



CHAMBER OF MINES
of South Africa

INTEGRATED ANNUAL REVIEW 2016

Making Mining Matter

#MANGANESE #PLATINUM
#RegulatoryCertainty #MiningCharter
#SustainableFuture
#Coal
#Tomorrow'sMine
#Diamonds
#MiningCharter
#IllegalMining
#SafetyFirst
#SONA2017
#MiningfortheFuture
#ItAddsUp
#Mine2030
#GOLD
#WOMENINMINING
#MiningfortheFuture
#IfitsnotGrownitsMined
#MiningMatters
#IllegalMining
#BeBoldForChange
#feesmustfall
#miningmatters
#IfitsnotGrownitsMined

QUICK FACTS



455,109
direct jobs



Approximately
4.5 million
dependants supported



R120 billion
annual employee earnings

VISION

The Chamber of Mines' vision is to reposition the mining sector as South Africa's foremost industrial sector. In partnership with our key stakeholders, we envisage an environment that is conducive to shaping policy and legislation to facilitate a significant increase in real investment in the mining sector by 2030. Such an outcome would be a positive and game-changing catalyst in helping the country achieve its economic growth, development and transformation targets as articulated in the National Development Plan (NDP). In short, our vision is to ensure that mining matters for all South Africans.

& MISSION

The Chamber of Mines is committed to taking a leadership position in the South African mining space, working with its members and key stakeholders in becoming the most-respected, capable and trusted advocacy organisation for the entire mining sector. In seeking to realise its vision of a positive turnaround in the mining sector, the Chamber works in problem-solving partnerships with its key stakeholders.

OUR MEMBERS

Comprising more than 200 direct and indirect members, the Chamber of Mines represents around 90% of South Africa's mineral production by value, employs around 450,000 people and contributes around R18 billion in taxes per annum.



GOLD

AngloGold Ashanti; Sibanye; Gold Fields; Harmony; DRDGOLD, Pan African Resources, Village Main Reef

Gold remains one of the world's most-coveted metals, revered for its beauty, symbolism and held as a store of value. This versatile metal is malleable, conductive and does not tarnish, making it ideal for use in jewellery and many industrial applications.



COAL

Anglo American Coal; South32; Kuyasa Mining; Kangra Coal; Siyanda Coal; Sasol Mining; Shanduka Coal; Glencore; Exxaro; Total Coal; ARM Coal; Jindal Africa; Coal of Africa Limited, Msobo Coal; Mbuyelo Group; Ledjadja Coal; STA Coal; Dedicool; Vaalbult; Umcebo Coal; Sumo Coal; Springlake Colliery

Coal is the largest component of mining by sales value and is a critically important source of primary energy (electricity and liquid fuels) that drives the economy.



DIAMONDS

De Beers; Petra Diamonds; Trans Hex; South African Diamond Producers' Association

Diamonds, arguably the ultimate luxury mineral, are made of an intricate lattice of carbon atoms, a crystalline structure that makes them harder than any other form in nature. This characteristic makes diamonds not only popular in jewellery, but also desirable in high-tech cutting, grinding and polishing tools.



Scan this QR barcode with your smartphone or tablet to download the Chamber of Mines Integrated Annual Review 2016.



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HOW TO USE THIS REPORT

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PLATINUM

Anglo American Platinum; Lonmin; Impala Platinum; Ivanplats; Northam Platinum; African Rainbow Minerals Platinum; Royal Bafokeng Platinum; Wesizwe; Platinum Group Metals; Mvelo Platinum; Sibanye; Glencore Platinum

Platinum group metals (PGMs) constitute six noble metals, all silvery-white in appearance – platinum, palladium, rhodium, ruthenium, osmium and iridium. Platinum, palladium and rhodium are the primary metals of significant economic value. They are used largely by the automotive and chemicals industries for their excellent catalytic properties. Other uses include jewelry, investment (coins and bars), fuel cells, and many other industrial purposes.



BASE MINERALS

and industrial minerals: Kumba Iron Ore; Richards Bay Minerals; Glencore Alloys; Imerys; Pretoria Portland Cement; Black Mountain Mining; Palabora Mining Company; Kalagadi Manganese; Cronimet Chrome; Vametco; Tshipi é Ntle Manganese; Asia Minerals Limited; United Manganese Kalahari; Dwarsrivier Chrome Mine

Chrome is known for its high corrosion resistance and hardness. It is an essential metal in the production of stainless steel, which accounts for 85% of its commercial use. Manganese has numerous industrial and metallurgical applications, particularly in the manufacture of steel. In various forms manganese is used in the making of batteries and chemicals. Iron is among the most common elements on earth, comprising much of the planet's inner and outer core. However it cannot be extracted at such depth and is mined in the earth's crust of which it comprises some 5% of the total. Most iron ore is used to manufacture steel, which is, in turn, used to manufacture machines, buildings and tools.



OTHER

Aveng Mining; Fraser Alexander; Atha Group; Murray & Roberts; Corobrik; Rio Tinto; Siyanda Resources; Thebe; Shanduka; Clay Brick Association; Aggregate and Sand Producers' Association of Southern Africa; Deilmann-Haniel (SA); Pegmin; SA Association of Mining Contractors; Amava

SECTION 1 ORGANISATIONAL OVERVIEW AND STRATEGY



- 3 About the Chamber of Mines
- 4 Operating model
- 6 Strategy



CAPTION

Employees at Sibanye's Kroondal Platinum Mine, a low-cost mechanised mine

ABOUT THE CHAMBER OF MINES

The Chamber of Mines of South Africa (the Chamber) is a mining industry employers' organisation that supports and promotes the South African mining industry. The mining companies which are members of the Chamber collectively produce 90% of South Africa's minerals by value.

The Chamber serves its members and promotes their interests by providing strategic support and advisory input and represents its members in all key policy debates affecting mining. Key functions of the organisation are to facilitate interaction among mining employers, to examine policy issues and other matters of mutual concern and to crystallise and define desirable industry standpoints. A variety of initiatives are in place to promote collaboration between members. Consultation and collaboration are voluntary and do not compromise the autonomy of members.

The Chamber also acts as a principal advocacy group, representing mining in South Africa to government and communicating major policies endorsed by its members. The Chamber fulfills a vital function in co-ordinating and representing certain producers in centralised negotiations with organised labour.



Chamber members produce 90% of South Africa's minerals (by value).

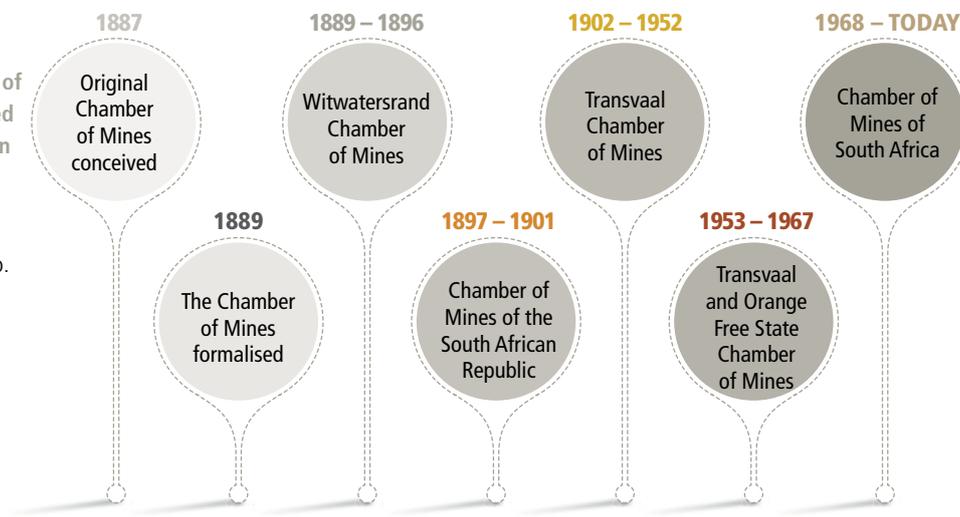
A CENTURY OF SERVICE,

collaboration, advocacy and leadership

A BRIEF HISTORY

The Chamber has undergone a number of name changes in its history necessitated by mining and political developments in South Africa.

More than a century of service, collaboration, advocacy and leadership.



OPERATING MODEL

This model illustrates what the Chamber of Mines does to achieve its objectives, the entities with which it engages, the means used and what was achieved in the past year.

Inputs



HUMAN CAPITAL

- Applying the vast technical experience and expertise available among members and their employees to improve the effectiveness of the Chamber and the industry



INTELLECTUAL CAPITAL

- Collaborating in R&D initiatives



SOCIAL AND RELATIONSHIP CAPITAL

- Engaging with business, Chamber members, government, research groups, trade unions, media, non-governmental organisations (NGOs) and others



NATURAL CAPITAL

- Implementing initiatives to:
- minimise water and energy usage,
 - reduce pollution
 - optimise the efficient use of natural resources
 - address legacy issues



FINANCIAL CAPITAL

- Chamber members contributing to and investing in industry-related initiatives – directly and indirectly



MANUFACTURED CAPITAL

- Creating platforms and opportunities for stakeholder engagement
- Enabling access to facilities and infrastructure

What we do

1

Engage effectively with stakeholders

2

Promote an understanding of our industry and enhance its image

PRIMARY STAKEHOLDERS WITH WHICH THE CHAMBER ENGAGES

GOVERNMENT	CHAMBER MEMBERS	TRADE UNIONS	SUPPLIERS AND RESEARCH GROUPS	INVESTMENT COMMUNITY	BUSINESS COMMUNITY	MEDIA
Including the Presidency, parliament and various government departments such as: Mineral Resources, Labour, Water and Sanitation, Trade and Industry, Environmental Affairs, Planning, Monitoring and Evaluation, Health and Higher Education	Established members and emerging miners	Amcu, NUM, Solidarity, UASA	Including existing and emerging suppliers, universities and NGOs	Local and international	BUSA, BASA, BLSA	National and regional print, online and broadcasting media

Operating model continued

What we do



Outputs 2016

-  Settlements achieved in gold and coal wage negotiations
-  Detailed Charters developed for the Quick-Win Programmes
-  Temporary residence permits and corporate visa exemption agreements
-  Engaged on industry's concerns regarding the NEMA Financial Provisions and the Waste Act
-  Award of a budget of R150 million of government funds in the Mid-Term Budget Statement
-  Voluntary submission to the South African Human Rights Commission hearing on mining and affected communities

Desired outcomes

(See Strategy on page 6)

 HUMAN CAPITAL	 INTELLECTUAL CAPITAL	 SOCIAL AND RELATIONSHIP CAPITAL	 NATURAL CAPITAL	 FINANCIAL CAPITAL	 MANUFACTURED CAPITAL
<ul style="list-style-type: none"> • Safe mining • Improved employee engagement and communication • Enhance training and development • Transformation • Addressing legacy issues 	<ul style="list-style-type: none"> • Promotion of research and development (R&D) unlock full potential of mining sector • Increased innovation to create the mines of tomorrow 	<ul style="list-style-type: none"> • Improved, responsive stakeholder relationships • Enhanced understanding and awareness of the South African mining industry 	<ul style="list-style-type: none"> • Improved resource management to ensure efficient use of resources 	<ul style="list-style-type: none"> • Increased investor confidence, leading to greater investment in the mining sector 	<ul style="list-style-type: none"> • Profitable, sustainable mining • Improved technology and mining practices (modernisation)

STRATEGY

The Chamber continues to implement its strategic plan during the year. A comprehensive strategic planning exercise is undertaken every three years and is reviewed by Council.

This plan is reviewed and amended annually to take into account prevailing socio-economic climate and specific issues raised by members. The illustration below outlines the current strategic plan (in its second year of the current three-year strategic planning cycle):

Strategic goal 1



Creating an enabling, policy, legislative and operating environment for a sustainable and successful mining industry

President's Framework Agreement for a Sustainable Mining Industry	P33-37
Mining Industry Growth, Development and Employment Task Team (MIGDETT)	P60
Mineral and Petroleum Resources Development Act (MPRDA) Amendment Bill	P13
Participate in the Integration of Compensation for Occupational Injuries and Diseases Act (COIDA) and Occupational Diseases in Mines and Works Act (ODMWA)	P12, 47 and 53
Mining Charter	P61
Tax Task Team on Davis Tax Review Committee	P47
Climate Change and Carbon Management Tools	P84
Deputy President's Labour Relations Declaration (Nov 2014) and National Economic Development and Labour Council (NEDLAC) Technical Task Teams dealing with labour legislation on national minimum wage (NMW) and violent and prolonged strikes	P36-37
One Environment System	P85-87
Classification of Mine Residue Deposits and Stockpiles (MRDS) as hazardous waste and National Environment Management Act (NEMA) Regulations on Financial Provisions	P83
Skills Education Training Authority (SETA) Grant Regulations	P67
Illegal mining	P93
2015 gold wage negotiations	P33
2017 coal wage negotiations	P35

Strategic goal 2



Promoting a positive image of the South Africa mining industry among stakeholders and society

Communications	P77
Employee indebtedness	P38
Reconciliation and rebranding	P10 and 15
School information programme	P80
Quarterly meetings between the principals of the Chamber and of the National Union of Mineworkers (NUM) and of Association of Mineworkers and Construction Union (AMCU)	P79
2014 health and safety milestones	P42
Engagement with government	P77

Strategic goal 3



Chamber and its members to implement a positive socio-economic contribution model (including contributing to the NDP)

Promote localisation of production among mining suppliers	P61, 71, 72 and 76
Mining modernisation	P70
Centre of Excellence	P43

Strategic goal 4



Leading by example – demonstrating progress on transformation, safety, and social and environmental imperatives (including the sharing of leading practice)

Promote zero harm (safety and health)	P39-56
Facilitate legacy payments from pension/provident funds	P12, 47 and 53
Implement Ex-Mineworkers Project	P53
Accommodation	P36
Environmental legacies	P83-89

Strategy continued

Improving the effectiveness and Performance of the Chamber



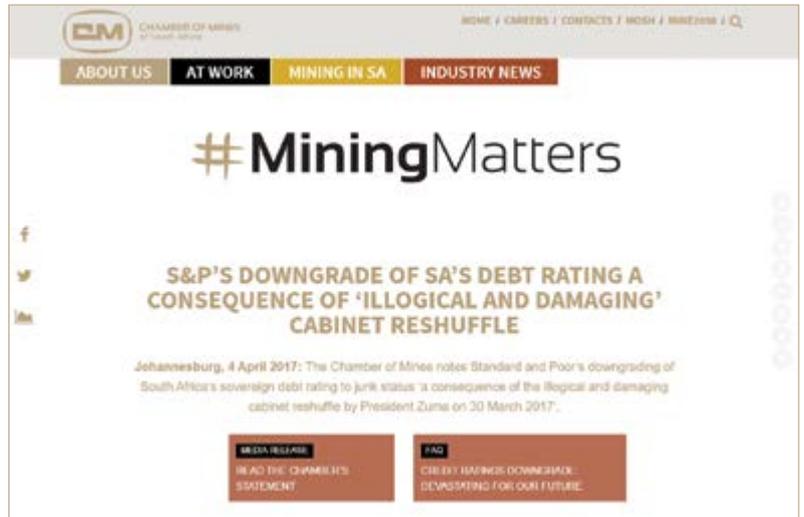
Communications



Internal performance management



Modernisation of the Chamber building



www.chamberofmines.org.za



www.mine2030.co.za



www.mosh.co.za/about-us/about-mosh



www.facebook.com/Mine



[@Mine_RSA](https://twitter.com/Mine_RSA)

SECTION 2 LEADERSHIP AND GOVERNANCE



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CAPTION

Haul trucks at Kumba Iron Ore's Sishen mine – one of the largest open pit mines in the world

LETTER FROM THE PRESIDENT



There are times when our industry and our primary regulatory authority, the Department of Mineral Resources (DMR), become so caught up in the immediacies of today that we do not afford ourselves the opportunity to step back and assess dispassionately where our industry, which remains an important foundation of our society and our economy, has come from and where it is going.

The tough negotiations over Mining Charter III took a great deal of time and energy, including emotional energy from all sides, during the year under review, and continued into 2017. These included the launch – originally by agreement with the DMR, with the action held in abeyance pending negotiations – of an application for a declaratory order on the so-called “once empowered, always empowered” issue in respect of the interpretation of the Charter’s black economic empowerment (BEE) ownership provisions.

At the time of writing, these issues had not yet been finalised. It is our hope that they will be resolved on a mutually satisfactory basis.

But as my term as Chamber president comes to a close, I would like to reflect on the industry, its challenges, its achievements and what remains to be done.

The issues of safety, volumes and costs will always be with us. Right now, we appear to have survived the worst of the recent commodities downturn, in almost all cases, thanks only to difficult restructuring exercises which came at significant human capital cost in terms of jobs, which our country dearly needs. Around 69,000 mining jobs were lost between 2012 and 2016 as mining companies battled to remain viable. Now, for many of us, prospects are looking somewhat better. Are we heading for that summer I often refer to?

The industry’s safety record has improved substantially since 1994, with the number of fatalities down by some 87% and the fatality rate having fallen by around 75%. Much excellent work has been done, not least by the Chamber’s Chief Executive Officer (CEO) Zero Harm initiative and the strength of the tripartite structure of the Mine Health and Safety Council (MHSC). That said, we cannot allow a repetition of the 73 fatalities that occurred in 2016. We mourn with the families, colleagues and friends of our departed colleagues.

MIKE TEKE

President

Mining remains an important foundation of our society and economy.

LETTER FROM THE PRESIDENT continued

Our safety record is perhaps a good illustration of other social and socio-economic challenges. We have made great strides towards transforming the situation. But we need a radical transformation. Yes, radical, well-communicated and coordinated.

We hear the calls for radical economic transformation. For our industry, that should ring many bells. For us it is not merely a political slogan. It is a clarion call to speed up and intensify that which we have been doing, since 1994 and especially since the Mining Charter came into being in 2004. Our view is that this country needs higher levels of inclusive growth, which is the real meaning of radical economic transformation.

This was an industry that once had no more than a handful of skilled black workers and women in its ranks. Black and female managers were equally scarce. By 2004, their numbers had grown, though they hardly equated to the South African demographic. Today, the majority of managers and skilled workers are black and/or female.

Similarly, in 2004, there were a handful of black mining entrepreneurs who had emerged from the earliest pre-Charter BEE deals. Today we see well-known corporate names in our sector that emerged from a string of deals – African Rainbow Minerals, Exxaro, Royal Bafokeng Platinum and Kalagadi Manganese, among others. Admittedly as well, there have been deals that were not so successful and we should learn from those experiences.

We also need to get away from the mistaken idea that the other mining companies are hence “white-owned”. The era where shareholdings in the industry were dominated by individuals or families is long gone. Today, more than 50% of the industry is owned by millions of South Africans, through pension funds and investments, across all racial groups, including the Public Investment Corporation (PIC) and the Industrial Development Corporation (IDC). The bulk of the remainder is owned by foreign pension and other asset-management funds, on whose investment dollars we are very dependent.

Notwithstanding all of this, South African mining companies still need to do much more to transform themselves and our country, and especially our workforce, before they reflect South Africa’s overall demographic. It remains the case that the average black household earns substantially less and owns a great deal less than that of their white counterparts. While this of course is not something the mining industry can fix on its own, these racial inequalities will continue to blight our society and our economy until they are largely remedied.

The NDP remains the lodestone of South Africa’s development path. The mining industry owes it to our society to walk that road energetically and to focus on the issues already discussed, contributing optimally to the development of economic and social infrastructure, and generally operating efficiently and profitably. We can contribute to more inclusive growth.

We can do no less.

Regrettably, I need to end this letter by commenting on the chain of events that culminated in late March and early April with the firing of Finance Minister Pravin Gordhan, along with his deputy, and the downgrade of the country’s debt status to junk by, at the time of writing, two rating agencies so far. The impact of these actions will only hamper government’s and the economy’s ability to achieve the transformation so desperately needed. We remain painfully aware that a big milestone in this chain of events was the Public Protector’s report on state capture which, as we know, focused on events in the mining industry. Those events were and are the antithesis of radical transformation!



MIKE TEKE

President

12 May 2017



‘Radical economic transformation’ is a clarion call to speed up and intensify that which we have been doing since 2004.

CHIEF EXECUTIVE'S REVIEW



As ever, the Chamber of Mines' principal responsibility is to properly represent the interests of its members by providing advice and services directly as well as working with government to establish a statutory and regulatory jurisdiction that delivers the certainty, based on an equitable approach, needed to attract mining investment, to bring about transformation that will allow the industry to contribute to the aims of the NDP. Without investment, inclusive growth is not possible. The mining industry needs predictable, stable and competitive mining policy, and legislation that is workable and practically achievable.

SAFETY

Mine safety and our objective of reaching a position of zero harm remain paramount. And our commitment is unflinching. Mine fatalities declined to 73 during 2016, a 5% decline on 77 in 2015. Sadly, though, we are not yet at our target of zero. It is of particular concern that there was an increase in fall-of-ground related fatalities, an area where the industry has made such great strides in recent years. The industry must redouble its safety initiatives.

My colleagues at the Chamber and I extend our sincere condolences to the families, friends and colleagues of those whose lives were lost.

In 2016, overall injury rates continued to fall, showing a consistent and underlying improvement in performance. It is worth noting that the rate of serious injuries recorded improved by 13% over the previous year. In the past two decades, the annual number of fatalities has declined by 88%, the fatality rate by 75% and the serious injuries rate by 69%. These are figures that underscore what is possible when mining companies, government, employees and the unions work together on this most important of issues.

The context and causes of catastrophic incidents that result in fatal accidents require a different approach. It is for this reason that the CEO Zero Harm Task Team was established, and plays such an important role in leading mine health and safety from the top so as to achieve the 2024 milestones on occupational health and safety.

ROGER BAXTER
Chief Executive Officer

The mining industry needs predictable, stable and competitive mining policy, and legislation that is workable and achievable to drive investment and inclusive growth.

CHIEF EXECUTIVE'S REVIEW continued

It is in a similar vein that the industry cannot accept the inappropriate application by the DMR's safety inspectors of Section 54 mine closures. We unequivocally support the fact that the inspectors have a vital role to play in ensuring the safety of miners and compliance by all parties and that Section 54 instructions are a necessary part of this. But the wholesale closure of mines for minor and localised safety failures is disproportionate and, in many cases, contributes to systemic failures by focussing on the wrong things.

Discussions with the DMR over the past few years have thus far not led to a mutual understanding on this matter. This in turn has obliged some Chamber members to seek the intervention of the courts.

The Chamber has developed a draft Section 54 implementation policy and it is hoped this will get traction in government to enable a fairer application. The industry and its members remain open to engaging constructively in seeking fair, reasonable and mutually acceptable outcomes.

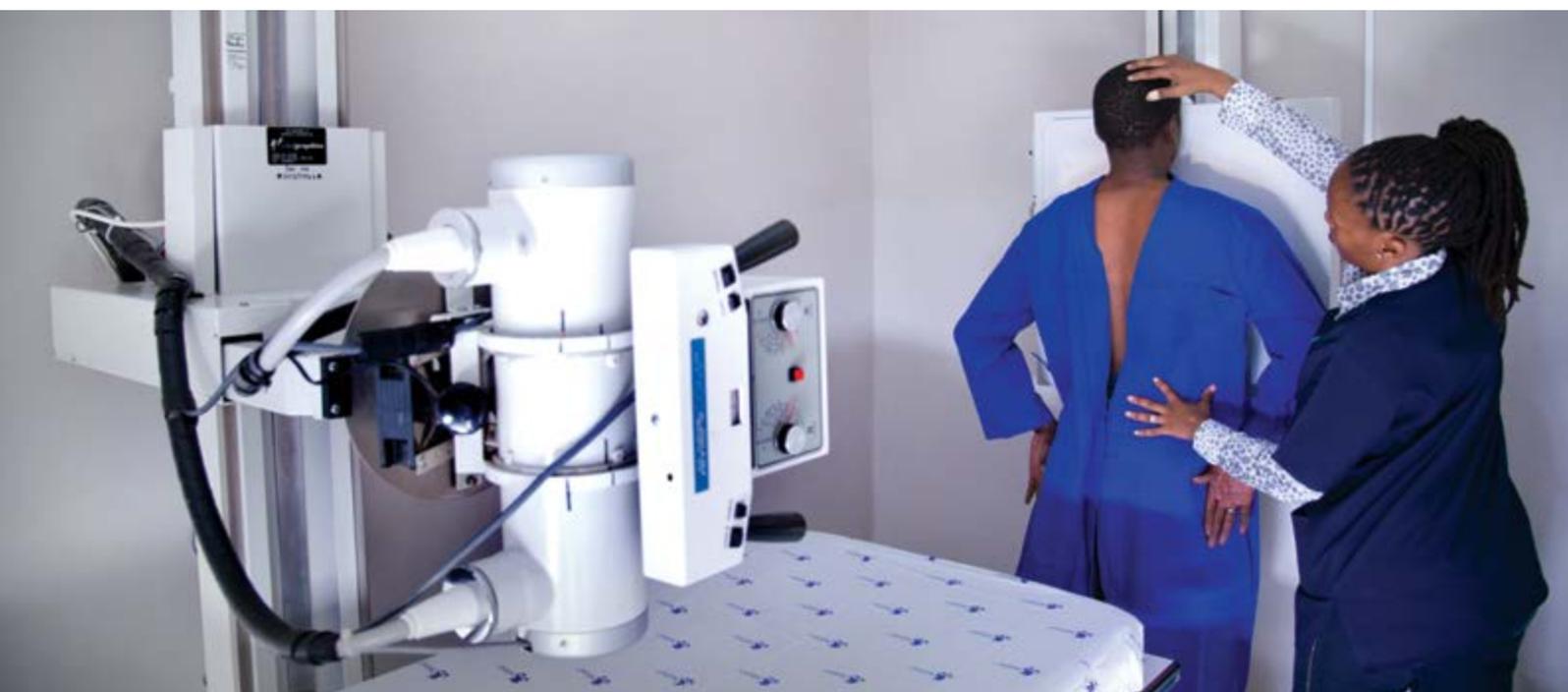
HEALTH

The mining industry's determination to improve the health and safety of its employees and to ensure fair compensation for those suffering from occupation-related diseases took further steps through a series of engagements with the Ministries and Departments of Health, Labour and Mineral Resources to discuss how best to approach the integration of compensation systems currently governed separately by the ODMWA and the COIDA. Working discussions are continuing. In the interim, the industry's support for the efforts by the Medical Bureau for Occupational Diseases (MBOD) to track and compensate former miners suffering from occupational illnesses continued with material progress made.

Further, the Chamber's contribution towards eradicating tuberculosis (TB) in mining communities continued to gain momentum as the Masoyise iTB programme entered its second year.



The mining industry is determined to improve the health and safety of its employees. Here, a Royal Bafokeng Platinum employee undergoes a medical examination



MINING ECONOMICS

Last year and the first weeks of 2017 saw a welcome change in the fortunes of some mining sectors. After opening 2016 at a low of \$1,077/oz in London, spot gold prices advanced to a peak of \$1,366/oz before steadily declining to a low of \$1,126/oz in the year's final fortnight. Since the start of 2017, the gold price has strengthened somewhat, reflecting its worth as a safe-haven investment at a time of dollar weakness and uncertainty over the ramifications of the Trump presidency in the United States.

The progress in iron-ore prices was even more startling, based on Chinese demand, with benchmark prices almost doubling in the year to peak in the vicinity of \$80/t cif Chinese ports by the close of 2016. In contrast, spot platinum prices were unable to sustain their improvement of the year's first three quarters. Platinum prices moved in line with those of gold. Having reached a year's low of \$814/oz in the latter part of January 2016, spot metal rose to \$1,182/oz in London in August before falling below \$900/oz as the year came to an end.

There are signs that the world economy is recovering slowly with growth centred on a few mineral commodities. Against this, however, should be set the fact that the index of minerals production shows production to have been 15% lower in 2016 than its peak in 2005, another indication that greater certainty is needed if the country's output is to set out on a permanently upward trajectory.

The post year-end downgrading of South Africa's sovereign debt rating to junk status by two ratings agencies was a devastating blow to the economy. The consequent downgrading of banks and other companies soon followed, and the result is likely to be significantly detrimental for the entire country. The downgrade will raise the cost of capital, increasing government and private borrowing costs, increasing the portion of government revenue that has to be allocated to covering debt service costs – thus crowding out other key government programmes, weakening the currency, raising inflation and, ultimately, affecting investment, growth and employment creation. The poor especially will be affected by higher inflation, with fewer resources available for social grants, low investment and limited growth in employment opportunities. Consequently, poverty levels will rise.

We will continue to work with the new Minister of Finance and his team to restore our country's investment grade.

MINERALS REGULATION

Of concern to the industry is the protracted evolution of the DMR's proposed changes to the MPRDA and the Mining Charter, the latter in its third iteration. At the time of writing, pending the publication by the DMR of a new draft following that published in May 2016, various issues are of concern. There is the question of mining companies' compliance with their BEE ownership obligations in terms of the existing Charter, the so-called "continuing consequences" factor. The Chamber in 2015 lodged a court application for a declaratory order on the proper interpretation of this provision. The decision to do so was originally made jointly with then Minister Ngoako Ramatlhodi. We have held back on proceeding with the application pending discussions aimed at reaching consensus.

Other concerns raised by the Chamber in the past year relate to the proposal that mining companies must contribute 15% of skills expenditure to a Mining Transformation and Development Agency (MTDA) for social and training spend. Little is known of the purpose and governance of this agency, and instead of creating brand new government bureaucracy, we should be focusing on improving the MQA. The DMR's procurement and employment equity targets remain, in our view, impractical and unachievable.



