

## REPORT FOR JULY & AUGUST 2021

### Company matters

1. The FSE consulted with Mr Andrew Papadopoulos of Kisch, an expert on copyright law regarding a matter involving an alleged copyright infringement. The matter was resolved.
2. Preparation of the FSE's BBBEE certificate (2021) and submission to funders.
3. Consultation on and preparation of the FSE's Privacy Policy in terms of the POPI Act and posting of the Policy on the FSE's website.
4. Consultation on and preparation of the FSE's PAIA Manual in terms of the PAIA and posting of the Manual on the FSE's website.
5. Submission to the Information Regulator - 'registration.IR@justice.gov.za' - of the Information Officer Registration Form on the 20<sup>th</sup> and 23<sup>rd</sup> of July, 2021.
6. Confirmation by the Department of Social Development that the Federation for a Sustainable Environment complied with the reporting obligations as stipulated in the NPO Act for the financial year ending Feb 2020.
7. WP Bower Mine and the FSE's current position and responsibilities in this matter (CASE NO 28740/2017).
8. Attested resolution by the directors of the FSE regarding the Central Rand Gold/Amatshe Mining matter.
9. FSE's website domain renewal.

### Appointments

The FSE is a member of the Water and Sanitation Sector Leadership Group (WSSLG) Sustainable Development 6 (SDG6) Task Team. Goal 6 is to ensure the availability and sustainable management of water and sanitation for all by 2030. There are 8 targets and 11 global indicators. The SDG6 Programme identifies the gaps that exist in reaching the 2030 objectives and monitoring progress. The SDG6 Programme informs the relevant 'vehicles' such as the National Water and Sanitation Master Plan (NW&SMP) to translate these Gaps into Actions that can be implemented by the Sector, towards the 2030 objectives.

The Sector has 6 sector Components to cover 6 Sector Focal Points. The FSE was appointed to represent one of these Sectors, namely civil society organisations in South Africa. In terms of the Terms of Reference the FSE's responsibilities will include sharing information with civil society and bringing their issues of concern to the Task Team. This appointment is a voluntary appointment and that there is no remuneration or emoluments attached to this appointment. The appointment therefore does not compromise or fetter the FSE in any way or manner.

### Participation

1. Green Drop Certification Programme (oral comments).

Water Service Institutions will be required to register their waste water treatment plants; register process controllers and supervisors and evidence will have to be provided of the maintenance capacity and proof of competency of the maintenance team. Information on in-house staff will be required as well as a site specific operation and maintenance schedule. The capacity of Engineering Management must be supplied, which must include an engineering technician and an engineering Technologist and one engineer or more than one of the aforesaid. In systems that are more advanced
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there must be a candidate scientist and a professional scientist. These water service institutions must also have a waste water risk register and risk abatement plan and evidence of risk mitigation must be included.

With reference to operational monitoring, samples must include inflow, outflow, process flows, sludge, etc. and determinands must be monitored. The frequency of the monitoring will be as per authorisation. Compliance monitoring will require monitoring of microbiological, chemical, physical aspects. To be included is design capacity management of waste water treatment works, energy demands, operations and maintenance budget to provide proof of the waste water systems' O&M budget per annum, evidence of which % of total sewage is received at the treatment plant; a process audit must be conducted by a technically/scientifically qualified municipal official. Waste water asset register must be kept and monitoring data must be submitted to the DWS monthly, etc.

2. Draft National Mine Closure Strategy: UCT MtM webinar on 14 July 2021. Panel discussion on the Closure Strategy.
3. Development of the Eutrophication Management Strategy for South Africa – Project Steering Committee (oral and written comments)



4. Development of the North West Province Climate Change Response Strategy – Project Steering Committee (29 July 2021) – oral comments.
5. Klip River Catchment Management Forum (3 August 2021) – oral and written comments.
6. Blesbokspruit Catchment Management Forum (5 August 2021) – oral and written comments.
7. Rietspruit Catchment Management Forum (10 August 2021) – oral and written comments.

8. Bojanala Air Quality Implementation Task Team (ITT) Meeting (10 August 2021) – oral and written comments.
9. DMRE and the National Association of Artisanal Miners (NAAM) on the DMRE’s Draft ASM Policy.
10. Hennops Catchment Management Framework (24 August 2021) – oral and written comments.
11. Water and Sanitation Sector Leadership Group Sustainable Development Goal 6 Task Team meeting (26 August 2021) – oral and written comments.
12. The South African Human Rights Commission’s investigation in the sewage pollution of the Vaal River and the Vaal Intervention Plan (30 August 2021) – Monitoring the Implementation of Directives re Vaal River System.
13. The Wonderfonteinspruit Catchment Management Forum (31 August 2021) – oral and written comments.

#### Social / Environmental Community Programmes

The FSE in collaboration with Gold Fields’ South Deep Mine participated in a Clean-up Programme by the community of Simunye and a local NGO, The Modern Us on Friday, the 13th of August, 2021 and contributed equipment for waste removal.

*“Hi everyone, I hope this finds you well. I am sending this email to give appreciation for the visit and cleaning material that was donated to show support in what we doing.*

*My team and I we are really happy we do not have enough words to say that will show enough gratitude but to put in more work to ensure that the iKasi Going Green project grows...”*





### Inspections

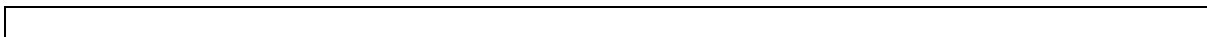
1. Inspection with the DWS, DMRE, the NNR, representatives of Sibanye Stillwater, Harmony and Mr Bongumusa Mbatha of a defunct dump in Slovoville and with its owner, pursuant to a complaint. (11 August 2021).

