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PEOPLE CARING FOR THE EARTH

WESSA Policy on Mining and Mineral Resources

WESSA's MISSION is to Educate, Advocate and Act for environmental and social justice to drive climate action, protect and restore biodiversity and reduce pollution through citizen action, sustainability education, conservation programmes, legislative and media engagement, compliance monitoring, and strategic partnerships.

This policy is grounded in Sustainable Development, the Precautionary and Polluter-Pays Principles. This policy recognises that the socio-economic and environmental landscapes are complex and so must make space for continuous change and emergence. The views expressed by WESSA in this policy were developed in the context of the information, data, and projections available at this time, and may change in response to new information and insights.

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INTRODUCTION

Mining has been the main driving force behind the history and development of South Africa's extraction-based economy; and continues to be a cornerstone of the current economy, is a major direct and indirect employer, contributes significantly to tax revenues and forex earnings, underpins South Africa' energy production and significantly influences the socio-political agenda of our nation. The products of mining are crucial for energy production, infrastructure development and product manufacturing. South Africa's national development plans include growing the mining sector, as essential job creation, transformation, benefit sharing and societal development drivers. In short, we acknowledge the pragmatic reality that we cannot live without mining, that it is integral to human socio-economic development. But there are few human activities that are more destructive and have greater negative impact on the planet's wellbeing than our extraction and processing of minerals from the earth itself.

Specifically, mining and the activities within its value-chain have a number of negative impacts and consequences:

- Largely, exploit natural, non-renewable resources
- Are a major contributor to climate change impacts through greenhouse gas (GHG) emissions,
- Result in recognizably negative impacts on biodiversity, energy, and water resources, as well as generating large volumes of (often hazardous) waste,
- Result in direct and indirect impacts on our natural and cultural heritage,
- Decrease the ability of the environment to produce free goods and services,
- Degrade infrastructure such as electricity, roads, and railway lines,
- The temporary influx of labour into adjacent communities has long-term negative social impacts on those communities,
- Often employ exploitative labour practices including child labour,
- Due to mines' remoteness and isolation, many practices go unchallenged due to poor self-regulation and external policing, and
- Cause significant negative human health impacts, as well as social conflict.

It is common cause that residual environmental impacts occur as a result of legal and illegal mining and related activities despite the best available technology; often due to the lack of or incomplete rehabilitation/habitat restoration of mines and the long-term altering of the physical and/or biological environment. Much of this appears to be linked to the short-term profit orientation of mining corporates and their investors. These characteristics of the mining sector mean that decisions around the exploitation of mineral resources will often result in long-term downstream lost opportunity costs and known and unintended consequences for the biophysical, economic, and socio-cultural environments.

Thus, to protect human and planetary wellbeing, it is critical that any mining activity is counterbalanced with robust environmental governance and policing, and only be permitted when absolutely necessary. The decision to allow mining must be guided by strategic, holistic, and long-term decision-making; that thoroughly considers how the mine will mitigate immediate and legacy impacts on adjacent communities and the environment.

POLICY STATEMENT

WESSA's aim is not to oppose mining in principle, but to understand its role in climate change and biodiversity loss, to ensure that mining and related activities are fully identified and adequately assessed across their lifecycles, and that the mitigation of detrimental immediate and long-term impacts takes place within reasonable timeframes and by those responsible. We also call for adequate compliance monitoring by the authorities, and that strong enforcement action is taken when non-compliance is found. This is the only way to ensure responsible environmental practices in mining, in the interest of workers, communities and the sustaining environment. We also recognise that South Africa has constitutional and moral obligations to protect the environment for current and future generations, that takes into cognisance South Africa's global responsibilities and commitments, especially with regards to the voluntary commitments made as part of the Paris Convention to reduce GHG emissions, the Sustainable Development Goals (SDGs) and a commitment to a Just Energy Transition (JET).

