



the federation for a sustainable environment

The African Mining Network

“Mining for future success

Initiatives by the mining industry that have fostered sustainable land use, livelihood opportunities and community involvement

Showcasing Gold Fields’ South Deep Mine and Sibanye Stillwater“

Presented by

Mariette Liefferink

Responsible Mining Companies recognize the role of civil society

Unzani Environmental v BP Southern Africa (Pty) Ltd

“NEMA not only requires a transparent administration but recognised the contribution that can be made to the protection of the environment by a vigilant and committed public which has most to lose.

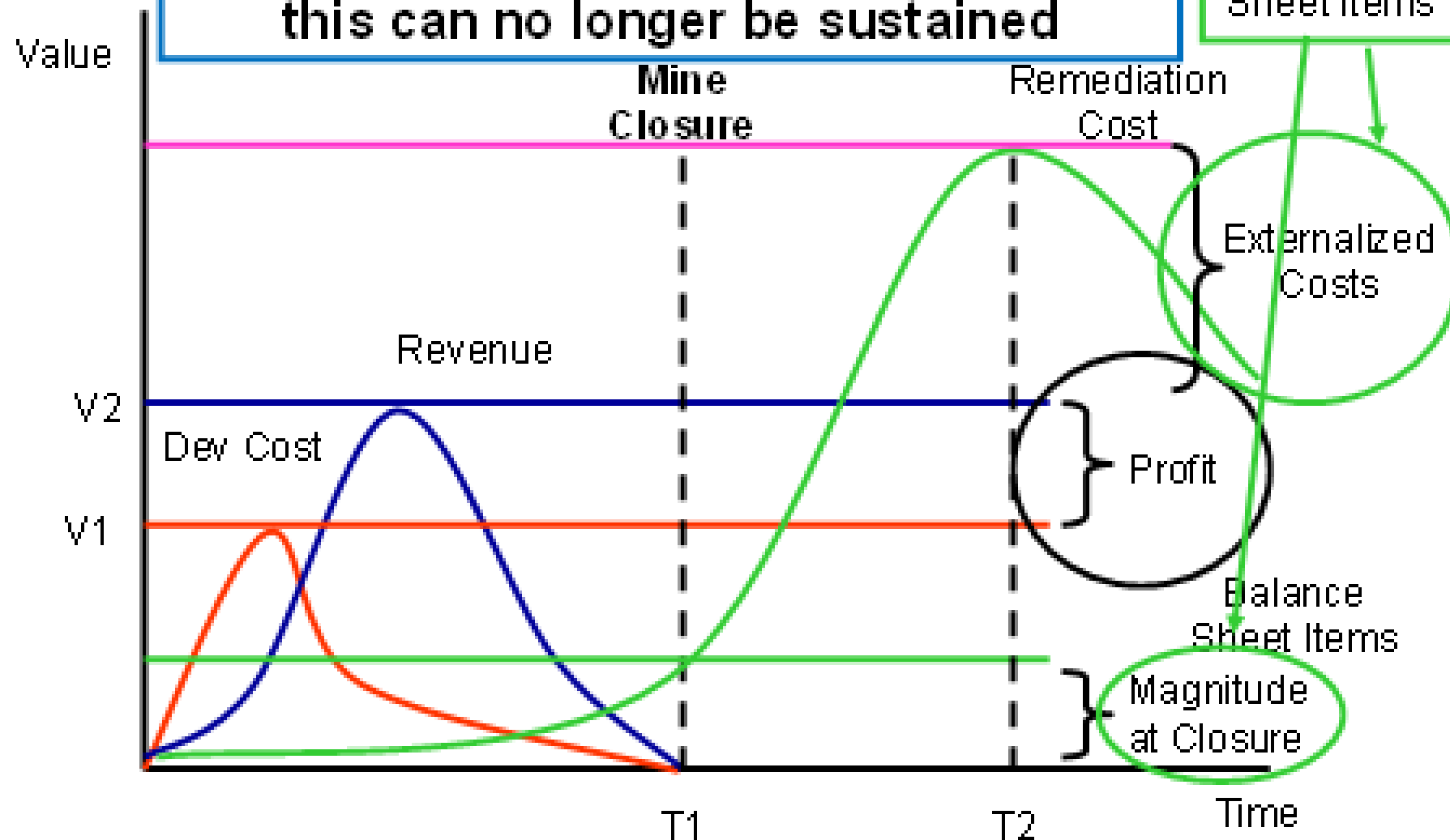
Securing protection is therefore no longer the exclusive preserve of those engaged in these activities, nor of an opaque administration or an under-capacitated and potentially inhibited law enforcement agency which cannot claim the number of successful convictions one would have expected despite clear evidence of historic degradation to our environment.”

“Active citizenry and social activism is necessary for democracy and development to flourish, to raise the concerns of the voiceless and marginalised and hold government, business and all leaders in society accountable for their actions”. (The National Development Plan 2030.)

NWRS (9.4.9) “Civil society will be encouraged to play a watchdog role in supporting compliance by water users with water regulation at all levels.”

The Externalization of Costs Model

Our national economic growth has been driven by an **externalized cost model** and **this can no longer be sustained**



THE RIGHT TO PROSPECT OR MINE

- The entitlements that flow from the right to prospect or mine are far-reaching.
- In order to obtain a prospecting or mining right, it is **not necessary to obtain the consent of the owner and occupiers of the land** – the duty to consult is all that is required.
- The law makes provision for **an extensive variety of balancing mechanisms**, e.g. EIA/EMPR, Mine Health and Safety Act, MPRDA and Regulations, Social and Labour Plan, WULA, Public Participation, Liability for ecological degradation (s19 of the NWA; s38 of the MPRDA; S28 of the NEMA), no-go areas, NEMA principles e.g.
 - Disturbance of ecosystems, loss of biological diversity, pollution and degradation of the environment to be avoided, minimised and remedied.
 - Waste should be avoided.
 - A risk-averse and cautious approach
 - The cradle-to-grave principle
 - The polluter pays

Legal Precedent

- Informal land rights of the Bakgatla community in the North West
- A community in Xolobeni in the Eastern Cape

SAHRC

- When proposed mining activity requires the relocation of specific community members' homes, a two-thirds majority of the specific persons affected by the relocation must consent to the mining activity.
- When a community's consent is required, the community shall decide whether to grant its consent in terms of that community's customary law and practices, provided that such process shall be transparent, democratic and participatory

Minerals Council Human Rights Framework

Free Prior and Informed Consent

- In unpacking the definition of FPIC, a key question is: **who are “indigenous peoples”?**
- According to the UN: *“Practicing unique traditions, they retain social, cultural, economic and political characteristics that are distinct from those of the dominant societies in which they live. Spread across the world from the Arctic to the South Pacific, they are the descendants - according to a common definition - of those who inhabited a country or a geographical region at the time when people of different cultures or ethnic origins arrived.”*
- This is an important explanation, because it has become common among various NGO groupings and others (including the SAHRC in its recent report) to demand recognition of the FPIC principle for a much broader range of people. Yet, it is important to adopt a position that is compatible with international norms.

Legal Matrix

Responsibilities, liabilities and duties for remediation and mine closure under the NWA, the NEMA and the EIA Regulations

Mineral and Petroleum resources Development Regulations, 2019

(Draft)

Amendment of Regulation 42

The applicant must within 180 days from the date of receiving notification of acceptance of application for a mining right from the Regional Manger, **consult with communities and relevant structures on the contents of the Social and Labour Plan to ensure that it addresses the relevant needs of such communities** and is aligned to the updated Integrated Development Plans of such structures.

Regulation 46A

A mining right holder must publish the approved Social and Labour Plan in English and one other dominant official language commonly used within the mine community.

The responsibility to publish this information rests with the mining right holder.

A consulted and approved SLP must be published within 30 days of approval using the following avenues: Company website/s, local newspaper/s; hard copies of the approved SLP to be placed in local libraries, municipal offices, traditional authority offices, company mine offices; and announcement may be made, where feasible in local radio stations and relevant news outlets.