There are signs that the world economy is recovering slowly with growth centred on a few mineral commodities.

CHIEF EXECUTIVE'S REVIEW continued

The DMR also continues to insist that multi-national companies supplying goods and services to the mining industry should pay 1% of turnover generated from local mining companies to the new MTDA. This doubles the target set in the 2010 Charter.

The Chamber believes that this is simply an additional tax which the multi-national companies will pass on to local mining companies in the form of higher prices, rendering the South African mining industry less competitive than it already is.

MODERNISATION

The Chamber and its members believe that the future of South Africa's mining industry remains firmly rooted in the mines' ability to work ever-deeper ore, safely, healthily and profitably. We support endeavours by our members to develop new equipment and mining techniques that could eventually lead to fully mechanised and remotely-operated underground equipment. For such equipment and techniques to be successful, we need a collaborative, holistic and people-centric approach to its adoption.

THANKS

It falls to me to sincerely thank outgoing Chamber President, Mike Teke, for his three and a half years of inspired leadership, and its Vice Presidents, Andile Sangqu and Neal Froneman, for their unstinting support and guidance through the year. Thanks must also go to Graham



Underground at AngloGold Ashanti's Mponeng Gold Mine, the world's deepest mine



Chief Executive's Review continued

Briggs, who retired as Vice President in May 2016. As always my thanks go, too, to the Chamber Council, to our executive team and the Chamber's entire staff for all the progress we have made in the period under review.

I am confident that working together as a team the Chamber will progress further in its task of properly representing and assisting its members, and that it will continue to play an ever-increasing role in the development of South Africa's mining industry for the benefit of all.

LOOKING BACK TO LOOK FORWARD

In concluding this review, which inevitably focuses on the challenges faced by the industry, I wish to pause and consider the role of mining and of the Chamber of Mines in South Africa.

Mining has played a vital role in the economy for over 100 years. In 2016, the mining industry contributed R304 billion towards South Africa's gross domestic product (GDP), representing 7.3% of overall GDP. Mining directly contributed R93.3 billion to fixed investment, while R3.7 billion in royalties and R12.5 billion in taxes were paid to the South African government. Mining remains a significant contributor to employment, with 455,109 individuals employed directly by the sector at the end of 2016. This represents just over 5.4% of all employed nationally. In total, these employees earned R120 billion in 2016, and contributed around R18 billion to the fiscus in terms of Pay As You Earn (PAYE) tax.

Looking back, this is an industry that has contributed greatly to the South African economy and its people. It has also done so at a cost – to people and to the environment – sometimes knowingly and intentionally, sometimes not. This is an industry that, today, must recognise its past and address the legacies that it has to bear. It is also an industry that must look forward to ensuring that future legacies are positive, value-accretive and responsible. The Chamber has accelerated its efforts in dealing with legacy issues and great progress is being made. The Chamber and its members remain committed to inclusive growth and meaningful economic transformation in the sector.

In 2015/2016, the Chamber of Mines Council considered the reports of a comprehensive brand assessment of the Chamber of Mines. It also considered and approved the Chamber's strategic direction in the future focussing on making the Chamber a cutting edge, progressive, modernising and transforming South African organisation.



ROGER BAXTER
Chief Executive Officer
12 May 2017



We must ensure that the legacies of the future are positive, value-accretive and responsible.

CHAMBER STRUCTURE

The Council of the Chamber of Mines comprises representatives of member companies. As the highest-ranking body in the Chamber, the Council guides and directs strategy. Council members nominate and elect three office bearers – the President and two Vice Presidents.

OFFICE BEARERS

1 President

Mike Teke

BA (Ed); BA (Hons); MBA

Mike Teke has served in various human resources roles at Unilever, Bayer, BHP Billiton and Implats. In 2008, he became one of the founding members and CEO of Optimum Coal. Mike was appointed Vice President of the Chamber of Mines in 2011 and elected Chamber President in 2013.

2 Vice President

Andile Sangqu

BCom (Acc); BCompt (Hons); CTA; Higher Diploma Tax Law; MBL

Andile Sangqu has provided leadership and guidance in various strategic areas including financial restructuring and development, strategic planning, organisational transformation and change-management processes. Andile is currently executive head of Anglo American South Africa. He has also held senior positions in various government departments and currently serves as a non-executive director in a number of companies.

3 Vice President

Graham Briggs

(retired in May 2016)

BSc (Hons)

Graham Briggs is the immediate past chief executive of Harmony, a position he was appointed to in January 2008, having joined Harmony in 1995. Graham has some 38 years of experience in the sector. Graham retired from Harmony at the end of 2015. He served as Vice President of the Chamber from 2013 until May 2016.

4 Vice President

Neal Froneman

(appointed in May 2016)

BSc Mech Eng (Ind Opt), University of the Witwatersrand; BCompt, University of South Africa; PrEng

Neal Froneman has been at the helm of Sibanye since January 2013 and has some 30 years of operational, corporate development and mining industry experience. He was appointed CEO of Alease Gold Limited (Alease Gold) in April 2003. Alease Gold, through a series of reverse take-overs, became Gold One in May 2009. Neal was primarily responsible for the creation of Uranium One Incorporated (Uranium One) from the Alease Gold uranium assets. During this period, he was CEO of Alease Gold and Uranium One until his resignation from Uranium One in February 2008. Prior to joining Alease Gold, Neal held executive and senior management positions at Gold Fields of South Africa Limited, Harmony Gold and JCI Limited. He currently serves as a non-executive director in a number of companies. Neal was elected as Vice President of the Chamber in May 2016.



Chamber structure continued

CHAMBER EXECUTIVES

**1 Chief Executive Officer
Roger Baxter**

BCom (Hons)

Roger Baxter joined the Chamber in 1992. He has played a leadership role in nearly all the major mining policy discussions over the past 25 years. He participated in the team negotiating a revised mineral policy with government and was the Chamber's negotiator on the Mining Charter, the Charter's Scorecard and in the Mineral Royalty Bill discussions. Roger has also played a pivotal role in MIGDETT which was established in 2008 to find ways of counteracting the effects of the global economic crisis on the industry and positioning mining for the next commodity upswing.

Roger has brought a key strategic focus to the Chamber and has led the strategy process, the modernisation of the Chamber and its brand.

**2 Senior Executive: Public Affairs
and Transformation
Tebello Chabana**

BA (Law), LLB

Tebello Chabana joined the Chamber in July 2016 following his departure from Anglo American South Africa. He began his legal career at Deney's Reitz Attorneys, then joined Anglo American South Africa as a Legal Advisor and served in a range of positions, ending as Head of Public Affairs South Africa. Tebello also spent time at Kumba Iron Ore as Executive Head of Public Affairs.

**3 Senior Executive: Employment Relations
and Legal
Dr Elize Strydom**

BA (Law); LLB; LLM; LLD

Labour law and employment relations expert, Elize Strydom, joined the Chamber in 1999 as an industrial relations manager and has risen through the ranks to her current position. She is also the chief negotiator for the Chamber's Gold members.

**4 Senior Executive: Environment, Health
and Legacies
Nikisi Lesufi**

BSc (Hons); MSc

Nikisi Lesufi joined the Chamber in 2002 as an environmental adviser. He was appointed to his current position in 2008.

**5 Senior Executive: Finance and Administration
Harry Groenewald**

BCom; MBL

Harry Groenewald's career in the mining industry started in 1985 when he joined Rand Mines. Prior to joining the Chamber, Harry was involved with copper and cobalt projects in the Democratic Republic of the Congo with ENRC, a Kazakhstan-based mineral resources company.

**6 Senior Executive: Modernisation and Safety
Sietse van der Woude**

MSc; MBL

Sietse van der Woude joined the Chamber in 2004 as a safety and sustainable development manager. He previously led the implementation of a regulatory framework for radiation safety in the mining industry at the National Nuclear Regulator.



CHAMBER STRUCTURE continued

SENIOR MANAGEMENT

- 1 Head: Environment
Stephinah Mudau
- 2 Head: Health
Dr Thuthula Balfour
- 3 Head: Learning Hub
Stanford Mamoshito Malatji
- 4 Head: Administration
Jeannette Hofsjager-Van Wyk
- 5 Head: Safety and Sustainable Development
Dr Sizwe Phakathi
- 6 Head: Employment Relations
Motsamai Motlhamme
- 7 Head: Skills Development
Mustak Ally
- 8 Chief Economist
Henk Langenhoven



DEPARTMENTS



The **Economics** team provides input on matters affecting investment in the South African mining industry and issues facing the mining industry which have an economic impact. The team's function includes collating and analysing data and information on behalf of the industry, and advising industry on responses and positioning in respect of critical issues.



The **Employment Relations** team provides service excellence to members in the field of labour relations, including labour market issues, collective bargaining, employment equity and social security.



The **Safety and Sustainability** team actively promotes safety and health in the workplace for mineworkers as well as promotes effective environmental management, and has identified areas in which the organisation can initiate positive change.



The **Health** team provides service excellence to members in the field of occupational health, including occupational medicine and occupational hygiene and ventilation, as well as advocacy and advice on TB, HIV and AIDS.



The **MOSH (mining industry occupational safety and health) Learning Hub** was established by the Chamber in 2009 to encourage and enable mining companies to learn from the safety and health expertise and leading practices that exist in the industry.

Chamber structure continued

The Chamber continuously looks for ways to advance the position of and make improvements in the South African mining industry and participates in various initiatives and projects in areas relating to health, education, policy and regulations.



 **IMAGE**

Kimberlite is removed from the open pit at De Beers' Venetia Diamond Mine



The Chamber's **Public Affairs and Transformation** team seeks to engage and inform all mining industry stakeholders through multi-channel communications and networking systems.



The Chamber's **Emerging Miners' Desk** provides advice and support, and acts as a resource centre for the smaller Chamber member companies.



The **Skills Development** team facilitates an environment that enables the mining industry to deliver skilled and trainable employees for deployment and advancement. A skills development initiative represents members in the areas of education and human resources development and associated policy and legislation.



The **Environmental** team is charged with ensuring environmental issues are addressed in a manner that enhances members' contributions to sustainable development and ensures that risks to the viability of the mining industry are identified and managed.



The **Legal** team provides the legal advice necessary to act on behalf of members in influencing legislative and other measures affecting members' interests. The focus is on constructive policies that are consistent with the national interest.



The **Illegal mining** team assists in addressing challenges from a range of perspectives with the rise of illegal mining in South Africa.

CHAMBER STRUCTURE continued

CHAMBER COUNCIL

As at 31 December 2016



- 1 Chamber of Mines: President
Seriti Resources: CEO
Mike Teke
- 2 Chamber of Mines: Vice President:
Anglo American South Africa: Executive Head
Andile Sangqu
- 3 Chamber of Mines: Vice President
Sibanye Gold: CEO
Neal Froneman
- 4 Kuyasa Mining: Executive Chairman
Ayanda Bam
- 5 Chamber of Mines: CEO
Roger Baxter
- 6 Northam Platinum: CEO
Paul Dunne
- 7 South32 Africa: President & COO
Michael Fraser
- 8 Impala Platinum (CEO)
Terence Goodlace
- 9 Anglo American Platinum: CEO
Chris Griffith
- 10 Gold Fields: CEO
Nick Holland
- 11 Glencore Coal: COO
Murray Houston
- 12 Sasol Mining: MD
Lucky Kgatle
- 13 Lonmin Platinum: CEO
Ben Magara
- 14 Anglo American South Africa:
Deputy Chairman
Norman Mbazima
- 15 Kumba Iron Ore: CEO
Themba Mkhwanazi
- 16 Richards Bay Minerals: CEO
Mpho Mothoa
- 17 De Beers Consolidated Mines: Chairman
Barend Petersen
- 18 Royal Bafokeng Platinum: CEO
Steve Phiri
- 19 Aspasa: Director
Nico Pienaar
- 20 Glencore Alloys: CFO
Willie Potgieter
- 21 DRDGOLD: CEO
Niël Pretorius
- 22 African Rainbow Minerals: CEO
Mike Schmidt
- 23 Harmony: CEO
Peter Steenkamp
- 24 AngloGold Ashanti: CEO
Srinivasan (Venkat) Venkatakrishnan
- 25 Palabora Mining Company: Chairman and CEO
Jinghua Han
- 26 Exxaro: CEO
Mxolisi Mgojo

CHAMBER COMMITTEES

PLATINUM LEADERSHIP FORUM

DIAMOND LEADERSHIP FORUM

COAL LEADERSHIP FORUM

GOLD LEADERSHIP FORUM

MANGANESE LEADERSHIP FORUM

CEO ZERO HARM TASK TEAM

Chamber structure continued

CHAMBER COUNCIL

As at 31 December 2016

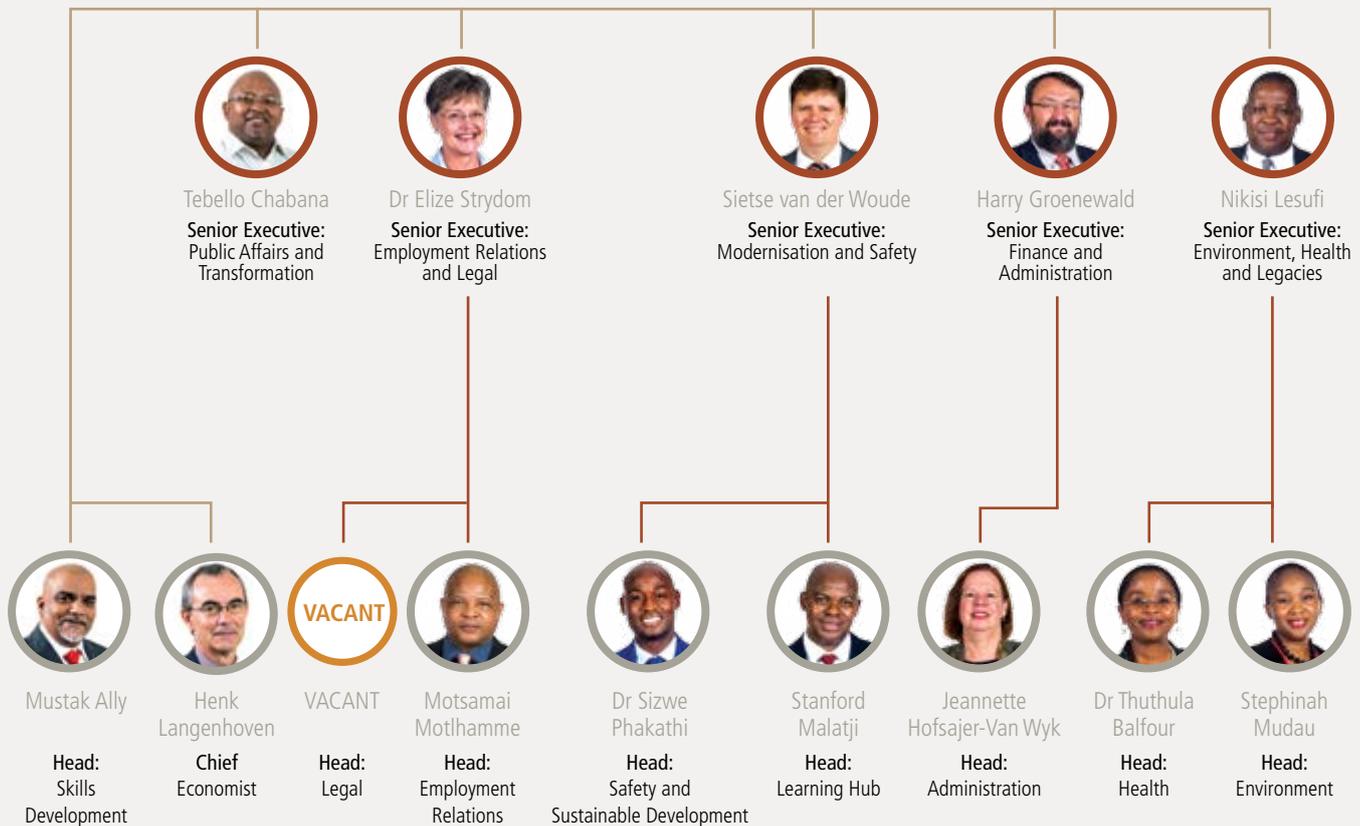


CHAMBER MANAGEMENT

As at 31 December 2016



Roger Baxter
Chief Executive Officer



SECTION 3 OPERATING ENVIRONMENT



23 Economics of mining



Anglo American Platinum's Mogalakwena is the largest open pit platinum mine in the world



ECONOMICS OF MINING

The challenges faced by the mining sector in South Africa continue unabated. Since the recession and financial crisis of 2008, the mining sector has experienced six year-on-year reductions in its percentage contribution to GDP.

After what seemed to be an improvement in 2015 (3.9% growth), the industry's contribution to GDP decreased by 4.7% in 2016. The sector's share of GDP declined from 7.7% in 2015 to 7.3% in 2016, the lowest since 2006 (6.4%).

A number of factors explain the decrease, including costs, low commodity prices and uncertainty emanating from the domestic policy environment. These factors posed challenges for some major mines in their efforts to remain profitable. As in 2015, many platinum and gold mines operated at a loss at some point during the year. The implementation of Section 54s (mine safety stoppages) by the DMR resulted in severe revenue losses.

The domestic policy environment deteriorated further and markedly in March and April 2017 due to the cabinet reshuffle that included the firing of Finance Minister Pravin Gordhan and the consequent downgrading of SA's sovereign debt rating. The downgrade will raise the cost of capital, increasing government and private borrowing costs, increasing the portion of government revenue that has to be allocated to covering debt service costs - thus crowding out other key government programmes, weakening the currency, raising inflation and, ultimately, affecting investment, growth and employment creation.

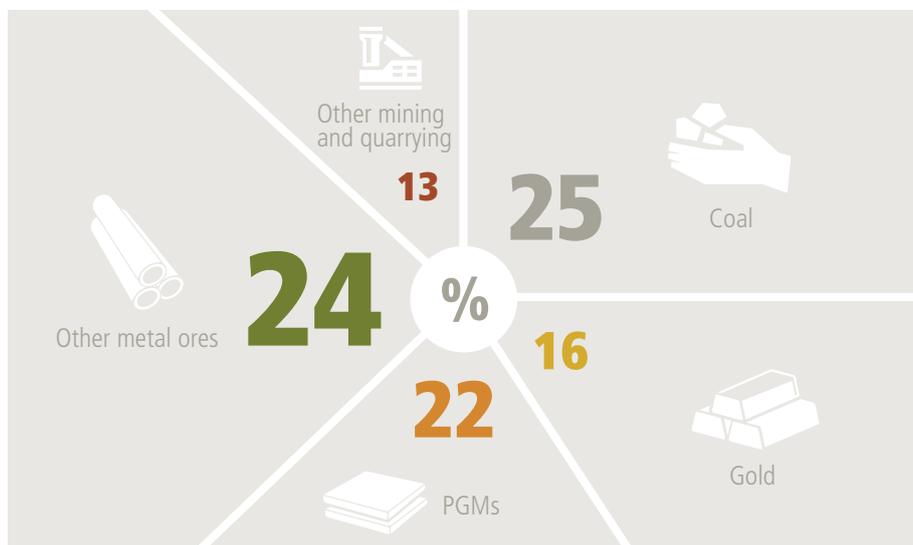
The mining industry continues to play a significant role in the country's development. This goes beyond direct expenditure on goods, services and employment. The mining industry is also a significant foreign-exchange earner, which makes it possible for the country to service its international debt obligations and to import foreign technology, so important for today's economic growth. Preliminary figures for 2016 indicate that total mineral exports amounted to R221.5 billion of the total merchandise exports of R1.1 trillion or 20.1%.

South African mining GDP increased to R304 billion in 2016 from R284 billion in 2015 in actual (or nominal) rand value. The largest contributors to mining GDP were the coal, PGMs and gold sectors, which contributed 25%, 22% and 16%, respectively.



1. **Henk Langenhoven**
Chief Economist

2. **Bongani Motsa**
Senior Economist



Contribution to mining GDP by sector – 2016

- Coal
- Gold
- PGMs
- Other metal ores
- Other mining and quarrying

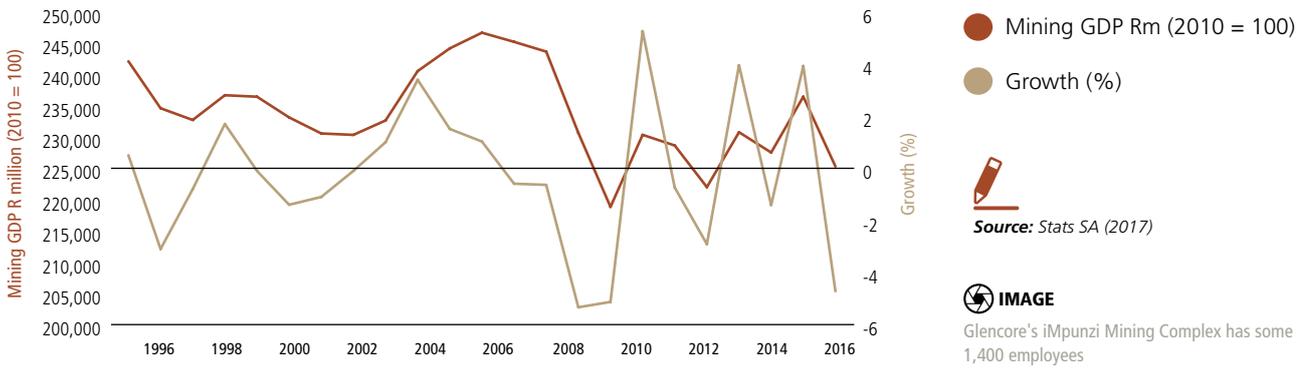


Source: Stats SA (2017)

ECONOMICS OF MINING continued

The impact of the increasingly unstable international and domestic environment in which mining operates is harshly illustrated by the fluctuations in the sector's GDP performance in recent times – at least since 2007 when there have been regular contractions in the industry's total economic activity.

Annual South African mining GDP fluctuations



Economics of mining continued

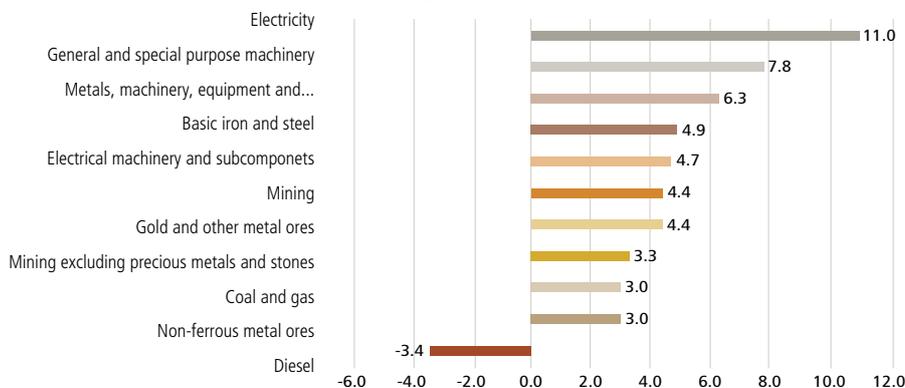
The mining sector's profitability is dependent on the selling prices of its commodities, mostly in international markets over which it has no control, and input costs incurred in the production of its commodities. Total production is estimated to have been R570 billion in 2016, with labour costs absorbing around 26% and intermediary costs 47% of the total. The biggest intermediary input cost drivers are petroleum and other chemicals (9%); machinery and equipment (+6%); electricity, gas and steam (6%); wholesale and retail trade (6%); and transport and storage (50%). On average, intermediary costs have increased annually by 12.3% in the last 10 years and by 8.2% since 2000. Average labour unit costs increased by 13.2% a year over the last 10 years and by about 10% over the last six years. These are averages calculated from national data for the sector, which will differ for every commodity group and for every mine within each commodity group.

Administered prices make up about 20% of the consumer price index and more than 12% of the production price index. Diesel and electricity costs tend to dominate the list of cost drivers. Some 80% of energy consumption in the primary sector including mining is diesel-based. It is hoped that as the National Treasury reviews the Diesel Fuel Tax Refund System (DFTRS), the benefits enjoyed by the mining sector will not be withdrawn – but instead be escalated – to improve the competitiveness of an already shrinking industry.¹

¹ The National Treasury has published a paper regarding the Diesel Fuel Tax Refund for public comment by 1 May 2017. Currently, companies meeting a specified threshold in the mining sector enjoy relief in the form of a refund pegged at 40% of the Fuel Levy and at 100% of the Road Accident Fund (RAF) Levy.

KEY COST DRIVERS IN MINING - AVERAGE ANNUAL RATE OF INCREASE IN COSTS 2013-2016

Producer Price Index (PPI) (% Average change, 2013 – 2016)



The mining sector
contributed 7.3% of GDP in 2016



Source: Stats SA (2017)

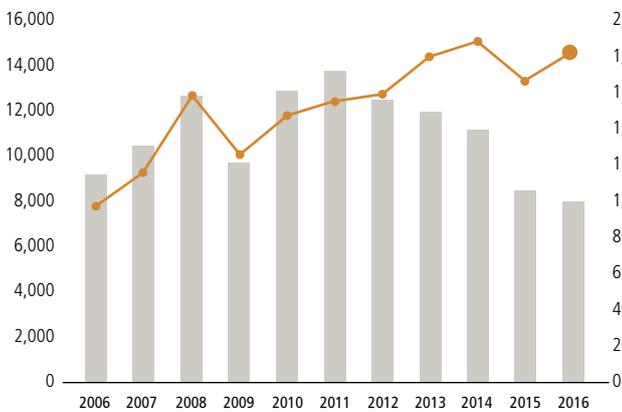
The sector paid R11.1 billion in corporate taxes in 2015, which improved further to an estimated R12.5 billion in 2016 according to National Treasury. The sector also paid R3.7 billion in royalties in 2015 and R6.3 billion in 2016. Dividend payments dropped from R7.026 billion in 2015 to an estimated R5.953 billion in 2016.

ECONOMICS OF MINING continued

GLOBAL COMMODITY PRICES

In 2016, the price trends for minerals were mixed. In dollar terms, platinum prices fell to an average of \$992/oz in 2016 from \$1,053/oz the previous year. On the other hand, rand platinum prices were up from R13,310/oz in 2015 to R14,622/oz in 2016. Gold prices increased in rand and dollar terms. In rand terms, local iron-ore prices decreased slightly to R626/t from R650/t. Average export prices for iron ore increased by 25.2% to R671/t in 2016. Coal export prices also fell to R615/t in 2016 from R678/t. However, the average local coal prices increased by 4.6% in 2016 to R308/t. The combined impact of rising commodity prices and a depreciated rand against the US dollar seemed to save the day for some industries.

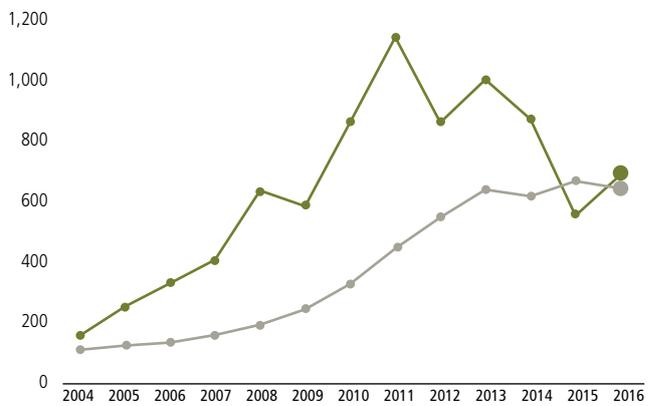
Platinum price (annual average), US\$/oz and r/oz




Platinum price in
Rand/oz (rh-side)


Platinum price in
US dollar/oz

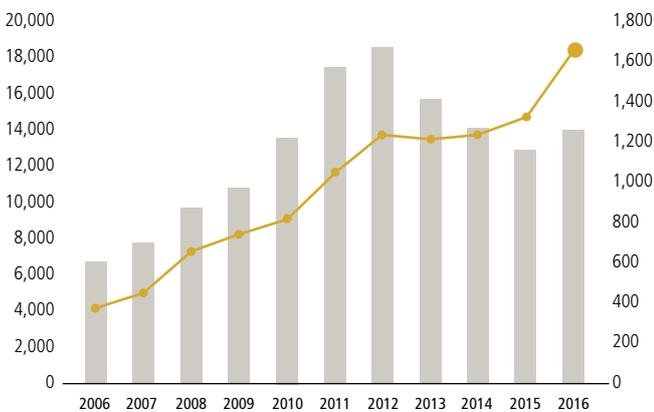
Iron ore prices (Rands/t)




Local prices
(Rand/Mt)


Export prices
(Rand/Mt)

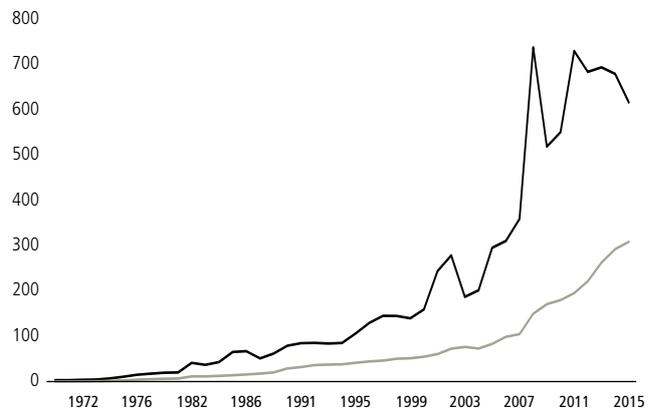
Gold price per ounce




Rands


US\$ (rh-axis)

Price of bituminous coal (Rands/t)




Local (to Eskom; free on rail)

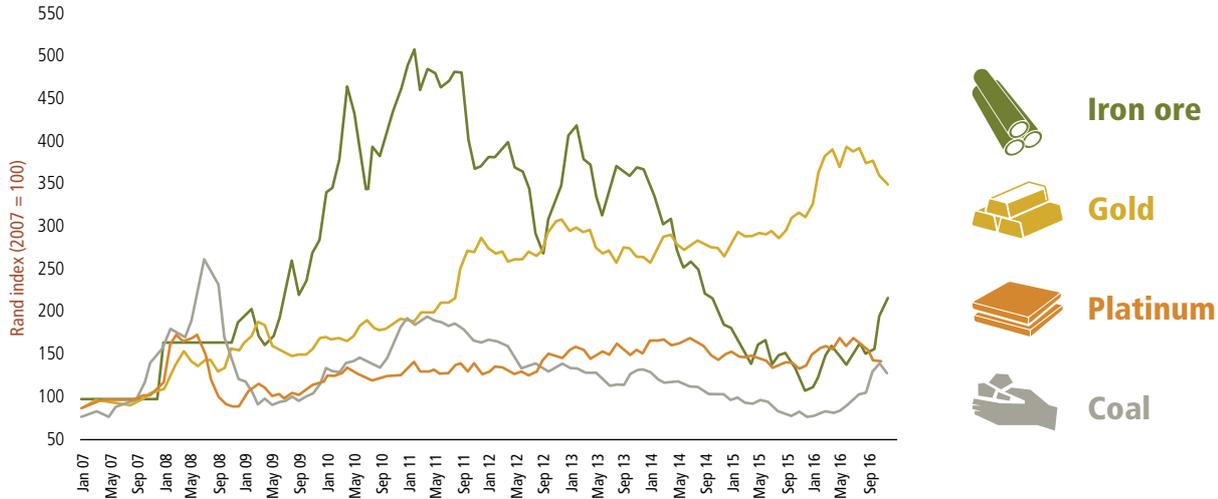

Export (free on board)

**2016 data not yet available*

Economics of mining continued

The following graph illustrates the diversity of commodity prices in rands from January 2007 to September 2016.