To this end, it is WESSA's standpoint that:

- Decisions about where and how to mine in South Africa be guided by careful spatial planning that reconciles mining priority areas and environmental priority areas, with due regard to avoidance of mining activities in the buffer zones of protected conservation areas (PAs) and critical ecosystems;

- Mining applications falling within declared PAs, biosphere core zones, Marine Protected Areas (MPAs) be refused, and that these types of conservation areas may not be re-zoned or de-proclaimed in order to make them available for mining applications;
- All mining and mining related activities be measured against South Africa's strategic and specific soil and water resource management strategies; with mining activities prohibited in South Africa's identified strategic water source areas (SWSAs);
- The consideration of mining and mining-related EIAs and environmental management plans/programmes be transferred back from the Department of Mineral Resources and Energy (DMRE) to the Department of Forestry, Fisheries & the Environment (DFFE), to address concerns of approval bias by DMRE;
- Effective compliance monitoring and enforcement is improved through legislative reform and appropriate capacity building within the DMRE.
- Mining activities should be considered with a "cradle to grave" approach that allows us to avoid unintended environmental consequences and opportunity costs to society;
- All mining projects be assessed with regard to maximising resource recovery and minimising waste, by encouraging production of co-products and by-products either directly or indirectly as spin-off industries, and by implementing all relevant recycling strategies;
- Exploration for and opening of any new coalmines, oil or gas wells, including any fracking operations, be prohibited. To meet the commitments made by South Africa under the UNFCCC Paris Convention to reduce carbon emissions by 2050, WESSA holds that South Africa must wean itself off fossil-fuel mining and use, due to their scientifically proven significant negative global climate change impacts; and to rather direct investment into renewable energy production, conveyance, infrastructure and storage. WESSA supports the recommendations made by the Presidential Climate Commission (PCC) which in June 2023 advised government to invest in solar and wind power to find a way out of the electricity crisis, by increasing the share of renewables in SA's energy mix from 7% to 40% by 2030. The PCC has indicated in its input on the revision of the 2019 Integrated Resource Plan that renewables are also the cheapest option for building the type of energy sector SA needs in order to meet and maintain its global climate action commitments;
- WESSA is opposed to offshore mining and mining exploration activities (including offshore seismic surveys) within South Africa's Exclusive Economic Zone (EEZ) specifically, and the open seas generally. The known and suspected far-reaching negative impacts on marine fauna and marine ecosystem functioning, including negative impacts on commercially important species (for food and tourism) make the mining of our seas unsustainable;
- Access to mining information be improved to ensure transparency in decision-making, and public participation in decisions affecting mining resources and land-use;
- Provisions for the calculation and retention of the regulated financial securities for mine closure, rehabilitation and long-term management be reviewed to ensure that the financial resources set aside for these are adequate, ringfenced and secure, and that these resources can readily be mobilized when they are required. Too often responsibility for long-term systemic impacts is avoided by those responsible, via company transfers or closures.
- DMRE takes decisive action to address the legacy of acid mine drainage (AMD) and environmental degradation of past mining activity, considering the severe limitations that these impacts place on society's choices for the future, by holding the mining companies, their directors and shareholders financially responsible. Where such companies, directors and shareholders are no longer available, DMRE must take on this responsibility; and
- All future mining projects be assessed in the light of their opportunities for local beneficiation and utilisation, and the consequent potential benefits in creating additional jobs and increasing the contribution to the local economy.

CONTEXTUAL INFORMATION

Historically, South Africa's diamond and gold production have been our key earners. Both gold and platinum have contributed significantly to South Africa's gross domestic product (GDP). In the 1980s, mining's contribution to the GDP peaked at 21% because of huge production of gold. Currently, the mining sector only contributes 8.2% to the GDP. South Africa remains rich in minerals, being the world's largest producer of chrome, manganese, platinum, and vermiculite. The country also holds the largest reserves of manganese.

South Africa is the second largest producer of ilmenite, palladium, rutile and zirconium, and the world's third largest coal miner (9,100 MT p.a.). With the growth of South Africa's secondary and tertiary industries, the relative contribution of mining to our GDP has declined over the past 20 years. Yet, the country is still estimated to have the world's fifth-largest mining sector in terms of GDP value and is ranked in the top three globally in terms of production of Platinum Group Metals (59%), Vanadium (25%), Ferrochrome (39%), Alumino-silicates (60%), Vermiculite (35%), Zirconium (32%), Titanium minerals (19%), Manganese ore (17%) and Antimony (2%), with its Gold (8%), Coal (4%), Iron ore (4%), Ferro-silicon, Silicon metal and Fluorspar ranked in the Top Ten globally. PGMs, Gold, Iron ore and Coal alone account for 82% of sales and 38% (R282 billion) of exports.

