

BOTSWANA RESOURCE SECTOR OVERVIEW

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INDEX

OVERVIEW

This research note provides relevant background details on Botswana’s resource sector including:

History of Mining in Botswana 2

Governmental Structure..... 18

Mineral Policies and Laws 20

Royalties and Taxes 23

Conflict Diamonds 24

Environmental Issues 27

Citizen Empowerment..... 29

HIV/AIDS..... 30

HISTORY OF MINING IN BOTSWANA

Ancient, Iron Age and pre-independence mining activity

The history of mining in Botswana is thought to go back many thousands of years. Ancient hunter-gatherer (Bushmen) communities mined red haematite and blue-black specularite for use as cosmetics, dyes and paints. Although such activity cannot be dated, similar mining sites in Swaziland are around 30,000 years old.

Mining as a basis for metalworking began in the Iron Age, and is thought to have commenced in Botswana around AD 400, having been introduced to southern Africa by Bantu-speaking farmers who migrated from further north from AD 200 onwards.

The remains of many iron-ore smelting settlements in eastern Botswana have been identified by archaeological excavations, going back to around AD 800. The early miners excavated iron, copper and tin from open cast pits, crushing the rock and then reducing the ore in furnaces to produce fairly pure metals, although later mines also used underground shafts. The ore-bearing rock was most likely obtained by making fires against the rock face, and then throwing water on the rock when it was very hot, causing it to crack. Travellers to Botswana in the early 19th century came across iron smelting, blacksmithing, and locally-made copper jewellery.

Around 1000 years ago many of the Iron Age communities of eastern Botswana were linked to the Mapungubwe culture, which was centred near the confluence of the Shashe and Limpopo Rivers where modern day Botswana, Zimbabwe and South Africa meet, and which was also involved in gold and copper mining. Gold mining was particularly important in north-east Botswana, in the Tati area (near present day Francistown), where over 200 ancient gold mines have been identified that are thought to have been in operation between the 15th and 18th centuries. During this time the Bakalanga Butwa kingdom sent gold and other products along the Limpopo river to be traded at the Indian Ocean coast. These mines typically followed the gold reefs underground to depths of up to 30 metres. There are also remains of ancient copper mines in the Tati region.

The gold deposits of the Tati region provided the basis for modern day mining activity, following the (re-)discovery of gold in the region by the German explorer Karl Bauch in 1866. The discovery was followed by a short-lived gold rush, although attention soon shifted to the much richer Witwatersrand goldfields in South Africa.

Nevertheless, gold mining provided the impetus of the establishment of Francistown, now Botswana's second city, and the potential for further gold discoveries was part of the reason for the interest shown in the territory of Botswana by Cecil Rhodes and the British South Africa Company ("BSA Co"). Rhodes concluded an agreement with King Khama of the Bangwato in 1893 giving the BSA Co. a concession over minerals, although Rhodes' ambitions in Botswana collapsed after the failure of the Jameson raid on Johannesburg, launched by the BSA Co. from within Botswana, in 1895.

Gold mining continued intermittently in north eastern Botswana throughout most of the 20th century, although always highly marginal and on a very small scale. Other small scale mining operations emerged during the pre-independence period, including manganese mining near Kanye and Lobatse, chrysolite asbestos, talc, and semi-precious stones. However, these did not prove sustainable and the manganese, asbestos and talc mining had all ceased operations by 1971, with a lack of viability reflecting the size of known ore bodies, high production costs due to remote locations or geological conditions, or market conditions.

Although there was no large scale mining activity in Botswana in the pre-independence period, prospecting did take place, especially following the establishment of the Department of Geological Survey in 1948. The Bangwato territory covering large areas of central, eastern and north-eastern Botswana was the focus of mineral exploration activity. Within this area, prospecting for diamonds began in 1955, following the discovery of a few diamonds in the bed of the Motloutse River, while prospecting for copper and nickel began in 1959.

Surveying during 1957-59 had identified coal deposits near Palapye, and the brine deposits of the Makgadikgadi Pans had long been seen as a potential source of salt and soda ash. In the post-independence period all of these minerals have been mined on a large scale and have contributed to mining becoming by far the most important sector in the Botswana economy, indeed the basis for Botswana's post-independence success and prosperity.

Over the past decade the mining sector has continued to make the largest single contribution to the economy. Mineral revenue rose from P4.68 billion during 1997/98 to P10.18 billion in 2009/2010. This is slightly lower than in previous years (12.33 billion 2007/2008) mainly due to the decline in diamonds sales caused by the global economic crisis.

Post-independence Mining Activity

Copper-nickel

- The recovery of copper and nickel prices has had positive effects on Botswana's copper and nickel mining industry.
- Copper and nickel remain Botswana's second highest export earner with a total export value of P 4.9 billion (period Q3/2008-Q3/2009) (CSO).
- Norilsk Nickel sets a positive sign to its commitment to its Botswana operation (Tati Nickel) by looking at new exploration possibilities near its existing mines.

The first major mineral discovery was the Selebi copper-nickel deposit in 1963. Assessments of the economic potential of Botswana around the time of independence concluded that there was considerable scope for mining to become an important economic activity – thereby reducing the high level of dependence on cattle rearing and beef – based on copper-nickel, coal, soda ash and salt. Following detailed evaluation of the copper-nickel deposits, it was concluded that the Selebi-Phikwe mine could become a major producer of copper and nickel and an important source of export earnings for Botswana.

The Selebi-Phikwe copper-nickel deposits were, however, in a remote and underdeveloped part of the country, and establishing a mine required all related infrastructure to be provided – roads, a rail link, a dam, water pipelines, a power station, and a new town. The Shashe Project, as it came to be known, was the focus of economic attention for the new government of Botswana in the years following independence in 1966. The mine and associated smelter was developed by Bamangwato Concessions Ltd (BCL), owned 85% by Botswana RS T, itself a joint venture between American Metal Climax of the USA and Anglo American Corporation of South Africa, with the Botswana Government holding a 15% stake in BCL. The Government itself took responsibility for the development of the water, power, transport, and urban infrastructures.

Although great hopes were placed on the establishment of BCL, the venture experienced problems from its opening in 1974, and it has never lived up to initial expectations. Technical problems with the smelter led to delays and large cost overruns, causing financial problems that were exacerbated by the collapse of the world copper price in 1973. BCL ran up huge debts, both to external lenders and the shareholders, which had provided guarantees. These debts have burdened BCL ever since. After numerous restructurings, including debt write-offs, debt-to equity conversions and changes in ownership, the company is now owned by the Government of Botswana (93.6%) and Norilsk Nickel (6.4%).

BCL Ltd. which had to retrench 70 employees due to the economic downturn in 2009, remains an important and essential player for the local economy of Selebi-Phikwe. One of the main challenges BCL is facing in 2010 is the growing need for a sulphuric acid plant (cost P1.9 billion) to deal with the mine's annual emission of 534,000 tonnes of sulphur dioxide. BCL is hoping to attract some foreign investment for the building of its sulphuric acid plant. Possibilities of developing a sulphuric acid production plant for the production of fertilizer are also considered. The BCL Mine has over the past received substantial funds from the EU System for Stabilizing Export Earnings from Mineral Products (SYSMIN) - the final project financed by SYSMIN is a large scale exploration to establish the size of the ore bodies related to the BCL Mine and its bearings on the life of mine. It is also hoped that there might be discovery of other ore reserves, further extending the life of mine. At present BCL Mine has an expected life of mine until 2020.

Through its acquisition of LionOre in July 2007, the Russian company Norilsk Nickel, the world's biggest producer of nickel and palladium and one of the world's largest producers of platinum and copper, has become a major player in the Botswana nickel-copper market.

Norilsk Nickel owns 85% of Tati Nickel Botswana (the remaining 15% is held by the Botswana Government), which remains the biggest producer of nickel in the country. Tati has become Norilsk's most profitable business, outside Europe and Russia, producing 19,600 metric tonnes of nickel from its open pit mine near Phoenix (operational since 1995) in 2009. This is almost 7% of Norilsk's total nickel output. After assessing all its international operations, Norilsk's is now actively committed to Tati's future. Tati's other mine, an underground mine at Selkirk, east of Francistown, which was in operation until 2002 is currently on care and maintenance. A pre-feasibility study was commenced in 2008 to assess the mine's potential as an open pit mine.

Tati's future will depend mainly on the sustainable recovery of the nickel market in order to raise finances for exploration works around its current operations. Tati's mine only has an expected lifespan until 2016. Both Tati and BLC have felt the effects of the end of the EU Economic Diversification and Mining Sector Programme which finished in December 2009 and which used to provide funds to both companies for exploration and development.

In June 2008, the company commissioned a large, 12-million tone a year dense-media separation plant at Tati. The plant, which selectively increases the head grade of run-of-mine material, is expected to eventually increase annual production at Tati from 14,500 tonnes to 22,000 tonnes of contained nickel in concentrate. At the same time, Norilsk Nickel suspended indefinitely the construction of the Botswana Metal Refinery 5 million Pula Activox plant. This refinery was to use the Activox hydrometallurgical technology to process nickel from Tati Nickel. Reasons for the suspension of the project, which resulted in over 1000 workers at BMR losing their job, were the escalation of the project cost fuelled by an increase in construction, equipment and project management costs, as well as the risk of short term power supply constraints in the region.

Botswana's first copper mine - Mowana mine - owned by base metals explorer African Copper and run through its subsidiary Messina Copper (Botswana) restarted production in August 2009, after production had been halted at the end of 2008. African Copper recorded £23.1 million net profit for 2009 financial year, compared to a loss of £ 102.7 million in the previous year. The mine started mining in January 2008 and produced commercial concentrate by October 2008. The mine was planned to work as an open pit for the first seven years, followed by underground mining of sulphides. Due to working capital constraints and unexpected equipment failure, production in the fourth quarter of 2008 fell to 270 tonnes instead of projected 1500 tonnes. By January 2009, Mowana mine had to be put on care and maintenance due to the worldwide fall in demand and copper prices and the company's need to raise further capital. In March 2009 a bridge loan was secured from Natasa Mining. In May, a take over bid by Natasa Mining was declined and African Copper entered a loan agreement with Zambia Copper Investments Limited (ZCI) of US\$ 31.3 million in June 2009. In April 2010, ZCI provided a further loan of \$10 million to African Copper. ZCI is the biggest shareholder of African Copper (82.6%). African Copper at present is investing in new mobile crushing equipment and looking at the construction of a wet tailings facility and a dense media separation plant at its Mowana mine. African Copper is also re-engaging in exploration, completing an environmental impact assessment study and an archaeological impact assessment study, a prerequisite to apply for a mining license (Q2/2010) for its Thakadu tenement area (about 70km from the Mowana mine). The company is also reviewing its Matsitama tenement area.

