

Chamber of Mines of South Africa

Annual Report 2007 – 2008

Mining – the foundation of the economy



It can be said that mining is the foundation of the South African economy as it is upon the mining industry that the economy of South Africa was and is built. Prior to the discovery of gold, coal and diamonds, the South African economy was based on agriculture – mainly subsistence agriculture. Infrastructural development, industrial entrepreneurship and a thriving retail sector followed the discovery of South Africa's mineral wealth.

Mining continues to support and stimulate growth and development in the country. Mining companies contribute extensively to South Africa's tax base; rail, road and port development is more often than not spurred on by the development of new and extended mining operations; new towns are established in mineral rich areas; it attracts new investment into the economy; it leads the way in empowerment, skills development and transformation; and it injects over R40-billion into the economy via wages.

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Chamber members

Financial corporations

Anglo American Corporation plc.

Barrick Africa

Mvelaphanda Resources

Rio Tinto

Base metals/minerals & exploration companies

ASA Metals (Pty) Limited

Delta Mining (Pty) Limited

G & W Base and Industrials (Pty) Limited

Imerys South Africa (Pty) Limited

Randgold and Exploration Limited

Richards Bay Minerals

Vametco Mineral Corporation (Pty) Limited

Coal mining

Anglo Operations Limited, Anglo Coal Division

BHP Billiton Energy Coal

Exxaro Resources Limited

Kangra Group (Pty) Limited

Kuyasa Mining (Pty) Limited

Optimum Coal

Sasol Mining (Pty) Limited

Siyanda Coal (Pty) Limited (t/a Koorfontein Mines)

Total Coal South Africa

Tweewaters Fuel (Pty) Limited

Umcebo Mining (Pty) Limited

Xstrata Coal South Africa

Diamond mining

De Beers Consolidated Mines Limited

Namakwa Diamond Company

Trans Hex Group Limited

Gold mining

African Rainbow Minerals (Gold) Limited

AngloGold Ashanti Limited

Gold Fields Limited

Harmony Gold Mining Company Limited

Pamodzi Gold

Iron Ore mining

Kumba Iron Ore Limited

Platinum mining

Anglo American Platinum Corporation Limited

Impala Platinum Limited

Lonmin Platinum Limited

Ridge Mining

Associations

Aggregate and Sand Producers Association of South Africa

Clay Brick Association Limited

SA Association of Mining Contracting Companies

South African Diamond Producers' Organisation

Other members

Corobrick (Pty) Limited

Deilmann-Haniel GmbH

Murray and Roberts (Cementation) (Pty) Limited

Shaft Sinkers (Pty) Limited

Suspended operations

City Deep Limited

Consolidated Main Reef Mines and Estates Limited

Crown Mines Limited

Chief Executive's review

For decades the mining industry in South Africa has been the main driving force of the country's economy, fostering growth, development and providing the foundation for the strongest economy on the African continent. Mining has contributed extensively to the development of our country's infrastructure, which spurred the growth of other sectors in the economy, such as manufacturing and commercial agriculture. It is therefore fitting that in recognition of the role of mining in South Africa's economy, the theme for this year's annual report is 'Mining, the foundation of South Africa's economy'.

During the year under review, the mining sector was faced with a number of important challenges, which affected the industry's operation, performance and contribution towards the country's economy. Statistics South Africa reported that in January 2008 mining production output was down by 7% when compared with figures for the same month in 2007. Unfortunately, this became a trend in the following months and threatened the safety of mine personnel, reduced production and jeopardised jobs, largely as a result of the electricity outages that had a negative impact on the economy as a whole and the mining industry in particular.

On 25 January 2008, Eskom imposed a 'force majeure' effectively closing the mining industry for a week. In essence, mines were reduced to an immediate 50% electricity level. This meant that many mines had to close their operations completely, owing to the very real safety concerns that such a reduction in electricity entails. Supply was later gradually increased to a 90% electricity demand level. However, the mining industry's electricity supply was not increased to 95% of normal levels as erroneously reported in the media. Only a few mining companies applied for and were granted extra electricity in an attempt to try to avoid retrenchments. It should be noted that electricity is an important input for all forms of mining: it is a major requirement for the transport of personnel, material and ore, production machines and mineral processing. In addition, it is the exclusive power source for vital health and safety related applications, such as the pumping of water, ventilation and refrigeration. In underground gold operations, electricity used for health and safety purposes may consume in excess of 55% of the total electricity operations.

The consequence of the January shutdown and the curtailment of electricity supply to 90% of the normal demand to an industry that is responsible for about 50% of South Africa's foreign-exchange earnings, was most deleterious. The industry directly accounts for about 6.8% of gross domestic product (GDP), while the indirect multiplier effects grow the contribution to 17.5% of GDP and it employs about 500 000 workers directly and an estimate of 170 800 workers are employed in industries directly associated with mining. The effects of the slowdown are still reverberating through the industry.

As reported in the 2007 Annual Report, the Chamber stressed that the planning strategies of the disparate industry role players be aligned to address not only the long-term, but also the immediate needs of the country. This position of the Chamber's is even more relevant today. In its endeavours to foster co-operation, the Chamber has increasingly used its position to orchestrate a more strategic, stakeholder driven approach to solve the sometimes vexatious issues facing the industry. One of the key issues the Chamber focuses its efforts on, is to ameliorate any possible job losses in the industry. In the case of the power supply shortages and the serious challenges facing Eskom, the industry has made key leaders available to assist the power utility, as with the secondment of Mr Ras Myburgh from Kumba Iron Ore to head up Eskom's coal procurement side.

Coal mining companies responded positively to Eskom's urgent request for an additional 45 million tons of coal, by immediately making 40 million tons of additional coal available to Eskom.

The Chamber was also kept busy with legislative issues that affect mining. Three important bills were due for amendment during this financial year: the Mineral and Petroleum Resources Development Amendment Bill [B10A-2007] (MPRDA), the National Environmental Management Amendment Bill [B36-2007] (NEMA) and the Mine Health and Safety Amendment Bill [B54-2008] (MHSA). There are two important principles of good legislation: that the law should not have unintended consequences that undermine the objectives of the legislation and secondly, the legislation should be practical and should not require activities which, for whatever reason are impossible to perform. Bearing these important principles in mind, the Chamber made written and verbal input on the bills.

The Chamber made presentations and submissions on the MPRDA Amendment Bill, which is aimed at addressing duplications



Zoli Diliza, Chief Executive of the Chamber of Mines of South Africa

in the National Environmental Management Act and the Mineral and Petroleum Resources Development Act. Draft B of the MPRDA Amendment Bill did not entirely address the mining industry's concerns on streamlining environmental authorisations on mining activities. However, the Ministers of Minerals and Energy and Environmental Affairs and Tourism reached a high-level agreement on a framework for environmental management for the mining industry.

Following an inadequate public participation process in the National Assembly by the Parliamentary Portfolio Committee on Environmental Affairs and Tourism in relation to the National Environmental Management Amendment Bill, the Chamber met with Mr Langa Zita, the chairperson of this portfolio committee. The purpose of the meeting was twofold: to establish formal lines of communication and to seek advice and guidance on how best to ensure that the Chamber's concerns were given due consideration, bearing in mind the processes that had left little or no room for the Chamber to contribute meaningfully to the NEMA Amendment Bill. It was agreed that the best way forward would be for officials from the Chamber and from the Department of Environmental Affairs and Tourism (DEAT) to meet urgently to discuss the Chamber's concerns with a view to addressing those concerns that did not relate to matters of policy and were not in line with the DEAT policy. A meeting with DEAT officials is expected to take place shortly.

With regard to the Mine Health and Safety Amendment Bill, I must emphasise that the Chamber supports all initiatives aimed at improving the health and safety of mine workers. However, the Chamber's concerns are that first, there must be a balance between preventative and punitive measures to ensure safe and healthy working conditions. The Bill, as it stands, signals a significant shift away from a system that is finely balanced between preventative and punitive measures, to a system strongly emphasising punitive measures. This is likely to have unintended consequences that will undermine the objective of improving health and safety on mines.

Secondly, in determining the real causes of incidents and ensuring openness and transparency during investigations into mine incidents, the Chamber proposes that any investigation reports may not be used as evidence in any administrative, civil or criminal proceedings. This does not mean that the same evidence cannot be heard in criminal or civil proceedings – it only means that such evidence would be subject to proper evidentiary rules, such as the right to cross examine, which is not necessarily the case in investigations. If this protection is not provided for in the Bill, it will be a step backwards in determining the real causes of incidents, and thus perhaps in preventing similar incidents in future.

Thirdly, the resourcing of an independent Inspectorate should be the responsibility of Government. The employers are already contributing substantially to health and safety research in the Mine Health and Safety Council (MHSC), and cannot be expected to further increase their contributions to enable an Inspectorate to be semi-privatised. It is important for the proposed Inspectorate to have a proper oversight body in the absence of the oversight role of the Department of Minerals and Energy, and the Chamber proposes that the MHSC becomes this oversight body.

Whilst on the issue of safety, I must point out that although there has been a significant improvement in the safety performance of the industry since the mid-1990s, and the number of fatalities has declined by more than 50%, the industry is still not happy with its safety record. The Chamber has, therefore, embarked on a proactive health and safety programme and has launched several initiatives, the details of which are provided elsewhere in this report.

I would just like to touch on one of these initiatives. Towards the end of August 2008, chief executives of Chamber member companies came together to strategise, share and learn from each other on the best ways to improve working environments, so that mining takes place in safer surroundings. Above all, the executives committed themselves to undergo regular assessment of their effectiveness as health and safety leaders. This is a clear indication of the dedication by mining company chief executives to ensure safer mining.

2009 will mark another important milestone in the mining industry: a review of the Mining Charter. In May 2004, industry stakeholders agreed to 'meet after five years to review progress and to determine what further steps, if any, need to be made to achieve the 26% target'. The Chamber has engaged the services of an independent consultant to conduct an audit on members' progress towards this important milestone. The Chamber is hopeful that the spirit of engagement, negotiation and co-operation that was present during the original Charter negotiations will be adopted again in 2009.

Notwithstanding the challenges and economic uncertainty that nearly crippled the industry earlier in 2008, the shared commitment by Chamber members and the on-going collaboration with government and labour, have made it possible for the industry to deal successfully with a number of important challenges. I indicated in last year's Annual Report that mining industry stakeholders have increasingly come to appreciate that adversarial engagements are not the best means to shape mutually beneficial outcomes. I am positive that all industry stakeholders will continue to engage positively in an effort to benefit the country's economy.

In conclusion, I would like to reiterate my ongoing commitment, and that of the Chamber, to extensive collaboration with all mining industry stakeholders. I believe these interactions will, in the long run, provide ongoing opportunities for the country and ensure that the mining industry maintains its world-class reputation, which it so clearly deserves.



Communications

Introduction

There are considerable costs to an organisation that fails to incorporate communication in its decision making processes. The impact that is associated with any failure to communicate to all stakeholders both internal and external may lead to an erosion of trust, conflict, a decrease in creativity and a loss of productivity. Consequently, the image of that organisation may be negatively affected.

For an organisation to succeed in its operations, communication should become its lifeblood. The Chamber, in its advocacy and lobbying role with government, labour and other stakeholders relies on information, transparency and candour – vital ingredients if it is to remain the recognised, unified and authoritative voice of the mining industry in South Africa. In communicating to its stakeholders, the Chamber seeks to understand the often disparate information requirements of the interested parties to arrive at vital determinations that will benefit the industry and the country as a whole.

The Chamber's reputation depends on its ability to create and nurture relationships with its stakeholders. In its communication endeavours, the Chamber must accurately identify the tools and activities that are most appropriate to transfer and receive information from stakeholders. It therefore engages in multi-channel communication, which involves a range of information flows and where necessary, an upgrade of its current communications technology and networking systems to enable effective and diverse communication. The Chamber is fully cognisant of the fact that the type of communication channel used needs to be appropriate to the message being conveyed and that barriers to communication can arise from choosing an inappropriate method for a message.

The Chamber's communications service is responsible for developing and disseminating strategic messages. The following are some of the communication channels used by the Chamber to inform its stakeholders of its activities on behalf of the mining industry in the economic and socio-economic spheres, on health and safety issues, in the fields of environment and sustainable development, legislative and skills development.

Industry promotion

Mining is the foundation upon which the economy of South Africa is built. It is through mining that South Africa is by far one of the most developed countries in Africa. In 2007, the sector directly accounted for 7% of gross domestic product (GDP) and the indirect multiplier effect brought the contribution to about 18.5% of GDP in total. The industry provides diverse investment and other opportunities for the country to prosper, which South Africa needs to encourage and facilitate foreign investment opportunities. To attract investment into the country, the

Chamber endeavours to promote a positive image of the mining industry through the output of all its advisory areas and by disseminating, in a strategic and timely fashion, accurate and key information on the mining industry for the good of Chamber members and the country as a whole.

During the year under review, the Chamber engaged a number of publishing companies and developed partnerships with them to promote the industry nationally and internationally. The topics that were covered ranged from an overview of the mining industry to health and safety, sustainable development, environment, economy, labour relations, skills development, transformation to a general insight into mining. Amongst others, the following publications carried the story of mining in South Africa to a wide and diverse public. *Deep South Africa; South Africa, Alive with Possibility; Succeed/Essential; Enterprise; African Analyst Quarterly; and Mining Weekly.*

A wide range of newspapers were used to carry current news and opinions on the mining industry.

Publications

In pursuit of industry promotion, the Chamber publishes a range of books, reports and newsletters, which contain information related to its lobbying and advocacy role. These publications are used to inform and interact with the Chamber's different audiences.

The Chamber's flagship publication

Mining, the Chamber's quarterly publication, continues to prosper. The publication has proved to be a huge success in promoting greater global awareness of all facets of mining in South Africa. It covers a range of mining related issues and impartially analyses the state of the mining industry in South Africa.

Just over 3 500 copies of this publication are distributed locally and abroad to carefully selected investment analysts, financiers, and policy and decision-makers in government and elsewhere.

Issues covered during the past year range from legislation and empowerment, environmental sustainability, beneficiation, silicosis, tuberculosis, small-scale mining, safety, mine water and acid drainage to skills development.

Mining News

Contained in this monthly newspaper is relevant information of interest to the industry's work force. *Mining News* places special emphasis on engaging all levels of mine employees and their families. It encourages miners to contribute to the publication since their perspective and energy is vital to the success and future of the industry.

The information contained in the newspaper empowers employees to become better informed and responsible partners in the economic prosperity of the mining sector in South Africa. The newspaper has also become a useful teaching tool in adult basic education and training (ABET) classes.

Website

During the year under review, the Communications Service of the Chamber developed a simple, functional, easy to navigate website ensuring that the appearance is both distinctive and aesthetically pleasing, and which has the needs of the user in mind. The information is now concise and well packaged; the pages are clearly differentiated and product focused, and the download speed has improved considerably.

The website (www.bullion.org.za or www.chamberofmines.org.za) provides links to a host of important sources, for example, service and equipment suppliers, international and local mining houses, newspapers and the mining research community.

Montjuic Communication tower in Barcelona



Communications will continue to extend the range of the website to provide up-to-date information for investors, market analysts, researchers and other interested parties.

Facts & Figures

Facts & Figures provides not only statistical mining sector data, but also comments and analysis of the data. This annual publication is available both as a hard copy and electronically on the Chamber website. It is an invaluable source of mining data and statistics of the mining industry in South Africa, bringing together general mining industry information and product-specific data from a host of sources, including Statistics South Africa, the Minerals Bureau, the South African Reserve Bank, the mining houses and government departments.

Stakeholder engagement

Government

The Chamber continues to engage different government departments on a range of issues. On 15 April 2008 the Chamber president, Siphon Nkosi, together with one of his vice-presidents, Robbie Lazare, and the chief executive of the Chamber held high level discussions with the minister of minerals and energy to explore a number of issues pertinent to the industry. The talks affirmed the critical role played by the industry and the importance of collaboration by the alliance partners.

A visit to the Rand Refinery was arranged by the Chamber for the minister of minerals and energy Ms Buyelwa Sonjica. However the visit did not materialise as the minister had to attend to other pressing issues in her department.

The Chamber has secured a permanent chapter to be used to promote its activities in the Department of Minerals and Energy publication, *Molato*.

Parliamentary portfolio committees

The Chamber's chief executive met with the chairperson of the Portfolio Committee on Minerals and Energy, Nqaba Ngcobo, to discuss amongst other issues, the electricity situation. Subsequently, on 20 February 2008, the Chamber's chief executive, and a mining delegation met with and delivered a presentation to the African National Congress study group and other interested parties on the impact of the power shortages on the mining industry. The aim of the meeting was a fact finding mission for the study group and the chairperson of the group indicated that the information was to be used towards finding solutions to the power situation.

The Chamber met with Langa Zita, the chairperson of the Environmental Affairs and Tourism Portfolio Committee, together with officials from the Department of Environmental Affairs and Tourism in Cape Town on 19 August 2008. The meeting was to strengthen relations with the chairperson and to discuss some concerns the Chamber had in relation to the National Environmental Management Amendment Bill [B36-2007].

Media relations

The Chamber maintains links with the media through media briefings, media conferences, interviews and informal contacts. The year under review was challenging as issues of the country's power situation, safety, environment, and investment opportunities, amongst others, took centre stage.

Since most of these issues were of national and international interest, and intense media focus was generated, to which the Chamber responded swiftly, effectively and positively to manage situations and perceptions while ensuring that its communications contained substance rather than mere publicity and was clear and unambiguous.

International liaison

Regional liaison

Mining Industry Associations of Southern Africa

The Chamber continues to provide the secretariat for the Mining Industry Associations of Southern Africa – MIASA. MIASA is an association of the six Chambers of Mines (Botswana, Namibia, South Africa, Tanzania, Zambia and Zimbabwe) operating in the Southern Africa Development Community (SADC). MIASA has its origins in a meeting of national associations with mining interests in 1996.

MIASA members met in Cape Town in February 2008 and the Chamber made input into discussions related to the harmonisation of mining policies in the SADC region. These discussions are continuing.

NEPAD Business Foundation

The Chamber is a member of the new Economic Partnership for Africa's Development (NEPAD) Business Foundation and has participated in all board and cross-sectoral meetings in the year under review.



Economic overview

International economic environment

The period from 2007 to the first half of 2008 was characterised by the occurrence of important events and trends. 2007 began with high global economic growth rates, rapid economic expansion in several developing countries – with intensive materials infrastructure spending – continued high mineral prices and a buoyant global mining industry. Key trends for the world-wide mining industry included rising investment in exploration and new projects, further ownership consolidation in the industry, rising cost pressures, challenges in bringing new projects on stream and the emergence of nationalisation of resources in a number of countries.

By the end of 2007 the fallout of the sub-prime mortgage lending crisis, combined with rising global inflation brought about by higher oil and food prices, had slowed the growth rates in many developed countries, especially the United States and the United Kingdom. Nevertheless, strong economic growth in the developing countries continues, especially India and China, prompting several economists to suggest that a type of growth decoupling was taking place between the developed and developing countries. While there is little doubt that countries like China and India will be affected by a slowdown in their key developed countries' export market, much of their economic growth is driven internally. In China, the urbanisation of 15 million people annually has resulted in major investment in infrastructure and industry, to the extent that investment expenditure makes up 42% of GDP. Household expenditure accounts for 35%, government consumption for 14% and only 9% is net exports. So, while the Chinese economic growth rate will moderate, it is still expected to remain high.

It is expected that the fallout of the sub-prime lending crisis and inflation issues will work its way through the global economy over the next 12 to 18 months. Thus, while developed countries' growth rates have slowed, emerging economies are likely to stimulate the world economy in the short-term.

Global commodity upturn

The last downturn in the *Economist* metals index was in October 2001. Since then the index has risen by 302%, peaking in June 2007 and moving sideways to June 2008. It makes this commodities bull cycle one of the longest and highest since the post second world war reconstruction period. While commodity prices will always remain susceptible to cyclical pressures related to normal economic growth and business cycles, the current interest in commodities has the making of structurally driven growth.

Demand for minerals in emerging economies, combined with supply constraints and falling stockpiles have placed upward pressure on prices. In particular, China has accounted for a substantial proportion of the spurt in demand for minerals. Higher mineral prices have resulted in

a quadrupling of exploration investment and a large rise in investment in new supply.

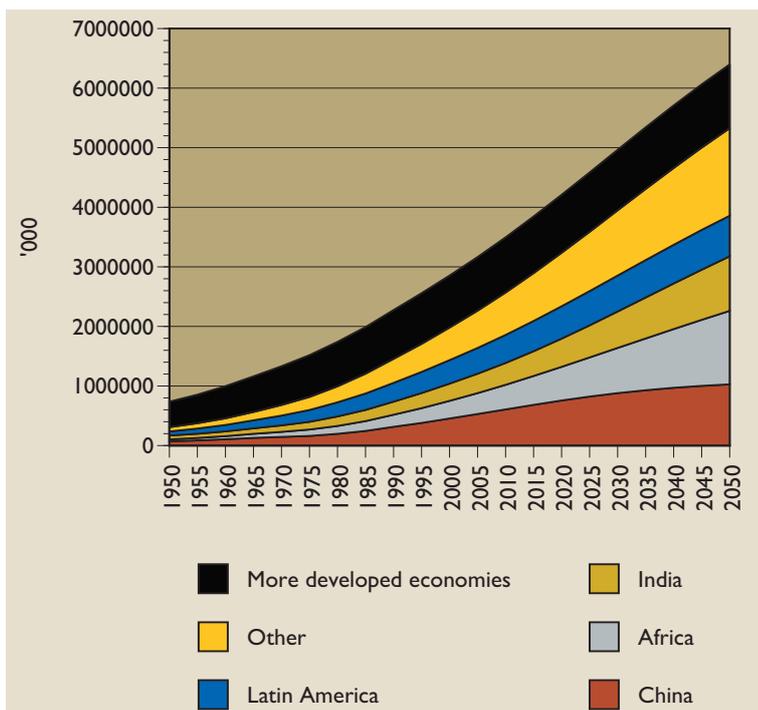
However, bringing on new supply has become increasingly challenging for the global mining industry. Finding and developing new projects is becoming more difficult and is being undertaken in riskier regions. Delays in the delivery of key equipment, longer licensing periods, combined with infrastructure and skilled human capital constraints have slowed the development and completion of new projects. The global mining industry is also facing rising cost pressures, which, in the long run, have resulted in the marginal cost of mineral production rising.

The key drivers behind the upswing are the flourishing urbanisation and industrialisation taking place in emerging economies, especially in the BRICs economies (Brazil, Russia, India and China). According to the United Nations, the world's urbanised population is expected to reach 1.4 billion by 2025.

Urbanisation and rising living standards in these countries is resulting in high infrastructure spending. The BRIC countries are currently spending 6% of GDP on infrastructure, while only 3% is spent by developed countries. China alone is expected to have 300 million people in cities by 2025, which will require the construction of an additional 200 tier one to three cities. China is currently investing the equivalent of 12% of GDP on infrastructural development. According to Morgan Stanley, emerging economies are likely to spend about US\$22-trillion on infrastructure over the next decade to accommodate urbanisation and industrialisation – China is expected to account for 43% of this infrastructure expenditure. China has spent more on infrastructure in the past five years than in the whole of the 20th century. The good news is that these development programmes are

The South African mining sector in 2007:

- ◆ accounted for 6.8% of GDP directly, although the indirect multiplier effects and the induced effect of mining take the contribution to about 17.5% of GDP in total. The industry's contribution to GDP declined by 0.1% in 2007 mainly because of an 0.8% drop in mining production. The indirect multipliers include backward linkages (e.g. transport, professional services), forward linkages (e.g. electricity generation) and the induced effect via mining generated incomes
- ◆ directly accounted for 8.9% of total fixed investment in the economy and for 12.1% of total private sector investment. If the multiplier effects are taken into account, mining helped generate about 18% of total investment in the economy. Real mining investment continued to recover from the 20% and 13% dips in 2004 and 2005 respectively and grew by 42.8% in 2006 and a further 25.5% in 2007. In real terms these levels of fixed investment are the highest on record
- ◆ continues to act as a magnet for investment to South Africa. As at 29 December 2007, the mining sector accounted for R2-trillion, or 35% of the value of the Johannesburg Securities Exchange (JSE). About R18.7-billion was paid to the providers of capital (investors) in the form of dividends. The mining sector contributed substantially to the JSE being ranked in the top 20 stock exchanges worldwide
- ◆ contributed about R162-billion directly in South Africa's merchandise exports, or 30% of the total. If beneficiated minerals are added to primary minerals (e.g. platinum group metal catalytic converters, ferro-alloys, steel, chemicals and catalytic converters), then the sector accounts for over 50% of merchandise exports. In terms of foreign exchange earnings per unit of GDP, mining generates the highest foreign exchange
- ◆ concluded around R51-billion worth of empowerment deals, making the resources sector the largest contributor to black economic empowerment deals by value for the third year in a row. Over the past 12 years a total of R141-billion worth of empowerment deals have been concluded in the resources sector
- ◆ moved about 97 million tons of bulk commodity ores (iron ore and coal) for export purposes on the rail system, thus making it the dominant user of South Africa's railways and ports. The 97 million tons of bulk commodity exports represents 53.5% of the total volume of Transnet's business in 2007
- ◆ directly employed an average of 495 474 workers in 2007, an increase of 36 874 on the 458 600 employees in 2006. It is further estimated that another 165 000 workers are employed in associated industries that either supply products to, or use products from the mining industry (the multiplier linkages of the industry), while as many as 400 000 more jobs are induced by the spending multipliers of the mining sector. Around five million people are directly dependent on mine employees for their daily subsistence
- ◆ accounted for 6% of the people employed in the non-agricultural formal sector of the economy and 7.5% of the total private sector of non-agricultural employment in 2007. If the multiplier and induced effects are included, the contribution to employment as a result of mining rises to about 16% of total non-agricultural formal sector employment in South Africa
- ◆ paid R50.1-billion in wages and benefits to employees, which accounted for about 5.9% of the total remuneration paid to all employed people in the country in 2007. This contributed substantially to domestic demand in the South African economy
- ◆ paid R20.9-billion in direct taxes and a substantial portion of indirect taxes to the fiscus in 2007. Mining direct taxes accounted for 18.5% of total company tax paid to government
- ◆ was the world's largest producer of alumino-silicates, chrome, ferrochrome, platinum group metals, vanadium and vermiculite. The industry was also an important supplier of aluminum (world rank 9), antimony (7), coal (5), ferro-manganese (4), ferrosilicon (6), gold (2), iron ore (7), manganese ore (2), nickel (9), phosphate rock (10), silicon (8), titanium minerals (2), uranium (11) and zirconium (2)
- ◆ accounted for a substantial amount of the supply and demand for energy. The industry consumed 31 800 gigawatt hours of electricity, 15.3% of Eskom's local electricity sales; 110 million tons of coal was mined and supplied to Eskom for electricity generation, which accounted for about 93% of the electricity produced in the country. The mining industry used about 762 million litres of diesel in 2006, or 9% of the total amount of diesel used in South Africa in that year. About 45.4 million tons of coal was first mined and then used in the manufacture of synthetic fuels and accounted for about 37% of liquid fuel supply in South Africa. This represents an annual savings of foreign exchange of about R30-billion annually.



Global urban population by key country/region 1950 to 2050 (Source UN)

financed through strong domestic government investment with fairly limited recourse to offshore funding.

While the commodities upturn has more structural than cyclical features, it is not immune to the vagaries of global economic cycles and pressures. The unravelling of the sub-prime crisis in the world's banking sector has induced corrections in equity and property markets, reduced the pool of liquidity available for funding new projects and has slowed consumer spending in the developed markets. These factors have reduced the growth in demand for minerals, resulting in cyclical challenges in commodities. Nevertheless, the underlying structural drivers remain intact. Urbanisation and industrialisation in emerging economies will continue to drive demand for minerals, while many of the mineral supply issues will remain.

The 2006 PricewaterhouseCoopers (PWC) report on the world's top 40 mining companies, entitled: *Riding the wave*, illustrated the favourable global environment and the thriving mining industry. The 2007 PWC report, *As good as it gets*, shows that while the industry has done well, a number of constraints are starting to surface. In particular, the key areas of power, people and procurement are singled out as key issues facing the industry. Nevertheless, higher commodity prices brought growth in revenues, earnings, capital expenditure and market capitalisation of mining companies.

The relatively depressed state of the commodities markets during the 1990s resulted in a slump in mineral exploration, with mining companies preferring to grow via acquisition rather than through greenfield's exploration. The recent commodities turnaround provided substantial impetus to mineral exploration, which, according to the Metals Economics Group, quadrupled from US\$2-billion in 2002 to US\$12-billion in 2008.

One of the key features of the increase in exploration has been the emergence of junior resource exploration companies as the dominant

driver of exploration. In terms of the share of global exploration expenditures, the juniors overtook the majors in 2004, and by 2007 accounted for over 50% of total spend, while the majors had declined to a 30% share. Invariably many new deposits are located by the juniors and are then mostly developed by the majors.

Global mining constraints

As mentioned in the 2007 PWC report, the three Ps: power, people and procurement have become prominent challenges to the global mining industry. Prosperous times in the global mining industry have stretched the supply pipeline of available skills. The rather depressed period of the 1990s did not provide incentives for students to study mining related sciences, nor did it provide incentives for mining companies to expand their training and skills programmes.

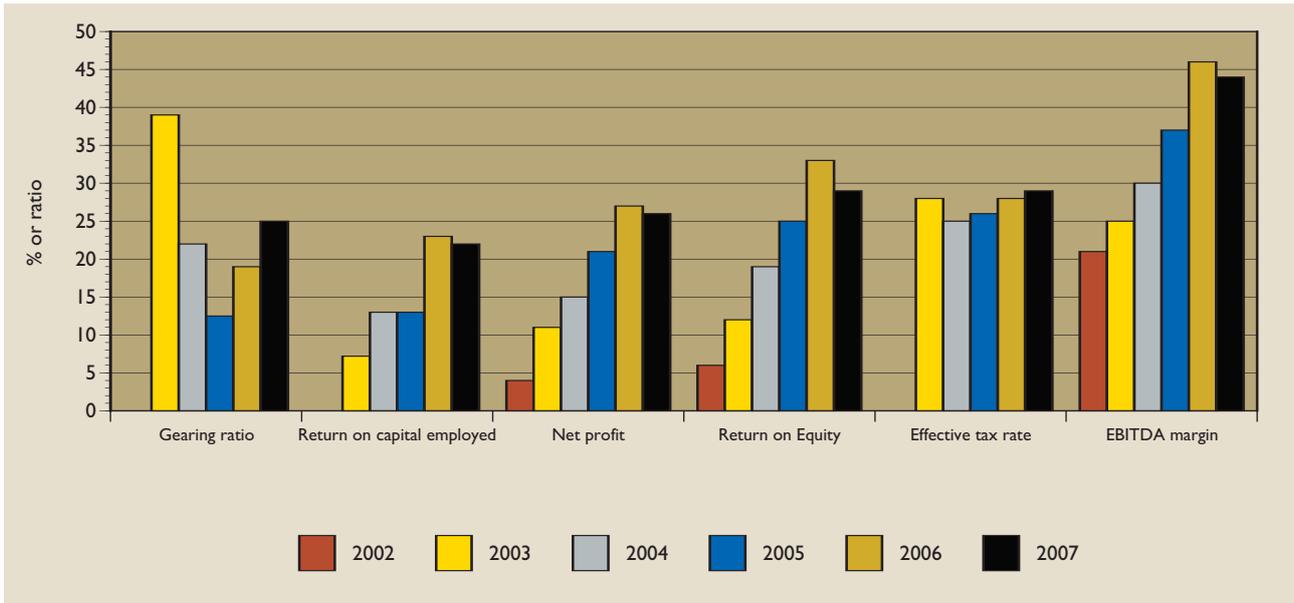
It is not merely the scarcity of skilled people, but also the fact that infrastructure around key mining areas has not kept pace with development, which has forced the mining companies to become more innovative in the way they attract, retain and house their employees.

The issue of electricity supply has come to light in a number of countries, with Brazil, Chile, China and South Africa experiencing problems. Mining companies now have to manage electricity supply including developing their own internal sources of supply.

Procurement is one of the more interesting problems facing the global mining industry. The materials intensive infrastructure requirements of the BRIC countries, and the pressure on the supply chain of goods and services have become strained, with the suppliers of goods and services unable to keep up. This has extended delivery lead times and raised the cost of equipment. According to the United Nations, the period from date of order to delivery had extended to 24 months by 2007.

South Africa – lagging behind

South Africa's mining sector stands out as



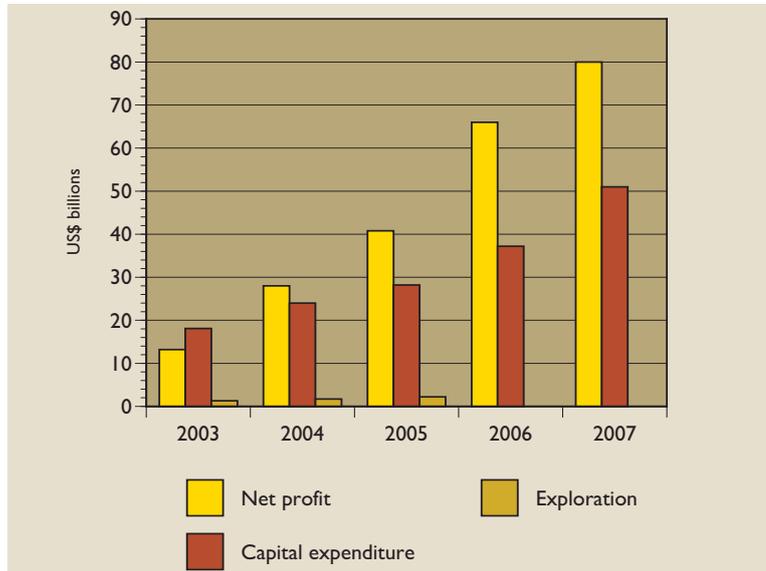
one of the few international mining industry players that has been unable to capitalise on the upsurge in the global commodities market. Despite real fixed investment staging a strong recovery in 2006 and 2007, South African mining sector production fell by 1.6% in 2006 and a further 0.8% in 2007. Even if gold production is excluded from the equation, total non-gold mining production declined by 0.3% in 2006 before a slight increase of 0.2% in 2007.

A combination of factors are responsible for both the decline in production and the modest growth in certain components of the industry. These include the closure of various mines and shafts owing to safety incidents, curtailment of electricity supply as a result of Eskom using demand market participation agreements, infrastructure constraints (rail, port, housing and roads), bottlenecks in the goods and services procurement pipeline into the mines, regulatory constraints – especially environmental permits – and shortages of appropriately skilled human capital.

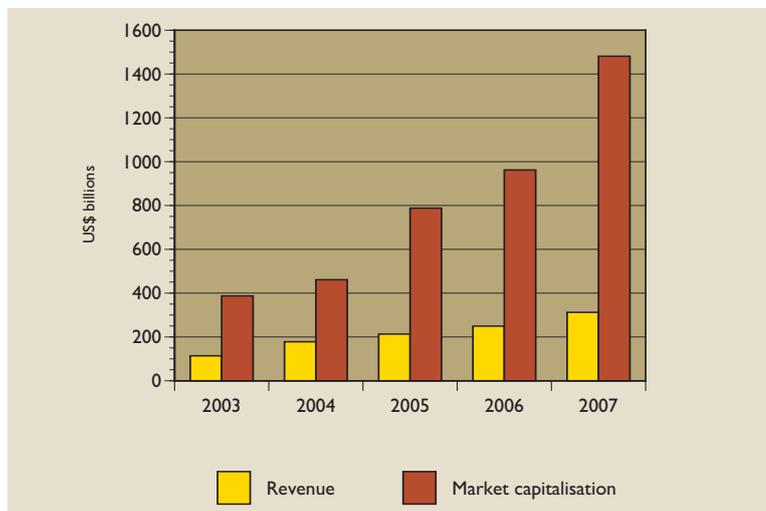
Electricity crisis undermines sector

The electricity crisis that hit South Africa on 25 January 2008 caused substantial economic damage to the mining sector. The industry was reduced to a 50% electricity supply level for the period 25 to 31 January 2008, which effectively shut down most of the mines. The Chamber

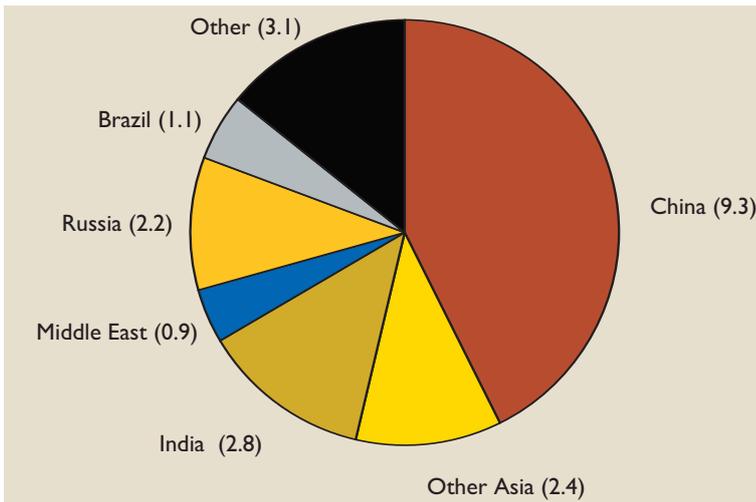
PWC survey of the top 40 mining companies 'As good as it gets?' key indicators



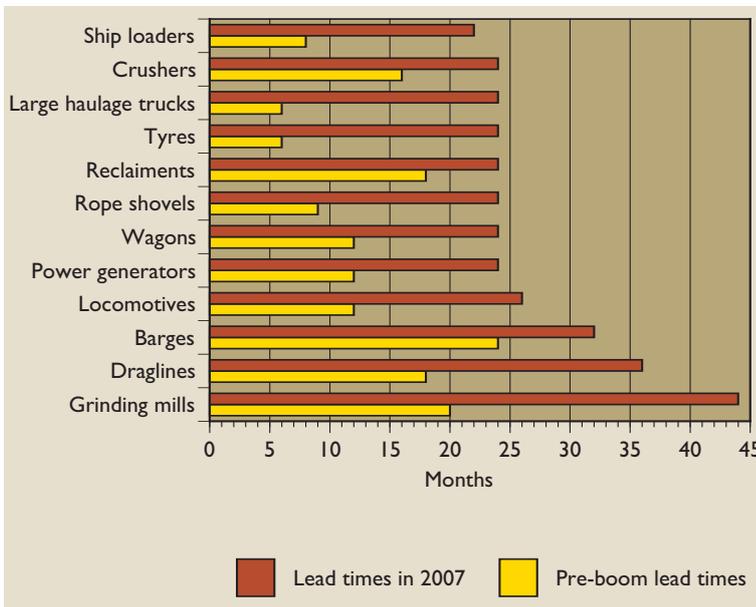
PWC survey of top 40 mining companies, net profit, capital expenditure and exploration expenditures



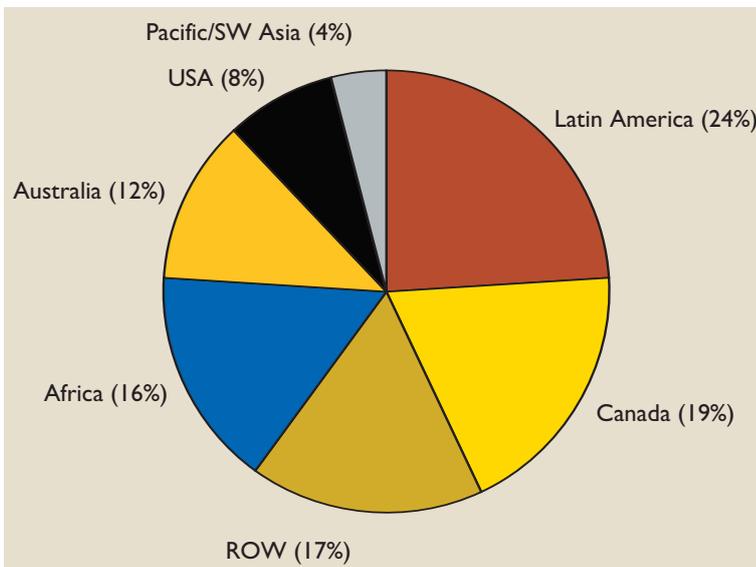
PWC survey of top 40 mining companies, market capitalisation and total sales value



Infrastructure investment in emerging markets 2008 – 2017 (total US\$21.8-trillion)



Supply delays, selected examples (source UNCTAD)



Worldwide exploration expenditure by region, 2007

estimates that these lost days cost the economy R12-billion in lost mineral sales, lost production and lost wages. While the National Energy Regulator of South Africa (NERSA) estimates that the electricity crisis cost the whole economy R50-billion.