The value of South Africa's mineral production for 2022 has come in at R1.18 trillion. In addition to being a large and well-established sector in South Africa, there is also significant potential for the expansion of mining and related activities in South Africa. Despite negative perceptions that the country is losing momentum in foreign investment, Ernst & Young found that South Africa is the most attractive Foreign Direct Investment (FDI) destination in Africa, and its reserves are among the world's most valuable, with an estimated worth of R29.6-trillion (based on known reserves of the major minerals in the country). The mining sector creates and preserves hundreds of thousands of jobs in South Africa, and the expansion of mining and related activities is projected to be able to provide significantly more employment in the country.

In 2022, the mining industry of South Africa had the following statistics:

- The direct contribution to GDP was R494 billion (7.53%)
- Employed 475,561 people, paying wages of R175 billion
- Contributed R27 billion to PAYE on behalf of employees, R74 billion in corporate income tax, R29 billion in VAT and paid royalties of R14 billion.

Mining can positively contribute to the Sustainable Development Goals (SDGs); for example: mining companies can leverage their energy demand or own energy production to extend power to undersupplied communities (helping to achieve SDG 7: Energy Access and Sustainability). The mining sector also contributes to other SDGs: catalysing economic growth and employment (SDG 8), creating more resilient infrastructure (SDG 9) and combating climate change and its impacts (SDG 13). Mining companies are required to extract with responsibility, produce with less waste, use safer processes (for both the environment, workers, and communities), incorporate new sustainable technologies, promote the improved participation and wellbeing of local communities, curb emissions, and improve environmental stewardship. As transition into an age of electric-powered transport, renewable energy and battery technologies, WESSA recognises that they require mineral components (especially rare earth and battery group metals); and that trade-offs between mining for these minerals and reducing mining for fossil fuels are required. The reliance on virgin metals from mining can be further reduced by redesigning, reuse, and recycling of metals and mining by-products.

Mining Impacts

Mining and related activities are known to have direct and indirect impacts on:

- Geology
- Climate
- Topography
- Soil
- Land capability
- Land use
- Flora - vegetation and ecosystems
- Fauna
- Surface water
- Ground water
- Wetlands
- Air quality
- Noise, light and nuisance factors
- Sites of archaeological, historical, scientific, cultural, and spiritual interest
- Visual and sense of place
- Climate change
- Cumulative and compounding impacts
- Community and individual wellbeing
- Social beneficiation

Some of these impacts cannot be fully mitigated against, resulting in permanent changes to the environment, and diminishing the ability of the environment to produce free goods and services. Of all of the biophysical impacts of mining, its impacts upon our water resources are at the forefront of WESSA's concerns; particularly with regard to quantity and quality of fresh water.

By their very nature, mining and related activities consume, transfer/divert, and pollute water resources, to the point that water has been described as "mining's most common casualty" (Environmental Mining Council of British Columbia, 2001). The current crisis of AMD and radioactive mine dumps in parts of South Africa is part of the legacy of past mining activities that have been undertaken with little concern for the environment. AMD is also the most difficult mine waste problem to address effectively, with some polluted water resources unlikely ever to be completely restored. Current and numerous proposed mines, particularly coal mines, in South Africa's Strategic Water Source Areas are a severe threat to South Africa's water security. Water quantity, flow and quality, for human and environmental (water reserve) requirements are being severely impacted and threatened by mining activities. Water is a basic human right under our Constitution. Therefore, it is critical that water resource management considerations are at the forefront of decision-making, planning and operations management for the whole of the mining sector.

Fracking

It is due to the likely long-term, negative impacts on scarce water resources, WESSA supports the current Moratorium against Hydraulic Fracturing being permitted in South Africa. WESSA believes that the precautionary principle enshrined in the National Environmental Management Act (NEMA, Act 107 of 1998) should be exercised in respect of fracking; which obligates the proponents of fracking to provide proof that fracking activities will not cause harm to the natural environment nor people, particularly critical aquifers. Fracking in other countries has evidenced significant harm to the environment and people including:

- Water (in the context of a dry region of a water-scarce country) – the quantity of fresh water needed operationally in competition with many more primary human needs and the impact of operations on water quality at groundwater and surface levels with associated ecosystem and social impacts.
- Poisoning of ground and surface water and lands through the use of hazardous chemicals in the fracking process or released from deep underground by the fracking process.
- Opting for continued reliance on finite fossil fuel sources will distract the country from the commitment to renewables which would create more sustainable jobs in the long term, with fewer externalised costs, including contributing to climate change by the release of additional GHGs. The release of these additional GHGs would be in opposition to South Africa's commitment to the Paris Climate Change Agreement.

