

M I N E R A L S A R E  
**BORDERLESS**

MAGAZINE

Vol.1(October 2022)



**MADI**

Minerals Africa Development  
Institution

[www.madi.africa](http://www.madi.africa)



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Institution



**Africa  
MaVal**

PROJECT

# AFRICA MAVAL

MADI to implement an EU funded Project – EU-Africa  
Partnership on Raw Material (Minerals) Value chains



Supported by the European Union





## EDITORIAL

Dear reader,

Welcome to the first ever MADI **MINERALS ARE BORDERLESS Magazine**, a quarterly publication where we highlight our activities and core progress for the first half of every MADI year.

In this issue, we bring you insightful articles that define our vision for Africa's mineral resources sector and justify the work that we do at a continental and international level.

MADI, being a youth-centric enterprise also brings you some of the top essays from our just concluded MADI Calestous Juma Essay Competition. We have to invest in developing the young African mind to think of creative out-of-the-box solutions to the problems that have long challenged us in terms of our socio-economic development.

MADI is here to change the narrative for Africa. We are pleased to have you join us on this journey.

Happy Reading!



**Charlotte Kwitonda**  
Communications, MADI





## Message from the Executive Director

### Dr. Frank Dixon Mugenyi

Distinguished readers, Board members, founding members, Advisors and subscribers, I welcome you to this new edition of MADI Bi-Annual magazine. MADI is an innovative African Think-Tank and a social enterprise that came into the space within the minerals sector to fill the gap that exists, and which has hindered African countries and people from benefiting from their vast mineral resources—the lack of independent, home-grown African solutions to African challenges.

Africa is endowed with resources, both natural and human. Africa is the biggest continent in the entire world by land mass. It covers The African continent has a land area of 30.37 million sq km (11.7 million sq mi) — enough to fit in the U.S., United Kingdom, China, India, Japan, Mexico, Bangladesh, New Zealand, Peru, Papua New Guinea, Nepal and many European Nations, including France, Spain, Sweden, Germany, Norway, Italy, and Greece combined. which is itself home of 55 countries and 1.3 billion people (as of 2022). Collectively, the countries that fit in Africa have a population of more than 3 billion people and a combined GDP of over \$54 Trillion compared to Africa's 1.3 billion people with a total GDP of \$3 trillion.

All these countries are industrialised and have large manufacturing sectors compared to Africa which exports its resources raw and depend on aid. Africa exports jobs by exporting unprocessed raw commodities while its 80% of her population is below 40 years of age and with highest unemployment rates.

There is no poverty of ideas about what Africa needs. Since the inception of the Organisation of the African Unity (OAU) in 1963, which was created to fight against all injustices of colonialism, Africa managed to get rid of political colonialism and apartheid but we are still to achieve economic independence. The Lagos Plan of Action (officially the Lagos Plan of Action for the Economic Development of Africa, 1980–2000) was an Organisation of African Unity-backed plan to increase Africa's self-sufficiency.

The plan aimed to minimize Africa's links with Western countries by maximizing Africa's own resources. In this regard, below I outline structure of the Lagos Plan of Action in only a few key sectors, Food and Agriculture, Industry, Natural Resources, Science and Technology, Environment and Development, Energy and Women and development to show you that African leaders had the best recipe for African development even to the current global standards. What happened? To answer this — is why Minerals Africa Development Institutions (MADI) was established.

### Food and Agriculture

The Lagos Plan of Action acknowledged the dismal state of Africa's food production and consumption. The Plan also highlighted a main cause of the problem with Africa's food production to be the lack of proper attention and resources to rural life. The Plan stressed that "the development of agriculture should not be considered in isolation but integrated within the economic and social development process" The Plan felt the need to integrate the youth into agriculture and shift the urbanization trend by introducing policy changes to make rural life more lucrative was an important part of agricultural development in Africa.

The Plan proposed that, from 1980 to 1985, Africa focus on establishing the "foundation of self-sufficiency" and the "immediate improvement in the food situation." The Plan also highlighted high priority issues such as reducing food waste, increasing food security, and increasing and diversifying the food supply while proposing urgent measures for all.



The Lagos Plan of Action called for "significant progress" to be made towards achieving a "50% reduction in post-harvest food losses." Some of the recommended actions to achieve this included educating the public of food waste reduction through mass media campaigns, building appropriate facilities for food storage and transport, and creation of national policies for food loss reduction. To increase food security, the LPA aimed to set up national food reserves at 10% of the total population for all member states. The LPA also called for a "coherent national food security policy" with "concrete actions" for each member state.

The LPA recommended for the proper research to be done to improve food transportation and distribution throughout Africa. The main objective the plan called for was for measurable "improvements in food-crop production with a view to replacing a size-able proportion of the presently imported products"

## **Industry**

The LPA acknowledged that Africa was heading into the 1980-90 decade as the "least developed region in the world" as the effect of colonization and proclaimed the years 1980-1990 as the "Industrial Development Decade in Africa." Due to resource limitations faced by African states, the LPA encouraged "industrial co-operation" between Member States in order to strengthen industrialization in Africa. Member states felt they were owed a "massive and appropriate contribution" from developed countries for African development. The plan also called for an industrial base in each Member state for African social and economic development.

By the year 2000, the Lagos Plan aimed for Africa to have "2% of the world industrial production" and recognized the need for the creation of a national industrial structure to achieve that goal. The Plan also emphasized the importance for cooperation between industry sectors for success in the long term. From 1980–1990, the Plan aimed for Africa to have "1.4% of the world industrial production" while achieving self-sufficiency in food, building materials, clothing, and energy". In the short term, the Plan aimed to have "at least 1%

of the world industrial production" and start the foundational process for achieving self-reliance in the long run. The Plan called for research to be conducted to determine which industry sectors could be developed in the short term and to learn which industries required regional and national support for development.

## **Natural Resources**

The Lagos Plan of Action stated that the main problems confronting Africa in natural resource development included lack of information, lack of adequate capital, and excessive foreign dependence. The Plan states the strategies for natural resource development in the 1980s should assess natural resource endowment, integrate natural resource development, strengthen existing natural resources, and work in close integration with the international community. The Plan recommended that a Member States gain a thorough understanding of their existing natural resources, conduct research, and store collected data in a national data bank.

The rational development and utilization of Member state's natural resources as well as conservation of natural resources was recommended. The main objectives for mineral resource development concerned gaining a better understanding of Africa's mineral resources. The Plan called for the establishment of a National Water Committee by 1980, strengthening of existing sub-regional organizations, properly identify water supply and irrigation projects, and increased cooperation in the development of water resources. With regards to mapping and cartography, Member states should "provide means to establish and strengthen national surveying and mapping institutions" and place an important emphasis on the development of national surveying and mapping institutions". Science and Technology.

In regards to science and technology, the Lagos Plan of Action called for increased training, funding and research to be conducted in preparing trained human capital and raising the standard of living. The Lagos Plan of Action recognized that despite past efforts, Africa was in need of science and



technology development. The plan called for Member States to hold science and technology fairs on a regular basis to encourage the exchange of knowledge between African scientists. The Plan also called for a centralized "Centre for Science and Technology for Development" in each Member State to serve as the operational structure for development. The development of human resources trained in science and technology and the creation of a competitive research environment was deemed vital. The Plan identified priority areas for technological innovation in food and agriculture such as improving seeds, storage/processing techniques, irrigation technology and more. For the industrial sectors, the Plan identified priority areas for scientific and technological innovation such as the food and agro-industries, the building and construction industries, the metal, engineering, chemical and forest-based industries.