Rand commodity prices on an index basis (2007 = 100)



The rand depreciated against the dollar from an average of R12.74 in 2015 to R14.78 in 2016. While this is good for the country's exports, persistent and dramatic depreciation in the domestic currency has a price-raising effect which eventually filters into higher input costs (approximately 20% of intermediary inputs are imported), and higher cost-of-living expenses raising pressure for higher wages.

Rand/US dollar exchange rate



The mining sector continued to provide significant employment in South Africa. Total employment for 2016 is estimated at 455,109 people, 5% lower than in 2015. Households of people employed in the mining sector enjoy a relatively high standard of living as wages and salaries are generally higher than the economy-wide average.



paid
by the sector in corporate
taxes in 2016

ECONOMICS OF MINING continued

A further estimated 1,000,000 employment opportunities are supported indirectly by industry suppliers and society as a whole. This means that more than 7.5 million people are dependent on mining (if dependency ratios of about five people per worker are assumed).

Median monthly earnings of employees by industry for 2010 – 2015*

	2010	2011	2012	2013	2014	2015
Agriculture	1,295	1,300	1,495	1,733	2,153	2,231
Mining	5,000	5,800	6,000	6,000	7,000	7,500
Manufacturing	3,250	3,500	3,500	3,672	3,900	3,800
Utilities	6,000	6,000	6,000	8,666	7,000	7,500
Construction	2,437	2,600	2,600	2,800	2,816	3,000
Trade	2,505	2,800	3,000	3,000	3,033	3,100
Transport	3,500	3,600	3,800	3,900	4,000	4,000
Finance	3,501	4,333	4,000	4,000	4,000	4,000
Services	6,000	6,000	6,500	6,000	5,000	5,000
Private households	1,000	1,200	1,200	1,300	1,400	1,500
Total	2,900	3,000	3,115	3,033	3,033	3,100

Source: Stats SA (2017)

*2016 data not yet available

Number of employees and earnings – 2016

Commodity	Total employed	Total employee earnings (R)	Average annual earnings per employee (R)
Gold	116,152	28,731,310,905	247,359,59
PGMs	172,124	45,876,264,317	266,530,32
Diamonds	17,242	4,769,875,581	276,642,82
Chrome	15,700	4,207,698,490	268,006,27
Iron ore	15,994	5,878,117,325	367,520,15
Manganese	7,363	2,117,701,834	287,613,99
Coal	77,189	21,092,894,511	273,262,96
Aggregate and sand	7,508	1,190,424,425	158,554,13
Other	25,837	6,201,371,262	240,019,01
Total mining	455,109	120,065,658,650	263,817,37

Source: Department of Mineral Resources, as at June 2016

The platinum industry is the major employer in mining with over 172,000 people employed in 2016 followed by the gold and coal industries, which employed 116,152 and 77,189 people, respectively.

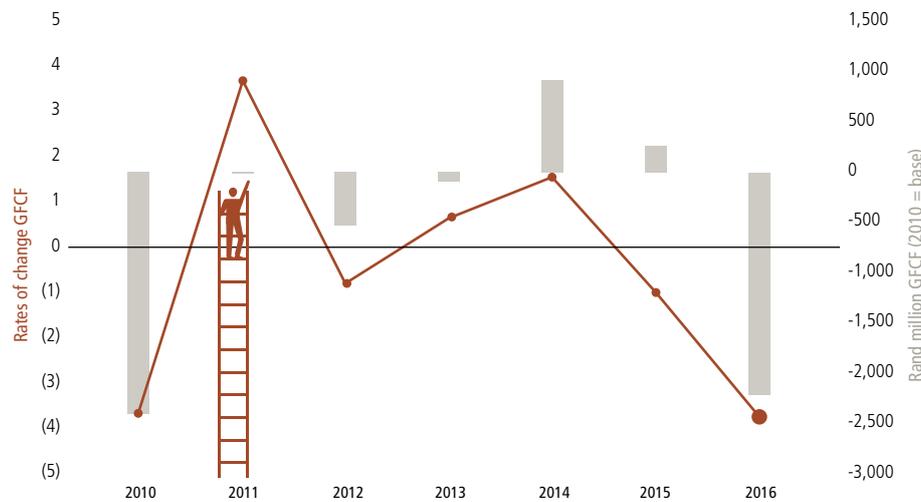


The platinum industry is the major employer in mining with over 172,000 people employed in 2016.

Economics of mining continued

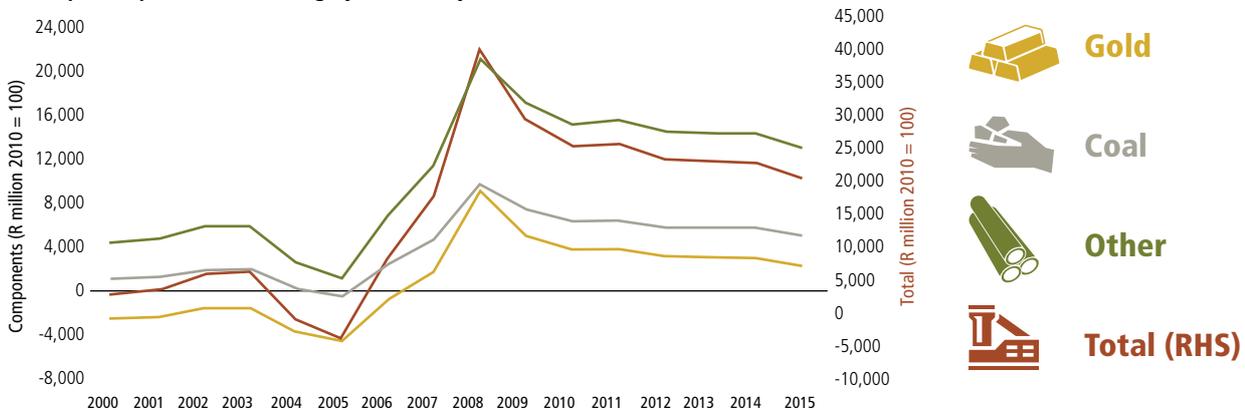
The slump in commodity prices and its domino effect on profitability had a major impact on fixed investment in the sector. Gross fixed capital formation (GFCF) in mining reached a recent peak in 2009, a level not achieved since. The graph shows the trend of GFCF relative to the peak of R65.965 billion; only in 2014 and 2015 was investment slightly higher than in 2009. GFCF was 3.4% lower in 2016 than it was in 2009.

Gross fixed capital formation in mining compared to 2009



Although gross fixed capital investment remained stable, a closer analysis of the data shows that it went mostly into maintenance of mining capacity, and less and less into new capacity investment (see graph on page 30). Other mining in the graph includes platinum mining as a major portion. Although all data was not available at the time of writing, it is estimated that net investment was negative in 2016.

Net capital expenditure in mining by commodity



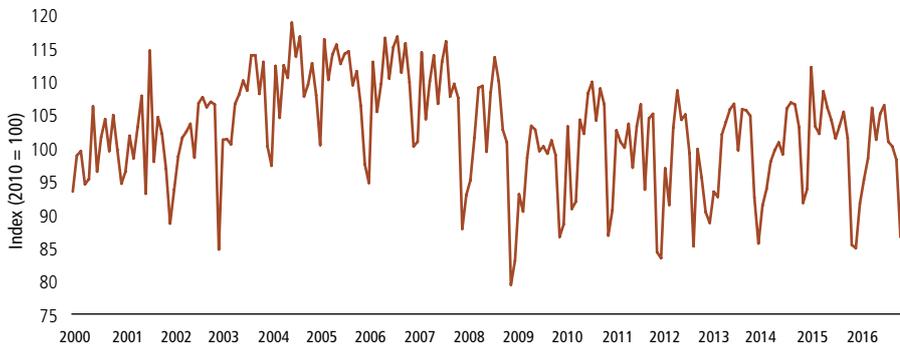
ECONOMICS OF MINING continued

Lack of investment in the industry is disappointing, especially considering South Africa remains abundantly endowed with natural resources. The country's gold reserves alone are estimated at 6,000 tonnes, according to the US Geological Survey (2016). This ranks South Africa third in the list of countries with the greatest gold reserves, after Australia (9,500 tonnes) and Russia (8,000 tonnes).



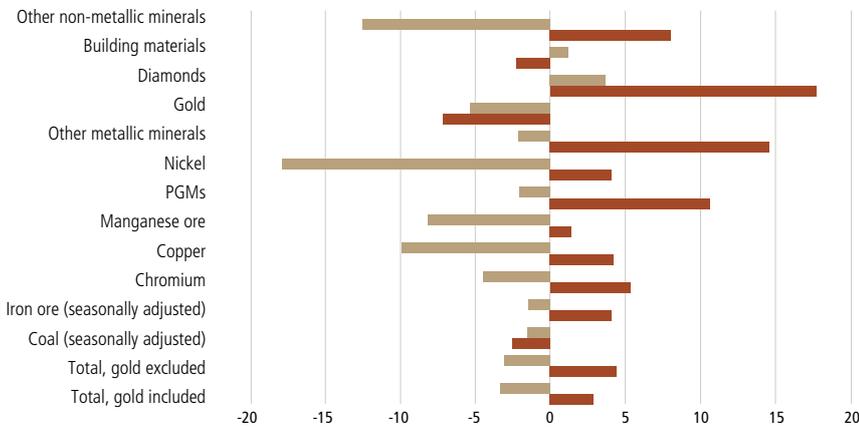
South African
mining GDP in 2016
was R304 billion
in nominal terms

Index of monthly mining production



Source: Stats SA (2017)

Rates of change in mining production by commodity



● 12 months to February 2017

● February to January 2017

Economics of mining continued



A gold pour at AngloGold Ashanti, a leading gold producer operating in 10 countries

CASE STUDY

One of the most effective pieces of economics work carried out by the Chamber in 2016 was the commissioning of a series of studies into allegations against the mining industry of trade mis-invoicing.

In July 2016 the United Nations Conference on Trade and Development (Unctad) published a report titled "Trade Mis-invoicing in Primary Commodities in Developing Countries: The cases of Chile, Côte d'Ivoire, Nigeria, South Africa and Zambia". The report asserted, among other things, that South African miners of silver, platinum group metals, gold and iron ore had systematically and fraudulently indulged in mis-invoicing in order to evade taxes and other legal obligations. The Chamber commissioned the Eunomix group to investigate the allegations in the report.

The Chamber asked Eunomix initially to focus on gold, where allegations were the most severe. The report stated that "between 2000 and 2014, under-invoicing of gold exports from South Africa amounted to \$78.2 billion, or 67% of total gold exports".

The first Eunomix report, published in mid-December 2016, showed serious methodological errors committed by the Unctad researchers. Unctad used only the United Nations Commodity Trade Statistics (UN Comtrade) database and simplistically assumed that discrepancies in import and export data supplied by countries indicated mis-invoicing.

The initial Eunomix report showed that SA's gold exports were incorrectly reflected there. However, they are correctly reflected elsewhere, including in South African Reserve Bank, Stats SA and Chamber of Mines data. Using those figures significantly reduced the discrepancy, leaving \$19.5 billion unaccounted for.

The second Eunomix report, published in February 2017, suggests that the "missing" \$19.5 billion is explained by gold sent by other countries for refining to the Rand Refinery in Germiston. This explanation is also supported by SARS. Foreign gold now accounts for about 50% of the gold processed at that institution. Ghana and Mali are among the main customers. The discrepancies arise because some of those countries record the gold returned to them as imports. South Africa does not record such gold as exports, as the origin and ownership of the gold lies outside South Africa.

The Chamber used the independent Eunomix reports as the basis for a series of media engagements that, we believe, effectively refuted the original allegations and mitigated much of the reputational damage caused by the Unctad report.

The Chamber also engaged with the relevant Unctad researchers in an effort to persuade them to correct their inaccuracies. A follow-up Unctad report made certain concessions, though not all that we believe justified. However, we trust that in future they will ensure greater rigour in their reports on these and other sensitive topics.

The challenge is that based on a report that is statistically flawed, Unctad made incorrect allegations against South Africa's mining industry and by implication the South African government.



SECTION 4 2016 AREAS OF FOCUS



- 33 Employment relations
- 39 Safety
- 47 Health
- 55 MOSH Learning Hub

- 58 Transformation
- 62 Emerging Miners' Desk
- 64 Skills development
- 70 Modernisation

- 77 Stakeholder engagement and communication
- 83 Environment
- 90 Legislation
- 93 Illegal mining



IMAGE

Employees at Glencore's Tweefontein Colliery, a modern, predominantly open cast operation

2016 AREAS OF FOCUS



Employment relations

The Chamber's Employment Relations department strives to make a positive contribution to the creation and maintenance of a stable employment relations environment in the mining industry, and to create practical and sustainable value for key mining industry stakeholders in the employment relations sphere, by:

- Promoting and fostering sound and constructive relationships with key stakeholders, in particular government and labour.
- Providing a credible platform for knowledge development and sharing in critical areas that have a potential impact on employment relations in the mining industry and in South Africa generally.
- Being the trusted voice of the mining industry on employment relations-related policy and legislative matters.

WAGE NEGOTIATIONS

Gold

In 2015, the Chamber of Mines concluded three-year wage agreements with the NUM, United Association of South Africa (UASA) and Solidarity on behalf of AngloGold Ashanti, Evander Gold Mines, Harmony, Sibanye Gold and Village Main Reef. Regrettably, AMCU did not sign the 2015 wage agreements.

At AngloGold Ashanti and Harmony, where the NUM, Solidarity and UASA represented the majority of employees, the agreement reached with these unions was extended to all employees, irrespective of union affiliation, by virtue of Section 23(1)(d) of the Labour Relations Act (LRA). At Sibanye, increases were unilaterally implemented for all employees irrespective of union affiliation even though agreement had not been reached with the majority of employees (AMCU represented 42% of employees). This was done as the company felt that it would be prejudicial to those employees who are members of AMCU, and could have led to workplace tensions.

In 2016, the signatories to the wage agreements focused on implementing the various commitments made:

The parties established a task team to undertake research work on extending the retirement age for miners and underground artisans and officials from the current 60 years to 63 years. Two workshops were held:

- The focus of a workshop on 4 February 2016 was the impact (if any) which an extension of the retirement age would have on retirement funds to which these employees belong, as well as on the funds which compensate workers for occupational injuries and diseases, including lung diseases.
- The focus of the second workshop, held on 29 February 2016, was on the impact (if any) that an extension of the retirement age would have on employees' health and safety, as well as on the health and safety of their co-workers. The applicable legislation was examined and international comparative research was done.



1. Dr Elize Strydom

Senior Executive: Employment Relations and Legal

2. Motsamai Motlhamme

Head: Employment Relations

2016 AREAS OF FOCUS *continued*

Ultimately, the task team recommended that the current normal retirement age for these employees be retained, but that individuals be afforded the option to extend their retirement age to 63 years, subject to certain conditions, such as passing company medical examinations and fitness-to-work assessments. The task team also recommended that the Mine Health and Safety Council (MHSC) should commission research to determine the health and safety impacts on employees who opt to extend their retirement age to 63 years. The signatories to the wage agreements accepted the task team's report and recommendations.

The parties to the wage agreements also implemented a clause which provided for an increase in funeral cover for miners, artisans and officials from R22,500 to R30,000 and for spouses from R10,000 to R30,000. In addition, funeral cover for the employees' children was also introduced. The funding of the funeral policy is done on a 50:50 contributory basis by the employer and employee.

AMCU was invited to participate in the implementation of the wage agreements, but chose not to. The union did, however, challenge the agreements on various grounds in different forums:

- It referred the wage agreement to the Employment Conditions Commission on what the union argued were unacceptable wage differentials. The Commission declined to engage on the issue.
- AMCU also challenged the Basic Conditions of Employment Act variations contained in the wage agreements and granted by the Department of Labour (DoL) in the Labour Court. A hearing date is awaited.
- AMCU referred an alleged unfair discrimination case to the Labour Court arguing that the differences in wages between the Categories 4-8 employees and miners, artisans and officials constituted unfair discrimination based on race. A hearing date is awaited.

AMCU's challenge to the lawfulness of the extension by AngloGold Ashanti, Harmony and Sibanye of the 2013–2015 wage agreements under the LRA to AMCU and its members. This was notwithstanding that the Labour Court, in June 2014, and the Labour Appeal Court, in March 2016, found in favour of the Chamber and the companies. The union appealed to the Constitutional Court and the matter was heard by the court on 24 November 2016 where judgment was reserved. Then, on 21 February 2017, the Constitutional Court ruled in favour of the Chamber of Mines and the gold producers.



Glencore's iMpunzi Mining Complex is a large export bituminous coal mining operation in Mpumalanga province



Employment relations continued

Coal

In 2015, a two-year agreement on wages and terms and conditions of employment was reached between the participating coal companies and representative unions under the auspices of the Chamber of Mines. Centralised negotiations did therefore not take place during the period under review. While a number of the issues were dealt with at company level in terms of the wage agreement, the following two issues were dealt with by the Chamber.

- Migration between retirement funds: The parties agreed that this issue could not be fully implemented due to the postponement of the annuitisation provision as per the Revenue Laws Amendment Act No 2 of 2016 which would prevent migration from a pension fund to a provident fund.
- Extension of retirement age: The issue was resolved after the Chamber engaged with the Mineworkers' Provident Fund (MPF) and the Sentinel Retirement Fund. The two funds confirmed that their rules permit retirement at the age of 63 years. This paved the way for the coal companies and the employees who wish to retire at the age of 63 to conclude the necessary arrangements to do so.

EMPLOYEE INDEBTEDNESS

Indebtedness remains a concern in all spheres of South African society and, as economic circumstances deteriorate and job losses rise, the situation is likely to intensify. Ironically, mining employees are vulnerable to formal and informal lenders as they have a stable, good income, and have access to banking systems and other documentation.

Employee indebtedness is known to have been a catalyst contributing to unreasonable wage demands and industrial action in 2012 and 2013, and is understood to be fuelling more recent expectations. Dealing with indebtedness was a feature of the 2013 gold and the 2014 platinum wage settlements, and is an area where unions and management have worked together, constructively. For more information, see the case study on page 38.

MIGRANT LABOUR

The Chamber initiated engagements with all key stakeholders, including government and organised labour, in order to find amicable solutions to existing challenges and guarantee the continued employment of the approximately 60,000 migrant workers who are employed in the mining industry. In 2016, the Chamber's Employment Relations Department addressed three key issues relating to the employment of foreign migrant workers.

- Temporary residence permits: The Department of Home Affairs (DHA) issued a directive in terms of the Immigration Act and the 2014 Immigration Regulations, to change the current practice of issuing temporary residence permits to foreign nationals working in the South African mining industry. The effect of this change would have been that mineworkers from the neighbouring countries of Mozambique, Lesotho, Botswana and Swaziland, would have had to apply for their temporary residence permits at the foreign missions in their home countries, and not at the ports of entry as is current practice. This change, which would have had a profound negative impact on the foreign mineworkers, on the mining companies and the economies of the affected neighbouring countries, was averted when the Chamber and the DHA reached an agreement to postpone its implementation indefinitely, in order to afford the parties an opportunity to jointly develop a workable alternative system for the issuing of temporary residence permits to foreign nationals working in the South African mining industry.



Mining employees are vulnerable to formal and informal lenders as they have a stable, good income, and have access to banking systems and other documentation.

2016 AREAS OF FOCUS *continued*

- **Corporate visas:** The Chamber's Employment Relations Department also engaged with the DHA on the impact of the provisions in the immigration regulations relating to corporate visas. The new regime requires mining companies to convert from corporate work permits that are of unlimited duration, to three-year corporate visas. At the expiry of the three years, mining companies would be required to undertake a burdensome process to apply for new corporate visas should they wish to continue with the employment of current foreign mine workers. Through engagements, the DHA and the Chamber agreed to conclude a Memorandum of Understanding (MoU) to exempt the mining industry from some of the stringent requirements of the corporate visa application process. The parties are working on the details of the MoU.
- **Green Paper on International Migration:** The Chamber's Employment Relations Department participated in the NEDLAC task team on International Migration, as part of the Business Unity South Africa (BUSA) delegation. The task team was established to engage with the DHA on the Green Paper on International Migration (Green Paper). The Green Paper seeks to address the identified shortcomings in the current policy and legislative framework governing international migration, and to promote the orderly, safe and secure movement of people across South Africa's borders. The Chamber drafted submissions on the Green Paper on behalf of its members, and these were incorporated into the BUSA submissions that were presented at NEDLAC.

HOUSING AND ACCOMMODATION

In 2016, the Chamber's Accommodation Task Team compiled a housing and accommodation fact sheet that outlines the work that Chamber members have done in the provision of housing for employees, as well as the investments made in bulk infrastructure and social amenities in the mines' host communities. The fact sheet was published on the Chamber website and is updated biannually.

 <http://www.chamberofmines.org.za/industry-news/publications/fact-sheets/send/3-fact-sheets/377-housing-and-accommodation>

Through the Chamber's facilitation, a number of member companies entered into collaborative arrangements with the Department of Human Settlements in providing housing and in facilitating integrated human settlements in some of the mining communities. The programmes included the provision of land, bulk service infrastructure and the building of social, health and recreational facilities in the identified communities. The Chamber also facilitated engagements and collaboration between some mining companies and the PIC, an initiative that resulted in the building of a massive housing programme in the Rustenburg area.

LABOUR POLICY COMMITTEE

The Employment Relations Department oversees and coordinates the Chamber's Labour Policy Committee (LPC), a forum that brings together senior employment relations and human resources managers from Chamber members across all commodities, including mining contracting companies.

This forum seeks to influence policy and legislation affecting the mining industry through advocacy initiatives, engagements and participation in relevant debates and processes. The LPC

Employment relations continued

develops and mandates industry positions on relevant issues, which in turn feed into national debates and processes, either directly or through other structures such as BUSA and NEDLAC.

A number of key issues that were discussed and mandated by the LPC during the period under review included migrant labour, social security and retirement and immigration.

MINERALS AND PETROLEUM BOARD

The Chamber nominated its Head of Employment Relations as a member of the Minerals and Petroleum Board, which was reconstituted in the last quarter of 2016. The Board is appointed by the Minister of Mineral Resources in terms of the MPRDA. The Board's primary functions are to advise the Minister on the sustainable development of the country's mineral and petroleum resources and on the transformation and downscaling of the minerals and petroleum industries. One other key role of the Board is to conduct investigations into the circumstances where economic conditions impact negatively on mining companies' profits and in cases where individual mining companies are likely to retrench 10% of their workforces or 500 employees, whichever is the greater. The Board is required in terms of Section 52 of the MPRDA to make recommendations to the Minister after the completion of its investigations. In the three months of its existence, the Board's Section 52 sub-committee completed one investigation and submitted recommendations to the Minister.

TRANSFORMATION OF THE LABOUR RELATIONS ENVIRONMENT

In his State of the Nation Address of 17 June 2014, the President called for social partners to deliberate on the state of labour relations in the country and to address low wages, wage inequalities, and the upsurge in violent and protracted strikes. This was done in the format of an indaba, under the auspices of NEDLAC and the stewardship of the Deputy President, and culminated in the Ekurhuleni declaration, which was signed by all the stakeholders on 4 November 2014.

A multi-stakeholder NEDLAC technical task team was created to implement the various objectives set out in the Declaration (the Chamber's Employment Relations Department is involved in the task team). The task team commenced work in January 2015 and was engaged in negotiations until the end of 2016. Labour pushed for a national minimum wage (NMW) to be introduced. The Deputy President established a panel of experts tasked with doing the necessary research on the matter and preparing a report with recommendations. The panel presented its findings to the Deputy President in December 2016 and *inter alia* recommended a NMW of R3,500 per month. The findings will be considered by the Committee of Principles which represent the leadership of business and labour.

Following two years of negotiations in NEDLAC, the task team ultimately managed to develop a Code of Good Practice on Collective Bargaining and on Industrial Action which is aimed at promoting respectful and professional negotiations as well as peaceful industrial action. Amendments to the LRA which provide for advisory arbitration by an independent panel in the event of prolonged and/or violent strike action, have also been drafted. These proposed amendments are supported by all the parties in NEDLAC and it is hoped that the proposed amendments to the LRA will be passed by Parliament in the first half of 2017.



The Chamber facilitated engagements and collaboration between some mining companies and the PIC, an initiative that resulted in the building of a massive housing programme in the Rustenburg area.

2016 AREAS OF FOCUS continued

IMAGE

Employees at Glencore's iMpunzi Mining Complex, which consists of two underground mines and an open cast mine

CASE STUDY

INDEBTEDNESS

The Chamber and its members are not alone in understanding that indebtedness by employees and the unemployed is a major social problem in South Africa. However mineworkers who have secure jobs have been a particular target of unscrupulous lenders and often take on debt that they cannot readily service or repay. Lenders have resorted to emolument attachment orders (EAOs) commonly known as garnishee orders that have legally obliged employers to deduct debt payments from employees' wages.

The industry-level indebtedness task team, consisting of the Chamber, company and union representatives, held its first Employee Indebtedness Workshop in 2016. The workshop was well attended and was indicative of the seriousness of indebtedness and the crucial role employers are playing to assist employees.

The indebtedness task team identified the urgent need to address the financial literacy of employees, as well as the management of the EAOs issued by unscrupulous lenders against such employees. The Chamber advocated a number of legislative changes *inter alia*, provisions of the National Credit Act (NCA), amendments to the Magistrate Court Act and issues related to the NCA, to address this issue in its engagements with Treasury, the Department of Trade and Industry (DTI), the National Credit Regulator (NCR) and other stakeholders.

In line with this, members of the Chamber have developed frameworks and financial education programmes to address employee indebtedness, including the management of emolument attachment and administrative orders, free financial support, assistance with legal queries and provision of employee financial literacy training. The training initiatives include features such as pay structure, benefits and deductions, overall impact on net pay, managing budgets and debt consolidation. The training initiatives have resulted in a decrease in employee indebtedness with many success stories including decreases in EAOs; more employees becoming eligible for home loans and an increase in responsible debt management.

The task team hopes that the combined effort of these actions will alleviate some of the debt pressure felt by employees.

Furthermore, the Chamber of Mines also represents its members on various NEDLAC task teams to work on proposals to further assist indebted employees to reduce their debt.

Though it did not affect the mining industry directly, in July 2015 in a landmark case, the Western Cape High Court ruled that EAOs levied against farm workers were illegal as they did not take into consideration the employees' financial positions or their ability to service the debt. The same could be extended to mineworkers, and the Chamber is reviewing this possibility and, particularly, the legality of EAOs that have been issued.

The Chamber's view and that of its members is that prevention is better than a cure, and human resources personnel across the industry are being instructed in how to handle the application of EAOs. On individual company levels, employers have also introduced training to help employees better understand the implications of taking on unaffordable debt and on how to escape from the debt trap.





Safety

The Chamber of Mines and its member companies remain committed to the industry's goal of zero harm of all those working at our operations, be they employees or contractors. The Chamber continues to be actively involved in a number of initiatives and partnerships aimed at eliminating fatalities and injuries in the mining industry.

The Chamber's Safety and Sustainable Development Department plays an important facilitative and coordinating role in the implementation of the 2024 milestones on mine health and safety in a manner that accelerates the achievement of the industry's goal of zero harm. This is done through engagement with the Chamber's Occupational Health and Safety Policy Committee (OH&SPC), the MOSH Learning Hub and the CEO Zero Harm Task Team; regional associations including the Association of Mine Managers of South Africa (AMMSA) and South African Colliery Managers' Association (SACMA); the DMR and organised labour through the MHSC; and with international industry bodies through the Chamber's membership of the International Council on Mining and Metals (ICMM).