Fossil Fuels

WESSA recognises that globally gas has a place in the transition away from fossil fuels, that the burning of gas as a fuel source emits less GHGs than the burning of coal, and that where current infrastructure exists, there is a pragmatic argument to be made for gas as a bridging fuel source. However, in the case of South Africa, where the current gas infrastructure is limited in extent, we endorse the PPC's recommendation to limit use of gas to power generation use only, and to a maximum of 3000 MW. We recognise that sufficient

global gas reserves are and will be available to purchase from other nations for the current short period that South Africa needs to use gas before sufficient renewable energy sources and battery storage solutions are developed to cater for South Africa's energy needs. WESSA opines that it will be detrimental to South Africa's economic and natural environments to invest heavily in a nation-wide rollout of gas infrastructure, when international energy research and analysis has evidenced that the global gas mining, refining and utilisation regime has peaked and faces decline within what would be South Africa's viable investment horizon. This would result in any new investment in gas infrastructure becoming a stranded asset within a relatively short period of time. Hence, we do not support fracking nor offshore oil and gas surveying and extraction.

WESSA is unreservedly opposed to the use of 2D and 3D seismic surveys for oil and gas exploration within South Africa's EEZ. Seismic surveys are high energy, low frequency, consistent impulse signals delivered through airgun blasts over extended periods into the marine environment in which sound plays a constitutive role. Seismic activity impacts marine species in a variety of ways that jeopardise their survival. Noise pollution and shock waves lead to stress, disorientation, embolisms and tissue damage, death, larvae deformity and species displacement. These have been recorded across all levels of the marine ecosystem; from marine mammals, seabirds to zooplankton: all critical to both the health and the productivity of our complex and globally important marine ecosystems. Cognisant of the fact that new scientific research on the impacts of seismic activity on marine ecosystems points to risks far beyond those considered in the approval of the current seismic survey permits, WESSA calls on DMRE to comply with the SDGs, to which the South African government is signatory, especially Goal 14: Life Below Water. Target 14.2 of this goal requires all nations to protect marine and coastal ecosystems to avoid significant adverse impacts. This compels DMRE to apply the precautionary principle and refuse to permit any further seismic surveys in order to avoid unacceptable ecological degradation of our offshore coastal resources.

Deep-sea Mining

The 2021 IUCN World Conservation Congress adopted Resolution 122: to protect deep-ocean ecosystems and biodiversity through a moratorium on deep-sea mining unless until a number of conditions are met. And the 2023 Treaty of the High Seas calls for environmental impact assessments conducted, with the right checks and balances, before running activities in the high seas. WESSA supports the call for DMRE to impose this moratorium until these conditions are met:

- The risks of mining are comprehensively understood, and effective protection can be ensured;
- Rigorous and transparent impact assessments are conducted based on comprehensive baseline studies;
- The precautionary principle and the "polluter pays" principle are implemented;
- Policies incorporating circular economic principles to reuse and recycle minerals have been developed and implemented;
- The public are thoroughly consulted throughout the decision-making process; and
- The governance of deep-sea mining is transparent, accountable, inclusive, effective and environmentally responsible.

Environmental Governance in Mining

The nature of the interrelationship between governance role-players will inevitably be reflected in the effectiveness of our environmental management. WESSA considers strong, effective environmental governance as characterised by:

- Being informed by the latest science and best practices;
- Broad public participation, which implies that all stakeholders have a voice in influencing decision-making;
- Transparency, which implies that the procedures and methods of decision-making should be open and transparent so that effective participation is possible;
- Accountability of decision-makers to the public and to key stakeholders;
- Effectiveness and efficiency in carrying out key functions;

- Responsiveness to the need of all stakeholders; and
- Being grounded in the rule of Law, which implies that legal frameworks guiding decision-making must be fair and enforced impartially.