### **Environment and Development**

The Lagos Plan of Action identified environmental development as a "priority areas of environmental concern requiring immediate action" with action required regarding: (a.) Maintaining safe drinking-water supplies and environmental sanitation; (b.) Desertification and drought; (c.) Reforestation and soil degradation; (d.) Marine Pollution and conservation of marine resources; (e.) Human settlements; (f.) Mining; (g.) Air Pollution Control; (g.) Environmental education and training, legislation, and information. The Lagos Plan stressed the need for the creation of an environmental matters intergovernmental committee as well as the cooperation of Member States for the progression of Africa's environmental development.

### **Energy**

The Lagos Plan of Action declared the African energy situation to be disturbing and rising at a rate that should cause serious concern. With consumption of Energy increasing at a rate that causes concern for the continent's energy supplies, the lack of an African national energy policy in most African countries was a major problem. The Plan identified the need to diversify energy sources, the lack of

funding, limited manpower, and the lack of standardization in the energy sector. In the long term, the Plan recommended exploring fossil fuels, hydropower, nuclear power, and new and renewable energy sources.

### **Women and Development**

The Lagos Plan of Action called for the full integration of women into development planning. The plan stated that any actions made for the development of women's status in Africa so far have failed to be adequate. The Plan stressed the importance of integrating women into all sectors of development within Africa and not treating the process as separate from Africa's development as a whole.

The Plan aimed to give women the "right to higher education, technical education, and management skills" allowing women to "participate more fully in economic and political life". The plan called for the "reduction of domestic burden of rural women" and for "steps to be taken to include women in higher administrative and policy-making levels". For the years 1980–1985, the Plan chose specific sectors to focus on. These included organizational machineries, education and training, employment, communications and mass media, health, nutrition, and family life, research, data collection and analysis, and lastly legislative and administrative matters.

The Lagos Plan of Action was drafted in Lagos, Nigeria in April 1980, during a conference which included a variety of African leaders. The plan blamed Africa's economic crisis on the Structural Adjustment Programs of the World Bank and International Monetary Fund and the vulnerability of African economies to worldwide economic shocks, such as the 1973 oil crisis. It has been characterized as the collective response of African states to the growing reliance of Western economies on the ideology of neoliberalism, which was summed up perfectly in the World Bank's 1981 Berg report, which replaced the LPA as the guiding economic document for Africa in the 1980s.

The report claimed that development in Africa could be achieved by a decreased reliance on raw material extraction, industrialization, global



equality in trade relations and an increase in development aid from the international community. Africanist scholars noted the absence in the report of any blame on, or calls for reform of, domestic governments of Africa. This contrasts significantly with the Berg Report, which apportioned blame solely on the Africa leaders themselves, with the international community taking no responsibility for their part in Africa's demise.

The above is provided by the Wikipedia and it is the basis upon which MADI is build. We need to go back to the drawing boards to find out what happened if our Leaders and forefathers had this articulate vision for Africa. The answer lies in the Berg Report which was developed to counter the Lagos Plan of Action in order to maintain the status quo of Africa being supplier of raw materials for the developed and developing worlds at the cost of Africans.

We need to change this and we have to start with the current young generation to change their mindset so that we can re-write the narrative and change the course of history.

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And this works towards MADI's vision of attaining the UN Sustainable Development Goals and African Unions Agenda 2063.

## MADI & SDGS



MADI is one of a 16-member Consortium that will be involved in the implementation of the **AfricaMaVal project**. The 7.85 million Euro Project will be coordinated by BRGM the French Geological Survey.

## Objective

Secure access to **Critical Minerals** is key for the European ambition to deliver the Green Deal and to perform the energy and digital twin transition. The future demand for the Critical Minerals (Primary raw materials to green Industries) will continue to be largely met by importation. As EU needs to diversify its supply chain and engage strategic partnerships with resource-rich African countries covering extraction, processing, and refining of these minerals in Africa. Partnerships along the Regional and Global Critical Minerals Value Chains. In this framework, AfricaMaval Project aims to develop EU-Africa partnership ensuring responsible sourcing of mineral resources for the EU Industries while granting Africa an opportunity to add value as wells ensuring sustainable (local – domestic) development in the best Environmental, Social and Governance (ESG) conditions and leading to a long-term business environment for EU and African Businesses (companies)

AfricaMaVal will focus on the minerals and metals presented in the Fourth list of Critical Raw Materials for the EU1 as well as on Copper (Cu), Nickel (Ni), Tin (Sn) and Manganese (Mn) that are particularly pertinent considering Africa's geological potential and their critical status in the digital and energy twin transitions. **In this proposal, an "Extended CRM" list (ECRM) will be used (See Annexes)**

The consortium created with partners covering both Africa and Europe, is based on experienced organisations and networks deeply anchored and involved in the minerals sector and a specific expertise and knowledge of the African culture, organisations, difficulties (challenges) and resources. The minerals, financial, environmental, social, institutional and economical aspects will be studied along all the value chains, including the Artisanal Small Scale Mining (ASSM) activities, to the project completion to reach its operational targets;

- Building an EU and Africa business networking on the whole ECRM value chains.
- Developing a strategy on the integration of identified and emerging EU and African raw materials value chains for the energy and digital transition.
- Assessing responsible investment opportunities

The AfricaMaVal Project will conduct ten case studies in African countries and an evaluation of 100 investment opportunities, and dissemination within Europe and Africa to promote responsible sourcing and will implement a sustainable organisation the completion of the project.





# OUR VISION FOR AFRICA



Minerals Africa Development Institution (MADI) Limited is a unique innovation, a social enterprise and an independent African think tank supporting African governments, private sectors and other stakeholders along the minerals value chains for sustainable mineral resources development in Africa.

MADI operates at the international forefront to promote the transformative role of mineral resources (liquid, solid and gas) towards the achievement of African economic independence (LPoA 1980) and (Abuja Treaty 1991 entered into force on 12 May 1994) - self-reliant, self-dependent – OAU-AU-AfCFTA.

MADI fully supports the African Mining Vision (AMV) statement that harnessing natural resources endowments in Africa is the key to Africa's development.

“Africa is the world's top producer of numerous mineral commodities and has the world's greatest resources of many more, but most of Africa still lacks systematic geological mapping which could bring to light a much greater resource base. Unfortunately, most of Africa's minerals are exported as ores, concentrates or metals, without significant value-addition. There is thus a large potential for mineral beneficiation. Africa also has significant known resources of fossil fuels (oil, gas and coal) and has large biomass and bio-fuels potential (ethanol, bio-diesel), especially in the tropics. In addition, it has massive hydro-electric potential (e.g. Inga 45GW, Congo River 200GW) and largely un-assessed geothermal potential along the Great African Rift Valley.”



We are a “youth-centric” undertaking dedicated to finding indigenous opportunities and solutions to the challenges that plague Africa’ s mineral resource sector. From our inaugural MADI Calestous Juma Essay Competition aimed at improving creative thinking among the youth to the Africa Youth for Development and Industry Symposium (AY4DI) as well as the MADI Youth Corps programme which have the shared vision of investing in the young African mind to endow it with the right tools to foster advancement across the board, we have a clear vision for the future we want for Africa in line with Agenda 2063 “The Future We Want”.