The value of mining equities quoted on the JSE declined by R85-billion during the week following the crisis, as the investment community became concerned about the sector's growth prospects. The impact of reduced mining production and exports during the crisis, and ultimately the impact on the current account of the balance of payments and the financial account have been significant. The country's current account deficit ballooned to 9% of GDP, financial inflows to the country via the financial account experienced a sharp reversal and the rand quickly weakened. The electricity crisis forced a curtailment in mining production for a number of minerals, which may have artificially spiked prices and placed pressure on consumers to save or try alternative products.

The key problems for mining companies, especially the deep-level gold and platinum group metals (pgm) mines, is the fact that electricity is not only an integral part of their production processes, but crucial to a safe environment for workers underground. On average, over 50% of the electricity used by deep-level mines is for cooling, ventilation and pumping, which cannot be switched off or reduced. So the drop in electricity supply to 90% of normal, means that a 10% reduction has to come from the 50% of electricity used for production.

The Chamber warned government that gold and pgm mining production would decrease by between 15% to 20% – exactly the outcome in the first quarter of 2008. Mining GDP declined by 25.5% on a quarter-on-quarter seasonally adjusted and annualised basis in the first quarter of 2008, which effectively halved the country's economic growth rate from 5% in the fourth quarter of 2007 to only 2.1% in the first quarter of 2008.

While there was an increase in dollar commodity prices for a few of the minerals, which provided some

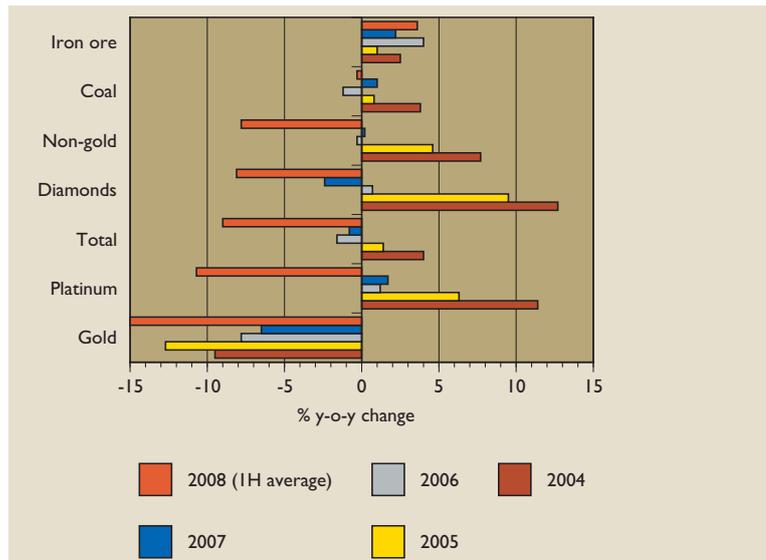
compensation for the lost mining production, the events of the first quarter severely impeded the sector as many mines battled to overcome the obstacles imposed by the electricity supply curtailment. By the end of the first quarter of 2008, the industry was still grappling with electricity supply constraints and the possibility of shaft closures and job losses became a reality.

In late March and early April, the mines most affected approached Eskom to apply for additional electricity to prevent job losses. Some received extra electricity, but the industry was not returned to a blanket 95% level. During the second quarter, the industry began to deal with the electricity supply issue and the rate of decline in mining production slowed, but was still negative.

Given the importance of the mining sector in terms of foreign currency earnings and employment, the fact that they bore the brunt of the electricity crisis in the first half of the year raises questions about Eskom making industrial policy decisions, while in fact such decisions should have been taken by government. Clearly what was needed in January and February was a more strategically driven approach to managing the crisis. Many other sectors of the economy, including the government sector, households, the property sector and tourism have done little to reduce demand, and could do so without materially damaging their economic prospects. Not only are mining leaders concerned about the unbalanced burden sharing between different economic sectors, but also about how the issue of new power connections will be dealt with in the future.

Other constraints

The local mining industry is facing other problems, including environmental permitting, water use licenses, infrastructure, transport and other services. While the industry has made major progress in meeting its Mining Charter and social and labour plan commitments, these have not been without difficulties and costs either directly or because of delays.



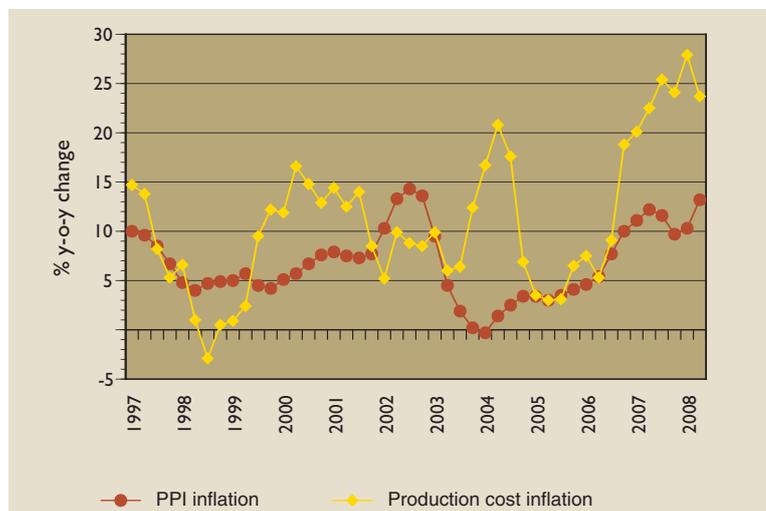
Impact of the electricity crisis on mining production (largest minerals)

Impact of rising costs on the sector

Mining companies have been under pressure from rising costs. Not only have steel prices risen sharply in recent years, but in order to retain skilled workers labour costs have risen, as have the costs of other key inputs such as diesel. The industry has also had to deal with the rising costs of capital equipment and machinery.

Contribution of mining to the economy

Mining remains the bedrock of the South African economy: it accounts for 6.8% of GDP directly and about 18% of the total GDP if the industry's multipliers and induced effects are taken into account. However, it is not only a large contributor to GDP, but also to net exports and to employment creation. In 2007, the mining sector produced R162-billion or 30% of the country's merchandise exports. If semi-fabricated minerals are included, such as catalytic converters, ferro-alloys and chemicals from coal then the total exports of the minerals complex are closer to R268-billion or 50% of merchandise exports.



Gold mining production, cost inflation vs PPI inflation

The industry employed 495 474 workers in 2007, but if workers employed in associated industries are included then the figure increases to 565 000 jobs. The wages and salaries paid to mine employees contributed substantially to the economy and to the purchasing power of workers. In 2007, R50.1-billion was paid in wages and benefits to mine employees, which accounted for 5.9% of the total compensation paid to all formally employed people in South Africa.

Mining is also a major generator of investment in the economy – mining investment rose to R37-billion, or 8.9% of all investment in the economy in 2007. The sector was also a key magnet for foreign capital inflows to the country and by the end of 2007, had accounted for 35% of the value of the JSE. In that year mining paid R20.9-billion in direct taxes, and provided the primary energy needed to drive the economy – 93% of electricity generated and 37% of the country's liquid fuel requirements from coal.

Mineral production, sales and exports

Total mining production declined by 0.8% in 2007, led by declines in gold production (down 6.5%) and diamond production (down 2.4%). The modest growth in iron ore production (up 2.2%), pgm production (up 1.7%) and coal production (up 1%) did not compensate for the dips in gold and diamond production. In the first half of 2008, mining production plunged by 9% as a result of the electricity crisis. Gold output fell by 15.6%, pgm output by 10.7% and diamond production by 8.1%. Sectors that were not as badly affected by the electricity emergency recorded modest increases in production: iron production rose 3.6% and building materials increased by 2.4%.

In 2007, the 4.2% depreciation in the rand exchange rate to R7.05 per US\$ and a rise in US\$ commodity prices resulted in the value of South African mineral sales growing by 14.5% to R223.9-billion. If the mining sector had been able to respond to the higher prices by producing higher volumes, the growth in revenues could have been much stronger and the pressure on the country's current account of the balance of payments would have been less.

The improvement in mineral sales was driven by a 59% increase in the value of manganese ore sales to R3.5-billion, a 35% growth in iron ore sales to R13.4-billion, a 19.7% increase in pgm sales to R78.4-billion and a 16.7% rise in coal sales to R44.2-billion in 2007. The top three minerals accounted for 72% of South Africa's total mineral sales in 2007. In a similar vein, total primary mineral exports increased by 15.7% to R161.8-billion in 2007. This accounts for 30% of South Africa's total merchandise exports and, if secondary beneficiated minerals are added to primary exports, then the minerals complex accounted for just over R268-billion or about 50% of total merchandise exports in 2007.

Chrome

Chromium is essentially used in the production of stainless steels, chromium chemicals, chromium ferro-alloys and chromium metal. South Africa is a leading producer of chrome and accounts for the majority of the world's production.

Chrome production increased by 30.3% to 9.6 million tons in 2007. Driven by modest price rises and the large increase in volumes, the total sales value for chrome sales increased to R3-billion.

China's growth continues to impact on the dynamics of the world chrome market. China's stainless steel production first overtook that of the United States in 2004, and was 142% higher in 2007. South African chrome exports accounted for 21.9% of total sales.

The sector employed 9 757 people and paid R880-million in wages and salaries.

World reserves and production

World chrome resources are estimated to exceed 12 billion tons. About 95% of the world's chromium resources are located in southern Africa and Kazakhstan, of which South Africa has 270 million tons – about 34% of the global total.

South Africa dominated world chrome ore production with a 45% share in 2007 followed by India and Kazakhstan with 16% each. South Africa is the only large-scale producer to have increased production in 2007, up by 30.3% to 9.6 million tons.

Ferrochrome production

World stainless steel production and the demand for ferrochrome are the key drivers of the chrome market. World ferrochrome production increased from 7.3 million tons in 2006 to 8.1 million tons in 2007.

Coal

The rapidly developing countries like China and India combined with strong growth in the developed world have continued to push up world demand for primary energy, especially for electricity production. Compared to other primary energy sources, coal is relatively abundant, dispersed across a wider geographical area, cost effective and has greater potential for cleaner energy production than most other sources of primary energy.

Coal was the fastest growing fuel in the world for the fifth consecutive year according to BP. Coal currently fuels about 40% of the world's electricity.

Around 1.4 billion people are expected to become urbanised in the next

two decades and with rising incomes world energy demand should grow by 56% by 2020. Given the slow start to, and expensive nature of renewables and the potential to produce increasingly cleaner energy from coal, coal's supply of primary energy should increase by 105% in the same period.

Over the course of 2007/08, the coal market was characterised by increasing demand and tight supply, which in turn pushed up prices. The growth in demand for coal by China for electricity generation and steel production prompted a cutback in Chinese exports. Infrastructure bottlenecks and supply constraints in other major coal producing countries also contributed to a tight coal market.

Total saleable coal production in South Africa grew by 1.2% to 247.7 million tons in 2007, however, coal exports decreased by 1.6% to 67.6 million tons. This was mainly because of lower coal railings, production shortages and increased rail tariffs to some of the terminals. Local sales increased by 3.2% year-on-year to 182.7 million tons in 2007. The impact of slightly higher prices in both the domestic and export markets combined with higher domestic sales led to a modest increase in the total revenue earned by the sector, which grew by 16.7% to R44.2-billion in 2007.

The coal mining sector employed 60 439 people and paid R8.7 billion in wages and salaries during the year under review. In addition the industry accounted for 2.2% of GDP directly (and closer to 5.5% if the indirect multiplier and induced effects are added). The coal sector also accounted for 4.6% of merchandise exports.

Global primary energy trends

Between 1973 and 2007, the world's total primary energy demand grew by 94% from 5 740 million tons of crude oil equivalent to 11 099 by 2007. Much of the growth in demand for primary energy has been for electricity generation, which increased by 225% to 19 895 terawatt hours in the same period. The growth in electricity production has picked up pace over the last five years in the populous

developing countries like China and India. Between 2000 and 2007, China's electricity production increased by 140% to 3 278 terawatt hours, and China will have to grow electricity production by a similar amount over the next decade. Within the next few years China will overtake the United States as the world's largest producer of electricity.

Key drivers of this growth in electricity demand are the combined factors of urbanisation and industrialisation. According to Goldman Sachs, a 1% increase in the number of people living in cities leads to a 1.8% rise in the demand for electricity. Given that around 1.4 billion people will become urbanised over the next two decades, the strong growth in electricity demand is expected to continue.

Coal's share of primary energy supply has increased from 24.4% in 1973 to 28.6% in 2007. According to the Shell energy scenarios, coal's share of primary energy production is likely to rise to 30% of the total by 2050, despite an increasing renewable energy supply.

World hard coal reserves and production

Confirmed world hard coal reserves for anthracite and bituminous coal at the end of 2007 was estimated to be about 430 million tons, a large decrease compared to 479 million tons in 2006. Overall, reserve holdings for major countries such as the United States, China, Russia and South Africa increased in 2007.

The United States is still the largest reserve holder accounting for 26% of the world reserves, about 2% higher compared to 2006, whilst China accounts for 14.4%, Russia 11.3% and South Africa 11.1%. India's reserves decreased to 12.1% in 2007 compared to 19% in 2006. The total coal reserve for 2007 was 847 million tons, including sub-bituminous and lignite coal.

World hard coal production increased by 3.3% year-on-year to 6 396 million tons in 2007, driven by increases in demand for coal from the electricity and steel manufacturing sectors. However, regional variations in demand and supply are evident. In the United States, coal production fell by 1.3% to 1 039.2 million tons in 2007 on weak electric utilities demand and stagnant prices, whereas China increased production by 7% to 2 536.7 million tons in 2007 and now has a world share of 41.6% of hard coal production. According to the World Coal Institute, global coal production is expected to reach 7 000 million tons by 2030 with China being the main contributor. Coal production in India, South Africa and the Russian Federation also increased in 2007 by 6.3%, 4.9% and 1.2% respectively.

Overall global consumption of coal increased by 4.5% to 6 481 million tons in 2007. The Asia Pacific region consumed 59.7% of total share with China and India being the major consumers with shares of 41.3% and 6.5% respectively.

World seaborne thermal coal market

Strong electricity demand in China and India has contributed to an increase in global thermal coal imports. China's imports have increased by 33.3% changing it to a net importer of coal. India has increased its import volumes by 21.2% owing to its increase in steel and electricity production. Malaysia and Korea import volumes also increased 15% and 11.7% respectively, whereas thermal coal imports in Europe fell by 4.5%.

World exports increased by 7.5% in 2007 to 683.2 million tons compared to 635.2 million tons in 2006. Indonesia's growth in exports increased by 10.5%, whereas China's thermal coal exports slumped by -14.2% owing to domestic power supply requirements. Exports from Australia grew only 0.5% in 2007 to 112 million tons and South Africa's steam coal exports fell by 1.6% to 66.1 million tons. Seaborne thermal coal prices soared to record highs in 2007 on the back of strong demand from Asia and supply constraints in major exporting countries like Australia, South Africa and China. These constraints were a result of infrastructure, local energy demand and weather disruptions.

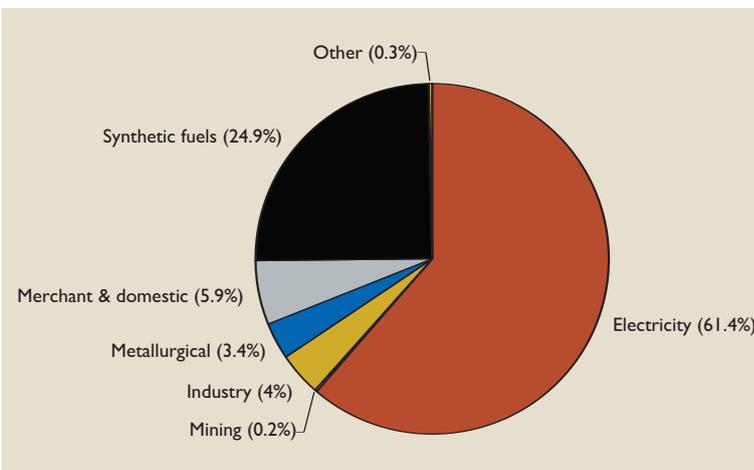
Local production and sales

South Africa's saleable coal production in 2007 increased by 1.2% to 247.6 million tons. In the first half of 2008, coal production fell marginally by 0.3% as a result of the heavy rains experienced in January. Local coal production is largely concentrated in Mpumalanga where about 84% of the country's coal by volume is produced. Domestic coal sales increased by 3.2% to 177.1 million tons in 2007, while export volumes decreased by 1.6% to 66.7 million tons. Slightly higher prices for coal in the export and domestic markets resulted in a 16.7% increase in coal sales to R44.1 billion with exports accounting for 55.4% of the total share of sales for that year. Export sales increased by 13.2% to R24.4-billion, while domestic sales increased by 21.4% to R19.7-billion.

The domestic market

Domestic coal sales increased by 3.2% to 177.1 million tons in 2007 on the back of positive growth in demand for coal from the electricity sector (up 3.2%), synthetic fuels (up 3.8%), merchant and domestic users (up 27%) and metallurgical (up 9.4%).

Eskom's dwindling coal stockpiles during 2007 are largely a result of the fact that total coal sales to the utility in that year were 110.4 million tons, while the coal used was about 119 million tons. The coal stockpile issue came back to haunt Eskom in early 2008 as poor stockpile level affected the capability of power stations to deliver electricity during the emergency in January and February. The mining companies responded well to Eskom's request for an additional 45 million tons of coal, by contracting in 40 million tons by the end of June. While coal sold for electricity generation will rise in 2008, this will



Domestic coal sales by user (source DME)

be attributable to growth in both power station burn rates and the rebuilding of stocks.

South African coal exports

South Africa's coal exports declined by 1.6% to 67.7 million tons in 2007 for the second year in a row. A further decline in export performance occurred in the first five months of 2008, with coal exports down by 13.5% year-on-year to an annualised 57 million tons. A combination of factors was responsible for the decline, including rail and mine production problems, the delayed impact of the slow approval of mining rights and the diversion of some export coals to Eskom to help boost stockpiles. South African coal exporters continued to increase exports to the fast growing Asian markets.

Coal exports to Europe fell by 13.9% to 45.1 million tons in 2007. The country's coal exports to Asia jumped by 301%, amounting to 12.2 million tons compared to 3.1 million tons in 2006 with India importing 69% of the total share. India's large demand for coal was mainly as a result of internal coal supply problems, the long distances between coal mines and power stations and falling freight rates during the first half of 2007. South African exports to the Americas and Africa fell by 38% and to the Middle East by 11.7%.

Investment in South African coal mining

In the coming decade Eskom is likely to require as much as 200 million tons of coal annually, which is about 75 million tons up on its 2007/08 requirement. Sasol is also considering expansions to its domestic synthetic fuel operations and will require extra coal. The Richards Bay Coal Terminal (RBCT) is being expanded to 91 million tons by 2009, which is about 20 million tons larger than the 2007 capacity. To cater for the increasing domestic and export markets, South African coal producers will need to increase production by about 90 to 100 million tons over the next decade.

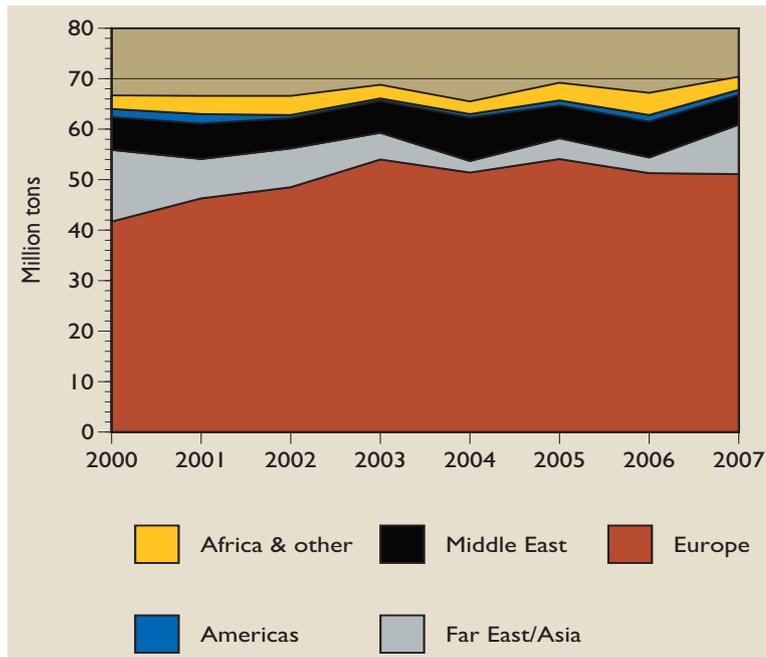
The bulk of the country's coal reserves is located in the Central Basin, which includes the Witbank, Ermelo,

Highveld, South Rand and KwaZulu-Natal coalfields. The Waterberg coal field is the next large area that has the potential to contain important new coal deposits. Most of South Africa's coal is produced from the Mpumalanga/Highveld region (220 million saleable tons) with only 30 million tons of saleable coal coming from other areas. While extra focus is being placed on expanding production from areas such as the Waterberg coal fields, the existing Mpumalanga/Highveld coal fields will require major investment to grow production to meet requirements.

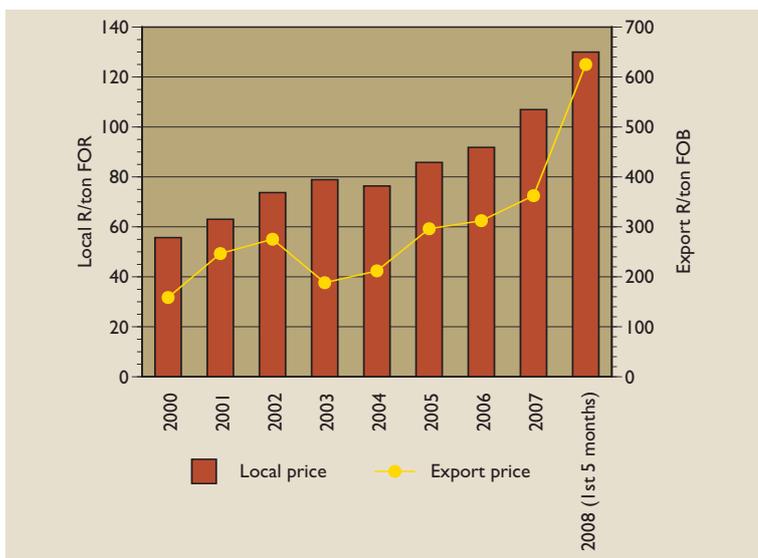
The South African mining sector is responding well to the need for new coal supply by investing in new projects and in feasibility studies for new projects. The industry currently has R15.5-billion worth of projects underway – expected to yield about 36 million tons of extra coal production – while also sustaining production at other mines. Another 63 million tons of extra production (likely to cost about R21-billion) is in the final feasibility stage.

Local and export coal prices

In 2007, The local coal price per ton FOR (free on rail) averaged R107 (a 16.5% increase), whereas prices received for exports FOB (free on board) averaged R362 per ton, a 16% increase. However, both domestic and export prices surged in the first half of 2008 on the back of a shortage of supply in both local and export markets. In the first five months of 2008, local coal prices increased by 29.2% on a year-on-year basis to R129 per ton FOR, while export prices surged by 83.1% to R624 per ton FOB. Given that a large proportion of coal sold in the local market is sold on a cost plus basis, the rise in local prices is mostly attributable to higher mining costs caused by the spike in diesel prices and in other key input costs. The price of coal used in the domestic electricity sector increased by 10.9% – averaging R89 a ton in 2007, and in the first five months of 2008 the price rose by 17% to R101 a ton FOR. The price of coal used for the production of synthetic fuels averaged R111 a ton in 2007 (up 15% year-on-year) and increased by another 13% to R119 a ton FOR in the first five months of 2008.



South African thermal coal exports by destination (source: SACR)



South African coal prices, actual received for local and export coals

Export facilities

The RBCT's export target for 2007 was budgeted at 74 million tons, of which four million tons was allocated to smaller black economic empowerment (BEE) producers, while the remaining 70 million tons was allocated to existing RBCT shareholders. Coal exports via RBCT declined by 0.5% in 2007 from 66.5 million tons in 2006 to 66.2 million tons. This resulted in exports being 7.8 million tons lower than the target. In the first six months of 2008, an annualised 58 million tons were exported through RBCT, which is again below the 76 million ton target. The RBCT expansion is in its fifth phase and should be completed by mid-2009. This will enhance the terminal's export facility to 91 million tons a year.

Durban's Bulk Connections Terminal's export target for 2007 was 1.5 million tons, however exports decreased by 42.8% from 1.4 million tons in 2006 to 0.8 million tons in 2007. Exports through the Matola

Coal Terminal in Mozambique also fell by 34.5% from 1.1 million tons in 2006 to 0.7 million tons in 2007 against a target of 1.5 million tons. Exports from these terminals were hindered by increased rail tariffs as well as new users opting for RBCT.

Diamonds

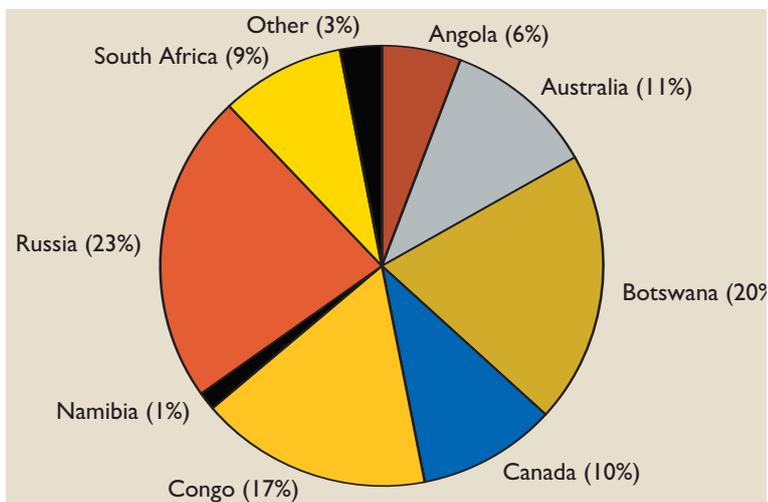
Global diamond mine production decreased by 4% to 168 million carats in 2007, but the value of diamonds increased throughout the diamond value chain indicating a positive year for the global diamond industry.

South Africa is the world's sixth largest diamond producer by volume and fourth largest producer by value. Diamond production in South Africa increased by 0.6% to 15.2 million carats in 2007 compared to 15.1 million carats in 2006. Exports amounted to 13.9 million carats and imports to 1.2 million carats. The South African diamond mining industry accounted for an estimated 0.4% of GDP directly (or 1% if the indirect multipliers are included), accounted for about 2.5% of total merchandise exports, employed 20 014 workers and paid R2.2-billion in wages in 2007.

Global diamond production

Rough diamonds are mined in 25 countries around the world, with 22 countries participating in the Kimberley Process Certification Scheme where governments have to declare their production and sales figures. Participating countries account for about 99% of the world's diamond production. According to the Kimberley Process database, global diamond production for 2007 decreased by 4% to 168 million carats from 175 million carats in 2006. However the value of production increased by 1.1% to US\$12.1-billion, reflecting a marginal increase in prices. Russia was the world's largest rough diamond mining country by volume, producing 38.4 million carats for a 23% global share; Botswana produced 34.3 million carats for a 20% share of the total and South Africa produced 15.2 million carats and accounted for 9% of global production.

The production numbers are deceptive in that there is great variation in the value of diamonds depending on grade and quality. While Australia is the world's fourth largest producer by volume, it produces mainly industrial grade diamonds and therefore slips down the



Global diamond production per country by volume, 2007 (total carats = 168.2 million)

rankings to position eight when the value of production is taken into account. The large proportion of gem quality diamonds produced by Botswana means that the country is the world's largest diamond producer by value with a 23% share. Russia is second with a 22% share followed by Canada at 14%. South Africa has lost third spot on the value of diamond mine production to Canada, with the latter having grown volume and value strongly in the past few years. South Africa has a 12% global share, followed by Angola at 11%. Africa accounts for about 53% of the world's diamond mine production by volume and 56% by value.

Global demand and the diamond pipeline

The value of global diamond production increased by 1.1% to R12.1-billion in 2007 and the value of mine sales, including the sales of inventories was close to US\$13.9-billion. IDEX (the International Diamond and Jewellery Exchange) estimates that around US\$15.6-billion worth of rough diamonds were available to, or used by the cutting and polishing industry in 2007, which industry produced US\$19.9-billion worth of cut and polished diamonds – a 27% value add versus the value of rough diamonds. India dominates the global diamond cutting and polishing industry with a 57% share, followed by Thailand/China with a 14.4% share and Israel with a 12.1 share.

It is interesting to note that, with one or two exceptions, the key cutting and polishing countries are not the primary rough diamond producing countries, as the competitive advantage requirements in the diamond cutting industry are somewhat different from the comparative advantage issues of mining. Botswana, Canada and Russia are the top three mining countries, while India, Thailand/China and Israel dominate diamond cutting and polishing.

The value of retail diamond jewellery sales increased by 6.7% to US\$73-billion in 2007, indicating a relatively robust market. Despite the sub-prime crisis and economic slowdown in the United States and Europe, the former continued to dominate the retail sales market with an

almost 50% global share, followed by Japan at 13% and Europe at 11.7% .

South African diamond production and sales

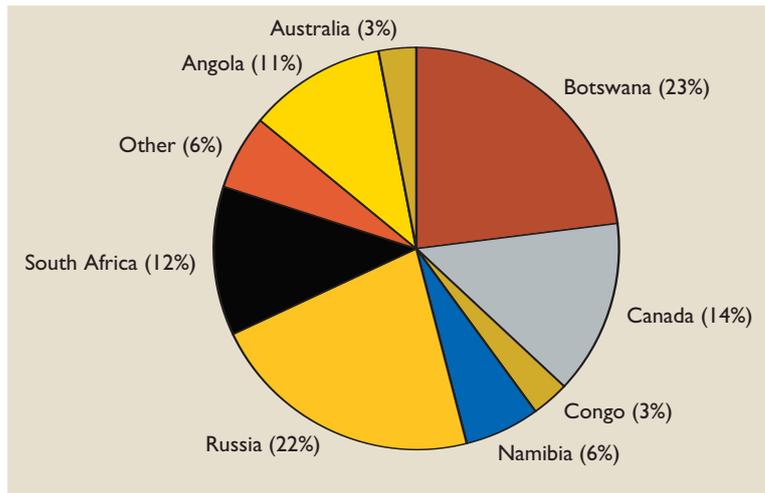
South Africa's rough diamond production increased by 0.6% to 15.2 million carats, worth about US\$1.4-billion in 2007. South Africa imported 1.2 million carats of gem quality diamonds and exported 13.9 million carats, indicating that the local diamond mining industry has helped import gem quality diamonds from its offshore production for the local cutting and polishing industry. It is estimated that about 41% of South Africa's diamonds are gem quality with the rest being mostly industrial quality.

The first half of 2008 has been a difficult period for the South African diamond mining industry. The electricity crisis combined with some rationalisation and closure of certain shafts resulted in an 8.1% year-on-year decline in production in the first half of 2008. The implementation of the new Diamonds Amendment Act has also posed challenges that the diamond mining and diamond cutting industries have to work through.

Gold

The gold price breached the 1980 high in 2007 and subsequently the US\$1 000 level, reaching an average annual level of US\$695.39 – 13% up on the nominal average of US\$614.50 for 1980. However, new mine supply declined by 1% to 2 476 tons, while jewellery demand increased by 5.1% to 2 401 tons.

The four Ps – people, procurement, power and permits – constrained the global mining sector, which together with falling grades lowered global production in the large established gold mining countries of Australia, Canada, South Africa and the United States. Unfortunately, these were not offset by large increases in supply from emerging producers such as China and Indonesia. Much of the fall in production of the established majors was a result of the mining of lower grades of ore that was facilitated by higher gold prices.



Global diamond production per country by value, 2007 (total value US\$12.1-billion)

South Africa, after nearly a century of being the world's largest gold producing country, has lost this position to China as declines in grade, coupled with safety related stoppages and the electricity crisis, hit production hard. One key area the global industry has faced is the increase in the costs of gold mining.

In March 2008, there was a further increase in the gold price to a record US\$1 011.25 an ounce as gold re-emerged as a safe haven asset. The continued weakening of the US dollar, the sub-prime crisis, a drop in housing and equity markets, rising oil prices, inflationary concerns and a slowdown in economic growth in developed markets have all impacted on the gold market. On-going investor interest in the safe haven status of gold, the positive fundamentals of the gold market (strong jewellery demand, a decline in central bank sales and continued producer de-hedging) were expected to provide support to the market.

Notwithstanding increased gold prices, there was a further drop of 6% year-on-year in gold production in the first half of 2008. Declines in South Africa, Australia, Indonesia and the United States were only partially offset by increased production in China, Russia and Peru and production is likely to remain under pressure in the short-term.

Nevertheless, the gold mining sector remained a key contributor to the South African economy in 2007 and early 2008. It accounted for R38-billion in foreign currency earnings, or 7.1% of total merchandise exports, about 2.5% of GDP, and for 168 860 employees who earned R14.7-billion in wages. The industry invested R8.1-billion in capital expenditure in the country, paid an estimated R1-billion in taxation to the state and R695-million in dividends.

Prices

Early in 2007, the price of gold hovered at just US\$650 an ounce, but surged to US\$770 an ounce from September to November as investors sought to diversify their asset bases into gold. Overall investment numbers, which, according to GFMS, had shown a 31% decline to 531 tons, hid some of the real progress made in the investment market as rises in coin fabrication and bar hoarding plus strong inflows into electronically traded funds (ETFs) were offset by investors switching from paper over the counter markets into allocated metals holdings. In 2007, on the basis of the 15.3% rise in the gold price to US\$697 an

ounce plus the 4.2% depreciation in the rand exchange rate to R7.05/US\$, the rand gold price rose to R157 241 a kilogram.

The gold price jumped to US\$927 in the first quarter of 2008 before cooling off to average US\$897 an ounce in the second quarter. A further 9.5% depreciation in the rand exchange rate to R7.78/US\$ in the second quarter meant that the rand gold price rose by 47.5% on a year-on-year basis to R223 943 a kilogram by the second quarter.

Global reserves and production

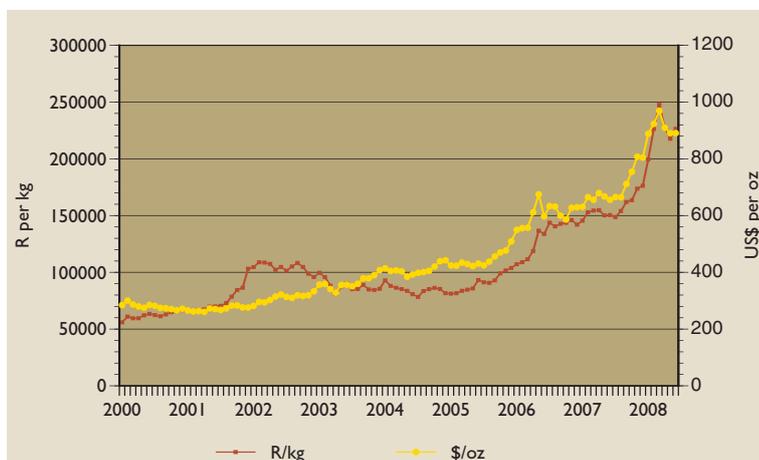
The world has an estimated reserve base of 90 000 tons of which South Africa is the largest holder with a 40% share. When one reverts to actual mineable reserves, South Africa is still the largest with a 6 000 ton or 14% global share followed by Australia at 11.9% and Peru at 8.3%. The recent rise in the price of gold has encouraged greater exploration across all minerals to an estimated level of US\$12-billion in 2008, of which gold accounts for 42% of the total.

In 2007, total world gold production declined by 0.4% to 2 476 tons on the back of production declines in most of the established producers with South Africa down by 8.7%, the United States down 4.9%, Canada down 2.2%, Australia down 0.3% and Peru down 16%. Strong growth in China, which was up 13.5%, enabled it to become the world's largest producer at 285 tons, plus a 26% increase in Indonesia was insufficient to offset the declines in the other producing regions. Over the past five years production has declined in the established producer regions while increasing in the new emerging producers.

The global gold market

Over the past five years total supply to the gold market has shrunk by 0.5% a year, driven by a decline in new mine supply, which has fallen by an average of 1.1% annually. Making up the balance of supply has been recovered scrap and official sector sales. The volume of scrap recovery has recorded a 2.9% annual increase during this period. Overall new mine supply constitutes 63.6% of total supply with scrap contributing 21.8% and official sector sales providing 12.4%.