Mineral and Petroleum resources Development Regulations, 2019

(Draft)

Amendment of Regulation 46B

A SLP must be reviewed after every five years. When reviewing a SLP, the Minister must take into account:

- (i) The extent of the holder's compliance with the approved SLP**
- (ii) Assessment of annual reports
- (iii) Input, comment and reports from the affected communities** and relevant structures
- (iv) The changing nature of the relevant needs of the affected communities as per the IDPs
- (v) The review process shall be done in consultation with affected mine communities, adjacent communities, labour sending areas, local or district municipality.**

Responsibilities, liabilities and duties for remediation and mine closure under the NWA, the NEMA and the EIA Regulations

Section 28 of NEMA: **Duty of care and remediation of environmental damage**

(1) *“Every person who causes, has caused or may cause significant pollution or degradation of the environment must take **reasonable measures** to prevent such pollution or degradation from occurring, continuing or recurring...”*

Who is responsible/liable?

- Section 34 of NEMA makes provision for:
 - both ‘**firms**’ (including companies and partnerships) and their ‘**directors**’ (including board members, executive committees or other managing bodies or companies or members of close corporations or of partnerships) to be held liable, in their personal capacities, for environmental crimes.
 - This personal liability also applies to **managers, agents or employees** who have done or omitted to do an allocated task, while acting on behalf of their employer.

Responsibilities, Liabilities and Duties for Remediation and Mine Closure under the NWA (S19)

Who is responsible/liable?

19 (1) An owner of land, a person in control of land or a person who occupies or uses the land on which-

- (a) Any activity or process is or was performed or undertaken; or
- (b) Any other situation exists, which causes, has cause or is likely to cause **pollution*** of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring.

***Pollution means the direct or indirect alteration of the physical, chemical or biological properties of a water resource so as to make it less fit for any beneficial purpose for which it may reasonably be expected to be used; or harmful or potentially harmful to the welfare, health or safety of human beings, aquatic or nonaquatic organisms, resource quality or property**

Appendix 5 to these Regulations

Content of closure plan

1. (1) A closure plan must include-

(a) details of -

(i) the **EAP** who prepared the closure plan; and

(ii) the expertise of that EAP;

(b) **closure objectives;**

(c) proposed mechanisms for **monitoring compliance** with and performance assessment against the closure plan and reporting thereon;

(d) **measures to rehabilitate the environment affected by the undertaking of any listed activity or specified activity and associated closure to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development,** including a handover report, where applicable;

(e) information on any proposed **avoidance, management and mitigation measures** that will be taken to address the environmental impacts resulting from the undertaking of the closure activity.

National Environmental Management Act (107/1998): Regulations pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations

Scope of financial provision

5. An applicant or holder of right or permit must make financial provision for—

(c) remediation and management of latent or residual environmental impacts which may **become known in future, including the pumping and treatment of polluted or extraneous water.**

8. (1) An applicant or holder of a right or permit must make financial provision by one or a combination of a—

(a) **financial guarantee** from a bank registered in terms of the Banks Act, 1990 (Act No. 94 of 1990) or from a financial institution registered by the Financial Services Board as an insurer or underwriter;

(b) deposit into an account administered by the Minister responsible for mineral resources; or

(c) contribution to a **trust fund** established in terms of applicable legislation (conditions)

Department of Environmental Affairs

Proposed Regulations Pertaining to Financial Provisioning for the Rehabilitation and Remediation of Environmental Damage caused by Reconnaissance, Prospecting, Exploration, Mining or Production Operations

Government Gazette, 17 May 2019

Regulation 6 (6)

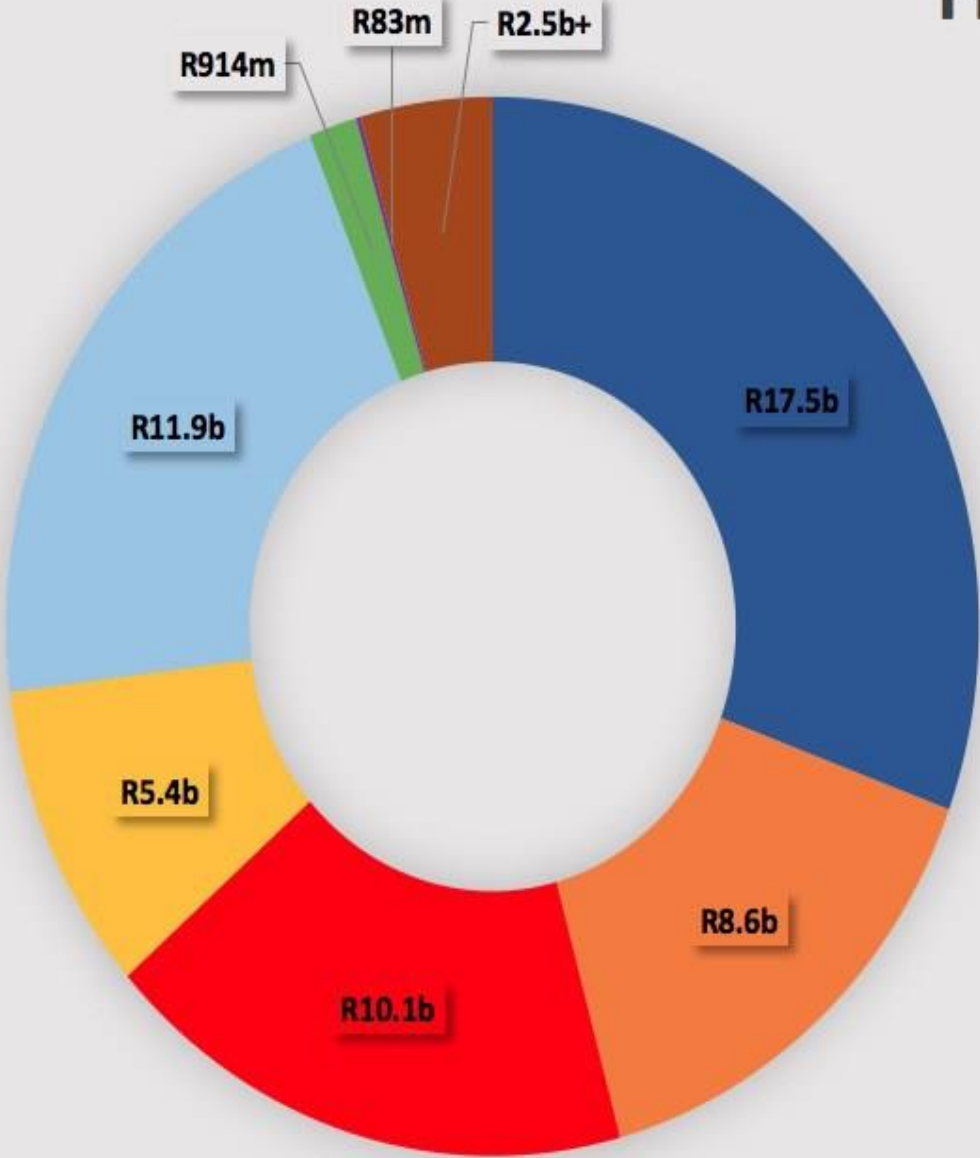
The Chief Executive Officer of the applicant, holder or person appointed in a similar position, or where liquidation or business rescue proceedings have been initiated, the liquidator or business rescue administrator of the company, is responsible for implementing the plans and report contemplated in subregulation (2) and signing off all documentation submitted to the Minister

Subregulation (2)

An applicant or holder must determine the financial provision through a detailed itemisation of all activities and costs, based on actual market related rates for implementing the activities for:

- (a) Annual rehabilitation
- (b) Final rehabilitation, decommissioning and mine closure
- (c) Remediation and management of residual and latent environmental impacts, including ongoing pumping and treatment of polluted or extraneous water.