## OUR ACTIVITIES

### MADINI 2021 pictures



### MADI @ NBS inception



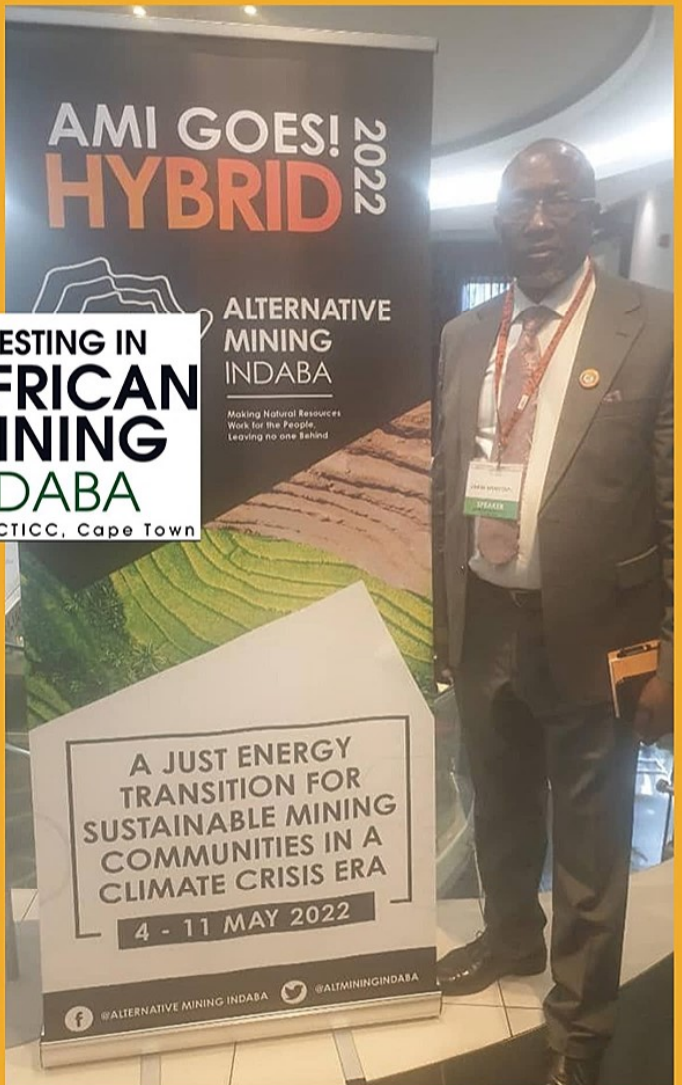
### MADI @ NEPAD launch



# MADI @ AFM



# MADI @ Indaba



# MADINI

## Convention

### THE MADINI E-CONVENTION 2021. DEMISTIFYING AFRICAN PARTICIPATION IN THE MINERALS VALUE CHAIN

**AUGUST 19 & 20, 2021**

#### **About the Madini Convention**

The Madini Convention is a grand annual gathering on mineral issues hosted by Minerals Africa development Institution (MADI). The Convention brings together over 10,000 delegates from 55 African Countries and beyond, with several sessions over 2 days.

#### **Why Madini?**

The only African Language recognized by the African Union besides English, French and Portuguese is Swahili. Madini is a Swahili word that translates into Minerals in English and Rasilimali za Madini means Mineral Resources.

Africa's resources do not have borders, but colonial demarcations were created in search of our resources and this has stayed as sovereign states hindering Africa's integration. Madini is a unifying factor to create a borderless Africa.

#### **Convener's profile**

Minerals Africa Development Institution (MADI) Limited is a first-of-its-kind unique innovation, a social enterprise, and an independent African think tank supporting African governments, private sectors, and other stakeholders along the minerals value chains for sustainable mineral resources development in Africa.

MADI operates at the international forefront to

promote the transformative role of mineral resources (solid, liquid and gas) towards the achievement of African inclusive growth and sustainable development as envisioned by Africa's Lagos Plan of Action, the Abuja Treaty, and the Agenda 2063 as well as the attainment of the Global Agenda 2030 or Sustainable Development Goals (SDGs).

MADI's main objective is to de-risk the African minerals sector to attract responsible investments both domestic and foreign, that will ensure that there are social and economic mutual benefits accruing equitably to all key stakeholders while taking environmental and climate change concerns into account. Due to the COVID-19 pandemic, we were unable to organize MADINI2022. MADINI Convention2023 will take place in August 2023. Watch this space!

#### **Format of the Convention**

The demystification of the African minerals sector requires a total mindset change. The Madini Convention 2021 is an e-Convention bringing together Africans from all walks of life, race, religions, and nationalities to learn and unlearn the concepts that have until now defined our view of African mineral resources.

We strongly believe in the power of example and that is why this year's convention will have a strong focus on showcasing who is doing what and where in the African minerals space. The attendants will get an opportunity to interact with the Africans braving the socio-political environment and thriving in this sector. This is intended to open African eyes to the immense opportunities on the other side of mindset.

The Madini Convention 2021 will also have a strong focus on discussing the contemporary opportunities in the minerals sector for Africans. A special focus shall be on the new opportunities as Africa unites to jumpstart the African Continental Free Trade Area. The AfCFTA, if leveraged upon presents an opportunity to greatly increase Africa's bargain in the minerals value chain.

Due to the prevalent Covid-19 Pandemic, the Madini Convention 2021 will be fully online.



## **Why Africans Must Stand in solidarity**

An estimated third of the world's known mineral-resource reserves are located in just a third of the explored parts of Africa. Nevertheless, Africa has not benefited substantially from its mineral wealth for the past 6 or so centuries. Even the remarkable extractives-driven economic growth of the last few decades across the continent failed to trickle down. Consequently, mineral-dependent African economies are in distress as they face severe fiscal and balance of payment deficits. Minerals refer to solid, liquid, and gas resources. The fragmentation of the African continent with a section still holding allegiance to the colonial masters and continuing to make huge economic sacrifices has been referred to by many scholars as a fundamental drawback to the unity and development of the continent. Intra-Continent Trade has been made difficult to impossible as a result.

This reality hitherto makes it necessary to put the deliberate effort in creating spaces for African-centred discussions that will result in Africans writing their own narrative. The Madini Convention is an innovation of this urgent necessity.

## **Focus Areas**

- Creating a domestic mineral resource business environment.
- Leveraging the African Continental Free Trade Area for regional value chains.
- Accelerating Industrial Development for Increased Mineral Value Addition and beneficiation in Africa – (Upstream and Downstream Beneficiation)
- Women and sustainable mineral development
- Youth and the Future of Africa's Minerals
- Informal Minerals Sector – (ASM)

Find resources on the focus areas, visit [www.madini.africa](http://www.madini.africa)

## **Participants**

- Policymakers and practitioners
- Academicians
- Private sector
- Civil Society
- Youth
- Small-Scale Miners (SSM)
- All stakeholders of the Minerals resource sector

## **Speakers**

There is a great line up of experienced Speakers and Panelists from the Sector along the minerals Value Chain.

**For more information, please visit the official event website: [www.madini.africa](http://www.madini.africa)**

**For details about the E-convention, contact;**

**Convener Okot Olaa; [okotolaa@madi.africa](mailto:okotolaa@madi.africa) /+256 (789) 042-430**





## Re-Igniting Africa's Industrialization

**IN OCTOBER 2019 EGYPT DISCOVERED THE VALLEY OF THE MONKEYS; AN ANCIENT INDUSTRIAL ZONE**

**By Frank Dixon Mugenyi**

### **Chapter 1**

#### **Introduction**

No nation in the entire world has developed without having the manufacturing sector contributing more to the GDP than any other sectors. In writing this paper, we need to revisit some theories that have transformed the economies of the developed world. One of these is the Linear stages of growth inspired by the Marshall Plan<sup>[1]</sup> and the other two are the Structuralism and Catching-up effect or hypothesis that was applied by European nations to rebuild their economies after the second world war. .