SAFETY PERFORMANCE AND TARGETS

Over the past 23 years, mine fatalities have been reduced by 88% - testimony to the significant efforts of all parties involved – management, employees, government and trade unions. In 2016, there were 73 fatalities in the South African mining industry compared to 77 fatalities in 2015. This marked an improvement of 5% year-on-year. 2016 marked the fourth consecutive year in which fatalities were reduced below 100 in the entire history of the South African mining industry. It was also the ninth consecutive year in which the industry reduced fatalities.

In 2016, there was a decrease in the number of serious injuries of 476, from 3,138 in 2015 to 2,662, a reduction of 15%. The Chamber would like to recognise the efforts of our member companies in this substantial reduction.

The South African mining sector now compares favourably, in terms of fatality rates, with developed mining nations such as the United States, Canada and Australia. The progress achieved in workplace safety is a tribute to the 2014 Mine Health and Safety Tripartite Summit and continued engagement with the DMR and organised labour through the MHSC.

Industry, unions and government signalled their intent to achieve further progress at the 2016 MHSC biennial Summit on Mine Health and Safety when all industry tripartite stakeholders signed a declaration of actions, to improve mine health and safety performance, harness the achievement of 2024 milestones and accelerate the industry's journey to zero harm. The declaration of actions focuses on building tripartite visible-felt leadership, building trust among stakeholders at various levels, aligning communication on zero harm among stakeholders, empowering employees and supervisors and hosting of annual health and safety days tailored to the respective needs of companies as part of their overall health and safety campaigns.



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1. Sietse van der Woude

Senior Executive: Modernisation and Safety

2. Dr Sizwe Phakathi

Head: Safety and Sustainable Development

2016 AREAS OF FOCUS continued

CEO ZERO HARM TASK TEAM

In 2012, the Chamber established the CEO Zero Harm Task Team (formerly called the CEO Elimination of Fatalities Team) to visibly lead by example, to drive health and safety initiatives and to share experiences to help address key challenges in a manner that will enable the industry to achieve the 2024 milestones and accelerate the industry's journey to zero harm. The CEO Zero Harm Task Team consists of the following Chamber-member companies: Anglo American Platinum, AngloGold Ashanti, Anglo American Coal, African Rainbow Minerals, De Beers, Glencore Coal, Glencore Alloys, Gold Fields, Harmony, Impala Platinum, Kumba Iron Ore, Sasol Mining, Sibanye Gold and South 32. The Team meets every quarter of the year with the following objectives:

- Develop a model for industry leadership at CEO level.
- Model visible leadership behaviour to demonstrate commitment.
- Share company experiences and help each other deal with and solve key challenges.
- Establish working protocols with industry stakeholders and communities.
- Monitor and agree to adjustments to industry models to suit specific needs.

The first focus area was on falls of ground (FOG) – the greatest single contributor to fatalities at the time. It is encouraging to note that our focus on falls of ground contributed to a 50% reduction in FOG fatalities in the first year.

In 2016, the Chamber's CEO Zero Harm Task Team members agreed on the following areas of focus:

- a) The development and management of critical controls for fatal risks, with an increasing emphasis on controls that are higher up the hierarchy of controls.
- b) A culture transformation in the industry that will change the behaviour of people at all levels to enhance their compliance and agility for change.

APPROPRIATE APPLICATION OF SECTION 54s

While the Chamber and its members recognise the important safety supervisory roles played by mines inspectors, we are also convinced that the inspectors' applications of costly Section 54 work stoppages should be proportionate to the infraction. Unfortunately this has not always been the case and has led to wholesale closures of mines where transgressions were confined to small parts of their operations.

Section 54s are the notices issued to mines in terms of the Mine Health and Safety Act (MHSA) that allow inspectors to stop mining activity in the event of an accident. A Section 55, another part of the MHSA, enables the DMR's inspectors to close only the affected area in the event of an accident, which is considered less punitive on the mining companies.

The Chamber is committed to zero harm whereby every mine worker returns from work unharmed every day. Through tireless efforts by government, employers and employees, mine fatalities reduced from 615 in 1993 to 73 in 2016, an 88% reduction.

The Chamber supports appropriate Section 54 instructions that empower inspectors to close parts of, or entire mines, for health and safety reasons. However, the Chamber remains concerned about disproportionate Section 54 instructions that have been issued since 2007. These affect the viability of many mines and their ability to sustain jobs. A recent Labour Court judgement against DMR officials stated that a Section 54 instruction must be proportional to the harm or potential harm that it intends to prevent, quoting an author on law who said '*... one ought not use a sledgehammer to crack a nut*'. The inspector had inspected a small portion of the mine and instructed the whole mine to be closed.



Through tireless efforts by government, employers and employees, mine fatalities reduced from 615 in 1993 to 73 in 2016, an 88% reduction.

The Chamber estimated that Section 54 instructions cost the industry some R4.8 billion in 2015. The Chamber's concerns are particularly around the North West, Rustenburg area, where inappropriate or disproportionate Section 54s are adding to the woes of a significant number of platinum producing shafts that are already loss-making. The primary drivers of this impact are the direct production days lost due to Section 54 stoppages and the indirect losses that result from the slow upliftment process and the subsequent start-ups.

While a number of companies are resorting to costly court action, the Chamber's Platinum Leadership Forum (PLF) consisting of CEOs of platinum mining companies, developed a practical protocol to guide the appropriate application of Section 54 instructions.

The protocol contains proposals to deal with challenges that make Section 54 applications both ineffective in enhancing health and safety and that render them value destructive, such as:

- a) Reducing the duration of Section 54 stoppages.
- b) Assessing the applicability of Section 55 (an instruction that avoids stoppage of operations) versus Section 54 and/or other instruments.
- c) Reducing the extent of Section 54 stoppages.
- d) Interacting appropriately with organised labour.
- e) Assessing the applicability of training as remedial action.
- f) Limiting the impact of small defects and administrative issues.

The practical protocol has been shared and discussed with the Acting Chief Inspector of Mines since September 2016 with regular follow ups, though with no response as yet.

During November 2016, this 'disproportionality' was challenged in the Labour Court by AngloGold Ashanti after its entire Mponeng mine was closed by an inspector who had found a few relatively minor localised infractions that posed no serious threats to the safety of employees in the small section of the Mponeng mine, or in the mine as a whole. In finding in favour of the company – that the inspector's closure order, as well as the penalty imposed were disproportionate – the Court established important legal principles. An inspector, the Court ruled, may only close an entire mine if he or she has objective reason to believe that occurrences and conditions identified, endangered, or may endanger, the health and safety of any person at an entire mine, and not only of a portion of the mine. It is hoped that this case will lead to greater clarity between mines, the DMR and its inspectorate.

A further legal challenge by another Chamber member, Sibanye, in the first month of 2017 was made on the basis that the closure of its Kroondal platinum mine in August 2016 was unwarranted. The company has lodged a claim against the Mineral Resources Minister and certain DMR inspectors in their personal capacities for an estimated production loss totaling R26 million.

In March 2017, the Chamber hosted a workshop aimed at empowering training and occupational health and safety (OHS) managers on the interpretation of Sections 54 and 55 of the MHSA. The Chamber has since tabled the workshop recommendation to the MHSC that this training be extended to other OHS managers, inspectors and organised labour's shop stewards. It is envisaged that Section 54/55 training will empower tripartite stakeholders to have a common understanding on the interpretation and implementation of Section 54s and 55s, thus building the much-needed trust in this area of mine health and safety.

2016 AREAS OF FOCUS continued

MINE HEALTH AND SAFETY COUNCIL

The MHSC was set up in 1996 to direct safety in the mining industry and to respond to industry safety and health challenges. The council was built on the achievements of decades of fundamental research and is funded by the mining industry. The MHSC comprises a tripartite board represented by the state, employers and organised labour, under the chairmanship of the Chief Inspector of Mines.

The MHSC is accountable to Parliament. The MHSC's primary tasks are to advise the Minister of Mineral Resources on occupational health and safety legislation and research outcomes focused on improving and promoting occupational health and safety in South African mines.

The council has been working on the implementation plan of the 2014 Summit milestones on mine health and safety and plans to effectively implement structures according to these milestones. Through the MHSC, more than R250 million has been spent on research into seismicity associated with deep-level mines. In addition, R40 million has been spent on fundamental and applied research and technology transfer. The research outcomes have led to new mine designs and methods and the fatalities associated with seismicity declined from 48 in 2003 to 7 in 2016.

The MHSC and its tripartite stakeholders held the biennial Mine Health and Safety Summit in November 2016 to review progress on the implementation of the occupational health and safety (OHS) milestones, targets and actions agreed upon by tripartite stakeholders at the 2014 Mine Health and Safety Summit. A declaration of actions (the pledge) was signed by the tripartite stakeholders at the Summit.

This declaration of actions aimed at improving the industry's occupational health and safety performance emanated from the outcomes of the MHSC Tripartite Leadership Workshop held in October 2016. The MHSC was then mandated to develop the actions as part of the pledge that was signed by tripartite stakeholders at the Summit. The Chamber's CEO Zero Harm Task Team members and the Chamber Council approved the declaration of actions prior to the signing of the pledge at the 2016 Mine Health and Safety Summit.

The main aspects of the declaration of actions are:

Tripartite visible-felt leadership and relationship building

Action: Principals and leaders of all stakeholder groups commit to meeting at least on two facilitated sessions on health and safety per annum. The representation would comprise union presidents and general secretaries, the DMR Minister, Deputy Minister, Director General, Chief Inspector of Mines, Principal Inspectors and mining CEOs.

Trust deficit

Action: All stakeholders will address the issue of trust deficit amongst the stakeholders moving from a transactional to a transformative approach.

Communication

Action: All stakeholder organisations – the MHSC, organised labour, government and employers – will commit to improving communication across all levels to ensure that the message of zero harm reaches all mine employees and contractors and, in so doing, support and permeate actions intended to improve OHS throughout the industry.



Through the Mine Health and Safety Council, more than R250 million has been spent on research into seismicity associated with deep-level mines.

Empowerment of supervisors and employees

Action: Stakeholders will collectively and collaboratively empower supervisors, health and safety representatives and employees through extended visible-felt leadership and empowering conversations. This will not only be implemented by employers, but also by other stakeholders from organised labour, government and the MHSC.

Tripartite stakeholders will also strive to empower women in mining on safety and security challenges, personal protective equipment and hygiene issues that impact them.

Annual company health and safety days

Action: Each mining company will commit to hosting an annual health and safety day tailored to their respective needs as part of their overall health and safety campaigns.

The objective of the above will be to reinforce tripartism, raise the bar on tripartite visible-felt leadership as per the Culture Transformation Framework (CTF) to harness the achievement of the 2024 milestones and to accelerate achievement of the industry goal of zero harm.

MINING QUALIFICATIONS AUTHORITY

The MHSC works closely with the Mining Qualifications Authority (MQA), which plays a critical role in addressing skills shortages in the mining industry through capacity development and process improvement. The MQA is mandated to ensure that the mining and minerals sector has sufficient numbers of competent people who have been trained to improve health and safety standards and processes.

MHSC CENTRE OF EXCELLENCE

In November 2014, the MHSC principal tripartite stakeholders launched a Centre of Excellence (CoE) to conduct world-class research, to build research capacity and to facilitate the implementation of research outcomes to accelerate the industry's journey to zero harm. The Chamber has played an active role in the development of the business plan for the Centre, which began operating on 1 April 2017. The Chamber will also maintain oversight of the following MHSC CoE 'quick-win' research projects:

- Understanding the impact of technology on people in the South African mining sector.
- Assessment of statutory equipment compliance for South African mines based on a centralised database.
- Assessment of the feasibility of developing a communication system for underground and surface mining operations.
- Development of testing specifications for netting and the dynamic testing of tendons and assessment of the feasibility of establishing an independent accredited support testing facility.
- Development of rock-mass condition assessment tools.
- Assessment of the feasibility of developing collision management systems for South African mines.
- Missing person locator system.

BUILDING A CULTURE OF SAFETY

The CTF, developed by the MHSC and approved at the 2011 Health and Safety Summit, is an initiative that seeks to transform the culture of health and safety in the workplace to control risks. Research shows that an organisation's culture has an impact on safety. In 2011, MHSC launched a campaign entitled "changing minds, changing mines", with the aim of developing a framework to guide the South African mining sector into making the necessary changes towards attaining zero harm.

2016 AREAS OF FOCUS continued

The CTF has eleven pillars. The Chamber is committed to the effective implementation of the following pillars of the CTF by 2020:

- 1) Bonus and performance incentive pillar to prioritise safety ahead of production.
- 2) Risk management pillar aimed at reducing risk at its source and to investigate root causes of incidents.
- 3) Leadership pillar encouraging leaders to lead by example and walk the talk of zero harm.
- 4) Leading practice pillar provides a unified approach to identifying and facilitating the adoption of leading occupational health and safety practices and research outcomes.
- 5) Diversity management pillar aimed at eliminating racism, genderism and any other forms of discrimination.
- 6) Data management pillar to monitor and evaluate progress of CTF implementation and mine health and safety performance.

After December 2020, the remaining pillars of the CTF will be implemented:

- 7) Integrated mining activity
- 8) Technology
- 9) Inspectorate
- 10) Tripartism
- 11) Regulatory framework

WORK BEING DONE ON CULTURE TRANSFORMATION BY MHSC AND CHAMBER

In the third quarter of 2016, the Chamber initiated two projects focusing on the risk management pillar of the CTF. At the behest of the CEO Zero Harm Task Team, the Chamber facilitated and coordinated the collation of information from the CEO Zero Harm Task Team member companies on the application of critical controls management on falls of ground (gravity) and underground transport (both trackless and rail-bound). The information was then analysed to compile a desktop study report that seeks to encourage companies to:

- a) Share BowTie Risk Models on falls of ground and underground transport (trackless and rail-bound) drawing on international experience and formalising lessons learnt including measurement criteria and controls (as per the critical control management steps outlined in the ICMM guidance documents).
- b) Share critical controls successes amongst the companies on falls of ground and underground transport (both trackless and rail-bound) in order to determine the benefits of such collated bowties.

The second project sought to understand the current incident investigation methodologies and systems being utilised by companies as well as their consistent application. The conclusions and outcomes of both projects highlighted that there was still some work to be done in developing the maturity of both systems. The OH&SPC subsequently mandated the Chamber to establish working groups to continue work in these areas.

The MHSC has commissioned two research projects focusing on the Leadership, Diversity Management and Bonus and Performance Incentive Pillars of the CTF. The aim of these research projects is to develop guidance on the leadership and diversity assessment tools and guidance on the incorporation of leading and lagging health and safety indicators in bonus and performance incentive systems.



Research shows that an organisation's culture has an impact on safety.

Safety continued

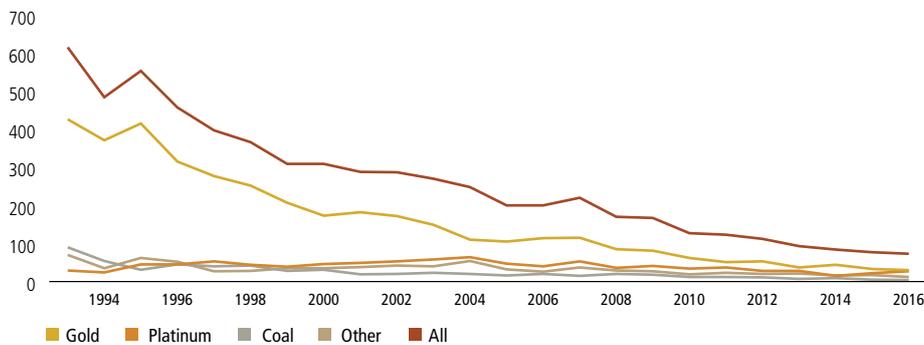
The Chamber is exploring various ways in which the MHSC's information reporting system and Chamber's HealthSource could be used to collate safety information including lost time injuries and adoption of leading practices.

At the 2016 Mine Health and Safety Summit, the tripartite stakeholders approved a set of declaration of actions as step change initiatives to harness the achievement of 2024 milestones. These actions complement the pillars and minimum standards of the CTF. The Chamber will facilitate, in conjunction with other stakeholders, the hosting of two annual sessions of stakeholder principals and leaders focusing on tripartite visible-felt leadership and relationship building.

The Chamber, through its President, Mike Teke, extends its heartfelt sympathies to the families, friends and colleagues of Ms Yvonne Mnisi, Ms Pretty Mabuza and Mr Solomon Nyarenda, who remain missing following the accident at the Vantage Goldfields Lily Mine near Barberton on 5 February 2016.

"We know that no words will be sufficient to bring comfort to them, and will keep them in our prayers. We want to thank those who have worked tirelessly to reach their colleagues since the collapse occurred, including the volunteer members of Mine Rescue Services, who have come from all parts of South Africa." Mr Teke also commended all parties for the mature and sensitive way in which they have worked together under trying circumstances. Mr Teke and colleagues from the Chamber of Mines visited the mine in February 2016 to extend the Chamber's ongoing support.

Mining fatalities per commodity (1993 – 2016)

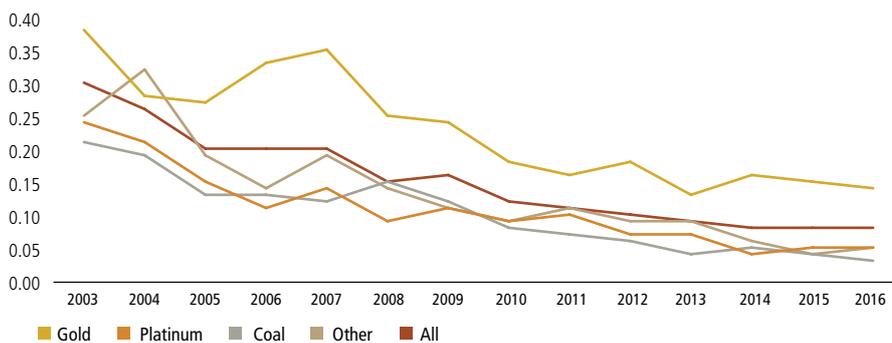


* Other includes diamonds, chrome, copper, iron ore, and all other not specified above.



Source: Department of Mineral Resources

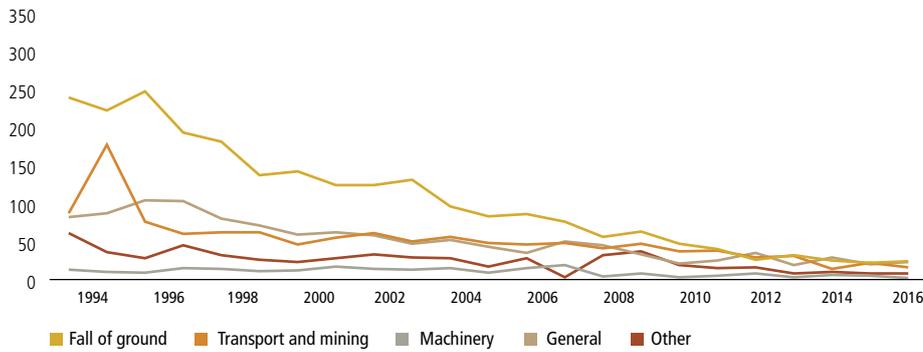
Fatality frequency rates per million hours worked (2003 – 2016)



Source: Department of Mineral Resources

2016 AREAS OF FOCUS continued

Causes of fatalities (1993 – 2016)



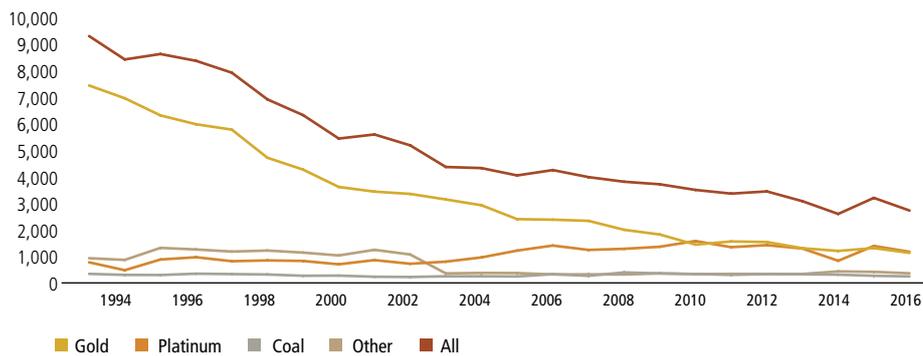
The Chamber's Health department strives to make a positive contribution at a number of levels in the spheres of public and occupational health, and in healthcare.



Source: Department of Mineral Resources

* Other includes diamonds, chrome, copper, iron ore, and all others not specified above.

Number of injuries (1993 – 2016)



Source: Department of Mineral Resources

Injuries in 2016

Commodity	2015	2016	% Change
Gold	1,249	1,069	-14
Coal	206	183	-11
Platinum	1,329	1,110	-16
Other*	354	300	-15
Total	3,138	2,662	-15

* Other includes diamonds, chrome, copper, iron ore, and all others not specified above.



Health

The Chamber's Health department strives to make a positive contribution at a number of levels in the spheres of public and occupational health, and in healthcare. During the year, the Chamber piloted a successful electronic occupational health reporting system; the Masoyise iTB initiative saw its second year of implementation; and the MHSC hosted its biennial occupational health and safety summit at which the health department was represented. The Department of Health disseminated the results of its survey on morbidity, mortality, incapacity and absenteeism, and there was considerable activity on the compensation front as efforts were made to integrate compensation systems.

POLICY AND LEGISLATIVE REVIEW

A significant development in the policy and legislative environment in 2016 was the response by the industry to the publication in December 2015 of the White Paper on National Health Insurance (NHI) in South Africa. The Chamber, as an organisation and through BUSA, made submissions which pointed out areas of concern and called for public/private collaboration in the piloting and implementation of the NHI.

No formal paper has been published on the financing of the NHI but the Chamber did make a submission to the Davis Tax Committee on the financing of the NHI. The submission stated that the proposals in the White Paper were not sufficiently detailed and thus posed a challenge to the provision of substantial comments. The submission also pointed out the need to locate the NHI within the Comprehensive Social Security Policy, which had not been published at the time.

The Comprehensive Social Security Discussion Document was released in November 2016 for discussion at NEDLAC. The document noted four important overlaps between the NHI Paper and the social security and retirement funding arrangements and that these would have to be addressed over the implementation period, including:

- The role of earnings-related contributions as a financing mechanism.
- The tax treatment of medical scheme expenses and associated risk-pooling arrangements.
- The alignment of medical benefits provided by compensation funds and the RAF with the NHI system.
- Post-retirement access to medical scheme membership.

The amendments to the MHSA were discussed extensively at NEDLAC during 2016 and a final NEDLAC report from all stakeholders was submitted to the chair of NEDLAC. The next step in the process will be submission to Cabinet and Parliament.

During 2016, the industry was occupied with the integration of compensation systems and amendments to the ODMWA. The Deputy Minister of Mineral Resources chaired a Steering Committee on the integration of ODMWA and the COIDA. A draft final report on the integration was submitted to the Ministers of Labour and Health in October 2016 and employers and labour were requested to finalise any outstanding issues regarding the integration.



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1. Dr Thuthula Balfour
Head: Health

2. Nikisi Lesufi
Senior Executive: Health and Environment

2016 AREAS OF FOCUS continued

HEALTH PERFORMANCE AND TARGETS

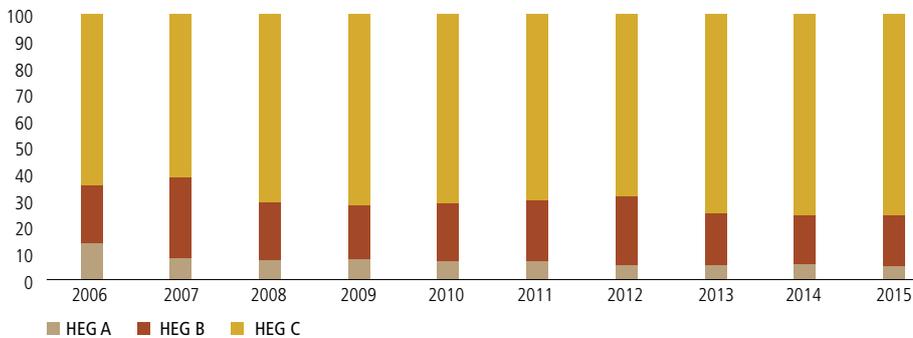
The performance of the occupational health sector is assessed from data supplied by the DMR. Companies make annual submissions to the DMR on occupational hygiene measurements and occupational diseases, including TB and HIV, diagnosed in the sector. The statistics reported below are compiled in the DMR Health and Safety Inspectorate Report 2015/2016, in the context of the occupational health milestones set by the industry in 2014.

OCCUPATIONAL HYGIENE

The DMR reports that it is encouraging to note that compliance in occupational hygiene statutory returns has improved.

- Airborne pollutants:** The milestone set by the industry is that, by December 2024, 95% of all exposure measurement results will be below the milestone level for respirable silica (0.05mg/m³), coal dust (1.5mg/m³) and platinum dust (1.5mg/m³). The DMR report does not provide details of the dust levels mentioned above but provides the measurements for total airborne pollutants. The chart below shows that the trends in exposures to airborne pollutants between 2006 and 2015, with the total airborne pollutants have shown a halving in homogeneous exposure groups (HEG) A exposed people (which is a very positive sign), a 10% decline in HEG B exposure and a 13% increase in HEG C exposed people. The aim is to have as many people in HEG C as possible.

Airborne pollutants exposures: 2006 – 2015 (%)



Source: Department of Mineral Resources

Exposure classification bands
 A = Exposures ≥ the OEL or mixture of exposures ≥ 1
 B = 50% of the OEL ≤ exposures < OEL or 0.5 ≤ mixtures of exposures < 1
 C = 10% of the OEL ≤ exposures < 50% of the OEL or 0.1 ≤ mixtures of exposures < 0.5

The DMR recognised that there was a collective effort by the industry to reduce exposures to respirable dust but that more was still required to eliminate these exposures. The industry was encouraged to share best practices and continuously monitor the controls, especially where improvement is not notable.

- Noise exposure:** The milestone set by the industry is that, by December 2024, the total operational or process noise emitted by any equipment must not exceed a milestone sound pressure level of 107dB (A). The occupational exposure limit for noise is 85dB (A) based on an eight-hour exposure shift. Persons in the A and B bands are overexposed. The chart on page 49 shows the trends in noise exposures from 2006 to 2015.

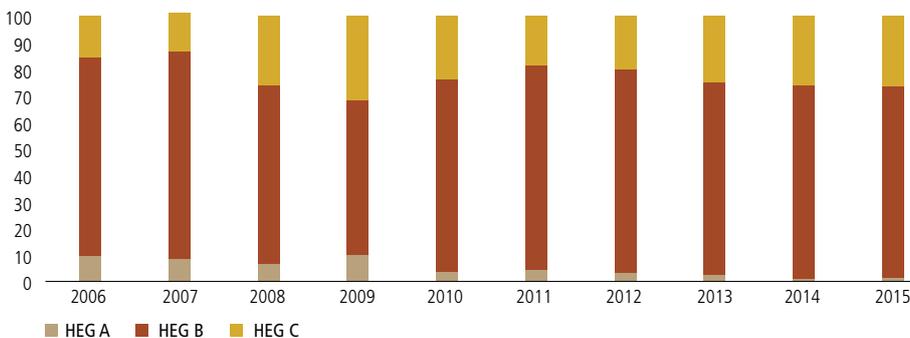
Health continued



IMAGE

The fully-automated sampling plant at the Saldanha iron ore terminal is a result of a partnership between Kumba Iron Ore and Transnet

Noise exposures from 2006 -2015 (%)



Source: Department of Mineral Resources

Exposure classification band:
 A = Exposures ≥ 105 dB $L_{Aeq,8h}$
 B = 85 dB $L_{Aeq,8h} \leq$ exposures < 105 dB $L_{Aeq,8h}$
 C = 82 dB $L_{Aeq,8h} \leq$ exposures < 85 dB $L_{Aeq,8h}$

Although there has been a decline in noise exposures in HEG A, the most significant category, exposures in HEG B have not shown much improvement. Noise exposure analysis indicates an overall increase in exposures above the OEL from 0.74% in 2014 to 0.96% in 2015. This clearly indicates the challenges around engineering controls to attenuate the sound pressure levels of equipment and their sustainability. More multi-stakeholder involvement effort is required to develop and implement strategies that will assist in reducing and eventually eliminating overexposures to noise.

2016 AREAS OF FOCUS continued

OCCUPATIONAL DISEASES AND TB AND HIV

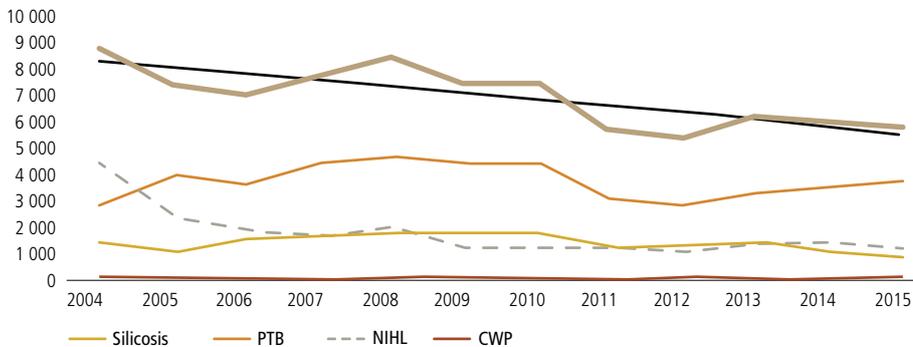
The milestones set by industry on occupational diseases are:

- Using present diagnostic techniques, no new cases of silicosis will occur among previously unexposed individuals (those who entered industry as novices in 2009).
- By December 2016, no employee’s Standard Threshold Shift will exceed 25dB from the baseline when averaged at 2000, 3000 and 4000Hz in one or both ears.
- By December 2024, the TB incidence rate should be at or below the national TB incidence rate.
- 100% of employees should be offered HIV counselling and testing (HCT) annually with all eligible employees linked to an antiretroviral programme as per the national strategic plan (NSP).

