ISSUE #
2021 / 02
MONTHLY NEWSLETTER
ISSN: 2708-9460

MADI AFRICAN TIMES

The Minerals Africa Development Institution (MADI) Limited is a social enterprise registered in Uganda as a company limited by guarantee with an aim of supporting African countries in sustainable mineral resources development. MADI de-risks the African minerals sector to ensure there are mutual social and economic benefits accruing equitably to all key stakeholders (public, private and communities) while protecting the environment.

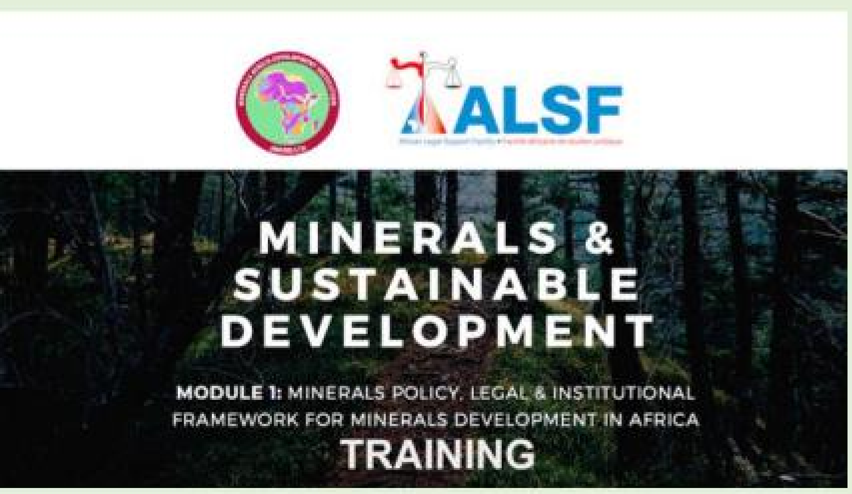
Tel: +256 41 237532 Email: info@ma-di.org www.ma-di.org

FEBRUARY 2021

MADI E-CONFERENCE:

NEW EU LAW-REGULATION ON CONFLICT MINERALS *SIGNIFICANCE AND IMPACT ON AFRICA'S MINERALS SECTOR, ASMs AND INTEGRATION PROCESSES*

February 18, 2021, 2 - 4 PM EAT
Pre-register:
https://ma-di.org/madi-e-conference-new-eu-regulations-on-conflict-minerals/



ANNOUNCING MADI E-TRAINING

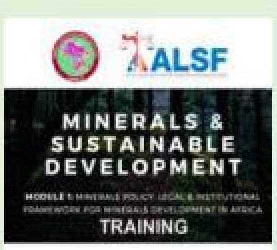
MINERALS & SUSTAINABLE DEVELOPMENT

MODULE 1: MINERALS POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK FOR MINERALS DEVELOPMENT IN AFRICA

Last week in March 2021 – TBC **Pre-register:**
https://ma-di.org/madi-training-registration-form/

IN THIS ISSUE AND MORE…

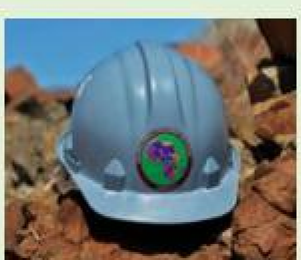
MADI CONFERENCE EU REGULATION CONFLICT MINERALS



ANNOUNCING MADI TRAINING – LAST WEEK OF MARCH

MEET MADI'S NEW STAFF MEMBERS

AMREC PILOT PROJECT IN UGANDA



EMP-HS TRAINING IN NAMIBIA BY MADI EXPERTS

CONTRIBUTION TO DEVELOPMENT FUND - PART 2

ROLE FOR THE AFRICAN DIASPORA IN MINING OPERATIONS

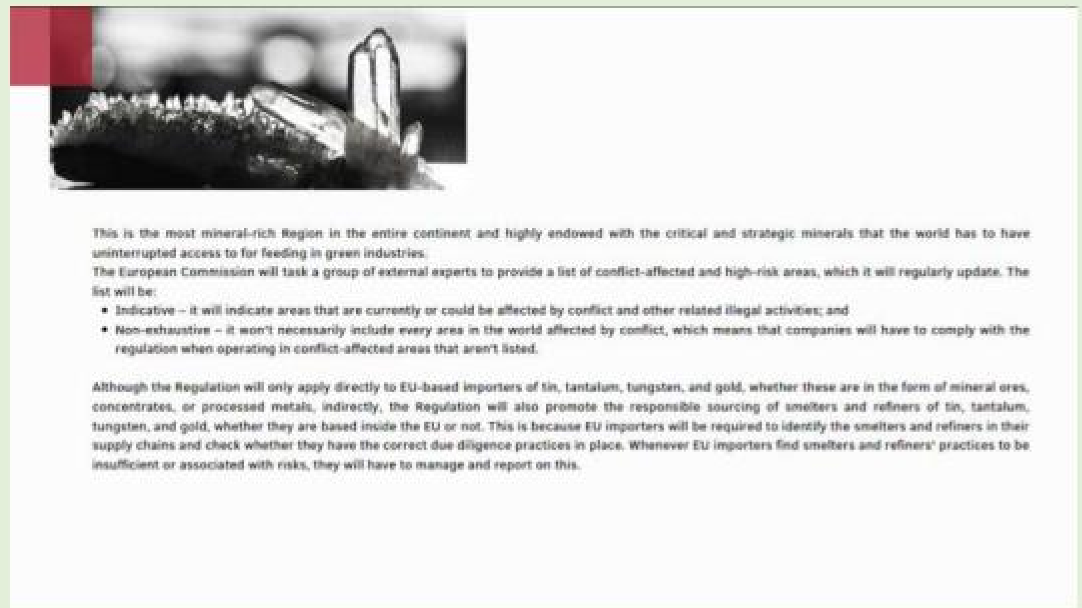
MADI NEWS

MADI E-CONFERENCE

NEW EU LAW-REGULATION ON CONFLICT MINERALS – SIGNIFICANCE AND IMPACT ON AFRICA'S MINERAL SECTOR, ASM AND INTEGRATION PROCESSES

