Zimbabwe

Contents

National vision
Biophysical profile
Socio-economic profile
Legal profile
Institutional profile
EIA practice
Key successes and challenges
Conclusion

Appendix 1: Case studies

The proposed Gwayi-Shangani Dam, 1995
A proposed ecotourism project at Ngomakurira Hills, 2001
The proposed Murowa Diamond Mine, 1999

Appendix 2: Useful contacts

References and other key publications
Acknowledgements
In Zimbabwe, the National Conservation Strategy of 1987 was the first policy document to incorporate the concept of sustainable development. Its goal was —

*to integrate sustainable resource use with every aspect of the Nation’s social and economic development and to rehabilitate those resources which are already degraded.*

(MNRT 1987)

The environmental impact assessment policy, published in 1994 by the Ministry of Mines, Environment and Tourism (MMET)¹, reinforced the need to incorporate sustainable development into the management of Zimbabwe’s environmental resources. In addition, as the existing laws and regulations were viewed as being fragmented and out of date, the Government of Zimbabwe recognised the need for new environmental legislation. This new legislation would provide the legal and regulatory framework for promoting sustainable development.

In 1998, the MMET initiated the law reform process with the publication of a discussion paper on environmental law reform and the drafting of the Environmental Management Bill. In launching the law reform process, the message from the then Minister of Mines, Environment and Tourism, SK Moyo, was as follows:

*Our dependence on the environment strikes deeply into our social, historical, cultural and economic sense of being. This understanding makes guardianship of our environment the crucial challenge for Zimbabwe today and in the years to come.*

(MMET 1998b)

The national vision of Zimbabwe is based on the following principles outlined in the Environmental Management Bill under parliamentary review at the time of writing this chapter:

*• Sustainable development, which includes taking into consideration the needs of current and future generations, is the basis for development.*

*• A cross-sectoral approach to managing the environment as an ecosystem is a prerequisite for sustainable development, and this requires an integrated approach towards environmental management, which in turn necessitates new institutional arrangements.*

*• A precautionary approach towards environmental management should be adopted and environmental impact assessments (EIAs) should be undertaken for proposed development projects.*

*• The enforcement of environmental standards is a necessary part of environmental management, and*

*• A clean and healthy environment should be a constitutional right like other fundamental human rights.*

Zimbabwe is a landlocked country with a land surface area measuring 390,757 km². It is bounded by Zambia, Mozambique, South Africa and Botswana.

**Relief**

The country has four main physiographic regions:

*• the Eastern Highlands (altitude 1,800–2,592 m)*

*• the Highveld (altitude 1,200–1,800 m)*

*• the Middleveld (altitude 600–1,200 m), and*

*• the Lowveld (altitudes below 600 m).*

**Climate**

Zimbabwe has a subtropical climate characterised by distinct wet and dry seasons with transitional periods in between, as follows:

*• main rainy season, mid-November to mid-March*

*• post-rainy season, mid-March to mid-May*

*• cool, dry season, mid-May to Mid-August, and*

*• hot, dry season, mid-August to mid-November.*

The mean annual rainfall for the whole country is 650 mm a year, with annual rainfall ranging from below 400 mm in the south to over 1,000 mm in the north-east. Droughts of varying magnitudes have become common over the last 20 years and there seems to be a gradual decline in rainfall over the same period. Figure 1 illustrates the monthly rainfall averages for Harare.

Mean annual temperatures range from 18 °C on the Highveld to 23 °C on the Lowveld. The Highveld experiences frost in June and July, but in the Lowveld temperatures rarely fall below 2 °C in winter (MMET 1998a). Figure 1 also illustrates the average range of temperatures experienced in Harare.

**Water resources**

Water resources in Zimbabwe are becoming progressively scarce as domestic, agricultural and industrial demands increase. Rivers constitute the bulk of surface water resources, which provide over 90% of Zimbabwe’s water supply. River flows are largely seasonal and, therefore, unreliable. Consequently, the

---

¹ Now called the Ministry of Environment and Tourism.
country depends on man-made dams for the storage and supply of water for power generation, irrigation, commercial and industrial use, domestic supply and recreation, e.g. Lake Kariba (power generation, tourism, recreation, fisheries), Lake Chivero (water supply) and Lake Mutirikwi (recreation).

Groundwater supplies are limited due to the typically porous nature of the crystalline basement rocks that underlie approximately 75% of the country.

Dambos are the main type of wetlands found in Zimbabwe. These are restricted to areas with rainfall greater than 800 mm and areas underlain by granitic rocks. Dambos cover approximately 3% of Zimbabwe and are used by rural communities for grazing their cattle, dry-season agriculture, and domestic water supply (MMET 1998a).

Vegetation
The vegetation of Zimbabwe belongs to three phyto-regions: Flora Zambeziaca, Afromontane, and Cape Floristic (MMET 1998a). The Flora Zambeziaca phyto-region is the most dominant, with five woodland types, namely miombo (common type of moist savanna woodland), mopane, teak, acacia, and Terminalia–Combretum woodlands. The Afromontane phyto-region occurs in the Eastern Highlands, mainly in the Chimanimani Mountains, the Nyanga area and the Chirinda Forest. The Cape Floristic phyto-region is limited to a small portion in the Nyanga area.

Wildlife
A wide range of wildlife species occurs in Zimbabwe. As a result of well-developed wildlife management policies and community-based natural resource management activities in the past, Zimbabwe’s wildlife populations have remained diverse, as illustrated in Table 1.

Insects are the most abundant invertebrates in Zimbabwe. Although the inventory and monitoring systems for insects are limited, indications are that a rich diversity exists and all the 29 insect orders have been recorded. Nine genera and nearly 30 species of scorpions have been recorded in Zimbabwe. Museum collections include a wide variety of species of spiders, centipedes, millipedes, pseudo-scorpions, crustaceans and molluscs, most of which still require identification.

Ecological sensitivity
Ecologically sensitive areas in Zimbabwe fall into four key groups:
- Wildlife areas
- Areas with endangered or rare flora
- World Heritage Sites at Victoria Falls and Mana Pools, and
- Wetlands.

These ecologically sensitive areas have designated World Heritage Site, national park, reserve, sanctuary, safari area or botanical garden status, and the Parks and Wild Life Act (1975, Chapter 20:14) controls land use in all these areas.

Wetlands, particularly dambos, are ecologically sensitive and uncontrolled human activities such as cultivation often lead to their degradation. Thus, the Natural Resources Act (1941, Chapter 20:13) prohibits cultivation in dambos. However, a shortage of human and financial resources within the appropriate authorities means enforcement is not effective.

### Table 1: A summary of Zimbabwe’s vertebrate fauna

<table>
<thead>
<tr>
<th></th>
<th>No. of species recorded in Zimbabwe</th>
<th>No. of species recorded in southern Africa</th>
<th>% present in Zimbabwe</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mammals</td>
<td>175</td>
<td>337</td>
<td>52</td>
<td>Protected species include the aardwolf, bat-eared fox, cheetah, gemsbok, Lichtenstein’s hartebeest, pangolin, black rhinoceros, white rhinoceros and roan antelope.</td>
</tr>
<tr>
<td>Birds</td>
<td>&gt;600</td>
<td>900</td>
<td>67</td>
<td>Bushveld and woodland habitats have the richest bird diversity.</td>
</tr>
<tr>
<td>Reptiles</td>
<td>163</td>
<td>411</td>
<td>40</td>
<td>The Nile crocodile occurs in many rivers and dams in the country, but the highest populations are found in Lake Kariba. Population estimates on the Zimbabwean side of the Lake range from 6,500 to as high as 11,500. Crocodile farming is also an important economic activity, with over 15,000 skins sold in 1990 (which amounted to approximately US$3 million in exports).</td>
</tr>
<tr>
<td>Amphibians</td>
<td>72</td>
<td>unknown</td>
<td>unknown</td>
<td>New species are continually being found.</td>
</tr>
<tr>
<td>Fish</td>
<td>122</td>
<td>unknown</td>
<td>unknown</td>
<td>Only those species of commercial and biological importance are well-monitored.</td>
</tr>
</tbody>
</table>

1 A shallow, water-logged, grass-covered depression, seasonally or permanently water-logged (MMET 1998).
Current and projected land use

It is important to note that significant land-use changes are taking place in Zimbabwe as a result of a major restructuring of the commercial agricultural sector. At present, predicting any future land use along with any major developments is very difficult due to the current political and economic crisis. Similarly, it is difficult to predict the environmental impacts of these changes. Table 2 presents the distribution of land use in Zimbabwe in the late 1990s.

Communal land is held under communal tenure and is typically used for residential, subsistence and commercial crop cultivation, as well as livestock production. The major crops in communal lands include maize, sorghum, pearl millet, cotton and groundnuts.

Commercial agriculture is practised in both the large- and small-scale commercial farming sectors. Land use in these sectors generally falls into one of the following categories:

- Cattle and game ranching in areas with less than 650 mm of erratic rainfall per annum
- Livestock production and irrigated agriculture (sugar cane, cotton) in areas with 450–650 mm of rainfall per annum
- Semi-intensive livestock and cash-crop farming (maize, tobacco, wheat, barley, soya beans) in areas with 500–750 mm of rainfall per annum
- Intensive cash-crop farming (maize, tobacco, wheat, barley, soya beans) and/or livestock production in areas with 750–1,000 mm of rainfall per annum, and
- Specialised and diversified farming (including fruit, tea, coffee, and macadamia nut production) in areas with more than 1,000 mm of rainfall per annum.

Although it was estimated (MMET 1998a) that 66% of the country is covered by wooded vegetation, recent estimates indicate that some areas may have less than 30% cover.

Some 31 species of fish have been introduced into Zimbabwe for fish-stocking and aquaculture. The most abundant commercial fish is the kapenta (freshwater sardine, Limnothrissa miodon), which was introduced to Lake Kariba in the late 1960s. Kapenta account for over 90% of annual fish landings from Kariba. Other species of commercial importance include Kariba bream (Oreochromis mossambicus), Mozambique tilapia (Oreochromis mossambicus), green happy (Sargocromis codringtonii), sharp太少 catfish (Clarias gariepinus), rainbow trout (Oncorhynchus mykiss) and brown trout (Salmo trutta). Largemouth bass (Micropterus salmoides salmoides) found in major dams is also important for recreational fishing.

Subsistence aquaculture (one or two ponds per household) in the rural areas is aimed at providing a cheap source of protein for domestic consumption (MMET 1998a).

Zimbabwe has over 35 minerals being produced by over 1,000 mines. Key minerals include gold, nickel, copper, tin, cobalt, silver and iron ore. Mining activities tend to be concentrated along the Great Dyke that runs through the centre of Zimbabwe in a north-north-east to south-south-west direction. Chrome and platinum are the main minerals found in the Dyke. Gold deposits are typically located within the greenstone belts occurring around the Bulawayo–Gwanda, Gweru–Chegutu, and Mazowe–Bindura areas. The gold deposits often contain copper, tungsten, antimony, cobalt and arsenic. Coal mining occurs mainly at the Wankie Colliery (5.8 million t in 2001) in the north-west.