Statutory reporting to the DMR through annual medical reports (AMRs) continued to increase and this is a good sign. However, the total number of employees covered in AMRs during 2015 decreased by 4% when compared to the previous year. This is most probably due to an attrition in the number of people employed in the industry.

The chart below shows the total number of diseases reported in the industry over a period of 11 years.

Total occupational diseases reported between 2004 and 2015



Source: Department of Mineral Resources

The total number of occupational diseases reported nationally in 2015 decreased by 1%, compared to 2014. Again, it is important to note, however, that the total number of employees reported in the AMRs for 2015 also decreased by 4% when compared to the previous year.

The statistics on occupational disease show that:

- The number of silicosis cases has been declining steadily since around 2008. There were 835 cases reported in 2015, compared with 1,063 in 2014.
- Noise-induced hearing loss (NIHL) continued to be prevalent as cases were still at levels seen in 2009.
- There were 3,773 cases of TB reported in 2015, compared to 3,460 in 2014. The overall trend however has been one of steady decline since 2008.

More mines are now reporting on TB and HIV, using the DMR 164 form as a tool. In 2015, 600 mines submitted TB and HIV data for their employees. The 600 mines represented 476,625 employees, compared to 459 mines representing 465,923 employees in 2014.

Health continued

As part of Masoyise iTB, the Chamber also collects data on TB and HIV and both the DMR and Chamber data is presented.

Counselling for HIV in the industry is improving year-on-year, as seen in the graph alongside, although the milestone target of 100% has not yet been reached.

- **TB screening:** As shown in the graph alongside, TB screening improved from 81% to 89% industry-wide, as reported to the DMR and 94% of employees in Chamber member companies were screened for TB. Chamber members have set themselves a target of screening 100% of employees for TB and this target is within reach.
- **TB incidence:** From the DMR 164 form, the number of TB cases reported is collated and from that the TB incidence per 100,000 employees can be calculated. The graph alongside shows the TB incidence over three years for Chamber members in 2015.

The TB incidence in the industry is still higher than the South African national incidence of 834/100,000 and more work needs to be done to reduce the industry's TB incidence.

MASOYISE iTB

The Masoyise iTB (Eliminate TB in *isiXhosa*) Project was initiated in 2015 with the primary intention of reaching out to all employees, including contractors, in the mining sector. The focus is on offering employees HCT and TB screening over a three-year period from 2016 to 2018, using 2015 as the baseline. The project has since established governance structures including steering and project committees. Sub technical task teams on data collection, small mines, contact tracing and outcomes data were also established.

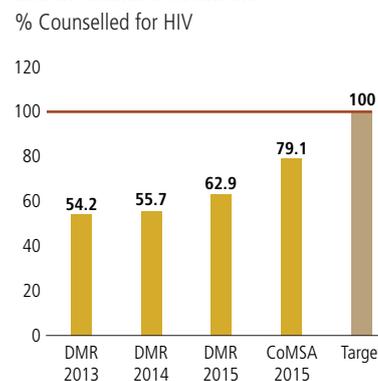
A broad coalition of stakeholders has been mobilised around Masoyise iTB and several presentations were made on the initiative. A leaflet on Masoyise iTB was prepared for the International AIDS Conference in Durban in July 2016, and distributed in substantial numbers. It was used in various other forums during the year, necessitating a reprint prior to the World AIDS Day event in December.

IMAGE

A partnership between the Department of Health and the Chamber of Mines resulted in the establishment of a one-stop service centre in Carletonville

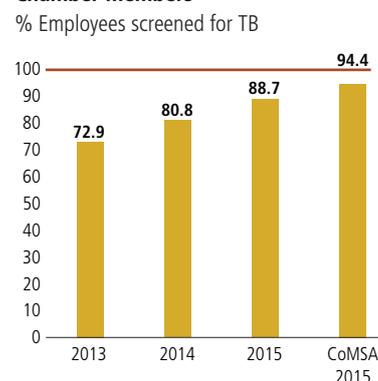


Counselling for HIV in mining industry and in Chamber members



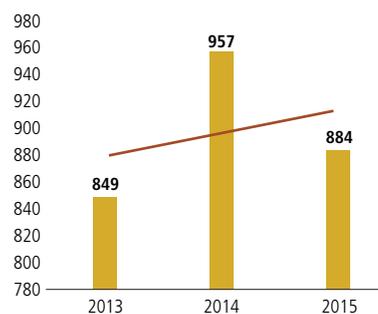
Source: Department of Mineral Resources

Screening for TB in industry and in Chamber members



Source: Department of Mineral Resources

TB incidence (per 100,000) in Chamber members



Source: Department of Mineral Resources

2016 AREAS OF FOCUS continued

CHAMBER OF MINES OCCUPATIONAL HEALTH REPORTING SYSTEM

The collation and reporting of occupational diseases has been a challenge for the sector for some time. Although the DMR now produces very credible, comprehensive statistics on occupational diseases, these are only reported annually, a year after the release of safety statistics. There is no real-time publication of data.

It is the vision of the Chamber and the industry that, ultimately, real-time occupational health data will be available and published in time to inform decisions that can lead to prevention of exposures and disease. The Health Incident Report form DMR 231 gazetted in September 2014 and revised in 2016 is the basis for a more responsive reporting system as it requires monthly submissions of incidents in the form of diseases diagnosed.

The MHSC has already adopted the Occupational Health and Safety Management System (OHSMS) which is a framework for a comprehensive reporting system that also stores client records.

In 2016, the Chamber launched an electronic reporting system that included reporting for Masoyise iTB on screening for TB and HIV. The system is a major step towards electronic reporting and it makes submission of data easier for companies. HealthSource provided the platform for the system and the system is open to all companies, including non-members of the Chamber.

Within a year of its implementation, the system has proven to be successful with more than 70% of registered companies having submitted data on Masoyise iTB through the system. The Chamber continues to support members in increasing the submission rate and workshops have been held for this purpose.

The Chamber's reporting system has been developed to dovetail with that of the MHSC, once it is up and running. The ultimate aim is that it will be subsumed into an industry reporting system at the MHSC.

SURVEY ON MORBIDITY, MORTALITY, INCAPACITY AND ABSENTEEISM

In 2015, the Chamber conducted a survey of its members, which gathered and interpreted responses on medical incapacity, chronic and occupational diseases and medical mortality of permanent employees and contractors at mines, from 2009 to 2014. The aim of the survey was to quantify and characterise the nature of the causes of morbidity and mortality in the industry.

Results showed that, with the exception of TB, which has been exhibiting a downward trend since 2012, the number of employees with diabetes, hypertension and HIV was steadily increasing. Occupational diseases such as NIHL, silicosis/pneumoconiosis and occupational TB all showed a decline over the years.

From 2009 – 2014, the average overall absenteeism rates gradually increased from 15.75% in 2009 to 17.89% in 2014. Medical absenteeism rates also showed a similar increase from 5.17% in 2009 to 6.01% in 2014. Since 2009, there was a total of 8,829 deaths at the reporting mines, with the highest number of deaths occurring in 2012 at 1,804.

This was the first survey of its type and shows the need for more research to fully understand the topics that were under investigation.



It is the vision of the Chamber and the industry that, ultimately, real-time occupational health data will be available and published in time to inform decisions that can lead to prevention of exposures and disease.

A presentation on the survey can be found at:

 <http://chamberofmines.org.za/industry-news/publications/presentations>

COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES

Compensation for injuries and diseases in the mining sector falls under two pieces of legislation. Compensation for injuries is administered by the DoL, through the COIDA. For most mining companies, the Rand Mutual Assurance (RMA) administers this legislation under license from DoL. The RMA runs an efficient compensation system with very few challenges.

Most of the attention of the industry has been on compensation for occupational lung diseases in mining, which is administered by the Department of Health (DoH), through the ODMWA.

In January 2016, the Deputy Minister of Mineral Resources, Mr Godfrey Oliphant, formally launched a process to integrate the compensation systems in the country. A steering committee and various task teams were established and a draft final report was submitted to the Ministers of Health and Labour in October 2016. The report was noted, with the request that further work needed to be done to settle outstanding disagreements between employers and labour.

The draft final report proposed that current and future miners should be transferred to the DoL to fall under the COIDA, while ex-mineworkers would be ring-fenced under the current legislation. More work, and a final report that will lead to legislative changes, is expected in 2017.

The Ex-Mineworker Project, a long-standing collaboration between the DoH and the NUM supported a number of the activities in strengthening the Medical Bureau for Occupational Diseases/Compensation Commissioner for Occupational Diseases (MBOD/CCOD) and in providing some resourcing for the compensation integration process. Teba was contracted to locate and complete necessary claim documentation for up to 20,000 beneficiaries who were due compensation for lung disease benefits in terms of the available evidence from the investigation and such records as could be accessed. The project also financed an inbound call centre. This took the form of a call centre to take calls from ex-miners and to stream their queries and information to the relevant officials at various institutions.

Support from the project has contributed to improvements at the MBOD/CCOD.

MINE HEALTH AND SAFETY COUNCIL ACTIVITIES

The Chamber and its members participate in the MHSA to promote health and safety in the mining industry. The Chamber and other industry officials serve on its various committees, including:

- Mining Occupational Health Advisory Committee (MOHAC)
- Mining Industry TB and HIV Advisory Committee (MITHAC)
- Safety in Mines Research Advisory Committee (SIMRAC)
- Culture Transformation Advisory Committee (CTAC)

CASE STUDY

OVERCOMING TUBERCULOSIS IN THE SOUTH AFRICAN MINING INDUSTRY

Pulmonary tuberculosis, commonly known as TB, has been endemic in South and southern Africa for many decades. In round figures, some 1% of the country's total population contracts the disease each year and, according to World Health Organisation analyses, our country has one of the world's highest incidences when measured per head of population. Some 80% of South Africans are believed to be infected by the disease, though an overwhelmingly large proportion have latent TB and are not actively affected – a situation where the TB bacillus lies dormant. The country has a particular challenge in that the disease is more likely to become active in people with compromised immune systems – for example, those suffering from untreated HIV – and in people working close to one another in dusty environments such as might be encountered in mines.

These circumstances present a significant public health challenge, a challenge exacerbated by a range of societal and causal factors such as overcrowding, poverty, poor nutrition and unhealthy working conditions. It is a health challenge that calls for nationwide interventions by all sectors of society – by government, by public and private health services, by the business community and by organised labour – if it is to be eradicated and its sufferers cured.

When Deputy President Cyril Ramaphosa launched a major anti-tuberculosis campaign in SA on World TB Day in March 2015, the country's mining sector and regions were always going to be an important part of it. That is why in December 2015 the departments of Health and of Mineral Resources, the four primary mining unions – AMCU, the NUM, Solidarity, UASA – and the Chamber of Mines launched Masoyise iTB, a major TB screening campaign in South Africa's mining sector.

The Masoyise iTB initiative is planned to run over three years from 2016-2018. The ultimate goal is to reduce TB incidence on mines and in mining regions to below the rate for the general population. Of course, it is hoped that the national campaign will also reduce TB incidence in the country as a whole in that period.

The five key targets of the Masoyise iTB initiative are:

- Every mine employee to be screened for TB each year
- Every mine employee to be offered voluntary counselling and testing for HIV each year

- Extend contact tracing into mining communities
- Support to small mines
- Support to mine contractors

The Chamber of Mines and members have for some time been at the forefront of addressing TB among mineworkers and those close to them – screening, diagnosing, treating, curing and educating sufferers, their colleagues and their families. The mining sector is a leader in these interventions. In addition, screening for TB is not just available to current employees – past mine employees are entitled to two-yearly screening provided by the Department of Health with support from the mining companies.

Looking at the bigger picture, Chamber member mines have largely converted old single-sex dormitories to single or family occupancy – a development that reduces the closeness of people at risk of contracting or being infected by TB. However, the mushrooming of crowded informal settlements in areas where economic opportunity attracts people faster than housing and other social infrastructure can be developed presents a major TB risk.

Industry data show that 94.4% of employees were screened for TB in 2015, and it is hoped that the Masoyise iTB campaign will not only increase that number but also extend this service to employees of contractors and take it into mining communities.

The Chamber has contributed significant financial and human resources to work in this sphere and the complementary work of assisting the MBOD/CCOD to work at best possible capacity. This has included:

- Donating close to R50 million to assist the MBOD to modernise and enhance the efficiency of its administrative systems
- Funding the staffing of the Carletonville One-Stop Service Centre for three years (ending in 2018) to a total of R5.6 million

For those with occupational lung diseases, TB is a compensable disease regulated by the DoH under the ODMWA through the MBOD/CCOD. Under ODMWA, TB is a compensable disease when: "in the opinion of the certification committee, it was contracted while the person concerned was performing risk work, or ...was already affected at any time within the twelve months immediately following the date on which that person performed such work for the last time."



MOSH Learning Hub

The Chamber of Mines established the Mining Industry Occupational Safety and Health (MOSH) Learning Hub in 2009, to encourage mining companies to learn from the pockets of excellence that exist in the industry. The MOSH adoption process involves identifying, documenting, demonstrating and facilitating widespread adoption of leading practices that have the greatest potential to address the major risks in health and safety areas such as falls of ground, transport and machinery, dust and noise. MOSH arose from the MHSC's tripartite approach towards health and safety and MOSH's role continues to be supported by mining companies, government and labour.

The Learning Hub Secretariat, as provided by the Chamber of Mines, plays a strategic facilitation role in leading the change to zero harm, including the provision of operational support to the adoption teams through monitoring and evaluation and through behavioural change processes. The secretariat evaluates the effectiveness of MOSH events and initiatives to gauge participants' satisfaction levels. The use of the MOSH portal continued to be monitored by plotting the analytics, including the number of registered users and visitors to the various web pages.

Organisations that invest in an internal change-management capability, set themselves apart from their counterparts in many respects. They are more agile and adaptable in the face of constant change in the business environment. Against this backdrop, the CEO Zero Harm Task Team was requested to consider bolstering mining companies' change management capability and leadership competencies. To this end, the CEO Zero Harm Task Team has resolved to continue to share the work each company is doing with regard to the appointment of behaviourists. Engagements with key role players commenced with preliminary discussions around the mining industry leader of tomorrow within the context of Mining Leadership Vision 2030. In addition, significant effort went into the alignment of MOSH methodology with other contemporary theories which, in some cases, were already embedded into management of change processes at company level. The Learning Hub facilitated some sessions at member companies to create awareness around the capacity required in this domain.

FALLS OF GROUND

The adoption team helped participating mines improve their reporting processes by monitoring and evaluating the portfolios of evidence and providing the mines with coaching during the Community of Practice for Adoption (CPA) meetings and peer review site visits. The number of employees benefiting from FOG-related leading practice (nets with bolts and trigger action response programme (TARP)) has improved from 56,987 to 76,187 which is a 33% improvement.

In the third quarter of 2016, the Learning Hub team agreed on a short-term strategy to help arrest increasing FOG-related fatalities. Extra support was given to mines that were struggling with FOG and human resources challenges, especially as it relates to lack of capacity to conduct and participate in peer review activities.

The strategy was to identify the mines most affected and, with their management, help put certain measures in place. One of the measures was to revitalise the application of Entry Examination and Making Safe (EEMS) and the TARP. The experiences and challenges were



Stanford Mamoshito Malatji
Head: Learning Hub

2016 AREAS OF FOCUS continued

shared with other participating mines, involving 56 and 46 mines respectively. FOG-related fatalities stabilised at 33% toward the end of 2016 compared to 29% in 2015. Though it is recognised that there are various industry initiatives including MOSH, it has been established that if properly adopted, EEMS, TARP and Nets with Bolts would have contributed even more positively to the reduction of FOG-related fatalities by at least 48%, 56%, and 59%, respectively.

The following table depicts adoption progress of leading practices that were promoted to the industry previously and whose adoption is being monitored on a continuous basis:

Adoption tracker for FOG leading practices

Leading practice	Number of participating mines	Crews trained	MOSH adoption rate	Employees directly affected	Remarks
Entry examination and making safe	74	6,900	100%	67,080	Revitalisation programme started October 2016 and continued in 2017.
Nets with bolts (stopping areas)	46	2,848	100%	76,187	Employees benefiting increased from 56,987 to 76,187 – a 25% improvement, in part due to improved reporting from participating mines.
TARP	51	797	84%	57,978	Participating mines increased from 49 to 51. Number of people benefiting increased from 42,850 to 57,978 - a 26% improvement, in part due to improved reporting by participating mines.

TRANSPORT AND MACHINERY

The focus of the adoption team continued to be placed on supporting the industry in improving safety performance in transport and machinery.

PROXIMITY DETECTION SYSTEMS (PDS) LEADING PRACTICE

Substantial progress has been made in the implementation of this leading practice in the underground coal sector, as the use of trackless mobile machinery has gradually increased. Progress with the underground hard-rock rail-bound equipment (RBE) solution was steady albeit relatively slow, except for two of the larger mining groups in the platinum sector which are still lagging behind. Despite a number of attempts by the MOSH transport and machinery team to motivate the beacon functionality for RBE and despite some support from the CEO Zero Harm Task Team most companies, with the exception of Anglo American Platinum, have not embraced the beacon technology. The team will continue to work with the adoption sponsor to increase the uptake of this technology in 2017. Evidence of poor adoption started to show and in some cases companies had to re-launch some of the RBE functionalities.

The table below shows PDS progress per sector:

Adoption tracker for transport and machinery leading practices

Leading practice	Number of participating mines	Number of installations	MOSH adoption rate	Percentage installation of PDS	Remarks
Coal electrical machines	16 operations (4 mining houses)	127 sections	<20%	89% (2014:46%)	
Hard-rock track-bound equipment	72 operations (7 mining houses)	672 levels & 3015 locos	<24%	51.1% (2015: 44%) (2014: 37%)	
Hard-rock trackless mobile machines	27 operations (9 mining houses)	3478 machines	0%	92.8% (2015: 76%) (2014: 83%)	The sector implemented the practice before it was identified as a leading practice.

DUST

In total, 53 Chamber members' operations are adopting the Continuous Real-time Monitoring of Airborne Pollutants Engineering Controls leading practice. This provides assurance of the sustained integrity of appropriate engineering controls tailored to mitigate airborne pollutants. These include gold mines (35), coal mines (15), diamond mines (1), iron ore mines (1) and a platinum processing plant (1). The coal mines include 14 underground fiery mines and one opencast mine. The lead adopter mine reports from AngloGold Ashanti's Moab Khotsoang and Exxaro's Grootgeluk mines provided good insight on the 'make or break issues' for the success of adoption. The Leading Practice Adoption Guide has been updated accordingly.

The COPA programme continued, with greater sharing of the understanding and challenges on the adoption process, and with the on-mine pilot of the instruments prior to rolling out.

The underground Colliery MOSH Dust Working Group focused on airborne dust monitoring with a Real-time Dust Monitor on-board a continuous miner with the aim of preventing explosions. The envisaged spin-off benefit is reduced dust exposures to same-zone workers. As there was no continuous real-time monitoring of airborne dust engineering control monitors with Explosion Proof Certification (EXia), the group involved the Occupational Equipment Manufacturers from the outset. The on-mine piloting of these instruments started in November 2016.



Substantial progress has been made in the implementation of proximity detection systems in the underground coal sector.

NOISE

The MOSH noise team continued to facilitate the Industry-wide Buy and Maintain Quiet Initiative (IBMQI). This is a noise-source elimination initiative for managing noise hazards at the machine design phase, using the collective demand from the industry to motivate Original Equipment Manufacturers (OEMs) and suppliers to focus more on noise reduction as part of their product development. The initiative acknowledges that individual mining companies have established Buy Quiet Policies albeit with limited success. Some of the key achievements of this programme in 2016 include:

- Implementation of the Measurement and Standards Sub-working Group's published Guidance Note for *Noise Measurement of Equipment to ensure compliance with MHSC milestones*; testing and subsequent implementation of the Procurement Working Group's developed requirements to identify, review and select equipment that comply with specific noise emission requirements (*Critical Noise Screening Tool*).
- Research Consolidation Report with the specific objective of *reviewing previous and current research direction, and assess current technology*. The outcomes of the report were to inform the IBMQI steering committee about ways of engaging with OEMs and inform industry about possible research direction.
- The Noise Team has continuously assisted mines that are still interested in adopting the leading practice on *Hearing Protection Devices – Training, Awareness and Selection Tool (HPD-TAS)*.

2016 AREAS OF FOCUS continued



Transformation

The Chamber continues to play a leading role in positioning its members in a leading role in the country's transformation agenda.

Apart from looking after the interests of its members on regulatory issues such as the Mining Charter, the Chamber's Transformation team has been at the forefront of engaging with key stakeholders to demonstrate how its members have performed against the Mining Charter's key objectives. The Chamber has encouraged members to support the national transformation agenda by going beyond compliance in fulfilling companies' social licence to mine.

In 2015, the DMR publicly reported on the industry's performance against the Mining Charter's 2014 targets. While the industry acknowledges that much still needs to be done, the Chamber has been able to demonstrate significant progress made by its members in meeting the set targets.



Tebello Chabana
Senior Executive: Public Affairs
and Transformation



Sibanye's Driefontein Operation is an underground mine with surface reserves



Transformation continued

Overall performance by Chamber members against Mining Charter targets

Charter element	Description	Measure	Compliance target 2014	Chamber assessment
Ownership	Minimum target for effective Historically Disadvantaged South African (HDSA) ownership	HDSA ownership %	26%	38%
		Percentage of companies achieving 26%	100%	100%
		Percentage of companies with BEE, community and employee stock ownership plan	–	41%
Housing and living conditions	Conversion and upgrading of hostels to attain occupancy rate of one person per room	Percentage reduction of occupancy rate towards 2014 targets	100%	73%
	Conversion and upgrading of hostels into family units	Percentage conversion of hostels into family units	100%	63.4%
Procurement and enterprise development	Procurement spent from BEE entity	Capital goods	40%	72%
		Services	70%	63%
		Consumable goods	50%	72%
		Multinational suppliers' contribution to the Social Fund	Procurement spend from multinational suppliers	0.5%
Employment equity	Diversification of the workplace to reflect the country's demographics to attain competitiveness	Top management	40%	50.4%
		Senior management	40%	41.9%
		Middle management	40%	50.9%
		Junior management	40%	54%
		Core skills	40%	75.5%
Human resource development (HRD)	Development of requisite skills, including support for South African resource development	HRD expenditure as percentage of total annual payroll	5%	5.5%
Mine community development	Conduct ethnographic community consultative processes to delineate community needs analysis	Implement approved community projects	Implementation to date	70.6%
Sustainable development and growth	Improvement in the industry's environmental management	Implementation of approved environmental management plans	100%	90.6%
	Improvement of the industry's mine health and safety performance	Implementation of tripartite plan on health and safety	100%	86.2%
	Utilisation of South African research facilities for analysis samples	Percentage of samples in South African facilities	100%	84.6%

2016 AREAS OF FOCUS continued

As a mandate-driven organisation, the Chamber drives its transformation agenda through the Charter Reference Group (CRG) Committee. The CRG comprises representatives of Chamber member companies responsible for the implementation of charter targets by those companies.

On 30 October 2015, the Minister of Trade and Industry released Notice 1047 of 2015 to exempt the DMR from applying the requirements contained in section 10(1) of the Broad-Based Black Economic Empowerment (B-BBEE) Act 53 of 2003. In effect, this was done to allow the DMR more time to develop a Mining Charter that would be aligned to the B-BBEE Codes of Good Practice as provided for in the Act.

Following publication by the DMR in April 2016 of the draft reviewed Mining Charter, the DMR embarked on an engagement process to discuss its content. The process was fundamentally different to that followed in the drafting of the previous two versions of the Charter finalised in 2004 and 2010. Previously there was a tripartite engagement process (through the MIGDETT in the 2010 version) where the parties rigorously engaged each other throughout and ultimately reached a negotiated consensus. On this occasion the DMR, sometimes including the Minister, has held a series of meetings with one set of stakeholders at a time.

In the several meetings in which the Chamber has been involved, the DMR position has created concern in a number of areas (see Transformation case study). Should those positions be included in an intended final published version of the Charter, the industry will need to consider its options.

The Chamber's understanding of the country's transformation imperative is informed by the following:

- The Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996)
- MPRDA Act 2002 (Act No. 28 of 2002)
- B-BBEE Act 2013 (Act No. 53 of 2003)
- National Industrial Policy Framework (NIPF)
- The National Development Plan (NDP)
- The recognition of the role that the mining industry needs to play to redress systemic inequalities and to meaningfully contribute towards the promotion of an inclusive industry and economy

The mining industry remains committed to a collective stakeholder process to finalise a Mining Charter that reflects the country's strategic intent to align transformation legislation.



The mining industry remains committed to a collective stakeholder process to finalise a Mining Charter that reflects the country's strategic intent to align transformation legislation.



Gold Fields' South Deep Gold Mine is an intermediate to deep-level mechanised mine

CASE STUDY

REVIEWED MINING CHARTER

In engagements with the DMR, the following have emerged as key issues the industry has in respect of the draft reviewed Mining Charter proposals.

In respect of the ownership element of the Charter, the Chamber holds that, correctly interpreted, the Act and the Charter do not provide for top-up when BEE entities sell shareholdings (the so-called "once empowered, always empowered" issue). Detailed discussions have not yet led to a consensus on the way forward. As discussed in this report's Legislation section, the Chamber has initiated an application for a declaratory order by the High Court on this matter, though it will be proceeded with only if and when it is clear that agreement cannot be reached.

The Chamber does not support the establishment of the MTDA. A new bureaucratic structure, whose remit, governance structure and strategy are unclear and which is unlikely to add value, will be an additional cost to the industry and will undermine its competitiveness.

The Chamber does not support the appropriation of 15% of the 5% skills levy currently contributed to mining company skills development programmes in terms of the 2010 Mining Charter, or the proposed 1% procurement levy from multi-national companies. This skills money is best directed by the mining companies.

The Chamber and its members remain committed to workplace diversity and equitable representation at all levels to promote social cohesion, transformation and the competitiveness of the sector. But, the DMR's proposed employment equity targets are simply too steep and not realistically achievable by the sector even in the five-year transition period. The Chamber and its members are willing to work with the DMR in driving employment equity with reasonable and practical targets.

The industry supports the promotion of local manufacturing if it is done in a holistic manner looking at, among other things, supply, local and international demand, incentives and other key factors.

The Chamber is opposed to the 70% target for locally manufactured capital and consumable goods from BEE-compliant companies as this target is not achievable for a number of minerals. This new formulation of 70% locally manufactured goods from BEE compliant entities is a marked change and increase from the previous target of 40% BEE expenditure and is untested.

The revised DMR proposal for contributions to mine community development of 1% of turnover over a two-and-a-half-year period (0.4% per annum) is a reduction from the 1% of annual turnover proposal of April 2016. However, it is still equivalent to a royalty being charged on an *ad valorem* basis, and is the most regressive form of tax, as even loss-making mines would be liable to contribute. The Chamber is in favour of a reasonable EBIT-based target for commitments to community development.

The requirement for 100% compliance, at all times, with three ring-fenced elements – ownership, human resource development and mine community development – is unrealistic and not supported. The Chamber has proposed the use of sub-minimums similar to the B-BBEE Codes.



2016 AREAS OF FOCUS *continued*



Emerging Miners' Desk

As part of its transformation agenda, and to diversify its membership, in 2014 the Chamber established an internal specialist group known as the Emerging Miners' Desk (EMD). Since its launch the EMD has made considerable progress in its main purposes:

- Recruiting and assisting new entrants into the mining industry.
- Implementing a programme that will assist emerging miners in understanding their legal obligations, assist them in conducting their mining activities in a socially responsible manner, and in complying with the environmental obligations required from all mining companies.

Though there is no hard-and-fast definition of what makes an emerging miner, these are generally firms that operate in the early phases of the mining cycle. Those with which the Chamber is currently engaged are primarily registered companies that hold mining or exploration rights. Most are operating in the coal sector where barriers to entry are less onerous than those into deep-level, hard-rock mining.

In addition the EMD also works with two associations, the Clay Brick Association as well as the South African Diamond Producers Organisation (SADPO) which represents the smaller diamond companies. It also counts small contracting companies among its members.

The Chamber has sought and actively seeks to extend and diversify its membership in order to be more representative of the South African mining industry as a whole. Emerging miners pay a subsidised membership fee and have full access to all Chamber resources.

30 companies made up of emerging miners and related advisory services have joined the Chamber membership and fall under the EMD. As stated above, at present most are engaged in coal operations, followed by diamonds, manganese, iron ore, platinum, industrial minerals and chrome. Most are black-owned, empowered firms, particularly those in the coal sector.

Since its inception the EMD has run a number of public workshops covering diverse areas such as the Mining Charter, finance, water management and environmental compliance. These workshops are free of charge and topics are determined by needs expressed by the participants. The EMD also runs closed sessions exclusively for its members. Examples are on the inputs mining companies can make into the development of the third iteration of the Mining Charter and on finance, run in conjunction with the IDC. The EMD has also hosted a confidential workshop helping facilitate the linking of smaller producers with their larger counterparts in order to create operating and commercial synergies.