New mine supply has not responded to the higher gold price, while official sector sales have been within the framework established by the second European Central Bank Gold Agreement with sales limited to less than 500 tons a year.



Gold price – rand and US\$

Despite record jewellery prices, demand for gold remained relatively robust with only an annual 1.7% decline in the volume recorded in the past five years. Jewellery demand rose by 5.1% in 2007, but a record high in the gold price in March 2008 induced a 25% reduction in demand. The positive demand for gold has been supported by a 6.9% increase in demand for other fabrication, such as coins and bars; producer de-hedging (up 59% a year); and implied investment up 33.5% a year for the past five years. The diversification of demand into other areas is encouraging as evidenced by the fact that other fabrication demand for gold has risen from 12% of total demand in 2002 to 17.2% of the total in 2007.

Global pressures on gold mining

The world's mining sector is facing pressures from a number of areas, including the scarcity of new projects. Despite record exploration expenditures, mining companies have found it difficult to find new deposits and are having to investigate riskier and more geographically isolated areas to find new gold deposits.

The global industry has also faced cost pressures as the prices of key inputs have risen: diesel, electricity, skilled people, steel, explosives and capital equipment have all increased substantially over the last 18 months. Compounding these direct cost increases has been a decline in average grades mined and production in the established producers, which in turn have exacerbated unit cost pressures. At a global level, the average 2008 cash production costs for gold mining companies increased by 24.6% to US\$395 an ounce, while total production costs rose by 24.9% to US\$496 an ounce.

South African production

South African gold production, as recorded by the Chamber, fell by 7.4% to 254.7 tons in 2007 (the reason for the difference in gold production figures between the Chamber and GFMS is because the latter estimated gold theft and added it to the production number). This is the lowest level since the 1922 strike.

In 2007, the Chamber's gold producing members recorded a decline of 6.7% to 219.2 tons. The 5.8% increase in tons of ore processed through the mills to 53.3 million tons was insufficient to offset the 11.8% drop in the average grade mined. Companies were able to mine lower grades as the average cut-off grade that had to be mined fell by 9.8% to three grams/ton.

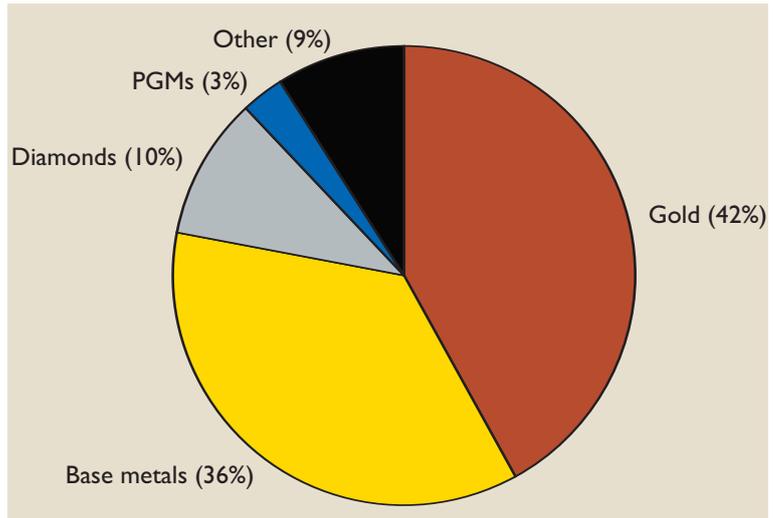
In the first half of 2008, the loss of electricity supply to 50% survival load from 25 to 31 January and the subsequent return of only 90% supply to the mining sector placed enormous pressure on the gold sector. Given that more than 50% of electricity supply on the average deep-level gold mine is used for sustaining purposes (i.e. pumping, cooling and ventilation, which cannot be switched off), the curtailment of electricity supply by 10% meant that production electricity (the remaining 50%) had to bear the brunt of the full 10% reduction – a 20% cut in production.

Large equipment is not designed to be switched on and off regularly and companies initially struggled to stabilise underground production and surface treatment plants to run at an electricity supply of 90%. As a result, first half 2008 gold production fell by 13.6% to 109.2 tons. During March, when it became apparent that certain mines were in major difficulties, these mines were given an opportunity of applying to Eskom for additional electricity to try to prevent shaft closures and job losses. Some mines received an additional 3% – 6% electricity supply.

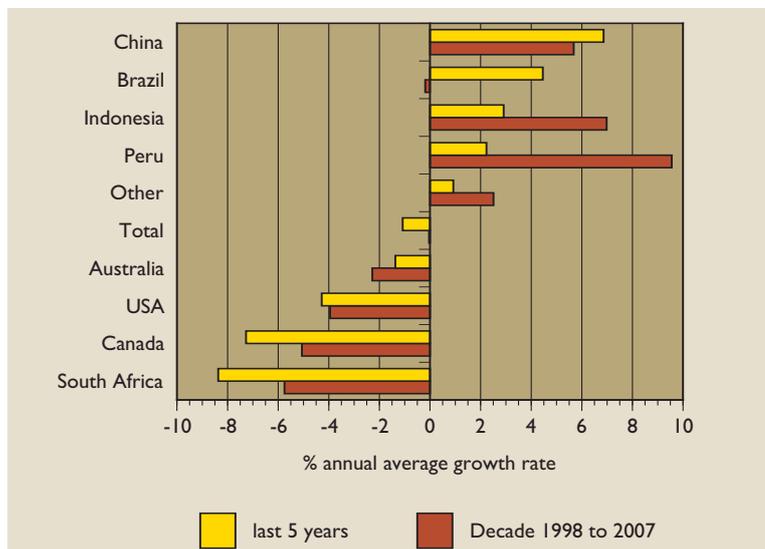
Revenues, costs and capital expenditure

The rise in the US dollar gold price in 2007 combined with a slight depreciation in the rand exchange rate and a fall in South African gold production meant that the total revenue attributable to the gold mining sector rose by 10.7% to R32.8-billion (for Chamber members).

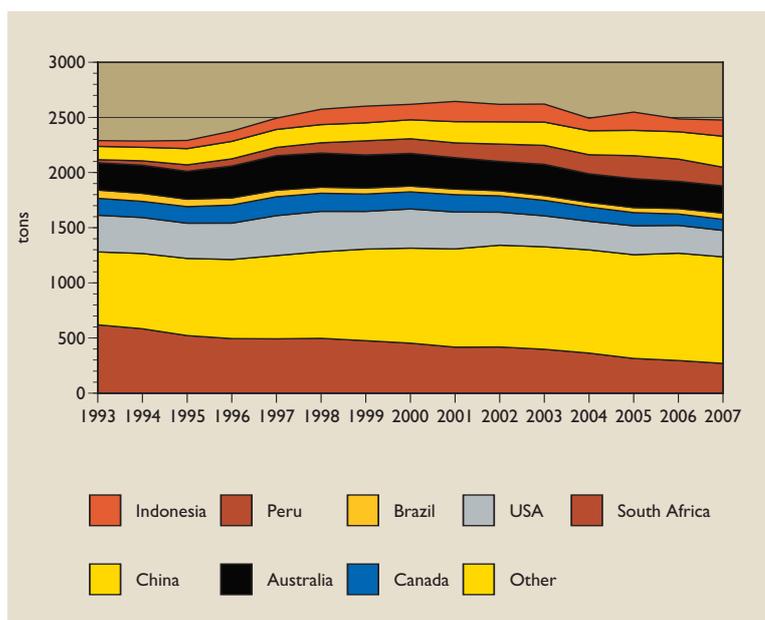
Unfortunately, a fair proportion of the benefits of higher prices was eroded by the combination of higher input costs and lower production rates, which resulted in



Worldwide non-ferrous exploration budgets by target, 2007 (source MEG)



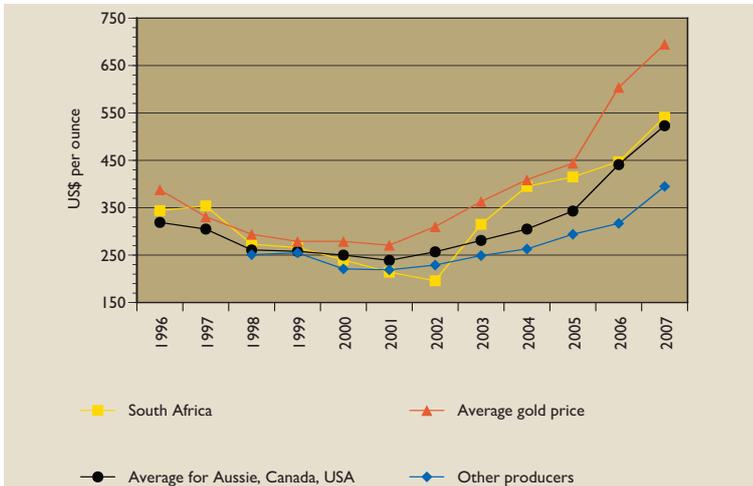
Annual rate of growth (decline) in gold production from key countries



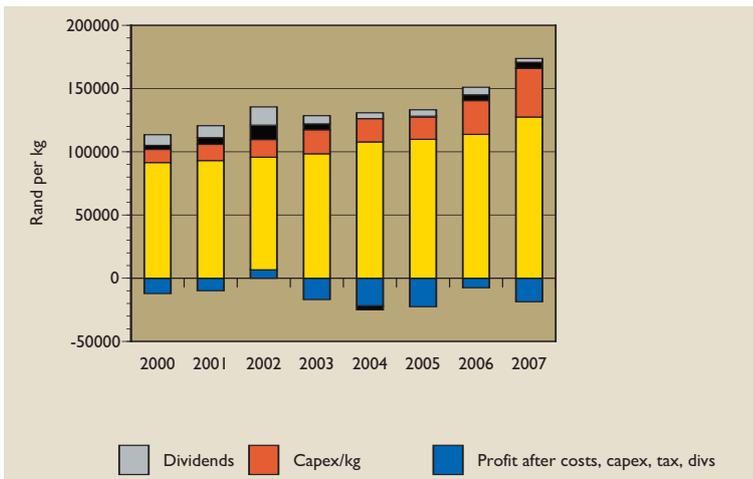
World gold mine production by source country

total production costs before capital expenditure rising by 15% to R27-billion.

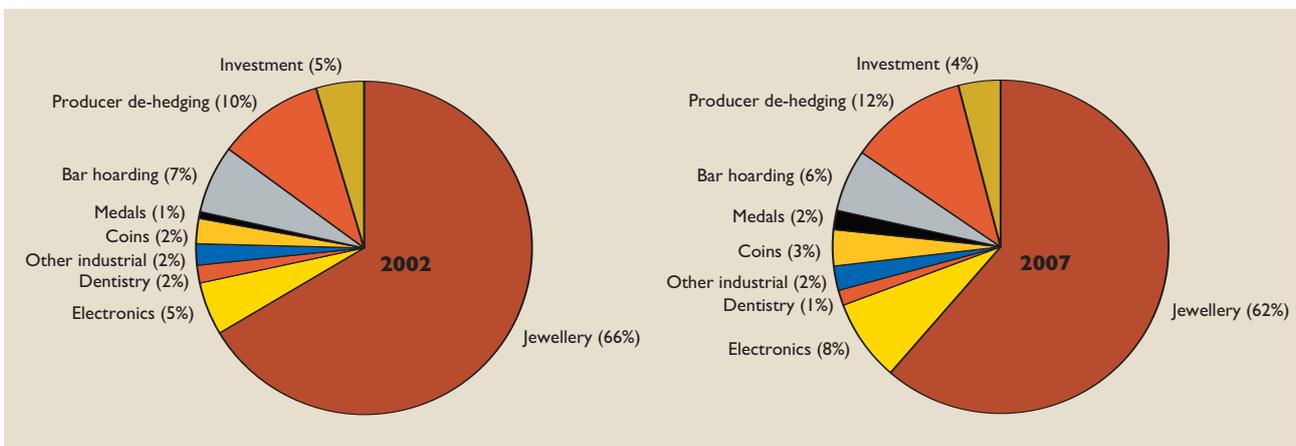
Nevertheless, most of the benefits of the strong improvement in prices have been reinvested in the gold mining sector in terms of capital expenditure, which increased by 36.9% to R8.1-billion. In the first half of 2008, revenue rose by 20.6% to an annualised R37.8-billion on the back of the higher price.



Gold production total cost trends for South Africa, the average of Australia, Canada and the USA and other producers vs the gold price (source GFMS)



Profit, costs, capex, taxation, dividends – all expressed in real 2007 money terms per kg for Chamber member gold mines



Gold market, share of demand by category (source GFMS)

Iron ore

The materials intensive urbanisation and industrialisation in large developing countries such as China and India have fuelled strong growth in demand for the raw material of steel. This has resulted in an increase in global production, with a number of new mining projects and expansions to existing iron ore mines. With global pig iron production up by 8.7% and crude steel production up 7.5%, it is clear why global iron ore production has risen by 9% to 1.6 billion tons.

Local iron ore production increased by a more modest 1.7% to 42.1 million tons in 2007 with total sales amounting to R13.4-billion. Iron ore mining contributed about 0.6% directly to GDP and accounted for 2.2% of total merchandise exports. The sector employed 13 858 people and paid R1.3-billion in salaries and wages in 2007.

World reserves and production

Global reserves are estimated at 150 billion tons with an iron ore content of about 73 billion tons. Russia has the world's largest reserves with a 19.2% share followed by Australia (13.7%), the Ukraine (12.3%), Brazil (12.2%) and China (9.6%). South Africa is ranked 15th in terms of reserves and has a 0.9% share of the global total.

World iron ore production increased by 9% to 1 621 million tons with Brazil producing 23% of the total share followed by China 20.5%, Australia 20% and India 9.9%. China's iron ore production increased by 20% in 2007 to 322 million

tons (Fe adjusted), which makes the country the second largest producer behind Brazil. South Africa is the world's 8th largest iron ore producer.

Global steel market

Global steel production increased by 7.5% to 1.3 billion tons in 2007 of which China contributes 36.4% of total share of production followed by the European Union at 15.5% and Japan at 8.9%. It is estimated that steel production will increase in 2008 and 2009 by 5.2% and 5.4% respectively owing to the strong demand in transitional and developing economies.

Steel consumption increased by 6.7% to 1.32 billion tons in 2007. Asia is the driving force behind the growth in global steel consumption with China consuming 33% of the total share, whilst India's consumption increased by 10.2% for the year in review.

Iron ore trade

The global trade in iron ore reached a new record level for the sixth year in a row in 2007. It increased by 9.2% to 835 million tons in 2007 and is forecast to continue to grow. Brazil, Australia and India dominate the market in terms of exports of iron ore to key global markets, accounting for more than 75% of the global total. Brazil remains the main world exporter of iron ore, with its exports increasing by 8.9% to 269 million tons in 2007 as a result of capacity expansions due to high prices and world demand.

Despite its own growing domestic production, China is by far the largest importer of iron ore with a 46% share of total global imports, followed by the European Union with a 20.8% share and Japan with a 16.6% share. China increased its imports of iron ore by 17.7% to 384 million tons in 2007.

Iron ore prices

China played an important role in determining benchmark prices for iron ore. As the largest importer, it took the lead in price negotiations in 2007 with the world's big iron ore producers – CVRD and BHP Billiton. The mark-up was 9.5%

for fines and the price was set at US\$0.732/dmtu (FOB) Ponta da Madeira and US\$1.7211/dmtu FOB Tabarao. China's annual iron ore import demand is 384 million tons. It concluded agreements with BHP Billiton for the same increase of 9.5%.

In 2007, the average price achieved for iron ore sales in South Africa was R141 a ton FOB, an increase of 21% on 2006. Export prices increased by 26% to R393 a ton FOB in 2007, reflecting the global market price movement.

South African export infrastructure

The agreement reached between Spoornet, Kumba Iron Ore and Assmang to upgrade the Sishen Saldanha railway line and the port of Saldanha will increase capacity by 20 million tons by 2010, providing a total capacity of about 47 million tons. This could almost double South Africa's iron ore exports by 2010. In 2007, South Africa's export sales increased by 8.6% to 29.7 million tons and local sales increased by 3.5% to 12.4 million tons, resulting in a total sales value of R13.4-billion. As a result sales value increased by 35.2%.

Manganese

Manganese is an important alloy and its use in steel fabrication improves rolling and forging qualities, strength, toughness, wear resistance and hardness of steel. Manganese has no satisfactory substitute in steel making owing to its relatively competitive price and its ability to desulphurise and prevent oxidation. It is also used in dry cell batteries, in plant fertilisers, animal feed and as a colourant.

About 90% of all manganese produced annually is as a steel alloy. It is the fourth most used metal after iron, aluminium and copper. As more than 90% of manganese ore is used in ferro-alloy production, the performance of the manganese alloy industry is the key determinant of ore demand, which in turn is driven by global steel fabrication. Given continuing growth in the demand for steel in the populous developing countries such as China and stable demand in most other regions, the global demand for manganese is expected to continue its positive growth.

Global reserves and production

The total global reserve base for manganese is estimated at about 5.2 billion tons, of which 457 million tons are known as mineable reserves. South Africa dominates the global reserve base with a 77.6% share, followed by Australia with a 3.1% share. However, in terms of known mineable reserves, South Africa has a 21% global share after the Ukraine with a 30% share. It is important to state that manganese reserves are irregularly distributed in the key reserve and production countries and that a high degree of grade variability exists between the countries.

Global manganese production rose by 7% from about 34 million tons of manganese ore mined in 2006 to 36.4 million tons in 2007. World demand for manganese ore according to International Manganese Institute statistics, increased by 5.9 million tons (16%) to 40.7 million tons in 2007.

Demand

Ferromanganese production is driven by global steel production, which has been growing at a healthy pace for most of the past decade. In

2007, 37 million tons of manganese ore demand translated into 14 million tons of manganese alloy production, which fed through into 1.3 billion tons of crude steel production. Fabrication facilities for the production of ferromanganese are generally located in the large steel fabrication countries, such as China, or in countries where the manganese ore is of a high quality, or where the cost of electricity is competitive (Australia, South Africa and Brazil). China accounts for 43% of manganese alloy production, followed by the CIS at 15% and Africa/Middle East at 10%.

A 57% share of ferromanganese production is used for the manufacture of construction quality steels (which can use lower grade manganese ores), while 43% of ferromanganese is used in flat steel products or in higher quality steels, where higher grade manganese ores are required. While China dominates global manganese production, the quality of its ore is generally below 30% Mn and these ores are used locally for fabricating construction quality steel. Australia and South Africa are not only big manganese producing countries in their own right, but also produce higher quality manganese ores with Mn content greater than 43%. Low quality manganese producers such as China, tend to consume their production domestically, while the high quality ore producers like Australia and South Africa dominate the export markets. Low grade ores also tend to push up the fabrication costs for the ferro-alloy producers as more electricity, more reductants and more flux is required to produce a slightly inferior product to what a higher grade manganese ore can achieve. This results in higher grade manganese ores having a higher value in use.

Prices

Demand was higher than supply in 2007, coupled with rising raw material and power costs, low inventories, disruptions to production at several smelters and fears that the European Union would impose dumping duties on alloys from a number of countries, manganese ferro-alloy prices reached record levels. In the United States, where the spike was most noticeable, prices for ferromanganese rose from US\$807 – 837/ton in January 2007 to US\$1 673 – 1 870/ton by July 2007. Over the same period, prices of ferrosilica-manganese rose from US\$860/ton to as high as US\$2 260/ton.

South African production

South Africa's primary manganese ore production in 2007 increased by 15% to six million tons; 3.7 million tons of which was exported, whilst 2.3 million tons was consumed locally. Total sales of R3.6 billion were realised in 2007. Local sales contributed 26.2% to total sales at R934.9 million and export sales contributed 73.8% to total manganese sales at R2.6 billion. The average unit value of manganese exported amounts to R714/ton, up from R534/ton in 2006.

South African manganese mines employed 3 240 people with R405-million paid in wages and salaries. Manganese mines make up about 0.7% of total mine labour figures and 0.3% of the country's total merchandise exports.

Infrastructure

The availability of good quality ores, reductants and reliable cost-effective supply of electricity has always contributed to South African

producers being below average cost positions on the world cost curves for manganese production. South Africa should continue to be the leading supplier of HCFeMn and large supplier of refined FeMn.

However, despite the recent electricity crisis and the rise in electricity prices of over 25% in 2008, the industry's competitiveness and potential growth profile are unlikely to drop. Possible con-strained power supply to new projects and brownfield's expansions are expected to be dealt with in terms of a protocol on new connections that the government has been working on, which should clarify the situation.

As rail capacity to Port Elizabeth is not sufficient to transport manganese, an alternative means of transport in the form of road trucks is being used. This has escalated transport cost. Damage to roads, accidents and traffic congestion also impact on transport and delivery. The preferred mode is rail, but delivery is not guaranteed because of the limited availability of slots resulting from a shortage of wagons.

Transnet rail freight is expanding the line and will soon introduce new wagons to replace the current old rolling stock. Port Elizabeth and Durban harbour handle about 4.2 million tons a year and 0.5 million tons a year of manganese respectively. Exports are expected to grow to six million tons a year and three million tons a year for Port Elizabeth and Durban respectively by 2012/13.

In the long term, the Department of Transport and Transnet anticipate that the Coega/Ngqura Port will be the port of choice for manganese ore and will be able to export 10 million tons a year in 2015/16 with a future capacity of 12 million.

Plans are underway by the three large manganese ore producers to increase supply of HCFeMn by 580 kt/annum and that of SiMn by 200kt/annum by 2010. These expansions will require better capacity in terms of logistics, energy and skills.

Platinum

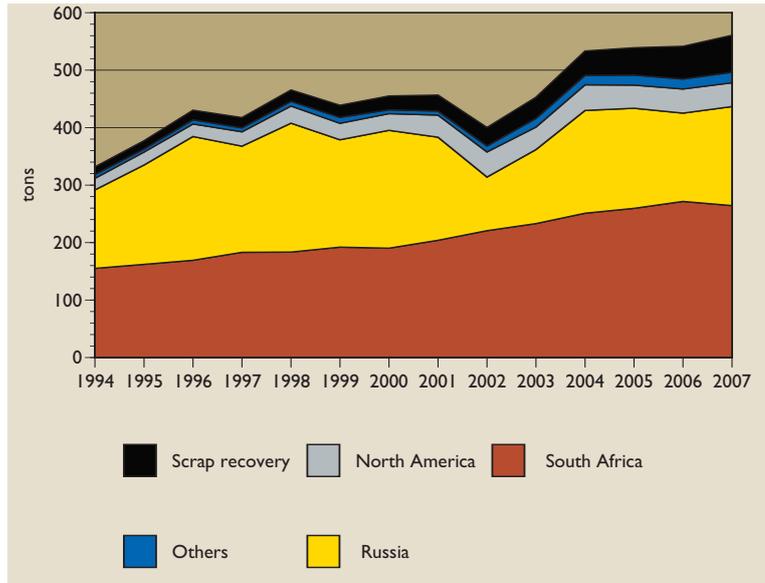
Platinum enjoys an eminence greater than almost any other metal because of its beauty, rarity and unique physical and chemical properties. Its high corrosive resistance, unparalleled catalytic properties and high fusibility ensure its role in many varied industrial uses, while its lustre, colour, strength and brand equity attract an increasing following in the jewellery sector.

The platinum market swung from surplus to deficit in 2007 as a result of local production disruptions and growing industrial and catalytic converter demand, while jewellery demand remained fairly resilient in the face of higher prices and investment demand. The tight market combined with a weaker US dollar and positive sentiment for commodities in general, resulted in higher prices. In early 2008, the disruption to South African pgm production caused by the electricity crisis, pushed prices to further records, before a slight price correction in June.

South Africa is the dominant world supplier of platinum and rhodium and a significant supplier of palladium. The pgm sector is now firmly established as the largest component of the South African mining industry. Pgm sales increased by 19.7% to R78.4-billion in 2007.

Owing to domestic production disruptions in 2007, the local pgm industry's share of production of the top three pgm (platinum, palladium and rhodium) fell to 53% of global new mine supply in 2007 versus 56% in 2006. While positive prices and generally good market fundamentals have translated into growing investment in the local pgm mining sector over the past few years, this investment has not brought increased production.

If one includes the sale of R12-billion worth of pgms locally to the catalytic converter industry (which are then exported), pgms accounted for 14.6% of South Africa's merchandise exports in 2007, which contribution continues to increase. Pgm accounted for about 2.1% of GDP directly (about 5.3% of GDP if the indirect and induced effects are



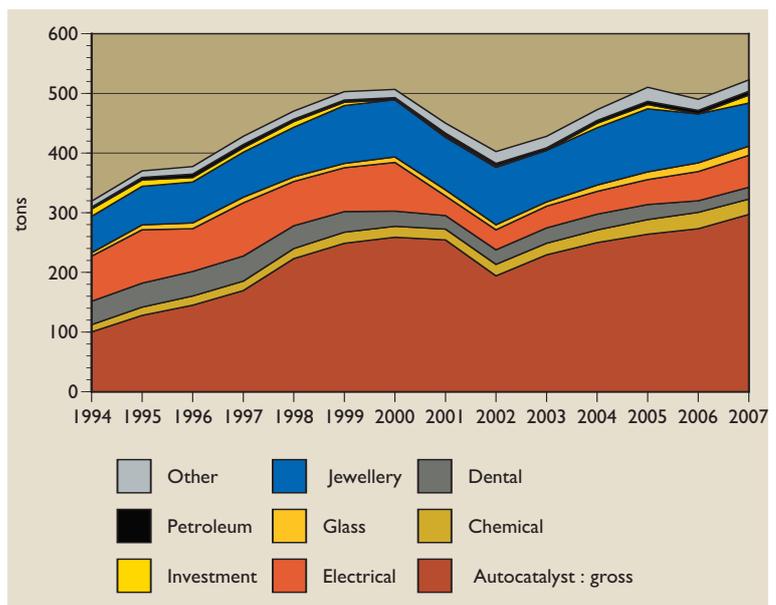
Pgm supply by source (source JM)

added), employed 186 409 workers (an increase of 10.6% on the year before) and paid R18.4-billion in wages.

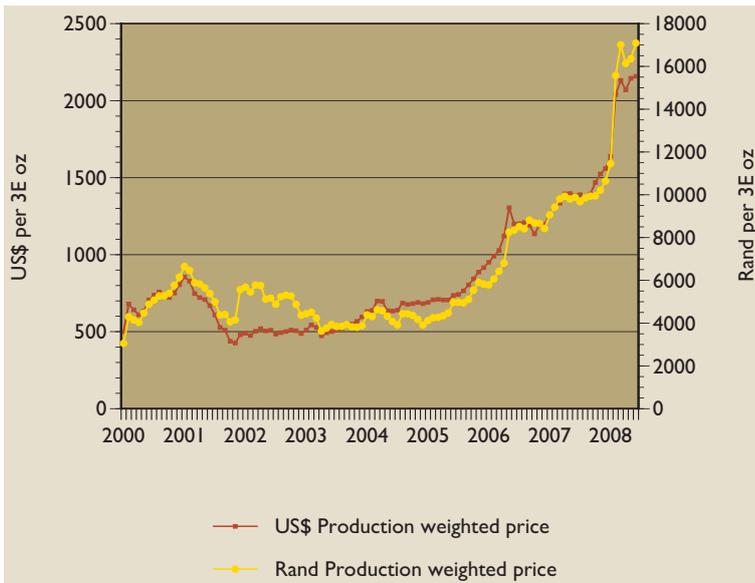
Global reserves and production

South Africa is estimated to have 87% of the world's known pgm reserves, with Russia second at 8.3% and the United States third at 2.5%.

Global supplies of the three main pgms, including scrap recovery, increased by 3.5% to 560.8 tons in 2007, as higher levels of scrap recovery (up 13.3% to 64.5 tons) and higher Russian sales (up 12.1% to 172.3 tons) offset the fall in South African production (down 2.7% to 264 tons). Most South African producers had unforeseen production disruptions brought about by a combination of industrial action, safety-related shaft closures, processing bottlenecks, geological difficulties, falling efficiencies and skilled employee shortages.



Pgm demand by use (source JM)



Production weighted basket prices for South African pgm production (3E basis)

South Africa accounted for 53.3% of global new mine supply of the three largest pgms in 2007, down from 56% in 2006. South Africa is the dominant global producer of platinum (76.9%) and rhodium (84.7%) while Russia is the dominant supplier of palladium (52.9%). Scrap recovery is the third largest source of supply and this increased by 13.3% to 64.5 tons in 2007.

This picture of pgm supply does not adequately explain the trends within the different pgms. For example, total platinum supply fell by 3.3% to 231.4 tons as a result of the large 4.9% decline in South African production, while palladium supply leapt by 9.5% to 298.1 tons and rhodium supply increased by 3.4% to 31.3 tons.

Global demand

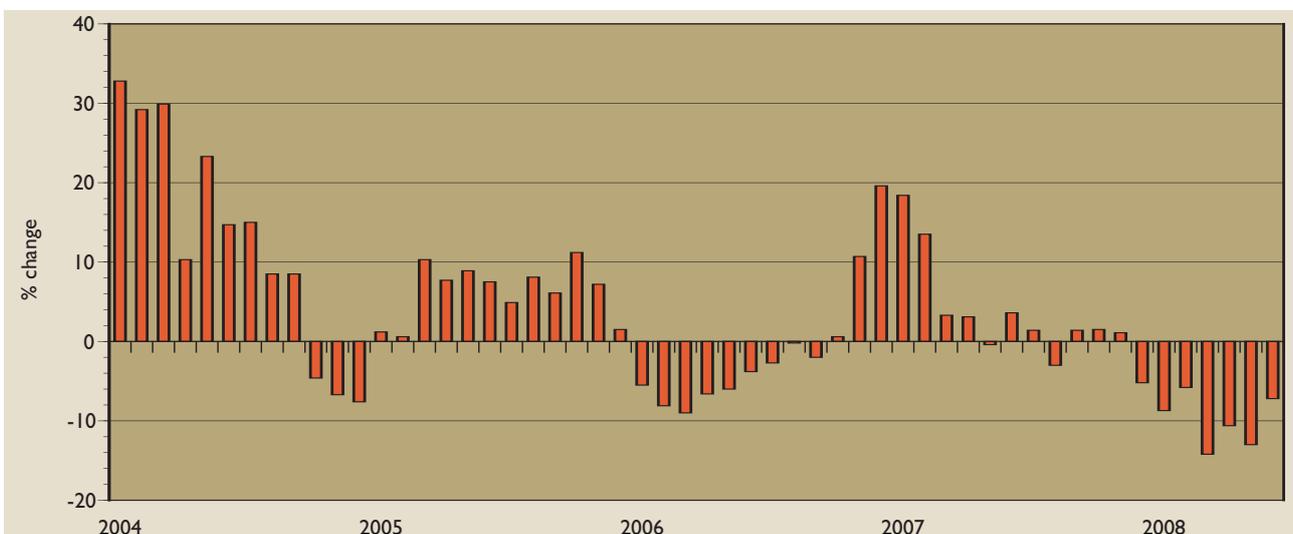
Notwithstanding the increase in 2007 prices, industrial demand for the three main pgms increased by 3.9% to 119.7 tons, with strong growth in demand recorded in the electrical and chemical areas, while demand for autocatalytic converters rose by 8.8% to 297.2 tons. Tightening emission standards in developed countries, combined with positive growth in

certain industrial applications such as chemical and electrical applications, continued to underpin the market in 2007. In the face of increasing prices, demand for pgms for jewellery decreased by 11.8% to 72.3 tons. Total demand, excluding scrap, for the three main pgms grew by 6.6% to 522.4 tons in 2007 – catalytic converters accounted for 56.9% of total demand, followed by industrial applications at 22.9% and jewellery at 13.8%.

Despite the raising of emission standards in developed countries and increased use of catalytic converters in various developing countries, the sub-prime induced financial crisis in the economies of developed countries has placed downward pressure on vehicle sales, which in turn is slowing the growth in demand for pgms. This pressure came through the pgm market late in the first half of 2008. However, jewellery sales have risen as prices fell and the medium-term prospects for the pgm market remain sound.

Prices

Driven by positive market fundamentals and the platinum deficit between demand and supply, the production weighted global price for pgms rose by 13.1% to US\$1 011 per 3E ounce produced in 2007. The platinum price rose by 9.4% to US\$1 251 an ounce, the palladium price increased by 11.2% to US\$359 an ounce and the rhodium price increased by 32.8% to US\$6 050 an ounce. Tight platinum and



South African pgm production, y-o-y percentage change in production

rhodium markets plus a weakening of the US dollar resulted in the production weighted basket price of pgms rising by 48% to US\$1 500 per 3E ounce in the first half of 2008. This was on the back of a 57.6% rise in the average platinum price to US\$1 957 an ounce and a 46.6% rise in the rhodium price to US\$8 866 an ounce in the same period.

In 2007, the South African production weighted basket price of US\$1 354 per 3E ounce produced was 33.9% higher than the average global production weighted price. The slightly weaker rand exchange rate in 2007 resulted in the rand basket price for pgms rising by 24.3% to R9 654 per 3E ounce of pgms produced. In the first half of 2008, the local production weighted basket price rose by 50.7% to US\$2 031 per 3E ounce and by 61.7% to R15 602 per 3E ounce as a result of the slightly weaker rand exchange rate.

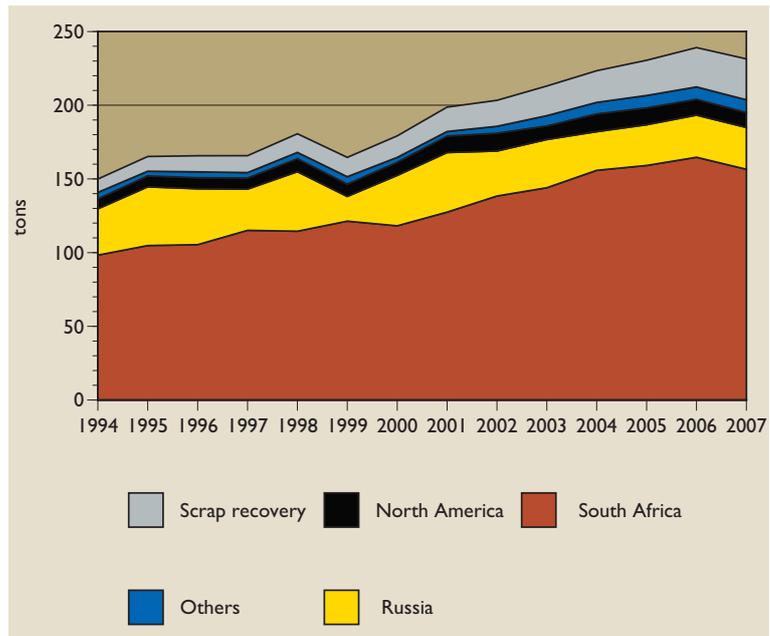
South African production, sales and exports

Total 2007 pgm production fell by 1.1% to 304 tons. The electricity emergency of January 2008 curtailed electricity supply to pgm mines to 50% survival load between 25 and 31 January, but the mines were later returned to a constrained 90% level of normal electricity supply. This had a major negative impact on South African pgm production, which is estimated to have fallen by 14.2% on a year-on-year basis in the first quarter of 2008.

Many South African companies tried to bring forward maintenance programmes to fill the gaps left by the cut in supply. By the second quarter of 2008, the year-on-year rate of decline in production had slowed to 7.2%, but the situation remained unsatisfactory.

Given the strategic importance of the pgm sector to the South African economy, the restoration of power to existing mines and the provision of certainty in respect of electricity supply to new projects are critical issues.

However, the appreciation in the rand prices of pgms in 2007 resulted in total South African pgm sales rising by 19.7% to R78.4-billion. Local sales of pgms to



Platinum supply by source

domestic catalytic converter fabrication industry grew by 4.4% to R12.4-billion, while export sales increased by 27.3% to R66-billion.

Platinum

The platinum market went from an 11 ton surplus in 2006 to a deficit of 14.9 tons in 2007. New mine supply fell by 4.1% to 203.7 tons, while total supply, including scrap, declined by 3.3% to 231.4 tons. The key reason for the decline in supply was the 4.9% drop in local platinum production to 156.6 tons, while the only improvement area was that of scrap recovery, which increased by 3.5% to 27.1 tons.

Platinum production outside of South Africa fell by 1.3% to 47.1 tons. Demand (excluding scrap) grew by 8% to 246.3 tons in 2007 on the back of an 8.2% increase in demand for catalytic converters to 131.4 tons and a 6% increase to 60.3 tons in the demand for platinum for industrial applications. Continued growth in demand for light diesel vehicles and rising emission standards helped spur platinum demand. Investment demand for platinum increased substantially to 5.3 tons in 2007 from an implied disinvestment of 1.2 tons in 2006, as investors increased demand via EFTs. Jewellery demand fell by only 3.4% to 49.3 tons, out performing market expectations despite the rising platinum price.

Platinum started 2007 at US\$1 137 an ounce and the price continued to increase throughout the year ending at US\$1 529 for an annual average of US\$1 251. The platinum price rose to a record US\$2 280 an ounce on 4 March 2008 and averaged out at US\$1 957 an ounce in the first half of 2008.

Palladium

The palladium market remained in oversupply in 2007 as the 2.9% growth in demand to 235.6 tons was more than offset by the 8% growth in new mine supply and Russian stockpile sales. In 2007, total supply increased by 9.5% to 298.1 tons, including scrap recovery. South Africa's 0.2% decline in palladium production to 86.2 tons was more

than offset by the 15.8% rise to 141.2 tons in Russian supply and the 25% increase in scrap recovery to 31.1 tons.

The growth in palladium demand of 2.9% was led by a 10.8% increase to 138.4 tons in demand for catalytic converters driven by the favourable price ratio between platinum and palladium, which encouraged vehicle manufacturers to use palladium where possible. Strong growth in vehicle sales in emerging economies (Russia, China and India, which produce mainly petrol cars) was a key driver of palladium demand for catalytic converters. Industrial demand increased by 1.2% to 54.4 tons on the back of a thriving electronics sector, which used 40 tons. Investment demand also jumped to 8.1 tons following the introduction of the ETFs earlier in the year.

It would appear that much of the extra palladium was absorbed by investors and institutions. With a weaker US dollar and rising precious metals prices, the palladium price also increased, rising from US\$332 an ounce at the beginning of 2007 and finishing the year at US\$365 an ounce, for an annual average of US\$359. In the first half of 2008, the palladium price grew by a further 24.8% to average US\$446 an ounce.