Financial provisions held for mine closure



National Environmental Management Act (107/1998): Regulations pertaining to the
Financial Provision for Prospecting, Exploration, Mining or Production Operations
(Continue)

Responsibility of holder of a right or permit

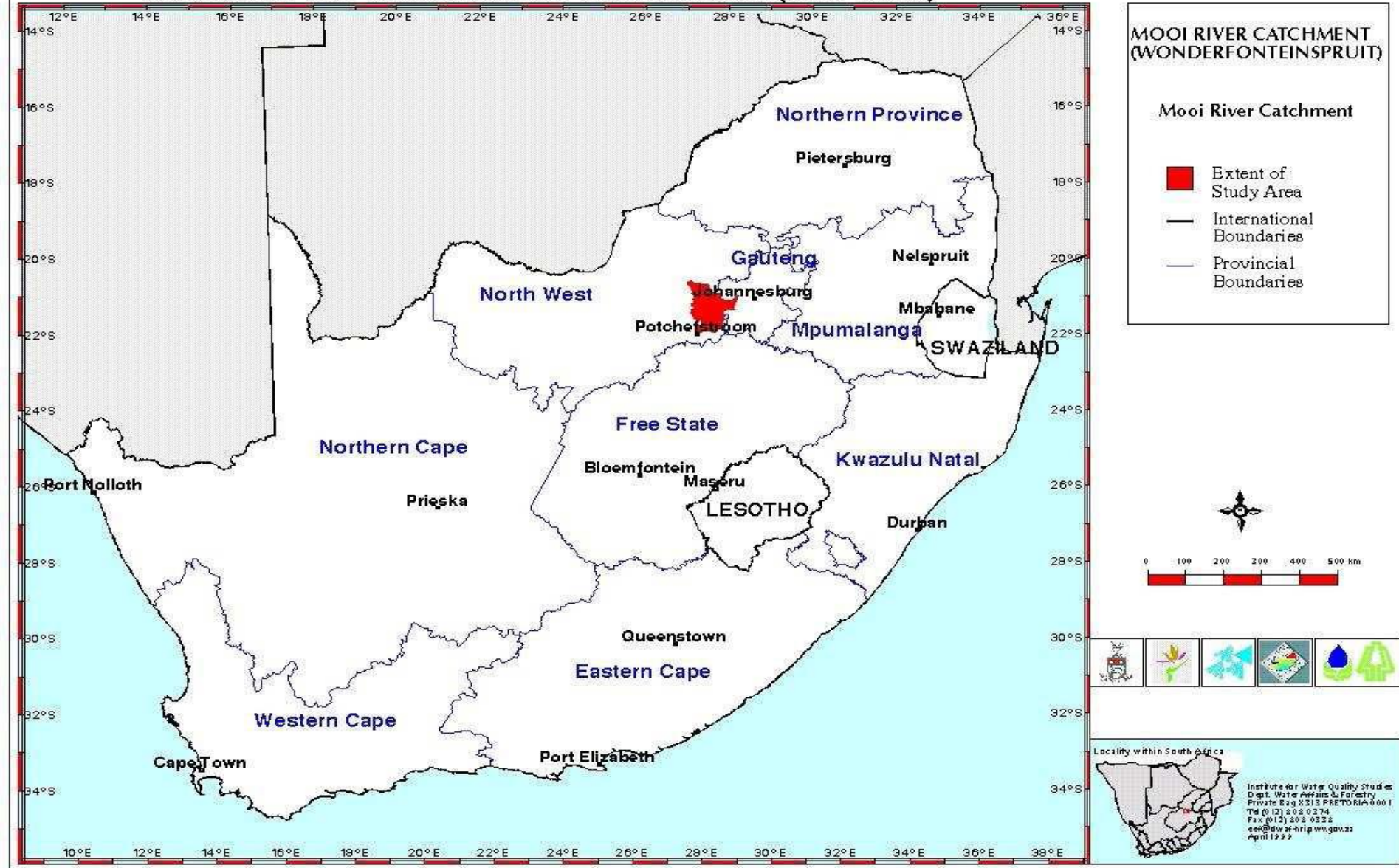
13. (1) The holder of a right or permit must make an **environmental management programme** submitted in terms of section 24N of the Act and any approved amendment thereof required in terms of the Environmental Impact Assessment Regulations, 2014 —

- (a) **available on a publically accessible website** of the holder of a right or permit, if such holder of a right or permit has such a website;
- (b) **available at the site office** of the prospecting, exploration, mining or production operation;
and
- (c) **accessible to the public on request.**

Legacy Issues

Gold-mining Areas of the Witwatersrand gold fields

RADIOACTIVITY MONITORING PROGRAMME (01/97-12/97)



Witwatersrand Mining Basin*

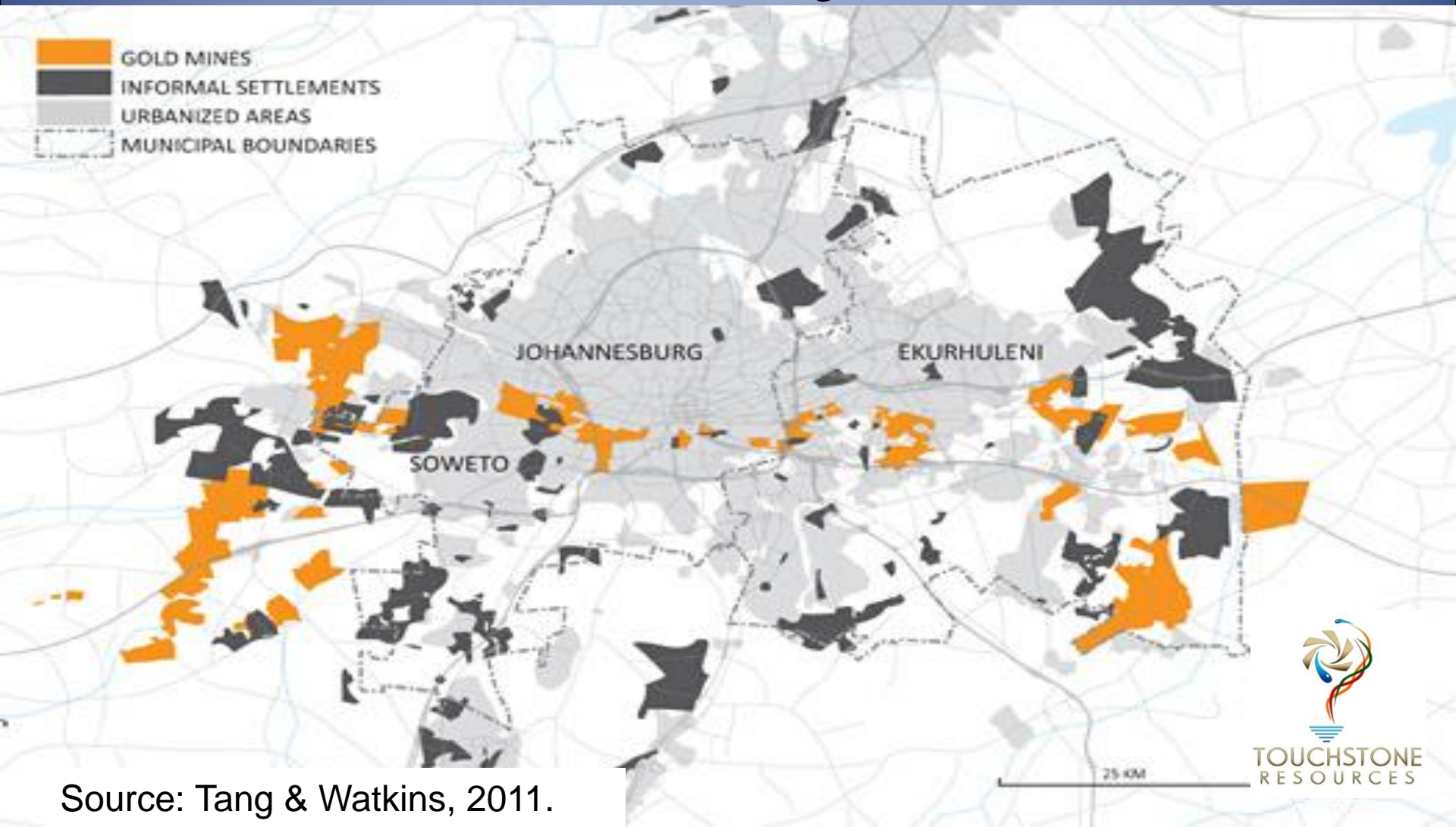
- Having yielded more than one third of all the gold ever produced on the planet, the Witwatersrand Basin held **the world's largest gold reserves** (Tucker et al 2016).
- The Witwatersrand has been **mined for more than a century**.
- It is the world's **largest gold and uranium mining basin** with the extraction, from more than **120 mines**,
- of **43 500 tons of gold** in one century and **73 000 tons of uranium** between 1953 and 1995.
- The basin covers an area of 1600 km², and led to a legacy of some 400 km² of mine tailings dams (**270 tailings dams and 380 MRDs**) containing
- **6 billion tons of pyrite tailings** and **600 000 t** of low-grade **uranium**.
- It is estimated that **6000 km²** of soils are significantly impacted by gold mining on the Witwatersrand Basin alone (Weiersbye and Witkowski, 2003).

