessed Government action aimed at addressing the legislative injustices that existed in South African law, and specifically environmental law.

The legislative review process began with the Water Law Review process, which comprised a detailed review of all South African water law. The question of who does what as regards environmental management under the constitution is fundamental to both Government and the private sector. For Government it is imperative that its employees understand their respective roles, powers and functions in the development, administration, implementation and enforcement of environmental law. In the case of the public sector, the public are entitled to be aware of their rights and duties pertaining to the environment as they pursue their legitimate activities and practically, to know which organs of state are to be approached for authorisations and many other respective areas of environmental concern.

At the National sphere of Government the following departments play an integral role in the administration of environmental issues: Environmental Affairs and Tourism; Water Affairs and Forestry; Mineral and Energy Affairs; Land Affairs; Agriculture; Transport; Constitutional Development and Planning and Arts, Science and Technology.

Schedule 4 of the Constitution lists the functional areas of concurrent national and provincial legislative competence. Both the provinces and national government may legislate upon the areas listed under Schedule 4 Part A. These areas are: administration of indigenous forests; disaster management; environment; nature conservation, including national parks, national botanical gardens and marine resources; pollution control; regional planning and development; soil conservation and urban and rural development. Part B lists areas that may be legislated upon by local government as well. These are air pollution; building regulations; storm water management systems in built-up areas and water and sanitation services limited to potable water supply systems and domestic-water and sewage disposal systems.

Schedule 5 lists the areas of exclusive Provincial legislative competence. Only the provinces may legislate upon provincial planning. Cleansing; control of public nuisances; fencing and fences; municipal parks and recreation; noise pollution and refuse removal, refuse dumps and solid waste disposal may be legislated upon by local government as well.

Within the National sphere parliament may legislate on any area except those listed in Schedule 5 of the Constitution.