### News Media Reports

1. Daily Maverick

<https://www.dailymaverick.co.za/article/2021-07-18-thirstlands-of-eapasa-the-failures-of-our-environmental-regulator/?fbclid=IwAR211pf5b7OQZvVmFhhXt1nc107X6MN9o6i9oED8iKewNu5P19j6x7BTIzg>

2. Andiswa Matikinca from Oxpeckers/#Mining Alert





## New strategies for sustainable closure of mines

Posted on 30 Jul, 2021 by [Oxpeckers Reporters](#)

An ambitious new government strategy to deal with abandoned mines is welcome but needs more teeth, say those in the know. **Andiswa Matikinca** reports



*The draft national strategy aims to manage the closure of mines to mitigate negative impacts on neighbouring mines, communities and the environment. Photo © Daylin Paul/Life After Coal*

It has been almost six years since #MineAlert reported that it will cost R30-billion or more to clean up and rehabilitate the thousands of abandoned mines scattered around South Africa. In a series of data-driven investigations, starting with [No \(dis\)closure on mining's mess](#), #MineAlert highlighted the legacy impacts on the environment and the health of poor communities living along the mining belt. In May 2021 the government published a new national mine closure strategy to deal with the problem. Still in draft form, the key focus areas include environmental rehabilitation, planning for “a diverse post-mining economy”, closure planning throughout the lifecycle of a mine and a regional approach to mine closures.

The draft strategy aims to manage the sustainable closure of mines regionally to mitigate negative impacts on mines neighbouring and connected to those due for closure as the closure of one mine has an impact on those that are still operating. The strategy also aims to mitigate environmental impacts such as the contamination of water sources, air pollution, radioactivity from uniferous waste and land degradation.

The implementation of these key aims focuses on planning for the economic succession of mine operations and developing a diverse economy from the mine and surrounding environment after the life of a mine has been reached. The strategy highlights food and non-food agricultural projects as one of the possible post-mining economic activities.

Mining companies and the government will have to work together in assessing the full social and environmental impacts of any proposed new mining project and drafting sustainable closure plans for the proposed mine. A peer review process throughout the life of the mine will go hand in hand with the monitoring and evaluation process, according to the draft document.

Professor Michael Solomon, one of the independent advisors to the Department of Mineral Resources and Energy during the drafting of the strategy and a professor at the University of Cape Town's Department of Chemical Engineering, said this strategy is community focused and aims to provide an economic succession to mining as well as succession plans where mining should be seen as a catalyst of primary economies.

According to Solomon, the economic beneficiation of mines can also happen through “extending the economic footprint of a mine while it is still in production, by creating parallel economies on and

around mining sites that are not necessarily tied into the mine's economic value chain but can enhance the economic value of the infrastructure.

"This is to make sure there is an alternative economy that is not tied to the mine that will provide for post-mining development in the communities," he said.



*Acid mine water enters the Wonderfonteinspruit through unlined and unreclaimed pollution control dams on Mintails property. A Parliamentary investigation found a R460-million shortfall in the money needed for full cleanup. Photo supplied by FSE*

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### Urgent need

Mariette Lieferrink, chief executive of the Federation for a Sustainable Environment (FSE), an NGO that has been dealing with the legacy of abandoned mines for years, said there was an urgent need for this new strategy. It was originally developed by the Council of Geoscience as a regional mine closure strategy for the Witwatersrand goldfields in 2008, she said.

In their official comments submitted to the department, the FSE welcomed the draft strategy but Lieferrink said before it can be turned into policy it needs to have more teeth. "We would like to see punitive and administrative measures taken against operators, managers and directors of companies if they are non-compliant with the policy that will flow from this strategy," she said.

The strategy should have been finalised and published sooner to avoid certain undesirable consequences, especially in the declining gold mining sector where the closure of gold mines is imminent.

"It [the lack of a proper strategy] has incentivised certain mining companies instead of following a structured closure process. They simply liquidated and no one could be held responsible for the environmental and ecological damage," she said.

In an 18-month [data-driven investigation](#) on mine closures across South Africa, #MineAlert revealed in 2016 that very few companies apply to close large-scale mines legally, and that the money set aside for environmental rehabilitation is usually minimal. A real-life case study of the undesirable consequences of unclear laws pertaining to mine closures was the R460-million mess left behind by gold mining company Mintails, which was granted provisional liquidation in August 2018.

According to Lieferrink, nothing has changed on the ground with Mintails despite a parliamentary probe seeking clarity on who would foot the bill for the clean-up costs. (See [Parliament probes](#)

[Mintails toxic legacy.](#)) The FSE is currently preparing an expert report on the current risks to the communities and the environment as a result of the abandoned Mintails operations, she said.



*'Rehabilitating for the future': A shredded sign outside one of Mintails's operations proclaiming its intention to rehabilitate the gold mine in November 2018. Photo supplied by FSE*

### Interlinked approach

The proposed government strategy has many linkages with existing legislation that deals with mine closures, such as section 43 of the Mineral and Petroleum Resources Development Act as well as the Financial Provisioning Regulations for the rehabilitation and remediation of environmental damage caused by reconnaissance, prospecting, exploration, mining or production operations, which were published in 2019 and are still in draft format.