The linear stages of growth model of development places Industrialization at the heart of economic growth. It assumes that economic growth<sup>[2]</sup> can only be achieved by industrialization. Industrialisation in itself is defined as the period of social and economic change that transforms a society from an agrarian society into an industrial society and later to more of a service society. The process of industrialization involves an intensive and extensive re-organisation of an economy for the purpose of manufacturing. Manufacturing, itself, is the process of producing products for end use or for sale using labor (skilled mainly

and machines (technology), tools, physical, chemical or biological processing or formulation and is the essence of secondary and tertiary industry. Manufacturing refers to a range of human activity from handicraft to high tech but essentially it is applied to industrial innovation and design, in which raw materials are transformed into finished goods on a large scale. Such finished goods may be sold to other manufacturers as intermediary goods for the production of other more complex products, or distributed to end users and consumers. Ultimately, an economic growth is attained in which growth can be restricted by local institutions and social attitudes<sup>[3]</sup>, especially if these aspects influence the savings rate and investments. According to the linear stages of growth model, a massive injection of capital and state intervention (developmental state) leads to industrialization and economic development of any nation

For developing countries, we need to look at

#### **Rostow's stages of economic growth.**

Rostow's stages of economic growth model is the best example of the Linear Stages of growth model. It was published by American economist Walt Whitman Rostow<sup>[4]</sup> in 1960. The model postulates that economic growth occurs in five basic stages, of varying length:

**1. Traditional society** is primarily agriculturally based with some extractive industry such as mining. The workforce is mainly unskilled and the economy considered unproductive.

**2. Preconditions to takeoff** characterized by an increase in productivity brought by science, technology, and investment in infrastructure necessary for continued growth.

**3. Take-off** is an industrial revolution, tied directly to radical changes in methods of production, having their decisive consequences over a relatively short period of time. It is also called 'a great watershed in the life of modern societies

**4. The drive to maturity** is the period when a society has effectively applied the range of modern technology to the bulk of its resources. Now regularly growing economy **drives** to extend modern technology over the whole front of its economic activity.

**5. The drive to maturity** is defined as the period when a society has effectively applied the range of modern technology to the bulk of its resources. Now regularly growing economy **drives** to extend modern technology over the whole front of its economic activity.

### Structuralism

Structuralism is a development theory which focuses on structural transformation in which economies move from being factor driven economies (depending on export of raw commodities of agriculture and mining) to technological driven economies in which economies are dominated by technology, urbanization and manufacturing and later to innovation and sophistication driven economies that depend mainly on the services sector.

The unit of analysis is the transformation of a country's economy from, mainly, a subsistence agriculture to a modern, industrialized, urbanized manufacturing and service economy. Structuralism can be equated to Import Substitution Industrialization (ISI) and policy prescriptions include major economic statism<sup>[5]</sup> in the economy including protection of infant industries from being crowded out by imports of cheap products from developed markets and to fuel the industrial sector with stimulus packages for example. This is contrary to the current policy prescription in Africa that requires countries to provide deleterious incentives for attracting Foreign

Direct Investment that ultimately crowds out the countries' domestic industries. The so-called conducive environment for investment.

Developing economies pursue structuralism in order to achieve autarky growth (Lagos Plan of Action). This can only be reached by ending dependency on exports of primary commodities (agricultural and mining products) that are normally prone to external shocks caused by the fluctuation of terms of trade, and pursuing inward-oriented development by shielding the domestic economy from that of the developed economies.

However, this works for closed economies where trade with advanced economies is minimized through all kinds of trade barriers and an overvaluation of the domestic exchange rate; in this way the production of domestic substitutes of formerly imported industrial products is encouraged. The protection of the infant industry sector in which young industries initially do not have the requisites of competing with foreign competitors in an open free market such as productive capacity and technological capability, investment in R&D, innovation and incubation, economies of scale and experience and thus need to be protected until they are able to compete in an open free market.

„**The Prebisch–Singer hypothesis**<sup>[6]</sup>, a self-economic dependency model, states that over time the terms of trade for commodities deteriorate compared to those for manufactured goods, because the income elasticity of demand of manufactured goods is greater than that of primary products. The Prebisch-Singer thesis further argues that primary products have a low price elasticity of demand, so a decline in their prices tends to reduce revenue rather than increase it. If true, this would also support the ISI strategy. In this regard, Structuralists argue that the only way Third World countries can develop is through action by the state. “Third world countries have to push industrialization and have to reduce their dependency on trade with the First World, and trade among themselves”<sup>[7]</sup>.



Lately, we have seen that even developed countries including the United States and the United Kingdom are trying to be more nationalistic with closed economies than open to the wider market. This is an attempt to re-ignite their manufacturing sector and protect their domestic industries. Paul Krugman a renowned American economist recently has argued that "without a robust revival in the manufacturing sector, we can kiss our status as a great economic power goodbye"<sup>[8]</sup>.

### **Catching-up growth Hypothesis.**

The idea of convergence in economics (also sometimes known as the catch-up effect) is the hypothesis that poorer economies will tend to grow at faster rates than richer economies. As a result, all economies should eventually converge in terms of per capita income. Developing countries have the potential to grow at a faster rate than developed countries because diminishing returns (in particular, to capital) are not as strong as in capital-rich countries.

Furthermore, poorer countries can replicate the production methods, technologies, and institutions of developed countries.

Catch-up growth hypothesis is attributed to Moses Abramovitz<sup>[9]</sup> who explain that Western Europe's Golden Era of economic growth from 1948 to 1972 was due to Western Europe's ability to import and implement technology from the United States. He, therefore, argued that if a country is trying to be industrialized, it can only be better off; it will grow much faster than countries that are already industrialized. In the process, the country creates more jobs and more capital, which means the economy's total revenue will increase more and more quickly. The fast growing economies like Japan and the Asian tigers and now china are known to have applied the principles of the Catch-up hypothesis principles to accelerate their industrialization process.

The limitations to the catch-up effect that need to be considered if Re-igniting Africa's Industrialization has to benefit from the catch-up effect include: developing and leveraging what Abramovitz called "social capabilities."

These include the ability to absorb new technology, attract capital, and participate in global markets. This means that if technology is not freely traded, or is prohibitively expensive, then the catch-up effect won't occur<sup>[10]</sup>.

Can these three important economic models work for Africa? We very well know the post independence most African nations adopted the ISI model. They tried to protect their infant industries and pushed for manufacturing substitutes to the majority of products they were importing. As I have already stated above, these two development economics models for industrialization can only work for closed or semi-closed economies. We see emerging economies such as China, the Four Asian Tigers also applied these economic models.

In Africa some countries such as Ethiopia have been able to demonstrate high levels of economic growth by not opening up their economies and through protection of domestic industries. Ethiopia like China and other countries have applied selective liberalization policies. America is an integrated economy of 50 states and as such it was, using the very economic models, been able to such levels of development through manufacturing. There is a concerted efforts by the US Trump's Administration to bring back all manufacturing jobs that had been overtime lost to China which was strategic.

The only way African economies can apply these models is through integration and the best opportunity is provided by the African Continental Free Trade Area (AfCFTA). Trading under AfCFTA is scheduled to commence on 1st July 2020. The AfCFTA provides an opportunity to re-ignite Industrialisation through the development of Regional Value Chains where economies of scale, building productive capacities and technological capabilities, innovation and investment in R&D can be achieved.





## End notes

[1] The Marshall Plan was an American initiative passed in 1948 for foreign aid to Western Europe. The United States transferred over \$12 billion in economic recovery programs to Western European economies after the end of World War II. Replacing an earlier proposal for a Morgenthau Plan, it operated for four years beginning on April 3, 1948. The goals of the United States were to rebuild war-torn regions, remove trade barriers, modernize industry, improve European prosperity, and prevent the spread of Communism. The Marshall Plan required a reduction of interstate barriers, a dropping of many regulations, and encouraged an increase in productivity, as well as the adoption of modern business procedures. – we may need to consider this as a Post COVID 19 Strategy for Africa

[2] Wikipedia: Economic growth can be defined as the increase in the inflation-adjusted market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP.