February 18, 2021 from 2 to 4 PM EAT **Pre-Register:** https://ma-di.org/madi-e-conference-new-eu-regulations-on-conflict-minerals/

If you have difficulties reading from these slides please click here. Thank you.



CONTEXT

In this regards, Minerals Africa Development Institution MADI is organizing an E-Conference on the new regulation, and what the regulation will mean for producer countries (which are mainly African Countries and predominantly with Artisanal and Small Scale Mining (ASM) in these minerals) – particularly those affected by or at risk of conflict as well as those that are commercial hubs for these targeted minerals. The E-Conference will take place on February 18, 2021.

OBJECTIVES OF THE E-CONFERENCE

The objective of the e-conference is to establish how the Law/Regulation will affect the producers in Africa and focusing on Artisanal and Small Scale Miners. Given that the 4 targeted minerals are strategic and key minerals for Africa, it is imperative that Africa takes this law seriously and knows how to mitigate the risks associated.

- How is the regulation expected to impact the domestic/regional mining sector in Africa?
- Has the regulation been well communicated in Africa in influencing decision-makers?
- Given the significant impact the regulation will have on the African Minerals Sector especially the ASMs, what should Africa do?
- What does this mean for the implementation of AfCFTA?
- Overview of Africa Minerals Governance Framework (AMGF) and Private Sector Compact as Instruments that can lead to responsible Minerals Value and Supply Chains
- Introduction of the proposed African Precious Minerals and Metals Association (APMMA) that could lead to an African Regulation.

EXPECTED OUTCOMES

- The EU regulation is explained
- The possible impact of the Regulation on the domestic/regional mining sector in Africa is discussed
- The impact of the Regulation on the ASMs is clarified and recommendations for the ASMs are discussed and determined as well as how the recommendations could be enforced.
- How will the implementation of AfCTA be affected by the EU regulation and what needs to be done on different levels to enforce the implementation and results of EU Regulation implementation in Africa?
- Participants will understand Africa's Initiatives on Responsible Minerals Resources Development including AMGF, Private Sector Compact, and APMMA)

PARTICIPANTS

- The ASM and SSM Operators
- Policymakers and practitioners
- Academicians
- Private sector
- Civil Society
- African Think Tanks
- Artisanal and small scale miners All stakeholders of the Minerals resource sector

SPEAKERS

Speakers are yet to be confirmed but will be drawn from the following Institutions.

1. Minerals Africa Development Institution, MADI
2. Inter-Governmental Forum on Mining – IGF
3. International Conference of Great Lakes Region, ICGLR
4. The European Partnership for Responsible Minerals (EPRM)
5. Captains of Industry with experience in 3TG
6. Independent Experts

For more info

Please visit our website www.ma-di.org/
For details about the E-Conference,
please contact Mr. Raymond Kudzawu-D'Pherdd at raymondkd@ma-di.org

Please join us for this very important debate by pre-registering on our website at ma-di.org at:
https://ma-di.org/madi-e-conference-new-eu-regulations-on-conflict-minerals/

MINERALS & SUSTAINABLE DEVELOPMENT

MODULE 1: MINERALS POLICY, LEGAL & INSTITUTIONAL FRAMEWORK FOR MINERALS DEVELOPMENT IN AFRICA

TRAINING

ANNOUNCING MADI E-TRAINING

MINERALS & SUSTAINABLE DEVELOPMENT

MODULE 1: MINERALS POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK FOR MINERALS DEVELOPMENT IN AFRICA

Last week in March 2021 – TBC - Pre-register:
https://ma-di.org/madi-training-registration-form/

INFORMATION

DATE: Last week of March 2021
DURATION: 5 days (Two Day Sessions OF 2 Hours Each per day of a classroom of 30 and 30 mins of practical/exercises)
LANGUAGE: Bilingual (English-French)
LOCATION: Learning in Person
PROGRAMME DIRECTOR: Ms Nancy Awori

FEES: $250 (One time Promotional Fee). Each other course at $500.
READING MATERIAL: Relevant Policies, Laws, Regulations, & Guidelines ETC.

WEBSITE: https://ma-di.org/training-and-capacity-building/

1. RATIONALE FOR THE COURSE

Africa has for a long time been the subject of international and domestic interest due to its vast natural resources. However, for many different reasons, Africa has not benefited from its natural resources in terms of tangible development and improvement of standards of living for her people. The exploitation of these resources by foreign interest has remained a major cause of conflict in Africa, negatively impacting economic and social development. The exploitation of Africa's natural resources has also increased concerns in relation to the exercise of sovereignty by African states. Good governance, transparency, accountability, the quest for self-reliance, benefits to local communities, management of mineral revenue, and responsible environmental management. For Africa to change the status quo and benefit from its resources, there is a need to extensively review and improve the existing policies, laws, and regulatory frameworks to specifically take care of African interests and vision. Additionally, there is a need to clearly address emerging challenges and issues including value addition, local content, regional integration, and industrialization that were not envisaged at the time the current mineral/mining laws were being drafted necessitating for the laws to be revisited to take care of these new issues.