Environmental laws require that mining companies include studies that show the projected environmental damage ahead of their proposed mining activities and what the costs of rehabilitation will be in their Environmental Management Plans (EMPs) when applying for a mining right or permit. The companies also have to set aside funds to cover these costs.

The Department of Environment's [Financial Provisioning Regulations](#) regulate how holders and applicants of mining rights and permits should provide funds for the rehabilitation of environmental damage caused by mining activities following the closure of a mine. The financial provisions as well as other aspects related to mine closures previously fell under the Mineral and Petroleum Resources Development Act but now fall under the National Environmental Management Act.

Responding to questions about what is holding back progressive action when it comes to mine closures, Professor Tracy-Lynn Field, who holds the Claude Leon Foundation chair in earth justice and stewardship at the University of the Witwatersrand, said there is a lack of leadership to coordinate integrated and regional mine closure strategies.

"The Mineral and Petroleum Resources Development Act already allows for this, but to date we have lacked state leadership to take it forward," she said. "As a result we have a fragmented and piecemeal approach which also applies to the funding of closure and the socio-economic planning for mine closure."





*The legacy of unrehabilitated gold mines in the Krugersdorp area – water and air pollution affecting informal settlements in close proximity to the abandoned mines and remaining operations. Photo © Mark Olalde/Aerial photography made possible by The Bateleurs*

### Closure challenges

The challenges with current mine closure processes, as reported by #MineAlert in the past, include the fact that only small amounts of the financial provisions are held in cash and are not enough to cover the full extent of the rehabilitation costs; delays in the issuing of closure certificates to mining companies; the abuse of temporary closure or care and maintenance laws to avoid expensive closure programmes; and mines being passed down to smaller companies that can only afford to mine the remaining minerals and are unable to cover the historical damage left by their predecessors. These mines are then abandoned, opening up opportunities for illegal mining to take place and leaving health and safety threats to communities.

“Neither the law, nor the accounting standards governing company disclosures, ensure the necessary transparency and accountability about financial provision for environmental rehabilitation. It is therefore impossible for shareholders or taxpayers to hold companies or regulators to account,” stated the Centre for Environmental Rights (CER) and Intellidex in a 2018 report, *Full Disclosure: The truth about mining rehabilitation in South Africa*.

Field said state failure to implement laws that require long-term mine closure planning and finalise amendments to the financial provisioning regulations “leaves companies in a prevailing atmosphere of uncertainty.

“There is a failure to arrest the ‘chain’ of buck-passing for closure liabilities that proceeds through legal means such as major asset sales, business rescue and company winding-up. There is also a lack of any legal mechanism to allow for partial closure, as is recognised elsewhere in the world.” Field said instead of only focusing on punitive and administrative measures, the DMRE should be examining creative incentive schemes that will allow mining companies to transition or to facilitate the transition to other economic activities in mined areas.

The strategy document will inform and provide guidelines for a policy on mine closures. Solomon said there will likely be a two-stage process of looking at the comments and feedback on the draft strategy, followed by a second round of more focused consultations.

“From this there will be a more focused round of consultation with the relevant stakeholders and once that draft has been signed off by the minister it will go into a policy document and be gazetted,” he said.





5. Mr Thomas Wilson and Ms Melanie Naidoo Vermaak: Harmony Gold Mining Company and presentation on the abovementioned items well as the Green Drop Certification Programme on the 13<sup>th</sup> of July, 2021 and the 16<sup>th</sup> of August, 2021.
6. Meetings and engagements with Webber Wentzel, the Legal Resource Centre and Riverlea Community Mining Forum re the Mintails Group of Companies, Central Rand Gold and Amatshe Mining (Pty) Ltd.
7. Engagements with Mr Justice Maluleke of the DWS and others ('Siwelane Lilian (GAU)' <SiwelaneL@dws.gov.za>; 'Ackerman Pieter' <AckermanP@dws.gov.za>; 'Bila-Mupariwa Ntombizanele Mary' <Bila-MupariwaN@dws.gov.za>; etc.) regarding the rehabilitation of the Centurion Lake.
8. Ms Glaudin Kruger of Kruger & Associates re The Sustainable Built Environment conference 2022 (SBE 2022) and the STADIO School of Architecture and Spatial Design (SOAASD) – a series of perspectives on the past, present and future of sustainable built environments.
9. Prof Andreas Nidecker of IPPNW on the launch of „Nuclear Games“ <https://vimeo.com/577290188/6e54b87823>.
10. Gunter Wippel of uranium-network.org regarding [https://urldefense.com/v3/\\_https://www.researchgate.net/profile/Titus-Haakonde/publication/353920823\\_Uranium\\_exposure\\_and\\_health\\_risk\\_implications\\_A\\_preliminary\\_study\\_among\\_the\\_residents\\_living\\_around\\_uranium\\_mining\\_sites\\_in\\_the\\_Southern\\_Province\\_of\\_Zambia/links/611eb2b91ca20f6f8634360f/Uranium-exposure-and-health-risk-implications-A-preliminary-study-among-the-residents-living-around-uranium-mining-sites-in-the-Southern-Province-of-Zambia.pdf?](https://urldefense.com/v3/_https://www.researchgate.net/profile/Titus-Haakonde/publication/353920823_Uranium_exposure_and_health_risk_implications_A_preliminary_study_among_the_residents_living_around_uranium_mining_sites_in_the_Southern_Province_of_Zambia/links/611eb2b91ca20f6f8634360f/Uranium-exposure-and-health-risk-implications-A-preliminary-study-among-the-residents-living-around-uranium-mining-sites-in-the-Southern-Province-of-Zambia.pdf?)
11. Engagements with Jaco Grundlingh, VS Attorneys, Nkgadima Attorneys and parties in the PW Bower Mine matter and confirmation from the parties that: *“We agree that neither you nor the FSE will carry the legal costs for this matter”*.
12. Engagement with Mr Lucas Mitsapitso of *“All Blacks organisation do to the whites what they have done to you”* regarding the reputation and activities of the FSE.
13. Trevor Brough regarding AMD outflow from the West Rand AMD Treatment Plant.

