THE STATE OF MINING IN SOUTH AFRICA
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Key issues - safety

- Commitment to Zero Harm
- Leadership from the top
- MOSH Learning Hub
- MHSC successes and concerns
- 20 years of MHSA
- Communication at mine level
Commitment to Zero Harm

- Our commitment is to Zero Harm – where every employee returns from work unharmed every day
- We will continue to collaborate tirelessly with government and unions to achieve Zero Harm
Since 1993, fatalities have **reduced** from 615 to 73 in 2016, and injuries from 9,228 to 2,662.
Leadership from the top

• Health and safety is a non-competitive issue requiring leadership from the top and continued, significant investment
• All Chamber health and safety structures are open to non-Chamber members
• Chamber’s CEO Zero Harm Forum – meets at least three times per year to:
  • share learnings from successes and incidents
  • promote engineering controls to eliminate risks
  • effect behaviour change through culture transformation
MOSH Learning Hub: a Chamber Zero Harm investment

- Established in 2008 - largest programme in the Chamber for mines to learn from each other
- Complements Mine Health and Safety Council (MHSC) by:
  - identifying and promoting existing leading practices and informing MHSC research gaps
  - considering MHSC research as new leading practices
- People-centric approach to adoption of leading practices
- Since 2008, identified and promoted:
  - six leading practices on falls of ground
  - two leading practices on transport
  - three leading practices in dust management
  - two leading practices in noise management

Technical practice
Leadership behaviour
Behavioural communication with employees

State of mining in South Africa
Targeting major contributors to fatalities

- Significant improvements achieved
  - Fall of ground fatalities reduced by 92%
  - Transportation and mining fatalities by 78%
Major drive to deal with seismicity

• In 2008, industry leadership committed to a vision that:
  • All fatalities and injuries, including those from seismicity, are preventable
  • Seismic events cannot be predicted, but harm from them can be avoided
• Efforts should be wisely focused - not on prediction, but on prevention of harm through:
  • Improved mine design
  • Improved support systems (eg nets with bolts, as promoted by MOSH Learning Hub)
  • Continuously investing in new research (eg Harmony Chair of Rock Engineering at University of Pretoria)
• In the past decade
  • MHSC and industry spent over R250 million on safety-related research
  • Chamber of Mines commissioned a study to summarise leading practices

Number of fatalities as a result of seismicity reduced from 48 in 2003 to 7 in 2016
MHSC: successes and concerns

• Successes
  • Valuable platform for collaboration
  • Shared vision and aspirational 10-year milestones accelerating improvement
  • Development of Culture Transformation Framework
  • Intensive focus - research on seismicity
  • Centre of Excellence launched
  • Developing regulations that are implementable through tripartite processes

CONCERNS | SOLUTIONS
--- | ---
R&D: Too slow, not enough solutions ready for adoption, too much focus on current mining methods | • Accelerate establishment of an effective and efficient Centre of Excellence  
• Collaboration on modernisation
General: Need more focus on small number of high impact initiatives | Collaboratively re-prioritise initiatives
20 years of the MHSA

- 2017 is the 20th anniversary of Mine Health and Safety Act (MHSA)
- Underpinned by key pillars:
  - **Tripartitism** - government, employees and employers collaborate to improve health and safety
  - **Performance, risk-based approach**, rather than a prescriptive approach to regulation dominated by an undue focus on regulations, inspections
Communication at mine level

• 2011 Culture Transformation Framework provides for effective engagement and empowerment of employees

• MHSC 2016 Summit Pledge re-emphasised importance of communication and empowerment of employees and supervisors

• Regional Tripartite Forums aim to build trust amongst regional stakeholders
Key issues - health

- Reaching MHSC milestones
- Acting against TB
- Towards an integrated system of compensation
- Uncertainty in delivery of health services
Overall decline in occupational disease 2004 - 2015

Pneumoconiosis (including silicosis), NIHL, TB and HIV continue to be the key challenges
MHSC milestones

Industry has set milestones for 2024 and cooperates through the MHSC in developing programmes/initiatives to reach these milestones