During 1999, minerals accounted for 27% of export earnings, and the major exports were of gold, ferro-alloys, nickel, asbestos, iron and steel. Future developments include mining for diamonds in the Midlands Province and for coal in the Gokwe area. In addition, small-scale informal mining activities are on the increase – especially chrome ore mining, riverbed gold mining and alluvial gold panning.

The main power-generation facilities are at Hwange (coal) and Lake Kariba (hydroelectricity), and there are plans to develop another facility at Gokwe, in the north-west, using coal from the Sengwa Field.

Lake Kariba, built on the Zambezi River in 1958, is the major source of hydroelectric power in Zimbabwe. They key purpose of the lake is to generate power for Zimbabwe and Zambia, but it does not contribute much to domestic, agricultural or industrial water supplies. Kariba meets approximately 33% of Zimbabwe’s total power requirements, but this fluctuates depending on water levels.

Tourism makes an important contribution to the economy of Zimbabwe. Tourist arrivals increased by 18% annually during the period 1989–1994. Tourism could potentially be

### Table 2: Land use, late 1990s

<table>
<thead>
<tr>
<th>Land use</th>
<th>% of land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communal lands</td>
<td>42</td>
</tr>
<tr>
<td>Large-scale commercial farming</td>
<td>15</td>
</tr>
<tr>
<td>Small-scale commercial farming</td>
<td>5</td>
</tr>
<tr>
<td>Resettlement</td>
<td>20</td>
</tr>
<tr>
<td>State farms</td>
<td>3</td>
</tr>
<tr>
<td>National parks, and recreational, safari and sanctuary areas</td>
<td>12</td>
</tr>
<tr>
<td>Forest land</td>
<td>2</td>
</tr>
<tr>
<td>Urban</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

Zimbabwe’s second-largest foreign currency earner after agriculture (MMET 1998a).

Victoria Falls, Hwange, Mana Pools, Lake Kariba and the Zambezi River (for white-water rafting, canoeing) are the main tourist destinations. The Zambezi River is the key focus of most tourism attractions. It is, therefore, a natural resource that needs to be managed accordingly.

In the 1990s, tourism rapidly expanded into the communal areas under the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) Association. This programme encourages communities to set aside land for community wildlife management. Not only is this an important boost for biodiversity conservation in Zimbabwe, but it also offers an alternative income to subsistence agriculture and livestock production, especially in marginal areas.

Industrial (manufacturing and processing) activities typically occur in the urban areas of Harare, Bulawayo and Gweru.

**Key environmental limitations**

The key environmental limitations facing Zimbabwe include —

- rainfall variability and seasonality
- inadequate water resources, and
- poor soil fertility and erodible soils.

Rainfall marginally exceeds potential evapo-transpiration during the rainy season. For the rest of the year there is a moisture deficit. For most parts of the country, rainfall limits agricultural production. The country frequently experiences droughts that can last up to two years, and these adversely affect agricultural production and water supply for both human and wildlife use.

Both surface water and groundwater resources are scarce in Zimbabwe due to frequent droughts and the seasonal nature of rainfall. Lake Chivero is Harare’s main source of water. At the current consumption rate and at full capacity, Lake Chivero is estimated to be able to supply the city for 24 months. However, consumption is rapidly increasing and costs for water treatment are escalating. Water availability in Bulawayo is even more critical. Development plans to alleviate the water situation in Bulawayo, such as the construction of a multimillion-dollar pipeline to draw water from the Zambezi River and/or the construction of a dam on the confluence of the Gwayi and Shangani rivers, have been thwarted by financial and political problems.

The granitic rocks that underlie most parts of the country give rise to sandy soils with very limited fertility, which adversely affects crop production. These soils are prone to erosion. Steep slopes, particularly in areas with domed inselbergs, tend to promote high soil erosion rates.

**Key environmental impacts**

Key environmental impacts in Zimbabwe include —

- deforestation
- land degradation and soil erosion
- water pollution
- habitat destruction and loss of biodiversity
- household and industrial air pollution, and
- increase in human, domestic and industrial effluent and waste production.

Deforestation is closely linked to habitat destruction and can subsequently result in a loss of biodiversity. Deforestation in Zimbabwe is largely the result of the growing population exerting extreme pressure on the land. It is estimated that 69% of the population lives in the rural areas, with population densities ranging between 60–207 people/km². Rural population estimates for 2000 were approximately 8,036,000 and projections for 2010 are approximately 8,787,000. The rapid expansion of cultivated lands, excessive timber extraction and the collection of fuelwood are the key causes of deforestation. There is a high dependence on fuelwood for almost all residents of communal lands, since alternative fuels are either not affordable or not readily available. In 1998, it was estimated that only 5% of rural homesteads were connected to the national electricity grid. In addition, with the increase in the cost of living due to high inflation, low-income urban residents are now also using fuelwood for heating purposes.

Land degradation and soil erosion resulting from poor conservation practices — including overgrazing, particularly in communal lands — is a major problem. It was estimated during the 1980s that 1.8 million ha or 4.7% of the land in Zimbabwe was affected by soil erosion. Approximately 26% of the land surface area in communal lands is severely eroded (Whitlow 1988), but in some areas this is estimated to be as high as 40%.

Water pollution is largely caused by the contamination of rivers and water bodies by poor-quality, untreated wastewater. The quantity and range of pollutants in wastewater have increased as a result of population growth, intensive
urbanisation, increased industrial activities and high exploitation of cultivatable land. Key sources of pollutants include industrial and manufacturing works, mines and associated industries, poorly maintained sewage treatment works in urban areas, partially treated sewage effluent, leachate from landfills, soil erosion and siltation, and fertiliser and pesticide use.

Habitat destruction and loss of biodiversity is another key environmental impact. The causes of this impact include the expansion of agricultural lands, timber logging, fuelwood collection, poaching, invasion of alien plant species, drought, mismanaged or frequent fires, and high elephant densities.

Air pollution is generally limited to the major cities. Major pollutants include carbon monoxide, hydrocarbons, nitrogen compounds, oxides of nitrogen, sulphur compounds, and a range of volatile organic substances. Zimbabwe is said to contribute 3% of Southern African Development Community’s (SADC’s) sulphur emissions, of which 96% result from industry and power production. Mining activities are also responsible for air pollution. For example, two gold-roasting plants in Zimbabwe are said to emit 40 t of arsenic into the atmosphere annually (MMET 1998a).

Due to industrialisation and intensive (largely unplanned) urbanisation, the production of industrial – including hazardous – waste and domestic waste has increased dramatically. Urban population estimates for 2000 are approximately 4,387,000 and the projection for 2010 is approximately 6,482,000. In Harare, for example, each person is estimated to produce 0.2 t of solid waste every year (MMET 1998a).

Furthermore, waste-handling systems and facilities are inadequate, which leads to a wide range of environmental problems including —

• human health risks
• air, land and water contamination
• loss of flora and fauna, and
• reduction of quality of land for future land-use options.

These impacts are compounded by illegal dumping, which is on the increase as a result of the lack of effective waste-management strategies by local authorities.

**Natural capital and socio-economic development**

As with most southern African countries, Zimbabwe has a high dependency on natural resources. Socio-economic development is closely linked to the availability of, and access to, natural capital. Population densities in the rural areas are high and the pressure on natural resources such as cultivatable land, grazing land, water, timber and fuelwood is continually increasing.

**Major transboundary environmental impacts**

The major transboundary environmental impacts affecting Zimbabwe and its neighbours include —

• poaching of wildlife
• movement of elephants

... siltation of rivers and poor downstream water quality, and downstream flooding due to the release of flood waters from Kariba Dam.

Poaching of wildlife along the Zambezi Valley is a major problem. There have been substantial losses of black rhino as a result of this poaching. It is believed that most of the poachers are of foreign origin.

The movement of elephants out of and into Zimbabwe has always been a major issue. Elephants are regarded as problem animals in the communities because they destroy crops. Control management practices to deal with problems animals are ongoing, but are not always successful.

Poor catchment management in Zimbabwe has resulted in the siltation of several rivers in neighbouring countries. This has particularly affected the Save and Limpopo rivers. Siltation affects downstream water quality, causes damage to infrastructure along rivers, and causes loss of channel capacity.

The Kariba Dam, which is on the Zambezi River and is jointly owned by Zambia and Zimbabwe, has major effects on downstream areas in Mozambique. The release of flood waters from Kariba when the Cahora Bassa Dam is also releasing water can result in major flooding problems on the Lower Zambezi Valley in Mozambique, as evidenced by the massive floods there in 2000 and 2001.
### Table 3: Summary of demographic trends

<table>
<thead>
<tr>
<th>Demographic aspect</th>
<th>1975</th>
<th>1999</th>
<th>2015 projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population (millions)</td>
<td>6</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Annual population growth rate (%)</td>
<td>–</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Urban population (as a % of total)</td>
<td>20</td>
<td>35</td>
<td>46</td>
</tr>
<tr>
<td>Population under age 15 (as a % of total)</td>
<td>–</td>
<td>45</td>
<td>40</td>
</tr>
<tr>
<td>Population aged 65 and above (as a % of total)</td>
<td>–</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total fertility rate (per woman) estimates, 1970–1975</td>
<td>7</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Total fertility rate (per woman) estimates, 1995–2000</td>
<td>–</td>
<td>5</td>
<td>–</td>
</tr>
</tbody>
</table>


### Table 4: Summary of socio-economic profile, 1999

#### Socio-economic aspect

| Life expectancy at birth (years) | 43   |
| Probability at birth of not surviving to age 40 (% of cohort), 1995–2000 estimates | 52   |
| Underweight children under age five (%), 1995–2000 estimates | 15   |
| Undernourished people (as a % of total), 1996–1998 | 37   |
| Physicians (per 100,000 people), 1990–1999 estimates | 14   |
| Population using improved water sources (%) | 85   |
| Population using adequate sanitation facilities (%) | 68   |
| People living with HIV/AIDS: Adults (% aged 15–49) | 25   |
| People living with HIV/AIDS: Women (aged 15–49) | –    |
| People living with HIV/AIDS: Children (aged 0–14) | 56,000 |
| Adult literacy rate: Female (% aged 15 and above) | 83   |
| Adult literacy rate: Male (% aged 15 and above) | 92   |
| Combined primary, secondary and tertiary gross enrolment ratio (%) | 65   |
| Gross enrolment ratio: Female (%) | 63   |
| Gross enrolment ratio: Male (%) | 67   |
| Population below income poverty line (%, national poverty line, 1984–1999 estimates | 25   |


*Note: The figures presented in this section are largely from the late 1990s or represent projections based on past performance. It is important to note that as a result of the current political and economic crisis in Zimbabwe, it is likely that these figures have changed drastically and that projections may not be accurate.*

### Table 5: Summary of economic performance and trade, 1999

#### Index of performance

| Gross domestic product (GDP) (US$ billions) | 6    |
| GDP (PPP US$ billions)                     | 34   |
| GDP per capita (PPP US$)                   | 2,876|
| GDP per capita annual growth rate (%), 1990–1999 | <1   |
| Imports of goods and services (as a % of GDP) | 46   |
| Export of goods and services (as a % of GDP) | 45   |
| Primary exports (as a % of merchandise exports) | 73   |
| Manufactured exports (as a % of merchandise exports) | 27   |
| High-technology exports (as a % of manufactured exports) | 3    |

#### Economic activities

Agriculture, mining and tourism account for the bulk of output, employment and foreign exchange earnings in Zimbabwe (IMF 2001). Projections for the agricultural sector are bleak and food shortages are chronic. During the first seven months of 2000, manufacturing output fell by 11% compared with the same period in 1999, mining production fell by 14%, and tourist arrivals were down by 60%. Output continued to fall up to mid-2003, when this chapter was finalised. Figures 2 and 3.