[3] Wikipedia: In psychology, attitude is a psychological construct, a mental and emotional entity that inheres in, or characterizes a person. They are complex and are an acquired state through experiences. It is an individual's predisposed state of mind regarding a value and it is precipitated through a responsive expression towards oneself, a person, place, thing, or event which in turn influences the individual's thought and action. Prominent psychologist Gordon Allport described this latent psychological construct as "the most distinctive and indispensable concept in contemporary social psychology." Attitude can be formed from a person's past and present. Key topics in the study of attitudes include attitude strength, attitude change, consumer behavior, and attitude-behavior relationships. This will be an important aspect for transforming African economies – change of the mindset.

[4] Wikipedia: Walt Whitman Rostow was an American economist, professor and political theorist who served as National Security Advisor to President of the United States Lyndon B. Johnson from 1966 to 1969.

[5] Economic interventionism, sometimes also called economic statism and state interventionism, is an economic policy perspective favoring government intervention in the market process to correct market failures and promote the general welfare of the people. An economic intervention is an action taken by a government or international institution in a market economy in an effort to impact the economy beyond the basic regulation of fraud and enforcement of contracts and provision of public goods. Economic intervention can be aimed at a variety of political or economic objectives, such as promoting economic growth, increasing employment, raising wages, raising or reducing prices, promoting income equality, managing the money supply and interest rates, increasing profits, or addressing market failures.

[6] Prebisch-Singer hypothesis was developed by two development economists; Raúl Prebisch was an Argentine economist known for his contributions to structuralist economics who became the Executive Director of Economic Commission for Latin America in the 1950s and Sir Hans Wolfgang Singer was a German-born British development economist

[7] Prebisch-Singer Hypothesis

[8] Paul Krugman in his Opinion Paper Making Things in America published in the New York Times on May 19, 2011

[9] Moses Abramovitz (January 1, 1912 – December 1, 2000) was a 20th-century American economist and professor. During his career, he made many contributions to the study of macroeconomic fluctuations and economic growth over time

[10] Moses Abramovitz – Wikipedia



# PanAfGeo-2

“PanAfGeo-2” for “Pan-African Support to Geological Sciences and Technology” supports the training of geoscientific staff from African Geological Surveys through the development of an innovative training programme.

This includes the acquisition and development of important professional skills that complement their technical qualifications. The training programme is carried out by geoscientists with international experience and coming from African and European Geological Surveys.

PanAfGeo-2 (2021-2024) is a continuation of the well-recognised PanAfGeo (2016-2019), which has provided 42 training sessions for 1,068 geoscientists coming from 49 African countries, and generating notable impacts at the political, institutional, and technical capacity level in Africa.

## AFRICAN AND EUROPEAN EXPERTS LEADING TOGETHER A UNIQUE GEOSCIENTIFIC TRAINING PROGRAMME

PanAfGeo-2 allows trainees to acquire state-of-the-art tools, methods and experienced knowledge in 8 geoscientific skills :

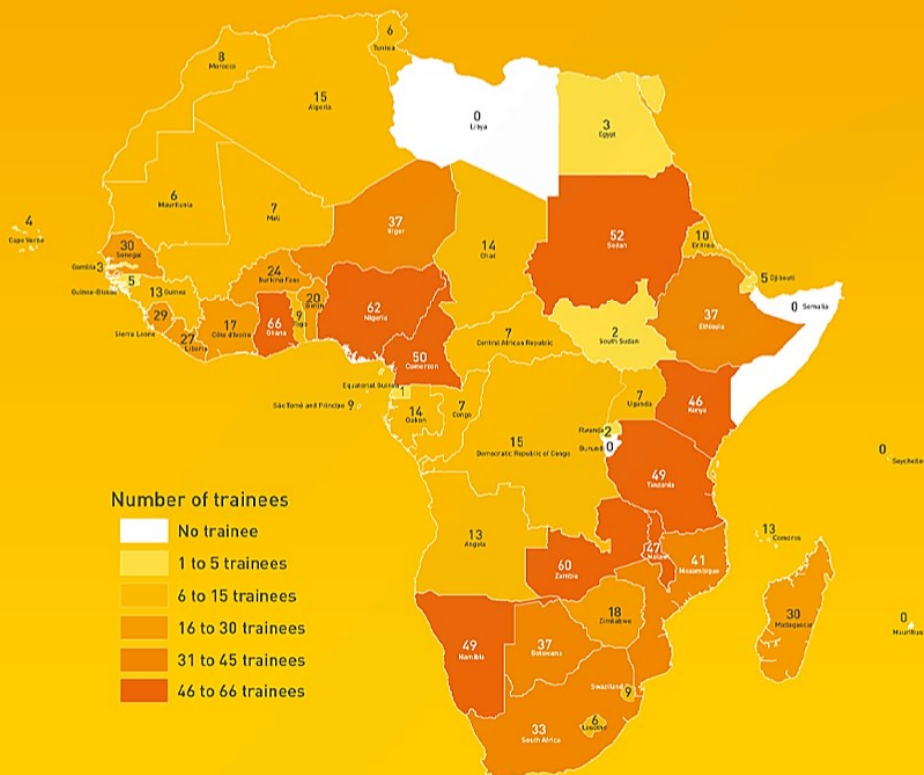
- **WP-A:** Geoscientific Mapping
- **WP-B:** Mineral Resources Assessment
- **WP-C:** Artisanal and Small-Scale Mining
- **WP-D:** New Frontiers in Geosciences (Geoheritage and Geothermal energy)
- **WP-E:** Geohazards & Environmental Management of Mines
- **WP-F:** Georesources Governance & OAGS/GSOs Institutional Strengthening
- **WP-G:** Geoscientific Information Management
- **WP-H:** Communication, Dissemination and Dialogue

## THE PANAFGEO-2 CONSORTIUM

- Geological Survey of France (BRGM)
- Geological Survey of Czech Republic (CGS)
- EuroGeoSurveys (EGS)
- Geological Survey of Slovenia (GeoZS)
- Geological Survey of Denmark and Greenland (GEUS)
- Geological Survey of Spain (IGME)
- Geological Survey of Italy (ISPRA)
- Geological Survey of Lithuania (LGT)
- Geological Survey of Portugal (LNEG)
- Geological Survey of Poland (PGI-NRI)
- Geological Survey of The Netherlands (TNO)
- Members of the Organisation of African Geological Surveys (OAGS)

## PanAfGeo-1

A unique Pan African training programme in Geosciences (2016-2019), Provided 42 training sessions for 1,068 geoscientists from 49 African countries.



# MADI YOUTH PROGRAMS

## MADI – AFRICAN MINERALS YOUTH CORPS – AMYC

### MADI – YOUNG MINERALS LEADERSHIP PROGRAM

MADI-African Minerals Youth Corps (MADI-AMYC) Leadership Programme is a 6-12 month African Minerals Leadership development programme targeting youths 15 to 35 years old who are interested in taking up leadership roles in Sustainable Mineral Resources Development in Africa. Participants who complete the programme will be conferred as MADI-African Minerals Youth Corps.

The MADI-AMYC- Leadership programme objective is to give the African youths a broader understanding of the Minerals sector in Africa and how to ensure that the sector contributes to Africa's Development Agenda envisioned by the Africa's Lagos Plan of Action, the Abuja Treaty and the Agenda 2063 – “The Africa We Want” and the Global 2030 Development Agenda – the Sustainable Development Goals (SDGs).