### Publications

1. Final edit of chapter 14 of the book, titled “Community Engagement Research in South Africa”. The chapter is titled “Engagement with Mining-affected Communities: Lessons learnt – A Case Study within the West Rand Gold Fields”. The chapter documents the FSE’s engagements with South Deep Mine’s host communities and refers to the surveys with KPMG and Synergy Global. Permission was obtained from Gold Fields and Synergy Global for the use of their material. The book will be published by Van Schaik Publishers in November 2021.

### Research Assistance

1. Ian Robinson: Assistance with book on “The Evolution of the South African Mining Industry since 1980.”
2. Khuliso Ramaite, an honours student of the Witwatersrand University re research on mining rehabilitation.

3. Prof. Elize van Eeden regarding the proposed multi disciplinary research project for the Far West Rand in the 21st Century titled “Proactive Engagements, Initiatives and Activities for a sustainable Far West Rand in the 21st Century” and its alignment with Sibanye-Stillwater’s Bokomosa Ba Rona Initiative.
4. Hassen Lorgat of Benchmarks Foundation on the requirements for residential developments within the buffer zone of a TSF.
5. Prof. Djiby Thiam of the University of Cape Town (SusTral project - first phase).

*“Dear all,  
Good news.. the first phase of the proposal SusTal has been accepted. This gives us a good opportunity to build/strengthen our collaboration around water resources management in the Limpopo river basin...”*

### Interviews

1. Ms Jean Dunn – Gold Fields questionnaire.

### Site visitations

1. Danie Neumann was appointed by the FSE in the Mintails Group of Companies matter pursuant to the Order of the Court to submit and file a report to supplement the Notice pertaining to the nature and extent of the health hazard to the lives of the surrounding residents and the damage to the environment. The Legal Resource Centre (LRC) is the FSE’s attorneys on record. The costs for the report are carried by the LRC.

The FSE, Danie Neumann and colleague, the LRC and Stephan du Toit of Mogale City Local Municipality conducted a site inspection of Mintails’ operations on the 6<sup>th</sup> of June 2021. Sibanye Stillwater assisted with security during the FSE’s visit to Mintails’ gold treatment plants and offices, which have been completely plundered. The area is currently occupied by heavily armed illegal miners.

### Legal Matters

1. Judicial Review of the decision to approve Uthaka’s land use change application. CASE NO: 1344/20. The FSE is one of the Applicants in this matter.

### Comments on:

1. Sphanko Industrial Supply’s Mining Permit Application, EIA, EMPr and specialist reports.
2. Prospecting Application by Singo (Pty) Ltd on behalf of Legare Mining Services (Pty) Ltd for Chrome, Cobalt, Nickel, Gold and PGMS within all Portions of Farm Rondavelskraal 290 JP, Marico District.

*“...FSE’s comments on the Rondavelskraal prospecting application- I was very impressed and learnt so much from it! It is such an amazing example for us to try and aspire to!...”*  
Jane Visser, KWEF.

3. Amatshe Mining (Pty) Ltd) - Mining Right Application (GP 30/5/1/2/2 (140 MR) and transferral of entire share capital from West Wits Monarch to Amatshe Mining.
4. West Wits Mining Project – Integrated Waste And Water Management Plan In Support Of The Integrated Water Use Licence Application. DHSWS WATER USE NUMBER: WU17195.
5. Review of GSDF 2030 - Presentation for the Environment and Heritage component of the spatial analysis from Environment and Heritage Sector Workshop.

#### Assistance

1. The FSE facilitated engagements between Harmony Gold Mining Company and residents of Margaret Village which resulted in the domestic cleaning project of illegal dumping sites in Margaret Village.
2. Mr Timothy van der Berg regarding elevated arsenic levels in borehole water and Christmas Rock Sand Mining.
3. Riverlea Community and Webber Wentzel regarding Amatshe Mining (Pty) Ltd.
4. Mr Ngaki Mogopodi, Africa Mining House (consortium), Ms Ntatha Mosia and others re mining activities undertaken by Amatashe Mining (Pty) Ltd. on MR133 (Ptn 3 Witpoortjie 245 IQ)
5. Messrs Deon Johnson, Sid Sidersky, Dr Patrick Sithole and Ms Christie Briel (attorney) regarding EAPASA Malpractice Policy and the FSE’s complaint.
7. Mr Peter Kane-Berman of Beestepan Boerdery (Pty) Ltd regarding mine water pollution.
8. Mr Jacques Jordaan re illegal construction of a dam within the East London area.
9. Mr Jaco du Toit and Magaliesburg Community Forum regarding the applications by Cold Gold Trading (Pty) Ltd - GP30/5/1/1/2(10658) PR, GP30/5/1/1/2(10667) PR, GP30/5/1/1/2(10664) PR, GP30/5/1/1/2(10665) PR, GP30/5/1/1/2(10670) PR, GP30/5/1/1/2(10666) PR, GP30/5/1/1/2(10668)PR, GP30/5/1/1/2(10657)PR, GP30/5/1/1/2(10669)PR within the Magaliesburg Area.
10. MW Noko and others regarding the Prospecting Application by Singo (Pty) Ltd on behalf of Legare Mining Services (Pty) Ltd for Chrome, Cobalt, Nickel, Gold and PGMS within all Portions of Farm Rondavelskraal 290 JP, Marico District.
11. Mr Godfrey Makomene regarding West Wits Mining, Amatshe Mining (Pty) Ltd. and draft National Mine Closure Strategy and Artisanal and Small Scale Mining Policy.
12. Dawie Maree, ARMETT Environmental Sevices.