### Economic overview

The combination of wavering domestic policies, governance problems and the recent costly deployment of troops to the Democratic Republic of Congo has seriously affected economic performance and investor confidence in Zimbabwe since the early 1990s. By late 2000, Zimbabwe was in the midst of a serious economic crisis (IMF 2001).

Gross domestic product (GDP) shrank by 4.5% in 2000 and almost 7.5% in 2001. It is forecast to shrink by 10–12% in 2002 (Zimbabwe Independent, 26 April 2002). Inflation at the end of 2002 was about 120% and unofficial estimates for 2003 are as high as 350%. Investor confidence is low and foreign direct investment has continued to slump from a level of US$436 million in 1998 to US$5.4 million in 2001. Lack of foreign exchange in the economy has severely curtailed output in the industrial sector. The official foreign exchange rate remains pegged at over Z$800:US$1, with a parallel market rate of Z$1,500:US$1. The Zimbabwe Dollar was devalued during early 2003 and further devaluation of the currency is inevitable.

### COUNTRY REPORTS

**Socio-economic profile**

Population estimates for 2000 range from 11.4 million to 13.3 million, depending on the source consulted. Estimates for 2001 are as high as 13.6 million, with projections for 2002 at 13.9 million, which drop back down to 13.6 million for 2003 (Business Monitor International 2002). The average population density is 27 people/km², but in rural areas this ranges between 60–207 people/km². There is rapid growth in the urban population, with estimates that 46% of the total population will be urban by 2015 (UNDP 2001). Unemployment is currently estimated at 80% (PRB 2001).

An overview of the demographic trends, the socio-economic profile, and economic performance and trade is presented in Tables 3, 4 and 5.

According to the United Nations Development Programme (UNDP), Zimbabwe’s human development index value was 0.554 for 1999. This value falls into the ‘medium development’ classification range of 0.500–0.799, but narrowly escapes the ‘low development’ classification of values below 0.500 (UNDP 2001).
respectively, show the sectoral contribution to GDP and the state of Zimbabwe’s economy in 1999.

**Donor profile**

Foreign assistance by donors has greatly decreased in Zimbabwe. Typical donors in the past have included Canada, Denmark, the European Union, Germany, Japan, the Netherlands, Norway, Sweden, the United Kingdom and the United States of America. Figure 4 presents Zimbabwe’s donor profile between 1990 and 2000.

It should also be noted that many donor agencies are either in the process of phasing out their aid programmes or have stopped providing assistance altogether. The profile presented in Figure 4 may, therefore, have changed significantly since 2000.

**Projected growth areas**

As discussed above, business and investor confidence is currently low. Typically, growth areas would include agriculture, mining and tourism. However, with the current instability, projections are not possible.

**Social capital and socio-economic development**

As presented in Tables 3, 4 and 5, Zimbabwe’s social capital plays an important role towards improved standards of living. Poverty levels are high and are directly related to economic development and growth in the country. Addressing the issues of education, health care, HIV/AIDS, water supply, food security and gender equality are crucial to ensure socio-economic development. In the past, these issues have remained high on the Government’s agenda and support from international agencies has contributed to improvements.

**Key socio-economic limitations**

A wide range of socio-economic limitations face Zimbabwe, including the following:

- Low economic growth (low investor confidence, high foreign debt and overdue payments, high inflation, lack of foreign currency, drop in outputs from agricultural and industrial sectors, decreased tourism, etc.)
- High population growth and high rural densities
- Increasing number of urban residents
- Increased pressure on the land
- Food shortages
- High unemployment
- High rates of HIV/AIDS, and
- Inadequate water supply, education facilities and health facilities.

The root causes of these limitations are linked to low economic development in the country. There is a high dependency on the land, which is increasingly unable to support the growing rural densities. Restructuring of the agricultural sector has led to sharp declines in agricultural production and food shortages are prevalent. Services and facilities in urban areas are under extreme pressure.

---

1. Human immunodeficiency virus/acquired immune deficiency syndrome.
Current and emerging policies and laws

Typically, Zimbabwe’s natural resource management laws and policies have been developed locally. Nonetheless, in certain cases donor agencies have granted technical and financial support (e.g. development of the EIA policy and the EIA guideline documents of (MMET 1997a, 1997b) was assisted by the Canadian International Development Agency).

The former Ministry of Mines, Environment and Tourism reviewed all the laws that dealt with natural resources and environmental management in Zimbabwe (MMET 1998b). The results of these reviews revealed major weaknesses in the current laws. Most of the laws are outdated, they no longer serve present and future environmental management needs, and they do not reflect the concept of sustainability. They are based on the ‘command-and-control’ principle and focus on licensing and granting permits for various activities. The laws also emphasise the need to prosecute offenders. However, most of the fines for various offences are now unrealistically low and, thus, ineffective in comparison with the environmental damages that will have taken place due to an offence having been committed.

At present, environmental laws in Zimbabwe fall under the auspices of several agencies and remain fragmented. In most cases, related environmental resources are managed by different agencies that do not always coordinate the implementation of environmental management initiatives. There are also cases where the intention of one law may conflict with another when dealing with environmental management. For example, the Mines and Minerals Act places minimal requirements on environmental management of decommissioned mines, which has led to water pollution arising from abandoned mines. On the other hand, the Water Act strictly controls the occurrence of water pollution.

<table>
<thead>
<tr>
<th>Act or policy</th>
<th>Key elements</th>
<th>Implementing authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Management Bill, draft of 2002, currently before Parliament</td>
<td>When approved by Parliament, the Bill will repeal the Natural Resources Act (Chapter 20:13), the Atmospheric Pollution Prevention Act (Chapter 20:03), the Hazardous Substances and Articles Act (Chapter 15:05) and the Noxious Weeds Act (Chapter 19:07). The Bill proposes to create a framework for environmental management, make provision for the formulation of environmental quality standards, (e.g. air, water, noise, effluents, waste and hazardous substances), and develop a national environmental action plan. The Bill requires EIAs to be undertaken for prescribed activities, and specifies procedures for the administration of the EIA process.</td>
<td>Ministry of Environment and Tourism</td>
</tr>
<tr>
<td>Environmental Impact Assessment Policy, August 1997</td>
<td>The Policy requires that the authorities responsible should not grant permits to projects that are prescribed for EIA before such EIA has been undertaken, reviewed and accepted by the Department of Natural Resources. EIA is regarded as part of project planning.</td>
<td>Ministry of Environment and Tourism</td>
</tr>
<tr>
<td>Natural Resources Act (1941, Chapter 20:13)</td>
<td>The Act aims to conserve and improve natural resources (soil, water, minerals, animals, vegetation, wetlands). It provides for the formation of a Natural Resources Board to disseminate information on the conservation of natural resources. It also provides for the construction of works (i.e. landowners can be requested to construct works such as contour ridges) for the conservation of natural resources.</td>
<td>Ministry of Environment and Tourism</td>
</tr>
<tr>
<td>Water Act, No. 31 of 1998</td>
<td>The Act regulates the planning and development of water resources, and provides a framework for allocating water permits. The Water (Waste and Effluent Disposal) Regulations of 2000, which are associated with this Act, specify what quality is acceptable in terms of effluent released into rivers.</td>
<td>Ministry of Rural Resources and Water Development</td>
</tr>
<tr>
<td>Forest Act, (1949, Chapter 19:05)</td>
<td>The Act provides for demarcating forests and nature reserves, conserving timber resources, regulating trade in forest produce, and regulating the burning of vegetation.</td>
<td>Ministry of Environment and Tourism</td>
</tr>
<tr>
<td>Parks and Wildlife Act (1975, Chapter 20:14)</td>
<td>The Act establishes national parks, botanical reserves and gardens, sanctuaries, safari areas and recreational parks; provides for the conservation and control of wildlife, fish and plants; and designates specially protected animals and indigenous plants.</td>
<td>Ministry of Environment and Tourism</td>
</tr>
</tbody>
</table>
The now restructured Ministry of Environment and Tourism (MET) has proposed several reforms to legislation dealing with the environment. For example, the Environmental Management Bill currently under parliamentary review aims to overcome prevailing environmental management problems arising from weaknesses in the existing laws. The Bill, which endeavours to provide an integrated framework for environmental management, renders other laws on matters relating to environmental management as obsolete. The Bill is discussed in more detail in the sections below.

**EIA policy**

At present, EIA is not a legal requirement in Zimbabwe, since the Natural Resources Act (1941, Chapter 20:13) does not directly cover EIA. In recognition of this shortfall, the Government of Zimbabwe published the EIA policy in 1997 (MMET 1997a). This policy will complement future EIA or environmental management legislation.

The main principles of the EIA policy are given below (MMET 1997a):

- EIA must enhance development by contributing to its environmental sustainability, not inhibit it.
- EIA is a means for project planning, not just evaluation.
- Project impacts are to be monitored and managed throughout the life of the development.
- The policy depends on the normal regulatory functions of the authorities responsible to implement EIA results.
- The policy involves the participation of all government agencies with a mandated interest in the project thus evaluated, monitored and managed, and
- Particular attention is to be given to the distribution of project costs and benefits.

The main weakness of the EIA policy stems from its lack of legal backing: it has to rely on the relevant authorities to enforce the need to have EIAs undertaken. These authorities do not always include the EIA report's recommendations in the conditions for permitting developers to proceed with a project.

