

Final Programme

Day 1: Thursday 15 September 2022

Session 1- Inauguration

Session Chair: Dr. C. Stanley, *Namibia University of Science and Technology, Namibia*

07:00-08:00 **Registration Opens and Early Morning Refreshments/Zoom Platform Opens**

08:00-08:05 **Safety Briefing**
Venue Official

08:05-08:30 **Official Welcome**
Dr. Eroid Naomab, *Vice Chancellor, Namibia University of Science and Technology, Namibia*

08:30-08:50 **Welcome Address**
H. Musiyarira, *Conference Chairperson*

08:50-09:00 **SAIMM Presidential Address**
Z. Botha, *SAIMM President*

09:00-09:30 **Keynote Address: Sustainable mineral development and product stewardship in the Namibian Uranium industry - a catalyst for economic development and environmental sustainability**
G. Schneider, *Namibian Uranium Association, Namibia*

09:30-10:00 **Keynote Address: Large-scale mining small-scale mining relations**
G. Hilson, *University of Surrey, United Kingdom*

10:00-10:15 **Q&A**

10:15-10:30 **Morning Tea Break**

PARALLEL SESSION

Session 2A - Codes

Session Chair: Prof. B. Mapani, *Namibia University of Science and Technology, Namibia*

10:30-10:50 **CERA 4in1 – Certification of raw materials development and validation of a model for the risk assessment of mineral raw materials worldwide**
L. Förster¹, H. Mischo², and G. Apel³, ¹DMT GmbH & Co. KG, *Germany*, ²TU Bergakademie Freiberg, *Germany* and ³Bergische Universität Wuppertal, *Germany*

10:50-11:10 **Validation of the certification of raw materials (CERA 4in1) assessment template: A case study of the cobalt supply chain in the DRC**
F. Animah¹, G. Barakos², L. Förster³, and H. Mischo⁴, ¹Virginia Tech, *USA*, ²Curtin University, *Australia*, ³DMT GmbH & Co. KG, *Germany* and ⁴T.U. Bergakademie Freiberg, *Germany*

11:10-11:30 **Impact of sustainability reporting and ESG indicators on firm risk in the Australian mining industry**
I. Moopanar and S. Raval, *University of New South Wales, Australia*

11:30-11:50 **The African mineral and energy resources classification and management system: Status Quo**
A. Nguno¹, A.T. Salom², and M. Barton³
¹Geological Survey of Namibia, *Namibia*, ²University of Porto, *Portugal* and ³Mary Barton, *Odikwa Investments CC, Namibia*

11:50-12:10 **Application of the African Mineral and Energy Resources Classification and Management System (AMREC) to mineral and anthropogenic resources: Case studies from Namibia**
M. Barton¹, A.T. Salom², A. Nguno³, A. Mwetulundila³, J. Kamupingene³, and V. Nakafingo³, ¹Mary Barton, *Odikwa Investments CC, Namibia*, ²University of Porto, *Portugal* and ³Geological Survey of Namibia, *Namibia*

12:10-13:00 **Lunch Break**

Session 2B - Industrial

Session Chair: Prof. G. Dzinomwa, *Namibia University of Science and Technology, Namibia*

Application of matrix-stabilised backfill (GESAV II/SAVER-Project) in HAW repositories in former salt underground mines
L. Schaarschmidt, I. Paschke, D. Freyer, and H. Mischo
TU Bergakademie Freiberg, Germany

Addressing energy efficiency in quarries – First stage in the development of a holistic approach
F. Sanchez and P. Hartlieb, *Montanuniversität Leoben, Austria*

From sand to bottle: Assessment of silica sand deposits in Northern Namibia for glass-related value chains
F. Amupolo¹, E. Iiyambo¹, and A. Militzer², ¹Geological Survey of Namibia, *Namibia* and ²Federal Institute for Geosciences and Natural Resources (BGR), *Germany*

Geopolymer (green) concrete technology: State of the art, challenges/gaps and way forward
T. Falayi, G. Dzinomwa, and H. Musiyarira
Namibia University of Science and Technology, Namibia

Performance evaluation of different reagent regimes in flotation of a sulphide ore from Botswana
N. Poloko¹, G. Danha¹, G. Dzinomwa², I. Beas³, and M. Kabomo⁴, ¹Botswana International University of Science and Technology, *Botswana*, ²Namibia University of Science and Technology, *Namibia*, ³Botswana Institute for Technology Research and Innovation, *Botswana* and ⁴University of Botswana, *Botswana*