The outcomes of these sessions are not left in the air. By way of example, the outcomes of one closed seminar aimed at enabling emerging miners to give inputs to the draft Reviewed Mining Charter were submitted to the DMR. These inputs were made during the window period for submissions to the DMR. At another open session on the Charter, concerns emerged over the status of the pending court case, issues around social and labour plans, an accurate definition of emerging mining and the lack of participation of the junior sector in policy in the past.



Tebello Chabana
Senior Executive: Public Affairs
and Transformation

Emerging Miners' Desk continued

The EMD also runs a mentorship programme for emerging miners. In this programme, the Chamber matches, on a pro bono basis, retired executives with emerging miners. Emerging miners' continued meaningful participation in this programme will help determine the content of the coaching programme. The Chamber is grateful for the participation of this pool of retired executives who have committed to ploughing back their skills and experience for the benefit of future leaders in the mining industry.

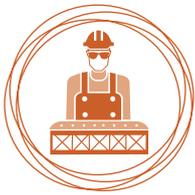
There have been approximately nine requests for mentorship where EMD members have been linked to mentors. In most cases this involves one or two meetings and the mentors then point the companies in the right direction. In some cases mentors have kept longer relationships with the Emerging Mining companies. Requests range from financial advice, business strategy, legal and regulatory issues, advice on the acquisition of mines, and business partnerships as examples.

**IMAGE**

AngloGold Ashanti employed an average of 28,507 people in South Africa in 2016



2016 AREAS OF FOCUS continued



Skills development

In recognition of the critical role the mining sector has to play in skills development in South Africa, the Chamber of Mines' Skills Development Unit continues to solicit and consolidate stakeholder views as well as to lobby, advocate and influence these views to develop a skills development solution that is in the interests of all stakeholders.

The Chamber is involved in all levels of skills development – from adult education and training to skills training for operators, miners, artisans, technicians, professionals and managers. This involvement includes input into theoretical, practical and workplace-based training and development programmes that are carried out by Technical and Vocational Education and Training Colleges, universities of technology and accredited training providers.

CONTEXT

The NDP Vision 2030 subscribes to the objectives of eradicating poverty, removing inequality and reducing unemployment. It is well known that without sufficient focus and continued investment in skills development, these objectives may not be realised to any meaningful extent.

Within the mining sector there are many challenges associated with the development of relevant skills. Amongst others, a legacy of poor educational opportunities, a complex tertiary education and training landscape and a poor basic education system, have resulted in many employees having few or low levels of skills. The national shortage of skills in all economic sectors exacerbates the challenges associated with the retention of staff, and increases the demands for training and development in the mining sector. The skills-development environment is also complex, with many policy, regulatory and legislative requirements. Navigating these requirements and challenges can be resource-intensive and exhaustive to individual organisations.

To counter skills shortages, South African mining companies invest in employee training and development in many forms that include learnerships, bursaries, apprenticeships, internships and adult education. The industry also supports training and skills development in the communities where operations are located, helping to make socio-economic growth possible beyond the life of mines.

ADVOCACY AND LOBBYING

The Chamber's Skills Development Unit represents the interests of the mining industry on matters affecting education and skills development in the national arena. The Chamber is represented on statutory bodies such as the Mining Qualifications Authority (MQA), Human Resource Development Council of SA (HRDC), National Skills Authority (NSA), and the Quality Council for Trades and Occupations (QCTO).

Chamber officials are active members of several national, sectoral and ministerial task teams and/or committees. Involvement in these platforms ranges from foundational learning, further education and training colleges, and their course offerings, to artisan training and reviews of skills systems. Chamber officials are also active members of BUSA in areas affecting skills development, and play a leading role in business mandates on skills development. The Chamber is represented on the National Artisan Development Advisory Body (NADAB) and



Mustak Ally
Head: Skills Development

Skills development continued

is regularly part of skills development task teams established at NEDLAC. The Chamber is the convenor for employers and is active at all levels of the MQA. Through lobbying, the Chamber is able to influence many of the decisions made by, and the direction of, the MQA.

MINING QUALIFICATIONS AUTHORITY

The Chamber plays an important role in the tripartite MQA, together with organised labour and government. The MQA is the Sector Education and Training Authority (SETA) for the mining industry and supports skills development in the sector and is the body responsible for ascertaining skills demand and disbursing the skills development levy.

The 2016 year was challenging for the MQA which received a qualified audit for 2015/2016. The qualified audit opinion largely related to bursary management, project commitments and data integrity from inadequate systems. The focus through the year has been on developing a turnaround strategy to improve the MQA performance and ensure an unqualified audit opinion in 2016/2017. As a key member of the MQA board, the Chamber plays an instrumental role in ensuring adherence to, and the execution of, the turnaround strategy.

Companies contribute 1% of payroll levies to skills development and 10.5% of this is utilised for administration expenditure within the MQA. This expenditure was in excess of R100 million for 2016.

Some of the MQA's achievements during 2016 were:

- More than 9,000 employees completed formal skills programmes (against a target of 6,000).
- More than 3,000 employees progressed through adult education programmes.
- More than 5,000 learners in higher education were supported through bursaries, internships and workplace experience programmes.
- Over R1 billion was raised in skills levies and approximately R900 million disbursed to companies through mandatory grants and discretionary grants.



Two Rivers Platinum Mine is a joint venture between African Rainbow Minerals and Impala Platinum



2016 AREAS OF FOCUS continued

NATIONAL BODY REPRESENTATION

The Chamber is represented on the QCTO, the NSA, and the HRDC as business representatives nominated through BUSA.

The QCTO is responsible for quality assurance of trades and occupations in the post-school education and training system. The Chamber played a leading role in the establishment of the QCTO and continues that role in its implementation. Some of the key areas of focus in 2016 were:

- The QCTO is developing a business case for the Council in terms of funds that are required from the Skills Development Levy to carry out the given and additional functions assigned to the QCTO. This exercise will determine the sustainability and success of the QCTO in the future and provide a business case for securing sufficient funds to perform its functions.
- The QCTO is also grappling with the positioning of quality assurance in the skills system. The challenge is being experienced in the overlapping roles between the SETAs and QCTO.

The NSA advises the Minister of Higher Education and Training on policy issues relating to skills development. The NSA's focus during 2016 was largely on the following:

- Increasing and improving the monitoring and evaluation of SETAs, thereby improving the overall performance of SETAs.
- Soliciting input and developing an NSA position in the SETA and skills development landscape.
- Consulting stakeholders and conducting research into the overall improvement of the skills development system.

The HRDC is a national, multi-tiered and multi-stakeholder advisory body established in March 2010 under the leadership and stewardship of the Deputy President and managed by the Department of Higher Education and Training (DHET). Membership is based on a five-year tenure, and representatives include a number of government ministers, senior business leaders, organised labour, academia and civil society. In 2016, the HRDC focused on:

- Identifying skills blockages and recommending appropriate solutions to unblock them, as well as identifying the primary institutional structures and leaders for partnering with to implement possible solutions.
- Commissioning research in the HRD field.
- Encouraging organised business, civil society, government and organised labour to invest in education and training, and to take full responsibility for HRD issues within their areas of competency.

BLASTING CERTIFICATES

During an MQA board meeting in November 2013, the DMR, organised labour and employers took a decision for the MQA to hand over the administration of blasting certificate examinations to the DMR. This decision was a result of the challenges with the rock-breaker or equivalent qualifications being administered by the MQA. This decision was made subject to certain requirements such as a syllabus and examiner's guide being developed. The DMR issued an instruction that the Blasting Certificate would be implemented in July 2015 and that learners should no longer be admitted to the Rock-breaker Qualification. In spite of the implementation date being set, the requirements were not finalised and the instruction could not be implemented.

The DMR indicated that the process had taken longer than expected and that the Blasting Certificate would be implemented in April 2016. Unfortunately the requirements and associated issues were still not finalised and the date for implementation was moved to January 2017, when there were further delays. After further engagements with the DMR,



Artisans play an important role in the mining industry and the mining industry plays an important role in their development with, on average, 2,000 artisans qualifying in the mining industry each year.

Skills development continued

the new date of implementation has been set for June 2017. All issues relating to the suite of the Rock-breaker Qualification, learning materials and assessment of the Blasting Certificate have been concluded. The Chamber does not envisage any further delays in reverting to the Blasting Certificate.

TRAINING OF ARTISANS

Artisans play an important role in the mining industry and the mining industry plays an important role in their development with, on average, 2,000 artisans qualifying in the mining industry each year. The Chamber plays an active role in areas where the training of artisans is a focus. The National Artisan Moderating Body is responsible for the quality of artisans trained. It has developed:

- Transitional arrangements for trade testing of artisans
- Draft regulations on a national register for artisans
- A report on the Recognition of Prior Learning for Artisans project
- A policy for generic grants for artisan learners
- A national administration system
- A strategy to improve the trade test pass rate

New qualifications and associated curricula are being developed for the various trades with some of them already being registered at the South African Qualifications Authority. Others are in the process of being developed. The new curricula contain revised knowledge modules, practical skills modules and work experience modules. The DHET is also busy developing an Artisan Development Strategy. The Chamber has contributed to all this work and uses its membership within the NADAB to advise DHET on artisan matters and to influence policy relating to artisan development.

SETA GRANT REGULATIONS

BUSA challenged the Minister of Higher Education and Training's decision to change the SETA grant regulations (regulations which determine how the SETA grants are to be spent) through the Labour Court in 2013. The mandatory grant, which had amounted to 50% of the skills development levy paid to employers, was reduced to 20% and was the main change brought about by these regulations. In August 2015, the Labour Court ruled in favour of BUSA and set aside certain aspects of the regulations, specifically the reduction of the mandatory grant from 50% to 20%. The Court found that the Minister had failed to consult the NSA as required; that the Minister had acted irrationally by reducing the mandatory grant; and that the Minister did not have the power to move unspent SETA funds to the National Skills Fund. The Minister appealed this decision.

Further delays in the submission of relevant appeal documentation to the courts and the failure to execute this order on 1 April 2016, led to BUSA again lodging legal proceedings with the courts. The date for the appeal hearing has been set for May 2017.

PROPOSED SETA LANDSCAPE

SETAs are established for five-year periods. The current term of SETA licensing expired in March 2016. However, through two government gazettes, the SETAs were re-established until March 2020. Prior to this re-establishment, a Government Gazette on a new SETA landscape and National Skills Development Strategy IV was published in November 2015 for comment. The gazette was widely reviewed through various platforms. The Chamber obtained input from its members and broader industry and included these into a BUSA consolidated business response.

2016 AREAS OF FOCUS continued

The input and comments that were received by DHET led to a rethink on the proposed SETA landscape and this rethink led to the formulation in 2016 of a National Skills Development Plan (NSDP) by DHET. The NSDP is currently being interrogated at NEDLAC and as soon as this process is concluded a gazette will be published to solicit any further comment and input. The process is envisaged to be concluded in 2017.

CHAMBER OF MINES CERTIFICATES

The Chamber of Mines Examination Department arranges and administers all the examinations that are written in the Survey, Sampling, Ventilation and Rock Mechanics disciplines, and also issues these certificates.

- The Advanced Sampling qualification allows the candidate to be able to do his/her job with more confidence and equips him/her with the knowledge that can pave the way to a senior position.
- The Advanced Survey qualification is a pre-requisite for entry to be able to write the Government Certificate of Competency.
- The Mine Environmental Control qualification is required by the Mine Health and Safety Act (Act 29 of 1996) for persons who are responsible for environmental control at a mine.
- The Rock Mechanics qualification is required by the Mine Health and Safety Act (Act 29 of 1996) for persons who are responsible for the rock mechanics at a mine.



In 2016, more than 6,000 learners at higher education institutions were supported by the mining sector through bursaries, internships and workplace experience programmes.

CERTIFICATES ISSUED BY CHAMBER OF MINES IN 2017

The table below indicates the number of Chamber certificates that were issued over the past three years. Fluctuations in the number of candidates who have sat the examinations over the three-year period were driven by the demand from the various mining companies and is indicative of the economic fluctuations experienced by the sector. It is however expected that once these qualifications are formally registered with the QCTO then the number of Chamber examinations should decrease substantially.

Name of Certificate	2014	2015	2016
Certificate in Advanced Mine Surveying	91	63	73
Certificate in Advanced Mine Valuation	75	54	48
Certificate in Advanced Rock Engineering	4	7	6
Certificate in Basic Mine Sampling	164	123	99
Certificate in Basic Mine Surveying	156	143	134
Certificate in Elementary Mine Sampling	64	87	57
Certificate in Elementary Mine Surveying	141	120	92
Certificate in Mine Environmental Control	29	12	21
Certificate in Radiation Protection Monitoring Screening	181	102	145
Certificate in Rock Mechanics	25	18	26
Certificate in Strata Control	96	71	99
Intermediate Certificate in Mine Environmental Control	51	60	64
Certificate in Mine Survey Draughting	30	13	26
Total	1,107	812	890

CASE STUDY

FEE-FREE HIGHER EDUCATION? THE CHAMBER'S RESPONSE TO #FEESMUSTFALL

In 2016, South Africa saw unprecedented, intense and violent protests by university students in a call for free higher education. The Chamber was not immune to these protests actions and there were three protests marches to the head office of the Chamber of Mines. Among others, the common demand was that the mining industry support (predominantly through financial contribution) the call for free higher education.

The Chamber responded to the various memoranda that were handed over as demands as follows:

The Chamber and its members believe that consistent, quality, relevant and accessible tertiary education is one of the keys to South Africa's future and to enabling the country to achieve the long-term vision of a prosperous and inclusive future as described in the NDP.

Mining companies - directly and through the Chamber - have consistently over many decades supported higher education infrastructure developments, provided bursaries and scholarships, supported teaching and administrative costs, and sponsored many thousands of students at tertiary educational institutions across the country.

The mining sector, as represented by the Chamber, accounts for around 10% of the country's corporate taxation of which a sizable amount is used for funding education in the country. Further to this, the sector contributes more than R1 billion towards the skills development levy and a further 5% is spent on training and development through compliance to the Mining Charter. In 2016, more than 6,000 learners at higher education institutions were supported by the mining sector through bursaries, internships and workplace experience programmes.

The Chamber and its members believe that tertiary education should be funded primarily by government, with contributions from the corporate sector, and sliding scale contributions from students. Government should, over time, be encouraged to allocate a greater share of available revenue streams towards higher education, whilst balancing this with other demands of the country that are its responsibility.

The Chamber provided input into the Fees Commission in March 2017.

The Chamber does not and cannot support protest methods that result in damage to university and other private property nor can it support methods that use threats of, and actual, violence to force authorities to close universities. The Chamber also does not and cannot support the intimidation of students who hold contrary views. Further, the Chamber believes that the funding of higher education is the responsibility of all social partners and an amicable solution should be found without compromising other objectives.

2016 AREAS OF FOCUS continued



Modernisation – advancing the mining cluster through R&D and manufacturing

After the Mining Phakisa Lab in 2015, considerable progress was made by the Chamber's Modernisation team in 2016 to establish 'Quick-Win' R&D programmes that will ensure delivery on user-based R&D requirements. These requirements have been clearly articulated, in terms of solutions that are required to ensure the sustainability of the industry, especially in the gold and platinum sectors. Essentially, 2016 was a year of formulation, whereas 2017 will be a year of implementation.

The main achievements of 2016 were:

- Agreement amongst stakeholders to develop a model based on Public-Private Partnership for the mining cluster, based on the principle of Open Innovation.
- The commitment of the Department of Science and Technology (DST) to the re-establishment of the Council for Scientific and Industrial Research (CSIR) site at Carlow Road for collaborative mining research and manufacturing development with representation from the CSIR, the Chamber of Mines and equipment manufacturers.
- The establishment of the Mining Equipment Manufacturers of South Africa, as a Cluster Development Programme, supported by the DTI.
- The development of detailed Charters for the Seven Quick-Win Programmes as the core of the R&D programme by the mining industry, through the Chamber's Innovation Team.
- Being awarded a budget of R150 million over three years of government funds in the Mid-Term Budget Statement.
- Securing, in principle, an agreement on a test-mine facility that will be open to all participants.
- Implementation of a communications programme around modernisation culminating in a dedicated Mining 2030 webpage.



1

2

1. Sietse van der Woude
Senior Executive: Modernisation and Safety

2. Katlego Letsoalo
Intern: Modernisation and Safety



Kolomela Mine is Kumba's newest mining operation



Modernisation continued

QUICK-WIN PROGRAMMES

These programmes are based on industry needs, as well as national needs, with the aim of improving the contribution of the mining sector to the economy on a sustainable and inclusive basis. The programmes are divided into those affecting current mining operations, mechanised mining and non-explosive rock breaking as illustrated in the diagram below.

MODERNISATION OF CURRENT MINING OPERATIONS

This involves ensuring the sustainability of current operations, by ensuring work is done more efficiently, safely and healthily through the introduction of modern practices and appropriate technologies.

The focus is to increase the efficiency of extraction and improvement in occupational health and safety, as well as cost reduction.

MECHANISATION, USING DRILLING AND BLASTING

As this involves application in both the gold and platinum sectors, there are two work streams in this area.

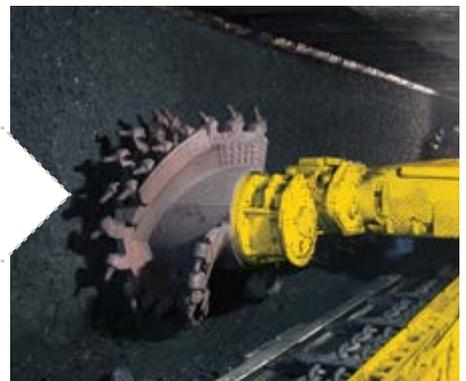
The main theme in these areas is to remove people from dangerous areas and introduce remote operation throughout the mining cycle. In addition to the technical challenges, a systems engineering approach is essential.

The aim is to develop fully mechanised mining systems that will allow for the drilling of narrow hard-rock mines (particularly gold and platinum).

NON-EXPLOSIVE ROCK BREAKING

While attempts have been made in the past, and continue to be made, to develop hard-rock continuous mining systems these have not proven to be successful. Significant fundamental research work is required in this area to develop rock-breaking technology, as well as the fully integrated continuous mining system of the future. This will require significant research into rock engineering aspects, designs and supporting systems.

The goal is to develop complete systems for extraction that are completely independent of the use of explosives.



ADVANCED OREBODY KNOWLEDGE

Any of the above programmes require a much better three-dimensional model of the ground in front of the mining faces, beyond just structure and grade. Therefore, new techniques are required to create these models so that mechanised mining systems can be planned for efficient, non-disruptive operations.

REAL-TIME INFORMATION SYSTEMS

Much research is required in the field of real-time information systems, digitisation and integrated communication technologies.

These areas of work relate to the "internet of things" in mining, and require specialised research into sensors, data capture, data transmission and data analysis and management in real time.

HUMAN FACTORS

None of these programmes will be successfully developed or implemented without a very good understanding and management of the human factors involved. These include issues of change management, skills development and behavioural aspects, all framed in the context of the 'just transition' to a sustainable economy, and decent work for local people.

2016 AREAS OF FOCUS *continued*

This non-explosive mining programme researches the means by which narrow-width mining can take place on a continuous basis, so that previously unexploitable reefs can be made economically viable. Research in this area started with a review of all previous and current attempts in this area, including the reef-boring project of AngloGold Ashanti. In parallel with this, researchers are being allocated to fundamental rock-breaking studies, with the involvement of local OEMs. This will result in 'local solutions for a local problem'.

There are three programmes which cut across all of these basic programmes:

- **Advanced orebody knowledge:** This programme recognises that significant capital investment into modernisation cannot be justified unless the orebody is de-risked. The aim of this programme is to develop real-time three dimensional models of structure, grade and other characteristics. Three researchers have already been assigned to the programme, with test sites established. Additionally, two international research studies identified through an Open Innovation Challenge done in collaboration with the Gauteng Innovation Hub, are under evaluation.
- **Real time information management systems** focuses on the "internet of things" or digitisation in mining. To assess the status of this in South African mines compared to global leading practice, two baseline studies have been commissioned through an international company. The steering committee has identified 13 work streams for research, and research institutions have been invited to participate in these streams. Essentially, this includes data collection, data transfer, spatial positioning, data standards and data conversion to management information, all in real time.
- **Human factors** is a programme that considers all of the change management and skills development areas associated with the 'just transition' to more modern mining methods, systems and mines. 'Just transition' is a framework that encompasses a range of social interventions needed to secure jobs and livelihoods, when economies are shifting to sustainable production. A steering committee is being established to guide the process, including creating a wider level of expertise in this area.

The Chamber provided financing for the immediate appointment of two programme managers, in the areas of modernisation and real-time information systems. Other programme managers will be appointed after the start of government's next financial year. Interim governance structures for the management of government funds are being established. Research institutions are in the process of submitting joint research proposals for the different programmes.



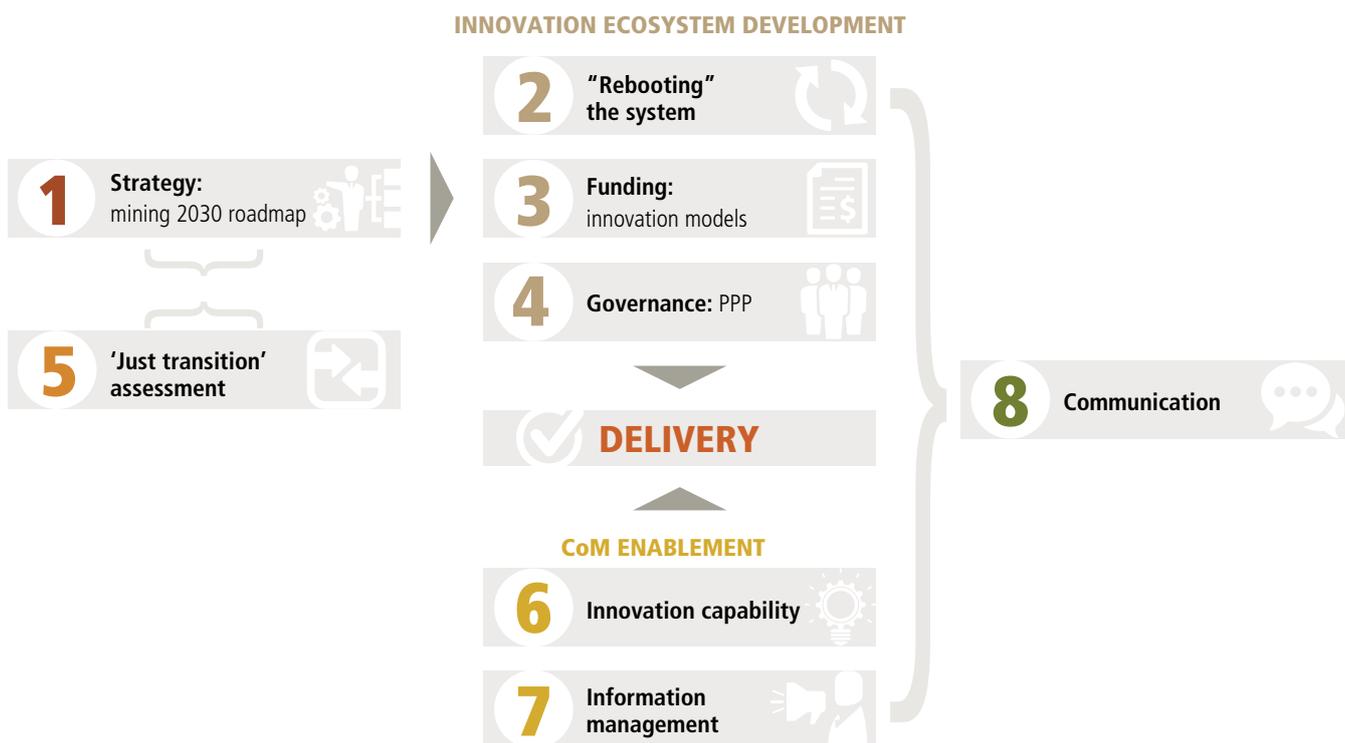
Exxaro is one of the largest black-owned, South African-based diversified resources companies



Modernisation continued

MINING 2030 THROUGH AN INNOVATION-FOCUSSED STRATEGY

Chamber Vice-President, Neal Froneman, in a presentation at the Mining Indaba said in Cape Town in February 2017, “To be successful, introducing technology will need to be addressed in a holistic manner, adopting a systems and people-centric approach.” To give effect to a holistic approach to innovation the Chamber decided, as part of its annual strategic review, to develop an ‘innovation-focused’ strategy. The framework for such a strategy is in the diagram below.



IMAGE

Anglo American's coal business in South Africa produces thermal coal largely for domestic use



2016 AREAS OF FOCUS continued

The priorities for 2017 are:

- **2030 mining innovation roadmap:** Mining companies are the end-users of innovations aimed at addressing all the challenges that face them, from technical, safety, health and skills development to the environment and societal expectations. The aim of the 2030 Mining Innovation Roadmap is to provide direction to all those involved in mining innovation, including mining companies, suppliers of goods and services, research and development entities, government, funding agencies, etc. Research and stakeholder engagement will be undertaken on trends, scenarios and decision points around technology, society, regulations and innovation. The roadmap should provide a holistic view of the many possible futures of South African mining, together with the decision points that could enable the country's mining to choose 'better' futures.
- **'Rebooting' the mining innovation ecosystem:** South Africa used to be considered among the global leaders in mining innovation, but this is no longer the case. The question is whether the mining innovation ecosystem is 'broken' or lacks visibility to mining companies. Assuming it is the latter, the aim of this initiative is to illustrate to mining companies what South African entities can do through innovation to help them deal with the difficulties they encounter. We often come across new challenges in companies, solutions to which lie in the mining industry. By mapping existing ecosystem efforts, designing to enhance what exists and then generating interest through events, the intent is to develop a comprehensive understanding of the mining innovation ecosystem across South Africa, together with a means to activate that ecosystem to be fully effective.
- **Funding and governance models:** The main aim of this project is to provide guidance on possible public-private partnership funding and governance models that will accelerate mining innovation in a holistic manner.
- **'Just transition':** As part of a people-centric approach to introducing technology and other forms of innovation, the transition to modernised mining needs to be just and socially acceptable. The impacts of innovation need to be communicated by parties that enjoy credibility among all stakeholders and then be addressed in a holistic manner. The Chamber will participate in all efforts aimed at achieving this outcome.



Sibanye's Kroondal exploits the UG2 Reef on the western limb of the Bushveld Complex





AngloGold Ashanti's Mponeng mine is one of the world's richest gold mines

CASE STUDY

MODERNISATION OF THE GOLD INDUSTRY

There can be no denying the fact that South Africa's mining future lies in widespread and diverse mechanisation. The country's underground gold and platinum mines with their narrow reefs, increasing depths, steep ore, rising temperature gradients, abrasive rocks and increasing seismic challenges are – and have been since their inception – labour intensive. But if the country's remaining and extensive gold reserves can only be exploited at depths beyond those that can currently be worked by humans, new technologies have to be introduced for the mines of the future.

As our mines have aged, distances between working faces and shafts have risen inexorably, meaning that miners' travelling times to their workplaces have risen steadily, leaving less time available for work at the mine face. The effects on productivity and costs are clear, as are the effects on miners' health and safety.

Further, the industry's absolute objective is for zero harm. To this is linked the aim of improving productivity by allowing operations to be carried out on a 24/7 basis by 2025, in part through the introduction of remotely-controlled equipment that minimises or eliminates the need for human intervention at the working faces. Such mechanisation needs to take into account the different geologies and needs of the country's gold and platinum mines.

While many modernisation initiatives are being pursued by individual Chamber members to manage their mines' specific technical challenges, it is clear that a holistic, collaborative and cooperative approach can provide significant advantages. This process gained momentum over the past year with the Chamber's co-creation of a research, manufacturing and sustainability hub driven by dedicated industry specialists which brings together contributions from the country's universities, technical research institutions, equipment manufacturers, mining companies themselves and key state departments.

It is certain that significant expenditure will be needed for research into appropriate robust technologies over the next few decades. Funding by the state and by industry will be crucial. In addition, interventions will need to be ones that do not unnecessarily disrupt current conventional mining operations. The introduction of new technologies and equipment will be progressive – a process that will include the training of employees to operate the new equipment.

The Chamber is confident that the industry will rise to the challenges of modernisation.



CASE STUDY

SIBANYE'S DIGITAL JOURNEY

In identifying and promoting leading practice related to innovation, the Chamber of Mines engaged a number of companies on the role of technology and digital in the South African mining sector. As a result of this initiative, Sibanye conducted a Mining Innovation and Digital Assessment (MIDA), with the assistance of management consultancy McKinsey and Company to create a baseline for what is possible in the South African context.

In its focus on how digital innovation can improve mining productivity, McKinsey notes four factors for accelerating digital adoption:

- Data and computational power have all accelerated in size, speed and cost effectiveness over the last three to four years.
- Advanced analytics (machine learning, advanced statistics) help turn vast data sets into insights.
- Mobile devices have transformed the way people interact not only with one another, but also with machines. This enables process digitisation.
- The cost of industrial automation has fallen by 50% since 1990.

Sibanye aims to capitalise on the rapid progression of digital technologies by leveraging existing data within its operations through the adoption of advanced analytics and new technology. While the company continues to drive traditional performance improvements in safety and health, productivity, quality and cost, the inclusion of digital and new technology will enhance the company's ability to transform data into business intelligence and implement improvement initiatives more effectively. Digital insights may enable more effective mineral resource management, improve safety and health, create employment in a local, high technology design and manufacturing industry, support more vibrant economies in local host communities and deliver enhanced shareholder returns.