2. COURSE OBJECTIVES

The course aims at introducing participants to the minerals policy, legal and regulatory framework in Africa. This will include a review and analysis of Continental, Regional and National policies, laws, regulations, and institutions involved.
The course will also highlight the salient issues, trends, and emerging issues and challenges of the legal systems of mining countries in Africa to give a comparative perspective and practical experience from those countries. At the end of the course, the participants will have:

- Enhanced knowledge in existing legal and regulatory framework at the Continental, Regional and National level that govern the minerals sector in Africa
- Better understanding of the available economic instruments that can be utilized in the minerals sector and the pros and cons of the instruments.
- Enhanced knowledge in minerals policy, legal and regulatory framework, as well as the contractual environment surrounding the minerals industry, how mining rights are granted, the production process, the nature of mining rights, the regulatory and contractual model surrounding a mining project, social, environmental, and sustainability issues surrounding mining projects and dispute avoidance and resolution.

3. TARGET AUDIENCE

- Policymakers at all levels.
- Managers involved with planning, managing, and designing government policies in the mineral resources and natural resources sectors.
- Private sector
- Members of the legislature
- NGOsCSOs

4. COURSE REQUIREMENT

- A minimum, a Bachelor's Degree
- Two years' work experience in the Minerals sector

5. CERTIFICATE OF COMPLETION

A Certificate of Completion will be issued by MADI to all participants who successfully complete the course-related self-assessments presented for each Module.

LECTURE DESIGN - COURSE CONTENT

A.) Module 1. Lecture 1: Overview of the Minerals and Mining Sector in Africa

B). Geological & Mineral Information for broad-based, inclusive, & sustainable development

C). Module 1. Lecture 2: Continental, Regional & National Policies for Minerals Resource management & Exploitation in Africa

D). Module 1. Lecture 3: Continental, Regional & National Laws Relating to the Minerals Resource Management & Exploitation in Africa.

E). Module 1. Lecture 4: Fiscal Regime/ Economic Instruments Design/Fiscal Tools

F). Module 1. Lecture 5: Assessing the Effectiveness of the Continental, Regional and National Policies and Legislation for the Management of Minerals exploitation in Africa

G). Module 1. Lecture 5: International, Continental, Regional & National Policies & Laws Relating to Responsible Environmental Management & Biodiversity Conservation during Minerals exploitation

H). Module 1. Lecture 6: Mineral Contracts

I). Module 1. Lecture 7: Enhancing National/Local participation in the Minerals Sector

J). Module 1 Lecture 8 Reviews, Questions & Answers

Each Module Duration: 2 Hours

COURSE OFFERED IN PARTNERSHIP WITH THE AFRICAN LEGAL SUPPORT FACILITY (ALSF) ACADEMY

Contact Us

THE MINERALS AFRICA DEVELOPMENT INSTITUTION (MADI LIMITED

PHONE NUMBER
+256 41 237532

MAILING ADDRESS
Plot 23-27, Prime Plaza, Kampala Jinja Rd. - Kampala, Uganda

EMAIL ADDRESS
info@ma-di.org

More Details: https://ma-di.org/training-and-capacity-building/

IMPLEMENTATION OF AN AFRICAN MINERAL AND ENERGY RESOURCES CLASSIFICATION AND MANAGEMENT SYSTEM (AMREC) PILOT PROJECT IN UGANDA

African Mineral and Energy Resources Classification and Management System (AMREC) is a continental system for the management of Africa's mineral and energy resources. The AMREC is developed based on United Nations Framework Classification for Resources (UNFC) Principles, Generic Specifications, and Guidelines and is aligned to Africa Mining Vision (AMV) and the Sustainable Development Goals (SDGs). This project focuses mainly on studying some key factors that control resource progression as envisaged by AMREC. Minerals form a fundamental composition of resources for socio-economic transformation. Sufficient and consistent geological and geospatial information aids the sustainable exploitation of mineral resources. We understand that the prime purpose of this pilot project is to illuminate, within the African Mineral and Energy Resources Classification and Management System (AMREC) framework, on the uptake of existing data, and as well, assess the applicability and sustainability of the AMREC scheme in Uganda's mineral development.

In this project, Minerals Africa Development institute (MADI) is partnering with the Makerere Business School (MUBS), African Mineral and Energy Resource Classification and Management System (AMREC), and Heriot-Watt University, United Kingdom.

From left to right, Dr. Nkote Isaac (MUBS), Mr. Bernard Wabukala (MUBS), Ms. Nancy Awori MADI (CEO), Dr. Frank Mugyenyi MADI-Board Chairman, Ms. Vanessa Kisakye (MADI), Mr. Bob Felix Ocitti (AMREC)

Ms. Vanessa Kisakye, Mr. Bob Felix Ocitti, Dr. Nkote Issac, Mr. Bernard Wakabula, Dr. Frank Mugyenyi and Ms. Nancy Awori

MEET MADI'S NEW STAFF MEMBERS

Angela Mulenga

Head, Business Development, Programming & Marketing

Angela Mulenga is a citizen of Zambia and has a bachelor's degree from the university of Zambia sociology and information studies while her post graduate studies in International marketing was obtained in Germany. Angela's expertise is in business development, Trade policy, marketing and value chain development in Mining and Agriculture sectors.