Discovery Metals Limited continues its expansive copper-mineral exploration (Boseto Copper Project) in north western Botswana. The total mineral resources at Boseto increased by 68% from September 2009. A bankable feasibility study for the Boseto project (open cut mining) has been completed and consultants' contributions are being reviewed for presentation in May 2010. Latest exploration results for the North East Plutus, South West Petra and Nexus Prospects all show strong potential to add a significant amount of mineral resources to the project. First copper and silver production from the mine is expected in late 2011 at a throughput of two million tonnes of copper concentrate a year. The mine will have a life span of 15 years. Discovery Metal has entered into a 5 year sales contract with Transamine (also now a shareholder in the company), a global nonferrous raw materials trading company for the 100% sale of its copper concentrate from its Boseto mine. A prefeasibility study has commenced for the Zeta underground project, after positive results have been obtained from the initial scoping study.

Discovery Metals continues further successful exploration in the underexplored Kalahari Copper Belt where it holds 14 prospecting licenses covering 10,100 km² of exploration ground.

Hana Mining has its focus on the 2,200 km² area, the Ghanzi copper-silver belt, located in north western Botswana. Drilling results in April 2010 have resulted in an inferred resource of 3.9 billion pounds of copper and 61.2 million ounces of silver. Focus has been on the Banana Zone and the objective of doubling the total mineral resource of this zone was achieved. The total copper bearing horizon extends over the entire strike length of 600 kilometres, so far only 37.6 km has been tested, thus only 6% of the total potential. Hana Mining continues successfully to secure finance for further exploration activities.

Discovery Metals also undertakes nickel exploration in northeast Botswana, through its Dikoloti nickel project. In October 2009, Discovery entered into a joint venture exploration programme with Japan Oil, Gas and Metals National Corporation providing funding for the exploration of the Dikoloti tenements. All four prospecting licenses for the area were renewed in August 2009. Botswana Metals Limited (de-merged from A-Cap Resources) holds prospecting licenses of major nickel sulphide deposits in the northeast of Botswana. The company obtained very positive drilling results in February 2010 and continues its exploration. Albidon (still under administration) continues to hold 100% of its copper-nickel prospecting site north of Selebi-Phikwe but has not undertaken any activities there since 2008.

Diamonds

- Botswana diamond production fell by almost 50% from 32.6 million carats in 2008 to 17.7 million carats in 2009 and total sales at \$1.7 billion were 39% lower than in 2008.
- Full recovery of the diamond market only expected by 2012/2013 (Budget 2010)
- Debswana expects production to reach 60% of its normal level in 2010

The prospecting that De Beers began in 1955 involved searching for the source of diamonds found in the Motloutse River in north-east Botswana. While it was almost certain that these diamonds had come from a kimberlite pipe somewhere to the west, finding the pipe was not straightforward, especially once initial prospecting had established that it had not come from anywhere in the region of the existing Motloutse river system. Eventually it was realised that the diamonds may have been brought by an ancient river that drained the area now occupied by the Kalahari Desert, but whose flow had been cut off by an uplift in the earth's crust.

This meant that the source of the diamonds was buried somewhere under the Kalahari sands. Prospecting moved to the Kalahari with a search for indicator minerals in areas considered promising to be the source of the ancient river. Eventually, in July 1966, a few months before Botswana's independence, a dense concentration of indicator minerals was found in the Orapa area near the village of Letlhakane. In due course drilling revealed the Orapa kimberlite pipe, which is one of the largest diamond pipes ever found, in terms of surface area. Although Orapa has turned out to be one of the richest diamond pipes in the world, this was not initially obvious.

The distribution of diamonds through the pipe is uneven, and it took several years of drilling and analysis to establish that mining the pipe would be economically viable. The Botswana Government was preoccupied with establishing the Shashe Project and the Selebi-Phikwe mine, which in the early post-independence period was felt to be the mining project with the most potential, and pretty much left De Beers to establish the Orapa Mine and associated township on its own – this being the reason why even today, Orapa remains a closed town, not generally accessible to the public. The Orapa mine commenced operations in 1971, and very quickly exceeded even the most optimistic expectations regarding the value of its output and the profitability of the mine. Continued prospecting soon located another pipe nearby at Letlhakane, which, although much smaller than the Orapa pipe, yielded a much higher proportion of gem diamonds. The mine was (and still is) operated by De Beers Botswana Mining Company Ltd (Debswana), a joint venture between De Beers and the Government of Botswana, the latter initially owning a 15% shareholding. However, the Government used the opportunity offered by De Beers' application for a mining licence for the Letlhakane mine to re-open the joint venture agreement governing Debswana. After a long period of negotiations, a new agreement was reached concerning production at Orapa and Letlhakane, as a result of which the Government's share in Debswana was increased from 15% to 50%. A new tax structure gave Botswana a share of around 70%-75% in the profits from diamond mining.

Although at the time the renegotiation and higher tax rate was controversial, with some concern that the Government had pushed De Beers too far and created a disincentive for further foreign investment in the mining industry, nevertheless, De Beers continued prospecting and soon located the Jwaneng pipe further to the south. The Jwaneng mine opened in 1981 and, with its large size and very high proportion of gem diamonds, soon became the richest diamond mine in the world.

Orapa and Jwaneng have continued to account for the majority of Botswana's diamond production, and both underwent major expansions in the late 1990s/early 2000s. Letlhakane makes a smaller but important contribution, as has done the newer Damtshaa mine, near Orapa, opened in 2002. Debswana has recently been granted a renewed mining licence for its diamond mines. The main mines are thought to have a lifespan of 10-15 years as open pit operations at current rates of extraction, following which underground mining will commence. Underground mining will be significantly more expensive, and hence the net benefits to Botswana will in due course be reduced.

In January 2009, due to the economic crisis, Debswana suspended production for one month at all its four mines and again from 25 February until 14 April. Production at Orapa Plant Number 2 and Damtshaa Mine were further suspended until the end of 2009 and this has now been extended to the end of 2010. The closure of these two mines has affected 580 employees.

In January 2010 Debswana announced that more than 1000 jobs will go during 2010 as a result of an operation review, independent of the global economic crisis.

Debswana kicked off its Cut 8 project at the beginning of 2010. Cut 8 is the expansion of the Jwaneng mine, aimed at extending the mine's life span by seven years to 2024. The project will strip 713 million tonnes of waste, exposing an additional 75 million tonnes of diamond bearing ore. The estimated total cost of the project is \$3 billion over 15 years. The Cut 8 project is hailed for its positive impact on the local economy. In addition, Debswana is undertaking a feasibility study on the proposed Orapa No. 3 plant which will be completed by end of 2010. Orapa No. 3 would replace Orapa No. 1 plant.

In March 2009, DiamonEx Australia sold 80% of its subsidiary DiamonEx Botswana (DEB), which owns the Lerala diamond mine, to Fleming Asset Management Botswana (FAMB). The Lerala mine is situated in eastern Botswana and only started producing in 2008. The mine has an established 3.7 million carat diamond resource and was scheduled to produce an average of 330,000 carats per annum for the next ten years. The first diamond sale in November 2008 resulted in a very low sales' volume at only \$20 per carat. The government provided a 10 million Pula loan to DEB in the same month. In early 2009, the mine was put under judicial management and about 284 jobs were lost as the company had difficulties meeting financial commitments. FAMB has raised sufficient capital to re-sustain the project and depending on the recovery of the diamond market, the Lerala mine might be back in operation before the end of 2010.

In November 2009, Lucara Diamond Corp acquired a 71% stake in the hard rock AK6 diamond mine from De Beers; in May 2010, African Diamonds took up its option to increase its share from 29% to 40%. AK6 was granted a mining license by the Botswana government in October 2008 for a period of 15 years. The final feasibility study for AK 6 is due to be completed by the end of May 2010, site development will start in September 2010 and production is aimed to start in late 2011. The mine is expected to have a throughput of 3 million tonnes a year initially, up from the originally 2 million tonnes. All diamonds will be sold via the Diamond Trading Company of Botswana. The first phase of development of AK6 is estimated at a cost of £30 million. African Diamonds is continuing exploration activities at its AK8 and AK9 (Atlas) kimberlites as well as its less well known BK5 kimberlite, all of which are located near its AK6 mine.

Many other kimberlites have been discovered in recent years, although perhaps only one in 100 is economically viable to mine. Almost certainly, there are many more kimberlites still to be discovered, as new exploration techniques make prospecting under the deep Kalahari sand cover more feasible.

Firestone Diamonds plc is planning to start production at its BK11 kimberlite, in the Orapa area, in the second quarter of 2010, aiming to reach full production by end of 2010. Total production is estimated at 1 million carats at \$155/carat. Firestone has more than 100 kimberlites in its license area across the Tsabong, Jwaneng and Orapa kimberlite fields. Other projects Firestone is advancing are the Jwaneng Tailings project and the Orapa Satellite Kimberlite (JV with Tswana).

Gem Diamonds acquired its Gope Kimberlite in the Central Kalahari Game Reserve (CKGR) from De Beers and Xstrata in 2007. In July 2007 it submitted a mining license application and continues negotiations with the Government with regards to the license. Little exploration activity took place in 2009 and no major plans have been announced for 2010. If a mining license at acceptable terms is granted, Gem Diamonds is planning to take this project further in future.

Petra Diamonds currently holds the largest diamond exploration land holding in Botswana. In January 2009, Petra Diamonds announced that it has reduced the level of its exploration activity and commensurate spend in Botswana and end of 2009 and first half of 2010 were to be used for consolidation activities. Still three new small kimberlites were discovered in 2009 with moderate to high diamond bearing potential and mineral chemistry and micro diamond investigation were conducted on Petra's DK 6 kimberlite. The company will not relinquish any license areas of interest and remains committed to operations in the country, which cover kimberlites in the Orapa/Lethlakane area, the Central Kalahari and Kukama project areas.

Soda Ash

- Botswana's third strongest, non-diamond mineral export
- Chlor Alkali Holdings (CAH) merge with Botash

The third major mining operation set up in Botswana was the soda ash mine at Sua Pan (part of the Makgadikgadi Pans complex). The Soda Ash Botswana (SAB) operation was established in 1991, after having been under consideration for nearly 20 years, as a joint venture between AECI, Anglo American, De Beers of South Africa, and the Government of Botswana. The process involves extracting brine from beneath the pan surface and concentrating it in solar evaporation pans, before processing to produce soda ash (300 000 tonnes per year capacity) and salt (650 000 tonnes capacity). However, soon after its establishment, SAB ran into financial problems due to soda ash low prices in South Africa, its main market, as well as operational problems, and was eventually liquidated in 1995. A new operating company was formed, Botswana Ash (Botash), with broadly the same shareholders. Apart from severe flooding of the pans experienced in 1996, which disrupted production, Botash has been operating successfully since that time and was only marginally affected by the recession last year. Botash produced 265,566 tonnes of soda ash in 2009, slightly down from 280,000 tonnes in 2008. There are plans to increase its soda ash production to 300,000 tonnes per annum by increasing the number of wells to raise brine production. The biggest client of soda ash remains the South African glass industry.

In March 2010, Botash's merger with Chlor Alkali Holdings, was approved (conditionally). Chlor Alkali Holding will hold 50% and 50% will continue to be held by the Government of Botswana. Chlor Alkali Holdings supplies chemical grade salt through its subsidiary Walvis Bay Salt Holding.