#### Financial Assistance

Residents of:

- Khuma



*“Good evening  
We really appreciate your help  
We had a very good and productive meeting with Harmony today  
I'm really ran out of words to thank you for your help  
Kind regards  
Pule Mokoteli”*

- Slovoville
- Kagiso
- Khutsong
- Soweto
- Toekomsrus
- Margaret Village Community

### Requests for Information

1. In terms of the provisions of the Promotion of Access to Information (PAIA) the FSE submitted a request to the National Nuclear Regulator on the 28<sup>th</sup> of August, 2021 for the written response by the NNR pursuant to the NNR’s oral “feedback on the NNR’s response to the FSE’s questions raised in the previous webinar” (Item 5 of the Agenda) of the NNR’s Webinar, which was held on the 24th of February 2021 via MS Teams.

The questions are inter alia:

- The status of the NNR’s compliance with the directives issued by the South African Human Rights Commission (SAHRC) and its findings pursuant to its ‘National Hearing on the Underlying Socio-Economic Challenges of Mining Affected Communities’ in 2016.
- What is the status of the NNR’s 2015 Position Paper on Remediation Criteria and Requirements and the NNR’s 2015 (PLN-SARA-15-012) Plan for Remediation of Contaminated Sites?
- What actions have the NNR taken to prohibit the use of dump and uraniferous waste material for building purposes?
- What actions have the NNR taken to address the risks identified in the NNR’s Report, dated 2007, titled ‘Radiological Impacts of the Mining Activities to the Public in the Wonderfonteinsspruit Catchment Area’, report TR-RRD-07-0006?
- What is the progress in conducting an epidemiological study in order to assess the health risks as a result of radioactivity of mining affected communities within the Witwatersrand gold fields?
- A report on the NNR’s investigation of the sale of potentially radioactive scrap metal from pipelines and the Mintails Group’s gold treatment plants to scrap metal dealers.
- In terms of the recommendations and findings of the NNR & DWAF’S Wonderfonteinsspruit Catchment Area: Action Plan of 2009, what actions has the NNR taken to protect the adjacent communities of Kagiso, the environment and properties from the exposure to the radiological risks.

- Tudor Shaft Informal Settlement: With reference to Case No 24611/12 in the matter between the FSE and others and the NNR and others, the status of the NNR's compliance with the Court Interdict.
  - In terms of the WRC Report No 1214/1/06 'An assessment of sources, pathways, mechanisms and risks of current and potential future pollution of water and sediments in gold-mining areas of the Wonderfonteinspruit catchment' (2004), what actions have the NNR taken to protect the public, property and the environment in this regard.
2. Requests to the Council of Geoscience for information on the status of the dysfunctional State Coordinating Technical Committee and the role of the Council of Geoscience in the monitoring and management of sinkholes within the Far West Rand gold fields, and requests to present at the Wonderfonteinspruit Catchment Management Forum on this matter.
  3. Request to submit the following questions to the Parliament and the Minister of Mineral Resources and Energy:
    - The DMRE's participation in Catchment Management Forums.
    - The DMRE's compliance with the directives issued by the SAHRC pursuant to its National Hearing on the Underlying Socio-Economic Challenges of Mining Affected Communities in South Africa and its 2016 Report.
    - The DMRE's compliance with the findings and recommendations of the Parliamentary Oversight Committee on Mineral Resources pursuant to its visit to Mintails' Operations and its Report to Parliament in 2018.
  4. Request to the SAHRC for a copy of its report on the its one day inquiry into the state of the rivers of the City of Tshwane.
  5. Requests to the National and Regional DMRE for officials of the DMRE to participate in Catchment Management Forum meetings.