At MADI, Angela is leading Business Development, Programming & Marketing Department.

Catherine Nankabirwa

Business Development Officer

Catherine is a Citizen of Uganda. She has a Bachelor's Degree in Business Administration and Finance from the Makerere University Business School in Uganda. She was also a Secretary of the Makerere University Finance Students Association. Catherine has various administrative and programming skills.

At MADI, Catherine is a Business Development Officer

Welcome Angela and Catherine to MADI!

NAMIBIA: SUCCESFUL TRAINING OF SMALL-SCALE MINERS ON THE IMPLEMENTATION OF EMP AND HSG BY MADI EXPERTS

Small-scale mining plays an important role in Namibia's economy. Employing between 5,000 and 7,000 people, the sector supplies a significant portion of Namibia's semi-precious stones. Despite its importance, the sector is fraught with unfavorable working conditions including illegal mining; health and safety risks; and inadequate personal protective equipment. A major deterrent to formalized small-scale mining activities is the requirements for an Environmental Management Plan (EMP). The cost of obtaining an EMP is usually too high for operators, they tend to carry on mining activities without one. The absence of an EMP however means that the operators cannot be issued with an Environmental Clearance Certificate (ECC) and thus cannot operate legally. To mitigate illegal operations, The Namibia's Ministry of Mines and Energy (MME) with assistance from the United Nations Development Programme (UNDP) facilitated the development of the Environmental Management Plan (EMP), National Health and Safety Guidelines (HSG) for Small-scale miners, at Farms Goboboseb and Tubussis in the Erongo region.

MADI experts were awarded a contract to train the small-scale miners at Goboboseb and Tubussis on the implementation of the Environmental Management Plan developed for their mining areas as well as train them on the use of the Health and Safety guidelines. The assignment entailed both the production of training material and the facilitation of training itself. Training was successfully carried out by MADI's Experts - Mr Nerson Tjelos and Mrs Mary Barton from 27 to 29 January 2020. Each site was allocated 1.5 days and a total of 72 small scale miners participated. On the first day, training was delivered in an interactive activity-style manner where the trainers guided the participants through the training manual using questions, activities, and images. The second day of the training was a half-day field visit which presented an opportunity to the participants to apply what they learned during the first day.

Photos from the Training Sites ©MADI 2021

CONTRIBUTION OF MINING COMPANIES TO THE LOCAL DEVELOPMENT FUND AND THE GUARANTEE OF STABILITY – PART 2

Continued From January 2020 Newsletter

I. The contribution of mining companies, under the development mining fund, submission to the guarantee of fiscal stability

Under Article 26 al. 2 of the Burkina Faso Mining Code, *"the local development mining fund is fed (...) by a contribution from mine licence holders and recipients of industrial quarrying licences to the tune of 1% of their monthly tax-free turnover or the value of products extracted during the* month." This same formulation is echoed in Article 84 al.1 of Mali's 2019 mining reform with a reduction in the contribution to 0.25%; In the same vein, the Senegalese mining code provides in provisions 115 al.3 of its 2016, a fund to support local development supported by holders of mining licenses, production sharing contracts or service contracts, in the operating phase, on the basis of a financial commitment of 0.5% of annual turnover excluding taxes. However, unlike the mining codes of Mali and Burkina Faso, the Senegalese Mining Code distinguishes between the exploitation and development phase. Thus, in the development phase, the annual amount of financial commitments under the mining fund are negotiated and specified in the agreements and protocols established between the holders of mining licenses, production sharing contracts or service contracts and the State (Art. 115 al. 4).

The resources of this local development mining fund are mainly aimed at initiating the economic and social development of local communities and populations impacted by mining; as a result of meeting public spending by the state. This objective, linked to the contribution of mining companies, fits perfectly into the scope of taxes, constituting levies that the State operates on a person's resources in order to support public expenditure. Moreover, without entering into the categorization or distinction between taxes widely discussed by the doctrine, the eminent **GASTON JEZE** considers the tax to be "a *monetary benefit required of persons by means of authority, definitively and without consideration, for the coverage of public charges".* In this regard, the contribution of mining companies based on a percentage of their turnover is of a social tax used to cover the expenditure of the central state allocated to local authorities. It therefore constitutes an additional burden on mining companies, in addition to the development obligations they are subject to in certain mining codes, notably that of Mali. As a result, it is eventually covered by the guarantee of fiscal stability enjoyed by the mining companies that have entered into their mining agreement or obtained their mining licenses prior to the new reforms coming into force. Article 11.2 of the mining agreement between the State of Senegal and Sabodala Gold Operations (SGO) S.A. (*07 April 2015*) states that "during the *period of the operating phase,* ***no unilateral changes can be made to the base, collection and pricing rules. SGO will not be subject to taxes, taxes, royalties, levies, contribution fees and any other charges that would occur after March 23, 2005, when the original mining agreement between the State and MDL Australia was signed***." In addition, SGO also enjoys general stability covering the legal, administrative, financial and fiscal conditions of the operation in accordance with Article 11.1 of that convention. In the same vein, Article 14.1 of the mining agreement concluded on 23 March 2012 and submitted to the 1991 mining code between the State of Mali and the Gounkoto S.A. mining company states that "**the *State undertakes to guarantee gounkoto S.A." the maintenance of the economic benefits and the tax and customs conditions provided for in this convention with the exception of EU taxes... Any changes that may be made in the future to Malian legislation and regulations, including the Mining Code, will not apply to Gounkoto S.A. without its prior written* consent**." The analysis of these various clauses automatically leads us to exclude the application of the new tax provisions relating to the development mining fund that took place after the signing of the aforementioned agreements, under the guarantee of stability granted by the States of Mali and Senegal to the mining companies of Gounkoto and Sabodala Gold Operations S.A. *The contract constituting the law of the parties,* no unilateral amendment with the purpose of a tax provision cannot be applied by the host state without the express consent of the mining companies. Failure to comply with this clause may result in penalties in arbitration tribunals. However, it is important to mention that this express - written consent can be obtained during prior discussions between the parties on draft tax, customs or economic provisions before the law comes into force, provided that the law does not substantially alter the content of the provisions.