Lunch Break

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PARALLEL SESSION

Session 3A - ASM

Session Chair: Ms. A. Militzer, BGR, Namibia

13:00-13:20 **Evaluation of artisanal and small-scale mining conditions in Nigeria with respect to the sustainable development goals of the UN: Identification of key performance indicators**
T.M. Oke¹, G. Barakos², and H. Mischo¹
¹Technische Universität Bergakademie Freiberg, Germany, ²Curtin University, Australia

13:20-13:40 **Industrial vs artisanal mining: The effects on local labour in Liberia**
M. Graeser, Vienna University of Economics and Business, Vienna

13:40-14:00 **Responsible sourcing of coloured gemstones: The impact on artisanal and small-scale miners**
J.H. Linus, Ministry of Mines and Energy, Namibia

14:00-14:20 **Prediction of creditworthiness of a viable artisanal and small-scale mining operation**
O.D. Eniowo and L.D. Meyer
University of Pretoria, South Africa

14:20-14:40 **Afternoon Tea Break**

Session 4A - Environment

Session Chair: Mr. M. Quinger, BGR, Namibia

14:40-15:10 **Keynote Address: Leverage innovation - it leaves a positive legacy: Dundee Precious Metals Tsumeb Case**
Z. Kasete, Dundee Precious Metals, Namibia

15:10-15:20 **Q&A**

15:20-15:40 **Application of water filtration methods to minimise the environmental impact of slag dump's iron rich effluent discharge - a case study of Kansanshi copper smelter**
D.C. Kapembwa, Kansanshi Copper Smelter, Zambia

15:40-16:00 **Fluidic functional verification for closing structures and fluid supported sealing of the contact zone**
J. Bauermeister¹, O. Langefeld¹, T. Wilsnack², U. Glaubach², and N. Müller-Hoeppe³
¹Technical University of Clausthal, Germany
²Consultants for mining, fluid dynamics and waste management (IBeWa), Germany and
³Federal company for radioactive waste disposal (BGE Tec), Germany

16:00-16:20 **Improving mining's social and environmental performance: A key to 'sustainable mineral development'**
R.A. Hodge^{1,2}, ¹University of Queensland, Australia and ²Queen's University in Kingston, Canada

16:20-16:30 **Delegates Photo**

16:30-17:00 **Time at Leisure**

17:00-19:00 **Welcome Cocktail Function**
Dress Code: Smart Casual

Session 3B - Sustainability

Session Chair: Mr. P. Shava, Namibia University of Science and Technology, Namibia

Investigating strategies to achieve superior sustainable performance in the Namibian mining industry
T.E. Moongo^{1,2} and F.G. Bello³
¹Namibia University of Science and Technology, Namibia
²University of Namibia, Namibia and ³University of Pretoria, South Africa

Is the African mining industry prepared for the transition towards sustainable development?
M.G. Ncube, University of the Witwatersrand, South Africa

Sustainable extraction of multi-mineralised base metal deposits: A case study of a copper deposit in Namibia
T. Moongo¹, T. Nghipulile², G. Dzinomwa¹, K. Fotolela¹, and G. Danha³, ¹Namibia University of Science and Technology, Namibia, ²Mintek, South Africa and ³Botswana International University of Science and Technology, Botswana

Sustainable mining: From a grassroot perspective
V. Upindi, Trevali, Rosh Pinah Zinc Mine, Namibia

Afternoon Tea Break

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Day 2: Friday 16 September 2022

Session 5

Session Chair: Dr. G. Barakos, Curtin University, Australia

07:30-08:00 **Early Morning Refreshments/
Zoom Platform Opens**

08:00-08:30 **Keynote Address:**
N. Plint, The University of Queensland, Australia

08:30-08:40 **Q&A**

08:40-08:50 **Split to rooms**

PARALLEL SESSION

Session 6A - ASM

Session Chair: Dr. V. Katte, University of Namibia, Namibia

08:50-09:10 **Governance fragmentation in the Congolese
artisanal cobalt, 3T and gold sectors - an
analysis of implications for international
engagement and capacity development**
P. Schütte and S. Vetter, Federal Institute for
Geosciences and Natural Resources (BGR),
Denmark

Session 6B - Sustainability

Session Chair: Dr. S. Raval,
University of New South Wales, Australia

**Methane gas concentration prediction in underground
coal mines as a sustainable mining approach**
J. Diaz¹, Z. Agioutantis¹, D.T. Hristopoulos², and
S. Schafrik¹, ¹University of Kentucky, USA and ²Technical
University of Crete, Crete