FSE’s Comments and Issues of Concern	NNR’s Responses
<p>The status of the NNR’s compliance with the directives issued by the South African Human Rights Commission (SAHRC) and its findings pursuant to its ‘National Hearing on the Underlying Socio-Economic Challenges of Mining Affected Communities.’ The National Hearing was conducted in 2016. Please see attached Report.</p> <p>For ease of reference, I subjoin hereunder the relevant extracts from the SAHRC’s Report. Please advise what the progress is since 2016 regarding the actions proposed by the SAHRC. The actions are highlighted in bold typography. The emphasis is my own.</p> <p>Page 6</p> <p><i>Nuclear waste management</i></p> <p><i>The Commission finds that there is an immediate need to address the lack of clarity concerning the State’s roles and responsibilities in the remediation of contaminated mine sites, particularly where such sites have been abandoned. The Commission further finds that, in light of the potentially severe and long-lasting impacts of contaminated sites, <b>the State must prioritise funding for the National Nuclear Regulator (NNR) to undertake remediation activities.</b></i></p> <p>Page 49</p> <p><i>In terms of the Act, “nuclear damage” is narrowly defined as:</i></p> <p><i>a. injury to or the death or any sickness or disease of a person</i></p> <p><i>b. other damage, including any damage to or any loss of use of property or damage to the environment which arises out of, or results from, or is attributable to, the ionizing radiation associated with a nuclear installation, nuclear vessel or action. However, the NNR interprets nuclear damage mainly in relation to death, personal safety or injury of a person. <b>The NNR submitted that there is not sufficient guidance with regard to property or environmental damage and has accordingly proposed an amendment to the definition.</b></i></p> <p><i>The NNR is not mandated to undertake remediation of contaminated sites in terms of legislation, nor is it capacitated to do so. In practice, where the NNR becomes aware of elevated radiation levels, the relevant government department is informed and is expected to respond to the situation. However, the NNR has no authority to enforce the implementation of remediation activities and pointed to a lack of coordination amongst relevant stakeholders in addressing the situation relating to potential contamination of abandoned mines. <b>The NNR developed a proposed coordinative plan and attempted to engage relevant stakeholders, including the DMR, DEA, DWS and the Department of Cooperative Governance and Traditional Affairs, over a number of years. Nevertheless, the NNR does not appear to have received sufficient cooperation and the roles and responsibilities of stakeholders remain unclear.</b></i></p>	

*Section 36 of the Act enables the NNR Board to make recommendations to the Minister of Energy for the development of safety standards and regulatory practices. In this regard, the NNR has developed draft safety standards and regulations, and is in the process of establishing remediation criteria. These standards have been based on international standards in line with those issued by the International Commission of Radiation Protection, and will distinguish between existing exposure scenarios and planned exposure scenarios. **These draft standards have been submitted to the Department for further consideration, following which they will be released for public comment.***

*The NNR is also in the process of establishing a laboratory to analyse samples from sites where radiological contamination is expected. **It is also working on improving legislation, processes and procedures for addressing contaminated sites and the establishment of a database of all potentially contaminated sites. The NNR experiences huge capacity restraints and does not possess the funding, nor the human resources, necessary to conduct proper planning, coordination and monitoring activities and remediation plans can only be implemented when finances are available.***

*The Commission notes that stakeholders have voiced complaints regarding the lack of responsiveness and transparency in respect of data on radioactivity in certain areas. While it notes the sensitivity and complexity of the issues involved, it is important for communities to have access to information that can be used to protect or realise their rights. In this regard, the Commission notes Principle 10 of the Rio Declaration on Environment and Development, which states: **Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment** that is held by public authorities, including information on hazardous materials and activities in their communities.*

*The Commission finds that there is **an immediate need to address the lack of clarity concerning the State's roles and responsibilities in undertaking remediation of contaminated mine sites, particularly where such sites have been abandoned. The Commission further finds that, in light of the potentially severe and long-lasting impacts of contaminated sites, the State must prioritise remediation and funding for the [NNR].***

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***The NNR, together with key stakeholders, must develop appropriate mechanisms for communities and other interested parties to access information necessary to protect or exercise their rights.***

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***The DMR must ensure that all reports and documents, with the exception of strictly confidential information as determined by the DMR, are immediately made available to the public. The DMR must develop a dissemination strategy and should consider making this information available through the Open Data Portal initiative led by the Department***

*of Public Service and Administration which seeks to improve access to information, data and services offered by government.*

*The NNR, together with other relevant stakeholders, must develop mechanisms through which communities and other interested parties can access information, including information on potentially hazardous material and contamination, on a basis that informs the realisation of rights.*

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- *The Commission finds that there is an immediate need to address the lack of clarity concerning the State's roles and responsibilities in the remediation of contaminated mine sites, particularly where such sites have been abandoned. The Commission further finds that, in light of the potentially severe and long-lasting impacts of contaminated sites, the State must prioritise funding for the National Nuclear Regulator to undertake remediation activities. Recommendation*
- *The NNR, together with key stakeholders, must develop appropriate mechanisms for communities and other interested parties to access information necessary to protect or exercise rights.*

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*The NNR, together with other relevant stakeholders, must develop mechanisms through which communities and other interested parties can access information, including information on potentially hazardous material and contamination, on a basis that informs the realisation of rights.*

In terms of Tang, D & Watkins, A's 2011 Report titled 'Ecologies of Gold: The Past and Future Mining Landscapes of Johannesburg'; the Gauteng Department of Agriculture and Rural Development's 2011 'Feasibility Study on Reclamation of Mine Residue Areas for Development Purposes: Phase II Strategy and Implementation Plan', Technical report no. 788/06/01/2011, and Strachan, LKC, Ndengu, SN, Mafanya, T, Coetzee, H, Wade, PW, Msezane, N, Kwata, M & Mengistu, H's 2008 Draft 'Regional Gold Mining Closure Strategy for the Central Rand Goldfield', Council for Geosciences, report no. 2008-0174, it was found that:

- It is estimated that 25 percent of the population in Johannesburg and Ekurhuleni live in informal settlements, and approximately one quarter of them, 400,000 people, are in the mining belt. The settlements range from 100 to 40,000 people, with the largest communities in Ekurhuleni.
- The majority of mine residue areas (MRAs) is radioactive because the Witwatersrand gold-bearing ores contain almost ten times the amount of uranium than gold.
- There has also been a historical migration of generally elevated radioactive levels to the urban areas of Johannesburg central business district indicating the use of dump and waste material for building purposes as well as downstream plumes in wetlands areas (Strachan et al. 2008).