Another weakness is that although the policy gives a list of projects that are subject to EIAs, it does not specify the limits or

---

**Table 6: Key policies and laws relating to environmental management (continued)**

<table>
<thead>
<tr>
<th>Act or policy</th>
<th>Key elements</th>
<th>Implementing authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communal Land Forest Produce Act (1988, Chapter 19:04)</td>
<td>The Act controls the use of wood resources within communal lands. Such resources in communal lands should be used for domestic purposes by the residents only.</td>
<td>Ministry of Environment and Tourism</td>
</tr>
<tr>
<td>Atmospheric Pollution Prevention Act (1971, Chapter 20:03)</td>
<td>The Act aims to prevent and control atmospheric pollution. A registration certificate is required before any activities are undertaken that will emit gases defined as ‘noxious’ or ‘offensive’. The certificate is issued on condition that measures are put in place to control the emission of noxious or offensive gases.</td>
<td>Ministry of Health and Child Welfare</td>
</tr>
<tr>
<td>Rural District Councils Act (1969, Chapter 29:13)</td>
<td>The Act allows for the establishment of Rural District Councils responsible for initiating and regulating development in rural areas.</td>
<td>Ministry of Local Government and National Housing</td>
</tr>
<tr>
<td>Hazardous Substances and Articles Act (1972, Chapter 15:05)</td>
<td>The Act regulates the transport, storage, trade and disposal of substances classified as ‘hazardous’.</td>
<td>Ministry of Health and Child Welfare</td>
</tr>
<tr>
<td>Fertiliser, Farm Feeds and Remedies Act (1953, Chapter 18:12)</td>
<td>The Act provides for the registration of fertilisers, farm feeds, and sterilising plants. It also regulates the importation and sale of fertilisers and farm seeds.</td>
<td>Ministry of Lands and Agriculture</td>
</tr>
<tr>
<td>Trapping of Animals (Control) Act (1974, Chapter 20:21)</td>
<td>The Act prohibits making, possessing or using certain types of traps, and specifies the purposes for which animal trapping is permitted.</td>
<td>Ministry of Environment and Tourism</td>
</tr>
<tr>
<td>Noxious Weeds Act (1927, Chapter 1907)</td>
<td>The Act requires owners of, or occupiers on, specified land to clear any noxious weeds that may occur on such land.</td>
<td>Ministry of Lands and Agriculture</td>
</tr>
<tr>
<td>Plant Pests and Diseases Act (1959, Chapter 1908)</td>
<td>The Act provides for the eradication and prevention of the spread of plant pests and diseases.</td>
<td>Ministry of Lands and Agriculture</td>
</tr>
<tr>
<td>Prevention of Cruelty to Animals Act (1960, Chapter 1909)</td>
<td>The Act prohibits activities considered cruel to animals.</td>
<td>Ministry of Environment and Tourism</td>
</tr>
</tbody>
</table>
ranges regarding size, area, etc. within which such studies are to be conducted. This may result in EIAs being undertaken for insignificant projects, resulting in time delays and unnecessary expense, or not being undertaken at all for projects that may have a high impact on the environment.

**Environmental Management Bill**

The Environmental Management Bill, drafted in 2002, has been submitted to Parliament for review. The Bill proposes the preparation of a ‘National Environmental Action Plan’ to detail measures for protecting ecological processes, the sustainable utilisation of ecosystems, and the environment. Environmental management plans (EMPs) for activities that affect the environment are also dealt with. The development and production of environmental quality standards relating to air, water, soil, noise, vibration, radiation, effluent and waste are also seen as part of the process.

The Bill seeks to legalise the current EIA policy and harmonise the existing environment-related legislation. All the requirements of the policy have been included, along with some additional requirements. For example, the Bill proposes that when an EIA has been undertaken and is found satisfactory, a certificate with a validity period of two years will be issued; the current EIA policy places no time limit on the validity of the EIA Acceptance.

The Bill proposes that environmental audits be undertaken, and that no other legislation will be able to override EIA requirements.

**EIA guidelines**

In 1997, the MMET published EIA guidelines to facilitate the implementation of the EIA policy. These guidelines cover the following sectors:

- Mining and quarrying
- Forestry
- Agriculture
- Transport
- Energy
- Water
- Urban infrastructure, and
- Tourism.

For each of these sectors, the guidelines provide examples of major activities that are likely to be undertaken for projects in that sector; the type of environmental impacts; possible measures for managing such impacts; sample terms of reference; and sources of information for use in an EIA study.

Government authorities, developers and EIA practitioners use the guidelines, which provide valuable assistance in implementing EIAs and improving the quality of sector-specific EIAs.

**Emission standards**

The Water (Waste and Effluent Disposal) Regulations of 2000 specify acceptable qualities of effluent or wastewater for release into streams. The regulations are based on the ‘polluter pays principle’. Effluent quality is classified into four categories ranging from safe to high hazard, and permits are issued accordingly.

The Atmospheric Pollution Prevention Act (1971, Chapter 20:03) regulates the emission of what are defined as ‘noxious’ or ‘offensive’ gases. Activities emitting such gases require a registration certificate that prescribes measures for preventing or controlling emissions into the atmosphere. Although regulations for atmospheric pollution have been developed, these only deal with stack emissions in general and stack height. At present, there are no comprehensive emission standards for potential gaseous pollutants.

Where there are no Zimbabwean standards available (e.g. for noise, vibration, radiation, and hazardous wastes), internationally accepted standards such as those of the World Health Organisation and World Bank are referred to.

**Constitutional clauses protecting the environment**

The current Constitution of Zimbabwe (GRZ 1996) has no clause that specifically protects the environment. The existing legal instruments have been used in a few cases to protect the environment. Typically, the cases taken to court involved pollution of water by effluent from industrial and municipal operations. Examples of cases include the following:

- The Department of Water Development has on several occasions fined the City of Harare for disposing effluent that did not satisfy the Water (Waste and Effluent Disposal) Regulations.
- The Department of Water Development fined the Chitungwiza Town Council for discharging effluent that did not comply with the regulations.
- A private pulp and paper company was fined by the Department of Water Development for discharging effluent into a river that also did not comply with the regulations, and
- Farmers using irrigation water from the Manyame River have sued the City of Harare for polluting it.

In most cases, fines are paid but these are largely ineffectual. With the revised regulations of 2000 (Water Act, No. 31 of 1998 and the Water (Waste and Effluent Disposal) Regulations 274/2000), penalties include substantial fines and shutting down of operations. The realisation is growing that legislation can be used to protect the environment. As a result some of the sentences against offenders have been made more stringent to reflect the need to improve environmental management.
Institutional profile

The Department of Natural Resources (DNR) in the MET implements the EIA policy. Figure 5 illustrates the relevant decision-making structures.

Staffing and training

The DNR has one member of staff in the EIA Unit based in Harare, who is responsible for coordinating the implementation of the EIA policy. Staff in each of the eight provinces assist in policy implementation for projects in their districts.

The MET held several EIA training courses for its staff during the 1990s. For example, the Institute of Environmental Studies of the University of Zimbabwe, together with the MET, undertook one-week EIA training workshops for government officers in each province from 1997 to 1998. The DNR acknowledges that some of their staff at provincial and district levels need more EIA training. However, no in-house training has been done since 1998. Members of staff have been encouraged to undertake postgraduate studies in order to improve their skills. Thus, since 1995, several DNR and MET staff members have successfully completed MSc degrees in Environmental Policy and Planning at the University of Zimbabwe. However, five of these members of staff have subsequently left the DNR.

The DNR has experienced a high turnover of staff with EIA skills. During the last eight years the DNR has lost five EIA specialists, and currently relies on one person to coordinate all EIA activities. The major reason for the loss of staff is poor remuneration in the public service. Those who left the DNR have joined non-governmental organisations (NGOs) and universities locally, regionally and abroad.

The DNR, like most government departments in Zimbabwe, faces severe shortages of funds and technical resources. The EIA Unit should ideally have three persons, but it currently only has one. Staff in the EIA Unit usually have to undertake other duties such as developing an environmental information system in addition to their ordinary tasks. Usually, specialised staff would have undertaken those duties.

Monitoring

The DNR is responsible for ensuring EIAs are implemented, and for monitoring projects to ensure that the terms and conditions under which development permits were granted are met. In practice, however, due to severe staff shortages, the ability of government personnel to undertake monitoring related to EIA is very limited in the short to medium term.

Permit system

In the main, the Regional, Town and Country Planning Act (Chapter 29:12) controls permits for new projects. The Act defines municipal or town councils, rural district councils, and local boards as local planning authorities that are required to draw up local plans to control development. These local planning authorities are empowered to control development projects by granting permits. In order for a project to be granted a permit at a particular location, the relevant proposal needs to agree with the master and local plans, which specify how the land within the area covered is to be used. Thus, a project can only be approved at a particular location if it falls within the designated land-use zone. In addition, since local planning authorities are required to implement the EIA policy, an EIA should be undertaken and approved before they issue a development permit to a project prescribed for EIA.

The MET is regarded by the Regional, Town and Country Planning Act as a local planning authority for parks and wildlife land, as well as for areas designated as forest lands. The MET issues development permits for these areas, and is responsible for ensuring that proposed developments are in agreement with the local plans for these areas. The EIA policy specifies that before a project can commence in these areas an EIA must be undertaken.

The Mines and Minerals Act regulates mining projects. Applications for mining permits are, therefore, made to the now restructured Ministry of Mines. Although the provisions of the Regional, Town and Country Planning Act do not apply to mining projects, Government requires that EIA policy conditions be met for these projects as well.

Permits for the abstraction and storage of water are granted in accordance with the Water Act.

Fig. 5: The EIA decision-making pathway

Decentralisation of EIA administration

The implementation of the EIA policy is centralised as it is the responsibility of the DNR in Harare, but provincial and district DNR staff participate in the review of EIA reports. There have been recommendations to decentralise the administration of the policy to provincial levels, but this is not likely to happen soon in view of staff shortages. It is also not likely that Government will outsource the administration of EIA in Zimbabwe, as the implementation of this policy is regarded as a key regulatory function of national government.
**The use of EIA over the past ten years**

The EIA policy was implemented in 1994, but the DNR only has information on EIAs undertaken since 1995. Figure 7 illustrates the total number of EIAs undertaken for each sector since 1995. Most EIAs were undertaken for tourism projects, followed by mining, industry and water development projects. Road construction and fishery projects have had the lowest number of EIAs. Typically, this trend can be linked to growth areas in Zimbabwe. No strategic EIAs have been reviewed by the DNR.

Figure 8 illustrates trends in the implementation of EIAs. The number of EIAs increased from 17 a year in 1995 to between 37 and 40 a year from 1998 to 2001. The number of EIAs declined in 2000, however, and further decline is anticipated due to the current decrease in development activities and the overall economic downturn.

**When is an EIA required?**

Zimbabwe’s EIA policy specifies the type of projects that are subject to the EIA process. These ‘prescribed activities’ are listed in Table 7 (page 312).

As the list of projects prescribed for EIA does not have thresholds, according to the EIA policy, any developer wishing to undertake a prescribed activity has to submit a prospectus in order for the DNR to determine if an EIA should be undertaken.

The EIA policy provides screening guidelines that the DNR uses to determine the level of the EIA to be undertaken. According to these guidelines, a project will be exempt from undergoing an EIA if:

- it does not utilise natural resources to an extent that current and future use of these resources will be affected
- the potential environmental impacts are minor and can be easily managed
- the type of project, its environmental impacts and measures for managing these impacts are clearly understood in Zimbabwe
- the environmental impacts and the measures for managing them have already been clearly incorporated into the project design
- it will not displace a significant number of people
- it is not undertaken in environmentally sensitive areas like national parks, wetlands, productive agricultural land, sites protected by legislation, or sites with rare or endangered species
- it will not result in significant emissions of pollutants, or release of waste materials whose disposal is not covered by existing legislation, and
- the public will not be concerned about the project’s environmental impacts.

The size of the project and the potential to displace people are regarded as particularly important criteria.