* The Witwatersrand Mining Basin is composed of the Far East Basin, Central Rand Basin, Western Basin, Far Western Basin, KOSH and the Free State gold mines

Mine Residue Areas
Tudor Shaft Informal Settlement



400 000 people live in informal settlements close to radioactive mine residue areas. The majority of MRAs are radioactive because the Witwatersrand gold-bearing ores contain almost ten times the amount of uranium than gold.



Source: Tang & Watkins, 2011.

Acid Mine Drainage (AMD)

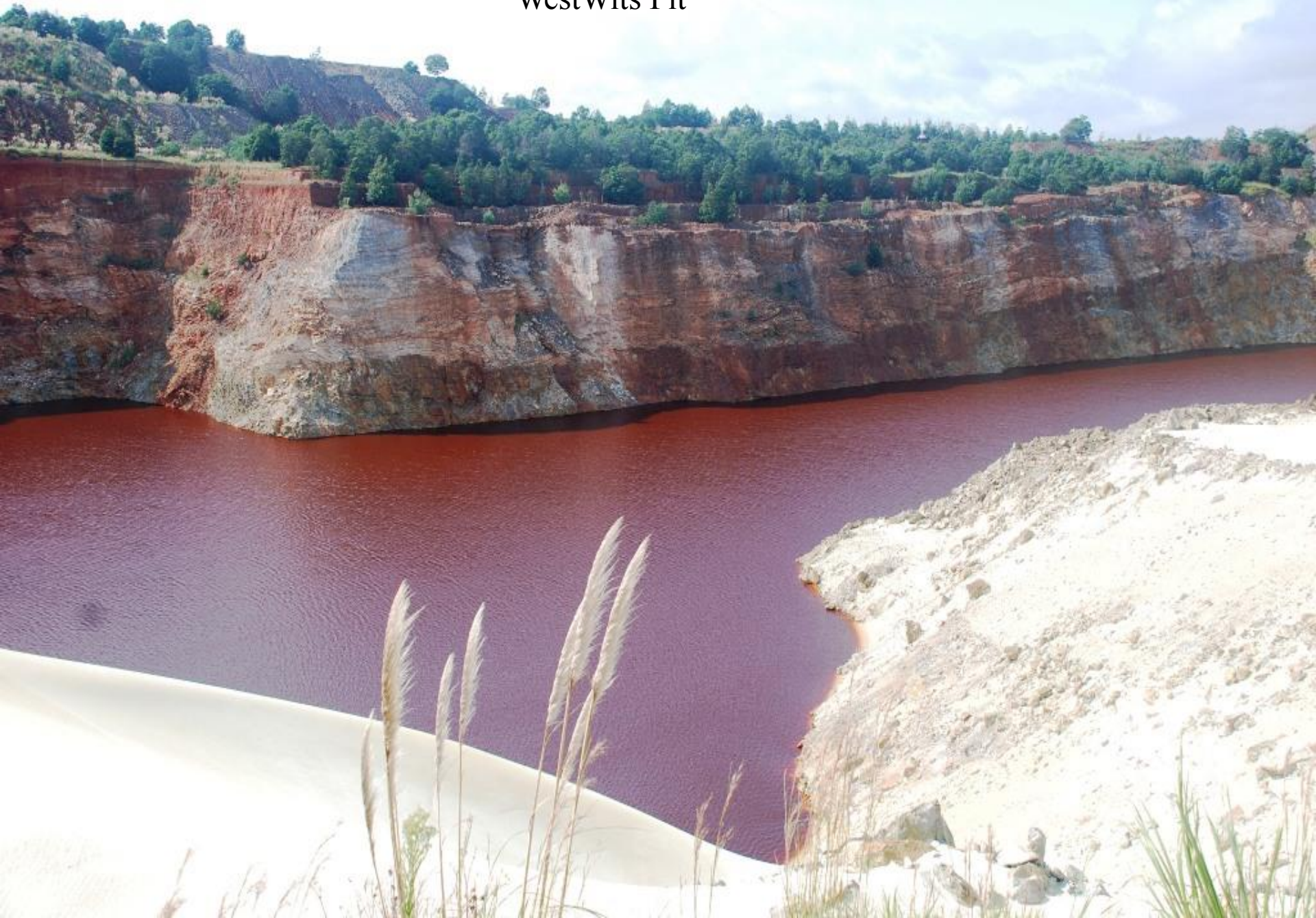


- AMD – established phenomenon in Witwatersrand since 1903.
- The potential volume of AMD for the Witwatersrand Goldfield alone amounts to an estimated 350ML/day (1ML = 1000m³).
- This represents 10% of the potable water supplied daily by Rand Water to municipal authorities for urban distribution in Gauteng province and surrounding areas, at a cost of R3000/ML.
- The gold mining industry in South Africa (principally the Witwatersrand Goldfield) is in decline, but the post-closure **decant of AMD** is an **enormous threat**, and this could become worse if remedial activities are delayed or not implemented.

Reference: R Scott. WRC Report No 486/1/95

CSIR. Briefing Note August 2009. Acid Mine Drainage in South Africa. Dr. Pat Manders. Director, Natural Resources and the Environment.