<table>
<thead>
<tr>
<th>Objective</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>To eliminate coal workers pneumoconiosis</td>
<td>By Dec 2024, 95% of all exposure measurement results will be below milestone level of coal dust respirable particulate of 1.5mg/m³ (&lt;5% crystalline silica) Using present diagnostic techniques, no new cases of coal workers pneumoconiosis amongst previously unexposed individuals (new people entering mining industry in 2009)</td>
</tr>
<tr>
<td>To eliminate noise-induced hearing loss</td>
<td>By Dec 2024, total operational or process noise emitted by any equipment must not exceed milestone sound pressure level of 107dB(A). By Dec 2016, no employees standard threshold shift will exceed 25dB from the baseline when averaged at 2000, 3000 and 4000 HZ in one or both ears</td>
</tr>
<tr>
<td>To eliminate silicosis</td>
<td>By Dec 2024, 95% of all exposure measurement results will be below the milestone level of respirable crystalline silica of 0.05%mg/m³ Using present diagnostic techniques, no new cases of silicosis will occur amongst previously unexposed individuals (new people entering mining industry in 2009)</td>
</tr>
<tr>
<td>Reduction and prevention of TB and HIV and AIDS</td>
<td>By Dec 2024, TB incidence rate should be at or below the National TB incidence rate. 100% of employees should be offered HCT annually, with all eligible employees linked to an ART programme as per the NSP</td>
</tr>
</tbody>
</table>
Chamber approach to reaching occupational health milestones

Milestones

MHSC

- Programme of action (MOHAC, MITHAC)
- Adoption of leading practices and research

Chamber of Mines

- MOSH initiatives
- Dust and noise aspirational curves
- Masoyise iTB

Milestone Reporting Systems

Summit
Masoyise iTB

Background

- Announcement by Deputy President, Cyril Ramaphosa on 24 March 2015, urged the country to increase screening of TB and HIV in high risk groups
- Chamber Council approved the Masoyise iTB project in September 2015
- Multi-sectoral initiative with participation by employers, unions, government (DMR, DOH, NIOH, NHLS), UN organisations, SABCOHA

Project purpose

- To screen all employees (permanent and contractors) in industry for TB and HIV over three years (2016 -2018), building on progress made to date

Project aim

- To have a meaningful impact on TB challenge in the country, reducing current high incidence rate as we seek to ultimately eliminate TB
Chamber position on TB and contractors

- Gold and coal agreements that conditions of employment of contractors should be in line with generally acceptable conditions of employment.
- Chamber position on TB in Contractors adopted by Chamber Council in 2014
  - By end of 2014, contractors must be treated the same as permanent employees for TB
  - Practically, this means they must be offered the same services as permanent employees have for TB
Towards an integrated system of compensation

Currently, two compensation systems

**COIDA (Department of Labour)**
- All occupational diseases except cardiopulmonary organs of mineworkers on controlled mines
- Administered by Rand Mutual Assurance (RMA) in mining

**ODMWA (Department of Health)**
- Occupational lung diseases in mines

**Significant challenges with compensation**

- Chronic inefficiencies with MBOD and CCOD
  - Non-payment of benefits due to mineworkers
- Fragmentation and limited cooperation between DOL and DMR, eg Risk Committee not functional
- Inadequate benefits under ODMWA
- No indemnity for employers under ODMWA
Achievements on compensation

- Steering Committee on Integration of Compensation established under the Deputy Minister of Mineral Resources - work underway, although no outcome yet in form of draft legislation

- Ex-mineworker Project:
  - Collaboration between the DoH, Chamber and NUM
  - R42m project over six years
  - Aimed to support establishment of benefit medical examination sites
  - Also supported MBOD/CCOD (Compensation office)

- Support from Gold Working Group to Compensation office
  - Database of ex-mineworkers
  - Improvements in tracking and tracing of mineworkers and payment of claims
Unclaimed retirement fund benefits

