



Mining In Namibia

Seen Environmental Learning Information Sheet no 4

Introduction

Mining has been one of the main contributors to the Namibian economy for a long time. European explorers saw Ovambo people smelting copper from surface deposits near Otavi in 1851. Following on from this the first official mining activities were established in 1855 in the Walvis Bay area.

Mining provides essential revenue for the Namibian economy today, and between 1990 and 1997 mining contributed almost 25% to the country's national economy. Diamond production alone totalled 1.7 million carats in 2002 and generated over \$500 million in export earnings.

Diamonds and uranium account for the bulk of the country's total export sales but Namibia is rich in a variety of minerals with 30 different commodities being produced from approximately 40 formal mining operations. As well as deposits of gold and silver, Namibia has deposits of the base metals copper, lead and zinc, and industrial minerals salt, graphite, marble, fluorspar and limestone. The semi-precious stones rose quartz, amethyst, agate and tourmaline and the dimension stones such as granite and marble can also be found.

Today five major mining operations in Namibia, **NAMDEB**, **Rosh Pinah**, **Rössing**, **Tsumeb Corporation** and **Navachab**, generate more than 95% of the mining income. NAMDEB, a diamond mine located in the Sperrgebiet, is jointly owned by the Namibian government and by De Beers Centenary. Rössing is the fifth biggest uranium mine in the world and is located just east of Swakopmund. The Skorpion zinc mine which was opened in 2003 by **Anglo American**, cost N\$454 million to build and is projected to produce 12,500 tons of pure zinc per month. Copper and other base metals are mined and smelted at Tsumeb, whilst Gold is mined near Karibib.

Environmental and health issues

Although the revenue made from mining has made huge contributions to the Namibian economy, there are problems related to mining. These problems are mainly related to environmental damage and health concerns for workers and people that live nearby.

Namibia is covered with the remains of abandoned and un-rehabilitated mines. Despite increased awareness of the threats to the environment posed by mining and its aftermath there are still certain activities which severely threaten the environment. When a mine has come to the end of its useful life, the mining activities end and it is often abandoned.

Problems can arise if no measures are taken to rehabilitate the area and make it safe. Un-rehabilitated mines can cause visual pollution. If rehabilitated the area can be made safe again and it can be returned to close to its original state. Habitats are often destroyed when a mine is built and this can have a serious impact on the ecosystem of an area. The creation of a mine can cause habitat destruction for many animals and plants and threaten their existence. Some mining activities require a considerable amount of water and in a country like Namibia where water is a scarce commodity this can cause huge problems.

All mining activities can create **air, soil, water and noise pollution** and these are often not dealt with appropriately. The effects of poorly managed mining can stay around long after the mining operations have finished. There are also social problems when mines close down. A town may have been created purely on the money made from mining and for the people who work at the mines and their families.

When a mine closes it leaves a large gap in the local economy which has built up in close association with the mine. Many people are left

unemployed and whole towns may suffer the consequences.

Coastal mining

After the first diamond was found in Namibia, hundreds of workers removed and processed the diamond-bearing sediment and transformed entire valleys into sterile areas of bedrock. Diamond mining is still the most prominent industrial activity in Namibia. Diamond mining is a very environmentally harmful activity. Although it does not use of toxic chemicals, large quantities of sand must be moved in order to extract the diamonds. The mines are generally located in very isolated areas and this means that often entire infrastructures must be created to support the mines. The combination of these factors leads to diamond mining being an environmental nightmare along the coastline of Namibia.

Many mines operated along the skeleton coast, in so-called protected areas for decades without any environmental safeguards. The mines closed in the 1990s but many signs remain in the form of environmental damage.

Marine and beach diamond mining involve serious threats to the environment and threaten the life of certain species that live in these areas. The ecosystems are also disrupted by the waste that these operation produce.

Oil and gas exploration

In 1974 significant gas deposits were discovered 70km West of Oranjemund. More wells were drilled in 1987 and 1988 and these confirmed that the deposit has potential. The first round of petroleum licenses were issued in 1992. This particular deposit has been named the Kudu deposit and up until the present time remains the only commercially viable deposit.

The Namibian government has made a commitment to encourage environmentally acceptable mining. The 1992 Prospecting and Mining Act was created to ensure good mining practices were used which protect the environment during both initial enquiries and the

mining itself. There are incentives for operators who rehabilitate old mines and repair any environmental damage.

Uranium mining

Rossing Uranium is owned by Rio Tinto, the world's largest mining group, which has annual profits of over \$1.4 billion. It supplies un-enriched yellowcake uranium to power stations in France, UK, USA and Japan.

The open-cast mine opened in 1976 and it has now been decided that the mine will close with the next few years. The company had an option of spending \$100 million and expanding the mine, or closing down all operations by the year 2007; it close the latter. Rio Tinto says that the weak US dollar and the low market price of uranium has meant that the plant is not longer profitable.

The problems for Namibia associated with the closure of the mine will be numerous. Production at this site makes up about 3% of the Gross Domestic Product of Namibia (GDP) and 10% of the country's foreign exports. The mine also provides employment for 800 local people. The mine produces 20 million tons of radioactive alaskite rock, soaked in sulfuric-acid. The plants also used 2-3 million cubic metres of fresh water each year. In a country which suffers from a severe lack of water, and has an annual rainfall of less than 30mm, that is a real problem.

Although mining causes environmental damage, these problems do not necessarily disappear with the closure of the mine. There are many dangerous waste products which would need to be disposed of and many methods that have been used at other mines in the past have been ineffectual. The closure of the mine will doubtless cause severe economic hardship. The contribution that the mine makes to the economy of the local community cannot be underestimated. Many of the employees will find themselves with few prospects when the mine closes.

Ideas to stress in your teaching and learning

- Mining is an important part of the Namibian economy and the largest contributor to export earnings. However, employment in mining continues to decline.
- Diamonds are the most important mineral followed by uranium.
- Mining activity has created environmental problems such as the destruction of habitat, noise, air and water pollution and the creation of unsightly dumps.
- New mining activities now have to provide an environmental impact assessment before they are approved. They also require to have an environmental management plan that shows how environmental damage will be minimised or put right.
- The closure of mines recently has resulted in social problems as workers have been left without jobs and homes.

Glossary

Ecosystem	A group of interdependent organisms together with the environment they inhabit and depend on.
Gross Domestic Product(GDP)	The total value of all goods and services produced within a country in a year, minus net income from investments in other countries.
Habitat	The natural conditions and environment in which a plant, animal or person lives.
Infrastructure	The basic organisation on which something is built or based upon.
Un-rehabilitated	Something that has not been returned to its former natural state

Sources/ Further Reading

Barnard Phoebe (ed): 1998 : Biological diversity in Namibia – a country study
<http://www.mbendi.co.za/indy/ming/af/na/p0005.htm>
<http://www.infomine.com/countries/namibia.asp>