WestWits Pit



Tweelopiespruit





Dump Reclamation
and
Unscheduled Closure

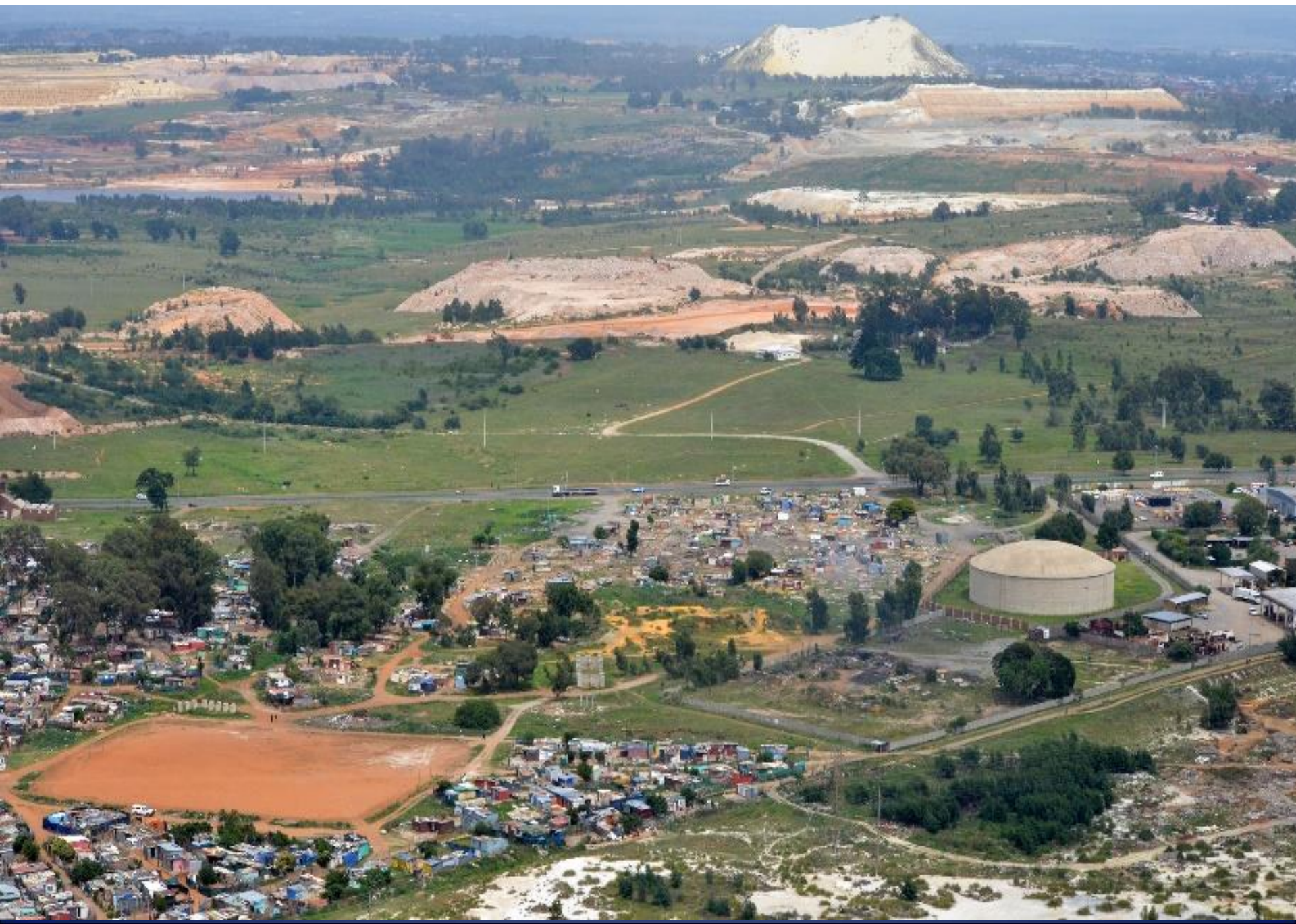
Case Study

Mintails

How not to close a mine

- Australian listed company
- Three mining rights (132MR, 133MR, 206MR)
- In liquidation
- Unfunded environmental liability of R460 367 811.07
- *“The DMR allowed Mintails to operate between 2012 and 2018, despite the fact that the Department had never approved the environmental management plans of the mine and had never issued the company with a mining right under the law”.*

(Ref. Parliament: Announcements, Tablings and Committee Reports. 22 November 2018)



Open Pits
Emerald/Monarch Cluster



Pipeline Route
5 November 2011







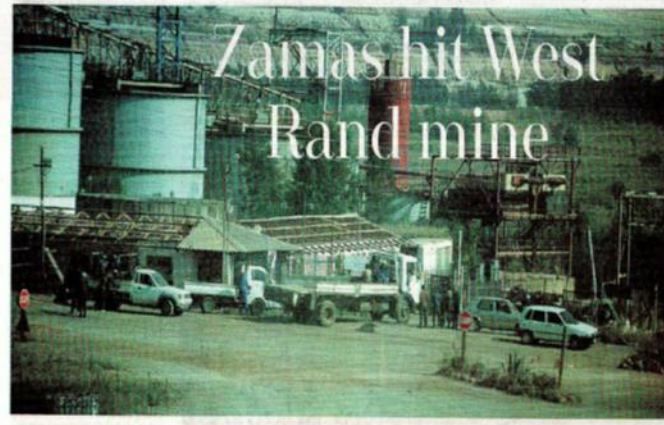
GOLD TAILINGS TREATMENT OPPORTUNITY
Combination of Mineral & Deposition Rights, Plant and Property.
Data room available.

WH Auctioneers has been duly instructed by the Joint Provisional Liquidators to proceed via public tender to sell the assets and property vesting in the estate of Mintails Mining SA (Pty) Ltd (in liquidation) and all subsidiary entities falling under the Mintails umbrella either in liquidation or not, including various assets, mineral and deposition rights. WH is calling for expressions of interests (EOI) for the sale of Mintails Mining SA. The Joint Liquidators reserve the right not to accept the highest or any offer/bid.

TENDER CLOSES: THU 4 APRIL 2019 @ 12PM
TENDER DOCUMENTS: joshua@whauctions.com
VIEW by appointment • RFP/RFI ZAR/USD refundable • BUYERS FEE 10%
Joshua: 072 536 5482 • Tim: 082 371 1069
whauctions.com
WH Auctioneers (Pty) Ltd • 575 56th Road, Midrand • Tel: 011 576 5700




ENVIRONMENT



Zamas hit West Rand mine

been shut down since then.

"Due to increased theft and damage to the Mintails gold treatment plant area it was decided that it would be risky to repair the current power line as it will be vulnerable to ongoing cable theft, increasing repair costs and unprecedented downtime on the plant.

"To reduce downtime the option of installing a generator was considered, however, due to the power needs of the plant it was ascertained that the size of the generator is not readily available and would be costly.

"In the interest of speed and safety TCTA with Sibanye Gold took a decision to install an overhead power supply, which is due to be completed by Tuesday."

Ratso said the AMD treatment plant had permanent security and was "not at risk from the zamas plundering" the Mintails infrastructure.

"There is a peril: zama zama activity in the area of the now liquidated (and abandoned) Mintails' mine. Zamas are heavily armed and are stripping metal, electrical cables, gold-bearing waste, etc. on the property of Mintails."

Ratso said armed security personnel would be permanently deployed at the pump station to deter attempts of cable theft or other damage to the pump station, including the stripping of metal.

The Department of Mineral Resources said it was aware of the situation and "working with all relevant stakeholders to mitigate any damage to the environment".

Mintails applied for business rescue in October 2015, but was liquidated in September last year. It has an unsecured environmental liability of R485 million, but only secured R25m financial provision in its environmental rehabilitation funds.

"We've seen in the Blyvoor case, in the Genevieve case and now in the Mintails case, that besides the environment and future generations carrying the risk, impact and costs, neighbour-

MINTAILS' gold treatment plants and infrastructure on the West Rand are being plundered by hundreds of illegal miners who scavenge for copper cables, metal and gold dust. This includes the electrical cable which supplies power to Shaft 9, here where acid mine drainage is pumped from the Western Basin. | NOKUTHALA MBATHA African News Agency (ANA)

Ransacking the now-liquidated Mintails' mine area may have dire consequences

SHEREE BEGA

THE armoured vehicle could go no further. It killed tentatively, a few hundred metres from a devastating scene: scores of illegal miners were stripping the Mintails gold treatment plants and infrastructure in Randfontein.

A line of vehicles were parked outside, where the security arm of the Zama Zamas extensively demanded



to be fearful to get involved. This is a fire-breath, the footing is continuing with impunity and no enforcement.

Over the weekend, 70 to 80 vehicles at a time entered the premises to scavenge copper cables, metal and gold dust.

Mintails offices, too, have been stripped. Thick plumes of black smoke tickled into the sky where copper cables were being burnt.

Parliamentary Portfolio Committee on Mineral Resources

Findings

- It is clear that some mining companies are still operating without adequate financial provision for repairing damage caused to the environment by mining activities, if they suddenly close.
- Neither Shiva Uranium (Pty) Ltd and Mintails Mining SA (Pty) Ltd has saved all the money they were supposed to set aside under the law to pay for environmental rehabilitation. The shortfalls are R36.6-million for Shiva and R460-million for Mintails.
- The state will inherit these liabilities if the mines are finally liquidated.
- The DMR has failed to implement effectively and carry out the intentions of Parliament to ensure that all mines rehabilitate the damage they cause.
- Changes to the mining law were made by Parliament after 2002 to ensure that in mining, as elsewhere, the polluter must pay.
- DMR must report on what efforts they have made to hold directors and shareholders of Shiva and Mintails liable for the environmental debts of these failed ventures.
- The DMR must actively ensure that the licensing of mines goes with responsibility and accountability.
- The DMR should further explore the regulatory gaps resulting from the business rescue process and come up with regulations that will ensure full environmental compliance during the period when a mine is experiencing financial distress.

South African Human Rights Commission

National Hearing on the Underlying Socio Economic Challenges of Mining Affected Communities in South Africa

13-14 September; 26 and 28 September; 3 November 2016

Conclusion

- Overall the **mining sector is riddled with challenges** related to land, housing, water, the environment and the absence of sufficient participation mechanisms and access to information
- **Non-compliance, the failure to monitor compliance, poor enforcement, and a severe lack of coordination amongst especially government stakeholders exacerbate the socio-economic challenges** faced by mining-affected communities
- It is crucial that government ensures that communities are able to participate meaningfully in mining-related activities and influence decisions that detrimentally impact their enjoyment of constitutionally guaranteed rights and general well-being
- The State must do more to include communities in reporting and monitoring mechanisms

Council of Geoscience

Management of mine residues by integration

- Any new application to exploit mining residues should only be approved if it involves the **removal of an entire residue deposit and the rehabilitation of the remaining footprint.**
- The past practice of granting rights and authorization for the reprocessing of individual residue deposits may need to be reviewed insofar as it allows the **selective extraction** of value from portions of a site **without ploughing some of that value back into the rehabilitation of the entire mining area.**
- It must be accepted that the reprocessing of some mining residues will never be economically viable and that these will need to be transported to superdumps, if this is not too costly or **rehabilitated in situ.**
- Radiometric surveys over previously reprocessed mine residue deposit footprints have in some cases shown elevated levels of residual radioactivity in the soils. In these cases, it must be accepted that some areas will never be suitable for unrestricted development and that these areas will need to be demarcated as such, and appropriate land-uses proposed and implemented.