- Issue of unpaid retirement fund benefits a massive challenge: R45bn is owed to 3 million people throughout all sectors of the economy
  - Of these unpaid benefits, around R3.2bn (7%) is owed to 332,000 former mining industry employees
- Reasons for the benefits being unclaimed are varied
- Chamber committed to address issue of unpaid benefits
  - Together with government and other stakeholders, the industry is working on addressing the matter
  - Engaging and closely monitoring progress with industry retirement funds and others, including 1970’s Funds; Mineworkers’ Provident Fund; Sentinel; TEBA and RMA
  - Chamber has recruited a fulltime staff member to assist the many former employees and their dependents who visit the Chamber’s offices seeking assistance
  - Retirement and provident funds are responsible for tracing and paying the benefits
- Progress being made. Outstanding benefits are being paid out although the process does take time
Uncertainty in delivery of health services

Mining health services are at a cross roads:

- Evolution of mining health services from paternalistic health service delivery model, to medical aid and outsourcing
  - Original model based on migrant labour, resident in hostels, comprehensive services provided to workers but not families
  - Companies moving towards medical aid which is available to families
  - Companies outsourcing PHC and hospital services due to poor economies of scale
- Impact of the National Health Insurance
  - Full implications of the NHI on employers and employees not yet determined
ECONOMICS OF MINING

State of mining in South Africa
Key issues

- Global mining environment
- Limited control over market forces
- Mining in crisis
- Myth of illicit financial flows
Global mining environment in 2016: Under significant financial pressure

In 2015/16, for the top 40 global mining companies:

- **Falling commodity prices** continued - demand slowed and oversupply emerged
- **Revenues** fell by 21% to $539bn (2014:$678bn)
- **Operational costs** fell to $419bn (2014: $502bn)
- **Impairments** (*permanent reduction in accounting value*) doubled to $53bn (2014: $27bn)
  - Miners have **impaired** 32% of capex spent 2010-15
- **First net loss** -$27bn (2014: $50bn profit)
- **Gearing** (*a measure of debt*) increased to 46% (2014: 38%)
- **Free cash flow** down 15%
- **Market capitalisation** fell to $494bn (end 2014: $791bn), back to levels pre-global financial crisis

**Response:** Working capital improvements (reduction in capex and better efficiency)
Mining companies focused on cost cutting, productivity improvement, capital discipline and adjustment
Industry has limited (if any) control over market forces

- Industry is largely a price taker, based on international commodity prices
- Rand/Dollar exchange rate
- Domestic cost pressures (esp electricity)
- Impact of credit downgrades
- Regulatory uncertainty (-R51bn, PIC -R2.7bn)

Source: World Bank
Myth and reality of illicit financial flows

- Chamber of Mines’ membership charter subscribes to good corporate citizenship and ethical business practices
- Members subscribe to OECD guidelines on transfer pricing
- Many members subscribe to extractive industries transparency initiative (EITI)
  - global standard to promote open and accountable management of oil, gas and mineral resources
- Chamber members initiated a programme of standards for suppliers for responsible sourcing in supply chain practices
- Chamber supports government’s initiatives to eradicate illicit financial flows, base erosion and profit shifting
Debunking the myths

• Chamber shares frustration that illegal activities are not rooted out
• Chamber, SARB and StatsSA were deeply concerned by allegations in an UNCTAD-sponsored report: *Trade Mis invoicing in Primary Commodities in Developing Countries: … Chile, Cote d’Ivoire, Nigeria, South Africa and Zambia*, published in July 2016
• Report alleged mis invoicing (2000 – 2014) of $127.4bn, or R1,695tn
  • Around 65% of mineral exports during the period
• Chamber commissioned an independent study that found
  • Core proposition that trade (data) discrepancies equals trade mis invoicing is false
  • When correlating statistics from StatsSA, SARS and SARB data, no substantial discrepancies were found
Key issues – Job losses

- Wages and employment
- Mining industry employment
- Jobs declaration
- Regulatory framework
- Modernisation to save jobs
- Small scale and artisanal mining for job creation
Mining industry employment

• Chamber shares Committee’s concerns on job losses
‘Jobs declaration’

- Chamber participated in the development of Jobs Declaration of August 2015
- Regrettably, of the 10 interventions, the DMR and unions have only engaged on:
  