## MADI – CRE8 (CREATIVITY AND INNOVATION)

MADI CRE8 is An initiative focused on assisting Africa unlock, embrace and promote creativity and innovation as a driving force for entrepreneurship, value addition, economic change and social growth on the continent. CRE8 is made up of 8 principle concepts that represent our interpretation of creativity.

These principals, we believe, are at the core of creativity and innovation and they make up the pillars of CRE8, our foundational knowledge and will serve as the framework for the next generation of African creatives under CRE8.

Our focus is ultimately;

- Redefining creativity; Changing mindsets and expanding perceptions on what it means to be creative

- facilitating and providing practical and educational opportunities (specifically in the creative and innovation spectrum) for the next generation of African creatives and entrepreneurs.

## MADI – CJ – ESSAY COMPETITION

Minerals Africa Development Institution (MADI) in partnership with the Calestous Juma Legacy Foundation (CJLF) in 2021 presented the inaugural MADI-Prof. Calestous Juma Essay Competition. We sought to bring together great young African minds to deliberate on solutions to persisting problems that plague Africa’ s mineral resource sector, both at a national, sub-regional and continental level. We invited essays from all over Africa on relevant thematic areas affecting the mineral resource sector along the value chain as we position ourselves for Africa’ s social and economic structural transformation, inclusive growth and sustainable development.

The theme for our essay competition was “Changing Mindset: Transforming Africa’ s Mineral Resource Sector for Sustainable Development” and we received over 50 essays from all over the continent within the time frame of August to December 2021 and these are being reviewed by our esteemed judges as we speak.



# AY4DI – SYMPOSIUM (2023)



Africa currently has the largest population of young people in its history, with young people aged 18-35 comprising over 36% of the total population and 82% of the population being under the age of 35. Africa is the world's second largest and second most populous continent after Asia in both cases. At about 30.3 million km<sup>2</sup> including adjacent islands, it covers 6% of Earth's total surface and 20% of its land area. With 1.3 billion people as of 2018, it accounts for about 16% of the world's human population.

AY4DI will bring youth from all over Africa to deliberate on how best minerals can contribute to sustainable development of Africa as envisioned by Africa's agenda 2063 and the global agenda 2030 SDGs.

## SUSTAINABLE DEVELOPMENT GOALS





# African Mineral and Energy Resources Classification and Management System (AMREC) and Pan African Reserves and Resources Reporting Code (PARC)

By Frank Dixon Mugenyi

African Mineral and Energy Resources Classification and Management System (AMREC) is a continental system for management of Africa's mineral and energy resources. The AMREC is 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) and Agenda 2063. Adapting to national or local needs, the AMREC provides the specifications and guidelines required for sustainable development of Africa's mineral and energy resources.

The African Mining Vision (AMV) was adopted by the African Heads of State and Governments in 2009 with a long-term goal of "transparent, equitable and optimal exploitation of Africa's mineral resources to underpin broad-based sustainable growth and socio-economic development". More specific, among its goals, the AMV action plan aims to improve geological and mineral information systems to contribute to a broad based and inclusive growth as well as social and economic structural transformation of African economies as envisioned by the Agenda 2063. In the African Union context, minerals

resources are defined as solids, liquids and gas resources.

At the heart of the AMV, is the development and harmonization of strategies, policies, legal and regulatory frameworks, instruments and practices for the greater participation of African countries in regional and global minerals value chains. The AMV, therefore, aims to integrate Africa's energy and mineral resource sectors into it's broader social and economic development processes and thereby addressing its persistent poverty and underdevelopment. The development of AMREC will therefore ensure a harmonized continental wide resource management system based on the principles of the United Nations Framework Classification for resources (UNFC) and integrating international best practices tailored for inclusive and sustainable development of Africa.

This is an African initiative and home-grown solution aligned with the international standards through UNFC but designed to respond to what Africa needs in order to achieve the aspirations and goals of the Agenda 2063 and the AU Vision of **"An integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in global arena."**

## Why AMREC?

Africa is well endowed with natural resources and a major source for oil, gas and solid mineral resources and yet no country in Africa has a comprehensive mineral and energy resource management system. Further, no country in Africa except South Africa has a standard code for reporting mineral and energy resources to stock exchanges and financial institutions. Africa has little knowledge of its natural resources wealth and



endowments. This means that most African countries with their vast natural resources endowments are left to the mercies of foreign investors who play by rules set by financial institutions and stock exchanges outside Africa.

Often the social and environmental costs of raw material production are burdened on Africa, while its value-addition and downstream beneficiation happen elsewhere with little or no jobs created in Africa for the growing African Youth population who are now perishing trying to cross the deserts and oceans in search of jobs elsewhere. Having an African Mineral and Energy Resources Classification and Management System (AMREC) together with the Pan African Reserves and Resources Reporting Code (PARC) will not only ensure that resources estimates and classification are harmonized across Africa, but will also ensure a game-changing unified stock exchange and financial reporting code to attract responsible investments along the Minerals Regional and Global value Chains.

By incorporating the best practices of reporting on economic and non-economic value of mineral and energy reserves value-addition, technological innovation and social and environmental management AMREC will contribute to the fight against Illicit Financial Flows (IFF). Annually Africa loses in excess of US\$100 Billion through IFF mainly through corruption by government officials and malpractices of Multi-National Corporations. This is more than what Africa receives on ODA.

The overall objective of AMREC is to provide comprehensive guidance on sustainable resource management in Africa for the following functions:

- Regional Africa resource management: To enable and support coherent and consistent regional resource classification and management policies and associated regulations at African Union level in the service of delivering the African Union Agenda 2063 and the Africa Mining Vision
- National resource management: To assist the development and implementation of sustainable resource management policies and regulations at national level.

- Company internal business process innovation: To enable companies to develop and adopt business processes that are sustainable, profitable, socially inclusive, environmentally responsible and resilient.

- Financial reporting: To enable companies to report resource assets and raise finances from appropriate financial institutions in a manner consistent with international standards and good practices.

**Specifically AMREC aims to achieve the following:**

1. Facilitate resource policy and strategy formulation for broad based, inclusive development as well as social and economic transformation of African economies,
2. Assist Member States to identify strategic mineral resources for short, medium and long term development planning
3. Strengthen public and private sector resource governance and management thus reducing illicit capital outflows,
4. Promote industrialization through value addition and beneficiation of Mineral Resources commodities,
5. Guide effective capital allocation and build resilience in the industry that is constantly threatened by market volatilities
6. Support capacity building to build an efficient and internationally recognized African workforce

The Pan-African Reserves and Resources Reporting Code (PARC), is the AMREC based code for public reporting for resources under relevant financial and security regulations in Africa. The fundamental purpose of PARC is to support stockholder as well as stakeholder confidence and ensure that in alignment to the Africa Mining Vision and Agenda 2063, good social, environmental and economic benefits are assured for Africa.



## Benefits of AMREC

AMREC together with the Pan African Resource Reporting Code (PARC) will ensure the following benefits to the African continent:

1. It will ensure a trust worthy and consistent reporting of natural resources endowments across Africa
2. It will ensure that the enormous natural resources in Africa are accurately accounted for its social, environmental and economic net value
3. It will ensure independent validation and assessment of natural resources that meet global standards
4. It will ensure dissemination of mineral resource knowledge to stakeholders including governments who are usually not fully aware of its true value
5. It will ensure adoption of a comprehensive reporting system that meets financial institutions' requirements and promotes wider participation of Africa's stock exchanges in the development of the sector
6. It will ensure the development of competent persons who will bring capability, trust and confidence to decision-making and operations
7. It will ensure local empowerment and easy attainment of local content policy objectives.