Regional Mine Closure Strategies

- It is important that mine closure be approached from a sustainable and “**cradle-to-grave**” perspective.
- Mine closure is seen as a **continuous series of activities that begins with pre-planning prior to the project’s design** and construction and ends with the achievement of long-term site stability and the establishment of a **self-sustaining ecosystem and community**.
- Therefore, **mine closure needs to be considered throughout the mine’s entire life cycle** and should be designed to restore the physical, chemical and biological quality (or potential) of air, land and water regimes disturbed by mining, to a state acceptable to all concerned.
- **Closure is no longer thought of as an end-of line procedure**, but rather as a planning process for closure which is aimed at reducing long-term environmental impacts before they become a problem, as well as reducing the financial burden of final closure and rehabilitation.
- The **Regional Closure Strategy will promote the alignment of individual mine closure plans**.
- The closure of a mine within a region will often impact on the remaining mines in that region. The implication of a single mining operation’s decision to cease operation, taken in isolation from its neighbouring mines, may consequently result in a risk that is transferred to the remaining mines in that region.

ICMM Principles

1. Apply ethical business practices and sound systems of corporate governance and transparency to support sustainable development;
2. Integrate sustainable development in corporate strategy and decision-making processes;
3. **Respect human rights and the interests, cultures, customs and values of employees and communities affected by our activities;**
4. **Implement effective risk-management strategies and systems based on sound science and which account for stakeholder perceptions of risks;**
5. Pursue continual improvement in health and safety performance with the ultimate goal of zero harm;
6. **Pursue continual improvement in environmental performance issues, such as water stewardship, energy use and climate change;**
7. **Contribute to the conservation of biodiversity and integrated approaches to landuse planning;**
8. Facilitate and support the knowledge-base and systems for responsible design, use, re-use, recycling and disposal of products containing metals and minerals;
9. **Pursue continual improvement in social performance and contribute to the social, economic and institutional development of host countries and communities; and**
10. **Proactively engage key stakeholders on sustainable development challenges and opportunities in an open and transparent manner.**

Sibanye –Stillwater

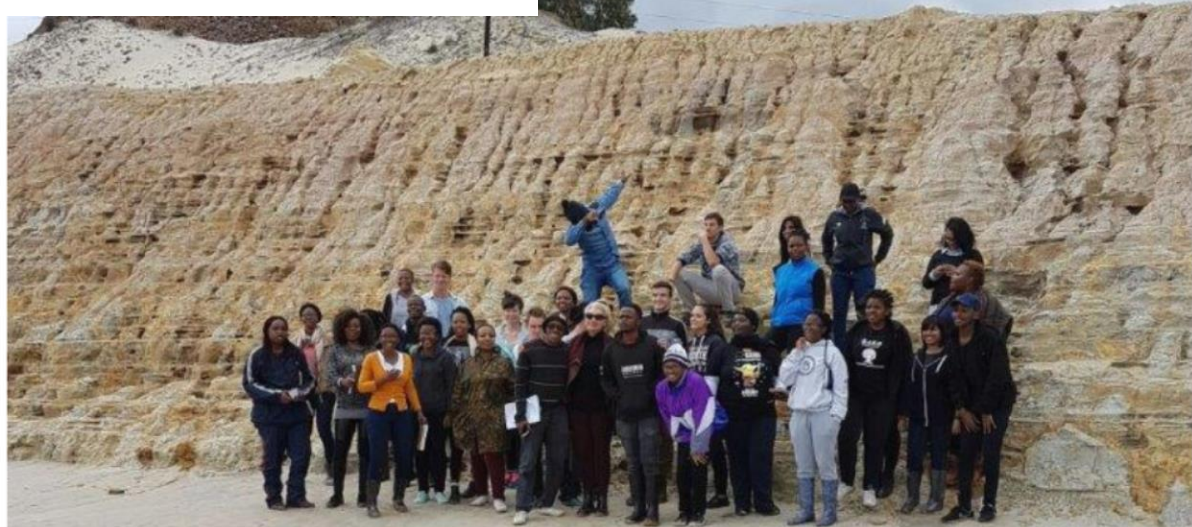
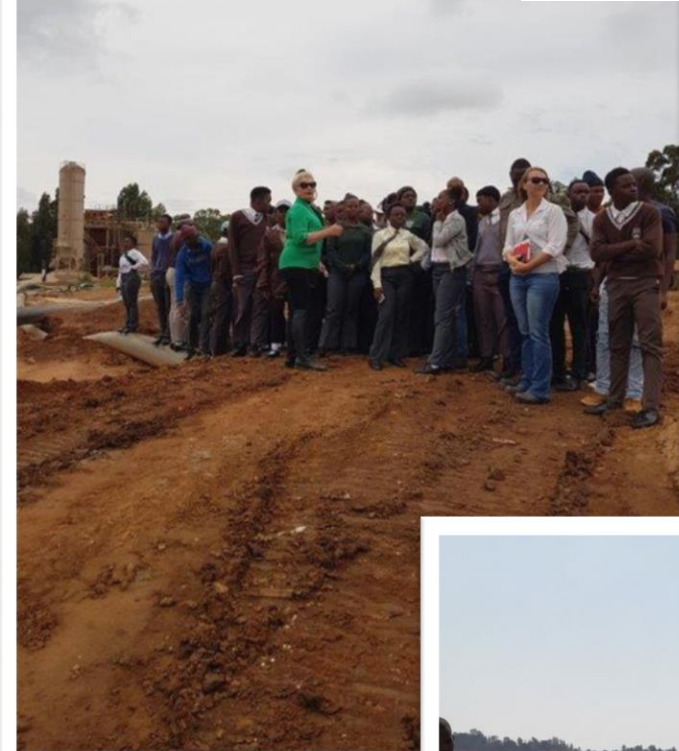
Mine closure or mind closure?

Narrow view or broader perspective?

Sibanye Stillwater
Sand Dump 20



Environmental Tours and Site Visitations





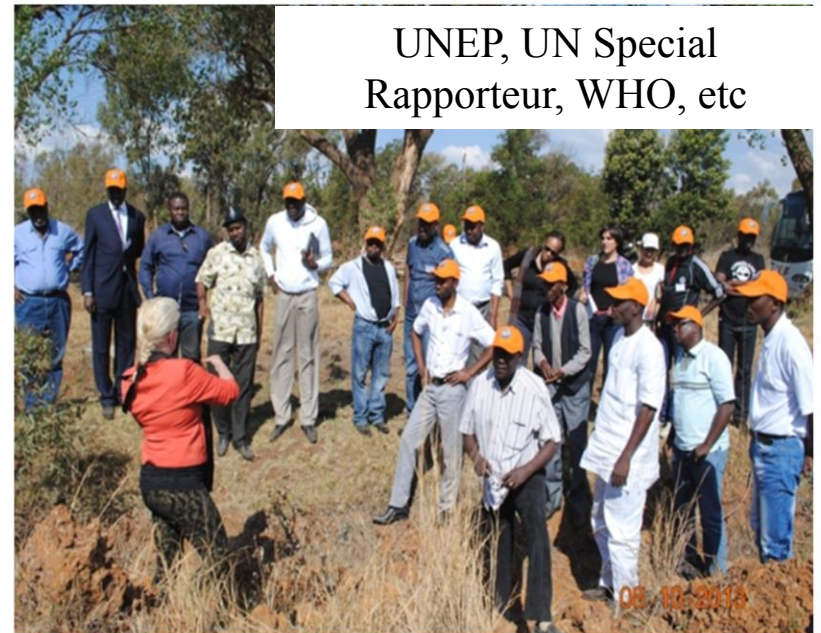
Tour with the South African Institution of Mechanical Engineering (SAIMECHE) and Business Leadership SA



Prof Jurgen Runge and students (Geography Department, Goethe University, Germany)



IPPNW; International Delegation



UNEP, UN Special Rapporteur, WHO, etc



Prof Dr.-Ing. H. Roth of the Universität Siegen Regel- /Steuerungstechnik planting a Buffalo Thorn Tree on the rehabilitated footprint area of Sand Dump 20



Mills Site Complex



According to Sibanye-Stillwater:

- Sibanye Stillwater is the largest primary producer of PGMs, which includes necessary metals (palladium, platinum, rhodium, etc.) for auto-catalysts. The catalysts remove carbon monoxide, hydrocarbons and nitrous oxides from exhaust emissions, which consequently reduce greenhouse gas emissions from automobiles, addresses climate change and ensure environmental sustainability.
- Tiffany & Co. purchases all of their platinum from Sibanye-Stillwater because of its environmental reputation and performance. Sibanye-Stillwater is also the preferred supplier of platinum/palladium to well-known brands of motor vehicles.
- Sibanye Stillwater has initiated a “Good Neighbours Agreement” with its host communities in Montana. The Agreement, which is a unique initiative within the mining industry, allows for transparent engagement with host communities and conflict resolution.
- Sibanye-Stillwater is committed to the transition to a low-carbon economy and as such will not be mining coal.