Rhodium

While only accounting for about 5.6% of the volume of the three main pgms, rhodium makes up about 32.3% of the value of the pgms. Although South Africa's mine production of rhodium was down on 2006, the sale of stocks resulted in an increase of 4.5% to 21.6 tons. Rhodium demand increased for the seventh consecutive year in 2007, growing by 3% to 32.3 tons. Despite higher prices causing consumers to minimise their loadings of rhodium, the call for rhodium for catalytic converters increased by 1.9% to 27.3 tons. Total industrial demand grew by 9.6% to five tons, driven by a 30.6% increase in demand for the chemical sector to two tons.

The deficit between supply and demand continued to weigh on the rhodium price, which started 2007 at US\$5 550 an ounce and

ended the year at US\$6 850 for an annual average of US\$6 050 an ounce. Further tightness in supply resulted in the price rising by 46.6% on a year-on-year basis to US\$8 866 an ounce in the first half of 2008.

Titanium

Titanium mineral concentrates are mostly used by the titanium dioxide pigment industry; other key uses include welding rod coatings and in the production of manufacturing carbides, chemicals and metals. There is rising demand for titanium metal, driven by strong demand from the aerospace sector, titanium sponge and welding industries.

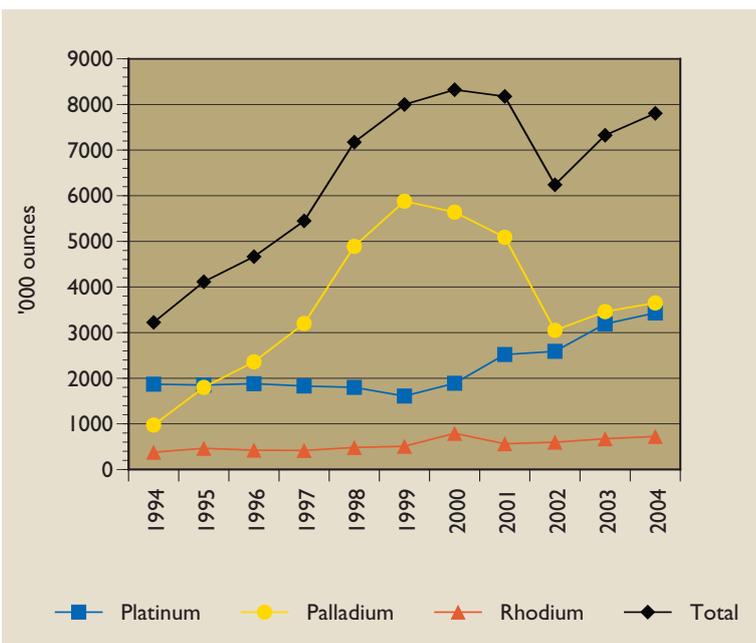
China again provided major impetus to this market as the country increased its consumption of titanium dioxide pigment. Global production of titanium mineral concentrates is estimated to have increased by 3% in 2007.

Ilmenite supplies about 92% of the world's demand for titanium minerals, with the remainder from rutile. South Africa is a substantial world supplier of both ilmenite and rutile – the world's second highest producer in both categories. Local production of ilmenite increased by 1% to 1.1 million tons in 2007, while its rutile production grew by 3.4% to 121 000 tons.

Reserves and production

Total reserves for ilmenite and rutile together amounted to 730 million tons in 2007. China holds the largest reserves for ilmenite in the world, accounting for 29% of total share followed by Australia, 19%, India 12.5% and South Africa 9%. Australia has the largest reserves of rutile at 45% of total followed by South Africa with a 20% share and India with a 17.6% share.

Total world production of ilmenite and rutile increased in 2007 by 5.2% owing to new mine production in various countries such as Australia, Chile, Gambia, Mozambique and South Africa.



Product demand for autocatalysts



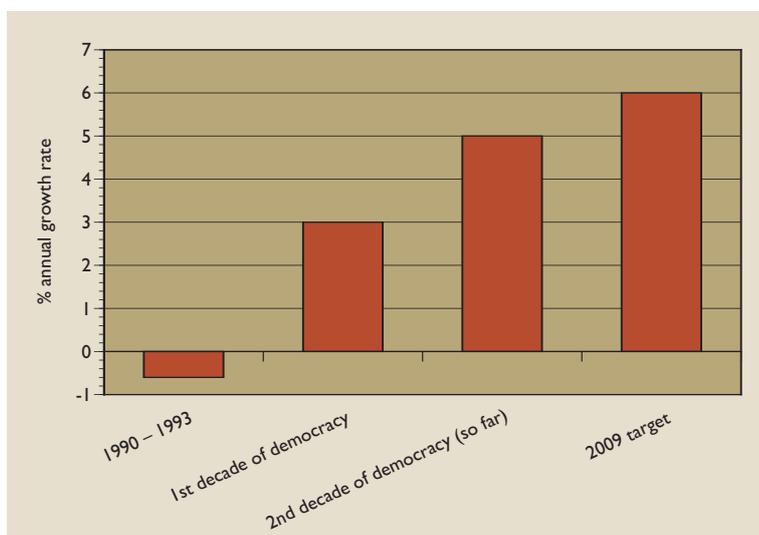
Investment and economic growth

Since 1994, the South African government has pursued a broad set of macro-economic policies that have created a strong foundation for growth and development in the economy, and have played a major role in enabling the country to benefit from rising global prosperity, capital flows and globalisation.

The results must not be underplayed. In particular, these policies have led to significant capital inflows, which have enabled the funding of investment and growth in the economy. Economic growth has risen from zero in the period before 1994 to 3% per annum in the first decade of democracy and 5% per annum in the second decade. Government, through the Accelerated and Shared Growth Initiative (ASGISA), has targeted a 6% GDP growth rate by 2009. South Africa is reaping the fruits of the hard work that the country has done to stabilise the macro economy, liberalise trade, target inflation, consolidate the national finances and open the economy to international trade and investment.

Economic growth is key to reducing unemployment and poverty

An economy growing at 5% a year will double in size in approximately 14 years. An economy growing at 7% a year will double in size in a decade. Creating a larger economy for all South Africans to share in will go a long way towards addressing poverty and inequality and meeting government's 2014 target. While it has taken some time to get the macro-economic balances right in South Africa, the benefits of doing so have resulted in rising investment, declining unemployment and an ability to address poor education and economic transformation.



South Africa's improving economic growth performance

Over the past decade South Africa has lagged behind the global economy.

Although the country's economic reforms at the macro level have enabled it to take advantage of the favourable global circumstances over the past five years, it will be necessary to do much more if it is to emulate the Asian countries.

Less favourable global conditions

The favourable global circumstances of the past year have changed considerably as the sub-prime crisis has spilled over into consumer spending, to the extent that it has forced a slowdown in the American and European economies. The slowing developed country markets are being partially carried by continued strong growth in Brazil, Russia, India and China, but even these developing economies are not immune to the global slowdown. Property and equity markets have faced significant corrections and the crisis has forced a curtailment in the amount of credit available at the global level.

Emerging economies like South Africa are not immune to global forces, as the pool of liquidity has narrowed and the world economy has slowed. Given the country's very low domestic savings rate, South Africa has been borrowing savings from the rest of the world to help fund its rising rate of investment. This has resulted in a fairly large current account deficit at about 8% of GDP (investment rate of 21% of GDP, less savings rate of only 13%).

In the absence of any substantial rise in domestic savings, the country will have to continue to borrow money overseas to fund the massive investment programmes for companies like Transnet and Eskom, in addition to the private sector's investment plans of about

R1.5-trillion over the next five years. With the recent constraints on the availability of global capital, the room for South Africa to manoeuvre in terms of access to foreign

borrowings and in terms of macro-economic policy choices have narrowed.

South Africa's uneven economic growth profile

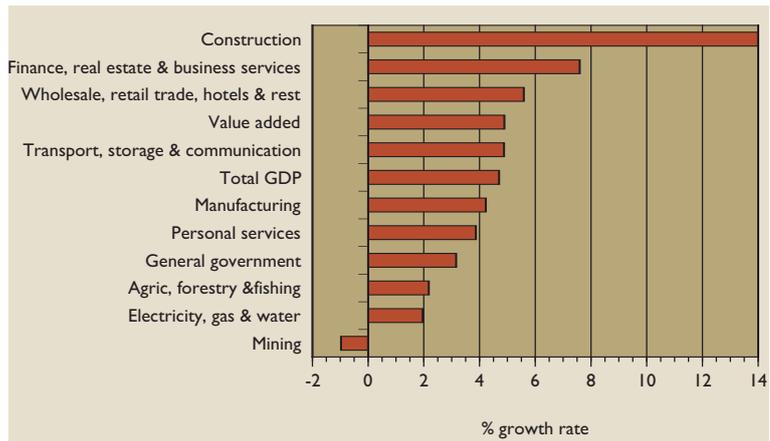
South Africa's economic growth is mostly concentrated in the non-tradable sectors of the economy such as construction, financial services and the wholesale and retail trades. Unfortunately, the supply-side tradable sectors have performed poorly, with agriculture, mining and manufacturing growing at a much slower pace than the rest of the economy. The high growth Asian economies have tended to base their growth rates on supply-side tradable export industries. A pertinent question would be: is South Africa placing the cart before the horse in terms of demand-side non-tradable sectors leading growth?

The unbalanced economic profile in South Africa is creating its own set of challenges as poor export growth has compounded the pressure on the current account of the balance of payments. While it is encouraging that the largest import component of the current account is that of capital equipment, which should help update capital stock, the problem is that the deficit has to be funded from foreign savings via the financial account of the balance of payments. A weak current account can add to uncertainties, such as increasing volatility to the rand exchange rate if the short-term capital inflows covering the current account deficit slows.

The Harvard-led growth diagnostic reports on South Africa, indicate that the country was ranked 50th of 56 comparable countries in terms of export performance. The report described South Africa's export track record from 1960 to 2004 as extremely poor and an Achilles heel to the growth prospects. In the past five years South Africa's real export growth was only 5% annually, whereas imports grew at 12.4% a year. If the tradable sectors were growing at a reasonable pace then the whole country's economic growth rate would improve.

Investment is rising

While domestic interest rates have risen in an attempt to cap inflation, which had

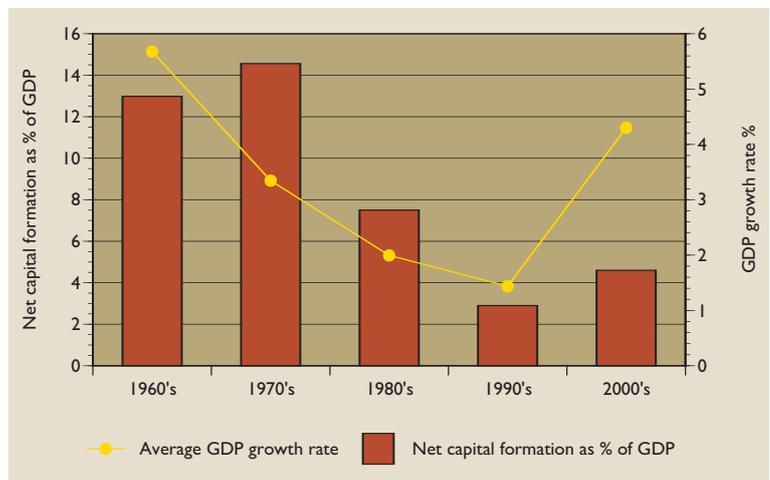


South Africa: sector GDP growth rates in real terms, average 2004 – 2008

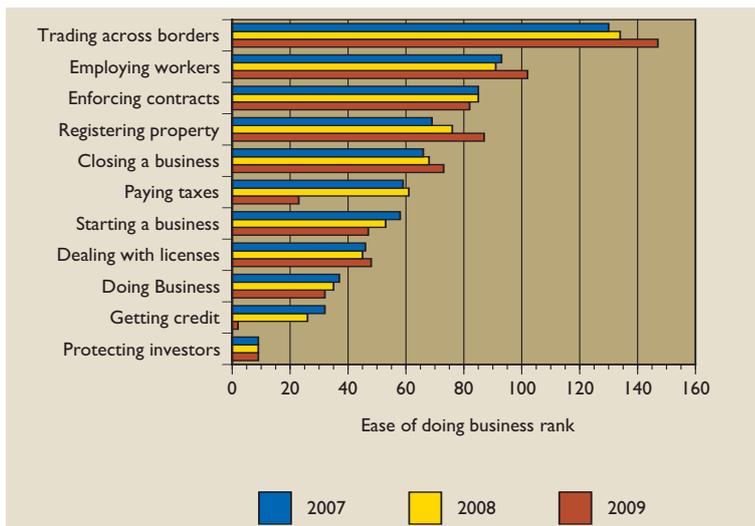
risen to 11.5% by June 2008, the demand side of the economy has slowed. Fortunately, this should be partially offset by the proposed big increase in investment by both the public and private sectors. South Africa has been growing faster than its economic growth potential (5% versus 4%) and the result is that capacity utilisation has risen in most industries, to the extent that some industries are now short of sufficient spare capacity to guarantee reliable supply.

Key areas of constraint include electricity supply, railways, ports, road networks, cement and steel fabrication and liquid fuels refining capacity. The only solution to capacity constraints is increased investment to generate the required capacity. The infrastructure programme for the 2010 world cup and the Gautrain project are also large contributors to rising fixed investment.

Real fixed investment grew by 13.7% in 2006 and 14.8% in 2007, before a slight slowdown in the first half of 2008 of 13.5% as a result of the electricity crisis. While real fixed investment by parastatals grew by 32.6% in 2007, this sector only accounted for 13.3% of total fixed investment and the strong growth is off a very low base. The private sector grew real fixed investment by 14.8% in 2007 and accounts for a substantial 74.4% of total gross investment. A large portion of fixed investment by parastatals is going into areas that have traditionally had capital expenditure deficits, so the improvement in their gross investment is largely catch-up. Disappointingly, growth in real fixed investment by government (especially municipalities) was only 0.8% in



GDP growth rates versus net investment (to fuel growth)



World Bank: ease of doing business, South Africa's country ranking per category

2007, and fixed investment by this sector only accounted for 12.4% of total investment. The fact that government capital spending has stalled in the face of urgent infrastructure needs, such as roads and road maintenance, is disconcerting.

Real fixed investment rose to 22.1% of GDP by the second quarter of 2008, the highest level since 1982. If the provision for depreciation is removed from gross investment to arrive at net investment, then South Africa's aggregate net investment levels are still too low to support a sustainable high growth rate beyond 4% a year. Net investment by parastatals was negative for eight of the past 14 years, illustrating the extent of the problem.

While an improvement in gross and net investment is welcome, there are a number of constraints that will need to be addressed if investment is to accelerate. In particular, regulatory red tape, such as the delays in the issuance of water use licences or in the processes surrounding environmental impact assessments, have affected the building of power stations and delayed mining projects. Despite several commitments by government to reduce red tape and lower the costs of doing business in South Africa, actual progress has been slow.

According to the World Bank publication: *Doing Business 2009*, South Africa ranked 32 out of 181 countries in terms of the ease of doing business in 2008. This places it in the top quartile of countries in terms of the ease of doing business. However, hidden in the numbers are some areas where definite improvements are needed. For example, while the country is highly rated in terms of protecting investors (world rank of nine), because of the extent of corporate disclosure and corporate governance, it scores poorly in a number of areas that are crucial to investment, including trading across borders (world rank 147), the ease of employing workers (rank 102), registering a property (rank 87 and costing 8.8% of the property value), closing a business (rank 73), starting a business (rank 47), dealing with construction permits (rank 48, but high cost of 27.5% of income per capita), and enforcing contracts (rank 82).

South African policy makers and regulators need to build on the country's strengths and aim at getting all the key costs of doing business criteria into the top quartile of the global rankings. Issues such as the

high costs of registering a property or high costs of starting a business must be tackled to provide an enabling environment for investment. Where legislation and regulations are not working, such as in environmental legislation, a proper review must be done and remedial steps taken.

Achieving more rapid economic growth

Over the past few years a number of external economic think tanks have investigated means to ensure more broad-based and rapid economic growth. The Harvard Diagnostic Growth report, the Organisation for Economic Co-operation and Development (OECD) economic assessment of South Africa and the Commission on Growth and Development report all make a number of observations and recommendations on ways of encouraging more rapid and broad-based growth.

Organised business, through the Economic Growth Task Team of Business Unity South Africa (BUSA), has also done substantial work on the critical questions of growing investment and reducing unemployment and poverty. Over the past five years the discussion has migrated towards the key micro-economic issues that are negatively affecting economic growth (as listed in the ASGISA – Accelerated Shared Growth Initiative for South Africa – framework), such as the following key areas:

- ◆ Regulatory red tape and the compliance burden on business, especially small business
- ◆ Infrastructural constraints, such as rail, ports, electricity, roads, telecommunications, water and pipelines
- ◆ Deficiencies in state organisation, leadership and capacity to deliver, especially at local government level
- ◆ Skills constraints
- ◆ Barriers to entry and competition in the economy and limited new investment opportunities
- ◆ The volatility and level of the currency.

Other key areas of discussion have included a focus on the impact of crime, the efficiency of the education and skills

development and the country's weak export performance.

Recent developments, such as the electricity emergency, have received attention, with business and organised labour trying to ensure a more strategically driven approach to managing such challenges. From a business perspective, many of the obstacles to higher growth are at the micro-economic level. For example, the delays in the approval of environmental impact assessments and water use licences have delayed the development of new power stations. Business is not necessarily against the content of the environmental requirements, but the slow processes and long lead times to approval have frustrated business and parastatals.

ASGISA

To accelerate the pace of investment and economic growth, the government adopted the ASGISA initiative, which is designed to identify and unblock constraints (regulatory, infrastructural or skills) to higher investment and economic growth. ASGISA also tackles many of the constraint issues undermining export growth.

ASGISA has its genesis in the core objectives of the government, as set out in 2004, which are to halve poverty and unemployment by 2014. The ASGISA programme is not intended to be a new overarching economic strategy for the country, but rather is focused on specific blockages to economic growth that require resolution. The programme targets a 6% growth rate by 2009 and investment rising to 25% of GDP from its current 22% level.

The government has sought stakeholder input on ASGISA, including a number of meetings between organised business through BUSA with the national president, deputy president and ministers from key economics departments. The Chamber has participated in the entire ASGISA process through BUSA and continues to play a leadership role. Most of the focus in ASGISA is on problem solving.

Countering the agreed set of constraints has involved government establishing a set of measures and priorities, which include:

- ◆ Macro-economic issues – encouraging a more stable and competitive exchange rate
- ◆ Infrastructural programmes
- ◆ Sector investment strategies, linked to the new industrial policy
- ◆ Skills and education initiatives, including the work of JIPSA (the Joint Implementation of Priority Skills Acquisition)
- ◆ Second economy interventions, including the launch of an anti-poverty strategy
- ◆ Public administration issues.

Key ASGISA focus areas by the Chamber

The Chamber, through the BUSA economic growth task team and its membership of various ASGISA task teams and via bilateral engagement with government and state owned enterprises, has played an important role in organised business' input made to government. The following areas should be mentioned:

- ◆ Government has planned for capital investment in infrastructure of about R470-billion over the next five years for Transnet and Eskom, while government capital investment is expected to amount to R297-billion over the three year, medium-term expenditure framework period. The Chamber has also raised concerns on the lack of a decision on investment in a new liquid fuels inland pipeline, because of the need to provide reasonable security of supply of diesel to mines. Through the Rail Industry Transport Collaboration Forum, the Chamber has engaged with Spoornet on future plans and key areas of constraint, such as the lack of adequate railway facilities to the Waterberg coalfields, or the development of inland coal terminals
- ◆ The Chamber has played a role in the BUSA task group on Regulatory Impact Assessments (RIAs), including some of the advocacy efforts. The Presidency has now agreed to the merits of the concept of RIAs and will start rolling out the process to various departments.

Administered prices

Administered prices refer to the prices of various goods and services set by government or non-financial government enterprises for public consumption. All major parastatals have large capital programmes to fund and they are all requesting increases at the same time, for example, Eskom applied for a 13% plus CPIX increase in late 2007, followed by a request for a 60% nominal price increase in its second application brought to the national Energy Regulator of South Africa (NERSA) in 2008. The tariff increases applied for by other parastatals, such as the Petronet increase of 5.6% and the Spoornet tariff increase for its general freight business, are likely to place upward pressure on inflation when aggregated.

Higher inflation means upward pressure on interest rates, which in turn raises the cost of bank funding and slows down demand led growth. Administered prices are important to the mining sector because of the upward pressure uncontrolled administered prices exert on mining operating costs.

The Chamber played a key role in the administered pricing study that started at the end of 2006 and ended in 2007. After a number of delays the project focused on administered pricing in the key areas of rail, ports and water. The consultants (Genesis Analytics) found it particularly difficult to access data from Transnet. In fact Transnet refused to co-operate despite a request from the Department of Public Enterprises (the government's shareholder in Transnet). Nevertheless, Genesis Analytics was able to use interviews with customers, the extensive international data that is available and anecdotal evidence to produce reports on rail and ports, which are strategic in nature and which have spurred government awareness.

Owing to good data availability, the report on water was comprehensive and completed on time. The consultants presented the final reports to the constituencies in NEDLAC in late 2007. The findings will help influence policy debates around port and rail infrastructure. The Chamber led the business input and developed the original terms of reference for the project.

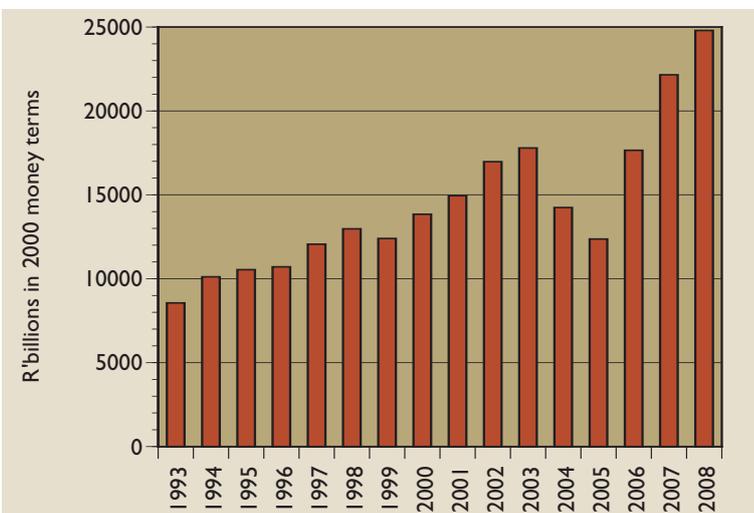
Inputs on economic policy

During the course of the review period, the Chamber provided input and leadership on economic issues in the country. The Chamber continued to chair the Standing Committee on Economic Policy in BUSA and, via BUSA, provided input into NEDLAC, the ASGISA process and in the BUSA meeting with President Mbeki and Cabinet. For example, the Chamber participated in presentations to Parliament on the National Budget (economic assessment of the budget) and the economic response to the budget to the minister of finance in NEDLAC Council meetings.

Growing investment in the mining sector

Mining is a crucial foundation industry for South Africa. Not only does the sector provide jobs for about one million people – directly and indirectly – it makes up almost a fifth of the economy and is by far the largest net earner of foreign exchange.

The decline in real investment in mining in 2004 and 2005 led to the establishment of a high level task team on mining investment by the



South African mining real gross fixed capital formation, 1993 – 2008

Department of Minerals and Energy (DME) director-general and senior industry leadership in November 2006. The investment task team was chaired by the deputy director-general of the DME and included senior representatives from the Chamber and organised labour.

A draft document outlining the problems and possible solutions was formulated by the task team and submitted to Cabinet in February 2007. A further, more comprehensive document was prepared by the task team and was provided to a workshop on mining investment held on 11 June 2007 at the Development Bank of South Africa. This workshop was attended by the country's deputy president and senior representatives of the Chamber, the South African Mining Development Association, government and organised labour.

In essence, it was agreed that three key areas were responsible for the declines in mining investment, although it was also agreed that no single factor was the overarching reason. The three issues included regulatory constraints (environmental and mining licensing), infrastructure constraints (rail, ports and water) and the impact of the volatility of the exchange rate, which also affected planning in the sector.

The introduction of the Mineral and Petroleum Resources Development Act, which came into effect on 1 May 2004, combined with many new requirements, such as the commitments to meeting the Mining Charter objectives, new social and labour plans, and new environmental requirements, meant a steep learning curve for the industry and government.

A large number of applications for conversions of existing rights and for new rights were made to the DME and initial delays were recorded in the granting of rights. These delays were both administrative and at company level. But over time progress has been made to the extent that by the third quarter of 2006, the DME was meeting its targets of processing new mineral right applications within 12-months and new prospecting rights in six months. By the end of 2006, the DME was publishing the data on

applications for new rights to provide a proper picture of the progress being made.

On the issue of infrastructural constraints, the industry, via the Rail Transport Collaboration forum and through direct engagement between the mining companies and parastatals, have reached agreement on the expansion of the RBCT, the Coalink railway line and the Orex iron ore line. Industry is also urging Transnet to explore other issues such as inland coal terminals. RBCT is to be expanded to 92 million tons capacity per annum as is the Coalink railway line. Similarly, Spoornet and the iron ore mining companies have reached agreement on expanding the Orex iron ore line and port of Saldanha to handle 47 million tons of iron ore exports a year by 2010. The go-ahead on the development of the De Hoop dam has been given, and progress has been made. Additional water capacity in the Steelpoort area is still required to enable the pgm mining in that area to reach its full potential.

Mineral royalties

The new mining laws introduced state custodianship of the country's mineral resources in line with internationally practice. Related to the system of state custodianship is the prerogative of the state to charge a severance tax on the extraction of non-renewable resources.

National Treasury released a first draft of the Mineral and Petroleum Resources Development Bill for public comment in 2003. The following five years saw four draft Royalty Bills prepared by Treasury and subjected to intensive discussion and engagement with the industry via the Chamber. Discussion took the form of workshops, bilaterals and presentations to the Portfolio Committee on Finance. Throughout the process the Chamber supported the concepts of the State becoming the custodian of the country's mineral resources and that the State has the sovereign right to charge a severance tax for the extraction of a non-renewable resource.

However, in the royalty debates, the

Chamber focused on trying to find an appropriate balance between the needs of the state, and the competitiveness needs of mining companies and investors. The Chamber, with the backing of its Executive Council, argued for a royalty system that was internationally competitive, predictable and stable. A system that would recognise that mining is cyclical, that the industry requires significant investment and has long lead times to project development were all considered.

In late 2007, Treasury released the third draft Royalty Bill, which contained innovations, including the shift to a formula system based on earnings before interest taxes, amortisation and dividends (EBITDA) and attempted to not penalise companies that undertake further beneficiation and processing by proposing the adoption of net smelter return base against which a formula rate would be applied.

The Chamber's detailed submission on the third draft Royalty Bill was approved by the Executive Council in February 2008 and submitted to Treasury in early March. In essence, the Chamber argued that while a formula was the right route to follow, the 2007 EBITDA formula proposal would result in the industry paying a much higher royalty level (comparable to the 2003 original fixed rate proposal) and that the formula needed to be adjusted to create an appropriate balance between the needs of the state and the competitiveness needs of mining companies.

The Chamber argued for a shift to earnings before interest and taxes (EBIT) to enable the sector to gain some benefit for the massive capital investment required to sustain and grow the sector. Issues such as the problem of double royalties, the specific challenges of a mature gold sector and ring fencing the royalty proceeds were also raised. The Chamber made a detailed submission to Treasury and the Portfolio Committee on Finance on 19 March.

On 3 June 2008, Treasury released the fourth draft Royalty Bill and the second draft Royalty Administration Bill, and proposed a hybrid EBIT formula system. Treasury proposed two EBIT formulas for refined minerals (gold and pgms) and for non-refined minerals. It also moved away from the proposal of a first saleable product to determine the base against which the formula would be applied. The objective of this route was to prevent penalising companies that undertook further processing. While the Chamber welcomed Treasury's shift to an EBIT formula, outstanding matters included the industry's ongoing concern with double royalties, its suggestion that royalties be ring-fenced (either whole or in part) to support mine community and major labour sending area development and some technical drafting input.

The Royalty Bill is expected to be signed into law in the second half of 2008 for implementation on 1 May 2009. Industry and government have travelled a long journey to arrive at a royalty system that is competitive, predictable and stable, and which captures an appropriate balance between the needs of the state and those of companies and investors. Formula based royalties are at the cutting edge of royalty systems around the world.

Electricity supply

The Chamber participated in the NEDLAC discussion on a new energy policy for South Africa in 1998. The agreed Energy White Paper urged

government to introduce private power generation in competition with Eskom, to strengthen the transmission system and to consolidate the electricity distribution system through the formulation of regional electricity distributors. The White Paper also warned that at current economic growth rates, the country would run out of generating capacity by 2007.

Government decided that Eskom was not to build additional generation plant, instead it was expected that independent private entities would enter the market and build generation plant. Unfortunately government did not consider that it was not economically viable for private power companies to invest in South Africa; low rates of return on capital invested and the cheapest price of electricity in the world were not facilitative for independent power producers (IPP).

By 2004, it became apparent that, owing to economic growth, the demand for electricity was approaching the available supply while no private generation had yet materialised. The Chamber and other bodies brought the situation to the attention of the minister of minerals and energy and later that year Eskom was given permission to build new generation capacity. However, the situation deteriorated; for a while Eskom was able to avert a supply shortage by increasing plant utilisation, but higher utilisation of mid-life plant inevitably leads to increased risk of unplanned breakdowns.

The first indication of a crisis was on 18 January 2007 when unplanned outages threatened system stability and Eskom was forced to shed load by disconnecting consumers with little or no warning. The winter of 2007 passed without generation outages, but during the latter half of that year the need to take generation plant out of service for maintenance, together with unplanned outages owing to breakdowns, resulted in daily load shedding in early 2008.

Large mines, as key industrial customers, were increasingly required to reduce their demand in terms of the demand market participation scheme. On 24 January 2008, Eskom experienced a shortage of 4 000 MW despite the implementation of load shedding and the reduction in demand by key industrial customers.

Fears that the shortage could increase and affect system stability resulted in requests to gold, platinum and coal mines to reduce their demand to survival levels on 25 January 2008. The mines were also warned that, should they continue normal operations, their electricity supply was not guaranteed. A number of gold, platinum and coal mines complied and discontinued operations.

Electricity is an important input for all forms of mining; it is a major energy source for the transport of personnel, material and ore, production machines and mineral processing. In addition it is the exclusive power source for vital health and safety related applications, such as the pumping of water, ventilation and refrigeration.

Most underground mines experience an inflow of groundwater. This water has to be pumped out to maintain safety. Some gold mines in South Africa are situated in an area where the ore body is overlain by water bearing dolomitic strata. The workings of mines are ventilated to remove dust and fumes and provide healthy atmospheres for workers.

The virgin rock temperature increases with depth. The rate of temperature increase, or the geothermic gradient, varies according to the type of rock and differs from place to place. In mine workings heat flows from the exposed rock surfaces and heats up the air. To provide a safe environment for workers in deeper mines it is necessary to cool the ventilating air. This is achieved by refrigeration plants that supply chilled water that is in turn used to cool the air.

In underground gold operations these health and safety applications may consume in excess of 55% of the total electricity used.

Meetings with the management of Eskom and the ministers of minerals and energy and public enterprises led to a partial restoration of the electricity supply to mines, but the situation remains critical. In March, a number of large-scale mines were facing severe difficulties in managing a 90% electricity supply level and some shafts and jobs were at risk. The mines most affected were able to apply for additional electricity to Eskom and some received additional power. The applications were looked at on a case by case basis and the industry was not restored to a blanket 95% level.

The mining sector bore the brunt of the initial reduction in demand. The sector was singled out by Eskom on 24 January 2008 because it would respond immediately owing to the safety related consequences of an electricity outage. However, the mining sector and Eskom's other 138 large industrial customers continued to bail out the rest of the economy for the remainder of 2008.

Unfortunately, many other users of electricity, especially those that could reduce demand without affecting their businesses or livelihoods, such as households and the retail, hospitality and property sectors, did very little to reduce demand.

In late February, early March, the Chamber led a co-ordinated effort to increase electricity supply to mines that were the most compromised by the electricity supply curtailment.

The Chamber participated in most of the structures established to deal with the crisis including leading the BUSA input at the Joint Presidential Working Group meetings, participating in the NERT, (National Electricity Response Team) in the Eskom technical task teams and chaired the BUSA task team on electricity. However, it became clear that a more integrated strategic approach was required to manage the crisis. The Chamber began lobbying other role players and actively participated in the NEDLAC process that culminated in the NEDLAC Energy Summit on 16 May 2008. It became apparent from the NEDLAC process that other role players were also frustrated with the slow progress in resolving the crisis, with the African National Congress and Cosatu (Congress of South African Trade Unions) playing key roles.

In response the Chamber assumed the following positions:

More effective tripartite leadership

Government, labour and business will have to work together to resolve the crisis. Up to this point government leadership had been at best ad hoc, or vested interest driven. In particular, government needs to play a more effective role in making strategic decisions about electricity, such as how curtailment is managed and how to allocate electricity to growth projects. Given the multiple cross-cutting issues that affect many government departments, The Presidency should lead government's initiative.

An appropriate and co-ordinated response

The current assortment of structures dealing with electricity issues must be integrated into a single structure, comprising business, government and labour to avoid duplication and wasted effort. All policy issues relating to the electricity emergency should be discussed in this structure before decisions are made. It is particularly important that all decisions are subject to an economic impact assessment process. Eskom should not be placed in a position where it is compelled to make what amounts to national economic policy decisions, i.e. who gets electricity and who does not.

An appropriate and effective institutional structure

The Chamber is behind efforts to ensure an integrated response, including the establishment of an institutional framework that reduces duplication and allows for speedy resolution of key issues.

Protocol on future electricity supply disruptions

To prevent a repeat of 24/25 January 2008, the Chamber has requested that government formulate a protocol on how government/Eskom would handle any future large-scale reduction in electricity supply. This would ensure that the mining sector is not considered an easy target, but should in fact be last in the queue should load-shedding be necessary.

Restoring supply to large export industries

The Chamber is engaging government on the need to restore supply as it makes little strategic or economic sense for the major export industries to face electricity supply curtailment, when many other sectors have done little to reduce demand.

The allocation of supply and new projects

A strategic approach should be taken in allocating electricity to current operations and providing for future growth in the economy. Key criteria in awarding increased electricity to consumers should include factors such as employment intensity, export potential and the electricity intensive nature of the production process.

Power conservation programme

While the Chamber is a signatory to the 2005 Energy Efficiency Accord, it has advised government and Eskom that the move to energy efficient production methods is a process and not a once-off event. In addition, the Chamber has advocated the view that a combination of higher prices and incentives should drive energy efficiency in the country and that the adoption of a compulsory power rationing system should be seen as a last resort.

Co-generation and IPP

The implementation of co-generation and IPP projects must be given priority. The decisions about prices or off-take conditions should be taken by the regulator and/or government, but not by Eskom. In addition it should be made easier for industrial customers to buy additional electricity from co-generator partners, using Eskom networks to convey the electricity.

More emphasis on improving the supply of electricity

The Department of Public Enterprises and Eskom have placed too much emphasis on demand curtailment and higher prices and too little emphasis on what Eskom can do to bring new supply on line and reduce the unacceptably high levels of unplanned outages of generation plant. They should be more transparent in areas where there are difficulties. Eskom needs to restore a 90% plant availability rate from the crisis levels of about 74% – 85%.

Non-technical losses

A recent report indicates that the impact of non-technical losses – electricity theft and non-payment – on national electricity demand

could be as high as 3 600 MW, which is equivalent to the output of a major coal-fired power station. Eskom, government, the National Energy Regulator and all distributors should take urgent steps to curb and eliminate non-technical losses.

Short-term measures

There are a number of short-term measures that should be implemented as a matter of urgency. While the implementation of some of these measures is in progress, the process could be accelerated. Examples include the replacement of incandescent bulbs with compact fluorescent lights – a possible saving of 1 000 MW-peak; Eskom's solar water heater subsidy should be increased through government subsidies, such as direct tax rebates to taxpayers for the installation of an SABS approved solar water heater – government/stakeholders should target the installation of one million solar water heaters, which is equivalent to a saving of 1 500 to 2 000 MW off peak demand.

Outcomes

The Chamber can report that most of the focus areas have yielded positive results. The president chairs the National Stakeholder Advisory Council on Electricity (NSACE), the first meeting of which was held on 27 June 2008. The Inter-Ministerial Committee is to be chaired by the deputy president. The Stakeholder Advisory Council will comprise five leaders from business, government and labour and will deal with key issues, such as power rationing, or allocating electricity to new projects. A streamlined NERT will drive all the issues with strong strategic and technical representatives from the three stakeholders. The Programme Management Office (PMO) will facilitate the working groups, NERT and the Stakeholder Advisory Council and make recommendations on priorities and performance management. The working groups are managed by the technical experts. The Chamber is participating in some of the working groups, NERT, the terms of reference committee for the PMO and in the Stakeholder Advisory Council.

The following points of progress are worth noting:

- ◆ A more appropriate institutional structure to deal with the crisis is now in place, involving high level political, labour and business leadership
- ◆ There is some sympathy within government (the economic ministries) that key export sectors should have electricity supply restored where necessary
- ◆ The minister of public enterprises has promised that a protocol will be developed on the way in which government/Eskom will handle any electricity generation reductions
- ◆ The Department of Trade and Industry is preparing a protocol on new connections, for consideration by NSACE.
- ◆ Much greater focus will be placed by the NSACE on potential quick wins, such as the rapid roll out of a incandescent light bulb exchange programme
- ◆ Treasury is expected to respond shortly to the R2-billion energy efficiency business plan submitted by the DME.

Conclusion

The electricity emergency has had a significant impact on the mining sector, especially on deep-level mines. The Chamber initially played a key

role in trying to minimise the impact of the crisis, but is now placing its attention on orchestrating a more strategic, stakeholder driven approach to dealing with the crisis. The Chamber continues to engage on key issues, such as the draft Energy Bill and the draft Electricity Pricing Strategy via participation in the different structures and in terms of leading business' response.

National Energy Bill

Following the approval of the White Paper on Energy Policy by Parliament in 1998, legislation was enacted to implement the policy positions contained in the White Paper, some of which have not yet been addressed. A draft Energy Bill, intended to address the outstanding positions, was formulated and published for comment in 2004. At the time the Chamber submitted comment on the draft Bill to Cabinet for tabling in Parliament in 2006. The Bill was, however, withdrawn and reformulated to ensure that it addresses the critical issues affecting energy security in South Africa.

In a parallel process, Cabinet approved the White Paper on Renewable Energy in 2003, the Energy Efficiency Strategy for the Republic of South Africa in March 2005 and the Energy Security Master Plans for Liquid Fuels and Electricity in August and December 2007 respectively. The effective implementation of the white paper, strategy and master plans requires legislation to empower the minister of minerals and energy to introduce the necessary measures.