09:10-09:30 **Rethinking artisanal mining: Nuances of
hegemony, dispossession and resistance
amongst rural artisanal mining communities**
N.M. Zondo, University of KwaZulu-Natal, South
Africa

**An investigation of the relationship between regional
sustainable development and depletion of surface coal
mines**
C. Roumpos¹, F. Pavloudakis², and Z. Agioutantis³
¹Public Power Corporation of Greece, Greece,
²University of Western Macedonia, Greece, and
³University of Kentucky, USA

09:30-09:50 **Interdependencies between formal and
informal networks in artisanal and small-scale
gold mining in Peru: The case for explosives**
L. Jaramillo-Urrego and N.M. Smith, Colorado
School of Mines, USA

**Towards sustainable business model innovation in
mining**
J. Kretschmann, S. Krause, and O. Drusche,
Technische Hochschule Georg Agricola, Germany

09:50-10:10 **Rethinking strategies to combat atrocity crimes
in developing states: A case of extractive
industry in Africa**
P. Masake, Namibia University of Science and
Technology, Namibia

10:10-10:30 **Morning Tea Break**

Morning Tea Break

Session 7A - SLO

Session Chair: Ms. K.G. Jegede, Namibia University of
Science and Technology, Namibia

10:30-10:50 **Unlocking opportunities: Local procurement
and effective engagement for exploration - A
key to a social licence to operate**
M. Ospina¹ and J.A. Fowler²
¹O Trade, Canada and ²J.A. Fowler & Associates,
Canada

Session 7B - Supply chains

Session Chair: Prof. G. A. Blengini, Politecnico di Torino, Italy

The economic potential of Namibian feldspar
A. Militzer¹, A. Muyongo², E. Iiyambo², E. Utoni²,
F. Amupolo², I. Mbidi², L. Ntema², S. Shipunda², and
Y. Kavetuna², ¹Federal Institute for Geosciences and
Natural Resources (BGR), Germany, and
²Geological Survey of Namibia, Namibia

10:50-11:10 **Obtaining a social licence to operate vs the social
licence to explore: A comparative analysis**
A. Wajid¹, Md A. Islam¹, G. Barakos², and
H. Mischo¹, ¹Technische Universität Bergakademie
Freiberg, Germany and ²Curtin University,
Australia

Preliminary assessment of graphite resources in Turkey
A. Özarslan¹, L. Krebbers², M. Bilen¹, R.M. Akmaz¹, and
B.G. Lottermoser², ¹Zonguldak Bülent Ecevit University,
Turkey and ²RWTH Aachen University, Germany

11:10-11:30 **Corporate social responsibility at African mines:
Developments, approaches and contestations**
G. Hilson and Y. Hu, University of Surrey, United
Kingdom

**Artisanal and small-scale gold supply chains in Latin
America and Africa: Insights from Peru and Kenya**
N.M. Smith, S. Duzgun, D. Soud, K. Seguin, G. Clough,
U.M. Saka, J. White, F. Aranoglu, and G. Martinez,
Colorado School of Mines, USA

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PARALLEL SESSION

Session 7A - SLO (continue)

11:30-11:50 **The role of gender and leadership legitimacy in securing a social licence for mining firms: A case of Namibia and South Africa**
F. Maingehama¹ and H. Musiyarira², ¹University of the Witwatersrand, South Africa and ²Namibia University of Science and Technology, Namibia

Session 7B - Supply chains (continue)

Actualising the growth at home strategy for coloured gemstones and associated value chains in Namibia: The triple helix approach
A. Vatuva¹, R. Shivor¹, C. Uahengo¹, H. Musiyarira², L. Kashungu³, and H. Klukowski⁴, ¹University of Namibia, ²Namibia University of Science and Technology, ³Ministry of Mines and Energy and ⁴Southern Gemstone Center, Namibia

11:50-12:10 **The role of intercultural differences and challenges faced in communicating rehabilitation of mine sites integration from Europe to Africa**
C. Rodolaki, TU Bergakademie Freiberg Alumni, Germany

The local content and value addition in the mining oil and gas sector in Mozambique: Context and resource governance
S. Mondlane, Eduardo Mondlane University, Mozambique

