



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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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.

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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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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.

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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.



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2016 AREAS OF FOCUS continued

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.



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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