**What is the status of the NNR’s 2015 Position Paper on Remediation Criteria and Requirements and the NNR’s 2015 (PLN-SARA-15-012) Plan for Remediation of Contaminated Sites?**

**What actions have the NNR taken to prohibit the use of dump and uraniferous waste material for building purposes?**

In terms of the NNR’s Report, dated 2007, titled ‘Radiological Impacts of the Mining Activities to the Public in the Wonderfonteinspruit Catchment Area’, report TR-RRD-07-0006, it was found that:

- Strong dust emissions from TSFs occur during wind events. Due to the small particle size of the slimes, particulate matter can be transported over relatively long distances to agriculturally used land in the surroundings. The deposition of radioactively contaminated dust on leaves of vegetable and forage plants can cause radiation exposures exceeding those from the inhalation of contaminated dust substantially.
- The measured uranium content of many of the fluvial sediments, e.g. in the Wonderfonteinspruit within the West Rand gold fields, including those off mine properties and therefore outside the boundaries of licensed sites, exceeds the exclusion limit for regulation by the National Nuclear Regulator Act (NNRA) of 1999.
- The sediment pathway can cause radioactive contamination of livestock products resulting in effective doses of the public in some orders of magnitude above those resulting via the water pathway.

**What actions have been taken by the NNR to address these risks to the public?**

The International Agency for Research on Cancer (IARC), an intergovernmental agency forming part of the WHO of the United Nations identified gaps and opportunities pertaining to the health effects in populations living around the uraniferous gold mine tailings in South Africa and contracted the Federation for a Sustainable Environment (FSE) to collect 1,600 human hair samples from mining affected communities within the West Rand gold fields. The objective of the sampling was to study the environmental exposure to uranium and its decay products of the population living in close proximity to gold mine tailing dumps in and around Johannesburg. (Please see Schonfeld, SJ, Winde, F, Albrecht, C, Kielkowski, D, Liefferink, M, Patel, M, Sewram, V, Stoch, L, Whitaker, C, Schüz, J 2014, ‘Health effects in populations living around the uraniferous gold mine tailings in South Africa: gaps and opportunities for research’, International Agency for Research on Cancer, Lyon.)

I now refer to the second attached Report, dated 2019 and titled ‘Human exposure to uranium in South African gold mining areas using barber-based hair sampling’ by Frank Winde, Gerhard Geipel, Carolina Espina, and Joachim Schuz, which concluded:

*“U concentrations measured in the hair of the resident population of this South African gold mining area indicate elevated U levels that merit research on possible adverse health consequences.”*

**Please advise what the progress is in conducting an epidemiological study in order to assess the health risks of mining affected communities within the Witwatersrand gold fields.**

Mintails Group

The Parliamentary Portfolio Oversight Committee found during its oversight visit of the Mintails operations that:

- *“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”.*
- *“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.”*

(Ref. 22 November 2018: ANNOUNCEMENTS, TABLINGS AND COMMITTEE REPORTS NO 174—2018. No 174—2018, FIFTH SESSION, PARLIAMENT. Pages 39 – 52.)

Following the liquidation of Mintails Mining SA Proprietary Limited (MMSA) (Registration number 2007/004029/07) and Mintails Gold SA Proprietary Limited (MGSA) (Registration number 2007/003948/07) within the Mintails Group, the liquidators allowed the potentially radioactive 14 km pipeline and gold treatment plans to be demolished by unlawful entities and the scrap metal to be sold to scrap metal dealers. Please see subjoined photographs.



Potentially radioactive metal residue lies scattered in wetlands and adjacent to residential developments.



Failure to establish access control, fences and security, the liquidators created the opportunity for unlawful miners to strip the gold treatment plant within two months to the ground. The potential radioactive metal from the gold treatment plan was sold to local scrap dealers.

In this regard we refer to the attached Notice of Motion, the Founding Affidavit and the Order of Court in which the Minister of Energy is listed as one of the Respondents. We trust that the NNR has taken notice of the FSE's Application and the subsequent events following the liquidation.

**The FSE cordially invites the NNR to a joint site inspection of Mintails' Operations. In terms of the attached Court Order the FSE is allowed access to Mintails' Operations.**

In terms of the findings of the NNR & DWAF'S Wonderfonteinspruit Catchment Area: Action Plan of 2009 it was found:

*"Tudor Dam*

- *The Tudor dam is located in the south eastern portion of the headwaters of the WCA. The dam was mined by a company called Mintails to recover gold from the sediments, The soils and sediments at the site are potentially contaminated with radionuclides. The activity concentration of uranium 238 in the soils and sediments behind the dam are high, 8000- 10000 Bq/kg with radium 226 at 1700-2800 Bq/kg.*
- *Remediation of this site, from a radiological health perspective is required, in order to meet ALARA levels. It is recommended that recovery of material containing in excess of 0.5 Bq/g of any radionuclide be the target. It is suggested that the remediation be completed within the next year and that a complete rehabilitation plan from the responsible parties, with timelines and rehabilitation objectives, be submitted to the NNR, DME and DWAF,*

*for approval by the authorities, within 3 months. If the detailed remediation implementation plan provides evidence that achieving the 0.5 Bq/g clearance target is not feasible then an ALARA justification for a higher value must be carried out and approved by the regulator.*