One of the Botswana public enterprise projects is the building of a P 500 million + glass manufacturing plant in Palapye, to be completed by the end of 2011. Discussions with Botash are under way about supplying soda ash to this plant. Following the merger, Botash will also supply any inland South Africa based purchaser of chemical grade salt.

Coal

- The electricity crisis and shortage of coal in Southern Africa has turned coal into a major growth opportunity and increased economic diversification for Botswana
- Botswana's Morupule B power station is progressing

In 2010, focus continues to be on exploring the potential to export coal from Botswana. Being land locked and with insufficient rail infrastructure, direct export of coal has not been considered economically feasible until recently. The following progress has been made;

A memorandum of understanding was signed in 2009 between the Namibian and Botswana governments with regards to the construction of the Transkalahari Railway Line (TKR) at an estimated cost of \$1.4 billion. The approximately 1,500 km TKR would link Walvis Bay, through Botswana to the industrialized areas of South Africa. The outcome of the initial feasibility studies are awaited for late May 2010 before a consortium will be appointed to conduct a bankable feasibility study. CIC Energy, which will be producing seaborne-traded A grade thermal coal on their Mmamabula coal field for export have expressed an interest to join such a consortium.

The Matola Coal Terminal in Mozambique has completed its first two phases of expansion and has increased handling capacity from two million to four million tonnes a year this April, with a further planned expansion to six million tonnes a year by August 2010. Grindrod Group (owners of Matola) is in talks with South African railways company Transnet to ensure that their system will be able to deal with the increased demand of coal and magnetite.

The construction of the deep-water port at Dabela in the Matutine District, on the coast of the Southern province of Maputo, received the go-ahead in May 2009. The project will be run by the state run Mozambique Ports and Railways Company together with a British based company, Porto de Dabela (PDD). The port, at an estimated cost of \$550 million, will be able to harbour vessels of cargo capacity of up to 300,000 tonnes. It was announced that construction of the port will start in two years (2011). Dabela port will be situated about 500 km closer to South Africa's main coal producing areas than the country's own Richard's Bay.

The extensive coal deposits in eastern Botswana were discovered before independence but mining did not begin until the 1970s. The only operating coal mine is the Morupule Colliery, near Palapye, which has as its main customer the adjacent Botswana Power Corporation (BPC) power station. The mine was established by a subsidiary of Anglo American Corporation of South Africa, but was sold to Debswana Diamond Company in 2000. The Morupule mining lease was extended for a further 25 years in 2001. The other main customers of the Morupule Colliery, besides BPC, are Soda Ash Botswana and the BCL copper-nickel smelter.

737,798 tonnes of coal were produced in 2009, compared to 909,511 tonnes in 2008. Export of coal to date is minimal.

Another major coal deposit is at Mmamabula, south of Mahalapye and extending east to the border with South Africa. The Morupule and Mmamabula coal deposits, together, amount to some 17 billion tonnes, giving Botswana the second largest coal reserves in Africa, after South Africa.

CIC Energy Corp. has largely completed exploration drilling at its Mmamabula Coal Field. In August 2009 CIC has announced a revised global mineral resource estimate of approximately 2.6 billion tonnes of coal (measured and indicated).

BPC has signed an engineering, procurement and construction contract for the development of the 600 MW coal fired and air cooled Morupule B power station with Shanghai Electric Company of China as main contractor in November 2008. The 11 billion pula project is partly financed directly by government and partly by loans (P 2.4 billion) from the World Bank and the African Development Bank, to be approved by Parliament (March 2010). In February 2010, construction of the first phase of the 600 MW plant (1 unit of 150 MW) has begun and is hoped to be completed for first output by January 2012. The full project (all 4 units of 150 MW each) is aimed to be finished by October 2012.

BPC is working closely with the Morupule Colliery, wholly owned by Debswana, which will supply the needed coal to Morupule B. Strategic expansion plans at the Morupule Colliery foresee an increase of production of coal to 4 million tonnes by 2011. In March 2008 Morupule Colliery commissioned a Pula 84 million coal washing plant which will produce 900 tonnes of beneficiated, high calorific value coal for the local and export markets.

CIC Energy Corporation's Mmamabula Energy Complex, which consists of the Mmamabula Energy Project (MEP), the Mookane Domestic Power Project (MDPP), the Export Coal Project and a potential Coal-to-Hydrocarbons Project (CTH) in the southeast of Botswana near the South Africa border, is one of the only projects which could meet the urgent demand for new base load capacity in South Africa. In March 2009, CIC Energy Corporation signed an EPC contract with Shanghai Electric Company of China for the development of the MEP. After South Africa's first integrated resource plan did not provide much clarity on the import of power and did not cover the time period relevant for MEP, CIC put on hold all development activities for MEP until the signing of a definitive loan agreement following the second integrated resource plan, anticipated for mid to late 2010. The project was initially to include two 2500MW power stations but has been downsized due to cost sharing problems to a total of 1200 MW, comprising two units. Commercial operation was expected for early 2013 but will depend on resolving the regulatory issues with South Africa. Commercial operation is now not expected until earliest 2014.

CIC in parallel is developing the Mookane Domestic Power Project (MDPP), aimed at supplying power to the Botswana economy. This planned 300 MW power station and associated coal mine will also be located next to the Mamabula Coal Field. A memorandum of understanding was signed by CIC and GCL Projects limited in February this year, GCL will be a majority equity investor and CIC will hold 30% equity. GIC's affiliates will be responsible for construction and operation of the power station whereas CIC will oversee the development and the operation of the mine. CIC is currently raising capital for the project.

Other companies active in coal mining are Aviva Corporation Ltd which is developing a 1.3 billion tonnes coal resource and a 1,000 MW power station at Mmamantswe, northeast of Gaborone, the Mmamantswe Integrated Coal and Power Project. Results from the initial reserve report outline a probable run of mine reserve of 895 million tones and the scoping study showed that the reserve could support 2,000 MW for 40 years. Aviva is now in a position to apply for its project to become a sub project of the Botswana Power Corporation, a prerequisite for it to gain access to the Southern African Power Pool (SAP). Aviva is also awaiting the outcome of South Africa's second Integrated Resource Plan to resolve the Independent Power Producer (IP) procurement process in South Africa. Asenjo Energy (a JV of Aquila Resources and Jonah Coal) have engaged in exploration activities on the western Mmamabula coal field, 100km north of Gaborone. A prefeasibility study at its 1 billion tonne Dukwe coal reserve was started in May 2009 to be completed by mid 2010. Asenjo planned for exporting coal and to build a 300-600 MW power station.

Gold

- IAMGold's Mupane mine had a difficult year

As noted above, there has been intermittent gold mining activity over a long period in north-east Botswana. However, in 1998, Gallery Gold discovered a one million ounce gold resource at Mupane. Production commenced in late 2004, and quickly reached the rated capacity of 100,000 oz p.a. In March 2006 Gallery Gold was taken over by IAMGold.

The switch of IAMGold in 2008 to owner mining of its Mupane goldmine has led to an increase in mineral reserves (expected life of mine mid 2012), and lower operating costs. Gold production in 2009 reached 51,000 ounces at a cash cost of \$735/ounce, compared to 101,000 ounces output at a cost of \$367/ounce in 2008. This fall in output was due to lower mill throughput from the non-availability of the ball mill for most of the second half of 2009. This problem was resolved in December. In November 2009 a new interim general manager was appointed tasked with reviewing the life of mine and assessing the mine's long term outlook. Proven and probable mineral resources at Mupane were 205,000 contained ounces as of last December. This February IAMGold entered into a forward sales option contracts in order to protect a portion of Mupane's production for 2010 and 2011 taking into account the short life of mine. Since Q4/2009, Mupane's gold is sold at spot prices. There was reduced exploration activity taking place by IAMGold in Botswana in 2009.

Central African Gold, with 100% interest in Matoko Mining with exploration rights in the Kraaipan Greenstone Belt, has expressed interest to undertake further exploration there.

Uranium

- Increased demand for uranium world wide with increase of nuclear power plants as an alternative source of energy.
- A-Cap's Lethlakane site is the 12th largest unexplored uranium deposit in the world

In December 2007 A-Cap Resources produced Botswana's first uranium resource at its Letlhakane project site. A-Cap Botswana site holds discoveries of 158 million pounds of uranium oxide (U₃O₈) with further potential of resource upgrading and expansion. This makes it the 12th largest unexplored uranium deposit in the world. In 2009, a scoping study was conducted, followed by a feasibility and environmental impact assessment study in 2010, which will be followed by project development. In late 2009, a new surface, secondary mineralization was discovered at Letlhakane. This secondary mineralisation represents the most profitable ore due to its high grades and metallurgical characteristics and its closeness to the surface.

A-Cap holds 10 prospecting licenses in tenements in Botswana covering a total area of 7,000 km² and discovered uranium deposits at Serule in 2008. Further exploration works are planned in Serule and Gorgan South in 2010. A-Cap predicts significant increased demand for uranium in the future caused by a global raise in nuclear energy.

Impact Minerals now owns 100% of its Botswana uranium project (near Serule in eastern Botswana) after buying its 15% remaining share in July 2008. Its prospecting licenses cover about 20,000 km². Impact is planning a major drill campaign from June 2010, to test for uranium at Sua and Kodibeleng and to undertake prospect and infill drilling at its Lekolobo prospect.

African Energy continues its uranium exploration (drilling, trenching and soil sampling) at its Sese project site in Botswana. The company has conducted drilling at two sites and will do further drilling in 2010 at other untested uranium targets.

Other Minerals

Diamonds, copper-nickel, soda ash and coal are the main minerals being mined in Botswana at present. As noted above, historically, other minerals have been mined, including manganese and asbestos. Semi-precious stones are mined on a small scale, and there is increasing demand for sand, crushed stone and gravel from the construction sector. Clay is mined near Lobatse for the domestic brick industry.

Australian mining company Mount Burgess Mining continues to explore its 30 million tonne Kihabe and Nxuu base metals (zinc-lead-silver resource) project in Ngamiland in North West Botswana with the aim to develop the Kihabe and Nxuu resources. A scoping study was completed for both resources in 2009 and the project has the potential to be developed into a mining operation. Other minerals known to exist in Botswana, although not necessarily in commercially viable quantities, include agates, fluorite, kyanite, antimony, graphite, limestone, talc, gypsum, chromite, iron, platinum, feldspar and kaolin.

Prospecting Activity

Extensive prospecting and exploration activity is taking place in Botswana. The number of prospecting licenses rose sharply during the 1990s. At present (April 2010), there are 1379 prospecting licenses, an increase of 26.3% compared to March 2009.

Commodity	Number of Prospecting Licenses
Diamonds	434
Radioactive	109
Metals	320
Industrial	96
Energy	260
Radioactive and Metals	159
Metals, Radioactive and Energy	1

Source: Department of Geological Survey, April 2010

Data on production of all minerals in Botswana from 2000 to 2009 is shown in the table below.