Moreover, despite the submission of contributions from mining companies under the local development mining fund to the guarantee of tax stability, a legal limit is to be noted.

II. Contribution to the local development mining fund, a limit to the application of the tax stability clause

In addition to the common will of the parties to the mining agreement, which may constitute an alteration of the application of the tax stability clause in relation to the contribution under the mining development fund, mining codes of Burkina Faso and Mali provide for a principle of retroactivity of the provisions relating to the mining fund. Articles 26 al. 3 and 84 al. 2 of the mining codes of Burkina Faso and Mali, respectively, show that *"mine licence holders and beneficiaries of industrial quarrying permits valid when this code comes into force are subject to the obligation to contribute to the local development mining* fund."

This provision, absent from Senegalese mining legislation, has a public order character whose aim is to compensate, both to the economic deficit in mining areas, but also to the paradox associated with mining. Thus, in the presence of such a public policy provision which the will of the parties cannot rule out, mining companies are obliged to comply. Moreover, given its social nature, it is likely to be a major limitation on the application of the guarantee of fiscal stability. Especially since in practice, despite the existence of stability clauses in mining conventions, mining companies make any social levy legislated by the host state and after the acquisition of mining rights.

This retroactivity of the tax provisions, despite the stability clauses, is not new in extractive sector. Indeed, the mining reform in the Democratic Republic of Congo *(2018)* establishes this principle of retroactivity from new tax provisions to mining rights acquired before it came into force, under Article 342 bis (The *provisions of this Act are* of immediate application to all ***holders of valid mining rights*** at the date of its entry into *force. In the event of a legislative change within five years of the entry into force of this Code, holders of the mineral rights covered in the previous paragraph benefit from the guarantee of stability of the tax, customs and exchange regime of this Code).* This reflection not shared by **Me Emery MUKENDI WAFWANA** [1] states that "**immediate *application»*** *does not imply the removal of the initial legal stability guarantee ... and therefore the retroactive application of the new tax* provisions." However, despite the various legal interpretations of Article 342 bis, a major finding is to be made regarding the evolution of stability guarantees, as to the limitation of their duration and scope.

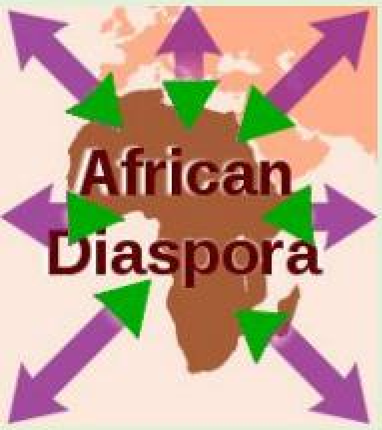
Finally, despite various informal reflections on the contribution of mining companies to the local development mining fund in the face of the guarantee of fiscal stability, it must be seen as an alternative or a fundamental contribution to the social responsibility actions of those companies. Indeed, this contribution allows not only to make the host state and local authorities accountable in terms of budget management, but also to mining companies in terms of monitoring and assessing the resources transferred in order to ensure their proper use. As such, it is essential that the various parties to the mining conventions compromise on its effective implementation.

AHAMADOU MOHAMED MAIGA (PHD)

MADI Global Affairs and Partnerships

African Diaspora in North America Unit

A CONTEMPORARY ROLE FOR THE AFRICAN DIASPORA IN MINING OPERATIONS ON THE CONTINENT



According to the World Bank, remittances by African Diaspora in 2019 amounted to US$ 48 billion. The President of the World Bank group David Malpass[2], states that remittances assist families to buy food, enjoy a modicum of medical care and other basic needs. The African Diaspora is indeed contributing to the various economies of their respective communities and therefore are equally capable in participating even in long term projects to better the livelihoods of their people.

Some of the ways they can do these are described below.

African Diaspora as Facilitators and Negotiators

African Diaspora can act as ***facilitators and negotiators*** for investment and developmental projects between their host country and country of origin.[3] David Leblang argues that migrant communities can facilitate cross-border investments between the investing country and the migrants country of origin.[4] This arrangement is encouraged because the migrant has knowledge of the investing country and country of origin with regards to culture, general laws and regulations, and is well versed in the local languages.[5] Migrants can help investors differentiate from false information and facts as they will have first-hand information on what's on the ground. [6]A migrant is a good source of information to the investor, in terms of the prevailing business culture, work ethics of the

[1] https://juriafrique.com/blog/2018/04/05/incidences-de-la-modification-de-la-garantie-legale-de-stabilite-sur-les-projets-miniers-existants-en-rdc/

[2] https://www.worldbank.org/en/news/press-release/2020/04/22/world-bank-predicts-sharpest-decline-of-remittances-in-recent-history#:~:text=Remittances%20to%20Sub-Saharan%20Africa,percent%20is%20expected%20in%202021.