Consequently, the National Energy Bill (B52 -2008) was introduced to Parliament on 19 June 2008. The Bill addresses the following key issues contained in the white paper:

- ◆ The provision of data and access to data sources. Energy data is currently collected on a voluntary basis, which has resulted in unavailable, or insufficient data being for effective energy planning within the DME. This provision will enable the mandatory collection of energy data by the DME, where such data is not already collected by other government departments or other public entities
- ◆ The establishment of a programme or

programmes aimed at minimising the negative impact of energy carriers on health and the environment. This will empower the DME to mandate certain energy carrier and equipment specifications and standards, developed under the Standards Act, 1993. It will allow the minister of minerals and energy to develop, in collaboration with the ministers of trade and industry and of environmental affairs and tourism, certain energy related standards that may not already exist

- ◆ The establishment of programmes that will provide households with universal access to appropriate forms of energy
- ◆ The fulfilment of international energy commitments and obligations
- ◆ Integrated energy planning
- ◆ The establishment of a national liquid fuels strategic reserve capability to provide for the procurement and management of strategic liquid fuels' stocks
- ◆ The establishment of programmes and measures to ensure adequate investments in the development of energy infrastructure.

The Bill also provides for the establishment of two juristic persons, namely:

- ◆ The National Energy Modelling and Information Agency, which is intended to provide an energy modelling capability aimed at assisting in the development of integrated energy master plans and energy related sector plans. It will also provide input into the development of national energy policy and related macro-economic policies
- ◆ The South African National Energy Development Institute will undertake research and promote energy efficiency and renewable energy. It will comprise a renewable energy division, an energy efficiency division and an energy research and development division. It will absorb the National Energy Efficiency Agency and the South African National Energy Research Institute.

The Chamber submitted written comment on the Bill to the Portfolio Committee on Minerals and Energy and a

Chamber representative presented the Chamber's views at a public hearing held by the portfolio committee. The Chamber's comment addressed, amongst others, the following major issues:

- ◆ The lack of provision for stakeholder input into energy policy formulation and energy planning
- ◆ The absence of explicit provision for integrated energy planning capacity
- ◆ The omission of a coal industry representative on the board of the planned National Energy Development Institute
- ◆ The envisaged establishment of the National Energy Modelling and Information Agency as a juristic person separate from the DME and allowing for the partial funding of this body through levies.

Electricity pricing

Eskom and the National Energy Regulator agreed in 2006 to a multi-year price determination that would allow Eskom to increase the electricity price by CPIX +1% a year over the next three years.

During late 2007, Eskom applied to the NERSA for a deviation from the agreement to provide for an increase of CPIX +13.5%, i.e. a 20% nominal increase, on 1 April 2008. The application was necessitated by the increased demand for electricity, which compelled Eskom to purchase more coal than expected on the open market at spot prices that were considerably higher than the price of coal obtained from contracted collieries. In addition, the estimated capital expenditure required to construct new generating capacity had escalated substantially and the current multi-year price determination did not make sufficient provision for these eventualities.

In comments submitted to the regulator, the Chamber recommended that NERSA allow Eskom the requested additional revenue for the 2008/09 year and then proceed without delay to formulate multi-year price determination rules for the period from 2009 to 2012 to provide for the expected capital expenditure and the increased uncertainty regarding the cost of primary energy, without sacrificing any benefit. NERSA subsequently granted an increase of only 14.2%.

On 18 March 2008, Eskom applied to NERSA for a revision of the 14.2% price increase granted for 2008/09 to be changed to a 60% nominal increase. The requested price increase was based on the recovery of primary energy costs, the funding of the accelerated demand side management programme and the need to sustain Eskom's investment grading.

Subsequent to the recent electricity shortages and load shedding, government and Eskom agreed to implement an accelerated demand side management programme to reduce demand, avoid forced load shedding and lower the use of expensive generation options. The proposed price increase would provide R2.5-billion to fund the demand side management programme. Another reason for the proposed price increase was the need to restore Eskom's profitability to enable it to sustain its investment grade rating by international rating agencies.

The Chamber commented that:

- ◆ The quantum of the proposed increase and the timing of its implementation required reconsideration



- ◆ Based on available information, the inclusion of the cost of primary energy and the rebuilding of the depleted coal stockpiles in the price of electricity appeared to be reasonable
- ◆ The full funding of the demand side management programme should be borne by government and taxpayers through the central fiscus. Government should also look at funding the demand side management programme via the Clean Development Mechanism. The R2.5-billion funding for the demand side management programme should be entirely removed from Eskom's pricing proposal
- ◆ Government, as 100% shareholder in Eskom, should be required to provide additional support to Eskom, including taking on further international debt to fund the building programme, which in turn will support both Eskom's balance sheet and income statement
- ◆ The two cents per kilowatt hour levy on electricity generated by fossil fuels proposed by Treasury in the February 2008 budget equate to a 10% increase in price. While the levy was proposed as a type of carbon tax, it should be shelved owing to the electricity emergency, and instead should be built into the revised 2008 Eskom price proposal.

Coaltech Research Association

The year under review was a period of consolidation for the Coaltech Research Association.

It was Coaltech's first year as a juristic person in its own right. The transformation from a partnership to an association incorporated in terms of Section 21 of the Companies Act proceeded without setback. The process, however, brought to light a number of governance and administrative issues, mostly concerning legal compliance and taxation, which were resolved during the year.

The research programme continued as planned. Some highlights of the programme are:

- ◆ The completion of the first comprehensive airborne geophysical survey of the Waterberg coalfield. The data gives Coaltech and its members valuable insights into the structural disposition of this area
- ◆ The completion of a wetlands database for the Upper Olifants River. The database is now used by the Department of Water Affairs and Forestry to formulate its management strategies
- ◆ The *Rehabilitation Guidelines* formulated in collaboration with the Chamber were received enthusiastically, especially by the coal mining industry which is already implementing a number of the guidelines.

The year also brought the implementation of several technologies developed under the auspices of Coaltech. The most notable of which were a fine coal beneficiation plant at Leeuwpan Colliery and the Emalahleni water treatment plant.

During the year members contributed R4.85-million, with an additional R1 516-million from the Technology for Human Resources in Technology Programme (THRIP) funded by the Department of Trade and Industry. In addition, some members committed themselves to additional contributions to import and test coal screening equipment and a redesigned road header from China.

Since it is becoming increasingly difficult to obtain funding from THRIP, it was decided to identify other sources of external funding. The management of Coaltech spoke to the Department of Science and Technology to explore possible funding by that department. It emerged that the department could fund projects undertaken by universities on behalf of Coaltech. Discussions with the University of Pretoria and the Department of Science and Technology are underway to identify suitable projects for such funding.

It became clear early in 2008 that South Africa's coal production would have to increase substantially over the next decade to meet escalating demand, especially power station coal, in a

sustainable manner. At the same time it will be necessary to contain costs and improve resource utilisation, which will have to take place under increasingly stringent environmental conservation conditions and a large measure of public antipathy.

During board deliberations on the future of Coaltech, the view was expressed that Coaltech should become the agent for step changes in coal mining practice. Another view was that Coaltech should, in addition to its medium to long-term programme, establish a mechanism to address immediate problems experienced by its members.

So far Coaltech has focused on specific problems requiring mostly medium-term work that resulted in incremental changes in processes. These views, therefore, present a radical departure from the current Coaltech approach.

The board agreed to initiate the process to re-align Coaltech during the 2008/2009 financial year.

Coal road transport in Mpumalanga

In excess of 20 million tons of coal is transported annually by road in Mpumalanga. Despite efforts by the province, the roads in Mpumalanga continue to deteriorate. The poor road conditions are already impacting on coal supply to power stations and have the potential to disrupt supply to some power stations, which in turn will result in loss of generation capacity at a time when that capacity is already strained.

The chairman of the Chamber's Collieries Committee, accompanied by representatives from Eskom, met with the Mpumalanga MEC for roads and transport to discuss road conditions. It emerged that the province did not have sufficient funds to carry out all the road rehabilitation and maintenance required. A Chamber delegation met with officials from National Treasury to bring this matter to its attention with a view to securing additional funding for road maintenance in the affected area. Treasury was also informed

of the road repairs being done by coal producers and Eskom where the provincial authorities appeared unable to do so expeditiously.

National Treasury responded that it is aware of the road situation in Mpumalanga and that the provision of additional funding would be considered in the formulation of the Medium Term Budget Policy Statement. Any additional funding would be subject to conditions to ensure that it was used for the intended purpose, namely, road rehabilitation and maintenance.

The harmonisation of mineral policies in the SADC region

A proposal for the harmonisation of mineral policies and the envisaged processes was approved by the Southern African Development Community (SADC) Council of Ministers at its meeting in August 2006. The SADC secretariat requested the United Nations Economic Commission for Africa (UNECA) to assist it in developing a multi-year thematic programme for the implementation of the mineral policies harmonisation framework. UNECA in turn commissioned Mintek to develop an implementation strategy, a draft of which was delivered to the SADC secretariat during July 2007.

The SADC secretariat, in conjunction with the United Nations Economic Commission for Southern Africa arranged an expert group meeting in October 2007 to validate the plan. Representatives from MIASA participated in the meeting. The validated implementation plan will be presented to a meeting of SADC mining ministers during September 2008 for approval.

Underground colliery fire inertisation system

During August 2007, the Chamber's Collieries Committee agreed to pursue the acquisition of an Air Liquide fire inertisation system and gas chromatography equipment; the cost of which is to be shared on a proportional basis among Chamber member collieries, as well as other interested underground collieries.

A meeting of representatives from underground collieries was convened to obtain their participation. All representatives present at the meeting supported the acquisition of the fire inertisation system.

In further discussions it was agreed that the system will be housed at the Collieries Training College and managed in a similar way to the Rescue Drilling Unit.

The Board of Mine Rescue Services (MRS) also agreed that the MRS Trust be used to receive and disburse the funds involved in purchasing the equipment. It emerged that it was necessary to purchase a diesel powered generator as electricity supply could not be guaranteed at the sites where the inertisation system was likely to be deployed.

During July 2008, discussions with representatives of Air Liquide took place to determine the final cost estimate and to make arrangements for the purchase of the equipment. It is expected that the system will be in place by the end of 2009.



Environment policy

The most demanding issues for the period under review were the continuous and fundamental changes to the regulatory framework for environmental management in the mining industry and the continued problems surrounding water use authorisation licenses. The ongoing adverse media reports on environmental legacies of the past century have resuscitated a tendency among environmental non-governmental organisations (NGOs) to question and undermine the legitimacy and the adequacy of DME decision-making processes. This has led to public outcries whenever there is a mining application in which there are competing land uses or mining applications (not mining operations) in areas which the NGOs perceive as environmentally sensitive.

Sustainable development approaches provide the framework for the Chamber's input on environmental policy and legislative process. The Chamber recognises and promotes the pursuit of a balance between the four pillars of sustainable development, namely, social equity, environmental protection, economic development and an effective governance framework.

The Chamber's Environmental Adviser's office participated in most environmental issues of concern to the mining industry, and has provided expert and specialist input (verbal and written) to many legislative and policy initiatives undertaken in the year under review. The main vehicles for the mining industry's environmental policy issues and generation of policy positions and specialist input are the Chamber's Environmental Policy Committee and the Industry Forum on Radiation. These committees are comprised of environmental and radiation specialists from the mining groups, who collectively represent the most senior environmental management groupings in the mining industry in South Africa.

In addition to engaging government departments on public policy in environmental management in the mining industry, the Chamber continues to liaise with a wide range of stakeholders, from community organisations concerned about the environmental impacts of mining, to specialist groups undertaking studies in various aspects of environmental management in the mining industry. The Chamber continues to liaise with NGOs, such as the Endangered Wildlife Trust, the Wildlife and Environment Society of South Africa, the Federation for Sustainable Development, and the South African office of the World Conservation Union (IUCN).

The Chamber has good professional working relationships with specialist and research organisations such as the Water Institute of Southern Africa, particularly the Mine Water Division, where the Chamber is part of the Management Committee, and the Sludge Management Division, which undertakes innovative initiatives relevant to the mining sector. The National Association of Clean Air, the South African Bureau of Standards, the Water Research Commission, the National Research Foundation, Coaltech's Surface and Mined Land Research, the Mineral and Energy Education and Training Institute, Wits University's Centre for Sustainability in Mining and Industry, the University of North West's Centre for Environmental Management, and other tertiary institutions.

Engagement with government departments

The Chamber continues to engage government and provide specialist input via its participation on task teams, general and project steering committees of initiatives of the DME, the Department of Water Affairs and Forestry (DWAF), the Department of Environmental Affairs and Tourism (DEAT), the National Nuclear Regulator (NNR), BUSA; and public hearings by portfolio committees on environment related legislative proposals in the National Assembly and the National Council of Provinces.

Department of Minerals and Energy

Environmental management in the mining industry

During the period under review, the Sustainable Development Committee, a sub-committee of the Mining and Minerals Development Board (MMDB), replaced the multi-stakeholder Standing Committee on Environmental Management in the Mining Industry (SCEM). The objective of SCEM was to address issues pertaining to co-operative governance, inter-departmental disputes in interpretation and implementation of legislative mandates, integrated environmental management in the mining industry, and transparent and consistent application of DME policies throughout the regional offices.

In the past, the committee was important in fostering discussions on uniform and transparent application of the then regulatory requirements by the regional offices of the DME. These ranged from the interpretation of financial provision requirements to strengthening co-operation with other government departments. However, the Sustainable Development Committee did not have sufficient authority or time to apply its collective wisdom to pursuing these issues. It was preoccupied with attempts to determine its role and responsibility in relation to other committees of the MMDB, and in attempting to prevent overlaps and duplications with the board itself and other committees of the board.

Proposed amendments to the Mineral and Petroleum Resources Development Act (MPRDA) [Environmental Provisions]

The Mineral and Petroleum Resources Development Amendment Bill of 2007, was tabled in the National Assembly on 4 May 2007. One of the purposes of the Bill is to streamline the regulation of environmental management in the mining industry by aligning the environmental provisions of the MPRDA and the National Environmental Management Act (NEMA), to prevent overlaps and duplication.

Public hearings on the Bill, in which the Chamber made its submission, were held on 29 May 2007. On 1 August that year, the A draft of the Amendment Bill (B 10A – 2007) as agreed to and amended by the Portfolio Committee on Minerals and Energy, was published. The A draft amended section 4 of the MPRDA by adding a new subsection 4(3) which provides as follows: ‘The provisions of the National and Environmental Management Act (NEMA), 1988 (Act 107 of 1998), relating to environmental authorisations and any other related matters, shall not apply to activities of holders regulated in terms of this Act.’

On 1 August, the B draft of the Amendment Bill (B 10B – 2007) was published as altered by the portfolio committee after submissions had been made to that committee by the public, including the Chamber. The B draft retained the proposed subsection 4(3) of the MPRDA. The proposed amendments to both the MPRDA and NEMA did not satisfy the requirements of streamlining environmental authorisations for mining related activities.

During November 2007, the ministers of minerals and energy and of environmental affairs and tourism reached a high-level framework agreement on the issue of environmental management for mining (which is explained under the report on NEMA). On 7 February 2008, the two directors-general signed an agreement between the two departments in accordance with the framework criteria. The Chamber had an opportunity to submit its comments on the way in which proposed amendments to the Amendment Bill (B10D – 2007) accommodated the agreement between the two departments.

Mine environmental management (MEM) guidelines

In an effort to facilitate better understanding of the successful interpretation of the MPRDA, the DME will produce the MEM guidelines to be used in conjunction with the Act and Regulations to aid interpretation and implementation. The CSIR, the Council for Geoscience and Mintek were appointed by the DME to facilitate the development of the guidelines. During the period under review, the MEM guideline on mine closure, one of the series of documents being

developed by the DME, was published for comment. The Chamber has submitted its comments. The guidelines have not yet been finalised.

Other engagements on policy and procedures

The Chamber is engaging with the DME to deal with the urgent issues of financial provision and regional mine closure, particular in mature mining operations in the gold mining sector. The Chamber organised a workshop with experts from the mining sector to consider innovative ways of addressing the issues of financial provision. The following issues were highlighted during the period under review:

- ◆ Various DME regional offices have different interpretations and ideas
- ◆ Differentiation between DME and accounting rules (two sets of figures)
- ◆ Various rights’ execution dates – constantly updating one or other provision
- ◆ New areas/operations provide full liability up front even though nothing on site
- ◆ Accuracy of historical cost estimates (may be overestimated or underestimated)
- ◆ Access to trust funds or withdrawals of funds from a trust is a perpetual problem
- ◆ Cost of bank guarantees – funds tied up in bank guarantees impact on borrowings and affect cost of capital
- ◆ There is no expiry date on guarantees and exchange of bank guarantees
- ◆ South African registered banks or any other bank or financial institution approved by the director-general versus the credit ratings of mining companies
- ◆ The absence of a risk-based provision for closure model
- ◆ Cost of premature closure versus planned closure
- ◆ Application of fixed contractor rates
- ◆ Loading with additional costs
- ◆ Current rehabilitation is funded from working costs, unit cost implication – companies having to source finance elsewhere for rehabilitation and only afterwards can they submit

documentation for the latter to the DME so that they can access their funds from a trust fund.

The Chamber is currently developing a watertight business case for presentation to the DME to review the implementation problems of financial provision.

Department of Environmental Affairs and Tourism

Proposed amendments to NEMA

In the previous reporting period, it was indicated that the minister of the DEAT had exempted mining related activities from the scope of the 2006 Environmental Impact Assessment (EIA) Regulations pending the fine tuning of administrative matters between the DME and the DEAT to prevent duplication. During the current review period, the DEAT embarked on the following process to amend NEMA:

- ◆ On 4 May 2007, the minister published for comment the National Environmental Management Second Amendment Bill, 36 of 2007 and the first amendment draft to the National Environmental Management EIA Regulations, 2006 which provide for further regulation of EIAs and environmental authorisations
- ◆ The National Environmental Management Amendment Bill 2007 (the NEMA Bill), which proposes to amend NEMA, was originally published (as Bill No. B 36 – 2007) and tabled in the National Assembly on 31 August 2007. It was referred to the Portfolio Committee on Environmental Affairs and Tourism, which held public hearings on the Bill on 6 November 2007
- ◆ The Chamber made submissions on the NEMA Bill to the portfolio committee on 6 November 2007
- ◆ It should be noted that at the time such comments and submissions were made on the NEMA Bill to the portfolio committee these were formulated in the light of the proposed new section 4(3) of the MPRDA, which stated: 'The provisions of the National and Environmental Management Act, 1988 (Act 107 of 1988), relating to environmental authorisations and any

other related matters, shall not apply to activities of holders regulated in terms of this Act.'

- ◆ In consequence of the provisions of the proposed insertion of section 4(3) of the MPRDA, the Chamber's submissions were made on the basis that such amendments would not apply to players in the mining industry engaged in exploration, prospecting and mining because such persons would be the holders of rights as defined in the MPRDA and would accordingly not be subject to the provisions of NEMA – as expressly provided for in the proposed section 4(3) of the MPRDA. It followed that it was not necessary for the Chamber to make any submissions on the proposed amendments to NEMA insofar as they related to environmental authorisations and other related matters, thus limited submissions were made on associated activities to environmental authorisations
- ◆ The NEMA Bill was not finalised in 2007 because of the deadlock between the DME and the DEAT on the issue of EIAs. During November 2007, the Chamber expressed its displeasure to the ministers at the uncertainties brought about by this impasse
- ◆ The two ministers reached a high-level framework agreement on the issue of environmental management for mining. The three framework criteria which they agreed were necessary to achieve the required alignment between the DME and the DEAT and between the MPRDA and NEMA, and were summarised as follows:
 - ❖ There will be one environmental impact management system for South Africa; it will be legislated and regulated through NEMA. This means that NEMA and the DEAT will set the regulatory and policy framework, determining norms and standards and develop guidelines for the environmental management of mining
 - ❖ The minister of minerals and energy will retain existing environmental mandates and will remain the implementing agent for environmental management for mining
- ◆ As the ultimate custodian for environmental matters, the DEAT minister will be the appeal authority on environmental management decisions taken by the minister of minerals and energy
- ◆ The directors-general of the DME and the DEAT signed a departmental agreement in accordance with the framework criteria agreed by them
- ◆ The chairman for the Portfolio Committee on Environmental Affairs and Tourism issued a memorandum summarising the accord in terms of the high-level framework agreement as set out above. The memorandum records that, in addition, the two departments concurred that the agreement, 'would be the first step to a three-year process that should ultimately lead to the transfer of the whole function to DEAT'.

The departmental agreement has not been published, was not attached to the memorandum from the chairman of the environment portfolio committee, has not been made generally available to the public and, despite several requests, has not been made available to the Chamber. The only information on the content of the departmental agreement made available to the public and the Chamber, is a summary of the high-level framework agreement that was concluded between the ministers. Even the full terms of the framework agreement have not been disclosed.

At the time of the finalisation of this review, the National Environmental Management Bill was still being processed by the National

Council of Provinces. The Chamber has maintained its engagement with Parliament and the DEAT on its outstanding concerns, which are:

- ◆ It is evident that the departmental agreement envisaged new and substantial amendments to NEMA and the MPRDA. The amendments did not form part of the versions of the NEMA Bill and the Amendment Bill published for public comment and as such, fundamentally and significantly change the original amendments proposed in those Bills. Accordingly, the public was made aware that the departmental agreement exists and that, if implemented by Parliament, the agreement will require substantial amendments to NEMA and the MPRDA. None of these amendments were made public, and the public is thus unaware of the precise nature and detail of such amendments
- ◆ This is not simply a question of shifting the administrative provisions pertaining to environmental management matters in the field of mining from one statute to another. There is a fundamental difference in approach under the provisions of NEMA to which the mining industry will, at a stroke, become subject, for example, the consideration of an alternative site is not a practical option
- ◆ The Chamber insists that the approved Environmental Management Programme (EMP) in terms of the MPRDA should be deemed to be an Environmental Authorisation in terms of NEMA, the substantive Act itself (as Parliament's decision) and not in regulations (as the DEAT's prerogative) as in the proposed EIA regulations. Furthermore anything done or deemed to have been done under a provision repealed or amended by the MPRDA, should be deemed to be an action under the corresponding provision of NEMA. Actions taken, applications and regulations made under the MPRDA, are not covered in transitional arrangements
- ◆ The concept of an appeal from one minister to another is fundamentally abhorrent, and therefore should be deleted and replaced by a provision indicating that normal appeal procedures in the MPRDA would apply, and anyone detrimentally affected by the decision of the minister of minerals and energy would be able to take the matter on judicial review in terms of the Promotion of Administrative Justice Act, 2000.

The Draft Second Amendment to the EIA regulations

In terms of the above process and the streamlining of environmental management regulatory requirements in the mining industry, it is envisaged that all environmental provisions contained in the MPRDA will be moved to NEMA once the legislative reform process is finalised. In terms of the proposed, amended NEMA, no listed activity may commence without an environmental authorisation being issued by a competent authority after an EIA has been undertaken as prescribed by the EIA regulations. According to the Draft Second Amendment to the EIA regulations, mining is now a listed activity under listing notice 1 and 2 and would therefore require an environmental authorisation from a competent authority before the commencement of any activity. The Chamber has submitted its comments on the draft regulations. Its main concerns are:

- ◆ The mining industry cannot continue to be subjected to a fragmented regulatory environmental framework by the authorities, such as a dual appeal process

- ◆ It is important to have a regulatory system that is appropriate to the national circumstances, priorities, infrastructure and institutional capacity and ability. The system must allow for simple administrative arrangements for enforcement despite the wider application of the legislation with separate laws administered by different government departments with division of responsibilities
- ◆ The DEAT may not have mining expertise and the DME may not always appreciate the various dynamics of environmental conservation and management, thus continuous consultation and liaison between the two departments is essential
- ◆ If the final mechanisms are to be effective, the simultaneous development and/or amendment of regulatory instruments requires a high degree of co-ordination. It is necessary for the instruments to complement each other.

At the time of the finalisation of this review, neither the National Environmental Management Bill, nor the Draft Second Amendment to the EIA regulations were finalised.

National Environmental Management: Air Quality Act (NEM:AQA) – draft National Framework

The draft National Framework (in terms of section 7 of NEM:AQA) was published in 2007. The National Framework is meant to be a medium to long term plan of how the NEM:AQA will be implemented in practical terms to meet the stated objectives of the Act. (i.e the framework is analogous with the National Water Resources Strategy). The Chamber and air quality experts from member companies submitted comments to the DEAT.

National Environmental Management: Waste Bill (B 39, 2007)

The Waste Bill was published in the government Gazette No. 30142 of 3 August 2007. The Chamber submitted comments to the DEAT in March 2007 covering the request by the department for stakeholder comments. The comments were



The Hillendale Pit at KZN Sands

elaborate and highlighted substantive issues in the Bill that needed consideration and possible revision by the authorities. Some of the issues were:

- ◆ Duplication of other legislations
- ◆ Definition of terminology, i.e. licence vs permit
- ◆ Clarity on co-operative governance as referred to in the Bill.

The Chambers' submission highlighted the need for this Bill to exclude mine waste related activities as these are adequately covered by the MPRDA of 2002. It seems, however, that although mine waste has been omitted in the definition, references to mining activities are made intentionally or unintentionally in the Bill. The Bill is currently being subjected to parliamentary processes.

The Department of Water Affairs and Forestry

The Chamber and the DWAF have established liaison mechanisms whereby members of the Chamber's Environmental Policy Committee, and the DWAF's Chief Directorate: Water Use and Conservation,

discuss issues of mutual concern. The turnaround time for the processing of water use authorisations remains a thorny issue for Chamber members, whereas the DWAF is concerned about water users who use water without valid authorisation. The formal, scheduled liaison mechanism is important to highlight various water-related developments from the Chamber's perspective and policy and procedural initiatives from the DWAF's side. During the period under review, the Chamber made input in the following projects:

Best Practice Guidelines for Water Resource Protection in the South African Mining Industry

The Chamber's Environmental Policy Committee members, individually and collectively, provided expert input into the finalisation of the guidelines. The Chamber, in conjunction with the DWAF and the Water Institute of South Africa (WISA) Mine Water Division, organised an information transfer session attended by mining industry personnel, government officials and consultants. The purpose of the symposium was to develop a common understanding among all role players on the content and the intention of the guidelines, and how they should be used.

Generic Water Conservation and Water Demand Management Framework: Guideline for the Mining Sector in South Africa

The objective of the guideline is 'to develop a water use efficiency toolkit for the mining sector that consists of principles, guidelines, management practices, benchmarks, targets and performance indicators.' The overall purpose of the guideline is to provide assistance to both the DWAF and the mining sector in the assessment, planning and

management of water conservation and demand management. The guideline should become a valuable tool to stimulate improvements in water use efficiency within the sector and to evaluate and report on the effectiveness of these improvements. The Chamber has participated in piloting the guideline in various settings to evaluate its efficacy under different scenarios.

Water Allocation Reform Strategy and BBBEE Evaluation Guidelines

The purpose of this policy initiative is to give effect to constitutional and legislative requirements of transformation by documenting and formalising the DWAF policies on the promotion and support of broad-based black economic empowerment (BBBEE) and other government socio-economic objectives in the allocation of water. The Chamber submitted its comments on this policy initiative, the main themes of which are:

- ◆ that mining companies are already subject to the Mining Charter, which deals with BEE and related issues
- ◆ that water use (for example, groundwater dewatering, storage of water, disposing of water containing waste, diverting the flow of a stream and construction of water care works) is only a component of a bigger mining project
- ◆ that the water component of the project cannot have a stand-alone BBBEE requirement outside the broader BBBEE requirements of the overall project, although it is noted that water may be a limiting factor in the execution of the project.

Water Sector Leadership Group: Water for Growth and Development

The Chamber is part of the Water Sector Leadership Group that is guiding the development of the water strategy for growth and development. The minister of water affairs and forestry has called for a strategy on water for sustainable growth and development to answer the question: 'how best can the water sector respond to issues of access to water for economic growth?' The vision underpinning this strategy is of a robust and accountable water sector, which successfully meets the demand for water security and reliable and effective water services, and enables equitable, environmentally sustainable economic growth and social development in South Africa.

The Chamber also participates on the executive committee of the Water Sector Leadership Group to provide strategic direction to the various task teams of the group.

NNR/IFR

The National Nuclear Regulator (NNR) is the national institution established by the National Nuclear Regulator Act, No 47 of 1999, for the protection of the public, property and environment against nuclear damage. The regulator is governed and controlled in accordance with the Act by a board of directors and is operated by an executive comprising the chief executive officer and the staff of the NNR. The minister of minerals and energy is the executive authority responsible for the NNR and appoints the NNR board.

The functions of the NNR include:

- ◆ nuclear authorisation, that is the process of granting, by written approval to applicants or/and operating organisations, permission to

perform nuclear related activities as detailed in the scope of the authorisation

- ◆ compliance assurance, i.e. the regulatory process used by the NNR to provide assurance of holders' compliance with the conditions of nuclear authorisations, through the implementation of compliance inspections
- ◆ interaction with international organisations associated with nuclear regulations and related matters, such as the International Atomic Energy Agency.

A few years ago, the Minerals, Energy and Allied Industries Forum on Radiation (IFR) was formed to address the sensitive issues of radiation within the country. One of the main aims of the IFR is to discuss and resolve all radiation-related issues, co-operate and negotiate with the NNR and advise all stakeholders on radiation matters.

There is continuous interaction with the NNR on mutual concerns and current initiatives around the management and prevention of radiation contamination in the Wonderfontein spruit catchment area. The mining companies in the area have grouped themselves into a mining interest group, and the Chamber assists in the interaction of the group with the NNR and other stakeholders.

Engagement with other stakeholders

The Chamber held meetings with a wide range of groupings and people concerned about environmental management in the mining sector during the period under review. The concerns mostly covered:

- ◆ the recycling of heavy-duty tyres
- ◆ the reclamation of existing mining dumps and the creation of mega dumps
- ◆ water quality
- ◆ biodiversity and land management
- ◆ radiological contamination in the Wonderfontein spruit catchment area
- ◆ environmental legacies of mining.

In most cases the issues were referred to the mining company involved and, where it was an industry matter, the Chamber dealt with the issue.

South African Mining and Biodiversity Forum

The South African Mining and Biodiversity Forum was formed to provide an opportunity for cross-sectoral interaction and co-operation aimed at improving biodiversity conservation, management and performance in the mining industry within the South African legislative framework. It brings together representatives of industry, conservation organisations and NGOs.

The forum began in January 2005, and a tripartite steering committee has co-ordinated activities since then. The primary output has been a strategic review of the status of biodiversity management in the South African mining industry.

Water Research Commission

The Water Research Commission receives funds to conduct research on water from a levy on water use. Several of its projects are relevant to the mining industry and the Chamber and its members sit on various steering committees for these projects.

The commission initiated a process of developing the second edition of the *South African Sludge Guidelines*. These guidelines are intended to deal with all waste water sludge management practices. It soon became apparent that it would not be possible to develop a single guideline document that would adequately protect all receptors without unduly stringent requirements. Consequently, a series of guidelines focused on specific sludge management options will be developed. The following volumes comprise the new sludge guideline series:

- ◆ Volume 1: Selection of management options
- ◆ Volume 2: Requirements for the agricultural use of sludge
- ◆ Volume 3: Requirements for the on-site and off-site disposal of sludge
- ◆ Volume 4: Requirements for the beneficial use of sludge at high loading rates
- ◆ Volume 5: Requirements for thermal sludge management practices and for commercial products containing sludge.

National Business Initiative

Launched by former President Mandela in 1995, the National Business Initiative (NBI) is a merger of the former Urban Foundation and the Consultative Business Movement. It is a leading business coalition focused on the broader role of business in sustainable development, especially during the first decade of democracy in South Africa. It is an alliance of forward-thinking South African and overseas companies committed to actualising the NBI's vision of a thriving South African society, with a market economy that functions for the benefit of all.

The Chamber co-operates with the NBI on the implementation of the Energy Efficiency (EE) Accord. An EE technical committee oversees the EE process by developing a monitoring and reporting guideline. Other issues under discussion with NBI are climate change, sustainable development and the United Nations global compact.

Water Institute of Southern Africa

WISA provides a forum for the exchange of information and views to improve water resources management in southern Africa. The objectives of the institute are the promotion and application of scientific and engineering knowledge and management skills in the planning, design, construction, operation, maintenance, investigation, research and education in connection with the natural and controlled water cycle. This includes, but is not limited to, the application of scientific, engineering and management skills to all or any hydrology, water resources, river management and flood alleviation, recreation, water supply and distribution, sewerage, sewage and industrial waste treatment, disposal and water pollution control.

The Chamber participates in most WISA divisions and sits on the management committee of the Mine Water Division.

International Council for Mining and Minerals

The Chamber is one of 27 national and commodity association members of the International Council for Mining and Minerals (ICMM). The Environmental Adviser's office participates in the Associations Co-ordination Group, Environmental Stewardship and Biodiversity Task Force, and is a correspondence member of Integrated Materials Management Task Force and the Community Development Task Force.



Checking radiation levels at KZN Sands



Health

Dust sampling strategy

Overview

Crystalline silica, microscopic in size, is found in many ore bodies mined in South Africa. Continual exposure to silica dust results in silicosis, i.e. damage to the lung architecture making lung tissue less able to extract oxygen from the air and supply it to the blood, resulting in breathing difficulties and increasing respiratory disability; it also increases susceptibility to other infections, especially tuberculosis (TB).

The 2007 Chamber of Mines Sustainability Report indicated 1 411 new Silicosis cases for 2005. The same report shows a total number of 1 597 cases for 2006. The latest DME statistics state that 1 673 new silicosis cases were reported in 2007. This consistent trend in the number of people harmed by silica dust indicates a potential failure in both the preventive measures in place to control dust in the working environment as well as the personal protective policy of the mining industry. The measurement strategy plays an important role in this process – both in raising awareness of the dangers of silica dust and in providing direction on the success/failure of dust management and future interventions.

Silica dust measurement strategy

The *Guideline for a Mandatory Code of Practice for the Assessment of Personal Exposure to Airborne Pollutants*, DME, 2002, revised in February 2008, forms the basis for current dust strategies in the mining industry. It provides for a stepped approach:

- Step 1 – Risk assessment and control
- Step 2 – Determination of sampling population
- Step 3 – Sampling and analysis methodology and quality control
- Step 4 – Personal exposure monitoring
- Step 5 – Reporting.

Whilst this methodology is thorough, recent research indicates that it could be inadequate. The SIMRAC (Safety in Mines Research Advisory Committee) research report on elimination of silicosis – SIM030603 – reveals that the current system of personal dust collection based on the homogeneous exposure group concept, may not be ideal primarily because the sampling strategy could result in the possible dilution of the results, especially, those concerning individual exposures.

The report shows that the mining industry should rather consider a methodology in which homogeneous exposure groupings are replaced by a methodology that concentrates on situations in which employees may be exposed to respirable crystalline silica (RCS). The concept of the maximum risk employee, where the emphasis is on employees who are most at risk, should be applied as recommended by the National Institute of Occupational Safety and Health of the United State's (NIOSH) *Occupational Exposure Sampling Strategy Manual*. A representative and statistically adequate sample of exposed workers' needs to be selected. This appears to be the best practice used in industrialised countries and a benchmark with which South Africa should be comfortable. Homogeneous risk groups should only be determined in situations in which individual maximum exposed workers cannot be selected with certainty.

The SIMRAC research also concluded that the direct-on-filter (DOF) for X-ray diffraction (XRD), DOF for infra-red (IR) and IR re-deposition methods do not agree as is claimed in the literature. The IR DOF gives a higher reading than the other two methods followed by the XRD DOF and then the IR re-deposition. The study reveals that IR DOF will show a higher estimate of the results; the IR re-deposition method will have low estimates of results. The XRD DOF is an ideal method for analysing RCS DOF, as the results obtained with this method lie between the IR DOF and re-deposition methods. Furthermore, XRD DOF does not involve any sample preparations that will cause a loss of particles on the filter analysed, and the XRD only quantifies crystalline silica particles. There is no overestimation or underestimation of results with XRD DOF. The percentage differences between XRD and IR analysis varied from 11.9% to 22%.

The SIMRAC research report also states that there is incomplete compliance with the current legislation. Employees do not seem to be aware of their exposure and are not sufficiently trained on the importance – to them – of the sampling programme. There is concern that overall the sampling programme does not appear to be consistently and comprehensively monitored.

The DME should undertake thorough, in-depth inspections to ensure that the mines are following correct sampling procedures to maintain the veracity of submitted results.

Sampling programmes should be monitored for the duration of the work shift to ensure that employees are wearing the sampling pumps,

wearing them correctly and that they are operating properly. Miners have been observed wearing pumps incorrectly, removing them during the shift and, in some instances, those wearing the pumps were in low dust areas like haulages and waiting areas.

Employees also report that sampling pumps sometimes hinder them from performing their duties properly. To address this problem, they hang the pumps in the waiting area during the shift and only wear them at the end of the shift before returning to surface. They also report that they find the sampling pumps uncomfortable to wear.

Best practice

Recent research studies on the current sampling and measurement strategy highlight fundamental deficiencies. It is evident that continuing to work in the same way will not aid the mining industry in achieving the targets and milestones and ultimately zero harm. Major shifts in dust strategy are required to align with best international practice. It is recommended that the following practices are adopted:

Sampling and measurement strategy

A decision was made to adopt the NIOSH Occupational Exposure Sampling Strategy:

- ◆ Which employee or employees are to be sampled?
- ◆ Where should the sampling device be located in relation to the employee sampled?
- ◆ How many samples should be taken on each work day to define an employee's exposure?
- ◆ How long should the sampling interval be for a measurement sample?
- ◆ During which periods of the work day should an employee's exposure be sampled?
- ◆ How many work days during a year should be sampled, and when?



Grootgeluk pantograph collecting electric current from overhead lines

The concept used by NIOSH is one of 'maximum risk employee' and is used to reduce the sampling burden on the employer.

As with the current DME guideline, NIOSH requires a personal dust sampling instrument to be placed within the breathing zone of the employee. The difference is that NIOSH provides for area sampling, which is not currently being done in South African hard rock mines.

The DME strategy is to sample at the following frequencies:

- ◆ Quarterly if exposure > OEL (occupational exposure limit)
- ◆ Biannually if exposure >50% of OEL and < OEL
- ◆ Annually if exposure >10% of OEL and <50% of OEL.

NIOSH suggests that bi-monthly sampling be done for exposures at or above the action level and should cease when exposures fall below the action level. The DME guideline would need to be revised to include the NIOSH sampling and measurement strategy.

Instrumentation

- ◆ Some existing gravimetric sampling pumps, cyclones and filters conform to current international standards
- ◆ The filters should have a capture efficiency of not less than 95% and be suitable for collecting crystalline silica.