YEAR	DIAMONDS	Ni/Cu MATTE			COBALT	COAL	SODA	SALT	GOLD
	(000's Carats)	Matte (T)	Contained Metal (T)			(T)	(T)	(T)	(Kg)
			Nickel	Copper					
2000	24,635	48,420	21,446	18,722	308	946,900	191,000	184,800	4
2001	26,190	50,999	22,454	19,209	325	930,374	251,231	178,646	2
2002	28,368	56,626	23,896	21,590	269	953,081	283,197	315,259	8
2003	30,412	51,983	27,400	24,289	294	822,780	234,520	229,432	9
2004	31,125	54,448	22,292	21,195	223	913,087	263,358	208,319	162.15
2005	31,890	68,637	28,212	26,704	326	984,876	279,085	243,945	2708.8
2006	34,293	64,368	26,762	24,255	303.3	962,427	255,677	151,595	2546.5
2007	33,639	53,947	22,844	19,996	241.962	828,164	279,625	165,710	2722.0
2008	32,595	61,686	28,940	23,146	337.09	909,511	263,566	170,994	3,176
2009	17,734	54,340	29,616	24,382	342	737,798	215,188	241,114	1,626

Source: Department of Mines

The Diamond Trading Company (DTC) Botswana

In March 2008, the new Diamond Trading Company Botswana was officially launched and opened. DTC Botswana, a 50:50 joint partnership of Debswana and the Botswana Government aims to be the world's largest diamond valuing and sorting company. DTC Botswana has taken over the activities of the Botswana Diamond Valuing Company (BDVC) at Orapa House. In 2008 diamond imports increased significantly (by more than 250%) due to the opening of the DTC and the country's beneficiation strategy.

Beneficiation of diamonds in Botswana was hailed as a major transfer of skills, job creation and the foundation of an establishment of a sustainable, integrated diamond industry within a producer country.

The core business of DTC Botswana consists of the sorting, valuing, marketing and selling of all in country Debswana production. The government has a sales agreement with DTC which expires in December 2010. Renegotiations are taking place this year. There has been a push for government to open up the market to other companies beyond the DTC Botswana. It is seen as a need for a proportion of the diamonds to go through an independent auction and tender system to help establish a fair market price and also to further establish Botswana as a diamond trading centre.

The government licensed 16 diamond cutting and polishing companies in 2008 all of which are actively operating by now (contracts until 2011). Due to the impact of the global economic crisis, there was a fall in employment in the beneficiation industry of 26% from 3226 to 2391 between November 2008 and August 2009. DTC Botswana closed down operations for two weeks in early March 2009 and operated on a reduced working day/ working week for the remainder of the year, with staff having agreed to pay cuts.

Many of the 16 sight holders are big international diamond manufacturing companies, such as Eurostar, Steinmetz Diamonds and Rand Precision Cut Diamonds (a majority of which is held by Tiffany & Co). Sight holders do not need to be locally owned but cutting and polishing needs to be done locally.

In 2007, over \$270 million of rough diamonds were released to these sight holders. This was meant to go up to \$375 million in 2008 and to \$550 million by the end of 2009, a 50% plus increase. But due to prevailing market conditions, DTC offered only about one sixth of the volume of rough diamonds valued at \$80 million to \$100 million to its sight holders compared to what was offered a year before (2008/2009).

DTC Botswana's new building, at the cost of over \$83 million houses 39 state-of-the-art diamond sorting machines and profits from new technology and R&D of De Beers/DTC London. It has a capacity to process up to 45 million carat per annum.

The next big step was to move aggregation of diamonds from London to Botswana in 2009, due to various issues this was postponed. According to De Beers this move is now back on track. A P40 million diamond transfer facility was completed in early 2010 at Sir Seretse Khama Airport, to open 01 April 2010, to ensure high levels of security during the transfer of diamonds (and eventually other high value goods) in and out of the country. In addition, the Diamond Hub is actively pursuing its plan to establish a jewellery manufacturing industry in Gaborone to further develop Botswana's diamond industry beyond mining.

Surveys

- Botswana is still ranked number 1 in Africa for mining investment but
- S&P has revised Botswana's credit rating from A to A-, following the government's budget presentation for the new fiscal year

Every year RESOURCESTOCKS magazine produces an index of which countries are perceived to be the lowest risk from the perspective of senior mining executives.

The survey covers the following areas: Sovereign Risk, Land Access, Green Tape, Land Claims, Red Tape, Social Risk, Infrastructure, Civil Unrest, Natural Disasters, Labour Relations and this year for the first time a category of Financial Risk was added. In 2009, 70 jurisdictions plus 12 Canadian provinces and seven Austral-

ian provinces participated. For the first time Canada was split into provinces, like Australia to allow for a better comparison within those countries.

This year's results reflect the global economic crisis with an overall increased perception of risk, coupled in many countries with political uncertainty.

Botswana remains the strongest country in Africa and like last year, scored fourth place. In 2005, Botswana came out first place. In 2006 and 2007, the country dropped to seventh place. Botswana's overall score in 2009 was 12.1, compared to the US in first place (in the country ranking), which had a weighted total of 10. Botswana's weighted score was lower than in 2008 (8.8) but that slight downward shift is apparent across all jurisdictions in 2009. Namibia is no longer one of the top ten countries but Ghana was placed eighth with a risk score of 14.4. Canada which was number two last year, disappeared from the top ten countries, but if split by provinces, Quebec is the overall winner at 9.6.

South Africa scores a weighted risk of 18.8 (down from 15.2 in 2008), with the high perceived risk of land claims (4) weighing it down. Zimbabwe which used to be the least favourable African mining country, now has another six African states under its weighted risk score (Angola, Sierra Leone, Gambia, Senegal, Burundi and Somalia).

In detail, Botswana, like in previous years, scores well across most of the categories included in the survey scoring on average 1-2 (on a 0-no risk to 5-maximum risk scale), except in the areas of infrastructure (3) and social risk (2.5).

Results of Risk Survey 2009

1.	US	10.6
2.	Chile	11.4
3.	Australia	12
4.	Botswana	12.1
5.	New Zealand	12.7
6.	Sweden	12.9
7.	Brazil	13.9
8.	Ghana	14.4
9.	Greenland	14.6
10.	Finland	14.8

"Botswana is the shining star of governance and lack of corruption in Africa"

Company president, exploration company, Fraser Institute Annual Survey 2008/2009

"Botswana lacks red and green tape"

President, exploration company, Fraser Institute Annual Survey 2009/2010

The Fraser Institute Annual Survey of Mining Companies assesses how mineral endowments and public policy factors such as taxation and regulation affect exploration investment. Botswana was ranked 21 out of 72 jurisdictions in the 2009/2010 survey.

The report measures the overall attractiveness for mining investment in 72 jurisdictions through its Policy Potential Index (PPI), calculated on the basis of responses from 670 mining companies world wide. The PPI is a composite index that measures the effects on exploration of government policies including uncertainty concerning the administration, interpretation, and enforcement of existing regulations; environmental regulations; regulatory duplication and inconsistencies; taxation; uncertainty concerning native land claims and protected areas; infrastructure; socioeconomic agreements; political stability; labour issues and availability of labour/skills; geological database; and security. In addition mineral potential assuming current regulation and land use restrictions and mineral potential of a jurisdiction assuming no regulation or land use restrictions are measured.

Botswana's PPI score of 66.5, a slight increase from last year (64.9) is the highest score for an African nation, only followed by Mali with a PPI score of 58.2. While in most categories, the prevailing conditions in Botswana serve as an encouragement to investment or at least not a deterrent to investment, a few areas show that they can be a mild deterrent to investment: Quality of infrastructure (40%); Quality of geological database (32%); Availability of skills and labour (32%) and Socioeconomic agreements/community development conditions (31%).

Top 22 Jurisdictions:

- | | |
|----------------------------|------------------------|
| 1. Quebec | 12. Sweden |
| 2. New Brunswick | 13. Wyoming |
| 3. Finland | 14. Northern Territory |
| 4. Alberta | 15. Utah |
| 5. Nevada | 16. Nova Scotia |
| 6. Saskatchewan | 17. Ireland |
| 7. Chile | 18. Alaska |
| 8. Newfoundland & Labrador | 19. West Australia |
| 9. Manitoba | 20. New South Wales |
| 10. South Australia | 21. Botswana |
| 11. Yukon | 22. Ontario |

Mali is ranked on place 27, followed by Ghana (34) and Namibia (37). South Africa is on rank 61.

The difference in the ranking of countries/jurisdictions in the two surveys can be partly explained that they measure slightly different criteria. RESOURCESTOCKS' survey measures the overall perception of risk, whereas Fraser's PPI measures the overall attractiveness of a region. In addition, last year's RESOURCESTOCKS survey was conducted at the height of the global financial crisis, whereas the Fraser's survey was conducted at the latter half of 2009 when first signs of recovery could be seen. Like last year, the Fraser survey added some general questions to the companies. In general, there was strong optimism about recovery in the mining industry. Almost twice as many companies stated that they will increase their exploration budget in 2010, compared to reducing or leaving it the same, and the majority believes that mineral prices will rise over the next two years.

In the World Bank's survey (2010) of "Ease of Doing Business" Botswana ranks 45 out of 183 countries in 2010, compared to place 38/181 in 2009. The only two African countries which score higher than Botswana are Mauritius (17) and South Africa (34). Mauritius ranks best in Starting a business (10) and South Africa ranks second for Getting credit.

The survey measures the ease of doing business in a country by looking whether the regulatory environment is conducive to business operations. Seven African countries, including Chad, Burundi and the Republic of Congo are at the tail end of the scale. For Botswana, positive areas in of doing business are (country rank in brackets): Paying taxes (18); Closing a business (27); Protecting investors (41); Getting credit (43); Registering property (43). Areas of greatest concern are: Trading across borders (150); Dealing with construction permits (122) and Starting a business (83).

In the 2009 Transparency International Corruptions Perception Index (which looks at perception of public sector corruption in 180 countries), Botswana ranks as in previous years as the least corrupt country in Africa and one of the least corrupt countries in the world (37/180), one place down from its 2008 ranking The next African country is Mauritius at place 42.

After last year's change of credit rating for Botswana by Standard and Poor, S&P has further revised its long term sovereign credit rating from A to A- following the presentation of this year's budget with government's commitment to continued spending within its National Development Plan 10 even in the face of falling revenues. The outlook for Botswana by S&P remains stable. Moody lowered Botswana's overall sovereign credit rating to negative in February 2010.

Power and the Mining Industry

In 2008, a failure of investment in new plants, lack of maintenance of existing plants, low electricity prices, increased demand for electricity and a very slowly developing private producer market plummeted South Africa and with it its neighbour into a power crisis. In January 2008 Eskom shut down power supply to South African mines for five days, which resulted in a sharp decline of mineral production for the period. In general, electricity outages caused a six-year low in economic growth in South Africa in the first quarter of 2008.