The EIA policy does not require the production of an initial EIA, as is the case in some other countries. The prospectus,
which seems most closely aligned to the concept of an initial EIA, is required for all prescribed activities. The following information is to be presented in the prospectus:

- Description of the proposed project
- Status of the project, i.e. whether it is at the feasibility, planning, design or implementation stages, and
- Known environmental impacts.

According to the EIA policy, a developer should be able to prepare a prospectus without assistance from environmental specialists. Thus, a prospectus may or may not be the same as an initial EIA, depending on the amount of information covered.

If an EIA is required, the developer is obliged to undertake this study and to submit the related report to the DNR for review. According to the EIA policy, the DNR is empowered to issue an official EIA Acceptance if a review of the EIA report establishes that all potential environmental issues have been considered, and acceptable mitigation measures for environmental impacts have been included. The developer then seeks the permission of the relevant authority to have the project approved for implementation (see Figure 6).

The undertaking of strategic environment assessments is not yet a requirement in Zimbabwe although the MET recognises their value in environmental management.

Public participation

Public participation is a requirement of the EIA process. The EIA policy states that the public should participate during the preparation and review of EIA reports. In practice, this has been limited to consultations with communities that are likely to be affected by the proposed project. These consultations have been aimed at identifying potential impacts and determining which mitigation measures would be acceptable to the communities concerned. The methods used to glean opinions from the community likely to be affected include questionnaire surveys, group discussions and formal meetings that are often chaired by local leaders. Nonetheless, public hearings have been conducted in very few EIA studies dealing with very large projects. The public are also not sufficiently aware that they can make a valuable contribution to the EIA review process.

The involvement of NGOs in the EIA process has generally been limited to providing information to EIA study teams. Thus, those undertaking EIA studies will often consult NGOs operating in the area where a project has been proposed, in order to get baseline information. In some cases, however, NGOs have lobbied for EIAs to be undertaken for proposed projects. This type of lobbying tends to be limited to NGOs representing special interest groups, e.g. wildlife and birds. Rarely have NGOs lobbied for EIAs on behalf of rural communities.

The centralisation of EIA report reviewing has not facilitated public participation in the review process. Even when the public is requested to make an input such as providing comments on proposed land-use plans, comment is not usually forthcoming. Thus, a culture of having the public participate in decision-making still has to be developed.

Media coverage

Both the electronic and print media occasionally cover environmental issues. In most cases, the media do not take a leading role in bringing environmental issues to the fore, but tend to compile reports based on politicians’ statements. Rarely do the media undertake their own investigations of environmental issues, which is largely because no environmental experts work in the media.

The issues that tend to be covered in the media are as follows:

- Pollution of water sources, especially of the lakes supplying Harare with water
- Deforestation
- Illegal cultivation within river valleys
- Siltation of water bodies, and
- Environmental problems associated with the extraction of alluvial gold by the informal sector.
### Table 7: Prescribed activities subject to the EIA process

<table>
<thead>
<tr>
<th>Sector</th>
<th>Prescribed activity</th>
</tr>
</thead>
</table>
| Agriculture                      | • New land development for agricultural production  
• Subdivision of land  
• Feed lots  
• Drainage and irrigation  
• Drainage of wetlands  
• Irrigation schemes  
• Conversion of natural woodland to other uses within the catchment  
• Conversion of forest land to other uses  
• Area of reservoirs used for water supply, irrigation or hydropower generation, or areas adjacent to national parks  
• Industry involving the use, manufacture, handling, storage, transport or disposal of hazardous or toxic materials |
| Dams and man-made lakes           | • Chemical plants  
• Iron and steel smelters and plants  
• Cement plants  
• Petrochemical plants  
• Smelters other than iron and steel  
• Pulp and paper mills  
• Lime plants  
• Tanneries  
• Agro-industries  
• Breweries  
• Oil and gas exploration and development  
• Pipelines  
• Oil and gas separation, processing, handling and storage facilities  
• Oil refineries  
• Thermal power stations  
• Hydropower schemes  
• High voltage transmission lines  
• Resort facilities and hotels  
• Marinas  
• Safari operations  
• Toxic and hazardous waste  
• Incineration plants  
• Recovery plants  
• Off-site wastewater treatment plants  
• Landfill facilities  
• Off-site storage facilities  
• Municipal solid waste  
• Municipal sewage, waste treatment plants, outfalls into aquatic systems, and effluent water irrigation schemes  
• Groundwater development for industrial, agricultural or urban water supply  
• Major canals  
• Cross-drainage transfers  
• Major pipelines  
• Water withdrawals from rivers or reservoirs |

The media rarely cover EIA studies and related reports, and developers do not usually use the media as part of their consultative process. Thus, EIAs that have been covered by the media usually focus on controversial issues arising between developers and the relevant authorities. The media have rarely been used to present an analysis of EIA studies such as potential impacts, mitigation measures and reviews. Even the views of the communities that are likely to be affected are not usually presented in the media.

**Quality assurance process**

The requirement for the DNR to approve the terms of reference for an EIA study along with the proposed EIA team is one measure towards ensuring that EIAs are of acceptable quality.

Quality assurance is also enhanced by the need to have EIA reports reviewed by the DNR and representatives of other government departments that deal with issues covered in the EIA report. The DNR can also invite experts from outside the public service to review EIA reports. In addition, the authorities responsible are required to ensure that they do not approve prescribed projects before an official EIA Acceptance has been granted. The granting of an EIA Acceptance means that an EIA report, adequately covering all the relevant issues, has been reviewed and accepted by the DNR.

The rapid staff turnover that most government departments – including the DNR – experience adversely affects the quality of the review of EIA reports.

A review of some of the EIAs undertaken so far shows that EIAs for large-scale projects proposed by large corporations are usually of a high quality. Some of these organisations already have their own environmental policies with EIA requirements, or are required to meet the standards of the project-funding agency. Such organisations may also have environmental specialists or environmental officers in their employ. In addition, these organisations usually have sufficient financial resources to enable them to recruit qualified personnel to carry out EIA studies.

Where consultants undertake an EIA for developers who do not have knowledge of EIA and often have poor funding resources, they are generally of poor quality. In some cases, only one person has prepared an EIA report – as opposed to the recommended multidisciplinary team. Such reports have been prepared in order to satisfy the minimal requirements of the EIA policy with very little influence over the design and implementation of the project.

**Accreditation of EIA practitioners**

EIA practitioners do not require accreditation in Zimbabwe. Usually, developers of large projects who require the services of EIA practitioners advertise a request for proposals from interested parties. For most EIAs, however, developers informally approach individuals who are often freelance consultants.

The DNR maintains a database of persons who have undertaken EIA studies. This information is collected from past EIA reports submitted to the DNR. If a developer does not know whom to approach, the DNR can recommend appropriate persons. In addition, the Environmental Forum of Zimbabwe and the World Conservation Union in Zimbabwe sometimes provide guidance and recommendations based on their informal databases of EIA practitioners.

The lack of an accreditation system has in some cases enabled those without the necessary expertise and experience to undertake EIA studies on behalf of developers. This can lead to major problems when the DNR does not approve the EIA report. The DNR has, therefore, recognised the need for an accreditation mechanism.

**Local vs. expatriate consultants**

Most EIA studies have been undertaken by local experts due to the availability of trained personnel in various fields and the requirements for local knowledge. These experts are based at universities or in consulting companies, or operate as freelance consultants. Where expatriate or foreign consultants have been used they have often been part of a large team undertaking planning of very large projects, e.g. mining.

An examination of 212 EIA reports prepared since 1995 reveals that 68% of the reports were prepared by private consulting companies, 18% by freelance consultants, 9% by Government and local government personnel, and 5% by NGOs.

**Funding for EIA studies**

The EIA policy states that project developers are responsible for preparing EIA reports, and that they are obliged to meet the costs of undertaking these studies and of compiling the required reports. However, contrary to emerging practice in other countries, developers in Zimbabwe do not pay for the review of EIA reports, and there is no EIA submission fee. The Government of Zimbabwe covers the costs for reviewing EIA reports and for any monitoring that may be required.

**Review of EIAs**

The DNR reviews the project prospectus that developers submit to determine if an EIA study should be undertaken, and which key issues the EIA study should consider. In addition, the DNR is responsible for reviewing EIA reports. Where the DNR believes it does not have adequate expertise to review EIA reports for some projects, other government departments with the required skills are requested to undertake the review. The DNR can also invite experts outside government, e.g. the Forestry Commission, the University of Zimbabwe or the Zambezi River Authority, to assist in the review of EIA reports.

During the review process, the DNR can ask the developer for additional information. If the review of an EIA report concludes that all the relevant issues have been considered and acceptable mitigation measures have been included, the DNR will issue an official EIA Acceptance. Thereafter, the developer can apply to the relevant authorities for project approval.

The DNR has developed a formal system for reviewing EIA reports. As part of the review process, the reviewer checks whether the following aspects have been adequately addressed:
COUNTRY REPORTS

- Satisfaction of the terms of reference
- Consideration of key issues
- Scientific and technical soundness of data collection and analysis methods
- Presentation of information in such a way that it is understood by the public, and
- Adequate presentation of information about the environmental consequences of a project, and provision of a basis for decision-making.

The reviewers are requested to score each of the main topics covered in the EIA report. The overall score of the EIA report is the average of the scores for each topic. The possible conclusions from this review are as follows:

- The report has adequately addressed all the issues.
- The report is satisfactory although there are minor omissions.
- The report is generally satisfactory, but there is a need to provide additional information on some aspects.
- The report is not satisfactory and a revised report should be submitted, or
- The report did not address relevant issues.

The EIA policy states that the review process should be undertaken within 60 days. If this deadline is not met the developer can assume that an EIA Acceptance has been granted. However, in practice, most developers (especially for large projects) seek to obtain official EIA acceptance in order to safeguard themselves from any future repercussions. Developers have ten days to lodge an appeal with the Ministry if their project has been turned down.

**Incorporation of EIA results in decision-making**

During the early to mid-1990s when the EIA policy had just been put in place, most EIAs were undertaken only after projects had already been planned and approved. Currently, most of the authorities that issue permits, e.g. local authorities and government agencies, are aware of the need to have EIAs undertaken prior to project approval.

Some project designs incorporate the recommendations of EIA reports. However, a key weakness is that the recommendations made in these reports (i.e. the environmental management plans, EMPs) are not always included as part of the conditions for project implementation. This is partly a result of the lack of legal backing for the EIA policy. In addition, the DNR does not have adequate human and technical resources to check that EIA recommendations are being implemented. More recently with the increasing trend for companies to have corporate environmental management policies, EIA recommendations are included as part of their environmental management systems.

There is minimal involvement of civil society in ensuring that the results of EIA studies influence decision-makers. In general, public awareness and knowledge of EIA is low.

**Evolution of EIAs to EMPs**

EIAs are being undertaken in order to satisfy the EIA policy, which recognises EIA as a planning tool. According to the policy, an EIA study ideally results in the development of an EMP. The EMP is crucial to the process as it provides the framework for project implementation. The Environmental Management Bill also emphasises the need to have EMPs.