[3] Plaza, S & Ratha, D Harnessing Diaspora Resources for Africa *World Bank* 11.

[4] Leblang, D Another Link in the Chain: Migrant Networks and International Investment *World Bank* 80.

[5] *Ibid.*

[6] *Ibid.*

local people and labour quality. African Diaspora gives foreign investors of their host countries key advantage, because they understand the political and economic landscape of their country of origin.

According to a report from Ernst& Young, the social license to operate, is the number one risk for mining companies to conduct operations in any country.[7] Ernst & Young states that companies who have not fully successfully been granted a social license to operate are met with challenges such as mass protests from employees and community resistance.[8] Since mining houses who have not gained the full acceptance of their employees and mining communities will not be able to operate fully, there is therefore a great opportunity presented to the African Diaspora to step in and negotiate on their behalf. This is because, the Africa Diaspora understands the dynamics of both the culture of the mining house country of origin and the countries were mining operations occur.

African Diaspora as Beneficial Transfers

African Diaspora can become ***"beneficial transfers"*** to their home countries through technology, innovation, entrepreneurship and managerial skills.[9] It is usually the case that the host country is often advanced in terms of development with more sophisticated and effective systems which increase productivity and ensure growth. Work experience gained overseas births new ideas and new skills.[10] These new skills and ideas can help solve the communities' problems such as lack of clean water, shortage of energy and little to no infrastructure. Africa Diaspora can bring about mechanization in the mining industry using advanced technology to produce a greater output of minerals. African Diaspora can drive for beneficiation processes through knowledge and skills transfer. London-based African Foundation for Development was formed to help African governments device strategies to engage African Diaspora to mobilize resources such as skills transfer, that could help develop the country's private sector.[11] This is important for value addition rather as opposed to the insidious practice of continuously exporting raw materials which invariable reduce profit margins.

African Diaspora can fund development initiatives

African Diaspora can ***fund development initiatives.***[12] Diaspora associations mobilise funds together with a Non-governmental organization such as *ActionAid*. This arrangement was successfully administered by African Diaspora in Denmark. This funding model can be incorporated in entrepreneurship ventures. The African Diaspora is expected to have a contact i.e an NGO in the receiving country.[13] There are three ways that Diaspora can fund mining ventures in their home countries. Firstly, by shipping equipment, in our context mining equipment would be of benefit to run operations, second hand equipment can suffice for usage. Another way to fund is by mobilising funds through collection of money from colleague-migrants to finance specific projects,[14] in this context for mining operations. Lastly, is through running informational and educational campaigns. Mining communities are bedeviled with a plethora of social vices or ills, therefore campaigns on alcohol and drug abuse and crime prevention will be of benefit to such communities. Training of artisanal miners to carry out operations that are not only sustainable but profitable through value addition could be a hidden panacea what for such initiative from the African Diaspora.

In conclusion, African Diaspora can contribute in changing the status quo in the mining sector by providing their resources and human capital, but governments have a critical role to play as well. Natural resource-rich African governments can take steps to make the economic environment suitable for African Diaspora to invest in, and Improve on the existing trust deficit between the country of origin and their citizenries. This could even be in the form of incentives made available for the African Diaspora that invest in their home countries, including the ease of doing business. It could also include the expedited processing of exploration and mining rights. Permits for social and environmental compliance must be obtained in a fair and transparent manner, tax holidays must be granted for African Diaspora. Such incentives can lure African Diaspora to engage in mining projects. The mining communities, African Diaspora and local government must act in good faith free from extortion, manipulation and resentment. A strong tripartite relationship must exist in a manner that all parties benefit fairly from the mining project. African Diaspora could be a contributing key to unlock mining ventures that are profitable and sustainable in Africa.

NYARADZO PRECIOUS CHAGWINYA
Intern and Research Officer, Industry Value Addition and Beneficiation, ASM, Women and Youth, Blue Economy, MADI

[7] Mitchell, P Top 10 Business Risks and Opportunities- 2020 *Ernst& Young* https://www.ey.com/en_gl/mining-metals/10-business-risks-facing-mining-and-metals
[8] *Ibid.*
[9] Gubert, F & Nordman, C.J Return Migration and Small Enterprise Development in the Maghreb *World Bank* 103.
[10] *Ibid.*
[11] *Ibid.*
[12] Trans, L and Vammen, I.M African Diaspora Associations in Denmark: A Study of Their Development Activities
and Potentials *World Bank 152.*
[13] *Ibid.*
[14] *Ibid.*

FROM OTHER SOURCES

WHY AFRICAN COUNTRIES MUST INVEST MORE IN EARTH SCIENCES

Michelle A. North, Lauren Hoyer, Warwick William Hastie, ***University of KwaZulu-Natal***

Published in: https://theconversation.com/amp/why-african-countries-must-invest-more-in-earth-sciences-153736

February 11, 2021 3.47pm SAST

The African continent contains some of the world's richest mineral resources. For instance, the Democratic Republic of Congo produces most of the world's cobalt; Rwanda, Ethiopia and Mozambique are major contributors to global tantalum output. These minerals are important constituents in modern electronics.

The continent also has the bulk of global reserves of platinum and palladium, metals which are critical in the rapidly evolving market for renewable energy and electric vehicles.