A new 5 year Power Supply Agreement was set up between Eskom and BPC at the beginning of 2008 reducing power supplies from Eskom to BPC from 410 MW to:

2008/2009: 350 MW
2010: 250 MW
 2011/2012: 150 MW

Even though the Botswana Government has been given assurance by the ANC, there is no guarantee that even this will be provided as there is provision in the agreement for Eskom to allow Eskom to reduce power supply with as little as 10 minutes warning to Botswana if deemed necessary.

Ensuring sufficient power supply is a top priority of the government and 28.7% of this year's total development budget, the highest share, has been assigned to the Ministry of Minerals, Energy and Water Resources, including for the Morupule B development and for developing national emergency power supplies.

Power in Botswana currently comes from five sources: Eskom (250 MW), Morupule (producing between 90-120MW), DRC (3 year contract, effective as of 01/01/2010 for 50 MW), Mozambique (40 MW) and 70 MW from an emergency power facility installed at Matshelagabedi, 30km off Francistown. In addition there is a non binding agreement with Namibia to provide power if excess available.

The emergency power facility, a diesel power plant, at Matshelagabedi has been supplied by APR Energy, a company dealing with temporary energy shortages. This facility is also operated by them under a contract with Botswana Power Corporation. The generator is producing 70MW since January 2010 into the South African Power Pool (SAPP), the regional primary power grid.

The single biggest consumer of power in Botswana has been the mining sector. In 2008 at peak load the mining sector consumed up to 216 MW. Still, due to pro-active management, any load shedding did not have significant effects on the mining sector, as measures had been put in place to deal with the problem. In 2009, with the global economic downturn and the negative impact on the Botswana mining industry, power demand by the mining sector, initially predicted to go up to almost 400MW by 2012/2013, fell significantly, with electricity intense projects being postponed or cancelled and mines being shut or put on care and maintenance. With renewed activities in the mining sector and signs of a recovery, consumption by the industry will go up significantly over the next years. Will the power secured by Botswana for 2010 be sufficient or will the country face power cuts and load shedding over the coming months?

What will happen in the future?

Additional power supply projects to cover the short term shortfall

- 90 MW diesel based emergency power facility in Orapa, commercial operation from September 2010, developed by Kalahari Sustainable Energy (KSE-see below).
- Extension of the emergency power facility in Matshelagabedi, to supply an additional 35 MW, to be operational from 01 January 2011.
- The Botswana government and the Botswana Power Corporation are currently in negotiation over an \$8 million deal with its Zimbabwe counterpart (ZESA) for the restoration of Bulawayo Thermal Power Station and the purchase of coal, which would result in at least 40 MW of power to Botswana. This project has for the time being put on hold (May 2010).

Projected demand for power is 720MW in 2011 and 750MW in 2012 (est. 2008). With these additional power supply projects, BPC hopes to match demand and supply over the next two years, until the first phase of the Morupule B power station is completed and operational (January 2012). There is currently no time line for CIC's Mookane Domestic Power Project (MDPP).

In April 2010, The National Energy Regulator of South Africa granted Eskom three tariff increases of about 25% each for the next three years. This increase in cost could directly feed through electricity prices in Botswana. Government announced in this year's budget speech that they will establish an Energy and Water Regulator, whose role will be the review of electricity and water tariffs, as well as issuing licenses to independent power producers. It was also announced in the budget that as of 1 April 2010, there will be an increase of 5 thebe per kilo watt hour, to support the National Electrification Fund.

On the demand side, BPC pursues a National Electricity Efficiency Campaign, urging the public to practice efficient electricity use and conservation. Measures such as energy saving light bulbs and switching off geysers during peak times have been promoted by BPC. The newest measure is the introduction of Hot Water Load Control smart meters which are currently tested to be rolled out in all major towns by end of 2010. These smart meters allow remote control of hot water through a central system. BPC believes that installation of these meters could save up to 40 MW. No binding measures or rules have been put into place to date.

Alternative Energy Sources

Coal Bed Methane (CBM)

Kalahari Energy, which owns prospecting rights over a 3,200,000 acre gas field in the Karoo Basin, in a consortium with Turkish power consultancy and services development company TUTEN were appointed as Independent Power Producer (IPP) by BPC to develop a power plant with a minimum capacity of 250 MW. Kalahari Sustainable Energy will build, own and operate the coal-bed methane-powered gas production and processing station, and will supply power to BPC for an initial 15 year period. The project is based on a 270MW simple cycle vertically integrated project consisting of CBM production as the ultimate fuel source. Power generation will be at two substations, one located in Orapa (90MW) with two GE turbines and one located in Mmashoro (180MW) with four GE turbines. The project is estimated to cost \$400 million.

The first phase (1-A) of the Orapa plant is the commissioning of the two GE turbines which will initially be diesel fuelled. Power production is planned from September 2010. Phase 1-B is to develop and quantify recoverable CBM resource costs of CBM extraction and the completion of a 110 km pipeline from the gas-site to the Orapa site. The second phase is the commission of four GE turbines for the Mmashoro site, using CBM as fuel source.

In March 2009, Kalahari Energy signed a joint venture with Exxaro Resources, South Africa to further its exploration of CBM in the Kalahari Karoo Basin in eastern Botswana.

Another company actively exploring CBM is Botswana based Saber Energy, which is looking at developing a CBM field and gas fired power station near Mmamabula. Saber Energy has completed a merger with Talon Metals Corp in March 2010, following its earlier JV agreement with Tlou Holdings in August 2009. Tlou is a 50:50 joint venture between Mitchell Group and Walcot Capital, both pioneers in CBM exploration in India, China and Australia. Tlou is financing Saber's current 12 core hole exploration programme.

Anglo Coal has been exploring CBM in Botswana since 2007 and holds 37 prospecting licenses. Most of their exploration work is focused in the Nata area extending towards Kasane and Pandamatenga, but they also have exploration rights in the north-east of the Okavanga Delta. Anglo Coal is still assessing the extent of CBM in Botswana for development of a gas-to liquids synthetic fuel plant. Energy Botswana, a public unlisted Australian explorer holds CBM licence areas in northern Botswana.

Last year, the Mines and Minerals Act (1999) was amended to better regulate exploration and exploitation of CBM. This amendment is at consideration stage but not yet approved and gazetted (February 2010).

Other

At present, the use of renewable energy is at 0.3% in Botswana. Within the government's national development plan (NDP 10), the plan is to increase renewable energy usage to 25%. Examples of renewable energy use include: The Government together with BPC and the UN are exploring a non-grid rural electrification scheme using photovoltaic power. Procurement by the end of 2010 of a flexi-bio diesel plant to produce about 10 million litres of bio diesel per year. A photovoltaic battery charging station which is operating at Lorolwana.

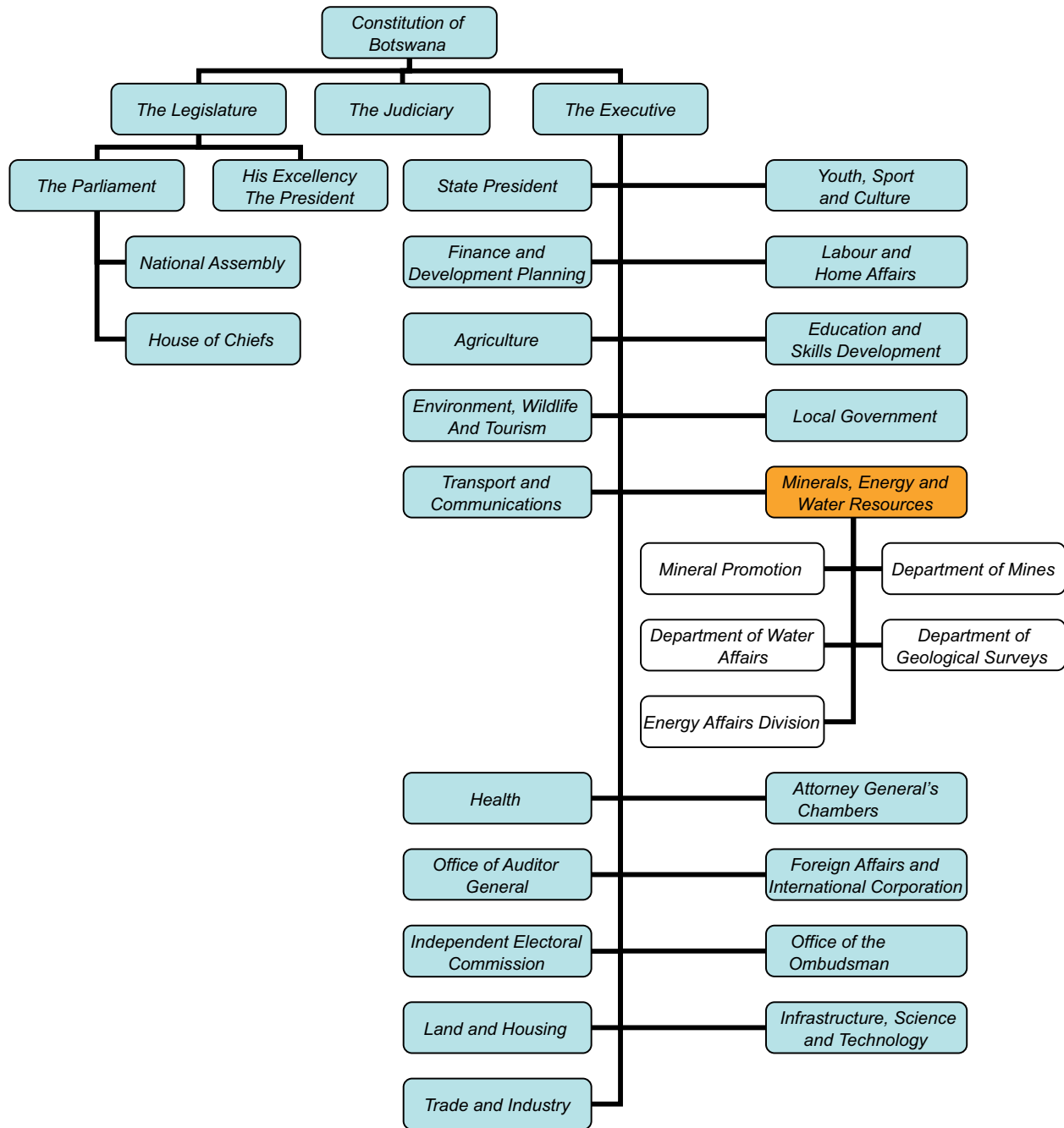
The legal framework for renewable energy is at a draft stage.

Construction of the first P83.8 million 1 MW solar power station is scheduled to start in September. The project is led by the Japanese government. This will be a test project and the Japanese government has expressed a willingness to support further photovoltaic power projects in Botswana by providing technical assistance. Botswana gets about 3,200 hours of sunshine a year, so solar power is seen as a natural solution to the power shortages of the country and region.

One of the private companies active in Botswana is Vilart Energy, a Botswana owned company providing solar systems for lighting. They have run a pilot project in Gaborone to provide street lighting by solar energy and they are exploring the use of solar energy for boreholes (2008).