- *If the Mine does not agree to do this within this time frame the regulator could require that all licensed areas be fenced and made off limits to the public until such time as the site is rehabilitated.*
- *It should be a requirement that this and any surface mining (dams, slimes piles, waste areas etc.) projects continue uninterrupted until the area is fully remediated and not left in a contaminated state, in which a potential public health hazard may exist. Currently it would appear that ALARA is not being achieved and the operations appear to be discontinued as soon as the profitable material has been removed.*
- *As a condition of its license to mine the old dam sediments the Mine must be required to mine and remediate as mining takes place. The site can in this way be converted from a mining site to a rehabilitated site.*
- *Once mining is completed, the site should be graded removing any hazards and re-vegetated. Access roads should be removed following remediation to prevent illegal dumping in the rehabilitated areas.*
- *There must be follow-up inspection by the NNR & the DWAF to confirm if cleanup is carried out as per the licence requirements.*
- *Independent sampling should also be conducted by the regulators since post-remedial sampling must ensure that residual soil levels of specified contaminants do not exceed remediation license levels and that the dose from all residual radionuclides will not exceed 1 mSv/a taking into account institutional control for the specified land use.*

#### *Stream Bottom 150m Downstream of Tudor Dam*

- *This site is a dry “wetland” below Tudor Dam.*
- *The channel contained well-sorted fine sediments, most likely, slimes deposited from the overflow from Tudor Dam.*
- *Uranium and radium activity concentrations were high here, at 2000 Bq/kg for uranium and 1200 Bq/kg for radium, as would be expected if they originated from the Tudor Dam.*
- *This site has contamination of radioactive material exceeding exclusion levels of 0.5 Bq/g per nuclide and will need to be remediated prior to the site being released from regulatory control.*
- *The site presents medium-high uranium and/or radium levels, exceeding national or international clearance standards. Remediation will be inexpensive and easy and should be done soon.*
- *Most of the sediments will be disturbed as a result of the poor mining practices at Tudor Dam and above. During mining the Mine was responsible to contain this material and should be required to clean up the material.*
- *It is recommended that this area be cleaned to release levels immediately following the rehabilitation of Tudor Dam site within the next 3 years or an ALARA justification provided as to why this should not be carried out.*
- *This site must be cleaned up as part of the current Tudor dam cleanup operation. The Regulators must ensure that this requirement is incorporated in the current clean-up plan of the Tudor Dam.”*

<p>It is adduced from the physical evidence that none of the abovementioned recommendations were implemented. Please advise what actions the NNR has taken to protect the adjacent communities of Kagiso, the environment and properties from the exposure to the above-mentioned radiological risks.</p>	
<p>Tudor Shaft Informal Settlement</p> <p>We refer to Case No 24611/12 in the matter between the FSE and others and the NNR and others.</p> <p><b>Please advise the status of the NNR’s compliance with the Court Interdict.</b></p> <p>Please note that the Steering Committee, which were established to address the Tudor Shaft Informal Settlement Matter has been in abeyance for more than 2 years.</p>	
<p>In terms of the WRC Report No 1214/1/06 ‘An assessment of sources, pathways, mechanisms and risks of current and potential future pollution of water and sediments in gold-mining areas of the Wonderfonteinspruit catchment’, WRC Report No 1214/1/06 by Wade, P., Winde, F., Coetzee, H. (2004) it was found:</p> <ul style="list-style-type: none"> <li>• <i>“Coetzee et al., 2003 report a uranium concentration in a surface-water body next to the northern watershed of the headwater region of the Wonderfonteinspruit (Robinson Lake) of 16 mg/l after underground mine water decanting into the Tweelopiespruit was pumped into the lake. This extreme concentration is believed to be the result of remobilisation of uranium from a contaminated sediment by acidic water.</i></li> <li>• <i>The combination of pH- and redox-driven reactions resulted in a measured uranium concentration of 16 mg/l, and resulted in the NNR declaring the lake a radiation area.”</i></li> </ul> <p><b>What actions have the NNR taken to protect the public, property and the environment in this regard. The Robinson Lake is at the time of writing unremediated, without fences or access control or warning signs and during rain events used by the children of neighbouring communities for recreational (swimming) purposes?</b></p>	
<p>In terms of the WRC Report No 1214/1/06 ‘An assessment of sources, pathways, mechanisms and risks of current and potential future pollution of water and sediments in gold-mining areas of the Wonderfonteinspruit catchment’, WRC Report No 1214/1/06 by Wade, P., Winde, F., Coetzee, H. (2004) it was found:</p> <ul style="list-style-type: none"> <li>• <i>“In downstream farm dams uranium concentrations are still significantly elevated; uranium concentrations relative to the local background, recorded at Klerkskraal Dam (&lt;1 mg/kg). In one specific dam (Andries Coetzee’s farm dam), concentrations of up to 900 mg/kg have been recorded in sediments.”</i></li> </ul> <p><b>What actions have the NNR taken to protect the public, property and the environment in this regard? At the time of writing the Andries Coetzee’s farm dam is un-remediated, unfenced with no access control or warning signs.</b></p>	
<p>Additional Questions and Comments:</p>	



**How many court actions and enforcements were instituted by the NNR for non-compliances with the NNR Act?**

It should be noted that according to the DMR's list there are no dumps or TSFs without owners except for the Davidsonville Dump. The Tudor Dump's ownership is uncertain.

Please provide us with a list of the attendees of the NNR's Webinar.