With such resources to hand, African researchers should be contributing significantly to the academic discipline of earth science – the physical and chemical makeup of the solid Earth, the oceans and atmosphere.

A robust earth science discipline has positive effects: the South African minerals industry employs almost 500,000 people directly and contributes about R350 billion to the country's GDP annually.

But exactly how much local knowledge and expertise in the earth sciences is developed by Africans, in Africa? That is what we set out to establish in a recent journal article. We surveyed 182,996 articles published in high-impact international earth science journals. These are prestigious journals that publish work by world leaders in research.

Our findings were alarming: 70% of research articles about some aspect of earth science in Africa do not contain a single African author. This compares very unfavourably to other regions. The five countries producing the most earth science research are the US, China, Australia, Japan and Canada, all of which also produce at least 60% of the research on their own countries.

We also found that the average contribution of African-authored earth science articles to the international literature has been 2.3% since 1973. This is extremely low; the US, a country with one-quarter of Africa's population, produces 47% of the literature.

It seems the production of earth science knowledge in Africa is simply not progressing, despite the world's interest in (and exploitation of) the continent's mineral wealth.

We argue that the reasons are preparedness, research expenditure and "parachute" science.

Preparedness

Nearly all countries around the world have a geological survey whose task is to examine and map basic geology, mineral resources and geohazards, and maintain databases related to geology and minerals.

However, two studies, by Geoscience Australia and the African Minerals Development Centre, have shown that most geological surveys in Africa lack capacity and geological information. Only six countries are able to undertake active geoscientific work: South Africa, Egypt, Ethiopia, Morocco, Namibia and Tanzania. These countries are within the top seven producers of earth science research in Africa. This suggests there is a link between a national survey's functionality and a country's research output. Although we have no information on why these countries have more active surveys, it might relate to their abundant mineral wealth.

Other work related to scientific publishing in the developing world has shown that relatively poor research output is linked to governments' perceptions that research is peripheral to meeting basic needs like food and health care. Research often needs laboratories, specialised equipment, substantial funding and technicians.

Many African scientists also tend to submit research articles to relatively low-impact, Africa-centric journals and are reluctant to collaborate on high-impact work. The main reason for this is overloading with teaching and service obligations, which has been documented at many African institutions.

There is also a well-documented "brain drain" of scientists from Africa. The International Organisation for Migration indicates that Africa has lost about 20,000 trained professionals each year since 1990, 30% of whom are academics.

Spending and investment

One of the most enlightening findings in our research is the link between spending on research, and research output and impact.

In Africa, research spending has increased from US$4 (1996) to US$42 (2017) per capita. The global average has increased from US$100 to US$300 per capita over the same period. The figures for high-income countries are significantly higher: about US$450 per capita in 1996, which more than doubled over the past 20 years to US$1,064. If these trends are plotted over trends in earth science research output, clear parallels emerge between research funding input and research output.

If there wasn't a lot of earth science research happening in African countries, this would explain the lower figures. But this is not the case. By examining individual articles, we found a great deal of earth science research happens in Africa. But much of it appears to be "parachute" science.

This is when researchers from developed nations work in Africa (for example, doing field work and collecting samples) without involving in-country scientists. African scientists may be excluded altogether, or left out when articles are being written for publication.

In the medical and health science fields, practitioners are becoming very aware of the negative impacts this can have. Some journals are becoming stricter in accepting this type of work, because it continues old colonial patterns in science and marginalises the prospects of in-country researchers.

Future directions

If African economies wish to build geoscience capacity, develop their own knowledge and use their own mineral resources, they must spend more on developing and retaining earth scientists and increasing research resources.

Researchers visiting and working in Africa ought to collaborate with their African counterparts, to develop skills and output that has impact. Funding bodies and universities in high-income countries should reevaluate their funding and reward policies to promote this.

Journals should avoid condoning the types of "parachute" science that marginalise researchers in developing countries through their publication of such articles.

Within Africa, it is critical that research institutes and universities reward meaningful research and international collaboration, retain high-quality staff and bolster investment.

OUT OF AFRICA

EXPERTS WARN OF BREWING SPACE MINING WAR AMONG US, CHINA AND RUSSIA

https://www.mining.com/experts-warn-of-brewing-space-mining-war-among-us-china-and-russia/

Cecilia Jamasmie | February 2, 2021 | 7:05 am Base Metals

Spearheaded by the US National Aeronautics and Space Administration (NASA), the Artemis Accords were signed in October by eight countries. China and Russia were left out. (*Image: MINING.COM | Pixabay.*)

A brewing war to set a mining base in space is likely to see China and Russia joining forces to keep the US increasing attempts to dominate extra-terrestrial commerce at bay, experts warn.

The Trump Administration took an active interest in space, announcing that America would return astronauts to the moon by 2024 and creating the Space Force as the newest branch of the US military.

It also proposed global legal framework for mining on the moon, called the Artemis Accords, encouraging citizens to mine the Earth's natural satellite and other celestial bodies with commercial purposes.

The directive classified outer space as a "legally and physically unique domain of human activity" instead of a "global commons," paving the way for mining the moon without any sort of international treaty.

Spearheaded by the US National Aeronautics and Space Administration (NASA), the Artemis Accords were signed in October by Australia, Canada, England, Japan, Luxembourg, Italy and the United Emirates.