The Government was also closely involved in the P55 million INGA III hydropower project, a joint project of five African nations to develop and build a 3,500 MW power plant in the Democratic Republic of Congo, to be commissioned by 2014. In March this year, it was announced in the press that the leading implementing company WestCor had lost its rights to the project site and that the DRC had awarded the same area to BHP Billiton for development of a power station. It was decided that WestCor can no longer proceed without the INGA III project, and WestCor's offices have temporarily been closed until clarification of the situation.

GOVERNMENT STRUCTURE



On 01 April 2008, a new President was inaugurated in Botswana. The following offices are held by (April 2010);
 President of Botswana: H.E. Lt. Gen. Seretse Khame Ian Khama, following general elections in October 2009;
 Vice President of Botswana: H.H. Lt. Gen. Mompoti S. Merafhe;
 Minister, Ministry of Minerals, Energy and Water Resources: Hon. Ponatshego H. Kedikilwe;
 Permanent Secretary, Ministry of Minerals, Energy and Water Resources: Gabaake Gabaake;
 Deputy Permanent Secretary, Ministry of Minerals, Energy and Water Resources: Boikobo Paya.
 Former Deputy Permanent Secretary, Ministry of Minerals, Energy and Water, Jacob Thamage was appointed co-ordinator of the Diamond Hub, January 2010.

General

The Ministry of Minerals, Energy and Water Resources (see above) has the portfolio responsibility to coordinate development and operational activities in the energy, water and minerals sector. Specific programmes and projects to fulfil these responsibilities are carried out by Ministry's departments (Geological Survey, Mines and Water Affairs) and parastatals (Botswana Power Corporation and Water Utilities Corporation).

The Ministry Headquarters provides leadership and policy directions to the departments and parastatals. The Permanent Secretary assisted by the Deputy Permanent Secretary provides administrative leadership under the political direction of the Minister. This Ministry formulates, directs and coordinates the overall national politics on minerals, energy and water resources. It formulates short and long term strategies for implementing the approved national policies and programmes on minerals, energy and water resources. The Ministry is divided into Planning Unit, Mineral Affairs Division, Energy Affairs Division and the North South Corner Water Project Unit. In addition, the Ministry Headquarter is responsible for the inter-ministerial Minerals Policy Committee, comprising the Permanent Secretary of the Ministry of Minerals, Energy and Water Resources, the Permanent Secretary of the Ministry of Finance and Development, the Permanent Secretary to the President and the Attorney General. This committee provides overall policy guidance on mineral policies, takes the lead in mining negotiations and represents government directors on boards of companies where the government has an interest.

Department of Mines

The overall objectives of the Department of Mines are to establish and maintain an effective organization to administer mineral exploitation legislation, and to enhance socio-economic, financial and other benefits to Botswana arising from the exploitation of mineral resources.

With respect to mineral policies the department will assist in developing sound national policy on mineral development and operation. The department will provide professional guidance on matters pertaining to mines safety and control of pollution arising from mining activities. The Department of Mines will formulate and provide technical guidelines, performance standards for mining, mineral processing and metallurgical operations and advise government accordingly.

Department of Geological Survey

The Department's mandate is to collect, assess, archive, advise on and disseminate all geo-scientific data related to the rocks, minerals and water resources of Botswana. It carries out geo-scientific surveys and research on a long-term basis in order to provide a better understanding of the geological framework of Botswana. It provides a service to mineral exploration companies actively involved or interested in prospecting in Botswana; it also evaluates industrial mineral prospects that could support local industry and reduce Botswana's reliance on imported raw materials. It also undertakes research on the major groundwater systems of Botswana to ensure proper utilisation and protection of such systems. The department also administers those sections of the Mines and Mineral Act relating to mineral exploration.

Department of Water Affairs

The overall objective of the Department of Water Affairs is to assess, plan, develop and maintain water resources for domestic, agricultural, commercial, industrial and other uses in the whole country. In order to provide effective leadership for water resources planning, development and management, the department will assist and advises in the formulation of water resources development and management policies. The Department assesses, plans, develops and manages water resources for short, medium and long term purposes. It also administers the water law and other related legislations, and liaises with the riparian users of national and international rivers on the saving, conservation and protection of water resources.

MINERAL POLICIES AND LAWS

The Policy Framework

The rapid growth and overall success of Botswana's minerals sector over the past thirty years has been in no small part due to the nature of the minerals policies followed by the government. Broadly, the minerals policy framework has aimed to engage the private sector as the main driving force in exploiting the country's mineral resources, in a constructive partnership with the government. This reflected the government's knowledge, in the early years after independence, that it had neither the financial resources nor technical expertise to embark on major mining projects on its own. A deliberate decision was taken to engage with international mining companies to take the lead in prospecting, development and operation of the mines. The government's approach was based on a commercial and developmental perspective, rather than the more political and nationalist approach often adopted elsewhere, which led to the nationalisation of mining activities with, typically, adverse consequences for those countries and their mining industries.

Botswana's minerals policy framework is intended to provide a stable, investor-friendly framework to support private sector investment decisions, enabling them to earn an adequate return on capital and reward for risks taken, while ensuring that excess profits, or mineral rents, are secured for the nation through a suitable fiscal regime. In maximising the economic and other benefits for the country, minerals policy aims to:

- (i) accelerate prospecting and new mine development;
- (ii) encourage activities that generate real value added and linkages with the rest of the economy;
- (iii) create training and employment opportunities for citizens;
- (iv) minimise the environmental damage caused by mining operations.

One of the important early decisions taken in the establishment of the minerals policy regime is related to the ownership of mineral rights. At independence, mineral rights were held by landowners, which included the state, private farmers and tribal authorities. If this situation had been left unchanged, mineral discoveries could have led to considerable inequalities between mineral-producing and other areas of the country, leading to uneven growth, and quite possibly generating ethnic, social and political tensions. It would also have deprived government of a potentially important source of revenue. An early decision was therefore taken to seek transfer of mineral rights to the government. This was achieved through a process of negotiation and a mineral rights tax that encouraged either rapid exploration or surrender of mineral rights. Importantly, there was no expropriation of privately held mineral rights. The transfer of mineral rights to the state was driven by Botswana's first president, Sir Seretse Khama, who was also Paramount Chief of the Bangwato, the largest tribal group, whose land also included most of the areas where minerals had been found. By pursuing the handover of tribal mineral rights to the state, Khama subordinated narrow tribal interests to the overall national interest, and provided the basis for the subsequent national stability.

A second important policy decision involved the formulation of the mineral taxation regime. Recognising that the value of any mineral deposit was subject to considerable uncertainty, and could fluctuate over time, the government adopted a mixture of revenue generating mechanisms. Rather than relying solely on a fixed royalty rate, which might be too high (for a marginal mining operation) or too low (for a highly profitable operation), the government chose, in addition to a modest royalty rate, to require an option to acquire a small portion of the equity in the mining operation; initially this was at no charge, although under recent revisions, the equity is now paid for on a cost-related basis. Additional equity shares can be acquired by government at a price to be negotiated. As a result, government has shares in some of the major mining operations.

Mineral companies are also subjected to profits taxes, although the regime is different to that applied to other private sector companies (see details below). Besides providing government with a revenue source related to the profitability of the project, equity stakes have another important function, which is to provide a mechanism for government representation on the boards of mining companies. This provided government with first hand information on mining operations and a direct say in the management of the nation's mineral resources. The arrangement ensures that government policies are understood by mining companies, and that government

can gain a good appreciation of any problems faced by mining companies at an early stage. In general, government participation through minority equity stakes has facilitated a beneficial collaborative relationship between government and private mining companies.

Mining Laws

Exploration and mining in Botswana is governed primarily by the Mines and Minerals Act, 1999 (Cap 66:01) which gets reviewed and if needed amended on a continuous basis. The legislation governs the ownership of minerals and mineral rights, applications for prospecting licences, retention licences, mining licences and environmental obligations. The Act also provides for financial aspects such as royalties to be paid, licence fees and penalties. A recent amendment to the Mines and Minerals Act, relating to the application for a mining license and the application for the renewal of a mining license has passed its third and final reading by Parliament. As per Budget 2010 (February 2010), in April 2009, amendments to the Mines and Minerals Act were initiated by Government, covering the following; mine site rehabilitation and mine closure, regulations governing uranium exploration as well as CBM exploration. The amendments to mine site rehabilitation and closure were at consideration stage, expected to be completed by March 2010 but so far have not been gazetted. Regulations with regards to uranium and CBM are at a drafting stage. Other relevant legislations include: the Precious and Semi-Precious Stones (Protection) Act (1969), which provides for the protection of the precious stones industry and regulates dealing in precious and semi-precious stones; the Petroleum (Exploration and Production) Act (1983); the Mines, Quarries, Works and Machinery Act (1978) and Regulations, which deals with mine safety; Diamond Cutting Act (1979) which regulates cutting, sawing and polishing of rough and uncut diamonds; Import and Export of Rough Diamonds Regulations (2004); and the Atmospheric Pollution Prevention Act (1971), which deals with environmental issues.

Prospecting Licences

There is a prescribed form dictated in the legislation for applications for prospecting licences. Generally speaking the applicant should show the existence of adequate financial resources to carry out the proposed work programme as well as the technical skills to successfully carry out the work. A prospecting licence is granted for a period of three years, and may be renewed twice for further periods of two years. Three months before expiry the holder of the prospecting licence wishing to renew the licence is required to submit a report to the Minister which sets out the work done so far and associated costs and proposed work and costs to be done during the renewed period. At the end of the initial period of the licence 50% of the land area is relinquished.

At the end of each subsequent renewal period 50% of the remaining area is relinquished again.

Retention Licences

Retention licences are granted where minerals have been found during prospecting, but which are not, in the short-term, economically viable to mine. A retention licence is applied for not less than three months before the expiry of the prospecting licence concerned. There is a prescribed form to be completed when applying for a retention licence but the applicant should show that the applicant has carried out a feasibility study on the deposit and can show that it cannot be mined on a profitable basis at the time of the application. The retention licence is granted for a further period of three years and may be renewed only once for a further period of three years.

Mining Licences

Application for a mining licence may be made not less than three months preceding the expiry of the prospecting or retention licence. The applicant submits information in a prescribed form but should demonstrate to the Minister that:

- the proposed mining programme will ensure the most efficient and beneficial use of the mineral resources in the proposed mining area;
- the proposed area is not the same as nor does it overlap an existing mining or retention area (other than with that other party's consent);
- the proposed mining area only covers that area reasonably required for surface mining and treatment facilities and also to cover the proved, indicated and inferred resources;
- the applicant has the requisite financial resources, technical skills and experience to carry out effective mining operations;
- the proposed financing plan is in accordance with good financial practice and provides for a debt to equity ratio of no more than 3:1;
- the parent company guarantee in a prescribed form has been furnished; and
- in the case of diamonds negotiations have been carried out between the applicant and the Government in respect of its participation.

Mining licences are granted for periods of up to 25 years. On expiry, the holder of a mining licence is entitled to a renewal of the licence for a further period of up to 25 years, as long as:

- the development of the mining area has proceeded with reasonable diligence; and
- the proposed programme of mining operations will ensure the most efficient and beneficial use of the mineral resources in the mining area.