Another major obstacles of the sampling equipment is the size of the instruments. Some underground workers already carry a lamp and battery, self contained self-rescuer, methanometer, CO monitor, oxygen monitor, first aid pouch, noise dosimeter, radiation dosimeter, etc. Should a dust measuring pump be added, the amount of equipment on that person is itself a problem. Research is necessary to identify/design lightweight, ergonomically sound equipment .

Weighing laboratories

All weighing laboratories should be accredited by the South African National Accreditation System. An audit protocol

must be developed and adopted and the laboratories audited frequently.

Analysis

X-ray analysis should become the best practice for hard rock mines as individual samples can then be analysed and proper exposures allocated. Cost is a factor as X-ray diffraction is approximately five times more expensive than the infrared method (R400 vs R80) and highly qualified technicians are needed to operate the X-ray diffraction machines.

Analysis laboratory

The mining industry should consider establishing a national laboratory for dust analysis and auditing of weighing laboratories and sampling procedures. The functions and duties of the occupational hygienist, air quality analyst, sample controller and wearer need to be audited and verified to form part of these audits.

Reporting

The current reporting, monitoring and evaluation system does not provide sufficient information to the mining industry to effect further improvements.

Conclusion

The mining industry faces huge problems when it comes to dust sampling and measurement. The current sampling strategy, as guided by the DME, is not adequate as proved by several SIMRAC studies. The prevalence rate of silicosis is still extremely high and the chances of meeting the Mine Health and Safety Council (MHSC) milestones on dust could be made more difficult by the SIMRAC research indicated above. A strategic change is required that would assist the mining industry to obtain results that are both accurate and statistically significant.

Targets and milestones

The 2003 Mine Health and Safety Summit agreed to the following targets and milestones on noise and dust:

Noise

- ◆ After December 2008, the hearing conservation programme implemented

by industry must ensure that there is no deterioration in hearing greater than 10% amongst occupationally exposed individuals

- ◆ By December 2013, the total noise emitted by all equipment installed in any workplace must not exceed a sound pressure level of 110dB(A) at any location in that workplace (including individual pieces of equipment).

Dust

- ◆ By December 2008, 95% of all individual measurements for respirable dust must be below the occupational exposure limit of 0.1mg/m³
- ◆ By 2013, there must be no new cases of silicosis in previously unexposed individuals, using current diagnostic methods.

This decision by the tripartite partners indicates the seriousness given to noise and dust in the working environment. The decision was triggered by the annual figures of noise induced hearing loss and occupational lung diseases, especially silicosis, emanating from the mining industry as shown in the graphs.

MOSH best practice adoption system

Introduction to the MOSH adoption system

Employers in the mining industry have embarked on a journey of continuous improvement towards zero harm, concentrating initially on falls of ground, noise and silica dust.

Zero harm can only be achieved if health and safety performance is not seen as a competition, but is recognised as a window of opportunity to share best practice and adoption throughout the industry. Leaders in the industry acknowledge that existing health and safety legislation prescribes only a minimum level of performance to achieve the targets, but they know that levels of performance must surpass any legislation.

In 2007, qualitative research conducted amongst key group executives and leaders on the mines, indicated that leadership behaviour and leadership communications are strong attributes in changing the culture of the work environment and achieving the objectives of zero harm.

The Mining Industry Occupational Safety and Health (MOSH) strategy builds upon these insights, providing guidelines for adoption of best practice for improving safety through innovative behavioural communications and leadership.

Vision/mission/values

The vision of the MOSH adoption system on dust and noise is to partner mining operations so that the milestones for respirable crystalline silica dust and noise are achieved. Its mission is to facilitate widespread adoption of knowledge, technology and practice that will significantly improve health and safety performance.

The adoption teams interact extensively to identify best practice and technology to address priority areas and work with key staff on mines to foster the adoption of demonstrated solutions, a culture of continuous improvement, accountability and visible leadership. The target is to provide working conditions free of harm.

Values

The MOSH adoption system is based on the following values:

- ◆ People: Zero harm to people
- ◆ Empathy: Demonstrated alignment with people's values of safety and health and effective communication to earn the confidence of employees, and cultivate leadership credibility
- ◆ Excellence: Goals and standards of work consistent with the highest international standards
- ◆ Involvement: Employees at all levels will be involved in the design, implementation and measurement of technologies and best practices to foster ownership.

Objectives

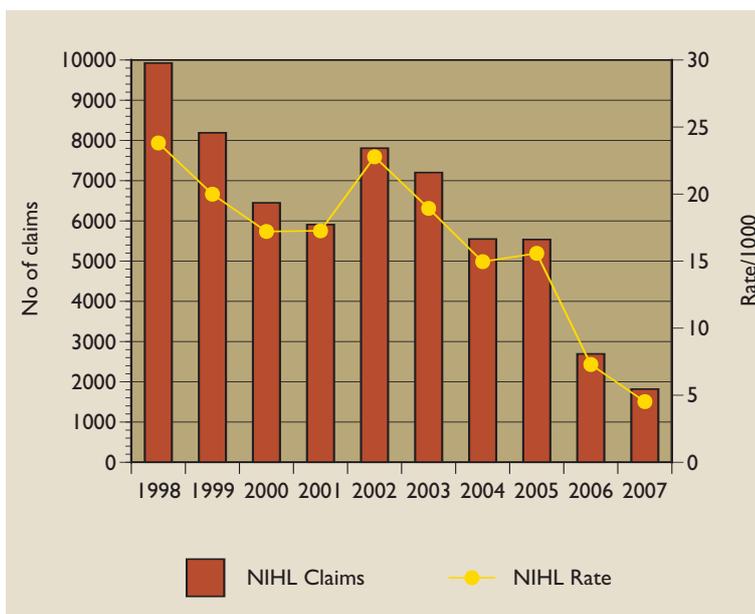
The objectives of the MOSH adoption system on noise and dust are as follows:

Dust

- ◆ To determine if a functioning fogger unit, with or without dust suppression agents can reduce worker exposure to respirable crystalline silica dust
- ◆ To improve employee performance, thus protecting respiratory health through focused employee behaviour and appropriate behavioural communications and leadership behaviour.

Noise

- ◆ The electrical Hilti rock drill is approximately five times quieter than the conventional pneumatic drill and was selected as the best practice as it satisfies several initial selection criteria including having an impact on the largest number of employees
- ◆ There is a strong correlation between the hearing conservation strategy and a reduction in noise induced hearing loss, including employee behaviour through behavioural communication and leadership behaviour.



Noise induced hearing loss – all communities

Critical success factors and indicators

Critical success factors

The widespread success of the MOSH adoption team programme depends on the following:

- ◆ Addressing the health gap in a way that is non-litigious to employers, non-accusatory and does not instill fear in employees
- ◆ Communicate clearly and simply
- ◆ Sense of ownership by all stakeholders
- ◆ Adoption teams must focus on the objectives.

Critical success indicators

- ◆ Best practice, that is, a fogger unit with and without dust suppression agents demonstrated at a selected mine
- ◆ Successful demonstration of the Hilti rock drill
- ◆ Adoption guide prepared and made available to candidate adoption mines
- ◆ Communities of practice for adoption established and operating effectively
- ◆ Best practice adopted by at least one of the candidate adoption mines and subsequently used throughout the industry
- ◆ Drafting a comprehensive report detailing the degree to which the reduction in noise and silica dust levels was achieved at the demonstration mine.

Mental models research

Decades of research and experience show that all people use tacit belief systems called mental models to guide their decision-making and behaviour.

Understanding people's mental models enables one to know how people think about important topics and the specific influences on their decision-making and behaviour. Research and experience also show that to encourage the desired behaviour, communication must explicitly address people's mental models.

Mental models of a large cohort of mineworkers have been inferred through formal and informal research. For example, in 2007, Decision Partners

conducted interviews with key group executives and leaders in the industry. In 31 interviews, an overwhelming majority (95%) believed that communication is critical to successfully implement a best practice or technology and that people are hungry for communication.

To ensure the effective implementation of technology, it is vital that workers' mental models and needs are addressed. To inform a strategy for meeting these needs, a qualitative research tool was developed by the MOSH adoption teams and Decision Partners. The questionnaire on dust was deployed among 25 stakeholders: workers, supervisors, shift bosses, occupational environment managers and suppliers; and the questionnaire for noise was circulated among 21 stakeholders. The interviews highlight the following:

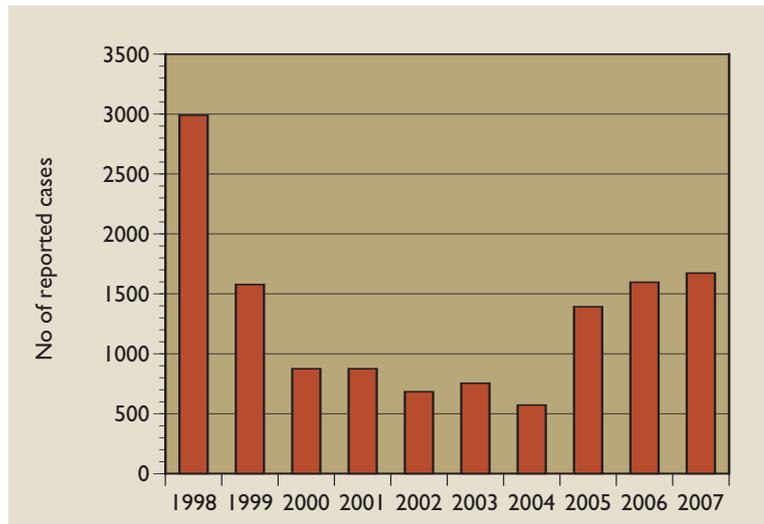
- ◆ There is a clear need for proper communication to improve risk management performance
- ◆ Health issues must be prioritised
- ◆ Safety and production driven priorities are not the only issues that should shape health and safety performance agendas and plans
- ◆ Distinct and important knowledge gaps exist concerning the use of current silica dust and noise control strategies and use of respiratory and hearing protective equipment
- ◆ Important role conflicts exist, which lead to confusion in who is responsible for health and safety; who communicates what and when and to whom.

Behavioural communication strategy

Behavioural communication addresses peoples' mental models through various kinds of communications emphasising those messages and other information that have the highest likelihood of encouraging desired behaviours (including acting in a manner that endorses responsibility for positive health and safety) among those who are responsible for noise and dust control and affected by noise and silica dust.

SIMRAC studies

Results from other research tend to support the findings of the mental model



New silicosis cases

research. For instance, SIM 0306033 illustrates that workers have various misunderstandings about silica dust sources, dust prevention, control and effects as well as leadership around these issues. Respiratory protective equipment applicability, availability, accessibility and effectiveness can be – and generally are – poorly understood.

In addition, SIM 0301023 highlights a general lack of trust in management of health services. In this study, employees were generally unaware of the various silica dust prevention strategies and they evinced weak self-efficacy, which – a belief in one's capabilities – to organise and execute the sources of action required to manage a situation. Both self and collective efficacy were poor amongst the respondents who stated that: 'nothing can be done to control dust, or to change the situation'. Workers felt helpless when it came to their ability to influence silica dust control activities

In 2005, the SIM 030102 SAFEMAP survey recommended that mines should adopt a culture whereby employees have the necessary levels of competence – described as comprising knowledge, skills and attitude – to assess risk and respond to it in a responsible and consistent manner. Although the SIMRAC research refers primarily to dust, the assumption is that similar opinions may be expressed about noise.

The MOSH adoption system supports the opinion that if the appropriate levels of consciousness – a willingness and readiness to act – amongst managers and workers is achieved, they will be empowered to exhibit the desired behaviour needed for optimal control of hazards in the work environment.

Leadership encourages the responsibility of creating an enabling environment where it is easy for employees to make independent decisions on health and safety.

Scope of best practice

Whilst best practice for noise and silica dust reduction is the use of a specifically designed technological solution, it is recognised that this alone will not ensure the success and sustainability of its adoption, nor will it enable success of the adoption system itself.

Rather, effectively addressing the people issues is key to achieving the desired adoption of a technology. The teams envisage addressing

the people issues by strengthening the broad noise and dust control strategy with a behavioural communication and leadership behaviour plan tailored to the specific circumstances of the demonstration project mine and ensuring adoption as illustrated in the graphic.

Best practice technology

The recommended fogger system can generate pressures of up to 125 bar, which allows for the dispersal of a very fine water vapour ranging from a fine mist to a dry fog. To optimise the functioning of the fogger, surfactants (surface acting agents) may be added to reduce the surface tension of the water thereby enhancing bonding between the silica dust particle and the water particles. This fogger system is an economical – even least expensive – mechanical dust control option as it substantially decreases water and energy consumption.

It is superior to multistage filters in terms of cost and reduction of noise levels and maintenance demands. Its optimal functioning and maintenance do not impact on production.

The fogger unit can be deployed in a number of different settings, in various commodity groups and in different applications such as in tips and orepasses, conveyor belts, or as spray curtains in the haulages, stopes and on continuous miners.

Its primary constraint is that spray nozzles can easily become blocked with particulates in the water and dust and so require intensive source water filtration and regular maintenance. When optimally maintained and functioning, the fogger unit can reduce respirable airborne dust by 35.7% – 48%, and in some instances even up to 96%. It can remove airborne particulate in the range 0.766 µm – 26 µm, suggesting that it has the potential to reduce RCS (which is <10 µm) exposure to workers. These preliminary values will be validated by the test mine results.

On the issue of noise best practice, the Hilti electrical rock drill has noise levels in the region of 102 dB(A) compared to the 118 dB(A) for conventional pneumatic rock drills. As every three decibels results in doubling or halving the noise intensity, the Hilti is five times quieter than conventional rock drills.

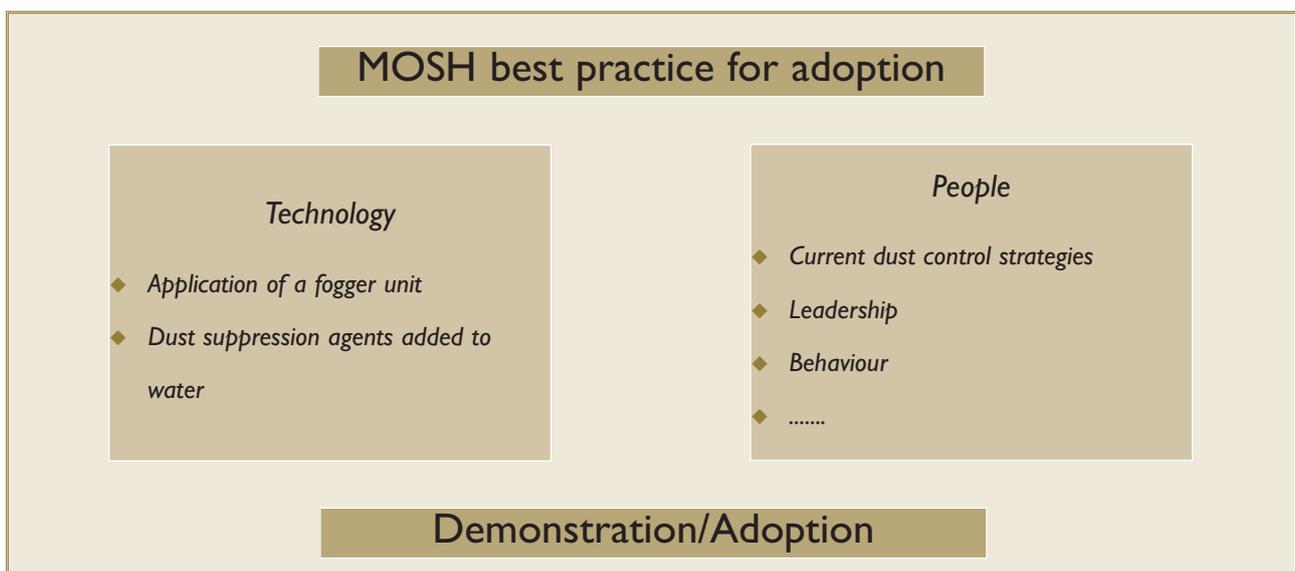
There is an opportunity for additional spin-offs besides noise reduction: electrical reticulation is much more efficient than compressed air systems, which causes fogging resulting in poor visibility. The electric drill also shows a huge reduction in vibration levels.

Conclusion

It is the way in which the industry moves forward together that will ensure a quantum leap in managing hazards in the working environment especially silica dust and noise control, to achieve a breakthrough in the elimination of human suffering through the eradication of injury and illness in the workplace.

A comprehensive behavioural communications and leadership behaviour strategy with the adoption system as its foundation will ensure sustainability of this programme and provide the framework necessary for future health and safety initiatives.

It is the vision of the MOSH adoption teams that by addressing the exposure to silica dust and noise by empowering people, their health performance opportunities and issues in general will be given the priority they deserve because they show that we treat ourselves and the people with whom we work with respect and dignity and, thereby, enhance the overall well-being and productivity of our fellow workers.





Labour policy and labour relations

Implementation of 2007's wage agreements

The Chamber is involved in the processes to give effect to the provisions agreed to in the 2007 review of wages and other conditions of employment that must be implemented at an industry level. These provisions are listed below.

Integration of the MDA and TEBA Development

Agreement was reached during the 2007 wage negotiations that the feasibility of integrating the Mineworkers Development Agency (MDA) and TEBA Development would be investigated. Given the linkages between this matter and the work of the Non-Mining Investment Task Team of the Gold Sector Project, the facilitators for the latter were asked to investigate a possible merger of the MDA and TEBA Development.

A joint meeting of the boards of the MDA and TEBA Development was held on 29 February 2008 at the Chamber. The primary purpose of the meeting was to develop a shared philosophy pursuant of moving towards the integration of the MDA and TEBA Development. The secondary purpose was to establish a joint working group to manage the integration process.

The joint meeting of the boards agreed that the vision of a new organisation should be to, 'aspire to be the leading development agency in providing services to the mining sector and its communities in southern Africa in meeting funding partners' socio-economic deliverables, as well as to support government's developmental goals to enhance quality of life'.

It also agreed that the purpose of the new organisation should be to facilitate and deliver sustainable, effective, efficient people-centred services and support to the mining sector and its communities in the following areas:

- ◆ local economic development
- ◆ community health
- ◆ skills development
- ◆ agriculture
- ◆ education
- ◆ job creation
- ◆ additional commitments to Social and Labour Plan and Mining Charter deliverables
- ◆ entrepreneurship
- ◆ funders' socio-economic deliverables
- ◆ leadership development.

The Joint Working Group established by the boards of the MDA and TEBA Development has met on a number of occasions. It has focused on the operational issues to be dealt with during the merger

process and identified certain operational alignment issues.

Currently, attention is on the financial due diligence of both organisations. The auditors are in the process of finalising their report, after which the outcomes will be presented to a joint sitting of the boards of the two organisations. The Chamber provides support for the facilitators appointed to take the merger process forward.

Coal: scarce technical skills

It was agreed during the 2007 wage negotiations in the coal sector that a coal industry task team, consisting of all parties, would be established to investigate the supply and retention of scarce technical skills amongst artisans, miners and officials (C lower and C upper), and to address skills shortages.

A scarce technical skills task team has been established in accordance with the wage agreement and has, to date, held two meetings. Terms of reference for the task team have been agreed as follows:

- ◆ to determine the extent of the shortage of artisans, miners and officials in the coal sector, both current shortages and medium-term demand
- ◆ to influence the Mining Qualifications Authority's (MQA) discretionary grant towards the funding of technical skills in short supply
- ◆ to form partnerships with existing initiatives to facilitate an increase in the number of learners registered for the courses and to improve the pass rates
- ◆ to develop an action plan for training miners and officials as they are not in the existing artisan training initiatives
- ◆ to develop monitoring mechanisms to ensure that there is progress in the training of scarce technical skills
- ◆ to investigate strategies to retain skills.

So as not to duplicate existing processes or efforts, the task team has also agreed that it will investigate current initiatives that have been put in place to address the supply and retention of scarce technical skills.

Mining museum and monuments

During the 2007 wage review, agreement was reached in both the gold and coal sectors that the contribution made by mineworkers to the South African economy should be recognised by way of a mining museum in Johannesburg and monuments in mining areas. The Chamber is participating in the initiatives being undertaken by the mayor of Johannesburg for the establishment of a mining museum in Johannesburg.

A proposal for a preliminary study to determine the options available to celebrate the miner and the mining industry in Johannesburg and mining areas has been compiled by a team of experts who investigated issues such as:

- ◆ how to recognise and connect to the richness of the diverse mining heritage in the inner city
- ◆ the intentions of the owners of existing mining heritage attractions
- ◆ components that could make up a mining museum
- ◆ the location or dislocation of the components of the museum.

The Chamber has received reports from the consultants engaged to investigate the establishment of a mining museum in the inner city and to make recommendations on the design of a monument that could be erected in major mining towns.

The Chamber is in the process of considering the consultants' recommendations and conducting further investigations on processes to design a suitable monument. Attention is also being given to identifying a possible site for a mining museum. The Chamber is scheduled to meet with the unions to discuss these issues early in October 2008.

Core conditions codes

The core conditions codes for miners and artisans in both the gold and coal sectors

were updated in the year under review. This had not been done for some years and the codes had become dated, making reference to legislation that has been repealed and not reflecting the conditions of service agreed to during the more recent rounds of negotiations.

Bargaining council

The National Union of Mineworkers (NUM) has for some time been demanding the establishment of a bargaining council for the mining industry. It is supported in this by UASA (United Association of South Africa) and Solidarity. During the 2003 gold and coal wage negotiations, the employers and NUM agreed to embark on a joint investigation into the issue of collective bargaining, including the feasibility of a bargaining council. This investigation was completed in October 2004. The industry again held a conference on the issue of collective bargaining, including a bargaining council, in March 2005. Discussions on this matter have been on-going since that time.

All employers in the mining industry, whether or not they are members of the Chamber, will be affected should a bargaining council be established. In essence, the Labour Relations Act provides for agreements that are concluded in a bargaining council (for instance on wages and other conditions of employment) to be extended to all employers and employees in the sector and area covered by a bargaining council. Thus, if a bargaining council were to be established for the whole or part of the mining industry, the agreements reached would be applied to all companies in the whole or part of the mining sector as the case may be, including those companies that are not members of the Chamber. The only way to avoid being bound by bargaining council agreements is to apply for exemption under the terms of the bargaining council's exemption processes. Given this, the Chamber has been engaging companies that are not members of the Chamber to keep them informed of the discussions surrounding a bargaining council that are taking place within the Chamber.

An information sharing session on a bargaining council for non-Chamber members took place on 13 May 2008. Oupa Komane, speaking on behalf of the NUM, Solidarity and UASA, explained why the unions wanted a bargaining council in the industry and the Chamber dealt with the legal issues of principle involved in establishing a bargaining council.

In the discussions that followed the presentations, some of the employers present expressed concerns that non-Chamber members, who were mainly small operations, might be negatively affected should a bargaining council be established. There was general consensus that more engagement between Chamber and non-Chamber member mining companies needed to take place. To this end, it was agreed that a further meeting should be held between the Chamber and the non-member companies. This meeting took place on 18 June 2008.

The role of contractors in a bargaining council has also been discussed. This follows the in-principle agreement reached in 2007 with the South African Association of Mining Contracting Companies that contractors should be accommodated in a separate sub-council of the main council. To understand the nature and composition of the mining contracting sector better, the parties commissioned an outside consultant to conduct a survey of mining contractors in the industry

The Mining Charter calls for more women to be employed in the mining industry

for both Chamber member and non-Chamber member companies. The consultant's report was presented to the stakeholders in July 2008. Discussions around a bargaining council are on-going.

Review of Mining Charter implementation

The Chamber has commissioned a study to determine the progress being made by its members in implementing the Mining Charter. The intention is that the Chamber and its members should have a clear understanding of the industry's performance to date in meeting its obligations. Industrial Relations has been responsible for gathering and assessing information on housing and living standards, employment equity, and mine community and rural development. In particular, attention has been given to:

- ◆ measures to improve the standard of housing, including hostel upgrading, conversion of hostels to family units and the promotion of home ownership options for mine employees
- ◆ steps to improve the nutrition of mine employees
- ◆ the formulation of integrated development plans for communities where mining takes place and for major labour-sending areas, with special emphasis on the development of infrastructure
- ◆ targets for employment equity, particularly in the junior and senior management categories
- ◆ focusing training programmes on historically disadvantaged South Africans
- ◆ ensuring higher levels of inclusiveness and advancement of women in the mining industry.



Social security and retirement

Government's proposals

The National Treasury hosted a workshop on social security in mid-December 2007. Government itself does not as yet have a unified position on social security and papers on the subject have been released by Treasury and the Department of Social Development. While there are some areas of agreement in the two government papers, it is

clear that in some instances they have different objectives, priorities, philosophies and views on social security generally, and on retirement specifically.

The main proposals of Treasury and the department relate to the following:

- ◆ a state old age pension for all citizens upon reaching a certain age, with a possible abolition of the current means test
- ◆ a mandatory national retirement fund (with the possibility of industry funds being excluded on certain conditions)

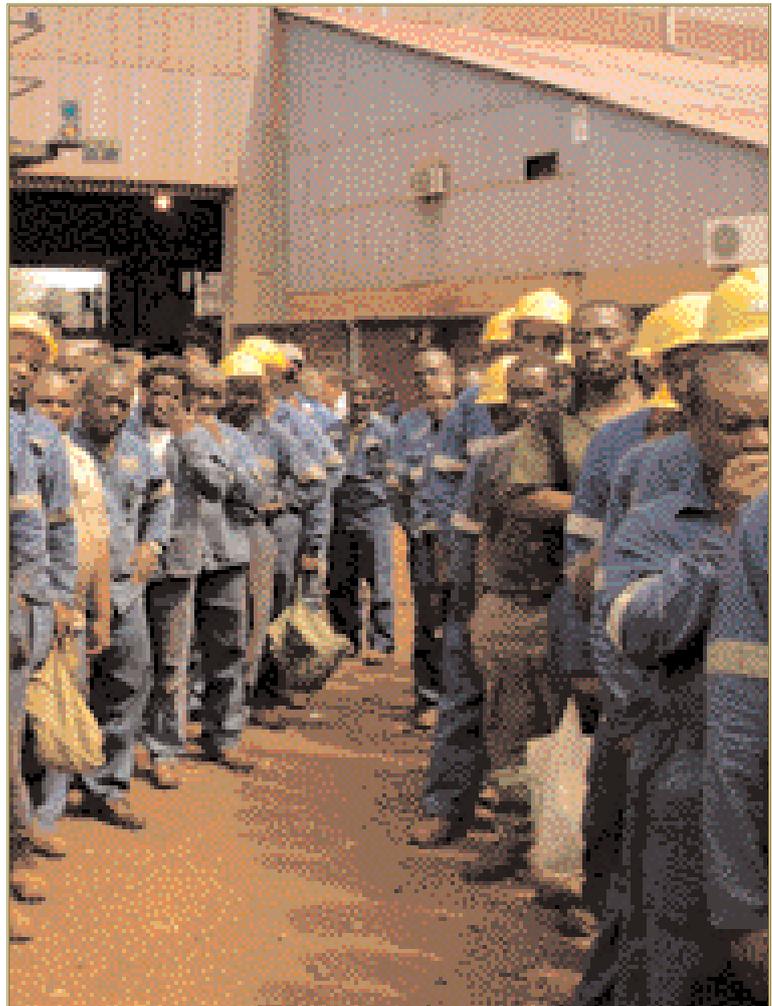
- ◆ mandatory contributions to private funds
- ◆ the provision of risk benefits such as death and incapacity benefits
- ◆ the strict regulation of the withdrawal of fund credits by employees.

An inter-departmental task team is co-ordinating government's position and intends to present a unified position to NEDLAC during the latter part of 2008. This will then be subject to a process of tripartite negotiation. In the interim, the Chamber is participating in a BUSA task team to develop a unified business position on government's proposals. The BUSA task team, which comprises both service providers and other BUSA members, is developing a business position on government's proposals.

BUSA has indicated its support for the objectives of government's retirement fund reform, and its vision of achieving retirement reform through long-term savings by the employed towards their retirement. However, BUSA has emphasised that the implementation of the new retirement system will have to be undertaken with due regard for the impact that it might have on labour costs. It has pointed out that it will be regressive for the economy to introduce a new retirement system at the cost of jobs.

Concerns have been expressed that the government's planned new retirement dispensation could jeopardise the retirement savings of those who are members of retirement funds. During May 2008, Zola Skweyiya, the minister of social development, addressed the question of existing funds, stressing that government has no intention of 'raiding' any existing retirement funds or absorbing them into the new National Social Security Fund.

He indicated that government wishes to ensure that all those who had previously contributed receive the full benefit of their contributions on retirement. The minister assured provident and pension fund members that, 'their savings are safe, and the reform proposals under consideration will look at how to



improve and enhance these savings, rather than reduce them in any way'.

The minister also referred to government proposals to permit exemptions for specific funds where adequate risk pooling is occurring and where the funds meet certain criteria. It appears that industry and bargaining council funds could be exempted if they meet certain criteria. These criteria will be based on the efficiency of funds, for both costs and service. The former relates to the costs of administering the fund and also the costs linked to investment management.

Government has proposed a benchmarking approach to determine the efficiency of funds. BUSA has supported this approach and is now endeavouring to access information on bargaining council and industry funds with a view to sharing this information with government. The information will serve as a basis for further discussion with the inter-governmental task team. The Chamber is gathering information on the mining industry funds that will be fed into these discussions.

Mineworkers' Provident Fund

The Chamber has held a number of discussions with the trustees and management of the Mineworkers' Provident Fund. These have focused on information sharing, funeral cover arrangements, the payment of death benefits and the administration of the fund.

Rural development

Community Development Forum

The Chamber has established a Community Development Forum to foster co-ordination and co-operation on community development programmes between members of the Chamber and other stakeholders.

The main purpose for the establishment of the forum is to serve as an internal platform from which to deliberate on pertinent strategic issues to ensure a collaborative and sustainable community development strategy in the mining industry. The forum also serves as a platform to share best practice on issues related to sustainable community development. The forum will:

- ◆ determine quantitative and qualitative indicators of community development issues, such as rural and urban development programmes
- ◆ identify challenges and/or concerns around community development issues and provide solutions to address them
- ◆ share best practice on issues related to sustainable community development, including consultation with communities about developmental issues
- ◆ identify areas of duplication by Chamber members on community development initiatives and the best methods of collaborating on large scale and value-add local economic development programmes
- ◆ serve as an important point of contact between TEBA Development or the MDA/TEBA Development merged entity and the mining industry concerning all community development-related issues to facilitate collaboration between mining companies
- ◆ facilitate strategic partnerships with government departments, trade unions and other developmental organisations both locally and internationally.

Participation in outside structures

BUSA and NEDLAC

The Chamber's IR adviser serves as the deputy chair of the BUSA Standing Committee on Social Policy and the Chamber is also represented on NEDLAC's Labour Market Chamber.

A number of issues that impact on labour relations have been considered, first by employers in BUSA and then in tripartite discussions at NEDLAC.

ILO: Decent Work Country Programme

The objective of the International labour organisation's (ILO) Decent Work Country Programme is to advance opportunities for women and men to obtain decent and productive work in conditions of equity, security and human dignity. Given its tripartite nature, the ILO has engaged employers and organised labour on the operational framework for programme priorities. The Chamber, through BUSA, has participated in the processes to formulate a BUSA position paper on the programme. This is important, since the discussions on atypical forms of employment have now been located within the decent work initiative.

BUSA has argued that the following principles should underpin the decent work country programme:

- ◆ A balance should be struck between the need to compete on business terms as well as the need to address the social dimension of globalisation
- ◆ Technological advancement must be embraced, but there is also a need to ensure that workers who are vulnerable as a result are catered for to enhance their employability
- ◆ The importance of flexibility in the labour market must be recognised, but balanced with the right of workers to be protected against abuse.

Discussions on the Decent Work Country Programme are continuing in NEDLAC.

Review of the NEDLAC Social Plan Agreement

A review of the Social Plan Agreement is currently underway in NEDLAC. A representative nominated by the Chamber acts for business on the NEDLAC task team dealing with this issue. The purpose of the original social plan was to regulate large-scale retrenchments whilst the current plan only requires reporting by employers who are retrenching 500 or more employees or 10% of their workforce.

Government has proposed that, because in the past employers have not advised the Department of Labour of proposed retrenchments, section 189 of the Labour Relations Act be amended to impose an obligation on employers to inform the department in the event of every retrenchment. Business is arguing that this should not apply to smaller companies for which it would be unduly onerous.

New proposals from government on the threshold to trigger a social plan intervention, migrant workers and future forums are also being discussed by the NEDLAC task team.

Future of the Labour Court

Earlier in the year, the minister of justice indicated in Parliament that she was in consultation with the judiciary about the

Superior Courts Bill, which provides for the folding-in of the Labour Court into the High Court and the Labour Appeal Court into the Supreme Court of Appeal. Upon learning of this development, NEDLAC addressed a letter to the minister seeking engagement on the Bill as the social partners believe that the Labour Court should retain its separate status as a specialist court within the High Court. The director-general of the department will meet with NEDLAC to discuss the department's latest proposals on the future of the Labour Court. The Chamber represents employers in these discussions.

Immigration

BUSA has established an ad hoc task team to deal with immigration-related issues. The Chamber has nominated a representative from TEBA Limited to serve on this task team to ensure that the interests of the mining industry are taken into account in BUSA deliberations. This representative has also been appointed to serve on the statutory Immigration Advisory Board.

Judicial Services Commission

In terms of the Labour Relations Act, NEDLAC, together with the Judicial Services Commission, makes recommendations on the appointment of judges to the Labour Court. Each of the social partners has a single representative; the IR adviser is business' representative.

Section 77 Standing Committee

The section 77 Standing Committee deals with protest action to promote or defend the socio-economic interests of workers. Most notably, in the period under review, the section 77 Standing Committee dealt with the notice served by Cosatu on its concerns that Eskom's reduction in electricity supply to industry might result in retrenchments and hardship for consumers. Protected protest action took place on a provincial basis and culminated in a national day of protest action on 6 August 2008.

Employment Conditions Commission

The Employment Conditions Commission is a statutory body that advises the minister of labour on matters relating to

conditions of employment, and also on sectoral determinations on wages and conditions of employment in sectors that are not organised.

International activities

International Labour Organisation

The 97th session of the International Labour Conference of the ILO took place during the last week of May and the first week of June 2008. The Chamber represents employers on the conference's committee on the application of standards. This committee is one of the main pillars of the ILO's supervisory machinery and examines how ILO standards are being applied throughout the world.

In accordance with the ILO's constitution, member states, in consultation with organised labour and employers, are obliged to report regularly to the ILO on how they have applied ILO standards in national law and practice. This information is examined by a committee of experts comprising 18 independent legal experts from all over the world. The task of the experts is to review member states' compliance with ILO conventions in an independent, impartial and objective manner.

The findings of the committee of experts are referred to the committee on the application of standards. The tasks of this committee are numerous and include:

- ◆ general discussions on ILO standards
- ◆ the application of specific conventions
- ◆ an examination of obstacles to the ratification of conventions
- ◆ individual country cases concerning the application of particular conventions.

With regard to the last point, the committee is used to focus attention on alleged abuses and to highlight unpopular national policies. In certain cases a country is mentioned in a special paragraph of the report on the committee's work. This is usually reserved for serious cases of continuous failure to comply with a particular convention. Once adopted by the committee, the report is presented to the conference plenary, which traditionally discusses and accepts it.

South African employers participated in the discussions on skills development, rural development and strengthening the capacity of the ILO.

Assistance to Chamber members

In addition to providing a collective bargaining service, the Chamber produces a quarterly *Labour Policy Digest* that provides information on topical labour policy issues.

The Chamber also informs its members of new policy and legislative developments in the industrial relations arena. It develops and mandates industry positions on these issues, which are then fed into national debates, either directly on behalf of the mining industry, or through BUSA on behalf of employers collectively.

The Chamber's Labour Policy Committee and its specialist task teams provide forums for industrial relations practitioners in the mining industry to meet, share information and develop policies that will improve the environment in which the mining industry operates.



Legal issues

Mineral and Petroleum Resources Development Amendment Bill

The Department of Minerals and Energy (DME) published a draft Mineral and Petroleum Resources Development Amendment Bill in the Government Gazette on 31 August 2005. The Chamber submitted comments to the department on 22 September 2005. More than a year later, on 4 May 2007, the Mineral and Petroleum Resources Development Amendment Bill was introduced into Parliament. The Chamber again submitted comments on this Bill on 24 May 2007.

The Chamber also made a presentation to the Portfolio Committee on Minerals and Energy during its public hearings on the Bill. Subsequent to the public hearings the portfolio committee adopted various amendments to the Bill, some of which related to new matters on which the public, including the Chamber, had not had an opportunity to comment.

The Chamber subsequently wrote to the minister of minerals and energy and held discussions with her regarding its concerns with the new matters raised on which it had not had an opportunity to submit its views. In August 2007, the minister agreed to make arrangements for the Bill to be referred back to the portfolio committee for further consideration.

In a parallel process, there were discussions between the DME and the DEAT on which department should regulate environmental matters in the mining industry. Following a protracted process, an agreement was apparently reached between the two departments in about February 2008 that the DEAT would ultimately be responsible for environmental matters in the country, with the DME being primarily responsible for

environmental matters within the mining industry for at least another 18 months after the coming into operation of the legislation effecting the changes.

Following receipt of the Bill on 14 August 2007, in which the portfolio committee had adopted the various new proposals, the Chamber kept in touch with Parliament and continued to seek an opportunity to present its views on the Bill when the Bill comes up for consideration in the portfolio committee. In discussions in 2008 with the DME, the Chamber was advised that the amendment Bill was being worked on, primarily to align it with the agreement reached between the DME and the DEAT, and that a copy of the revised Bill would be provided to the Chamber as soon as it was available.

The Chamber was informed on 27 May 2008 that the portfolio committee had put on its agenda for consideration the following day, the latest version of the MPRDA Amendment Bill. The Chamber urgently contacted the secretary to the portfolio committee as well as the portfolio committee chairperson and explained that it had not had sight of the latest version of the Bill, that it had various concerns with the version of the Bill that it had had sight of in 2007 and that it had no idea whether or not its concerns had been considered or addressed. The chairperson of the portfolio committee agreed that the Chamber could engage with the portfolio committee on 4 June, but indicated that its comments had to be with Parliament by 30 May. The chairperson also arranged for a copy of the latest version of the Bill to be sent to the Chamber that afternoon.

Notwithstanding the extremely short period for comment, the Chamber submitted comments as requested to Parliament by midday on 30 May. The Chamber's comments were limited to those new issues that had been raised in the Bill and on which it had not previously commented. The Chamber also made an oral presentation to the portfolio committee on 4 June.