  **Intervention 1:** delaying the implementation of retrenchments
  
  **Intervention 5:** other alternatives to avoid job losses

- It is submitted that stakeholders also need to engage on the other interventions, including those that may also avoid job losses, such as:
  
  • **Intervention 2:** enhancing productivity and managing cost pressures
  
  • **Intervention 3:** accelerated concurrent rehabilitation activities
  
  • **Intervention 9:** investment promotion and market development
Regulatory framework

- South Africa’s legislative framework to ensure lawful and fair retrenchments in line with ILO Conventions
- In the case of large-scale retrenchments, independent CCMA facilitators assist company and unions during the 60-day consultation period
- In addition, intervention 1 of the Jobs Declaration requires that consulting parties continue consultations during the 30 days’ notice period following the 60 day consultation period
- South African mining industry has to comply with an additional statutory requirement which other industries do not have to comply with, namely, Section 52 of the MPRDA
- Provisions ensure that retrenchment is the last possible option left to companies and is done in a substantively and procedurally fair manner
Modernisation: a job saving imperative

- In mining, modernisation could be a job saver and creator, not a job destroyer
- Beyond mining, modernisation could create jobs in manufacturing, and elsewhere
Modernisation: a job saving imperative

• In mining, modernisation could be a job saver and creator, not a job destroyer
• Beyond mining, modernisation could create jobs in manufacturing, and elsewhere
Gold potential with modernisation: more mineral wealth for longer

- Total Resources: 600Mt
  - of this, 500Mt can be mined through mechanisation
  - equivalent to 11 large gold mines, which would otherwise be sterilised

Source: AngloGold Ashanti, Sibanye Gold and Harmony Gold
Small scale and artisanal mining could create jobs

- Chamber created a task team to develop a position paper that would set the principles for Chamber engagement on the matter with stakeholders
- The Chamber’s interim observations are that:
  - A distinction should be made between small scale and artisanal mining
  - Small scale mining is already regulated under the MPRDA. However, DMR should investigate how these processes could be simplified, and how the time for processing of applications could be improved
  - Artisanal mining needs to be regulated

What is artisanal mining?

Refers to mining activities that are labour intensive and capital-, mechanisation- and technology-poor. ASM incorporates both formal and informal activities, where informal activities also include those operating outside the legal framework of the country concerned. In South Africa most of the artisanal mining is carried out illegally.
Small scale and artisanal mining could create jobs (2)

As regards artisanal mining, some of the principles that ought to be applicable include:

• Illegal mining activities should not be supported
• Work done to date to combat illegal mining should continue, and should not be replaced by efforts to assist artisanal.
  • should be viewed as two separate work streams, and not on the basis that artisanal will overtake and resolve illegal mining activities
• Artisanal mining should be regulated where this can be undertaken safely, in an environmentally responsible manner, and without undermining the health, safety and security of other persons, including at other lawful mining operations
• Selection of artisanal miners should benefit local communities and local employment – establishment of co-operatives could be considered
• Should be formal channels for sale/dispatching and beneficiation of the products of artisanal miners to prevent other illegal activities
• Probable influx of illegal immigrants should be controlled, as this will inflate the current problem with illegal miners and immigrants
• Artisanal mining should be limited to surface mining
SKILLS EXPENDITURE

State of mining in South Africa
Mining sector skills levy spend (1%)

The table below reflects the annual skills levy contributions (1%)

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>R1,243,261,027</td>
<td>R1,199,716,275</td>
<td>R1,074,558,861</td>
<td>R1,029,811,616</td>
<td>R854,096,498</td>
<td>R8,177,815,926</td>
</tr>
</tbody>
</table>

The table below provides A five year breakdown of training initiatives funded by skills levy