According to Sibanye-Stillwater:

- Sibanye-Stillwater intends to expand its relationship with DRD in order to reclaim not only the historic tailings storage facilities (TSFs) within the West and Far West Rand but also the platinum TSFs. In doing so, it will seek partnerships with non-profit foundations, such as the Bill Gates Foundation, to assist in ensuring the future environmental and socio-economic sustainability of the regions within which Sibanye-Stillwater operates.
- Sibanye-Stillwater, the West Rand Development Agency, the Gauteng Infrastructure Financing Agency and the Far West Rand Dolomitic Water Association have entered into a memorandum of understanding regarding the collective development and implementation of a pioneering agri-processing industrial cluster initiative, titled Bokamoso Barona, on the West Rand. The objective of the initiative is to facilitate the creation of a sustainable post-mining economy in the West and Far West Rand. Aurecon and Talmer will be managing the initiative.

“Towards Proactive Activities & Initiatives for a sustainable Far West Rand in the 21st Century”

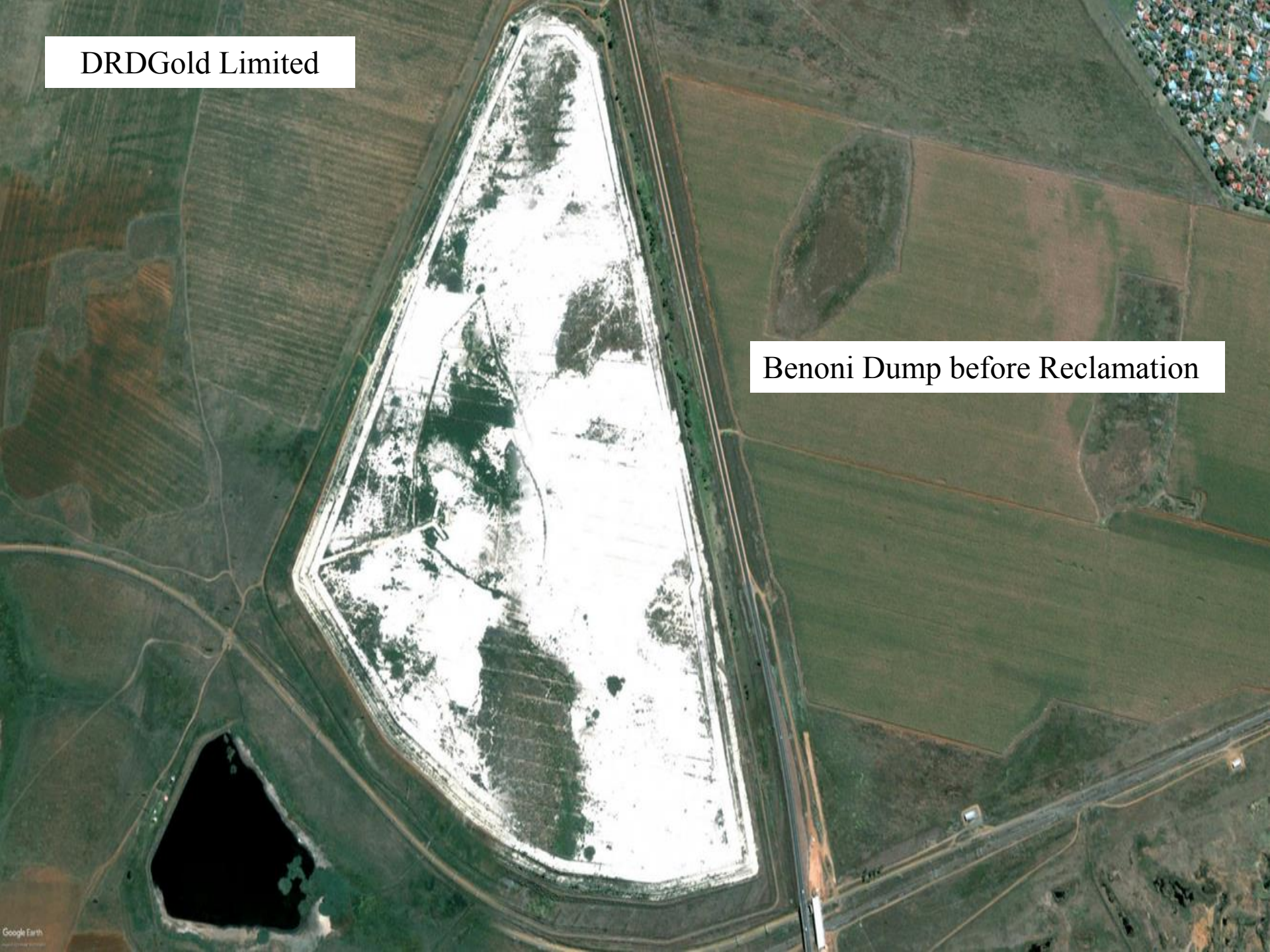
- Sibanye-Stillwater/DRDGold Limited is cooperating with the NWU School of Social Science on the Project titled “Towards Proactive Activities & Initiatives for a sustainable Far West Rand in the 21st Century”
- An initiative that aims towards the proactive consolidation of past, renewed and future ideas, activities and initiatives that will in practice and in an applied execution of research, positively help facilitate in paving the way towards a sustainable Far west Rand in the 21st century.
- Sustainability in the FWR implies that all past ideas towards creating sustainability should not be solo initiatives but consolidated and integrated efforts.

DRDGold Limited

Shift from asking “how do we clean up afterwards” to “how do we deliver value to the landscapes and communities that we impact upon”?

DRDGold Limited

Benoni Dump before Reclamation





Benoni Dump during reclamation

Benoni Dump: Final reclamation



Brakpan TSF : Cladding



Brakpan TSF : Cladding



Dust mitigation measures



From Mine Dump to Industrial Area

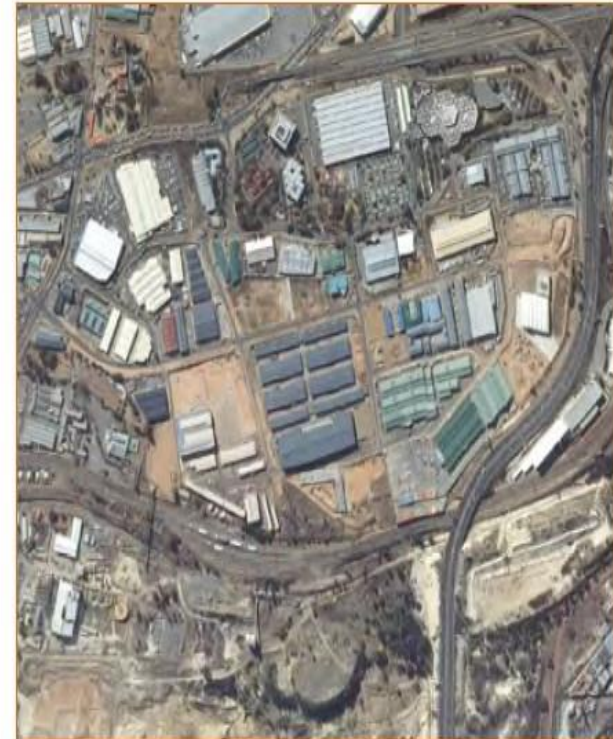
FROM MINE DUMP



TO RECLAMATION SITE



TO INDUSTRIAL AREA



9, SL19

1/10000

3/3/92

33







Workers from the local community preparing the slide slopes of the Crown TSF for grassing



Start of vegetation of Crown TSF

Preparing the side slope of Crown TSF



Final Vegetation: Crown TSF



Gold Fields

South Deep Mine

“A key question is “is conflict or cooperation in the best long-term interests of the mining sector?”