"Unfortunately, the Trump Administration exacerbated a national security threat and risked the economic opportunity it hoped to secure in outer space by failing to engage Russia or China as potential partners," says Elya Taichman, former legislative director for then-Republican Michelle Lujan Grisham.

NASA is working on lunar bases that can travel on wheels, or even legs, increasing landing zone safety, provide equipment redundancy and improve the odds of making key discoveries.

"Instead, the Artemis Accords have driven China and Russia toward increased cooperation in space out of fear and necessity," he writes.

Russia's space agency Roscosmos was the first to speak up, likening the policy to colonialism: "There have already been examples in history when one country decided to start seizing territories in its interest — everyone remembers what came of it," Roscosmos' deputy general director for international cooperation, Sergey Saveliev, said at the time. China, which made history in 2019 by becoming the first country to land a probe on the far side of the Moon, chose a different approach. Since the Artemis Accords were first announced, Beijing has approached Russia to jointly build a lunar research base.

President Xi Jinping has also he made sure China planted its flag on the Moon, which happened in December 2020, more than 50 years after the US reached the lunar surface.

The next Wild West?

China has historically been excluded from the US-led international order in space. It is not a partner in the International Space Station (ISS) program, and a US legislative provision has limited NASA's ability to cooperate with it in space since 2011.

"America and China should cooperate in space," say policy experts Anne-Marie Slaughter and Emily Lawrence. "If the US managed to coordinate with the Soviet Union on space policy during the Cold War, it can find a way to cooperate with China now," they note.

Slaughter, a former director of policy planning in the US State Department from 2009 to 2011, believes that President Joe Biden's team should distance from Trump's accords and instead pursue a new course within the UN Committee on the Peaceful Uses of Outer Space.

"Biden can restore some of America's global legitimacy by working to establish a multilateral framework, negotiated with all relevant parties that protects areas of common interest while granting internationally accepted commercial opportunities," Slaughter and Lawrence wrote.

It will not be an easy task, they say, but a necessary one. "Without an international framework that includes all major spacefaring countries, the moon could become the next Wild West."

The race is on. It has been for a while. So much so that NASA has laid out a $28 billion plan to launch an unmanned mission around the moon in 2021, followed by a crewed moon flyby in 2023, then a lunar landing in 2024.

NASA plans to build a permanent moon-orbiting base called the Gateway, similar to the ISS. From there, the agency hopes to build a base on the lunar surface, where it can mine the resources required to fly the first astronauts to Mars.

Russia has been pursuing plans in recent years to return to the moon, potentially travelling further into outer space. Roscosmos revealed in 2018 plans to establish a long-term base on the moon over the next two decades, while President Vladimir Putin has vowed to launch a mission to Mars "very soon."

NASA outlined in 2019 its long-term approach to lunar exploration, which includes setting up a "base camp" on the moon's south pole. (*Artist's rendition courtesy of NASA.*)

The US, Russia and China are not the first nor the only nations to jump on board the lunar mining train.

Luxembourg, one of the first countries to set its eyes on the possibility of mining celestial bodies, created in 2018 a Space Agency (LSA) to boost exploration and commercial utilization of resources from Near Earth Objects.

Unlike NASA, LSA does not carry out research or launches. Its purpose is to accelerate collaborations between economic project leaders of the space sector, investors and other partners.

The tiny European nation announced in November plans to create a European Space Resources Innovation Centre (ESRIC), in charge of laying the foundations for exploiting extra-terrestrial resources. Luxembourg is also supporting a program to begin extracting resources from the Moon by 2025.

The mission, in charge of the European Space Agency in partnership with ArianeGroup, plans to extract waste-free nuclear energy thought to be worth trillions of dollars.

Trillion-dollar market

Both China and India have also floated ideas about extracting Helium-3 from the Earth's natural satellite. Beijing has already landed on the moon twice in the 21st century, with more missions to follow.

In Canada, most initiatives have come from the private sector. One of the most touted was Northern Ontario-based Deltion Innovations partnership with Moon Express, the first American private space exploration firm to have been granted government permission to travel beyond Earth's orbit.

Space ventures in the works include plans to mine asteroids, track space debris, build the first human settlement on Mars, and billionaire Elon Musk's own plan for an unmanned mission to the red planet.

Geologists, as well as emerging companies, such as US-based Planetary Resources, a firm pioneering the space mining industry, believe asteroids are packed with iron ore, nickel and precious metals at much higher concentrations than those found on Earth, making up a market valued in the trillions.

On December 5, 2020, a metallic asteroid 140 miles wide and worth an estimated $10,000 quadrillion made its closest approach to our planet.

In This concept image, a resource prospector carrying a payload roves on the lunar surface. (*Image courtesy of NASA.*)

"With NASA and other companies investing in and developing nuclear power for use in space travel and colonization, the reality of mining asteroids is closer than ever before," says Bob Goldstein, CEO of US Nuclear Corp.

With proven successful fusion energy experiments under their belt, US Nuclear and Magneto-Inertial Fusion Technologies (MIFTI) believe they are only a few years away from building the world's first fusion power generator.

Fusion power releases up to four times as much energy as fission, and uses fuel that is lightweight, low-cost, safe, and sustainable. A spacecraft with fusion-powered propulsion systems could reach the asteroid belt in as little as seven months. According to Goldstein, it could be powerful enough to transport the asteroid to an earth orbit where it would be much more efficient to mine and transport these valuable resources to earth.

MADI AFRICAN TIMES is a monthly newsletter of the Minerals Africa Development Institution (MADI) Limited