**EIA in the next ten years**

The analysis of EIAs undertaken from 1995 to 2002 indicates that the most important sectors for EIA are tourism (which accounted for 22% of EIAs), mining (17%), and industry (16%). It is anticipated that these will continue to be the most important sectors with regard to EIA.

Prior to the downturn in economic activities during 2000, tourism was experiencing rapid growth. At the time, this growth was anticipated to continue for the next ten years. Both large and small-scale mining are also likely to experience growth. In addition, with the recent restructuring of the agricultural sector and the review of land reform policies, growth in the rural development sector is anticipated. However, due to the current political and economic situation, it is difficult to predict future trends.

**Key successes and challenges**

**Successes**

There have been some key successes in implementing EIA in Zimbabwe, as discussed below:

- In developing the EIA policy, the Ministry of Environment and Tourism involved all key stakeholders and created an increased awareness of the need to improve environmental management in order to achieve sustainable development.
- The EIA policy was formulated through a transparent process with inputs from all the stakeholders. Consequently, the policy is widely accepted by both developers and agencies mandated to approve projects.
- EIA guidelines have been prepared for a range of sectors. The guidelines provide valuable assistance to authorities, developers and EIA practitioners.
- Major developers realise the benefits of undertaking EIAs and are complying with the requirements of the EIA policy.
- Most government agencies, including local authorities, assist with encouraging developers to undertake EIAs.
- The presence of the EIA policy has increased awareness of the need for environmental management training programmes. Most universities have undergraduate and postgraduate programmes that include EIA in their teaching. Short EIA training programmes are also available, and
- The need to have legal backing for EIA has been accepted, and the Environmental Management Bill, currently under parliamentary review, proposes to make EIAs mandatory.
Challenges
There are several challenges facing EIA in Zimbabwe:

- The entrenchment of environmental protection in the Constitution of Zimbabwe should be a long-term goal.
- The entrenchment of EIA in law will ensure that the requirement to undertake EIA for all proposed projects can be enforced.
- There is a need to ensure that all agencies mandated with granting development permits are committed to the implementation of the EIA policy and enforce its requirements.
- EIA report recommendations should be made part of the conditions for project approval and implementation, and should constitute a contractual obligation.
- Not all government agencies are informed of their responsibility for monitoring tasks in terms of an EIA report recommendation. There is, therefore, a need to put in place a mechanism for informing these agencies as well as for allocating additional resources to them, so that they can effectively discharge their mandates. A mechanism for periodically informing all parties concerned about the monitoring results, including the remedial measures that may be recommended, should be put in place.
- Some of the developers are only made aware of the need to undertake EIAs once they have completed their feasibility studies and they submit the project for approval. Thus, inculcating an awareness of EIA and its benefits among existing and potential developers needs to be considered. This will ensure that EIA is entrenched in the project cycle and is not only undertaken to satisfy conditions for project approval.
- EIA skills need to be developed, and only those with the necessary skills should be permitted to undertake EIA studies. This requires a system for accrediting EIA practitioners.
- The retention by the Department of Natural Resources of competent EIA specialists who can effectively review prospectuses, draw up terms of reference for EIA studies and review EIA reports will be a major challenge in view of the perceived poor remuneration in the public service. Similarly, the retention by other government agencies of highly skilled personnel who can participate in the review of EIA reports is a major challenge.
- Public awareness of the need for environmental protection and the benefits of a healthy environment should be raised. This can be achieved by a more substantial involvement from the Government and NGOs. An increased understanding of environmental issues by the media will also be useful as they are in a good position to inform and encourage feedback from the public.
- Ensuring that the public effectively participates in the EIA process is another challenge. Further decentralisation of the administration of the EIA process to provincial and district levels should facilitate public participation.
- Improving the collection, storage, retrieval and dissemination of information about various environmental resources will allow greater confidence to be placed in the data and findings of the EIA. At present, some of the monitoring systems are collapsing, and data are not readily available on some environmental attributes. Access to information is also problematic as environmental publications are not readily available.
- The development of environmental standards to be used as benchmarks for assessing environmental impacts is urgently required, and
- Services and facilities for effective environmental management and monitoring are limited. For example, Zimbabwe does not have a comprehensive environmental laboratory, and waste-management facilities are inadequate. For environmental management plans to be effective, such facilities need to be in place.

Victoria Falls – one of Zimbabwe’s main tourist destinations
Conclusion

It is fair to say that Zimbabwe has made some progress in the 1990s and early 2000s in implementing EIA as a tool and towards achieving sustainable development. The key focus has been on the improvement of the legal and regulatory framework required to ensure efficient management of the country’s resources. EIA policy and EIA guideline documents have been developed, and are being used by both government agencies and the private sector. The implementation of EIA is improving with time and can be said to be a useful environmental management tool in Zimbabwe. However, the need to legislate environmental management is crucial. The Environmental Management Bill, currently before Parliament, needs to be passed as a matter of urgency.

In the past, Zimbabwe has been successful in raising awareness as regards the need to undertake EIAs and to ensure that developments are implemented in a way that not only is environmentally sound, but also enhances socio-economic development. Nonetheless, there are significant challenges facing environmental management and sustainable development as a whole in Zimbabwe.

At government level, these challenges are primarily linked to the need to improve the enforcement of environmental management requirements. This, in turn, is linked to the limited availability of resources, including financial and human resources, along with the lack of monitoring equipment and management facilities. In addition, Zimbabwe is faced with significant socio-economic issues such as high population growth and densities, unemployment, pressure on the land, insufficient water supply, inadequate health and education facilities, food shortages, and minimal support from the international community. Tackling these issues plays a major part in reducing environmental degradation. National declines in economic growth and the unstable political environment may mean that Zimbabwe will only be able to tackle these issues in the long term.
Appendix 1: Case studies

The proposed Gwayi-Shangani Dam, 1995

Project aim
The City of Bulawayo and the surrounding region have experienced major water shortages in recent years, and water rationing has been common for both domestic and industrial use. The aim of this project, therefore, was to augment water supply to Bulawayo and to alleviate the problems associated with inadequate supplies.

Description of the project
• Located just below the confluence of the Gwayi and Shangani rivers, approximately 270 km northwest of Bulawayo
• Construction of a 200-m-long gravity arch dam at the confluence of the Gwayi and Shangani rivers
• Total storage: 691 million m³, with a surface area of 10,400 ha
• Volume of concrete: 198,000 m³
• Width of the reservoir: 3-4 km
• Length of the shoreline: 256 km
• 270-km pipeline to convey water to Bulawayo
• Four years of dam construction
• 1995 estimated cost: Z$213 million for dam construction

Alternatives
• Construction of a 320-km pipeline for abstracting water from the Zambezi River and conveying the water to Bulawayo: The preliminary 1993 cost estimate was Z$1,700 million, which would result in very high water prices. This alternative is plagued by a lack of political commitment, financial difficulties and low investor confidence.
• Construction of the Gwayi–Mgusa Dam, with a total storage of 291 million m³ and surface area of 5,260 ha: Yields are low, with estimates that the dam would provide additional water for only four years. The 1995 estimated cost was Z$27.5 million.

Main project activities
• Clearing of vegetation at the site
• Establishment of the site and construction of access roads
• Quarrying, sand abstraction and excavation for foundations
• Concreting the dam and the tunnel
• Construction of outlets, a spillway, the pipeline and reservoirs
• Employment of 200-250 people

Environmental setting
• Catchment area of the dam: 38,740 km²
• Mean annual rainfall: About 650 mm a year
• Mean annual run-off of the catchment: 17.8 mm a year
• Major vegetation types: mopane, miombo and teak woodlands
• Region is well endowed with wildlife in national parks and large-scale commercial farms
• Main local communities: Ndebele and Tonga
• Main land uses: Subsistence cultivation of maize, sorghum and millet under communal tenure, with livestock and game ranching in the large-scale commercial farming sector

Main environmental impacts
• Conversion from a predominantly terrestrial to an aquatic ecosystem
• Displacement of 110 households – about 880 people
• Flow regulation: Flooding of downstream stretches of the river will only occur once in 4.5 years instead of annually, and the dry-season flows downstream of the dam will increase due to water releases
• Influx of construction workers and disruption to local communities, and potential for increase in sexually-transmitted diseases, including HIV/AIDS
• Part of the land on 11 farms will be inundated with water: Some properties will lose up to 66% of their lands
• Flooding of the only road used by one community: Transport costs will increase by about 300% when alternative routes are developed
• Enhancement of water supply to the water-short region, and to Bulawayo City in particular
• Increased number of tourists

EIA process
Since dams are prescribed activities requiring an EIA, an appropriate study was undertaken. The following steps were followed during this process:
• The Department of Natural Resources, together with the Department of Water Development (the proponent), prepared the terms of reference for the EIA study.
• The Department of Water Development invited EIA practitioners to submit proposals for undertaking the study. A team comprising a hydrologist, social scientist, terrestrial ecologist, aquatic ecologist, agricultural economist, and a land-use planner was selected.
• Fieldwork, including public consultation, was undertaken.
• The data were analysed.
• The EIA report was prepared.
• The Department of Natural Resources and the Department of Water Development reviewed the EIA report.
• The EIA report was accepted, and
• The final decision on implementation involved Cabinet, since this was a national dam.

Key issues
• Conversion of a terrestrial ecosystem to an aquatic ecosystem
• Displacement of communities and compensation for flooded properties
• Health implications
• Improvement in water supply
• Distribution of benefits
• Cultural considerations
• Access to water and conflicts over water usage
• Growth in tourism and fishery development

Civil society participation
Representatives of the relevant local authorities were consulted for their views on the proposed dam project, as were traditional leaders in the project area. Public meetings were held in the communal area and attended by 190 residents. Another meeting was held with large-scale commercial farmers likely to be affected.

1 Human immunodeficiency virus / acquired immune deficiency syndrome.
**Information availability**
The proponent and the team undertaking the EIA study briefed communities that were likely to be affected by the project. Maps showing the location of the project and areas that would be flooded were presented to the communities. The communities openly discussed the perceived impacts and made suggestions on mitigation measures. These suggestions were presented to the proponent in the EIA report.

**Proponent response and involvement**
The proponent was represented during all the public meetings and answered some of the queries.

**Political response**
Politicians representing communities that would benefit from the project lobbied for its implementation.

**Process of EIA review**
The EIA report was reviewed by the Department of Natural Resources with inputs from the Department of Water Development. The EIA report was considered to have adequately addressed all the relevant issues.

**Decision-making process**
The results of the EIA study will influence the management of environmental impacts, e.g. relocation of households that would be displaced by the dam. Taking into account the need to improve water supply to the city of Bulawayo, Cabinet made the decision to implement the project. The EIA study did not identify any impacts that would warrant not implementing the project.

The project has not yet been implemented due to insufficient funds.