Mining is regulated primarily through the Mineral and Petroleum Resources Development Act No. 28 of 2002 (MPRDA, as amended), as administrated by the DMRE. However, environmental functions are often concurrent competencies between the three spheres of government, with the Department of Forestry, Fisheries & the Environment (DFFE) as the lead agency. Currently the DMRE is the lead agency for evaluating mining environmental impact assessments, with concurrent authorizations and appeals on mining EIAs required from the DFFE, and ancillary water use licenses by the Department of Water and Sanitation (DWS). This leaves a disharmony in the institutional framework and threatens to forestall good governance, while also placing the environment at risk.

There are other regulatory issues that add complexity to this administration of environmental matters in mining, including the following:

- Under the MPRDA, the DMRE's mandate is to promote mining and oversee the maximized, efficient extraction of mineral resources in South Africa, but this Department is also required to adjudicate the very EIA process that may restrict access to these resources (ie. the DMRE is both player and referee in the EIA process).
- The environmental considerations for mining that are articulated in the MPRDA fall well below the standards set for other sectors through the EIA Regulations under NEMA.
- Access to information on the mining sector is notoriously poor. Most information is not disclosed to the public and is very difficult to access, either through mining houses themselves or through the DMRE. In addition, the regulated public participation procedures through the MPRDA fall far short of the standards set out in other environmental legislation in South Africa and the expectations of society.
- Additionally South Africa's current political regime favours mining over the environment.

Civil Society Alliances

As with all of WESSA's actions, we recognised that we cannot work on our own, and that our work does not happen in isolation. Therefore, WESSA seeks to work collaboratively with all sectors of society to build solutions where collaboration adds impact and value to the work in furtherance of WESSA's Mission. WESSA is part of civil society coalitions, such as Environmental NGO Collaboration, Save Our Wild Coast, Oceans Not Oil and Algoa Bay Ocean Stewards, that work together to implement a broad-based civil society strategy to promote environmental compliance, transparency and accountability in the mining sector.

Mine Closures

The appropriate and/or sustained management of mothballed or closed mines (regardless of the closure certificate) is crucial to prevent persistent negative environmental impacts of these mines. South Africa suffers tragically from acid mine leachate from abandoned and improperly closed coal mines which continuing to poison water resources and communities across South Africa. They have required exorbitant public financial resources to rehabilitate, with little recourse against the mining companies, their directors and shareholders that have profited from reneging on their mine closure responsibilities. Regulations have also been published under NEMA and the MPRDA which require financial provisions be set aside for the rehabilitation of mining-related impacts. South African mining companies are required by law to undertake rehabilitation work as part of their ongoing operations in accordance with an approved EMP that supports the mine closure plan. WESSA calls upon DMRE to regularly check and ensure that these financial provisions are kept up to date and protected from misappropriation, for the required mine closure measures; and secondly to pursue the mining companies that have failed in their prescribed Duty of Care to the environment (NEMA requirement). Enforcement will also curtail the practice of illegal mining of previously closed mines, with all their attendant negative environmental and socio-economic impacts.

Processing, transportation, and storage:

All minerals require processing, transportation, and storage; which can pollute communities and ecosystems, and destroy road infrastructure. As can be witnessed in the transportation and storage of manganese in Gqeberha, and that of coal trucked on KZN roads to Richards Bay. These "downstream" mining activities require systemic planning and monitoring, to ensure the minimum negative impact on communities and ecosystems.

REFERENCES & RESOURCES

Links to previous and other WESSA policies and position statements:

- Policy on Energy, March 2007
- Position Statement on the lifting of the Department of Mineral Resource's Moratorium on Hydraulic Fracturing in the Karoo Basin, 2011
- Renewable Solutions & Reduced Energy Demand Position Statement, October 2012
- Position Statement on Nuclear Energy, November 2012
- Policy on Mining and Mineral Resources, 2013.
- Position Statement on Seismic Surveying in South African Waters, June 2013
- Position Statement on Seismic Activity in South African Coastal Waters, November 2021

Legislation and Policy that have bearing:

- Mineral and Petroleum Resources Development Act No. 28 of 2002 (MPRDA, as amended)
- Exploration Strategy for the Mining Industry of SA, April 2022. Government Notice No. No. 46246, published 14 April 2022.
- National Environmental Management Act No. 107 of 1998 (NEMA, as amended)
- Renewable Energy IPP Procurement Programme 2015
- Gas IPP Procurement Programme 2015

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