## UNITY IS AFRICA'S WAY FORWARD #africamustunite

African leaders have woken up to the fact that Africa must unite to have power to engage with the rest of the world as one. That is when external control on Africa can be reduced. The rest of the world engages with Africa based on individual country's best interest but using collectively agreed upon policies. But what is the best interest for Africa? EU engages individual African countries using EU policies for instance imposing Economic Partnership Agreements (EPAs) agreed upon collectively to be signed by individual African countries. The United States of America consists of 50 states but yet it deals with individual African countries as a single entity such as USA and of course the new comers like China and India as a different ballgame all together. So #africamustunite and the greatest opportunity lies in the Africa Continental Free Trade Area (AfCTFA). Thus the control of the flow of second-hand garments and other counterfeits to Africa which impedes the growth of domestic industries should be an AfCTFA issue to allow regional value chains in textiles and other industries such as the mineral commodity industries to grow. Short of this, the AfCTFA market will be flooded with second-hand, poor quality counterfeits instead of boosting African industries.

## AID IN REVERSE: HOW POOR AFRICAN COUNTRIES DEVELOP RICH COUNTRIES

We have long been told that the rich nations of the OECD give generously of their wealth to the poorer nations to help them eradicate poverty and push them up the development ladder. The narrative is that OECD countries give more than \$125 billion in aid each year. This narrative is so widely propagated by the aid industry, Non-Government Organisations that benefit from this aid and the rich countries that we have to take it for granted. But this is not the case. In 2012, the last year of recorded data, developing countries, mainly in Africa received a total of \$1.3 billion, including all aid investment, and income from abroad. But that same year, some \$3.3 billion flowed out of them. In other words, developing countries sent \$2 trillion more to the rest of the world than they received. If we look at all years since 1980, these net outflows add up to an eye-popping total of 16.3 trillion dollars- that's how much money has been drained out of the global south over the past few decades. To get a sense for the scale of this, \$16.3 trillion is roughly the GDP of the United States. This is why Africa must come together and open our eyes to the reality that our best interests are not held by anyone else. We must industrialise and optimally utilise our resources by investing in its role along the minerals value chains to boost development across the board.

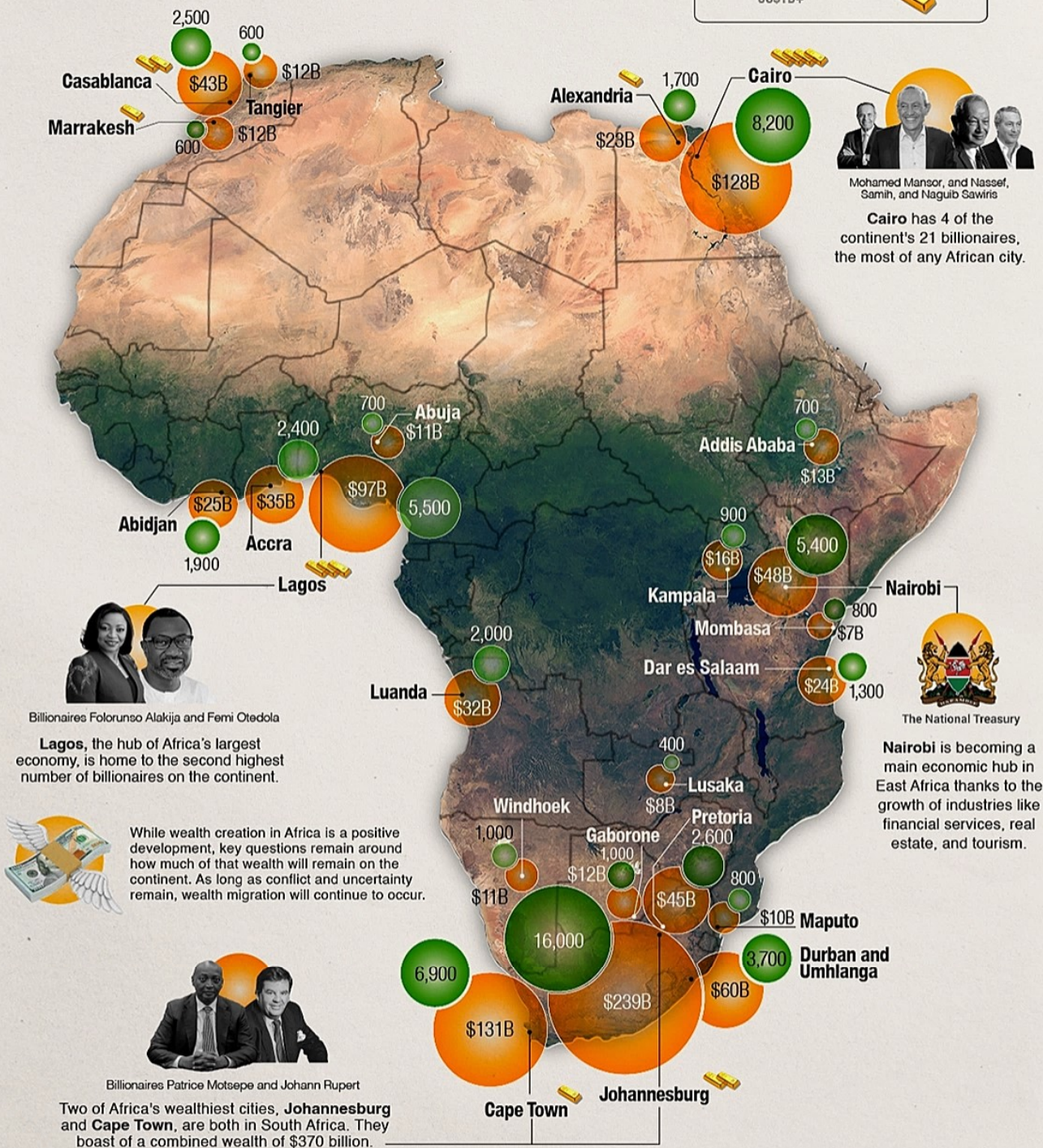
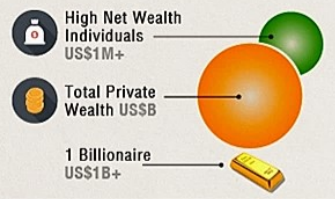


# WEALTH IN AFRICA

Total private wealth in Africa is currently worth \$2.1 trillion, according to the Africa Wealth Report 2022. Though the growth of total wealth was flat over the past decade, the rise of megacities and diverse new wealth-creation sources are expected to fuel wealth creation in coming years.

## WHERE IS WEALTH MOST CONCENTRATED WITHIN AFRICA?

### How to read this:



Source: Henley & Partners (Africa Wealth Report 2022)



# THE WORLD'S Billionaire Population

IN 2021

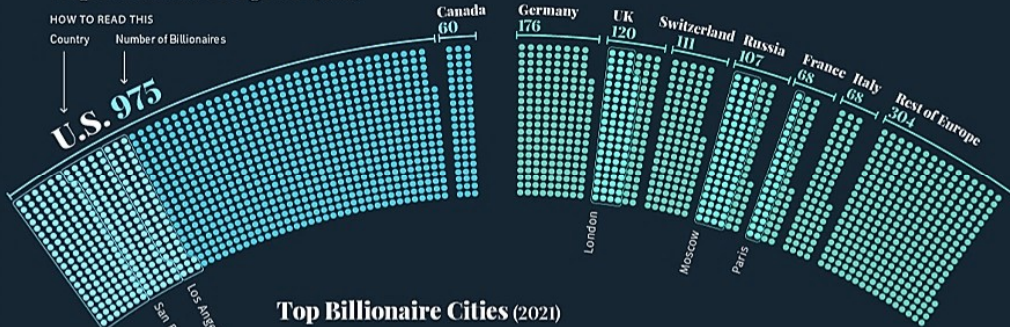
There are currently 3,311 billionaires worldwide, representing almost \$11.8 trillion in collective wealth.