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
<th>5 year average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult education &amp; training and foundational competencies</td>
<td>4.1%</td>
<td>2.2%</td>
<td>2.4%</td>
<td>2.9%</td>
<td>2.1%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Bursaries and work experience</td>
<td>24.3%</td>
<td>20.6%</td>
<td>32.4%</td>
<td>27.3%</td>
<td>35.8%</td>
<td>28.1%</td>
</tr>
<tr>
<td>Learnerships &amp; skills progammes</td>
<td>8.5%</td>
<td>10.1%</td>
<td>10.2%</td>
<td>11.5%</td>
<td>12.8%</td>
<td>10.6%</td>
</tr>
<tr>
<td>Graduate training programmes</td>
<td>19.7%</td>
<td>17.1%</td>
<td>12.9%</td>
<td>14.3%</td>
<td>10.7%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Math &amp; science development</td>
<td>1.0%</td>
<td>0.4%</td>
<td>2.1%</td>
<td>2.1%</td>
<td>2.7%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Occupational health &amp; safety</td>
<td>1.7%</td>
<td>1.7%</td>
<td>2.4%</td>
<td>2.9%</td>
<td>4.3%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Artisan development</td>
<td>27.1%</td>
<td>37.3%</td>
<td>26.4%</td>
<td>27.9%</td>
<td>10.7%</td>
<td>25.9%</td>
</tr>
<tr>
<td>Mine community development</td>
<td>3.8%</td>
<td>3.5%</td>
<td>2.1%</td>
<td>0.5%</td>
<td>0.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Youth development support</td>
<td>1.4%</td>
<td>1.0%</td>
<td>1.2%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other Initiatives (research, materials development, addressing transformation, etc)</td>
<td>8.5%</td>
<td>6.2%</td>
<td>7.8%</td>
<td>10.7%</td>
<td>20.9%</td>
<td>10.8%</td>
</tr>
</tbody>
</table>
The table below reflects the number of training interventions planned and concluded by companies. Companies have been doing almost double the amount of training that they had planned on an annual basis.

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interventions planned by companies</td>
<td>328,369</td>
<td>341,582</td>
<td>379,311</td>
<td>319,370</td>
<td>358,684</td>
<td></td>
</tr>
<tr>
<td>Interventions actually done by companies</td>
<td>641,377</td>
<td>628,511</td>
<td>532,111</td>
<td>552,973</td>
<td>757,974</td>
<td></td>
</tr>
</tbody>
</table>

Over and above the 1% skills levy, companies spend more than 5% on HRD as per Charter requirements. This training is for all job levels in the organisation. Training interventions that were conducted over the last five years are as follows:

<table>
<thead>
<tr>
<th>Type of learning programme</th>
<th>2012%</th>
<th>2013%</th>
<th>2014%</th>
<th>2015%</th>
<th>2016%</th>
<th>Average%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Courses (Operational skills programmes, credit and non-credit bearing, for all job levels)</td>
<td>53.3%</td>
<td>62.3%</td>
<td>56.9%</td>
<td>57.2%</td>
<td>44.0%</td>
<td>54.7%</td>
</tr>
<tr>
<td>Machine operator training/licencing/renewal</td>
<td>5.8%</td>
<td>9.5%</td>
<td>12.0%</td>
<td>15.3%</td>
<td>17.5%</td>
<td>12.0%</td>
</tr>
<tr>
<td>Other</td>
<td>20.8%</td>
<td>4.7%</td>
<td>7.1%</td>
<td>6.5%</td>
<td>9.8%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Skills programme (OHS)</td>
<td>6.0%</td>
<td>7.7%</td>
<td>8.7%</td>
<td>7.3%</td>
<td>5.1%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Job specific development programme</td>
<td>2.3%</td>
<td>3.8%</td>
<td>7.2%</td>
<td>5.6%</td>
<td>14.3%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Work placement (graduate development)</td>
<td>3.0%</td>
<td>6.8%</td>
<td>1.3%</td>
<td>2.7%</td>
<td>3.7%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Apprenticeships &amp; learnerships</td>
<td>5.6%</td>
<td>3.2%</td>
<td>3.9%</td>
<td>2.9%</td>
<td>3.3%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Adult education and training; foundational learning</td>
<td>2.5%</td>
<td>1.4%</td>
<td>1.2%</td>
<td>1.7%</td>
<td>1.2%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Higher education training (professionally qualified, management and senior staff development)</td>
<td>0.7%</td>
<td>0.6%</td>
<td>1.7%</td>
<td>0.8%</td>
<td>1.1%</td>
<td>0.8%</td>
</tr>
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