**Key lessons**
- The EIA for this project was undertaken in 1995, although the project may only be implemented in 2002 or 2003 – if funds permit. Accordingly, where such large and national projects take time to be implemented after the EIA study, provision needs to be made to update the relevant EIA. For example, some of the environmental conditions in the project area may have changed.
- Consulting the public about the potential impacts and acceptable mitigation measures minimises conflicts between the proponent and affected communities.
**Project aim**
The aim of the project was to create employment and generate income for the local community through the development of a tourist attraction. In addition, by controlling visits to the area, deforestation of the hills and disturbance of ancestral burial grounds would hopefully be reduced.

**Description of the project**
- **Location:** Ngomakurira Hills in the Domboshawa District, approximately 20 km north of Harare
- **Community-based ecotourism project**
- Conversion of hills currently used for grazing, fuelwood collection, harvesting of wild fruits, and uncontrolled visitors into a properly managed tourist facility
- **Main attractions:** Hill climbing, and viewing Bushman paintings and ancestral burial grounds

**Alternatives**
The alternative was to continue with the current land uses that are causing deforestation and uncontrolled visits to sites of national cultural value.

**Main project activities**
- Fencing-off of the hills
- Construction of chalets, an information centre, and ablution facilities
- Borehole development
- Employment of tour guides
- Sightseeing by tourists (hill climbing, rock art, caves, 4x4 trails)

**Environmental setting**
- Granitic topography with domed inselbergs
- Miombo woodland dominated by *Brachystegia* spp., *Julbernardia globiflora*, *Parinari curatellifolia*, and *Uapaca kirkiana*
- Wildlife species consist of hare, duiker, klipspringer, wild pig, monkey and baboon
- Several bird species, e.g. black and martial eagles
- Site occurs in communal lands
- Rock paintings and caves are protected by the National Museums and Monuments Act (Chapter 25:11).
- Caves date back to 2000 BC

**Main environmental impacts**
- Loss of current sources of fuelwood
- Loss of grazing lands
- Intrusion by foreigners
- Conflict between trail walkers and 4x4 vehicles
- Increase in solid wastes
- Reduction in vegetation loss
- Conservation of cultural and archaeological sites
- Creation of employment
- Increased revenue to the local community and local authority

**EIA process**
The EIA study was undertaken at the planning stage. The study was undertaken in order to fulfill requirements set by Zimbabwe’s EIA policy, and as a condition imposed by the funding agency. Consultations were undertaken with the local authority, the local community and relevant government departments.

**Key issues**
- Conservation of natural, cultural and archaeological resources
- Management of uncontrolled visits to sites that are of immense value to local communities

**Civil society participation**
Wide consultations were undertaken within the local community. Both traditional and elected local leaders assisted in presenting the views of the community.

**Availability of information**
The local community initiated the project with the assistance of the local authority, which meant that all the relevant information was available.

**Proponent response and involvement**
Since the local authority and local community constituted the proponent, they were involved in the project planning and were keen to minimise adverse environmental impacts.

**Political response and involvement**
The local leadership ensured that all concerns were considered.

**Process of EIA review**
The Department of Natural Resources and the Department of Museums and Monuments reviewed the EIA report.

**Decision-making process**
Recommendations of the EIA study were taken into account by the local authority in granting the permit for this project.

The project is currently being implemented. Although not confirmed, it is unlikely that any post-EIA or environmental management plan implementation monitoring has taken place due to the limited number of staff at the Department of Natural Resources.

**Key lessons**
Projects of this nature have significant and positive environmental impacts that far outweigh the negative impacts. Extensive consultation with the local community allowed for the positive impacts and benefits to be identified at the start of the project, and hence facilitated the EIA process.
Project aim
To develop a world-class diamond mine for the benefit of the people of Zimbabwe and for Rio Tinto shareholders. The developer was Rio Tinto Zimbabwe Ltd. with a joint venture partner, Tinto Holdings Zimbabwe Ltd.

Description of the project
- Location: Murowa Ward, Zvishavane District, Midlands Province, Zimbabwe
- Open-pit excavation of three kimberlite pipes to a depth of up to 250 m to mine diamonds, with a mine life of at least 20 years
- Waste-rock dumps covering some 230 ha and up to 60 m high
- Process plant, involving crushing mined ore and diamond extraction processes
- A tailings dam covering 200 ha
- Permanent employment of at least 150 people
- Outsourcing of non-core activities
- Mine village
- Waste disposal site, including an engineered cell for hazardous waste
- Sewage works
- Office blocks and workshops
- Security fence around the 1,200-ha mine site
- Upgrading of existing access road
- Water supply dam and pipeline
- Relocation of 145 families to a new area

Alternatives
The no-project option would result in little change to the poverty and diminishing livelihoods of the affected community, and would not boost the country’s foreign exchange earnings and gross domestic product (GDP).

Environmental setting
- Flat to gently undulating topography with granite inselbergs characterise the site.
- The site has poor, sandy soils.
- The site lies in the Runde River catchment, a major tributary of the Save River.
- The granite inselbergs have retained their original vegetation (Brachystegia woodland), but most of the woodland in the flatter areas has been cleared for agriculture.
- No large mammals occur on the site, but smaller mammals and reptiles are common, especially on the inselbergs and along the rivers.
- Three minor archaeological sites occur, two of which may be affected by the project.
- Dryland subsistence agriculture (maize, sorghum and millet), with domestic livestock, is the primary land use in the area.
- The entire project site lies in communal lands.
- The Murowa Ward is characterised by a high population density, with large household sizes.
- There is rudimentary development of infrastructure at and around the site (roads, tracks, railway, public transport, health facilities, telephones and power lines), but no water supply or sanitation infrastructure.
- The entire project site lies in communal lands.

Main environmental and social impacts
- The requirement of 1,200 ha of land for the project, necessitating the relocation of approximately 145 families
- Impacts of the new settlement area
- Disruption of the social fabric of the community
- Relocation of graves and loss of spiritual sites
- Loss of access to the mine plan area, thereby reducing arable land and access to other natural resources, as well as impeding access to the river
- Noise, dust and visual impact during construction and operation
- Increased safety hazard
- Negative health impacts, especially HIV/AIDS and respiratory diseases
- Closure means a loss of employment and permanent loss of land (400 ha)
- Direct and indirect employment opportunities
- Skills development and training opportunities
- Opportunities for small business development
- Increased policing and other services
- Direct economic benefits to the local community and the country
- Minimal impact on biodiversity

Management plans
A social management plan and an environmental management plan (EMP) were drawn up. The social management plan included issues such as guidance to manage social change, definition of accountability, responsibility and reporting procedures, definition of performance indicators and targets, establishment of a framework to measure social performance and apply remedial actions when necessary.

The EMP covered aspects such as sound and sustainable management of soils, water quality, noise, fauna and flora, air quality, visual aspects and archaeology, a rehabilitation methodology, a waste management plan, emergency response procedures, definition of responsibilities and reporting procedures, worker training and awareness, and audit procedures.

EIA process
- The project prospectus was submitted to the Department of Natural Resources, and was approved on condition that a full EIA be conducted.
- Terms of reference for the EIA were also submitted to the Department of Natural Resources for approval, which was granted.
- The EIA process that followed complied with Zimbabwe’s EIA policy, as well as the Rio Tinto policies. In addition, the EIA covered activities when necessary.
- Specialist studies included —
  - a community baseline study
  - a study of resource use
  - a health study
  - a socio-economic investigation
  - surveys of existing flora, fauna, aquatic ecology, hydrology, hydrogeology, noise, soils, land use, archaeology and palaeontology
  - air quality analyses, and
  - a visual assessment. 

1 Land without title, held in trust for the community by the Chief and incorporating a traditional right to occupancy.
2 Human immunodeficiency virus / acquired immune deficiency syndrome.
• The EIA consultant was a full, participating member of the project planning team. The final designs and project layout were developed in close liaison with this team to eliminate or at least minimise impacts at the planning stage. The Precautionary Principle was applied throughout.
• The impact assessment was based on the severity, duration and extent of impacts, linked to an estimate of the probability of occurrence and the sensitivity of the impact receptor.
• The proponents required that a social management plan and an EMP be developed within a framework of sustainable development. These were developed in conjunction with the project team.
• A closure plan was developed in accordance with the Rio Tinto guidelines for closure.
• A non-technical overview of the EIA was produced for general distribution.

Civil society participation

There were several levels of engagement:
• A public involvement process, as required by the EIA Policy
• An ongoing community relations strategy, including a community baseline study as per the Rio Tinto policy, and
• A socio-economic survey and a community ‘visioning’ exercise.

The public involvement process included —
• distribution in the local community of leaflets and posters written in Shona
• distribution to all interested parties and authorities of a background information document and invitation to participate
• media notices
• nine meetings with local communities, and local and national interested parties and authorities
• the provision of reply forms and comments boxes, and
• the distribution of minutes of all the public meetings, focus group meetings and interviews, and feedback meetings.

Proponent response and involvement

There was a high degree of interaction between the proponent and the EIA team. A number of impact mitigation and avoidance measures were applied during the planning phases, such as —
• reduction in size of the mine footprint, and hence in the size of the project area and relocation requirements
• exclusion of a livestock dam from within the originally proposed mine plan area
• realignment of the perimeter fence to allow greater access to the Runde River
• construction of a bypass road to reduce traffic impacts on the village of Murowa
• construction of a mine village and adoption of the commute option to reduce social impacts
• deployment of a community development facilitator and establishment of a local community relations office in the Murowa Business Centre
• temporary relocation, crop compensation and inconvenience allowances for families affected by exploration activities
• design of waste-rock dumps to blend in with the topography
• incorporation of a fish ladder into the weir
• revised location of infrastructure and the contractor’s camp to reduce impacts, and
• implementation of acceptable waste-disposal methodologies.

Political response

Difficulties have been experienced in implementing the requirements of an involuntary resettlement programme in parallel with, or within, Government’s national resettlement programme. This has resulted in delays in project implementation.

Process of EIA review

The EIA process included an internal review team, comprising specialist staff from Rio Tinto’s offices in London and Brisbane. The completed EIA is to be subjected to further independent review as part of the risk-assessment process.

Decision-making process

The EIA is to be submitted once Government has approved the relocation plan.

