



MANDELA MINING PRECINCT
MINDS FOR MINES

Successful Application of Technology Centred Around People (SATCAP) Programme



Cordially invites you to attend

GREEN AND CLEAN ENERGY/ ENVIRONMENT IMMERSION STUDY TOUR AND WEBINAR @ MINTEK

Mintek, Randburg, Johannesburg (10 Sep 2024)



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



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MINERALS COUNCIL
SOUTH AFRICA



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Programme GREEN AND CLEAN ENERGY/ ENVIRONMENT IMMERSION STUDY TOUR AND WEBINAR @ MINTEK



Dear Valued Stakeholder

The Mandela Mining Precinct, through the Successful Application of Technologies Centred Around People (SATCAP) programme, invites you to participate in Study Tour and Webinar on Green and Clean Energy/ Environment Immersion Study Tour and Webinar, at Mintek, Randburg (Johannesburg).

The purpose of the Study Tour is to immerse SATCAP stakeholders, including Researchers, Organised Labour, Mandela Mining Precinct interns and SAMYA students into mining modernisation contexts – to create awareness, understanding, acceptance and for capacity building. It also gives the stakeholders a sense of what lies ahead in terms of mining modernisation.

The Study Tour and webinar is organised as follows:

Date: 10 September 2024

Time: 09h00 – 13h00

Venue: Mintek, 200 Malibongwe Drive, Strijdom Park, Randburg, Johannesburg

Meeting venue: The Auditorium.

Google Maps location: <https://t.ly/Eppe4>

Please note that delegates will need to organise own transport – Maps and directions will be provided.

NB: MMP indemnifies itself herewith for any harm, injury or loss resulting from participation in the SATCAP events.

Delegates are requested dress comfortably and closed, flat shoes.

Regards

Dr. Sherin Ramparsad (SATCAP Programme Manager)

PROGRAMME PURPOSE



The SATCAP programme aims to understand the effects, impacts, and challenges of people in **mining modernisation**. SATCAP lends support to the **environmental, social and governance (ESG) agenda**, and has a research focus towards the outcome of ‘sustainable relationships and shared value for all people in the modernising minerals sector’, with activities to drive its research agenda, which include Impact on jobs, skills, and people-centric modernisation.

It is important to note that the Just Energy transition (JET) is a necessary focus on the transition of the energy sector in South Africa and globally.

Furthermore, as the mining sector moves towards modernisation, it needs to take into account the opportunities or challenges that Just Transition presents in its operations and the impact on jobs, its workforce and on surrounding communities. The diversification and maintenance of post-mine closure or post-mine transition economic development can be created through the just energy transition through upstream and downstream development for local mine communities.

More importantly the JET also proposes reskilling initiatives for employees towards new employment opportunities in the clean energy sector. The adoption of new technologies in green / clean energy and environmental initiatives is critical as the mining industry is on its journey towards more resource efficient methods of production that do not negatively impact the environment.

Some of the technologies that are impacted in the Green energy/ Clean energy /Environment friendly space include water recycling, mineral beneficiation and recycling, etc.

The immersion study tour and webinar on green /clean energy and environment aims to advance these broader objectives by immersing stakeholders into this context to get a sense of what lies ahead and how these technologies are being implemented.

Our Values





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PROGRAMME



Agenda

Time	Description	Responsibility
09h00 – 09h10	Welcome	Mintek, SATCAP
09h10 – 09h20	SATCAP Video	SATCAP
09h20 – 09h30	Mintek Video	Mintek
09h30 – 10h10	Mintek Presentation from Business Units Water treatment processes in Biometallurgy and Hydrometallurgy	Mintek
10h10 – 10h40	Panel Discussion Q&A	Facilitator: SML4C, EUP Panel: Mintek and SATCAP Stakeholders
10h40 – 10h50	Mentimeter	RIIS
10h50 – 11h00	Summary and Reflection	SML4C, EUP
11h00 – 11h15	Refreshment break (for in person delegates)	
11h15 – 12h30	Study tour – visit to labs (for in person delegates)	Mintek team
12h30 – 13h00	Thanks, Close and Departure	RIIS

Our Values



Mintek is recognised as one of the world's leading technology organisations specialising in mineral processing, extractive metallurgy, and related fields. The organisation possesses a comprehensive range of capabilities and operations encompassing research, development, and innovation throughout the minerals value chain. This encompasses exploration, extraction, mineral processing, refining, production of metal-based products, process development, and post-mining support.

Mintek's Extractive Metallurgy Cluster comprises three divisions, each with a unique focus that enables clients to benefit from a range of solutions tailored to their specific needs, resulting in more efficient and sustainable operations.

The Hydrometallurgy Division utilises aqueous chemistry to extract metals from various sources, including ores, concentrates, and recycled materials. The Biometallurgy Division exploits the interactions between microorganisms and metal-bearing minerals to extract and recover metals from mineral ores, concentrates, and waste materials. This Division employs biotechnology to create a sustainable and eco-friendly approach to extractive metallurgy. The Pyrometallurgy Division specialises in high-temperature processes to extract and purify metals from ores and concentrates. Mintek's approach to metallurgy means that clients can benefit from a range of solutions tailored to their specific needs, resulting in more efficient and sustainable operations.

Contamination of water resources by mining activities has been a persistent concern for decades. Emerging from both abandoned and active mines, the contamination of water with harmful metals and sulphates, poses sustained threats to the environment and public health. To solve this issue, Mintek has developed the NICMeRTM membrane which maintains constant water quality and can also be used as a stand-alone system, making it extendable beyond the mining operations, ensuring even the most remote areas can benefit from purified water.

The low-fouling ultrafiltration membrane not only addresses the harmful metal concentrations inherent in mine impacted water but also extends its applications to the potential reuse of industrial and domestic wastewater. Moreover, this innovative technology purifies raw water to meet potable standards by removing particulates and pathogens, contributing to improved water quality.