Some of the useful insights at Sibanye were:

- Vast amounts of data are generated across the business, with strong systems and standardised data collection across the supply chain. There is also a high level of integration across systems.
- The company generates basic insights, but there is an opportunity to leverage more advanced analyses to further optimise performance using the data currently generated.
- The company has a large, untapped data pool with which to improve performance.

- These opportunities indicated that the company could drive value immediately, without major upfront investment.

Sibanye's journey began with a number of activities including:

- Leveraging data that already generated in rail-bound equipment (RBE) and trackless mobile machinery (TMM).
- Developing applications to improve transparency and decision-making for employees.
- Launching partnerships with key players (OEMs, academics) to develop new technologies.

By leveraging data from safety systems on both TMMs and RBEs, Sibanye's Safe Technology department was able to develop substantial safety and asset optimisation improvements. The safety systems inform TMM operators of other personnel within their vicinity thus preventing collisions, while on RBE, the systems provide for proximity detection, as well as communication between the locomotive operator and guard. Both systems require event data logging for investigation in the event of an incident.

The TMM Proximity Detection System records the number of infringements in the asset's danger zone and the details of the employee who has infringed. The company was therefore able to use the data as a coaching tool to close gaps in training, and educate employees on the dangers associated with mobile machinery. Recorded infringements in the machinery danger zone were reduced significantly.

When analysing the information derived from the RBE proximity detection and communication system, management is able to view large variances in overall equipment efficiency on specific locomotives and levels. This may be as a result of the asset being used for either people or material transport, or ore transfer.

As locomotives are serviced weekly, fleet optimisation and the implementation of variable asset allocation will ensure that locomotives are used equally, improving the efficacy of weekly services and reducing downtime. Next, once a suitable amount of data is analysed, locomotive health profiles can be developed, facilitating the transition from preventative to predictive maintenance.

Sibanye currently operates more than 700 trackless mobile machines and over 1,000 locomotives. So, the optimisation of its fleet could provide Sibanye significant safety and cost improvement benefits with very little investment.



Stakeholder engagement and communication

Mining has been the backbone of the South African economy for more than 100 years and it will continue to be a catalyst for economic and social development if the environment is conducive to investment and there is community acceptance of our operations. The Chamber continues to build relationships with all its key stakeholders and periodically reviews its engagement strategies to ensure it responds to stakeholder expectations. This includes engaging stakeholders on difficult issues which may include legacy issues and our current and future contributions to the country's economic growth.

The Chamber defines stakeholders as those individuals, groups and entities directly and indirectly affected by our activities, and aims to develop and enhance relationships with these key stakeholders in order to create and sustain an enabling environment in which to do business.

In 2016, the Chamber embarked on an extensive exercise to identify and map its stakeholders, and to identify and prioritise material issues of mutual concern to the industry and stakeholders. This process is important in order to create an enabling, business-friendly policy, legislative and operating environment for a sustainable and successful mining industry.

IDENTIFYING STAKEHOLDERS AND RESPONDING TO EXPECTATIONS

Government

A prosperous mining sector, enabled by business-friendly policy, legislative and operating environment will materially contribute to economic growth and meeting the objectives of the NDP. Government is a key enabler for a successful and sustainable mining industry.



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1. Tebello Chabana

Senior Executive: Public Affairs and Transformation

2. Zakithi Zama

Stakeholder Relations Manager

2016 priorities	Performance
<ul style="list-style-type: none"> Contribute to economic growth and meet the objectives of the NDP Enhance contribution to transformation Achieve positive progress in managing legacy issues and implement corrective measures Lobby government for policy certainty and a conducive operating environment 	<p>Our priorities for the past year were informed by the expectations of government stakeholders, including a consistent contribution to economic growth and the NDP. In 2016, the industry's contribution to GDP was R306 billion.</p> <p>In the context of a negative economic outlook, along with an unstable political and regulatory environment, the Chamber engaged the Portfolio Committee on Mineral Resources on the key issues and messages needed to promote South Africa's mining industry in major international markets.</p> <p>Our members continued to contribute positively to the country's transformation goals and will continue to do so.</p> <p>The Chamber, through the tripartite partnership incorporating the Compensation Commissioner, the Chamber and the DoH, is an effective stakeholder in resolving legacy occupational health issues and compensation. Work in this regard is continuing.</p>

Going forward

In the coming year, the Chamber will continue to contribute positively to the growth and development of the South African economy and, importantly, engage and raise concerns with government, given that a well-governed country is key for economic development and growth. There have been special concerns about the over-regulation of the industry. The Chamber and its members remain committed to transformation and are proud of their achievements in respect of the 2004-2014 Mining Charter targets. At the time of this report, negotiations were ongoing with the DMR on new targets for the reviewed Mining Charter.

2016 AREAS OF FOCUS continued

Political parties

Political parties represented in Parliament are key stakeholders for the mining industry. Our commitments during the past year included formal engagement with those parties on our current and future industry performance, on the socio-economic well-being of society and how the industry's future plans are likely to affect society.

2016 priorities	Performance
<ul style="list-style-type: none"> Enhance socio-economic well-being of society by creating opportunities Conduct operations in a safe and environmentally-friendly manner 	<p>Topical issues discussed with parliamentarians included the transformation performance of the mining industry, infrastructural challenges in mining towns and environmental management.</p> <p>Discussions were also initiated on labour relations, specifically wage negotiation updates and migrant labour policies.</p> <p>On behalf of our members, we engaged on the industry's concerns in relation to the unintended consequences of the NEMA Financial Provisions and the Waste Act.</p> <p>We continued to provide updates on the progress made as part of the tripartite initiative between Government, the Chamber and the Unions on occupational health issues and compensation.</p>

Going forward

As part of the Chamber's commitment to transformation and societal prosperity, our activities in the new year will include continuous engagements with the respective Parliamentary Portfolio Committees to demonstrate progress on transformation, safety, health and environmental management. We are of the view that our engagements with political parties will improve understanding of the mining industry and help the Chamber better understand the views of parliamentarians.

The Chamber believes it can never communicate too much and will continue to engage to find win-win solutions that will enhance socio-economic growth and successful mining industry operations.

Business and investors

The Chamber participated in a number of local and international conferences, summits and panels in order to promote the industry, and to engage with stakeholders on relevant issues.

2016 priorities	Performance
<ul style="list-style-type: none"> Advise on socio-political issues and trends 	<p>The Chamber represented its members at investor conferences and gave updates on the mining business environment and on socio-political activities. The Chamber was represented at the following mining and investor conferences: Africa Down Under (Australia); Japan Oil, Gas and Metals National Corporation (JOGMEC); JSE SA Tomorrow (New York), the Prospectors & Developers Association of Canada (PDAC) (Toronto), Mines and Money (London); Joburg Indaba, Investing in African Mining (Cape Town) and the London Bullion Market (LBMA). In addition, the Chamber is an active stakeholder in BUSA and NEDLAC where economic issues of mutual interest are discussed.</p>

Going forward

The Chamber remains committed to its key role in business structures, helping to ensure that the business environment is conducive for the mining industry to thrive and will therefore be able to continue to contribute to the country's economic growth.

Stakeholder engagement and communication continued

Non-governmental organisations and opinion makers

2016 priorities	Performance
<ul style="list-style-type: none"> • Adhere to economic, social and environmental responsibility and reporting • Comply with transformation initiatives (including compliance with Social and Labour Plan (SLP) implementation) 	<p>The mining industry continues to have open dialogue with the NGO community on a range of issues. The implementation of SLP commitments, water resources management, mine closures and rehabilitation issues dominated in the past year. The Chamber supports a consultative and collaborative process with stakeholders in the development and the implementation of the SLPs. Already, many of our members now disclose their approved SLPs and annual SLP reports on their websites. The Chamber has however voiced its concerns over delays in the approval of SLPs by the DMR which has led to delays in communicating and implementing SLP projects in certain instances.</p> <p>Broad transformation and environmental management continue to be prominent matters for discussion between the industry and NGOs.</p> <p>The Chamber continues to provide information on environmental improvements and sharing of best practices on environmental management.</p> <p>During the year, the Chamber participated in a number of one-on-one engagements with local and international NGOs including the Centre for Applied Legal Studies and Lawyers for Human Rights.</p> <p>The Chamber also made a voluntary submission to the South African Human Rights Commission hearing on mining and affected communities. This presentation may be viewed at http://www.chamberofmines.org.za/industry-news/publications/presentations/send/7-2015/313-presentation-sahrc-national-hearing</p>

Going forward

The Chamber realises the importance of continued engagement with NGOs on environmental, social and economic issues, in order to share and showcase its successes, to understand the NGOs' concerns about industry and to promote sustainable development.

Environmental management continues to be a critical consideration for the mining industry and there are a number of environmental best practice initiatives where the industry has performed beyond compliance requirements.

Organised labour

2016 priorities	Performance
<ul style="list-style-type: none"> • Higher wages • Create and sustain decent jobs • Deliver on SLPs 	<p>The labour market was volatile due to low commodity prices and general economic gloom. The expectations of organised labour included negotiations on sustaining jobs. The Chamber is cognisant of the social challenges facing South Africa and Chamber members make the preservation of jobs their first priority. At the time of reporting, the industry had started to see job creation green shoots. The Chamber realises the importance of engaging with labour representatives and continued to meet with labour unions on a quarterly basis. Refer to the Employment Relations section for more information.</p>

Going forward

Working with our labour partners, we are considering future modernisation strategies that will contribute to job preservation as well as to a safe and sustainable mining industry.

2016 AREAS OF FOCUS continued

Communities

2016 priorities	Performance
<ul style="list-style-type: none"> • Compensation for injuries and deaths/legacy issues • Progress with implementation of SLPs • Creation of job and business opportunities and community development 	<p>Progress is being made to fast-track the implementation of programmes addressing legacy issues. The initiative involving the Departments of Health and of Labour has been instrumental in this regard.</p> <p>Through the Chamber website and a series of media updates, up-to-date information is provided on industry performance with regards to transformation and managing legacy issues.</p> <p>Many Chamber members have fully complied with the provisions of their SLPs and the Chamber encourages communities to be active participants in the formulation of Municipal Integrated Development Plans (IDPs), as this instrument is key when mining companies formulate SLPs.</p> <p>The Chamber has raised its social media platform presence through Facebook and Twitter, in line with its increased emphasis on proactive and reactive communications, and also to broaden its reach.</p>

Going forward

Community expectations of the mining industry are increasing. The Chamber has identified an increased need to engage with broader society on the benefits of mining in order to create shared value in a manner that will ensure the retention of our members' social licence to operate.

The Chamber recognises that mining is frequently portrayed in a negative light and is taking a two-pronged approach that seeks to influence and support the national curriculum (long-term); and to develop material to improve mining, mines and minerals awareness through provision of CAPS-aligned learning materials in schools across SA. An upcoming Mining for Schools website portal forms part of this plan.

In response to the perceived minimal impact of the industry's extensive social spend through various community development initiatives, the Chamber is establishing a regional presence to foster collaboration beyond Gauteng and into other regions with the Steelpoort, Carletonville, and Emalahleni areas as pilots.

Members

2016 priorities	Performance
<ul style="list-style-type: none"> • Creating a platform which allows members to raise concerns • Ensuring that the Chamber is fully aligned with its members 	<p>The Chamber hosts and meets with the communications executives of its member companies on a quarterly basis. These meetings facilitate open discussions on industry issues.</p> <p>The Chamber also reports on its activities on an annual basis in its integrated annual report and publishes a quarterly newsletter which is distributed to its members to keep all abreast of the latest developments.</p>

Going forward

As an advocacy organisation, the Chamber recognises that successful advocacy depends on finding a delicate balance that puts South Africa first, and creates an environment in which the mining sector can function optimally. Presenting its members' interests continues to be the Chamber's main priority.

Stakeholder engagement and communication continued

Media and analysts

2016 priorities	Performance
<ul style="list-style-type: none"> Promoting the mining industry amongst the investment community Communicating the Chamber's position on various aspects including health and safety, environmental issues, transformation and economic performance and stability, amongst others, to the media and the public at large 	<p>The Chamber ensures that accurate and up-to-date information is available and accessible to the investment community, the media and the public at large.</p> <p>A key component of these efforts is ensuring that the Chamber's website contains information which is useful, relevant, up-to-date and easy to access.</p> <p>The media relations function at the Chamber has been outsourced to an external public relations agency as part of the Chamber's drive to engage proactively with the media. During the year a proactive media relations programme was implemented to ensure that the industry's position is communicated accurately and timeously.</p>

Going forward

The Chamber remains committed to promoting the mining industry amongst the investment community and to convey the industry's position to the media and public at large.

THE CHAMBER OF MINES AT WORK

The Chamber and its members have clear views on:

- The sustainability of mining in a shifting economic and legislative environment
- Modernisation based on changing technologies and mechanisation on which the industry's future will increasingly depend
- Job security and skills development in an environment characterised by declining labour-intensiveness and moves towards productivity enhancements
- The financial ability of mines to provide fair wages and benefits
- The industry's provision of acceptable living conditions to employees
- The industry's health and safety initiatives, particularly progress towards the goal of zero harm
- Community welfare, including facilitating the transition of communities to sustainable post-mining futures

The Chamber and its members are in accord over the centrality of the mining industry in creating a socio-economic environment that contributes to government's economic growth, transformation and social development goals. The central message is that all of the industry's stakeholders should be treated equitably if these aims are to be achieved and if new investment is to be attracted to help create and sustain a vibrant mining sector.

THE MINING INDUSTRY ASSOCIATION OF SOUTH AFRICA

As part of our contribution to a wider, regional appreciation of mining's developmental role, the Chamber is a member of the Mining Industry Association of Southern Africa (MIASA) which brings together the chambers of mines of nine southern African countries – Botswana, the Democratic Republic of Congo, Madagascar, Malawi, Namibia, South Africa, Tanzania, Zambia and Zimbabwe. The Chamber of Mines of South Africa acts as the MIASA secretariat and is the primary MIASA contact. Amongst MIASA's aims is building a regional consensus on what constitutes "shared value" particularly in relation to African Mining Vision, which covers the aspirations of the African continent's governments and societies.

CASE STUDY

STAKEHOLDER COMMUNICATIONS

Effective communications with all of the Chamber's stakeholders – member companies, mine employees, unions, government, regulators, investors, the media and others – are and remain a central part of our remit. Our communications initiative takes into account our stakeholders' differing needs for information on the Chamber itself and on the broader mining industry as a whole. And it is founded on the premises of clarity, accessibility and coherency.

The foundation of the Chamber's communications initiative is its website. The site was redesigned and restructured in 2016 to create a portal for easy access to all of the organisation's other communications tools. The website also provides a portal for archived material such as media releases, public presentations and research papers. In addition, fact sheets containing detailed information on topical issues such as safety, health, housing and accommodation, illegal mining, skills development and transformation have been made available on the website to assist the industry in educating and informing all stakeholders about the issues dealt with on a daily basis.

Though the Chamber has its roots firmly planted in South Africa's soil, its vision extends to the rest of our region – the challenges faced by South African mining firms are often similar to those encountered by others elsewhere. In pursuit of this wider viewpoint, the Chamber also manages the official website of MIASA. South African mining does not exist in isolation.

The membership of MIASA links neatly with our message to prospective investors in African mining. This, in its turn, is most effectively delivered at the well-established annual Investing in

African Mining Indaba of which the Chamber is a sponsor. The conference attracts delegates from across the globe to Cape Town – delegates seeking one-stop opportunities to interact with government officials from across our continent, mining firms entering or operating in those jurisdictions and with service or equipment providers.

Chamber officials also take the industry's message to others across the globe. Again we strive for coherency in our presentations at a number of influential international mining investment conferences around the world. The Chamber's presentations complement those of individual South African mining firms at those same conferences.

In South Africa, a principal tool for communicating with our member companies is our quarterly newsletter written to provide insights into developments and changes taking place in the country's mining jurisdiction. Its range is broad, from the economics of mining through legislative changes to relationships with organised labour. Again, the message is coherent, cohesive and available to all of our stakeholders through the website portal. And the quarterly reports coalesce into the Chamber's comprehensive suite of annual reports, of which this is one.

Finally, and no less importantly, communications with the wider public are achieved through pertinent and timely news releases supported by face-to-face meetings with journalists, analysts or visitors.

These communications tools all form part of a coherent and interactive whole, which takes full account of the information needs of our interlocutors.



Environment

The Chamber of Mines' Environmental Department acts as the primary representative of the mining sector in environmental sustainability policy and regulatory initiatives, leading discussions and the development of position papers for policy formulation and implementation in the field of mining, general environmental management, water resources management-related issues, waste management, air quality and sustainable development. The department provides advisory services, reviews of policy and legislative frameworks, guidance and strategic leadership in areas such as mine rehabilitation and closures, environmental management policy issues, and sustainable development.

In 2016, the department participated in initiatives that dealt with environmental and sustainability issues of concern to the mining industry, including chemicals, biodiversity, air quality, water resources and waste management. It also provided expert and specialist input to many legislative and policy initiatives. The main vehicle for such interaction is the Chamber of Mines Environmental Policy Committee which is the most senior environmental management grouping in the South African mining industry.

KEY DEVELOPMENT IN 2016

National Environmental Management Act: Financial Provision Regulations

The National Environmental Management Act Financial Provision (NEMA FP) regulations – published at the end of 2015 - continued to dominate policy discourse in the mining industry insofar as environmental issues were concerned. The Chamber of Mines undertook constructive engagement with authorities to highlight the potential technical, legal and financial challenges posed by these regulations.

One of the key issues raised by the industry was uncertainty over the applicability of prevailing NEMA FP regulations to existing mining rights issued in terms of the MPRDA regulations. The Chamber of Mines subsequently engaged with the DMR who previously did not have a full appreciation of the extent of the issues.

In an attempt to allow time for the resolution of concerns pertaining to these regulations, the Department of Environmental Affairs (DEA) published proposed amendments to the 2015 NEMA FP regulations in October 2016, essentially delaying the implementation date of the regulations. The Chamber used this avenue to facilitate robust engagements with the authorities on the critical issues impeding smooth implementation of the regulations. Through the Chamber's engagements, significant progress has been made, with authorities opening up to solutions that will ensure legal certainty and the sustainability of the industry.

Classification of Mine Residue Deposits and Stockpile as hazardous waste

The Chamber sought to reach a workable solution with the DEA with regard to an unfortunate legislative amendment to classify MRDS as hazardous waste. This amendment had thrown the mining industry into legislative compliance disarray and led to inappropriate regulatory requirements, such as costly lining and waste management licensing of tailings facilities, now being required by the Department of Water and Sanitation (DWS). Most importantly making it difficult to reclaim dumps in terms of the requirements of the MPRDA.



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1. Stephinah Mudau

Head: Environment

2. Nikisi Lesufi

Senior Executive: Environment,
Health and Legacies

2016 AREAS OF FOCUS continued

While significant progress was made with senior officials of the DWS to reach a practical compromise which entails the adoption of a risk-based approach, the mining industry also actively engaged with officials at the DEA to seek a policy amendment solution that would create long-term certainty in policy requirements. Thus far, the DEA has made proposals to amend the Waste Act to exclude MRDS from the Waste Act through the National Environmental Management Laws Amendment Bill, 2015 (NEMLA 4). Further discussions are ongoing to find an interim solution in light of the fact that legislative amendment may take a while.

National Water Resource Strategy 2

The DWS consulted with stakeholders regarding the implementation of National Water Resource Strategy 2 (NWRS2). This engagement was to update stakeholders on the sector implementation plans, to seek cooperation from sectors and to request any additional information/data in order to assess progress made thus far.

Significant progress has been made by the Chamber and its members by initiating programmes aimed at implementing the themes set out in the “NWRS-2 Business and Mining Implementation Plan”. Some of the themes include water resources planning, development and infrastructure management, water resource protection, equitable water allocation, water conservation and water demand management, regulation and international cooperation and trans-boundary water management.

National Climate Change Response Policy

The Department of Energy (DoE) followed on its mandate as provided for in the National Climate Change Response Policy by developing a Carbon Offset Administration System (COAS). The development of this system is based on the draft Carbon Tax Bill and the draft Carbon Offset regulations. The DEA also initiated a project to develop South Africa’s Climate Change Mitigation System. These parallel, related initiatives were intended to assist South Africa to transition to a low carbon economy, and companies to lower their greenhouse gas (GHG) emissions, and mitigate and respond appropriately to climate change. The Chamber is participating in the DoE, National Treasury and DEA engagement processes to refine both these systems in order to ensure due consideration of mining industry interests.

The UNFCCC 22nd Conference of Parties – COP 22

The 22nd Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) took place in Marrakech, Morocco in 2016. The unprecedented political momentum on display in Paris in 2015 carried over into COP 22 in Marrakech, with countries moving more quickly than anticipated to ratify the Paris Agreement and bring it into force. COP 22 set 2018 as its deadline for completing the nuts-and-bolts decisions needed to fully implement the Paris Agreement.

This will result in parties to the UNFCCC, including developing countries such as South Africa, being held responsible for emissions reductions and forced to comply with their respective National Determined Contributions (NDC) adopted under the Paris Agreement. The Chamber has been instrumental in providing members contributions to the development and implementation of South Africa’s climate change policies with the intention of assisting the country in its GHG emissions reduction efforts and the transition to a low carbon economy.

Minamata Convention on Mercury

The Chamber and its members have been participating in a study initiated by the DEA to conduct an in-depth analysis of the prevalence of mercury in South Africa. The study involved stakeholder interviews and on-site assessment (where possible) to obtain data on mercury.



The Chamber and the mining industry provide specialist input and engage on environmental policy and legislative development through participation in a range of activities.

Environment continued

Data collection was also performed by individual companies and included the mining industry completing questionnaires developed by the DEA on mercury use or occurrence at operations.

The DEA, UN Environment Programme (UNEP), and the Africa Institute officially launched the Minamata Convention on Mercury initial assessment project in Durban. The project is aimed at facilitating the ratification and early implementation of the Minamata Convention by providing stakeholders in South Africa with sufficient scientific and technical knowledge to understand the impact of ratification. The project is due to be finalised by the end of 2017, at which time South Africa will be in a position to make an informed decision whilst considering the implication for ratification of the convention.

Policy and legislative development

The Chamber and the mining industry provide specialist input on environmental policy and legislative development through participation in a range of activities in which all stakeholders are engaged. Some of these are discussed below.

National Environmental Management Laws Amendment Bill (NEMLA 4)

Stakeholders were informed by the DEA that it intends to amend several pieces of environmental legislation, including NEMA and the Specific Environmental Management Act, through the NEMLA 4 Bill. These laws include *inter alia* the National Environmental Management: Waste Act, 2014 (NEM: Waste Act) where it is expected that the classification of MRDS as hazardous waste under the NEM: Waste Act will be excluded, thus providing long-term certainty to the mining industry. At this stage, no timeframe has been set for the amendment process.

National Water Act

The DWS published a general authorisation in terms of section 39 of the National Water Act (NWA). This general authorisation replaces the need for a water user to apply for a licence when impeding or diverting the flow of water in a watercourse (section 21(c)), or altering the bed, banks, course or characteristics of a watercourse (section 21(i)) of the NWA (Act no. 36 of 1998) provided that the water use is within the limits and conditions of this general authorisation. The published general authorisation describes the conditions under which a water use must be registered.



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2016 AREAS OF FOCUS *continued*

Among other NWA developments, the Chamber participated in the following initiatives:

1) Chapter 3 of the NWA, 1998 (Act 36 of 1998) lays down a series of measures which together are intended to ensure the comprehensive protection of all water resources. These measures include the classification of water resources, setting the reserve and establishing resource quality objectives. The DWS commissioned the study for the determination of resource quality objectives (RQOs) in the Mokolo, Matlabas, Crocodile West and Marico catchments in the Limpopo water management area.

The DWS initiated a project to determine, review and implement the reserve water quality and quantity in the Olifants/Letaba System. The reserve provides for two components:

- Basic human needs, ensuring that the essential needs of individuals served by the water resource in question are provided for.
- The ecological reserve, ensuring that the water required to protect aquatic ecosystems of the water resource is provided for.

2) The DWS also embarked on an initiative aimed at revising its current water quality management policies and at developing an integrated strategy in response to the country's need to take an improved integrated approach to water quality management.

Draft National Water Pricing Strategy

Chapter 5 of the NWA, 1998 (Act 36 of 1998) provides for the development of a Raw Water Pricing Strategy for water-use charges. The pricing strategy applies only to the use of raw (untreated) water, and to the setting of tariffs by the DWS and water management institutions to be established in terms of the NWA. The Chamber of Mines participated in a national consultation meeting on raw-water charges hosted by DWS and contributed to the strategy by providing written submissions to the relevant section of DWS.

Implementation of the National Environmental Management: Air Quality Act

The Chamber of Mines, through its nominated representatives, initiated a collaboration with the South African Bureau of Standards in consultation with the DEA to develop a framework of non-section 21 (that is, operations not requiring an atmospheric emission licence) emission factors that will be applicable for reporting in the National Atmospheric Emissions Information System. A draft framework for the development of these emission factors was proposed, although approval from the DEA is awaited to ensure that it is in line with the national policy initiative.

Chemicals Management Bill

After intense engagements with senior officials at the DEA it was eventually accepted that there is no need for the development of this legislation as there are adequate legislative measures in place to manage chemicals. The development of this Bill has since been abandoned.

Draft Preservation and Development of Agricultural Land Framework Bill, 2016

The Department of Agriculture, Forestry and Fisheries (DAFF), published a notice in the Government Gazette on 2 September 2016 urging stakeholders to comment on the Draft Preservation and Development of Agricultural Land Framework Bill. This is a follow-up Bill to the one published in 2015 on which the Chamber had commented. However, it is evident that most of the Chamber's 2015 comments have not been implemented and remain applicable to the 2016 version of the Bill.

With both draft Bills, the Chamber has made it clear that while it agrees with the objective of food security, it is of the view that the Bill does not promote an equitable balancing of agricultural needs with other economic and social development priorities including mining. The Bill reflects a silo approach by the DAFF without consideration of the broader policies of government as a whole. In this regard, the Bill contains a number of unconstitutional provisions, including one in terms of which it sought to trump rights, permits and permissions granted by the Minister of Mineral Resources in terms of the MPRDA to prospect and mine for minerals. In order to resolve some of these concerns in the Bill, the Chamber has been engaging with broader business at BUSA in order to reconcile the business views on the Bill for consideration at NEDLAC.

Mining and biodiversity

The Chamber continued to provide leadership in the biodiversity sector through collaboration with stakeholders on the development of measures to mainstream biodiversity. Training and capacity building sessions, both for government and for industry, on the use of mining and biodiversity guidelines continued during the year. This initiative has been successfully carried out through the South African Mining Biodiversity Forum managed by the Chamber.

Water conservation and demand management in the mining industry

The DWS hosted a workshop to share the outcomes of the collaborative project with the Chamber of setting water conservation and water demand management targets (benchmarks) for the mining sector.

The benchmark report and the guidelines for the development and implementation of plans have now been finalised. The project is in the final stages of encapsulating the development of the online Standardised Water Accounting Framework and the BPG G6 guideline to assist the industry in navigating this framework, and for reporting purposes.

Water Institute of Southern Africa, Mine Water Division

Over the years, the Chamber has been a standing member of the executive management committee of the Water Institute of Southern Africa's Mine Water Division (WISAMWD). This division provides a multi-disciplinary forum for the advancement of cost-effective and environmentally-acceptable water management in the South African mining industry. Among other activities, the Chamber participated in the Institute's symposium which took place in November 2016. The theme of this symposium was management options for mine water.

International Council on Mining and Metals

As a member of the ICMM, the Chamber works to strengthen social and environmental performance in the mining and metals industry. The Chamber has been participating in the implementation of the overarching strategy for 2016 to 2018, which is focused on collaborative action towards societal acceptance.

Engagement with the Portfolio Committee on Water and Sanitation

During the year under review, the Chamber was instrumental in the formation of the Bojanala Water Forum mandated by the Portfolio Committee on Water and Sanitation during oversight visits to Bojanala in September 2016. The Forum comprises mining houses, water boards, the South African Local Government Association, the Department of Cooperative Governance and Traditional Affairs, and municipal representatives and has been formed to implement partnerships between mining houses and municipalities on issues related to water and sanitation.



The Chamber continued to provide leadership in the biodiversity sector through collaboration with stakeholders on the development of measures to mainstream biodiversity.

CASE STUDY

WATER CONSERVATION AND WATER DEMAND MANAGEMENT PROJECT

In recognising that South Africa is a water-scarce and water-stressed developing country, the Chamber and its members are acutely aware of the importance of managing this resource efficiently through water conservation and water demand management (WC/WDM). The Chamber and its members recognise WC/WDM as a fundamental step in promoting water-use efficiency.

Most of the country's mines are located in water-scarce catchments areas. This adds to the imperative of establishing and implementing targets for WC/WDM by the mining sector to ensure effective, efficient and sustainable use of the resource.

To this end the Chamber has collaborated with the DWS in a project to study and to establish water-use efficiency (WUE) benchmarks for various mining sub-sectors.

Work remains to be done before our collaborative project is complete. However, no snags are expected as the Chamber and DWS deliver their inputs to the project that will ultimately contribute to the setting of benchmarks which are defined as being minimum-compliance rather than aspirational.

As shown by the following diagram, the Chamber's work was carefully structured and matched collaboratively with that of the DWS so as to ensure that all earlier stages have been completed before embarking on the next.