Key lessons

• The inclusion of the EIA team in the project design team resulted in an ‘outcomes-based’ EIA, as opposed to a process-based document.
• Since the client has already bought into all the recommendations made in the EIA report, the environmental management plan and the social management plan, these recommendations can now be incorporated into the project plans.
• External review (albeit within the Rio Tinto Group) proved to be very useful, as the EIA report was viewed from a different perspective and by people who were not intimately involved in the project.
• A major lesson learnt was that the political and country risk assessment should include potential impacts on the EIA process. In certain circumstances a political environment baseline study may be justified.
### Appendix 2: Useful contacts

<table>
<thead>
<tr>
<th>Official and title</th>
<th>Ministry</th>
<th>Address</th>
<th>Telephone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms M Chasi, Director</td>
<td>Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>(+263–4) 705661/4</td>
<td>(+263–4) 705671/793123</td>
</tr>
<tr>
<td>Mr I Kunene, Chief Ecologist</td>
<td>Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>(+263–4) 705661/4</td>
<td>(+263–4) 705671/793123</td>
</tr>
<tr>
<td>Mr C Maseva, Senior Ecologist</td>
<td>Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>(+263–4) 705661/4</td>
<td>(+263–4) 705671/793123</td>
</tr>
<tr>
<td>Mr B Basera, Provincial Natural Resources Officer</td>
<td>Matabeleland North Province, Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>c/o Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>c/o (+263–4) 705661/4</td>
<td>c/o (+263–4) 705671/793123</td>
</tr>
<tr>
<td>Mr P Chabva, Provincial Natural Resources Officer</td>
<td>Midlands Province, Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>c/o Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>c/o (+263–4) 705661/4</td>
<td>c/o (+263–4) 705671/793123</td>
</tr>
<tr>
<td>Mr N Dube, Provincial Natural Resources Officer</td>
<td>Matabeleland South Province, Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>c/o Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>c/o (+263–4) 705661/4</td>
<td>c/o (+263–4) 705671/793123</td>
</tr>
<tr>
<td>Mr R Mavhondo, Provincial Natural Resources Officer</td>
<td>Mashonaland Central Province, Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>c/o Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>c/o (+263–4) 705661/4</td>
<td>c/o (+263–4) 705671/793123</td>
</tr>
<tr>
<td>Mr M Mousha, Provincial Natural Resources Officer</td>
<td>Masvingo Province, Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>c/o Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>c/o (+263–4) 705661/4</td>
<td>c/o (+263–4) 705671/793123</td>
</tr>
<tr>
<td>Mr F Ndangana, Provincial Natural Resources Officer</td>
<td>Mashonaland West Province, Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>c/o Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>c/o (+263–4) 705661/4</td>
<td>c/o (+263–4) 705671/793123</td>
</tr>
<tr>
<td>Mr C Nyikayaramba, Provincial Natural Resources Officer</td>
<td>Manicaland Province, Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>c/o Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>c/o (+263–4) 705661/4</td>
<td>c/o (+263–4) 705671/793123</td>
</tr>
<tr>
<td>Mr R Rwafa, Provincial Natural Resources Officer</td>
<td>Mashonaland East Province, Department of Natural Resources, Ministry of Environment and Tourism</td>
<td>c/o Makombe Complex, Cnr Herbert Chitepo and Harare Streets, Harare</td>
<td>c/o (+263–4) 705661/4</td>
<td>c/o (+263–4) 705671/793123</td>
</tr>
</tbody>
</table>
### Key NGOs and community-based organisations (CBOs) dealing with EIA

<table>
<thead>
<tr>
<th>NGO or CBO</th>
<th>Address</th>
<th>Telephone</th>
<th>Fax</th>
<th>e-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christian Care</td>
<td>120 Baines Avenue, PO Box 33, Harare</td>
<td>(+263–4) 798248</td>
<td>(+263–4) 794171</td>
<td></td>
</tr>
<tr>
<td>Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) Association</td>
<td>Mukuvisi Woodlands, Cnr Glenara Avenue South and Hillside Road, PO Box 661, Hillside, Harare</td>
<td>(+263–4) 747422/747470</td>
<td>(+263–4) <a href="mailto:campfire@internet.co.zw">campfire@internet.co.zw</a></td>
<td></td>
</tr>
<tr>
<td>Environment Africa</td>
<td>3 Durham Road, Avondale West, PO Box A639, Avondale, Harare</td>
<td>(+263–4) 302886</td>
<td>(+263–4) 339691</td>
<td><a href="mailto:efrica@utande.co.zw">efrica@utande.co.zw</a></td>
</tr>
<tr>
<td>International Council for Local Environmental Initiatives</td>
<td>108 Central Avenue, Harare</td>
<td>(+263–4) 728984</td>
<td>(+263–4) 734593</td>
<td></td>
</tr>
<tr>
<td>Southern Africa Research and Documentation Centre</td>
<td>6 Bath Road, Belgravia, PO Box 5690, Harare</td>
<td>(+263–4) 732748</td>
<td>(+263–4) 791249</td>
<td></td>
</tr>
<tr>
<td>Southern Alliance For Indigenous Resources (SAFIRE)</td>
<td>10 Lawson Avenue, Milton Park, PO Box 19, Harare</td>
<td>(+263–4) 790470/795461</td>
<td>(+263–4) 794333</td>
<td></td>
</tr>
<tr>
<td>World Conservation Union (IUCN) Regional Office for Southern Africa</td>
<td>6 Lanark Road, Belgravia, PO Box 45, Harare</td>
<td>(+263–4) 728266/705714</td>
<td>(+263–4) 720738</td>
<td></td>
</tr>
<tr>
<td>World Vision International</td>
<td>PO Box 2420, Mount Pleasant, Harare</td>
<td>(+263–4) 301248/301709</td>
<td>(+263–4) 369027</td>
<td></td>
</tr>
<tr>
<td>ZERO</td>
<td>158 Fife Avenue, Harare</td>
<td>(+263–4) 791333/730230</td>
<td>(+263–4) 732858</td>
<td></td>
</tr>
</tbody>
</table>

### Key academic institutions offering courses in EIA

<table>
<thead>
<tr>
<th>Academic institution</th>
<th>Course details and comments</th>
<th>Address</th>
<th>Telephone</th>
<th>Fax</th>
<th>e-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>National University of Science and Technology, Department of Environmental Science and Health</td>
<td>BSc Honours in Environmental Science • Programme aims to provide education in resource use, and protection and enhancement of environmental quality • Environmental issues covered include EIA, environmental law and policy, environmental planning and management, environmental engineering, and humans and the environment</td>
<td>St Andrews House, 40 Samora Machel Avenue, Harare</td>
<td>(+263–4) 794848</td>
<td>(+263–4) 794848</td>
<td><a href="http://www.nust.ac.zw">http://www.nust.ac.zw</a></td>
</tr>
<tr>
<td>University of Zimbabwe, Department of Agricultural Economics and Extension</td>
<td>MSc in Agricultural Economics • Two-year programme with one of the specialisations being Environmental Economics • Environmental issues covered in the EIA, Environmental Policy, and Environmental and Natural Resources Economics courses</td>
<td>PO Box MP167, Mount Pleasant, Harare</td>
<td>(+263–4) 303211</td>
<td>(+263–4) 307155</td>
<td><a href="http://www.uz.ac.zw">http://www.uz.ac.zw</a></td>
</tr>
<tr>
<td>University of Zimbabwe, Department of Civil Engineering</td>
<td>MSc in Water Resources Engineering and Management • 18-month programme • EIA forms part of the Water Resources Planning and Analysis course</td>
<td>PO Box MP167, Mount Pleasant, Harare</td>
<td>(+263–4) 303211</td>
<td>(+263–4) 307155</td>
<td><a href="http://www.uz.ac.zw">http://www.uz.ac.zw</a></td>
</tr>
</tbody>
</table>
## Key academic institutions offering courses in EIA (continued)

<table>
<thead>
<tr>
<th>Academic institution</th>
<th>Course details and comments</th>
<th>Address</th>
<th>Telephone</th>
<th>Fax</th>
<th>e-mail</th>
</tr>
</thead>
</table>
| **University of Zimbabwe, Department of Geography and Environmental Science** | 18-month MSc/MA in Environment Policy and Planning  
• Offers an integrated and multidisciplinary approach to analysing environmental issues  
• Core courses include Environmental Policy Analysis, Environmental Planning and EIA (includes one week of fieldwork)  
• Programme started in 1995  
• Trains 8–12 people each year  
• Programme played key role in developing EIA specialists and/or practitioners who have found employment in Government, e.g. in the Department of Natural Resources | PO Box MP167, Mount Pleasant, Harare | (+263–4) 303211 | (+263–4) 307155 | http://www.uz.ac.zw |
| **University of Zimbabwe, Department of Geology** | MSc in Exploration Geology  
• Part-time programme  
• EIA forms part of the Feasibility Study module | PO Box MP167, Mount Pleasant, Harare | (+263–4) 303211 | (+263–4) 307155 | http://www.uz.ac.zw |
| **University of Zimbabwe, Department of Rural and Urban Planning** | Postgraduate Diploma in Project Planning and Management  
• 12-month programme  
• Focus on project planning and management in rural and urban environments  
• EIA is one of the components covered in the Project Appraisal course | PO Box MP167, Mount Pleasant, Harare | (+263–4) 303211 | (+263–4) 307155 | http://www.uz.ac.zw |
| **University of Zimbabwe, Department of Soil Science and Agricultural Engineering** | BSc Honours in Applied Environmental Science  
• Three-year degree programme  
• Environmental issues covered in Environmental Management, EIA, Environmental Policy, and Environmental Monitoring courses | PO Box MP167, Mount Pleasant, Harare | (+263–4) 303211 | (+263–4) 307155 | http://www.uz.ac.zw |
| **University of Zimbabwe, Institute of Environmental Studies** | EIA Short Training Course  
• Covers historical development of EIA; the EIA Policy of Zimbabwe; identification and assessment of impacts; management of environmental impacts; and EIA reporting and review  
• Course duration: Five days  
• Instrumental in developing EIA skills among government officers at provincial and district levels  
• Training courses for specific sectors have been undertaken, e.g. mining, irrigation  
• Courses held once or twice a year but can be increased subject to demand | PO Box MP167, Mount Pleasant, Harare | (+263–4) 302603 | (+263–4) 332853 | |

## Useful websites

- Southern Africa Research and Document Centre – Musokwatane Environment Resource Centre: [http://www.sardc.net/imercsa/index1.html#contact](http://www.sardc.net/imercsa/index1.html#contact)
- University of Zimbabwe: [http://www.uz.ac.zw](http://www.uz.ac.zw)
- National University of Science and Technology: [http://www.nust.ac.zw](http://www.nust.ac.zw)
## References and other key publications

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Publisher/Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anderson, IP, PJ Brinn, M Moyo &amp; B Nyamwanza</td>
<td>1993. 'Physical resource inventory of the communal lands in Zimbabwe – An overview.' Natural Resources Institute bulletin, 60.</td>
<td></td>
</tr>
<tr>
<td>MNRT (Ministry of Natural Resources and Tourism)</td>
<td>1987. <em>The national conservation strategy: Zimbabwe’s road to survival</em>. Harare: Department of Information, MNRT.</td>
<td></td>
</tr>
<tr>
<td>Mukaro, A.</td>
<td>2002. 'Farm seizures cost Zimbabwe ZWS 72 billion.' Zimbabwe independent, 26 April 2002. [Also available online at: <a href="http://www.theindependent.co.zw/news/April/Friday26/502">http://www.theindependent.co.zw/news/April/Friday26/502</a>].</td>
<td></td>
</tr>
</tbody>
</table>

## Acknowledgements

We would like to thank Mr D Mazvimavi (Geography and Environmental Science Department, University of Zimbabwe) for his valuable contribution in the preparation of this report. The following people are thanked for their participation in the consultative process of producing this report: Mr I Kunene (Chief Ecologist, Department of Natural Resources), Mr C Maseva (Ecologist, Department of Natural Resources), Mr S Chaibva (International Council for Local Environmental Initiatives) and Mr T Mubvami (Department of Rural and Urban Planning).