Further discussions were held with the DME covering the Chamber's concerns, and the Chamber was advised by the DME that although some of its comments would not be accommodated, consideration would be given to its other comments. However, even though this was reflected in the DME's response document to the portfolio committee regarding the comments made by stakeholders, these were not reflected in the Bill handed out by the DME to the portfolio committee for consideration. In spite of further engagement with the portfolio committee on 25 June, it proceeded with its consideration and adoption of the Bill without incorporating the 'agreed' provisions. The DME indicated it was also surprised by the portfolio committee's action and was hoping for an opportunity to provide some input when the Bill was considered by the National Council of Provinces.

Validation of rights granted by sub-delegates

In a recent court case (*Meepo v Kotze and others*) the court found that the regional manager of the DME had acted *ultra virus* (the doctrine in the law of corporations that holds that if a corporation enters into a contract that is beyond the scope of its corporate powers, the contract is illegal) in granting Meepo's prospecting right, because the delegation by the minister to the deputy director-general prohibited further delegation to any other person without the minister's consent, which consent had not been obtained.

The prospecting right granted to Meepo was therefore found to be void. The majority of all prospecting, exploration, mining and production rights have been, and are, granted in similar circumstances. Such rights are therefore vulnerable should a third party institute proceedings for judicial review for setting aside of such rights or otherwise raise the invalidity of such rights.

The State applied for leave to appeal against the judgement, but the application and a subsequent petition to the president of the Supreme Court of Appeal for leave to appeal, were refused. The Chamber approached the DME and suggested, amongst others, that a Validation Act be submitted to Parliament to protect existing rights and that, as an interim measure pending the Validation Act, the minister validate rights by using a certain provision of the MPRDA. In a parallel process, the Chamber's chief executive raised this matter in March at a meeting of the Minerals and Mining Development Board, where it was agreed that industry's concerns were valid and that the Chamber's proposed solutions be implemented.

Despite the Chamber's lobbying efforts and the decision taken at the meeting of the Mineral and Mining Development Board, the DME did not proceed with the Validation Act. The Chamber therefore recommended to the Parliamentary Portfolio Committee on Minerals and Energy that a validation clause be inserted in the MPRDA Amendment Bill, which was before Parliament. The DME advised the Chamber that its proposal would not be incorporated in the MPRDA Amendment Bill and that mines would have to apply to the DME on an individual basis for the validation of their rights.

As mentioned elsewhere, the MPRDA Amendment Bill was passed by the portfolio committee without it having addressed the Chamber's concerns such as a validation provision.

Income tax: mine employees from Mozambique

The taxation of mine employees recruited from Mozambique is regulated by a labour treaty between the republics of South Africa and Mozambique and by the Income Tax Act, 1962. The Income Tax Act, however, exempts from normal tax only employees who are temporarily employed in South Africa.

Notwithstanding, the practice, with the permission of the South African Revenue Service (SARS), has been not to deduct any income tax from the salaries of Mozambican employees, regardless of whether

or not they are temporarily employed or in full-time employment (which is in line with the treaty). In June 2006, SARS gave a written ruling to one of the Chamber's members that the Income Tax Act exemption would only apply to employees who were employed on a temporary basis.

During the period under review, employers became concerned that SARS could attempt to collect tax from employees from Mozambique who were no longer temporarily employed and could possibly attempt to collect such income tax retrospectively.

The Chamber held informal discussions with the acting director-general in the Department of Labour, who agreed with the Chamber's views that, in terms of the labour treaty, employees from Mozambique could not be subjected to income tax deductions in South Africa. The Department of Labour also shares the Chamber's concerns that any such taxation in future would first require changes to the labour treaty and could have important labour relations implications. The Department of Labour therefore suggested a meeting with SARS to discuss the matter.

At the meeting with SARS in July, it transpired that SARS wished to treat Mozambican employees in the same way as all other foreign nationals. SARS realised, however, that a change to the labour treaty would have to be agreed between the two governments before the matter could be taken further. As a first step, the ministers of finance and labour would have to agree on the way forward as the matter relates to a labour treaty with another state. Should the ministers agree on a way forward that would change the current practice, the matter would have to be taken to Cabinet for a final decision, whereafter the government of Mozambique would have to be engaged to amend the labour treaty.

It was agreed that whatever the two ministers decide, the Department of Labour, SARS and the Chamber would meet again to discuss the best way forward in the light of the decision.

Control, use and security of explosives at mines

Following the increase in the numbers of ATM machines being destroyed with commercial explosives, the Chamber and two mining houses formed part of the founding organisations that established a forum in January 2007 to look at measures to improve the control, use and security of explosives.

As part of the initiatives arising from this forum, various circulars have been sent by the Chamber to all its members urging them to initiate internal drives to create awareness of this matter amongst all persons at the mines and, as part of their induction programmes, to make all new employees aware of the various risks relating to explosives, particularly security and the control of explosives.

At an industry level the Chamber also assisted the DME in compiling a comprehensive audit questionnaire that is being used by the DME to audit mines. The Chamber sent a copy of the questionnaire to its members to enable them to prepare for these audits.

Another initiative that was agreed upon and implemented towards the end of 2007, was to introduce a dedicated hotline for reporting any theft of explosives and/or accessories. The hotline is funded by the Chamber and the Chamber sent a circular to all its members in December 2007 informing them of the hotline and attaching a copy of a poster prepared by the South African Police Services (SAPS) in which the hotline number is advertised. The Chamber urges its members to print as many copies as may be necessary to advertise the hotline at their mines and to put such copies up at appropriate and prominent places so that everyone is aware of the hotline.

The measures taken by each mining company are not necessarily identical, and will vary depending on each company's own circumstances. Everything that is set out below is therefore not necessarily applicable to every member of the Chamber, however, it summarises the

measures that are generally taken within the industry to address the problem.

Mines make extensive use of explosives in the mining process. Stringent control measures are adhered to across the process of receiving, handling, storing, utilising and discarding of explosives. These include designated and secure areas for the receiving of explosives, specially adapted cars for the safe conveyance of explosives, specially adapted boxes/areas for the storing and conveyance of explosives, as well as secure designated bays and cars for the receiving, handling, storing and conveyance of explosives underground.

Clear safety and security policies, procedures and protocols are in place as administrative controls around the accounting, handling, conveyance, storing, utilising and discarding of explosives, and these controls extend to explosives' loading bays, explosives' cars, explosive boxes and other areas where explosives may be stored, handled or utilised. Furthermore there are regular compliance audits conducted by the companies to ensure that all control measures are effectively in place and efficiently complied with.

The companies view control over explosives as paramount, and over and above the stringent control regimen, a zero tolerance policy is in place to deal with persons who may flout or attempt to flout these controls for nefarious purposes. Towards this end, the companies have a focused approach towards explosives from a security perspective and partner with the authorities to ensure that stolen explosives are accounted for, recovered where possible, and that those who are unauthorised to possess, convey or handle explosives are prosecuted.

Mine Health and Safety Amendment Bill

At the meeting of the MHSC on 31 January 2008, the chief inspector of mines announced that the DME intended to amend the Mine Health and Safety Act (MHSA) during 2008. On 12 February, the chief inspector sent a notice to all members of the MHSC inviting them to identify areas of concern, sections or provisions within the MHSA to be considered for review or amendment and to send their responses to the DME by 19 February.



Loading at Glen Douglas

The DME also arranged seminars/workshops in the major mining areas at which it gave reasons for wanting to amend the MHSA and solicited input from stakeholders.

Unlike the process that was followed in drafting the original MHSA (namely a tripartite working group), the DME decided that its policy unit would be solely responsible for drafting the Amendment Bill. A first draft of the Bill was handed out to members of the MHSC at its meeting on 28 March, while a second draft was made available on 4 April, with parties being requested to provide comments by 18 April. The Chamber submitted its comments as requested.

A third version of the Bill was published in the Government Gazette on 16 May with a request for comments to be submitted to the DME by 30 May. The Chamber met with the chief inspector of mines on 28 May, during which it explained its comments. The chief inspector also clarified why he proposed certain changes. In some instances the Chamber was able to make suggestions on possible alternative ways of achieving the desired outcomes. The Chamber also submitted comments by 30 May on the Bill published in the Government Gazette on 16 May.

Following the introduction into Parliament of the final version of the Mine Health and Safety Amendment Bill, the Chamber made written submissions to the Portfolio Committee on Minerals and Energy on 1 August and made an oral presentation to the portfolio committee during its public hearings on 14 August. By the end of the period under review, the Amendment Bill was still being considered by the portfolio committee. In its written submissions and oral presentation the Chamber made, amongst others, the following points:

- ◆ The Chamber and its members had already embarked on a programme of proactive action to improve health and safety at mines and as part of this programme several initiatives had been launched, the details of which are provided elsewhere in this report
- ◆ A strong and well resourced inspectorate is required to assist mines in improving their health and safety performance and preventing accidents, and to act efficiently against serious transgressors of the law
- ◆ The Bill signified a major shift away from a system that was finely balanced between preventative and punitive measures, to a system strongly emphasising punitive measures. Unfortunately this is likely to have unintended consequences, which will undermine the objective of improving health and safety at mines
- ◆ One possible way of ensuring that people are open and transparent during investigations into accidents is to ensure that any report on an investigation could not be used in any administrative, civil or criminal proceeding. If this protection is not provided, it will be a step backwards in determining the real causes of incidents, and so prevent similar future incidents
- ◆ Employers support the proposal that the inspectorate becomes a separate juristic person to ensure that it is able to recruit and retain more and suitably qualified staff. The employers' support is conditional on the inspectorate having a proper oversight body in the form of the MHSC
- ◆ Employers oppose the introduction of health and safety permits on the basis that a permit system requires extensive capacity and resource commitments from the inspectorate, which the

inspectorate does not have. Also, by granting permits, the inspectorate will be endorsing the proposed measures of mines to address identified risks, thereby effectively becoming at least jointly liable with employers should such measures prove to be inadequate, if not ultimately liable.

Product theft

The theft of precious metals and copper from mines continues to be a major problem in the mining industry. In addition to various initiatives at mine and regional level, the industry, through the Chamber and its members:

- ◆ participates in the activities of the national precious metals forum and regional precious metals forums established between the mining industry and the SAPS to address the problem of product theft
- ◆ participates in the activities of the national non-ferrous theft combating committee – commonly known as the National Forum on Copper Theft
- ◆ assists the SAPS' Forensic Science Laboratory to establish and maintain a fingerprinting database for precious metals
- ◆ participates in the activities of the Security Industry Alliance, an initiative in terms of which all the major role players in the security industry have formed an alliance to create cohesion in, and a united voice for, the security industry

Expropriation Bill

A draft policy on the Expropriation Bill was published in the Government Gazette on 13 November 2007. The Bill itself was introduced into Parliament in 2008 and the Portfolio Committee on Public Works held public hearings on the Bill on 17 and 18 June.

The current Expropriation Act of 1975 provides for expropriation for a 'public purpose'. Section 25(2) of the Constitution of the Republic of South Africa provides for expropriation 'for a public purpose or in the public interest'. The main aim of the Expropriation Bill

was given, therefore, to align it with the Constitution. However, there were various other provisions in the Bill that were of concern to the Chamber and its members. The Chamber therefore made written submissions to the Portfolio Committee on Public Works and participated on 17 June with Anglo American in joint oral representations to the portfolio committee.

The main issue covered in the Chamber's submissions was that the Bill provides that all unregistered rights in property being expropriated are simultaneously expropriated on the date of expropriation of the property. As a consequence, unregistered prospecting, mining, exploration and production rights preserved or granted in terms of the MPRDA will be expropriated when land is expropriated. This problem also applies to water use licenses and other forms of permits, permissions and authorisations granted under the MPRDA and the National Water Act.

The issue here is that mineral and petroleum resources fall under the custodianship of the State through the minister of minerals and energy, and water falls under the custodianship of the State through the minister of water affairs, but these rights could be expropriated by other organs of state.

The Chamber urged that such unregistered rights should be subject to separate expropriation and not be expropriated simultaneously with the land. Also, any expropriation should be with the consent of the minister of minerals and energy or of water affairs.

By the end of the period under review it was announced that the Bill had been withdrawn from the parliamentary process.

Companies Bill, 2008

The Chamber prepared comments on the draft Companies Bill of 2007. BUSA incorporated the comments in a position paper submitted by it to the Department of Trade and Industry, which took account of well over 100 written submissions from interested parties from all sectors of the economy. A revised Companies Bill was drafted and introduced to Parliament for comment in June 2008. Public hearings on the new Bill will take place in the National Assembly in the second half of 2008.

Ad hoc Parliamentary Committee on matters relating to the ex-mineworkers union

The Chamber administers the Mines 1970's Pension and Provident Funds, and nominates trustees to the boards of these funds. The funds were invited to make a presentation to the Ad Hoc Parliamentary Committee on Matters Relating to the Ex-Mineworkers' Union at Parliament in February 2008.

The ad hoc committee was to identify monies available within the mining industry that were possibly owing to ex-mineworkers, but which had not yet been distributed. As the Mines' 1970's Pension and Provident Funds caters for lapsed members only, representatives of the funds reported to the parliamentary committee on the efforts of the fund to locate members, pay out withdrawal benefits and settle surplus

distributions. The funds' presentation was well received by the chairman and members of the ad hoc committee, and a positive and constructive interaction with the members of the ad hoc committee ensued.

The funds were supportive of the maintenance of a central database of named ex-mineworkers in South Africa, to be managed by a government agency such as the Department of Labour, through which untraced ex-mineworkers could be invited to claim benefits due to them from all sources, including the funds.

The final report of the ad hoc committee was published on 4 June 2008. The report, and transcripts of the submissions made by the funds, the Chamber and others to the committee, are available on line at www.pmg.org.za, under Ad Hoc Committee Reports, 'Matters Relating to Ex-Mineworkers'.

Retirement fund reform

During the year under review, the Chamber continued to participate in the BUSA Social Security and Retirement Task Team on the Department of Social Development and Revenue's proposed reform of the social security and retirement system.

The Chamber is responsible for appointing representatives to serve on the boards of trustees of the industry's main retirement funds that will be affected by such reforms, and has formed a task team on social security to interact with stakeholders in the process. The task team has:

- ◆ addressed mining industry retirement fund boards of trustees on the government's retirement reform proposals
- ◆ advised the boards of trustees on business' perspective
- ◆ informed members of the Chamber and their employees on the reform proposals and their potential impact on employee benefits.

The process is continuing, and the Chamber participates in the reform negotiations with government, industry and retirement funds.

12 CRITICAL HAZARDS

1. Manual handling of material, equipment & tools



2. Fall of ground



3. Moving machines & transport



4. Conveyor belts



5. Dust



6. Ventilation



7. Methane



8. Electricity



9.



Safety

The Chamber is mindful of the harm and distress brought about by injuries and fatalities and endorses the target of zero harm and the milestones that have been agreed to with our tripartite partners – the state and labour – to realise this objective.

The Chamber believes that the adoption of a culture of care and stakeholder partnership, and rejection of a culture of blame is a critical prerequisite to improved safety performance. It will thus continue to strengthen partnerships with the other tripartite stakeholders to achieve zero harm.

Safety performance

The tripartite structures agreed in 2003 to a set of occupational health and safety targets and milestones to be achieved by 2013 to eliminate fatalities and injuries in the mining industry.

Industry target: zero fatalities and injuries

Milestones:

- ◆ In the gold sector: By 2013 achieve safety performance levels equivalent to current international benchmarks for underground metalliferous mines, at the least
- ◆ In the platinum, coal and other sectors: By 2013 achieve constant and continuous improvement equivalent to current international benchmarks, at the least.

The MHSC has agreed that the fatality frequency rate (FFR) – the internationally recognised safety performance indicator expressed as

fatalities per million hours worked – should be reduced by 20% a year to reach these milestones.

Regrettably, the industry's FFR deteriorated by 5% from 0.20 to 0.21 from 2006 to 2007. The number of fatalities increased from 200 to 220. The fatality rate dropped by more than 25% during the period January to June 2008. The graph shows that the industry still needs to improve by at least 28% year-on-year to achieve the 2013 milestones.

The gold sector's safety performance improved by 3% from 0.35 to 0.34 from 2006 to 2007, whilst the non-gold sector's safety performance declined by 8% from 0.13 to 0.14 from 2006 to 2007.

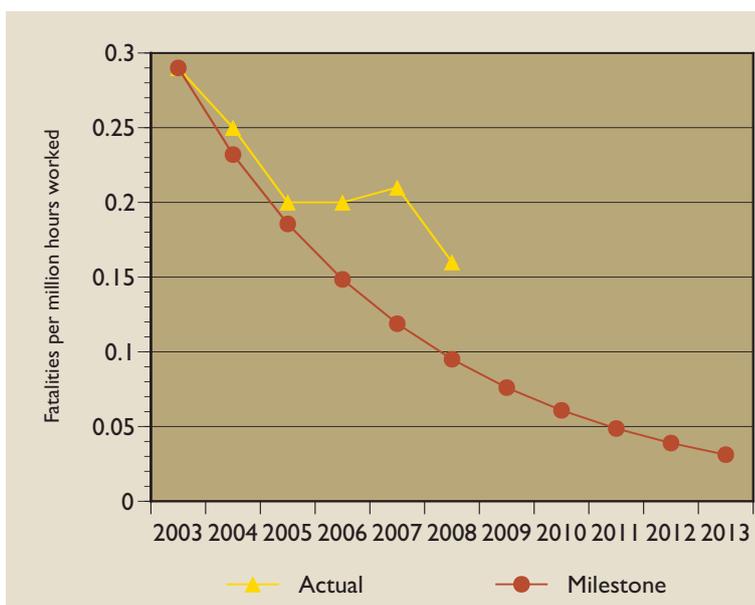
The table shows the number of fatalities in the various commodity sectors over the last 10 years.

The Chamber's executive council agreed to the establishment of a mining industry occupational safety and health (MOSH) task force to develop strategies towards the achievement of the 2013 milestones. The key focus areas of the Chamber's performance improvement initiatives are:

- ◆ leadership and culture
- ◆ best practice adoption
- ◆ seismicity and rockbursts.

Leadership and culture

The Chamber recognises that leadership is arguably the single most important contributor to success or failure of any initiative to improve health and safety in the industry. The Chamber's executive council agreed to a CEO round table on health and safety during the latter part of 2008. This initiative merges with the leadership best practice adoption initiative and will be supported by the CEO dialogues. The round table is the first of its kind and is expected to have a major and sustained impact on health and safety. The



Industry performance against milestones (FFR)

main objective is to develop actions to help the industry achieve the agreed tripartite milestones. Themes that will be considered during the round table are:

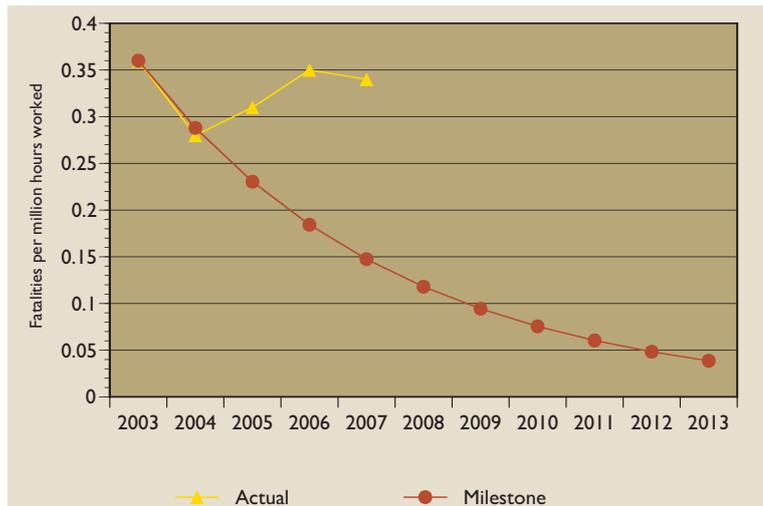
- ◆ leadership and culture transformation
- ◆ learning from other companies and from research
- ◆ creating capacities to enable dramatic improvements towards zero harm
- ◆ an environment, within and outside the workplace that is conducive to health and safety.

The NUM launched industrial action in 2007 to demand that industry take action to improve health and safety, following which the tripartite partners agreed to host a leadership health and safety summit later in 2008. The outcome of the round table will serve as useful input to this summit.

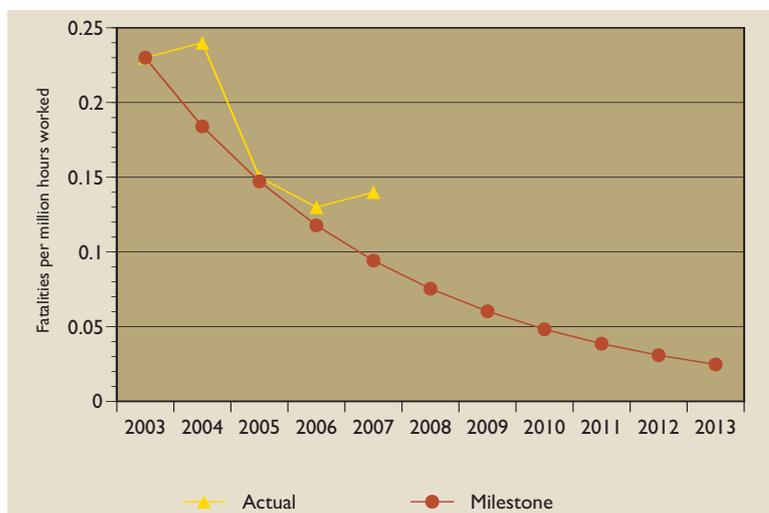
Best practice adoption

There are excellent performers in the industry and there is therefore an opportunity to learn from such examples; industry needs to move from sharing information to the adoption of best practices.

The Chamber's executive council agreed to pilot an industry best practice adoption system developed by the MOSH



Commodity performance against milestones – gold (FFR)



Commodity performance against milestones – non-gold (FFR)

Commodity	Fatalities									
	07 prov.	06	05	04	03	02	01	00	99	98
Gold	115	114	105	108	146	172	182	173	207	252
Platinum	52	40	47	65	60	53	49	46	39	44
Coal	15	20	16	20	22	20	19	31	28	42
Chrome	4	2	6	16	4	4	2	2	1	2
Diamonds	12	3	7	15	17	26	11	12	7	2
Copper	1	2	0	2	2	1	2	2	6	5
Clay	5	2	3	3	2	2	5	5	5	5
Iron ore	4	2	2	1	1	2	2	1	4	3
Granite DS	1	0	0	2	0	1	2	3	2	0
Limestone	1	5	5	3	0	1	5	2	2	2
Other	9	10	10	11	18	8	9	8	8	9
Total	220	200	201	246	270	290	288	285	309	366

task force. Mission and value statements were developed to provide direction during the piloting phase.

MOSH: best practice adoption

The mission of the MOSH Best Practice Adoption System is to facilitate widespread uptake of knowledge, technology and practice to improve health and safety performance in the industry. The adoption teams interact widely to identify best practice and technology to address priority areas and work with key staff on mines to foster adoption of demonstrated solutions and a culture of continuous improvement, accountability and visible leadership. The target is to provide working conditions that are free of harmful impacts.

The MOSH organogram below shows the structure that was established to pilot the system. Four adoption teams for leadership, noise, dust and falls of ground were established with key risks and challenges facing the industry. Industry involvement was identified as a key success factor for an initiative of this nature. This involvement was achieved through the nomination of CEO sponsors for each of the teams, eight full-time adoption team members (two for each of the teams) and part-time representatives from all the major mining companies. The full-time members were seconded or nominated by mining companies.

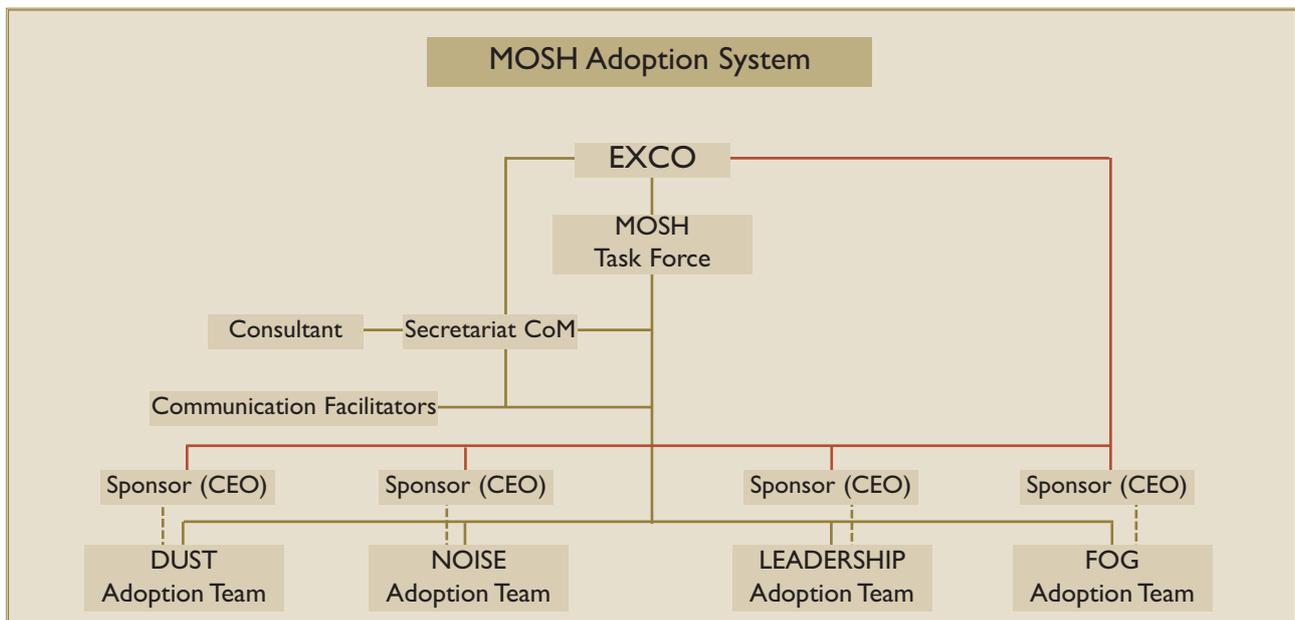
Another key success factor is a strong communication effort within industry and with key stakeholders. For this reason, the Chamber involved communication facilitators for the coal and hard rock sectors. The communication facilitators play an important liaison role between the adoption team members, the mine managers, the health and safety practitioners in the different companies and other stakeholders. A detailed communication strategy was developed to support the efforts of the adoption teams. The Chamber's communication department has been heavily involved in the implementation of this communication strategy together with communication experts in the various companies.

The adoption system is supported by the Chamber secretariat and by a local consultant and a consultancy that assisted the Chamber's Canadian sister organisation with a similar initiative. A key differentiator of the initiative is the focus on leadership and the quality of communication. The global consultancy is specifically assisting the adoption teams with this. A science-based, behavioural communication approach is followed, which is communication aimed at changing behaviour in contrast to communication that is aimed at information transfer.

The piloting exercise consists of a number of phases. The first phase involved the selection of one best practice from a broad inventory that could be adopted at mines. The selection was done systematically taking account of various factors such as the risks to be addressed, mining industry needs and available resources.

The second phase consisted of documenting the practice and demonstrating it at an identified mine. This included the development of a comprehensive description of the way in which the best practice could be adopted. It included behavioural communication and leadership behaviour plans.

The development of these plans is preceded by thorough surveys of those who have to adopt the best practices. The comprehensive description of the best practice often requires considerable testing to prepare for the best practice.





Safety equipment and stringent safety procedures at a smelter

The third phase of the piloting exercise entails the widespread adoption of the best practice.

For the piloting year, the Dust Team identified a dust suppression system as the best practice, whilst the Falls of Ground Team identified the implementation of adequate after-blast examination and safety procedures. The Noise Team concluded that a quieter rock drill was the best practice as rock drilling is one of the major contributors to noise induced hearing loss. All these practices are expected to improve particular health and safety risks by more than 20%.

The Leadership Team identified that a comprehensive leadership and culture change initiative is necessary to achieve zero harm in a sustainable manner. It is also recognised that such an initiative will take longer to roll out than the one year allowed for the piloting.

Seismicity and rockbursts

The risk of rockbursts continues to be the most difficult risk to manage particularly in deep-level mines. The Chamber launched a study on

seismicity and rockbursts to help employers manage the issue of rockburst risks better.

The study was undertaken by a panel of local and international experts under the chairmanship of Bobby Godsell, the previous chief executive of AngloGold Ashanti. The panel consisted of experts in mining engineering, geology, seismology, industrial psychology and sociology and an expert in mine safety law. In addition, the study was subjected to peer review by local and international academics.

The study reviewed the current performance and trends in seismicity and rockburst safety, the current state of

knowledge and technology required to control rockbursts, skills and management systems to control the risks, and human performance issues – it did not only focus on the technical aspects of managing seismicity and rock-burst safety. Concerns related to the chief inspector of mines' investigation into the risks associated with large seismic events will also be addressed through the study.

The study is expected to be completed later in 2008 and will contain a number of recommendations that should be implemented to improve seismic and rockburst safety. The Chamber will then interrogate and act on such recommendations.

MHSC

The tripartite MHSC was established by the Mine Health and Safety Act to advise the minister of minerals and energy on health and safety. The Chamber represents employers on the MHSC and continues to view this as an important tripartite partnership on health and safety. The strategic priorities of the MHSC include:

- ◆ research and research implementation
- ◆ legislation
- ◆ advice to the minister of key issues
- ◆ promotion of a preventative health and safety culture
- ◆ development of capacity in health and safety
- ◆ ensuring the effective and efficient operations of the MHSC office.

The year under review was an unfortunate year in the history of the MHSC as it had to deal with changes in the top leadership and a number of audit qualifications from the auditor general. The council commissioned an extensive review of the structure of its office, which serves as its secretariat. After considerable focus on the finances of the MHSC, it received an unqualified audit report for the 2007/08 financial year. The inability to spend its resources, however, remains a major concern to the Chamber.

Legislation

The Chamber continues to consider and

comment on new and revised regulations developed through the MHSC.

The Chamber interrogated the draft regulations released by the Engineering Council of South Africa under the Council for Built Environment in 2007. Whilst the general objectives of the regulations were supported, the Chamber's concern is that the proposed regulations could impose an undue burden on the mining industry in the area of scarce engineering skills. A study is continuing on the full implications of these regulations.

Research

The MHSC oversees an annual health and safety research programme of about R45-million. The Chamber is a participant in the structures that oversee the programme, including SIMRAC and its technical advisory committees. There are currently four technical advisory committees: rock engineering, engineering and machinery, human factors and occupational health.

The overall research programme is funded by the industry through a levy on companies related to their safety and health risk.

The emphasis in SIMRAC research has changed from smaller short-term projects to larger longer-term programmes. This was one of the main recommendations from the project, which reviewed past SIMRAC research. Programmes on rockfalls, rockbursts, noise induced hearing loss and silicosis continue as these are the major risks facing the mining industry. Human factors and transport and machinery programmes have also been identified.

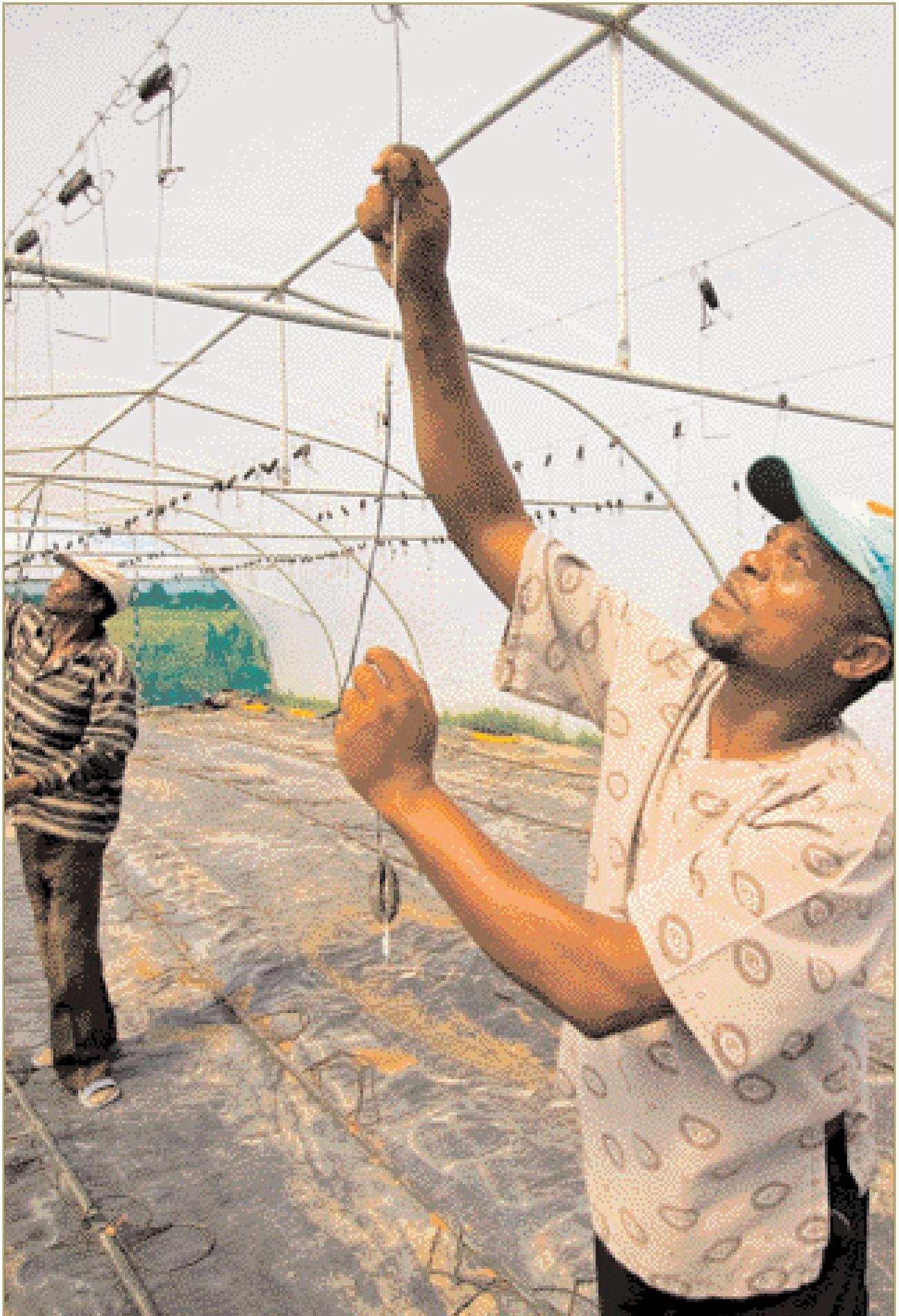
The rockfall programme shows some exciting developments into new tools for early warning rockfall monitoring. The research also investigates rockfall supports and current legislative practices.

The rockburst programme reviews current technical methods and best practices and investigates new approaches to the rockburst hazard. Promising new and improved monitoring and hazard assessment techniques are expected.

Other important research outcomes for the period include projects on detaching hooks, personal safety devices to help find trapped miners and health and safety database reliability.

A research improvement plan was previously prepared on the recommendation of the Chamber, but unfortunately it was not fully implemented owing to capacity problems at the MHSC office. The aim of the plan is to raise the quality of research through strengthening all research related structures and processes. The alignment of vision has helped research projects dovetail well with work that the Chamber has done during the year under review on the adoption of best practices and research findings.

Research implementation continues to be a major issue facing the industry. The project to review the SIMRAC research of the past 10 years made specific recommendations in this regard. The MHSC is currently considering the establishment of a centre of excellence to help it with research implementation.



Sustainable development

Sustainable development

The Chamber subscribes to the sustainable development definition of the 1987 Brundtland Report, namely, development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The Chamber believes that mining can make a sustainable contribution to the development of a nation, a region and the world. The Chamber engages both locally and internationally in programmes aimed at achieving sustainable development through mining and promoting responsible mining.

Conference

The Chamber hosts a biennial sustainable development conference to provide a platform for sharing best practices amongst Chamber members. The theme of the 2007 conference was: Delivering on our commitments. More than 300 delegates participated in this highly successful conference.

Leading companies made presentations on the Mining Charter as well as commitments related to health and safety, HIV/AIDS, community development, skills development, climate change, energy efficiency and water. Many discussions were held about the problems the mining industry faces in achieving its various commitments.

Sustainability and transformation report

At the sustainable development conference, the Chamber released the third *South African Mining Industry Sustainability and Transformation Report*. The report was prepared using international sustainability reporting guidelines issued by the Global Reporting Initiative and the Mining Charter – the mining industry's roadmap to transformation.

The report was the first of its kind in South Africa and one of the few reports of this nature published internationally. It presented the progress the industry has made on various commitments and highlighted its initiatives to improve delivery. The lack of quantitative, comparable information and the absence of systems to gather mining industry information made the preparation of a credible report of this nature difficult. Apart from the information that is available from national institutions such as the DME, the Chamber's members were surveyed on various key issues. Efforts to improve the coverage of the report and the accuracy of the information continue.

National sustainable development initiatives

The DME initiated a Sustainable Development through Mining (SDM) Programme. The main objectives of the programme are to develop policies, projects and reporting guidelines on sustainable development issues. The programme will help South Africa to report to the United

Nations Commission on Sustainable Development in 2010. The programme will be overseen by a multi-party sustainable development committee under the Mining and Minerals Development Board.

In support of this programme, the DME released an SDM framework document for comment. Whilst expressing support for such a document, the Chamber identified major gaps in the document. One of the key recommendations made by the Chamber was that the reporting guidelines be aligned with those of the Global Reporting Initiative to avoid an undue reporting burden on companies.

The Chamber was also involved in the finalisation of the National Strategy on Sustainable Development prepared by the Department of Environmental Affairs and Tourism.

The Chamber facilitates technical support to the Department of Trade and Industry on trade requirements that could impact negatively on South Africa.

International sustainable development initiatives

Materials stewardship

At the World Summit on Sustainable Development all countries represented committed themselves to the responsible management of chemicals, including mining products such as ores, ore concentrates, metals, metal compounds and alloys.

The European Union is one of the first regions to adopt legislation to give effect to this commitment. The legislation is called Registration, Evaluation and Authorisation of Chemicals (REACH) and will affect all mining products exported to the European Union. The Chamber supports its members on REACH implementation, where necessary.

The pre-registration period for all products that are exported to the European Union is from June to December 2008.