Community Engagement

- Communities in southern Africa are often poor and disempowered, and in need of employment.
- The notion of sustainable development, particularly intra-generational equity, with its medium-long term horizons does not resonate
- Communities often lack experience with large development projects and the knowledge of potential impacts and benefits.
- They have high, often unrealistic expectations and inadequate awareness of their own rights or the capacity to exercise these rights.
- Engagement must include awareness raising and disclosure. This limits the potential for external exploitation of the community and enhances community participation in identifying post project options and ultimately taking ownership of post-closure initiatives.
- There needs to be broad support of the planned end use by communities who will have to live with the legacy.
- Community dynamics and structures must be taken into consideration.

Community Engagement

NEMA Principles

- The participation of all interested and affected parties in environmental governance must be promoted.
- Decisions must take into account the interests, needs and values of all interested and affected parties.
- Community wellbeing and empowerment must be promoted through, for instance, environmental education and the raising of environmental awareness.



Meetings, Feedback Meetings & Open Days



Engagements, Tours & Environmental Lectures





It's World Water Day on Friday

The 2019 theme is 'leaving no one behind', which means water should be accessible to all. This week we're sharing examples of how our Regions are working to uphold the right to water and ensure business sustainability. Our first story is from South Deep, South Africa:



Heritage Day



EMPOWERING THE NEXT GENERATION OF WATER STEWARDS

South Deep's environmental education workshops empower schoolchildren in our communities with the knowledge to protect the environment, including water. They also get to see how we are working to limit our impacts on our shared water resources.

Launched in 2018, the workshops are presented in partnership with the Federation for a Sustainable Environment (FSE), an environmental NGO, and the content is aligned with the national school curriculum.

As part of the workshop they get to compare the historically poor environmental practices of mines in the past, to current best practices - they visit various legacy mining sites where acid mine water drainage has scarred the landscape, and South Deep's Doornpoort tailings storage facility (TSF). This TSF is widely viewed as one of the best in South Africa.



Main photo: Mariette Liefserink, Head of NGO FSE (top left) and community schoolchildren on the environmental tour. Learning about the environment also happens in the classroom (above).



World Water Day focuses on the UN's Sustainable Development Goal 6 (SDG 6): Ensure water and sanitation for all. Gold Fields supports the advancement of the SDGs and is fully aligned to the International Council on Mining & Metals (ICMM) water stewardship guidelines.

GOLD FIELDS

“Community engagement research in South Africa: Methods, theories, histories and practice.” Van Schaik Publishers (Draft, Unpublished)

The FSE’s chapter contribution is titled “Engagement with Mining Affected Communities: Lessons Learnt. A Case Study within the West Rand Goldfields” (Draft, Unpublished)

- Gold Fields' South Deep Gold Mine identified 14 communities which are directly affected by its operations due to the sharing of roads, water and the physical environment.
 - The case study considers the maturing over time of the contribution of the parties, that is, mining affected communities, Gold Fields’ South Deep Gold Mine as well as the FSE, in:
 - firstly identifying the grievances; and
 - secondly, in either transforming these conflicts into opportunities and/or resolving these conflicts to achieve a win-win situation for all parties concerned.
- In the process the nature of the engagement and the relationship between the parties also changed from acrimonious to co-operative.

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- Observable and documented paradigm shift:
 - From a win-lose operating environment to one where there is a net benefit to all stakeholders in particular for mining affected communities;
 - the establishment of partnerships and trust with communities;
 - a serious commitment to corporate social responsibility,
 - improved compliance with Social and Labour Plans and environmental legislation;
 - the appointment of teams of appropriately qualified employees to regularly engage and address the mining affected communities’ grievances and concerns; and
 - regular reporting on social and environmental impacts in an honest and transparent manner.

There were important lessons learnt in this specific case study namely that conflicts can be sustainably transformed or resolved if a mining company understands and meets the needs and interests of its host communities.

The role of the FSE, as an impartial and non-political actor, was necessary to offset the imbalance of power in the engagements between Gold Fields’ South Deep Mine and its host communities and to draw out knowledge and insight from the different parties.



GOLD FIELDS LIMITED – SOUTH DEEP – ENVIRONMENTAL MANAGEMENT



GOLD FIELDS



Vegetation of Sidewalls – Doornpoort and Old tailings dams



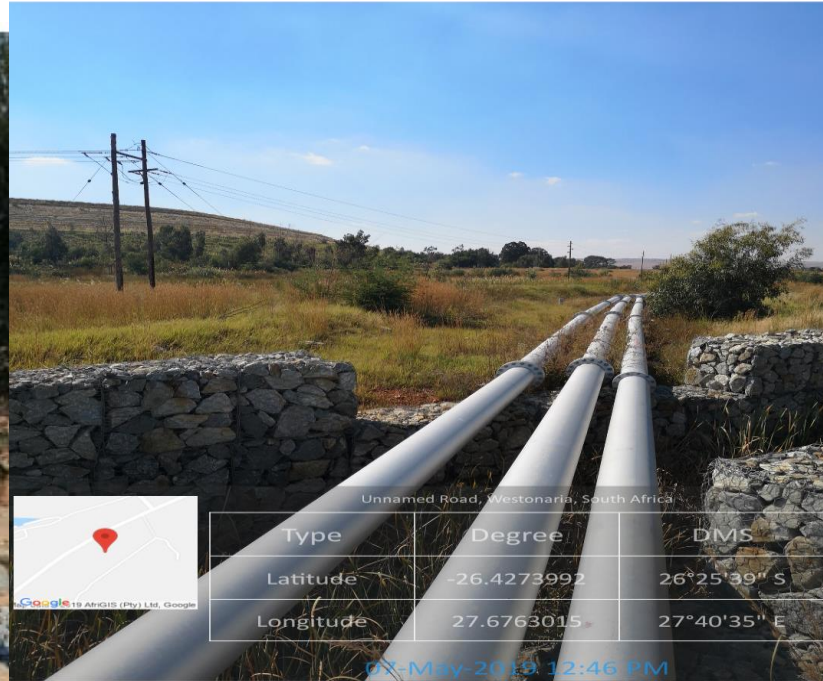


Dust Suppression Management Measures



Mine Water Management:

Best practice in construction of overland pipelines crossing the stream.

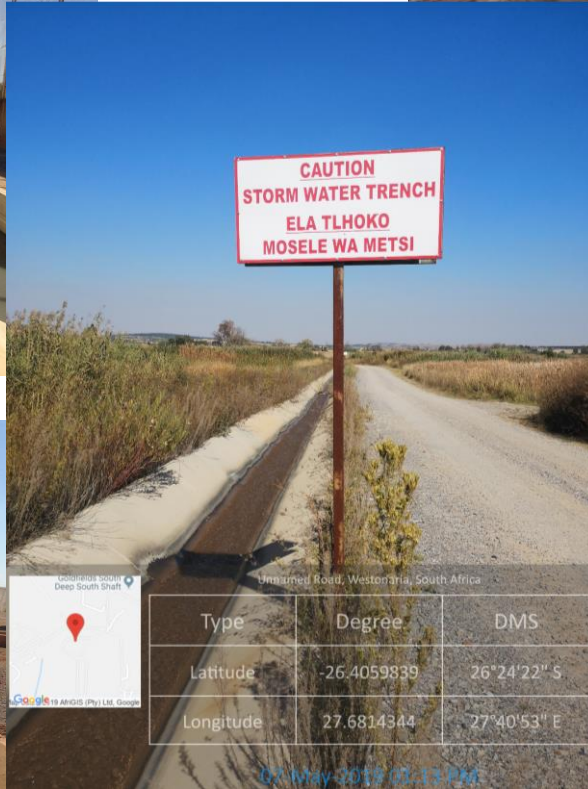


Mine Water Management:

Storm water management system i.e concrete lined channels and lined pollution dams



Silt Trap



Concrete lined trench transition to buried pipe



Conclusion

“It is as unacceptable for companies, when they move on, to leave great holes in the earth and polluted rivers as it is to leave disrupted or unenriched communities....”
(quoted in Anglo America 2002b:3)