Guidelines for the procedure to be followed in applications for mining licences are available on the Department of Mines websites; www.mines.gov.bw/guidelines.html.

Applications for mining licences must be accompanied by an Environmental Impact Assessment (see below under Environmental Issues for more details), as part of the Feasibility Study submitted.

Small-scale Mining Permits

Separate regulations apply to small-scale mining, which refers to mining operations, other than for diamonds, processing less than 50 000 tonnes of raw ore per annum and in which the overall investment in fixed assets does not exceed P1 million. The Minister may grant a mining permit for such a small scale mining operation, for any mineral other than diamonds, over an area not exceeding one half of a square kilometre. Mining permits for industrial minerals (barite, basalt, clay, dolomite, feldspar, granite, gravel, gypsum, laterite, limestone, mica, magnesite, marble, phosphate, rock, sand, sandstone, slate and talc) are reserved for Botswana citizens and wholly citizen-owned companies.

Government Investment

Once a mining licence has been issued the Government has the option of acquiring up to 15% working interest participation in the proposed mine, including the right to appoint up to two directors. If the option is exercised,

Government pays for this shareholding by contributing its working interest percentage of all audited expenditure incurred by the company to which the licence was issued that is directly attributable to the acquisition of the licence, including relevant prospecting expenditure. If the Government chooses not to exercise the option at the mine development phase, the option lapses.

This provision applies to all mining operations except for diamonds, where the ownership level and the terms of ownership are a matter for negotiation.

ROYALTIES AND TAXATION

The holder of a mineral concession is liable to pay royalties monthly to the Government on any mineral right obtained by him. The prescribed rates for such royalties are the following percentages of gross market value:

Precious stones 10%

Precious metals 5%

Other minerals or mineral products 3%

where “gross market value” is defined as the sale value receivable at the mine gate in an arms length transaction without discounts, commissions or deductions. Any royalties paid during the year of assessment are allowed as a deduction in the computation of the company’s chargeable income.

The taxation regime applicable to mining companies is laid out in the Twelfth Schedule of the Income Tax Act. For taxation purposes, the gross income of any mining company includes all amounts accruing as a result of mining and prospecting operations and all amounts accruing from the processing, marketing, servicing, financial or administrative operations whether carried out in or outside of Botswana.

In computing taxable income, mining companies are entitled to an allowable deduction known as the mining capital allowance, computed in accordance with 100% of the mining capital expenditure made in the year in which such expenditure was incurred with unlimited carry forward of losses. This deduction is not transferable between distinct and non-contiguous mining operations.

From 1999 a new non-negotiable mining tax formula was introduced in order to provide international investors with greater certainty. A variable rate income tax was introduced under which mining profits are taxed according to the following formula:

Annual tax rate = $70 - 1500/X$

where X is the profitability ratio, given by taxable income as a percentage of gross income, provided that the tax rate shall not be less than the company tax rate of 25% made up of 15% basic company tax and 10% additional company tax rate. The maximum theoretical tax rate that can arise under the formula is 55%. The actual tax rate applicable each year therefore varies, depending on the profitability of the mining operation.

The above formula applies to all mining operations except for diamonds, the taxation of which is subject to agreement in terms of section 51 of the Act.

The Twelfth Schedule also deals with “thin organizations”, whereby for mining companies with a foreign debt:equity ratio exceeding 3:1, the interest on the additional loans over and above this ratio will be deemed to be dividends and taxed accordingly.

Mining companies (along with all other companies) are subject to a Withholding Tax on all payments made offshore in respect of dividends, interest, royalties and management fees. The standard rate is 15%, although this may vary for payments made to certain jurisdictions with which Botswana has double taxation agreements.

For mining operations other than diamond mining, the taxation provisions of the Twelfth Schedule are not subject to negotiation.

There has been a review of the tax regime and new legislation is scheduled to come into force from 01 July 2010. Although there do not seem to be any changes directly related to the taxation of mining companies (diamonds and other minerals), the changes are applicable to all companies including mining companies. Changes include the abolition of ACT (additional company tax), 7.5% withholding tax on future dividends and the introduction of transfer pricing.

CONFLICT DIAMONDS

Conflict diamonds are diamonds that originate from areas controlled by forces or factions opposed to legitimate and internationally recognized governments, and are used to fund military action in opposition to those governments. The trade in these illicit stones has contributed to devastating conflicts in countries such as Angola, the Democratic Republic of Congo and Sierra Leone. For a period the controversy surrounding conflict diamonds threatened to seriously damage the image of the diamond market, and tarnish diamonds as a fashion accessory. The threat was treated seriously by Botswana, whose economy is dependent on the continued popularity of diamond jewellery sales.

In May 2000, Southern African diamond producing states met in Kimberley, South Africa, to come up with a way to stop the trade in conflict diamonds and to assure consumers that the diamonds that they purchase have not contributed to violent conflict and human rights abuses in their countries of origin. In December 2000, the United Nations General Assembly adopted a resolution supporting the creation of an international certification scheme for rough diamonds. In November 2002, after nearly two years of negotiation, the efforts of governments, the international diamond industry and NGOs culminated in the creation of the Kimberley Process Certification Scheme (KPCS). The KPCS outlines the provisions by which the trade in rough diamonds is to be regulated by countries, regional economic integration organizations and rough diamond trading entities.

The KPCS imposes stringent requirements on all Participants to guard against conflict diamonds entering the legitimate trade. Participants are required to implement internal controls, and all shipments of rough diamonds must be accompanied by a Kimberley Process certificate. Participants can only trade with other Participants who have met the minimum requirements of the certification scheme.

While each Participant is required to implement the Kimberley Process (KP) in their respective territories, sharing information and insight is an integral part of making the certification scheme work. Annual Plenary meetings are held to give participants the opportunity to converse with one another and with industry and civil society members to improve the effectiveness of the regulatory regime.

Participants, industry and civil society representatives work together in Working Groups – Monitoring, Statistics, Diamond Experts – and Committees – Participation Committee and Selection Committee – to ensure that the integrity of the certification scheme is upheld and that the Kimberley Process moves closer to stopping the trade in conflict diamonds. Israel was appointed the chair for the Kimberley Process for 2010. One of the tasks Israel wants to push for under its chairmanship is the set up of an arbitration committee, with the aim to settle differences of interpretation pertaining to Kimberley Process decisions.

Today the Kimberley Process Certification Scheme has evolved into an effective mechanism for stopping the trade in conflict diamonds. According to the World Diamond Council, conflict diamonds now represent less than 0.5% of all production from 4% prior to the Kimberley Process.

The total number of KP participants is 49, including the European Community (counted as one). Venezuela, has voluntarily taken the decision to separate from the KPCS for two years and has suspended import and export of rough diamonds until further notice.

The only current case of rebel forces controlling diamond production is in Côte D'Ivoire (representing less than 0.1% of world production). Cote d'Ivoire is currently under UN sanctions and is not trading in rough diamonds.

There has been recent criticism, in particular by NGOs about the effectiveness of the Kimberley Process especially with regards to Zimbabwe and also its consensus and decision making system which allows individual members to block decisions rather than using a majority voting system.

Parallel to the Kimberley Process, the diamond industry, through the World Diamond Council, has set up a Voluntary System of Warranties. This system is separate from the KP but is endorsed by all KP participants. Under this system, all buyers and sellers of diamonds – rough, polished or jewellery- must confirm on the invoice that the diamonds have been purchased through authorized channels, not involved in funding conflict.

Kimberley Process

States and regional economic integration organizations who have met the minimum requirements of the Kimberley Process Certification Scheme as of December 2009 are:

1. Angola	18. India	35. Sierra Leone
2. Armenia	19. Indonesia	36. Singapore
3. Australia	20. Israel	37. South Africa
4. Bangladesh	21. Japan	38. Sri Lanka
5. Belarus	22. Korea, Republic of	39. Switzerland
6. Botswana	23. Lao, Democratic Republic of	40. Tanzania
7. Brazil	24. Lebanon	41. Thailand
8. Canada	25. Lesotho	42. Togo
9. Central African Republic	26. Liberia	43. Turkey
10. China, People's Republic of	27. Malaysia	44. Ukraine
11. Congo, Democratic Republic of	28. Mauritius	45. United Arab Emirates
12. Cote d'Ivoire *	29. Mexico	46. United States of America
13. Croatia	30. Namibia	47. Venezuela**
14. European Community	31. New Zealand	48. Vietnam
15. Ghana	32. Norway	49. Zimbabwe
16. Guinea	33. Republic of Congo	
17. Guyana	34. Russian Federation	

*Cote d'Ivoire is currently under UN sanctions and not trading in rough diamonds.

**Venezuela has voluntarily suspended exports and imports of rough diamonds until further notice. Chinese Taipei has also qualified as a participating member

Extractive Industries Transparency Initiative (EITI)

The EITI was first announced at the World Summit for Sustainable Development in October 2002 in response to overwhelming evidence that mineral wealth in developing countries was fuelling conflict, corruption and misery rather than promoting development, notably in countries such as Angola, Sierra Leone and Nigeria.

The initiative is a multi-stakeholder with partners from governments, international organisations, companies, NGOs, investors and business and industrial organisations.

EITI supports improved governance in resource-rich countries through the verification and full publication of company payments and government revenues from oil, gas and mining. The initiative works to build multi stakeholder partnerships in developing countries in order to increase the accountability of governments. Good governance is a precondition for converting large revenues from extractive industries into economic growth and poverty reduction. When transparency and accountability are weak, the extractive industries may instead contribute to poverty, corruption and conflict- the so called "resource curse".

The primary beneficiaries of EITI are the governments and citizens of resource-rich countries. Knowing what companies pay and what governments receive is a critical first step to holding decision makers accountable for the use of revenues. Resource-rich countries implementing EITI can benefit from an improved investment climate by providing a clear signal to investors and to international financial institutions that the government is committed to strengthening transparency and accountability.

The EITI Secretariat has developed an EITI Source Book that provides guidance for countries and companies wishing to implement the initiative. Botswana was initially reluctant to join the EITI, on the basis that it had long established transparent procedures in terms of mineral revenues and budgeting, and hence that it had always been doing the things that EITI wanted them to do. Botswana was also concerned that some of the EITI commitments would breach confidentiality agreements that the Government had with De Beers. Finally, in May 2007 Botswana announced its intention to join the EITI. Since then, Botswana joins international EITI meetings and supports the EITI process but has not made any further commitment itself to become an EITI candidate country. Some of the other mineral rich African countries such as Zambia, Tanzania and Mozambique held EITI workshops in 2008 to launch the EITI process and are now candidate countries.

EITI currently has 29 candidate countries (although Guinea currently suspended) and two compliant countries (Azerbaijan and Liberia) across Africa, Asia, Europe and Latin America actively implementing EITI's internationally recognized standards for revenue transparency. These countries (e.g. Cameroon, Ghana, Trinidad and Tobago and Mongolia) have committed to EITI principles and criteria. Some countries are only beginning to launch the process, while others have published revenue and payments data. EITI's work continues to be supported by many countries providing political, technical and financial support as well as companies in the industry and international bodies (e.g. the Asian Development Bank).