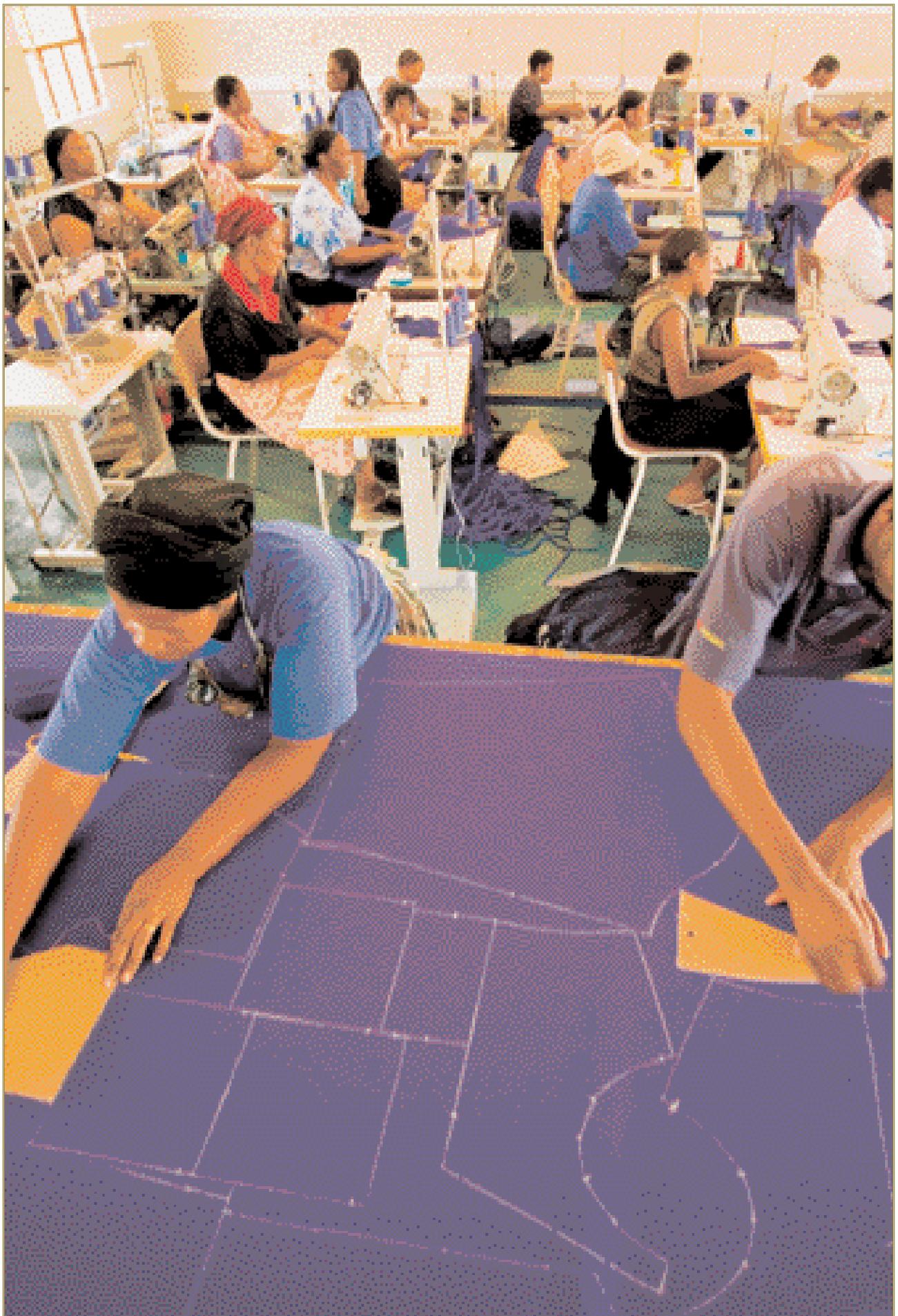
Eurometaux, the European metals association, has established a REACH gateway that provides information on REACH and the Chamber has secured access for its members to this gateway.

ICMM

The Chamber is an association member of the ICMM, an organisation that aims to promote the mining, minerals and metals industry as a key contributor to sustainable development. The ICMM's sustainable development framework consists of 10 principles, a reporting guideline, an independent assurance system and the promotion of good practice. The Chamber participates in various structures of the ICMM to gather information on global best practices and to serve the interests of the South African mining industry in the global arena.

Eradication of invasive plant species





Skills development

Advocacy and lobbying

The Skills Development unit continues to play a critical role in shaping the skills development legislative and policy framework. It successfully lobbied on behalf of business in the national arena and on all matters affecting education and skills development in the mining industry.

The presence of Chamber staff as business leaders at forums such as the Joint Initiative on Priority Skills Acquisition (JIPSA), the National Skills Authority (NSA), NEDLAC task team on skills development, the South African Qualifications Authority (SAQA), the National Board for Further Education and Training and BUSA demonstrates the important role of the Chamber in shaping policy in education and skills development.

The Chamber has once again made critical input to business' comments on all new legislation relating to education and skills development through its chairmanship of the BUSA subcommittee on education and training. Chamber comments formed the bulk of business input on such policy documents as the Skills Development Amendment Bill and the three national qualifications bills. The Chamber led the business delegation that negotiated the changes to the Skills Development Amendment Bill at NEDLAC. The Chamber was nominated to present business' response to the proposed National Qualifications Framework (NQF) bills at the Parliamentary hearings.

Challenges

Skills shortage

The shortage of skills, in particular those of artisans and engineers, remains an issue for the mining industry because of the growing South African economy and a demand for similar skills globally. More

government infrastructure programmes and the international mining boom have shrunk the skills pool in the labour market. The high turnover of artisans and a loss of engineers, especially to international labour markets like Canada and Australia, have forced the industry to develop creative ways to retain skills and implement accelerated training programmes to increase the pool.

The Chamber has initiated the establishment of the Mining Industry Employment and Skills Development Agency (MESDA) in line with the learnership regulations of the Skills Development Act. It is encouraging that most of the Chamber's members are willing to make their training facilities available for MESDA. The challenge remains the sourcing of funds from the Nationals Skills Fund to enable MESDA to become a reality. The Chamber persists in efforts to encourage the MQA to partner with it in its venture of training the unemployed to become qualified artisans.

Charter obligations

In anticipation of the Mining Charter implementation review in 2009, the Chamber is assessing the progress of the mining industry on its charter commitments. Most Chamber members have made significant progress towards achieving charter commitments on skills development.

All employers have created an opportunity for employees to become functionally literate by creating ABET facilities and employing teachers to teach literacy and numeracy. The issue remains the uptake of ABET programmes, with only about 6% of those who need ABET attending classes, and a very high drop-out rate. Recent MQA research still shows an illiteracy rate of more than 50% in the industry. The real reasons for the poor uptake of ABET programmes needs to be explored by all stakeholders.

National Skills Authority (NSA)

The Chamber continues to play a key role as convener of the business constituency at the NSA. The business members of the NSA assisted in drafting the contents of the Skills Development Amendment Bill, which has since been approved by Parliament. It is envisaged that the Bill will come into effect in April 2009.

Learnerships

The Chamber has played a major role in redesigning the artisan qualifications to comply with the required unit standards format. A definition of 'artisan' has emerged from this exercise as have the routes a learner can take to become an artisan. This has influenced the proposed Skills Development Amendment Bill, which will be the eventual Act that governs the training of artisans.

The activities of the National Skills Conference in October 2007 were mostly co-ordinated and facilitated by the business constituency.

On review of the National Skills Development Strategy (NSDS) it was evident that ABET remains an issue since only 17% of the ABET target was achieved. Whilst business argues that ABET is not within its domain, it has been more successful than government and its educational institutions. Business is reaching 5% to 10% of the target population when compared to the national figures that are only reaching around 0.1% of the populations that needs ABET. The mining industry is achieving 6% of its targeted population.

Business members of the NSA influenced the structure and content of the upcoming NSA conference where the following key themes will be discussed:

- ◆ Coherence and integration of skills development delivery
- ◆ Mass skills development delivery for productivity, employment, growth and development
- ◆ Quality and relevance of skills interventions to meet technological and future demands
- ◆ Building blocks for the NSDS 2010 to 2015.

The business constituency, led by the Chamber, will continue to influence the shaping of the Quality Council for Trades and Occupations, which is currently being established by the NSA.

JIPSA

The Chamber continues to represent business in the Technical Working Group of JIPSA. In the past year the working group finalised the following projects, which were approved by the JIPSA Joint Task Team:

- ◆ Acceleration of SAQA verification of the qualifications of foreigners
- ◆ Establishment and implementation of the Business Skills Task Group (members of the Chamber participate on this task group). The purpose of this task group is to create training opportunities for the unemployed, mainly in artisan skills programmes
- ◆ Placement of young graduates for practical experience at local and international companies
- ◆ Improvement of the process of issuing work permits by the Department of Home Affairs
- ◆ Revision and finalisation of the critical and scarce skills list and quota numbers for submission to the Department of Home Affairs
- ◆ Speedier training of town planners for local municipality development projects.

The term of the working group has been extended until such time as Cabinet launches the Human Resources Development Council of South Africa.

The Council for the Built Environment

The Department of Public Works published a Bill proposing amendments to the Regulatory Framework on the Built Environment Professions for public comment followed by Parliamentary hearings. The Chamber commented on this Bill as it has a specific interest in one of the professional bodies affected by this proposed legislation, namely, the Engineering Council of South Africa (ECSA). The Chamber wants to identify engineering work that will require professional registration as contemplated in the proposed Bill. Once passed, this legislation may

have adverse implications for the mining industry.

Other Chamber concerns about the Bill relate to the proposed funding model that appears to be unsustainable; conflict with current legislative bodies responsible for education and training; the role of the proposed South African Council for the Built Environment in education and training; and the disproportionate representation of members of the Council for the Built Environment.

The Chamber made a presentation on these concerns at the Parliamentary public hearings.

Mining Qualifications Authority

As the convener of employers, the Chamber continues to influence and shape the activities of the MQA. The Chamber participates on the MQA board and all other committee structures to ensure that skills development initiatives are prioritised. Amongst others, the Chamber is fully involved in the following MQA strategic areas:

Skills planning

The Chamber has a major influence on the format, distribution and analysis of the MQA's Workplace Skills Plans (WSP) and Annual Training Report (ATR). As a result of this the MQA has a high response rate of employees represented in the industry for its WSP and ATR submissions. The analyses conducted each year contribute to a database of the profile of the industry and skills development that take place.

A recent study using this data shows that the number of African employees in management positions increased from 3.7% in 2000/01 to 15.9% in 2007/08. Positive trends are also reported for black employees in professional and technical positions. Likewise, the percentage of woman in the mining industry increased from 3.2% to 6.9% over the same period.

The MQA intends to introduce a language policy that will phase out Fanakalo in the mining industry. Employers believe that a plan to phase out Fanakalo

should be informed by research, and the MQA has agreed to conduct such research. In the meantime, employers are carrying out their own investigation on the feasibility of phasing out Fanakalo and how best this could be achieved.

Quality assurance

One of the key focus areas of the Education Advisory Committee for 2007/08 has been quality assurance in the delivery of skills development. To this end, the Chamber has greatly influenced the accreditation function of the MQA as an education and training quality assurer (ETQA). The technical expertise needed for the accreditation function has been improved by providing specialists in mining, engineering, metallurgy and ABET.

Attention is being given to the process and documentation of various levels of providers' accreditation to enhance the quality assurance. Monitoring of the ETQA accreditation visits to providers has also improved.

The Foundational Learning Certificate

Qualifications registered on the National Qualifications Framework at levels 1 to 4 must have fundamental unit standards – this can constitute as much as one third of the entire qualification. The fundamental unit standards consist of communication (read, write, speak) and mathematical literacy.

Learners are required to prove competence in these areas at varying degrees of difficulty at each level before a qualification can be awarded. It is assumed that the level of communication and mathematical literacy is at the level of the qualification.

The Chamber has successfully lobbied to change the fundamental unit standards to a format that is more relevant to the workplace and achievable by learners. Proposals in new bills relating to skills development, currently in the parliamentary process, are that the Foundational Learning Certificate (FLC) replace the fundamental unit standards. The FLC will be completed only once by learners requiring such competencies rather than at each qualification level, and

will allow learners entry into all occupational qualifications at levels 2 to 4.

MQA information systems

Employers continuously experience difficulties with the MQA data system to access or input information, as required by the Skills Development Act. The Chamber successfully influenced the MQA board to purchase a new data system that is more user-friendly. Hopefully this new data system will be implemented in November 2008 and all affected employers will be trained in its use.

Learning materials

The Chamber continues to co-ordinate and deliver MQA learning materials through the Learning Materials Development Project.

The project delivers learning material packs for individual unit standards across the different disciplines within the sector. It has obtained funding from the MQA for the development of fundamental unit standards at level 2. This is seen as a breakthrough as the provision of fundamental unit standard learning has proved to be a stumbling block for training provision. The learning material for this should be completed towards the end of 2008.

The development of technical learning material continues and the participation of employers and training providers is a key factor in ensuring the continued success of the project. Feedback obtained from training providers indicates that they are using the learning material, particularly in disciplines such as metallurgy, mining and engineering. Training providers add their site-specific requirements to the learning material.

At the end of the reporting period, 1 112 unit standards had been allocated to accredited training providers for learning material

Discipline	As at July 2007	As at July 2008
Analytical services	54	55
Cement lime and aggregates	2	9
Diamond processing	27	27
Engineering	203	250
Jewellery manufacturing	38	42
Metallurgy	256	271
Underground coal mining	27	29
Underground hard rock mining	81	86
Surface mining	53	54
Occupational hygiene	1	4
Occupational safety	6	19
Rock engineering	53	66
Surveying	12	12
Small-scale mining	4	4
Introduction to mining certificate	1	4
Total	818	932

development across the different disciplines. The improvement in the final delivery of learning material on a year-to-year basis is shown in the table below.

Personal digital assessment development

In the past year, the Chamber was awarded a special tender to co-ordinate the development of data for use with the personal digital assessment (PDA) to assess the competence of employees/learners against unit standards. This was another note of confidence on the Chamber's ability and willingness to contribute positively towards efficient skills development delivery by the MQA.

In the engineering discipline, the assessment data for the electro-mechanic levels 2, 3 and 4 has been developed and is currently being tested at a pilot site. In the metallurgy discipline, the ore beneficiation skills programme is being populated and work in this area continues. In the underground hard rock discipline, considerable progress has been made; competent A and B and the blasting assistant for underground hard rock PDA data population should be finished by October 2008.

Name of certificate	As at July 2007	As at July 2008
Certificate in Advanced Mine Surveying	16	16
Certificate in Advanced Mine Valuation	16	24
Certificate in Advanced Rock Engineering	4	3
Certificate in Basic Mine Sampling	59	191
Certificate in Basic Mine Surveying	29	163
Certificate in Elementary Mine Sampling	27	37
Certificate in Elementary Mine Surveying	20	37
Certificate in Mine Environmental Control	4	4
Certificate in Mine Environmental Control/ Occupational Hygiene		30
Certificate in Mine Survey Draughting	7	16
Certificate in Radiation Protection Monitoring	30	50
Certificate in Rock Mechanics	8	2
Certificate in Strata Control	6	45
Intermediate Certificate in Mine Environmental Control		8
Intermediate Certificate in Mine Environmental Control/ Occupational Hygiene	25	38
Total	251	664

National Board for Further Education and Training

The Chamber represents business on the National Board for Further Education and Training. From the 152 technical colleges that existed in 1994, 50 public further education and training colleges were established between 2004 and 2006. This in itself has created problems.

In 2007, the National Certificate (Vocational) NC(V) was introduced replacing the NATED (N) courses that were a requirement for apprentices to become artisans. The pass rate for the NC(V) at the end of 2007 was dismally low. Other problems facing the further education and training colleges are a profile of the student body that does not fit the nature of the college, untrained lecturers and unsustainable funding.

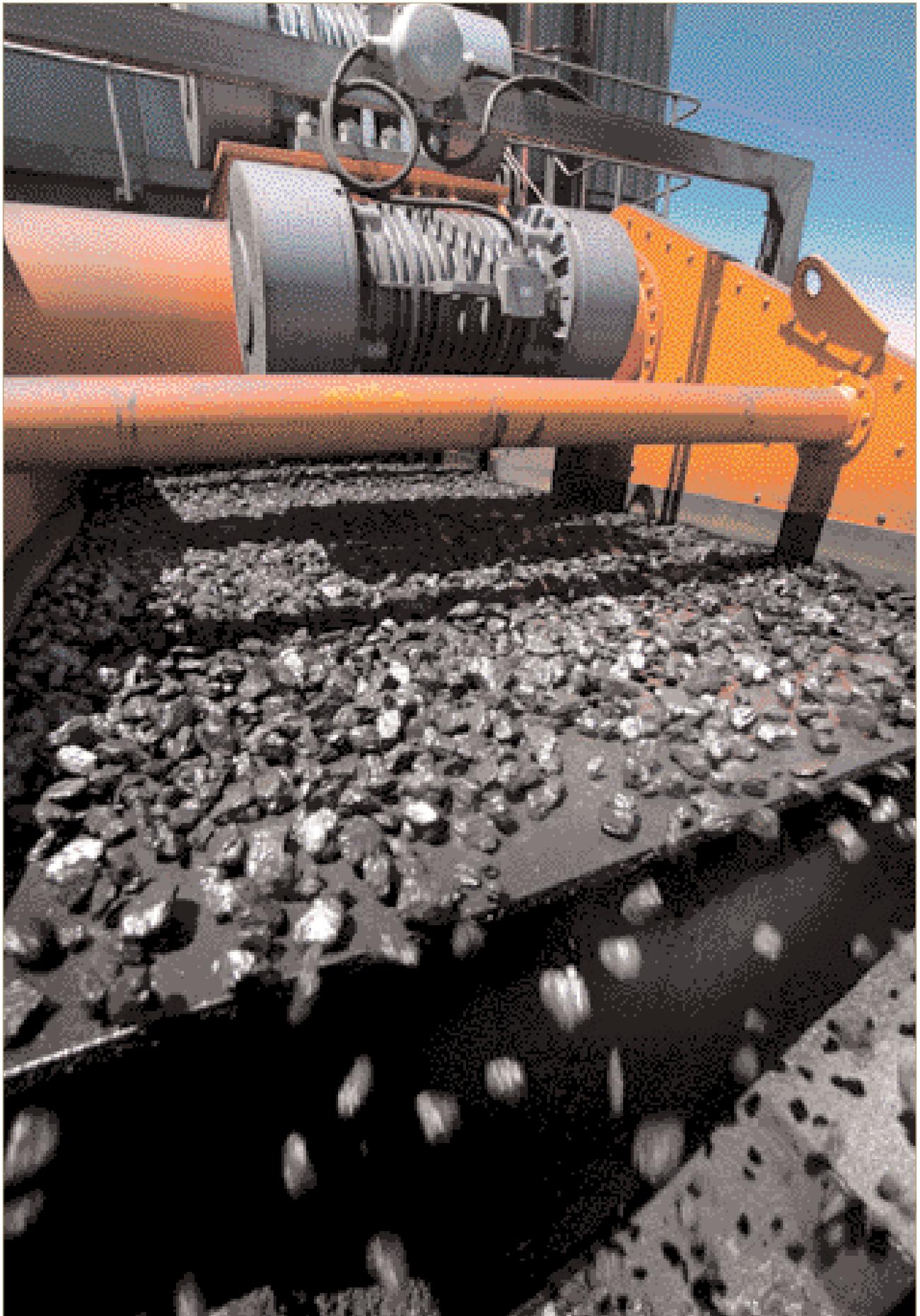
Business is raising awareness of the problems in this sector among its own constituency as well as with the Department of Education and other stakeholders.

Chamber certificates

Tuition leading to the attainment of the various Chamber of Mines certificates remains relevant in the absence of new unit standards-based qualifications for people who wish to practice in specified areas of work. The demand for these qualifications on a year-to-year basis is represented in the adjacent table of certificates issued.

The Chamber has appealed to the professional associates to begin developing the unit standards through the technical reference groups at the MQA. The Chamber will officially hand over the issuing of these certificates once the unit standards and the new qualifications have been finalised.

Tuition for these certificates is currently offered by private providers who are monitored by associates. The examinations are administered by UNISA on behalf of the Chamber.



Financial statements

Chamber of Mines of South Africa Annual Financial Statements for the year ending 30 June 2008

The following reports and statements are presented:

Executive Council's responsibility for financial reporting

Report of the independent auditors

Balance sheet

Income statement

Statement of changes in equity

Cash flow statement

Accounting policies

Notes to the annual financial statements

Notes to the cash flow statement

Executive Council's responsibility for financial reporting

The Executive Council of the Chamber is responsible for the maintenance of adequate accounting records and preparation and integrity of the financial statements and related information. The financial statements have been prepared in accordance with South African Generally Accepted Accounting Practice. The Chamber's independent external auditors, Deloitte & Touche, have audited these financial statements and their unqualified report appears on page 89.

The annual financial statements are prepared on a going concern basis. Nothing has come to the attention of the Executive Council to indicate that the Chamber will not remain a going concern for the foreseeable future.

Approval of Annual Financial Statements

The Annual Financial Statements as set out on the following pages were approved by the Executive Council on 19 September 2008 and are signed on their behalf by:



S Nkosi
President

MG Diliza
Chief Executive

Independent auditor's report to the members of the Chamber of Mines of South Africa

We have audited the annual financial statements of the Chamber of Mines of South Africa which comprise the executive council responsibility for financial report, the balance sheet as at 30 June 2008, the income statement, the statement of changes in equity and cash flow statement for the year then ended, a summary of significant accounting policies and other explanatory notes.

Executive Council Responsibility for the Financial Statements

The executive council is responsible for the preparation of these financial statements in accordance with South African Generally Accepted Accounting Practice, and in the manner required by the Labour Act in South Africa. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditors Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting principles used and the reasonableness of accounting estimates made by management, as well as evaluating the overall financial statement presentation.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Chamber of Mines of South Africa at 30 June 2008, and of its financial performance and its cash flows for the year then ended in accordance with South African Statements of Generally Accepted Accounting Practice, and in the manner required by the Labour Relations Act in South Africa.



Deloitte & Touche
Per A J Zoghby
Partner
Johannesburg
19 September 2008

Balance Sheet as at 30 June 2008

	Notes	2008 R	2007 R
Assets			
Non-current assets			
Equipment	1	1 325 329	1 436 862
Inventory		252 077	262 000
Investments	2	15 054 144	8 087 177
		<u>16 631 550</u>	<u>9 786 039</u>
Current assets			
Accounts receivable	3	8 380 713	9 441 140
Bank and cash	4	17 948 579	18 651 870
		<u>26 329 292</u>	<u>28 093 010</u>
Total assets		<u>42 960 842</u>	<u>37 879 049</u>
Funds and liabilities			
Funds			
Accumulated funds		6 521 247	6 521 247
Project funds	5	19 962 824	13 763 671
		<u>26 484 071</u>	<u>20 284 918</u>
Current liabilities			
Accounts payable	6	12 632 656	13 746 200
Short-term loan	7	3 844 115	3 847 931
		<u>16 476 771</u>	<u>17 594 131</u>
Total funds and liabilities		<u>42 960 842</u>	<u>37 879 049</u>

Income statement for the year ended 30 June 2008

Revenue	8	46 646 720	41 841 655
Administrative and operating costs	9	(48 258 708)	(43 034 965)
Deficit before depreciation		<u>(1 611 988)</u>	<u>(1 193 310)</u>
Depreciation		(475 408)	(351 211)
Operating deficit		<u>(2 087 396)</u>	<u>(1 544 521)</u>
Interest income		2 087 396	1 544 521
Project income	5	13 950 000	6 705 708
Project expenditure	5	<u>(7 750 847)</u>	<u>(4 756 234)</u>
Increase in project funding		<u>6 199 153</u>	<u>1 949 474</u>

Statement of changes in equity for the year ended 30 June 2008

	Notes	Project funds	Accumulated funds	Total funds
Balance at 1 July 2006		11 814 197	6 521 247	18 335 444
Decrease in project funding for the year		–	(2 911 307)	(2 911 307)
Transfer to project funds		<u>1 949 474</u>	<u>2 911 307</u>	<u>4 860 781</u>
Balance at 30 June 2007		13 763 671	6 521 247	20 284 918
Increase in project funding for the year		–	6 199 153	6 199 153
Transfer to project funds		<u>6 199 153</u>	<u>(6 199 153)</u>	<u>–</u>
Balance at 30 June 2008	5	<u>19 962 824</u>	<u>6 521 247</u>	<u>26 484 071</u>

Cash flow statement for the year ended 30 June 2008

	Notes	2008 R	2007 R
Cash flows from operating activities:			
Net cash inflow/(outflow) from operating activities	10	4 540 155	(12 768 098)
Cash flows from investing activities:			
Additions to equipment		(483 255)	(1 002 407)
Disposals of equipment		119 380	7 857
Investment income		2 087 396	1 544 521
Increase in investments		<u>(6 966 967)</u>	<u>(617 305)</u>
Net cash outflow from investing activities		<u>(5 243 446)</u>	<u>(67 334)</u>
Net decrease in cash and cash equivalents		(703 291)	(12 835 432)
Cash and cash equivalents			
at beginning of the year		18 651 870	31 487 302
Cash and cash equivalents			
at end of the year	11	<u>17 948 579</u>	<u>18 651 870</u>

Accounting policies for the year ended 30 June 2008

The principal accounting policies and basis of accounts used are in all material respects consistently applied. The Annual Financial Statements have been prepared in accordance with the historic basis, except for certain financial instrument which are stated at fair value and these policies conform with South African statements of Generally Accepted Accounting Practice.

Revenue recognition

Revenue represents contributions from members, administration fees and interest income. Contributions are recognised when invoiced and consists of contributions for operating costs and capital expenditure, collected in-line with the yearly approved budget. Administration fees are earned in respect of services provided to associated entities. Interest income is accrued on an effective yield basis.

Project income

Project income represents contribution from members for specific projects.

Project expenditure

Project expenditure relates to expenditure incurred on projects approved by the Executive Council.

Equipment

Equipment is stated at historical cost less depreciation. Depreciation is calculated using the straight line method so as to write off the cost of each asset less its residual value over its estimated useful life.

The rates of depreciation used are:

Motor vehicles	5 years
Computer equipment	3 years
Furniture and fittings	5 years

Investments

Unlisted investments comprise shares in related companies and are stated at cost. Other investments comprise monies invested to fund liabilities and projects which are stated at cost.

Accounting policies (continued)

Cash and cash equivalents

Cash and cash equivalents comprise cash and short term deposits. The carrying amount of these assets approximates fair value. Credit risk is limited as the counter parties are financial institutions with high credit ratings.

Financial instruments

Financial assets and financial liabilities are recognised on the Chamber's balance sheet when the Chamber has become a party to contractual provisions of the instruments. Trade receivables and payables are stated at their nominal value. Trade receivables are reduced by appropriate allowances for estimated irrecoverable amounts.

Retirement benefits

The policy of the Chamber, subject to the rules of the Chamber of Mines Retirement Fund, is to provide retirement benefits for its employees. Payments to the defined contribution fund are expensed as they fall due.

The Chamber of Mines does not have a post retirement medical aid liability as this liability has been fully funded and was bought out by Momentum Employee Benefits.

Inventory

Inventory consists of gold coins and medallions. Inventory is valued at the lower of cost or net realisable value.

Management judgements

In the process of applying the Chamber of Mines accounting policies, the most significant judgements made by management relate to the following:

- ~ revaluation of the useful lives and residual value estimations of assets and,
- ~ the bad debt provision.

Impairment

An annual impairment review of assets is carried out by comparing the net book value of the assets with their recoverable amount. Recoverable amounts are based on the higher of the value in use and the net selling price. Value in use is determined by applying a discount rate to the anticipated pre-tax cash flow for the remaining useful life of the asset.

Where the recoverable amount is less than the net book value, the impairment is charged against income to reduce the carrying amount of the affected assets to recoverable amounts. The revised carrying amounts are amortised on a systematic basis over the remaining useful life of such affected assets.

Provisions

Provisions are recognised where the Chamber of Mines of South Africa has a present legal or constructive obligation as a result of a past event, a reliable estimate of the obligation can be made and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimate.

Notes to the Annual Financial Statements for the year ended 30 June 2008

I. Equipment

	Cost	Accumulated depreciation	Net book value
2008	R	R	R
Motor vehicles	1 263 468	303 550	959 918
Computer equipment	873 851	670 719	203 132
Furniture and fittings	448 325	286 046	162 279
	<u>2 585 644</u>	<u>1 260 315</u>	<u>1 325 329</u>
2007			
Motor vehicles	1 059 409	176 303	883 106
Computer equipment	873 851	485 616	388 235
Furniture and fittings	389 345	223 824	165 521
	<u>2 322 605</u>	<u>885 743</u>	<u>1 436 862</u>

2008

Reconciliation of movement:

	Motor vehicles	Computer equipment	Furniture and fittings	Total
	R	R	R	R
Net book value at beginning of year	883 106	388 235	165 521	1 436 862
Additions	424 275	–	58 980	483 255
Depreciation	228 083	185 103	62 222	475 408
Disposals	119 380	–	–	119 380
Net book value at end of year	<u>959 918</u>	<u>203 132</u>	<u>162 279</u>	<u>1 325 329</u>

2007

Reconciliation of movement:

	Motor vehicles	Computer equipment	Furniture and fittings	Total
	R	R	R	R
Net book value at beginning of year	426 826	251 177	115 520	793 523
Additions	630 147	266 670	105 590	1 002 407
Depreciation	173 867	121 755	55 589	351 211
Disposals	–	7 857	–	7 857
Net book value at end of year	<u>883 106</u>	<u>388 235</u>	<u>165 521</u>	<u>1 436 862</u>

2. Investments

	2008	2007
	R	R
Rand Mutual Assurance Company Ltd 4 shares @ R20 (2007: 6 shares @ R20 each) Executive valuation R80 (2007: R120)	80	120
	<u>80</u>	<u>120</u>
Term deposits:		
Industry Task Force Radiation Fund	109 419	267 006
Disaster Relief fund	740 000	740 000
Insurance Claim fund	880 000	880 000
Research fund	38 432	40 000
HIV/AIDS Project	375 765	375 765
Epidemiology Study for Former Mine Workers	4 345 708	4 345 708
Occupational Lung Disease in the Mining Industry	484 138	520 227
Sludge Treatment	–	24 827
Industry Strategy for Occupational Safety	–	80 347
Development of Conceptual Water Strategies	500 000	500 000
Future of Gold Sector Project	27 546	269 500
Mining Industry Occupational Safety & Health Project (MOSH)	5 653 003	–
I U C N World Conference	–	43 677
Strategic Positioning of Mining Industry & the Chamber	500 000	–
Strategic review of the Mining Industry	200 000	–
Printing of Mining Related Information Packs/Guidelines	69 465	–

Notes to the Annual Financial Statements 2. Investments (continued)

	2008	2007
	R	R
Bargaining Council Consultancy Project	100 000	–
Mineworkers Provident Fund – Risk Project	100 000	–
Subvention of salaries	930 588	–
	<u>15 054 144</u>	<u>8 087 177</u>
3. Accounts receivable		
Accounts receivable – members	8 010 671	8 937 469
Accounts receivable – non members	777 293	774 314
	<u>8 787 964</u>	<u>9 711 783</u>
Less: Provision for Doubtful debts	<u>(407 251)</u>	<u>(270 643)</u>
	<u>8 380 713</u>	<u>9 441 140</u>
4. Bank and cash		
Cash at bank	7 825 434	5 991 093
Cash on call	25 177 209	20 747 834
Amounts classified under investments	<u>(15 054 064)</u>	<u>(8 087 057)</u>
Bank and cash	<u>17 948 579</u>	<u>18 651 870</u>
5. Project funds		
<u>Disaster Relief</u>	740 000	740 000
<u>Insurance</u>	880 000	880 000
<u>Research</u>	38 432	40 000
Balance at 1 July 2007	40 000	
Expenditure	<u>(1 568)</u>	
Balance at 30 June 2008	<u>38 432</u>	
<u>Industry Task Force Radiation Fund</u>	109 419	267 006
Balance at 1 July 2007	267 006	
Expenditure	<u>(157 587)</u>	
Balance at 30 June 2008	<u>109 419</u>	
<u>General Fund</u>	–	767 854
Balance at 1 July 2007	767 854	
Expenditure	<u>(767 854)</u>	
Balance at 30 June 2008	<u>–</u>	
<u>HIV/AIDS Project</u>	375 765	375 765
<u>Epidemiology Study for Former Mine Workers</u>	4 345 708	4 345 708
<u>Occupational Lung Disease in the Mining Industry</u>	484 138	520 227
Balance at 1 July 2007	520 227	
Expenditure	<u>(36 089)</u>	
Balance as at 30 June 2008	<u>484 138</u>	
<u>Project funding recovery</u>	4 908 760	4 908 760
This amount primarily relates to the recovery from the Chamber's insurers, of irregular expenditure that occurred in previous financial years.		
This funding recovery will be utilised for future projects.		
<u>Sludge Treatment</u>	–	24 827
Balance at 1 July 2007	24 827	
Expenditure	<u>(24 827)</u>	
Balance as at 30 June 2008	<u>–</u>	
<u>I U C N World Conference</u>	–	43 677
Balance at 1 July 2007	43 677	
Expenditure	<u>(43 677)</u>	
Balance as at 30 June 2008	<u>–</u>	
<u>Future of Gold Sector</u>	27 546	269 500
Balance at 1 July 2007	269 500	
Received	400 000	
Expenditure	<u>(641 954)</u>	
Balance as at 30 June 2008	<u>27 546</u>	
<u>Industry Strategy for Occupational Safety</u>	–	80 347
Balance at 1 July 2007	80 347	
Expenditure	<u>(80 347)</u>	
Balance as at 30 June 2008	<u>–</u>	

Notes to the Annual Financial Statements 5. Project funds (continued)

	2008	2007
	R	R
<u>Development of Conceptual Water Strategies</u>	500 000	500 000
<u>Strategic Positioning of Mining Industry & Chamber</u>	500 000	–
Amount received	500 000	
Expenditure	–	
Balance as at 30 June 2008	<u>500 000</u>	
<u>Strategic Review of the Mining Industry</u>	200 000	–
Amount received	200 000	
Expenditure	–	
Balance as at 30 June 2008	<u>200 000</u>	
<u>DWAF and Water Institute of Southern Africa</u>	–	–
Amount received	300 000	
Expenditure	(300 000)	
Balance as at 30 June 2008	<u>–</u>	
<u>Development of Concept Frameworks for Closure Strategies</u>	–	–
Amount received	500 000	
Expenditure	(500 000)	
Balance as at 30 June 2008	<u>–</u>	
<u>ICMM</u>	–	–
Balance at 1 July 2007	–	
Received	200 000	
Expenditure	(200 000)	
Balance as at 30 June 2008	<u>–</u>	
<u>Global Instruments on Climate Change</u>	–	–
Received	250 000	
Expenditure	(250 000)	
Balance as at 30 June 2008	<u>–</u>	
<u>Printing Mining Related Information Packs/Guidelines</u>	69 465	–
Received	150 000	
Expenditure	(80 535)	
Balance as at 30 June 2008	<u>69 465</u>	
<u>Bargaining Council: Consultancy</u>	100 000	–
Received	100 000	
Expenditure	–	
Balance as at 30 June 2008	<u>100 000</u>	
<u>Mineworkers Provident Fund - Risk Project</u>	100 000	–
Amount received	100 000	
Expenditure	–	
Balance as at 30 June 2008	<u>100 000</u>	
<u>Subvention of salaries</u>	930 588	–
Amount received	1 600 000	
Expenditure	(669 412)	
Balance as at 30 June 2008	<u>930 588</u>	
<u>Mining Industry Occupational Safety & Health Project (MOSH)</u>	5 653 003	–
Amount received	9 650 000	
Expenditure	(3 996 997)	
Balance as at 30 June 2008	<u>5 653 003</u>	
	<u>19 962 824</u>	<u>13 763 671</u>
6. Accounts payable		
Accounts payable – members	241 289	3 467 976
Accounts payable – non-members	12 391 367	10 278 224
	<u>12 632 656</u>	<u>13 746 200</u>
7. Short-term loan		
Chamber of Mines Building Company (Proprietary) Limited	3 844 115	3 847 931
This loan is unsecured, interest free and payable on demand.		

Notes to the Annual Financial Statements (continued)

	2008	2007
	R	R
8. Revenue		
Contribution from members	42 906 008	37 987 326
Administration fees	874 250	799 182
Profit on sale of motor vehicle	–	126 490
Other income	<u>2 866 462</u>	<u>2 928 657</u>
	<u>46 646 720</u>	<u>41 841 655</u>
9. Administrative and operating expenditure		
Auditors' remuneration	222 578	200 000
– Current year	<u>222 578</u>	<u>200 000</u>
– Other services	–	–
Staff costs	31 657 082	28 502 781
Operating costs	<u>16 379 048</u>	<u>14 332 184</u>
	<u>48 258 708</u>	<u>43 034 965</u>

Notes to the cash flow statement for the year ended 30 June 2008

10. Reconciliation of increase in project funding for the year to net cash flow from operating activities:		
Increase in project funding for the year	6 199 153	1 949 474
Adjustment for:		
Depreciation	475 408	351 211
Interest received	<u>(2 087 396)</u>	<u>(1 544 521)</u>
Operating funding before working capital changes	<u>4 587 165</u>	<u>756 164</u>
Working capital changes		
Decrease in accounts receivable	1 060 427	(631 347)
Decrease in funds under administration	–	(10 171 433)
Decrease in accounts payable	<u>(1 113 544)</u>	<u>(3 015 511)</u>
Increase in loans	(3 816)	284 106
Decrease in inventory	<u>9 923</u>	<u>9 923</u>
	<u>(47 010)</u>	<u>(13 524 262)</u>
Net cash inflow (outflow) from operating activities	<u>4 540 155</u>	<u>(12 768 098)</u>
11. Cash and cash equivalents		
Bank and cash	<u>17 948 579</u>	<u>18 651 870</u>
12. Financial instruments		

The organisation's non-derivative instruments consist of cash deposits with banks, accounts receivable and payable and loans from group companies.

Currency risk management

The organisation is not exposed to currency risk, other than the translation of its foreign bank account balance.

Interest rate risk management

The organisation adopts a policy of regularly reviewing interest rate exposure and maintains both fixed and floating rate borrowings.

Credit risk management

Management has a credit risk policy in place and exposure to credit risk is monitored on an ongoing basis. Provision is made for specific doubtful debts, and at the year end management did not consider there to be any material credit risk exposure that was not provided against. Reputable financial institutions are used for investing and cash handling purposes.

Fair values

The carrying amounts of the financial assets and liabilities carried on the balance sheet approximate their values at the end of the year.

13. Subsequent events

As at the date of signing these financial statements, there were no significant or material post balance sheet events which would require adjustments to or disclosure of in the annual financial statements.

14. Taxation

The Chamber of Mines of South Africa is exempt under section 10 (1) (d) of the Income Tax Act.