At the outset a study was initiated covering 39 coal, gold and platinum mines to derive commodity based benchmarks based on the mines' most-recent water-use data. This information was examined objectively to identify individual mines' progress in implementing sustainable water management. Data from each commodity group's top-performing mines was used to define specific national benchmarks for each of the three commodity groups. Importantly it has to be agreed that three benchmarks are realistically achievable – individual mines can have widely differing conditions that can affect their ability to meet the benchmarks. This remains a focus for determining an individual mine's efforts to reach benchmark standards and will display the pragmatism for which our mining industry is renowned.

As the Chamber/DWS study developed, an overarching guideline for the development and implementation of a WC/WDM plan was developed for the entire sector. Using this as a basis, it is now

possible to provide technical, mine-specific guidance on how individual mines can comply with their own WC/WDM plans.

Naturally, responsibility does not fall entirely on the mines themselves, but compliance with mine-specific WC/WDM plans has to be achieved in co-operation and collaboration with the department's own inspectorate. The experience gained through the close collaboration between the Chamber and DWS points to a continuing high degree of collaboration in the future.



 IMAGE

Sibanye strives to uphold the highest environmental standards

PROPOSED WC/WDM IMPLEMENTATION GUIDELINE

MINING INDUSTRY RESPONSIBILITIES

Compile accurate and computerized water balances with simulation capability in accordance with BPG G2*



Develop WC/WDM plan in accordance with WC/WDM guideline and BPG H3**

- Determine current WUE status in relation to benchmarks
- Identify potential WC/WDM options
- Evaluate effect of options on WUE
- Determine capital and operating costs of options
- Develop integrated five year WC/WDM plan
- Determine WUE indicator/target for 5-year plan



YES

Are WUE targets within national benchmark range?

NO

Prepare motivation for WC/WDM targets to deviate from national benchmarks

Submit WC/WDM plan as part of mine's IWWMP

Complete initialisation of SWAF

Implement submitted WC/WDM plan

Submit annual online SWAF update

Review and update WC/WDM plan every five years as part of mines IWWMP

DWS RESPONSIBILITIES

Issue regulations requiring mines to prepare and submit WC/WDM plans

Prepare SWAF as part of EWULAAS

Develop administrative systems to ensure water use allocations and/or restrictions for mines are aligned with WC/WDM plan and WUE status

CONSULT WITH DWS

Discuss with mine why WC/WDM plan cannot meet national WUE benchmarks

SUBMIT TO DWS

Review WC/WDM plan and provide feedback to mine

Review and update national benchmarks every five years based on submitted SWAFs

* Best Practice Guideline: Water and Salt Balances
** Best Practice Guideline: Water Rescue Reclamation

2016 AREAS OF FOCUS *continued*



Legislation

The Chamber of Mines' Legal Department is tasked with providing and co-ordinating the legal advisory services required by the Chamber in order to act in the best interests of its members. These services may include drafting and making submissions, both written and oral, on behalf of the Chamber. In certain cases, legal content takes up the major part of the submission, while in others it is a necessary, but not predominant part. The Legal Department also offers an in-house legal service to the Chamber. The Chamber seeks expert legal advice as and when required from law firms and/or legal counsel.

MINING CHARTER

The Chamber sought clarity through its 2015 High Court application for a declaratory order on the interpretation of BEE ownership transactions carried out by the industry between 2004 and 2014. However, on the hearing dates in March 2016, attorneys Malan Scholes asked the Court to be joined in the Chamber's application. The Court heard Malan Scholes' application and on 3 May 2016 handed down a judgment dismissing this application. Malan Scholes thereafter applied for a separate application for a declaratory order on the ownership element of the Charter to be set down for hearing. In the interim, the Chamber and the DMR agreed that the Chamber's application for a declaratory order would be held in abeyance while the parties endeavoured to reach agreement on the matter.

The parties engaged on a number of occasions during 2016 but by the end of December had not managed to reach a mutually satisfactory outcome.

MPRDA AMENDMENT BILL

The President refused to sign the MPRDA Amendment Bill into law upon receiving legal advice that the definition of "this Act" in section 1 of the Bill was probably unconstitutional, in that it elevated the Mining Charter (and some other documents) to the status of legislation, by-passing Parliament as the legislature in the process. Section 26 of the Bill was probably also unconstitutional in that it was inconsistent with South Africa's obligations under the General Agreement on Tariffs and Trade (GATT) and the Trade, Development and Cooperation Agreement (TDCA). The section constituted a quantitative restriction on exports and this rendered the State vulnerable to challenges in international fora.

In February 2015, the Parliamentary Law Adviser advised the Parliamentary Portfolio Committee on Mineral Resources that, in her view, these provisions were not unconstitutional. In late 2016, the MPRDA Amendment Bill was referred to Parliament's National Council of Provinces (NCOP) for public hearings.

The Chamber was instructed by its Council in November 2016 to ask the two Senior Counsel who gave legal opinions in 2015 on the two constitutional issues mentioned above to update their legal opinions. Depending on the updated legal opinions, the Chamber will decide whether or not to participate in the NCOP public hearings.



Dr Elize Strydom
Senior Executive: Employment Relations
and Legal

TAXATION

The Chamber made a submission to the DTC on the First Interim Report on the Proposed Carbon Tax for South Africa in January 2016, highlighting its concern about the negative impact of a carbon tax on the mining industry, given the deteriorating economic circumstances in South Africa and the fact that South Africa is reliant on coal as its primary energy source.

The Chamber also participated in a workshop on Mineral Royalties, hosted by the DTC on 13 May 2016. It dealt with the technical aspects and interpretational issues of mineral royalty payments in respect of diamonds, iron ore, coal and platinum. The Chamber regarded the Draft Tax Administration Laws Amendment Bill, 2016, published by Treasury on 8 July 2016, dealing with proposed amendments relating to the payment of mineral and petroleum royalties under the Mineral and Petroleum Resources Royalty (Administration) Act, 2000, as inappropriate because they pre-empted the report of the DTC. This proposed amendment did not provide legislative clarity which is precisely what the DTC was tasked with.

SOCIAL SECURITY

The Taxation Laws Amendment Act, which was scheduled to become effective on 1 March 2016, has been delayed until 1 March 2018, due to the labour unions' rebuttal of the proposed amendment relating to provident fund annuitisation. The implementation of annuitisation of retirement benefits in provident funds is the subject of ongoing discussions.

The DTC requested the Chamber's comments on the proposed funding models for the NHI contained in the White Paper issued on 11 December 2015. The Chamber submitted detailed comments and recommended that a comprehensive discussion on all social security reforms needs to take place before legislation in respect of such matters is finalised. The ad hoc proposals to increase taxes or levies in a low growth scenario and where the mining industry is in dire economic straits is, in the Chamber's view, inappropriate.

The Comprehensive Social Security Policy Paper was issued for comment in November 2016. The Chamber will participate in the NEDLAC meetings on this matter which are scheduled to commence in March 2017.

TRUSTEES APPOINTED TO INDUSTRY RETIREMENT FUNDS

In terms of the rules of the industry funds dealt with below, provision is made for the appointment of employer trustees, mainly because employers are co-contributors to these funds on behalf of their employees.

- **Sentinel Retirement Fund (Sentinel):** The Sentinel Retirement Fund is one of the largest self-administered, defined-contribution, umbrella funds in South Africa, actively managing assets of approximately R85 billion (as at 30 June 2016). The Fund has 41,113 active and deferred members and monthly pensions are paid to 34,644 former members and beneficiaries. In 2016, the Fund celebrated its 70th anniversary and was awarded The European Pension Fund of the Year – Africa. The Chamber appoints seven employer representatives to act as trustees of the Fund.
- **Mineworkers Provident Fund (MPF):** The MPF is one of South Africa's largest self-administered provident funds with assets exceeding R28 billion. It is disappointing that the proportion of unclaimed benefits has increased and, as at December 2016, stood at 70,147. A large number of these are more than 16 years old. The MPF plans to embark on

2016 AREAS OF FOCUS *continued*

an aggressive tracing strategy involving roadshows in 2017, both within and outside South Africa. The MPF has also established an office in Maputo to assist potential claimants with their claims. The MPF has amended its rules which are currently awaiting approval by the Financial Services Board. The number of employer trustees will be reduced from nine to five, taking into account the number of members employed by each employer.

- **Mines 1970 Unclaimed Benefits Preservation Pension and Provident Funds:** These are unclaimed benefit funds with assets in the region of R700 million. Over the past two years, the funds improved their combined tracing rate to identify 62% of the total number of missing beneficiaries. More than R60 million in previously unclaimed benefits has been paid to beneficiaries over the same period.

Much of the success in improving payments comes from expanded tracing initiatives, including semi-physical tracing where tracing agents make in-person visits to the homes of beneficiaries to help them complete application forms and obtain other supporting documentation. This process has helped speed up the return of claim forms and the subsequent processing and payment of claims. The funds continue to collaborate with other funds including the MPF, Sentinel and Amplats in order to identify additional potential claimants.



In FY2016 Northam's Zondereinde Platinum mine had over 6,000 full-time employees

CASE STUDY

DECLARATORY ORDER ON THE PRINCIPLE OF "ONCE EMPOWERED, ALWAYS EMPOWERED"

A prominent feature of the Chamber's Legal Department's work during the year under review has been the application to the North Gauteng High Court for a declaratory order on the interpretation of the BEE ownership provisions of the Mining Charter – the "once empowered, always empowered" question.

The issue revolves around whether a company remains compliant once a previous BEE shareholder has sold its shares or interests in the company and where BEE ownership thus falls below the 26% target set by the Charter. The industry holds that it does, otherwise it would either be necessary to repeatedly carry out transactions (which would have severe impacts on the value of other shareholders' holdings) or to structure transactions so that BEE shareholders may not sell their interests other than to other BEE entities. This latter approach would, we contend, put BEE shareholders at a severe disadvantage.

The decision that we should lodge the application was initially taken by agreement with then Mineral Resources Minister Ngoako Ramatlhodi. This was done in March 2015. However, government later apparently became uncomfortable with having agreed to hand adjudication on this matter over to the courts and withdrew its support for our application.

The application remains in place. However, the Chamber has not yet made progress on the matter as it has held back on applying for a court date pending discussions on the matter with the DMR. Some discussions have taken place, but consensus has not yet been reached. The Chamber will continue these negotiations and will take further court action only if the DMR seeks to implement the ownership provisions on a basis unsatisfactory to the industry.





Illegal mining

The Chamber recognises that illegal mining is a critical issue that needs to be addressed, not only for the sake of the industry and the fiscus, but also in the interests of the environment, safety, health, and security of mine employees, communities and in the best interests of illegal miners themselves.

In the medium and long term, rampant illegal mining will undermine the aims of the MPRDA and the Mining Charter and will result in irreparable damage, sterilising of resources and leaving behind a costly and damaging environmental legacy.

Illegal mining has a range of negative economic, social and environmental impacts which include the following:

Economic impacts

- Costs industry and fiscus more than an estimated R20 billion a year in lost sales, taxes and royalties
- Theft of copper, electricity cables, dragline cables, diesel, and materials prejudice the economic viability of companies and pose risks to mine infrastructure
- Significant increase in security costs and costs related to unnecessary stoppages, repairs and maintenance
- Cost to state and mining companies to commission Mines Rescue Services for rescues
- Unquantifiable environmental and social costs

Social impacts

- Influx of undocumented immigrants (90% of arrested illegal miners are undocumented immigrants)
- Significant safety and health risks to illegal miners and miners at legal operations, as well as communities
- Increase in crime and illegal trade - explosives, diesel, copper cables and other equipment from mines
- Destroys the social fabric of mining communities – fear, coercion, human rights abuses, prostitution, and substance abuse
- Number of mining accidents/incidents and near-misses in recent years related to illegal mining
- Risk of interruption of electricity supply (theft of copper cables) to underground workings
- Threats to employees, booby traps, tampering with mine equipment

Environmental impacts

- Sabotaged pipelines contaminate the environment
- Illegal water usage and wastage
- Sinkholes created due to water pipeline 'spiking'
- Underground fires and explosions
- Mercury contamination of environment
- Excavation and reopening of sealed and rehabilitated shafts, with associated hazards



Dr Elize Strydom

Senior Executive: Employment Relations and Legal

2016 AREAS OF FOCUS continued

Illegal mining is not only a South African challenge and it is not an issue that has recently come to light. Indeed, references to illegal mining may be found in the archives over the past 100 years. Illegal mining is a complex issue that requires the involvement of many layers of stakeholders – including government, labour unions, the South African Police Service (SAPS) and the industry - and the solution would need to include clear objectives with thorough risk assessments.

The Chamber is of the view that until all the underlying factors contributing to crime in South Africa, including illegal mining, are addressed, the parties will be addressing only the symptoms rather than the cause. The entire legal enforcement system needs to be addressed, including policing, prosecution, immigration and border control.

No single stakeholder can address the challenge of crime in South Africa, including illegal mining, on its own – collaboration is key. The industry, individually and through the Chamber, remains committed to working with other stakeholders to address this serious challenge.

ILLEGAL MINING VS SMALL-SCALE MINING

There is a difference between illegal and small-scale mining.

Illegal mining is not regulated. The Chamber is of the view that regulated mining is in the interest of everyone particularly from a health and safety, socio-economic, environmental and human rights perspective.

Small-scale mining is encouraged under the MPRDA, and the Chamber has a special unit dedicated to support small-scale miners.

This sector is regulated – not only to ensure that there is control over the allocation of mineral resources in a way that is beneficial to South Africa and promotes transformation, but also to protect the environment, communities and employees. Indeed, current legislation was put in place exactly for this reason.

ILLEGAL MINING IS ON THE RISE

Illegal mining is on the rise in South Africa and takes place on the surface and underground at closed-off, abandoned and operating mines. Illegal mining is often organised and carried out by organised crime syndicates. Whilst individual illegal miners may act out of economic desperation, there is no doubt that illegal mining activities are directly linked to the lucrative illicit trade in precious metals and diamonds.

By the Chamber's estimation, illegal mining activities on operating mines conservatively cost the economy more than R7 billion every year, including through non-payment of taxes and royalties. But, this is likely to be an under-estimate as illegitimate activities cannot be accurately quantified.

Illegal miners, also known as *zama zamas*, risk their lives to open cemented and sealed off shafts with explosives at abandoned mines where they travel up to 3km underground to live and work for extended periods without the necessary protective gear and without regard for the impact of their activities on the environment.

Where illegal miners trespass on operating mines to do their work, they cause significant damage and losses which have a negative impact on the viability of these operations. This translates into the loss of revenue, taxes, employment opportunities, capital expenditure, exports, foreign exchange earnings and procurement generated by legal mining. Illegal miners are often heavily armed and set ambushes and booby traps for employees, security and rival groups of illegal miners.

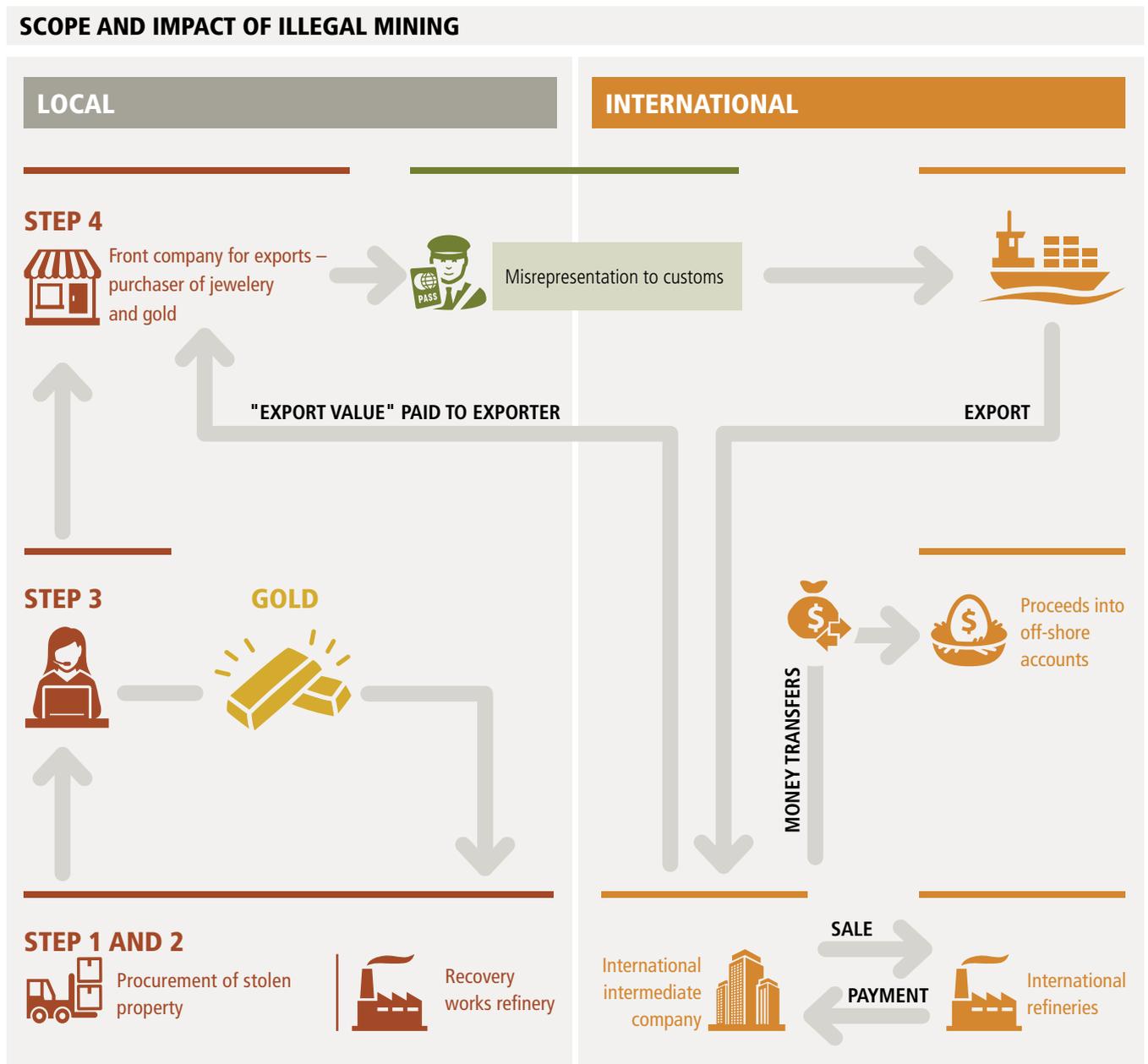


Small scale mining is encouraged under the MPRDA, and the Chamber has a special unit dedicated to support small-scale miners.

Illegal mining continued

Mining communities suffer as they become riddled with related crime such as bribery, violence against workers and management, and child labour.

Unfortunately, the illegal miners taking these risks are exploited by the organised crime bosses and do not share in the real value of their labour.



2016 AREAS OF FOCUS continued

THE ILLEGAL MINING MARKET SYSTEM

The illegal mining market is a well-managed five-tier system:

Tier 1: Illegal miners

The underground workers, mostly illegal immigrants, do the physical mining. Many have worked in the mines previously. They use chemical substances to primitively refine the product.

Tier 2: Buyers on surface, around the mine

They often organise Tier 1 illegal miners and support them with food, protection and equipment.

Tier 3: Regional bulk buyers

Often entities with permits issued under the Precious Metals Act.

Tier 4: National and international distributors

Distribution through front companies and legitimate exporters.

Tier 5: Top international receivers

Usually through international refineries and intermediary companies.

Local police and mine security deal with levels one and two of the five-tier syndicate system and the Chamber of Mines, SAPS, National Coordinating Strategic Management Team (NCSMT) and the DMR are working to identify and deal with levels three, four and five of the syndicate system that constitute the buyer market. This work is undertaken hand-in-hand with international agencies such as the United Nations (UN) Interregional Crime and Justice Research Institute, European police, Interpol and international embassies.

Multi-stakeholder efforts, National Precious Metals Forum and Standing Committee on Security

The Chamber remains fully committed to working with all other stakeholders to address the serious challenge of illegal mining.

The Chamber has a Standing Committee on Security (SCOS) in place which provides a platform for members to deal with all issues relating to security, including theft from mines. The SCOS led to the establishment of the multi-stakeholder National Precious Metals Forum (NPMF) over a decade ago – whose functions were recently absorbed into the SCOS as a result of SAPS restructuring. The NPMF became defunct in 2014 and was replaced by the NCSMT which is chaired by the Directorate of Priority Crime Investigation.

Its initiatives include:

- Establishing a precious metals finger-printing database at the SAPS forensic laboratories
- Formal agreements between the Chamber, the mining companies and the SAPS
- Determining where gold and platinum has originated from
- Creating a special investigative task force
- Investigating syndicate activity at national and international level



The Chamber remains fully committed to working with all other stakeholders to address the serious challenge of illegal mining.

Illegal mining continued

In addition, provincial multi-agency forums exist in five of the nine provinces in which the Chamber participates. The provincial multi-agency forums feed into a multi-disciplinary coordinating body which deals with illegal mining and the smuggling of precious metals and diamonds across the five syndicate levels. The forums implement provincially-based disruptive operations and measures to identify and apprehend illegal miners and provide awareness and training to the SAPS and other authorities in identifying the different forms of precious metals, platinum group metals in particular.

The Chamber has also engaged at regional and international levels to create awareness of the issue globally.

South Africa and the Russian Federation engaged in talks with the UN Interregional Crime and Justice Research Institute (UNICRI) and the United Nations Office on Drugs and Crime (UNODC) with the purpose of developing a global strategy to assist in dealing with the illegal mining phenomenon. In April 2013, South Africa tabled a resolution dealing with combating transnational organised crime and any possible links to the illicit trafficking of precious metals. The resolution was adopted by the Economic and Social Council (ECOSOC) on 25 July 2013. The resolution stressed the need to develop comprehensive, multi-faceted and coherent strategies and measures, including reactive and preventative measures, to counter the illicit trafficking of precious metals.

In its resolution 2013/38, ECOSOC mandated UNICRI to develop an international strategy to combat illicit trafficking of precious metals. Thus far, UNICRI has completed the assessment and has presented the technical report together with an International Strategy and a National Action Plan.

On 20 June 2016, the UNICRI assessment findings were presented to the Chamber of Mines Council. The Council endorsed the assessment and on 4 August 2016, UNICRI met with the CEO of the Chamber of Mines to propose a National Precious Metals Action Plan. The Chamber supported the proposal in principle.

Going forward, a meeting will be arranged with the Department of Policy Monitoring and Evaluation to develop a National Action Plan relating to illegal mining to establish, in the first instance, terms of reference for the plan and to agree on an approach to fund the model for the project.

SECTION 5 SUPPLEMENTARY INFORMATION



99 Abbreviations

IBC Contact details and administration



ABBREVIATIONS

AET	Adult Education and Training	EEMS	Entry Examination and Making Safe
AFV	African Mining Vision	EMD	Emerging Miners' Desk
AI	Africa Institute	EWULAAS	Electronic Water Use Licence Application and Authorisation System
AMCU	Association of Mineworkers and Construction Union	EXIA	Explosion Proof Certificate
AMD	Acid Mine Drainage	FOG	Falls of ground
AMR	Annual Medical Report	GA	General Authorisation
AMMSA	Association of Mine Managers of South Africa	GATT	General Agreement on Tariffs and Trade
BASA	The Banking Association South Africa	GDP	Gross Domestic Product
B-BBEE	Broad-Based Black Economic Empowerment	GFCF	Gross Fixed Capital Formation
BEE	Black Economic Empowerment	HCT	HIV counselling and testing
BLSA	Business Leadership South Africa	HDSA	Historically Disadvantaged South Africans
BUSA	Business Unity South Africa	HEG	Homogeneous exposure group
CCOD	Compensation Commissioner for Occupational Diseases	HRD	Human Resource Development
CEO	Chief Executive Officer	HPD-TAS	Hearing Protection Devices – Training, Awareness and Selection Tool
COAS	Carbon Offset Administration System	HRDC	Human Resource Development Council of South Africa
COE	Centre of Excellence	IBMQI	Industry-Wide Buy and Maintain Quiet Initiative
COIDA	Compensation for Occupational Injuries and Diseases Act	ICMM	International Council for Mining and Metals
COP	Conference of Parties	IDC	Industrial Development Corporation
COPA	Community of Practice for Adoption	IWWMP	Integrated Water and Waste Management Plan
CRG	Charter Reference Group	JOGMEC	Japan Oil, Gas and Metals National Corporation
CSIR	Council for Scientific and Industrial Research	JSE	Johannesburg Stock Exchange
CTAC	Culture Transformation Advisory Committee	LAC	Labour Appeal Court
CTF	Culture Transformation Framework	LBMA	London Bullion Market
DCOGTA	Department of Cooperative Governance and Traditional Affairs	LPC	Labour Policy Committee
DEA	Department of Environmental Affairs	LRA	Labour Relations Act
DHA	Department of Home Affairs	MBOD	Medical Bureau for Occupational Disease
DHET	Department of Higher Education and Training	MHSA	Mine Health and Safety Act
DMR	Department of Mineral Resources	MHSC	Mine Health and Safety Council
DOE	Department of Energy	MIASA	Mining Industry Association of Southern Africa
DOH	Department of Health	MIGDETT	Mining Industry Growth, Development and Employment Task Team
DOL	Department of Labour	MIOHAC	Mining Industry Occupational Health Advisory Committee
DPCI	Directorate of Priority Crime Investigation	MITHAC	Mining Industry TB and HIV Advisory Committee
DPME	Department of Policy Monitoring and Evaluation	MOSH	Mining Industry Occupational Safety and Health
DST	Department of Science and Technology	MOU	Memorandum of Understanding
DTI	Department of Trade and Industry	MPF	Mineworkers Provident Fund
DWS	Department of Water and Sanitation	MPRDA	Mineral and Petroleum Resources Development Act
EAO	Emolument Attachment Order	MQA	Mining Qualifications Authority
EBIT	Earnings before interest and taxes		
ECOSOC	Economic and Social Council		

ABBREVIATIONS continued

MRDS	Mine Residue Deposits and Stockpile	RAF	Road Accident Fund
MTDA	Mining Transformation and Development Agency	RBE	Rail-bound equipment
MWD	Mine Water Division	RCS	Respiratory Crystalline Silica
NAMB	National Artisan Moderating Body	RMA	Rand Mutual Assurance
NBI	National Business Initiative	RQO	Resource quality objectives
NCA	National Credit Act	SA	South Africa
NCOP	National Council of Provinces	SACMA	South African Colliery Managers' Association
NCR	National Credit Regulator	SADPO	South African Diamond Producers Organisation
NCSMT	National Coordinating Strategic Management Team	SAHRC	South African Human Rights Commission
NDC	Nationally determined contributions	SALGA	South African Local Government Association
NDP	National Development Plan	SAPS	South African Police Service
NEDLAC	National Economic Development and Labour Council	SCOS	Standing Committee on Security
NEMA	National Environmental Management Act	SEIFSA	Steel and Engineering Industries Federation of Southern Africa
NEMLA	National Environmental Management Laws Amendments	SENTINEL	Sentinel Retirement Fund
NGO	Non-governmental organisation	SETA	Sector Education and Training Authority
NHI	National Health Insurance	SIMRAC	Safety in Mines Research Advisory Committee
NIHL	Noise-induced hearing loss	SLP	Social and Labour Plan
NIPF	National Industrial Policy Framework	SARB	South African Reserve Bank
NMW	National minimum wage	Stats SA	Statistics South Africa
NPMF	National Precious Metals Forum	STS	Standard Threshold Shift
NSA	National Skills Authority	SWAF	Standardised Water Accounting Framework
NSP	National Strategic Plan	TARP	Trigger-action response programme
NSDP	National Skills Development Plan	TB	Tuberculosis
NUM	National Union of Mineworkers	TDCA	Trade, Development and Cooperation Agreement
NWRS2	National Water Resource Strategy 2	TVT colleges	Technical and Vocational Training colleges
ODMWA	Occupational Diseases in Mines and Works Act	TMM	Trackless Mobile Machinery
OEL	Occupational exposure limit	UASA	A labour union active in the mining sector
OEM	Original Equipment Manufacturer	UNEP	United Nations Environment Programme
OHS	Occupational Health and Safety	UNFCCC	United Nations Interregional Crime and Justice Research Institute
OHSMS	Occupational Health and Safety Management System	UNICRI	United Nations Framework Convention on Climate Change
OH&SPC	Occupational Health and Safety Policy Committee	UNODC	United Nations Office on Drugs and Crime
OLD	Occupational Lung Disease	VCT	Voluntary counselling and testing
PAYE	Pay As You Earn tax on personal income	WC/WDM	Water conservation and water demand management
PDAC	Prospectors & Developers Association of Canada	WISA	Water Institute of South Africa
PDS	Proximity detection system	WQM	Water quality management
PGMs	Platinum group metals	WSLG	Water Sector Leadership Group
PIC	Public Investment Corporation	WUE	Water-use efficiency
PLF	Platinum Leadership Forum		
PPI	Producer Price Index		
QCTO	Quality Council for Trades and Occupations		
R&D	Research and development		

CONTACT DETAILS AND ADMINISTRATION

COUNTRY OF INCORPORATION AND DOMICILE

South Africa

NATURE OF BUSINESS AND PRINCIPAL ACTIVITIES

A voluntary employers' organisation tasked with lobbying and advocacy to achieve a policy, legislative and governance framework, which is widely supported and which will allow the mining industry to convert the country's abundant mineral resources into wealth for the benefit of South Africa.

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First National Bank of South Africa Limited

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REPORTING PERIOD

The Chamber of Mines of South Africa's financial year is from 1 January 2016 to 31 December 2016. This report covers noteworthy events and developments during this period. Separate financial statements have been prepared which combine the Chamber's financials with that of Mining Lekgotla (Pty) Ltd, a 100% subsidiary company. These are available online at:



<http://www.chamberofmines.org.za/industry-news/publications/annual-reports>



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