12:10-13:00 **Lunch Break**

Lunch Break

Session 8A - SLO

Session Chair: Prof. M. Hitch, Curtin University, Australia

13:00-13:20 **The impact of the abandoned and unrehabilitated open pit mines in Namibia: A sociological perspective**
P. Masake and H. Musiyarira
Namibia University of Science and Technology, Namibia

Session 8B - Green Source

Session Chair: Dr. A. Vatuva, University of Namibia, Namibia

Impact of market prices of carbon dioxide -within planetary boundaries - on the extractive industry
A.M. Gómez Cuartas, EAFIT, Columbia

13:20-13:40 **Exploring the issues in mine closure planning: A holistic review of socio-technological and environmental approaches in mine closure and relinquishment**
A. Lee Zhi Yi, G. Corder, and A. Littleboy
¹The University of Queensland, Australia

Namibia - Its potential role in the development and application of green hydrogen
T. Falayi, G. Dzinomwa, and H. Musiyarira, Namibia University of Science and Technology, Namibia

13:40-14:00 **Socio economic impacts of mine closure in Namibia**
M. Pillalamarry and H. Musiyarira
Namibia University of Science and Technology, Namibia

14:00-14:20 **Afternoon Break**

Afternoon Break

Session 9

Session Chair: Prof. H. Musiyarira, Namibia University of Science and Technology, Namibia

14:20-14:50 **Keynote Address: Sustainable Growth Trajectory of the Navachab Gold Mine**
G. Botshiwe, MD, QKR Navachab Gold Mine

Panel Discussion: Exploring mining's silent S in ESG

Session Sponsored by AfriTin Mining

14:50-15:50 Mining rightly receives significant attention for its impact on the environment. However, the social impact of mining operations, both for local communities and host countries is often overlooked and industry needs to get better at showcasing its positive social impact. Mining has a vital role to play in the achievement of the United Nations Sustainable Development Goals. First and most obviously mining the materials needed to drive decarbonization and deliver the objectives of the Paris agreement. Equally if not more importantly through the social value responsible mining provides, including taxes and revenues to government, construction of and contributions to the development of vital infrastructure, provision of jobs, developing people through training, development of local supply chains, and community investment initiatives

15:50-16:50 **Round Table - Facilitated by AfriTin Mining**

16:50-18:00 **Time at Leisure**

18:00 **Buses leave from Hotel Main Reception to the Dinner Venue**
Dress Code: Smart Casual/Traditional Attire

Final Programme

Day 3: Saturday 17 September 2022

Session 10 - CRM and Green Deal

Session Chair: Prof. Z. Agioutantis, *University of Kentucky, USA*

08:00-08:30 **Early Morning Refreshments/
Zoom Platform Opens**

08:30-09:00

**Keynote Address: We want electric cars
but no mines**

K. Komnitsas, *Technical University of Crete, Greece*

09:00-09:10

Q&A

09:10-09:30 **Responsible sourcing for energy transitions -
reflection on the issue of justice in academic
discourse**

M.T. Kügerl¹, M. Hitch², and K. Gugerell³

¹Montanuniversität Leoben, Austria,

²Curtin University, Australia and ³University of
Natural Resources and Life Sciences Vienna,
Vienna

09:30-09:50 **Lithium outlook to 2030 - A global perspective**

M. Schmidt, *German Mineral Resources Agency
(DERA) at Federal Institute for Geosciences and
Natural Resources (BGR), Germany*

09:50-10:10 **An analysis of critical components for the
formulation of small-scale-mining policy in
Botswana**

M. Masialeli and B.I. Matshediso, *Botswana
University of Science and Technology, Botswana*

10:10-10:30 **Green Deal: A balancing act between climate
neutrality and security of supply and how Africa
can benefit from it**

R. Stiftner, *EUMICON EUROMINES, Austria*

10:30-10:50 **Morning Tea Break**

Session 11 - Digitalization

Session Chair: Dr. G. Barakos, *Curtin University, Australia*

10:50-11:10 **Nanosatellite technology: An enabler of
sustainable mining in Namibia**

S. Francis, *Namibia University of Science and
Technology, Namibia*

11:10-11:30 **Decentralised data acquisition communication
system for underground operations**

T. Krichle and H. Mischo, *TU Bergakademie
Freiberg, Germany*

11:30-11:50 **Closure from Chair - When is the next SDIMI**

11:50-13:00 **Lunch Break
(End of Technical Programme)**

13:00-14:00 **Time at Leisure**

14:00 **Depart to Swakopmund
Delegates to meet at the hotel main reception
for departure**