ENVIRONMENTAL ISSUES

Botswana's mining operations have traditionally had a limited environmental impact. The diamond mines are opencast, and the main environmental residue has been spoil heaps which, given Botswana's extremely low population density, have not been a major environmental concern. Recovery processes are mechanical or physical rather than chemical and thus pose no major effluent problems. In due course, the need to deal with the large open pits will become an issue, but, given that diamond mining is expected to continue in the current locations for many more years, this will only arise many years in the future.

However, there are some specific environmental issues that have arisen in the mining sector. When the soda ash plant was being constructed at Sua Pan, the environmental sensitivity of the area was acknowledged, and electricity cables taking power to the plant were located underground, in order to avoid a possible hazard to flamingos that seasonally migrate through the area. However, the main environmental concern has arisen from the BCL copper-nickel smelter at Selebi-Phikwe, which has had consistent problems with the levels of sulphur dioxide emissions that, in certain climatic conditions, cause problems for nearby residents.

A second environmental problem has arisen from abandoned mines, especially old gold mines in the Francistown area. As there are no proper records of these mines, many of which date back to the 19th century, the abandoned shafts cause serious problems from time to time.

The Mines and Minerals Act now requires all mining operations to take into account environmental considerations and conduct operations so as to "preserve as far as is possible the natural environment, minimize and control waste or undue loss of or damage to natural and biological resources, to prevent and where unavoidable, promptly treat pollution and contamination of the environment". All applicants for mining or retention licences must carry out an Environmental Impact Assessment (EIA) that must form part of the Project Feasibility Study Report that accompanies the licence application. At the end of operations, the holder of a mineral concession is obliged to restore the top soil of affected areas and restore the land substantially to the condition in which it was prior to the commencement of operations. The Department of Mines is currently reviewing the Mines and Mineral Act to ensure that mining license holders make adequate financial provision to fulfil the environmental obligations to rehabilitate the mines at the end of the mine life.

The EIA must cover the following issues:

- outline project description and motivation
- description of the pre-mining environment (geology, climate, topography, soil, land use, ecology, animal life, old and current mining operations, surface water, ground water, air quality, noise and vibration, archaeological and cultural aspects, sensitive landscapes and protected areas, visual aspects, regional and socio-economic infrastructure);
- detailed project description
- environmental impact assessment (by phase – construction, operational, decommissioning, residual impacts)
- environmental management programme
- consultation process.

A document on “Guidelines for Preparing Environmental Impact Assessment Reports for Mining Projects” is available on the Department of Mines Website; www.mines.gov.bw/guidelines.html, and the Impact Assessment (EIA) Act (May 2005) can be found on www.envirobotswana.gov.bw. At present, the EIA Act (2005) is being amended to allow, among others, the formulation of an EIA Practitioners Association and Board, to ensure better monitoring, controlling and regulation of the profession. The Environmental Impact Assessment (Amendment) Bill (2010) has been drafted and is being circulated among Cabinet. It has not yet passed the National Assembly. The Environmental Management Bill, to allow for better environmental management, is presently being reviewed internally by the Ministry to then be circulated for approval in due course.

Although there are at present no additional legal environmental requirements, international environmental accords and standards are expected to be followed by mining organizations in Botswana e.g. the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. The Ministry of Environment, Wildlife and Tourism will put increased measures into place to ensure that mining companies adhere to environmental monitoring in accordance to the EIA.

It can also be noted that some of the new mining projects started to incorporate environmental considerations, for example the Morupule Colliery. The beneficiated coal will reduce the emission of pollutants such as sulphur dioxide into the atmosphere, and the plant is designed that the water used for the beneficiation can be recycled, preserving this scarce resource.

CITIZEN EMPOWERMENT AND LOCAL PREFERENCE POLICIES

“Empowerment” issues are becoming increasingly important in Southern Africa. In South Africa, this specifically refers to “black economic empowerment” (BEE), designed to address that country’s history of racism and apartheid, which has historically disadvantaged the majority of that country’s population. In the mining sector, as in other industries, an empowerment “charter” has been agreed between key stakeholders, governing the reform of the sector to enable meaningful participation by historically disadvantaged groups.

Botswana has a markedly different history to South Africa. The country is Africa’s oldest continuously established democracy and has experienced remarkable growth. Government policies have benefited the population as a whole and there has been no systematic exclusion of any particular groups. Nevertheless, there is concern about foreign domination of the economy, and this has led to calls for “citizen empowerment”. This term embraces all races and tribes, a further indication of Botswana’s stability and history of racial harmony.

While citizen empowerment has become a more high profile issue in recent years, it is not an overriding principle of business as it has become in South Africa.

There are no indications that the Government is considering rules such as those in South Africa which regulate the minimum holdings that citizens should have in mining ventures, or exploration projects. In fact it is generally in Botswana believed that such policies would encourage corruption through “fronting” and lead to a reduction in growth in the mineral sector overall.

Nevertheless, mining companies are expected to run their operations for the benefit of the Botswana economy in general and for Botswana citizens in particular. The Mines and Minerals Act therefore specifies that the holder of a mineral concession shall give preference, to the maximum extent possible consistent with safety, efficiency and economy, to materials and products made in Botswana; to service agencies located in Botswana and owned by Botswana citizens or companies; and to the employment of Botswana citizens. In addition, the holder of a mining license shall conduct training programmes for the benefit of employees so that such employees may qualify for advancement. As noted earlier, the Government reserves the right to acquire a shareholding of up to 15% in new mining operations, paid for in proportion to expenditure incurred, as one means of ensuring local participation in mining ventures.

The former Minister of Labour and Home Affairs, Charles Tibone, announced in February 2008 Government’s decision to exempt expatriate employers from residence and work permits for certain key positions such as CEO and managerial positions in Finance, Quality/Technical, Sales and Marketing and Operations.

This move, to encourage more foreign investment into Botswana was perceived with mixed response. It was welcomed by the mining and diamond industries where often highly specialized skills are needed which cannot be found locally.

In the Fraser survey 2009/2010, 70% saw availability of labour/skills in Botswana not a deterrent to investment whereas only 16% of respondents in Botswana found availability of labour and skills (or lack of) a mild deterrent to investment in the country and only 4% said it was a strong deterrent to investment (this is even 1% less than in the previous year).

HIV/AIDS

In recent years, much of Botswana's social progress has been threatened as a result of HIV/AIDS, which is very widespread in Botswana. For many years Botswana had the highest measured rate of HIV prevalence in the world, with more than 35% of pregnant women testing HIV positive, which equates to an estimated adult HIV prevalence rate of around 28% and a population prevalence rate of around 17% (although figures are often mis-reported, even by supposedly reputable sources, as a 35% population prevalence rate). The total number of HIV positive adults (age 15+) is estimated at around 331,432 (est. 2009). Comparative international data now indicates that Botswana has the second highest HIV prevalence rate in the world, after Swaziland.

The spread of HIV/AIDS has had a dramatic effect on life expectancy. Following the widespread social investment that took place after independence, life expectancy had risen to around 67 years at the time of the 1991 national census. By 2001, life expectancy had fallen sharply, although with a very wide range of estimates of what it had fallen to. AIDS and the increased mortality caused by it has influenced most commonly used indicators of mortality. Life expectancy is estimated to be about 10 years shorter due to HIV. It is estimated to be 57 years with AIDS and 67 years without AIDS (ACHAP). The figure of life expectancy with AIDS is higher than the figure of 56 years estimated from the 2001 census due to increased access to antiretroviral therapy (ART) which has led to a rise in life expectancy after many years of decline.

The threats to the fabric of the society and the economy posed by HIV/AIDS are enormous. High rates of morbidity and mortality will pose a burden on family structures and livelihoods, as breadwinners die, medical and funeral expenses mount, and children are orphaned. They will also impact on firms, due to additional expenses related to sickness, absenteeism, reduced productivity, higher staff turnover and hence additional recruitment and training costs. There is also a major impact on the government budget, as well as the long term prospects for economic growth.

In response to the threat posed by HIV/AIDS, the government of Botswana, together with civil society and the private sector has mounted an extremely vigorous and extensive campaign on many fronts, focused on awareness raising, prevention and access to treatment and care. Despite awareness raising, high-risk behaviour persists and has been very slow to change. Since 2004, the government has introduced routine HIV testing in all health facilities which entails routine, but not mandatory testing to all clients of public health facilities. By September 2007, uptake of routine testing was 93% (Ministry of Health). The government has also established a nationwide network of voluntary HIV testing centres, which have a steadily growing influx of people wishing to "know their status". In addition, Botswana has become the first country in Africa to provide ART to all its citizens on a nationwide basis, free of charge. By September 2008 90,921 patients in public health facilities and 22,000 patients in private health facilities received ART, an estimated 94% of the people with advanced HIV infection (this is an increase of over 20% from previous year). The Government of Botswana was also the first in Africa to introduce PMTCT (Prevention of Mother to Child Transmission) which has resulted in a reduction from HIV transmission from mother to child of 40% in 2001 to 4% in 2007. Such initiatives are especially important to protect future generations. To implement these programmes, the government has built new health facilities, recruited medical staff and bought drugs, and established an extensive testing and monitoring programme. Government finances about 80% of HIV/AIDS expenditure, the remainder being met by donor funds. The government, under fiscal pressure, might have to start to reduce spending in the prevention and treatment of HIV/AIDS. Focus will have to be put on more HIV prevention through behaviour change and hence prevention, as the government cannot support an ever expanding patient base for the ART programme in the long run.

While the impact of HIV/AIDS campaigns has been slow to emerge, there is evidence that the HIV prevalence rate has stabilised and that the rate of new infections is declining in certain age groups, especially among the young, indicating a change in behaviour. The overall adult prevalence rate as recorded by sentinel surveys of pregnant women fell from a high of 37.4% in 2003 to 32.5% in 2009 (est.). The test of a successful campaign will be declining rates of new infections and declining mortality rates. HIV prevalence in older age groups has been rising from 1992 to 2007, whereas the younger age group prevalence rate is nearing its 1992 level (17.2% in 2007)-this shows that the rate of infection is decreasing, while the older age group shows the effect of the ART. Some indication can also be seen from data collected by Botswana's main voluntary testing centres which show a decline of the number of people testing positive towards the end of 2007.

It is believed by many that, if any country in Africa is going to succeed in implementing such a comprehensive HIV/AIDS care and treatment programme, then it is Botswana. However, the HIV/AIDS situation is undoubtedly dire, and is a burden on companies across the economy, particularly those dependent upon skilled labour. Even though Botswana has a national policy on HIV/AIDS as well as a Public Service Act (2008) which prohibits the discrimination or prejudice of employees because of an HIV positive status, the local NGO BONELA (Botswana Network on Ethics, Law and HIV/AIDS) continues its campaign to demand an amendment of the Employment Act to also protect employees in the private sector.

Disclaimer

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