Here's a look at where they live worldwide.

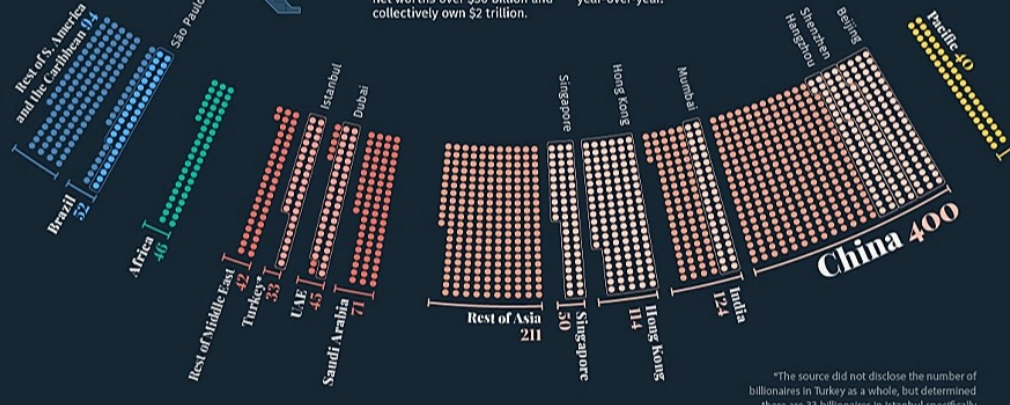
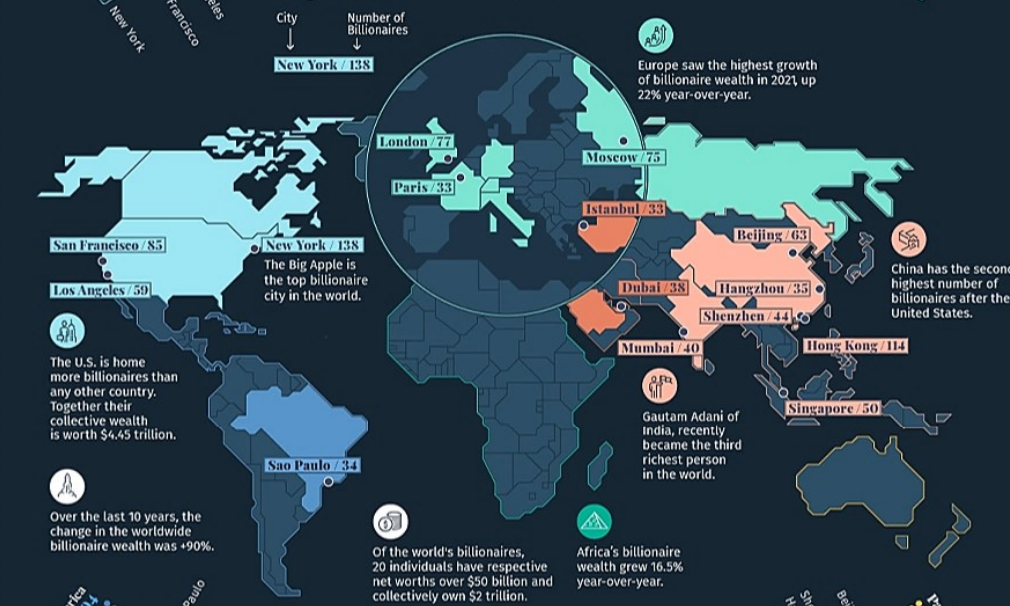
## Methodology

Billionaire status is determined by assessing an individual's total net worth, including publicly and privately held businesses and investable assets. To determine a billionaire's location, Wealth-X used primary business addresses.

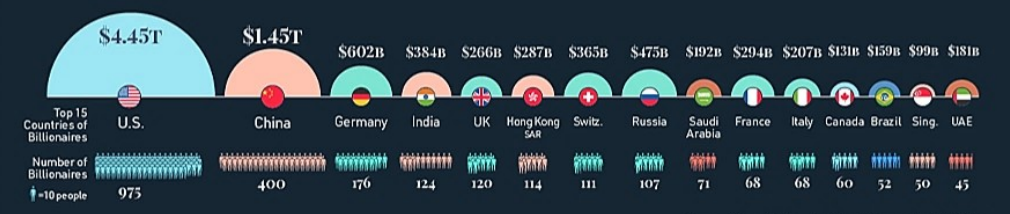
## Top Billionaire Regions (2021)



## Top Billionaire Cities (2021)



## Top 15 Billionaire Countries (2021)



Source: Billionaire Census by Altrata. Powered by Wealth-X



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COLLABORATORS RESEARCH • WRITING Raul Amoroso, Avery Koop | ART DIRECTION • DESIGN Joyce Ma

# MADI- PROF. CALESTOUS JUMA ESSAY COMPETITION 2021 WINNING ESSAYS

Minerals Africa Development Institution (MADI) in partnership with the Calestous Juma Legacy Foundation (CJLF) is proud to announce the winners of the recent inaugural Prof. Calestous Juma Essay Competition which was concluded early this year. We are proud to announce the following outstanding essays as the winners respectively:



## FIRST PLACE - Adaji Ufedo-Ojo Eleajo

Ufedo-Ojo Adaji is a student radiographer with aspirations to change the world through her writing. Adaji is a talented writer who varies her genres to include scripts, articles, fiction and poetry. She has also won the top 20 Ekonke short story competition, the EMEND WED essay competition and the 2021 Humans of Transcorp poetry competition. Adaji is adamant that we have the resources needed to conquer the globe as Africans and she will do her bit to show the world what Africa is capable of.

## SECOND PLACE - Nwankwo Gideon

Nwankwo Gideon Ikemdinachi is a writer, inspirational speaker and a public health enthusiast. He graduated from the University of Nigeria in 2019 with a B.Sc. (Hons) in Zoology and Environmental Biology. Gideon also writes poems, short stories and conference reports. He was a rapporteur during the 26th Nigerian Economic Summit event. He has coached many successful young writers and public speakers. He is the founder and director of the Excellent Writers Academy (EWA), an online coaching platform geared towards raising young dynamic writers who will champion social transformation through the power of the pen.



## THIRD PLACE - Joshua John Inioluwa

Joshua John Inioluwa is a 4th year medical student at the University of Ibadan, Nigeria. He is a multiple award-winning essayist, member of the 2022 UN Millennium Fellowship Class, volunteer and student leader. As a writer, he enjoys exploring the various socio-economic issues affecting Africa in general and Nigeria in particular, and more importantly researching and exploring practical ways to solve these problems. He looks forward to a career in trauma care and emergency medicine while also contributing through research and advocacy to improving health outcomes in Nigeria.



# MADI AT A GLANCE





## PanAfGeo

Pan-African Support  
to Geological Sciences and  
Technology Africa-EU Partnership

Appui panafricain aux géosciences  
du partenariat Afrique-UE

Apoio pan-africano às geociências  
da parceria África-UE

<http://panafgeo.eurogeosurveys.org/>



PanAfGeo



panafgeo



panafgeoproject



PanAfGeo Project



PanAfGeo Project



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