The African Climate Summit – Averting the Climate Crisis

By Juliet Akamboe and Morgan Bazilian

Climate change poses a significant threat to Africa, a continent already grappling with challenges including poverty and a lack of access to basic human needs like clean water, healthcare, education, jobs and electricity. Africa is already witnessing severe environmental consequences with changing rainfall patterns, severe droughts and extreme weather conditions, which are stalling socio-economic development. This year alone, about 2.7 million Africans are reported to have been displaced by the prolonged drought in the Horn of Africa. In all, 23.4 million people have been affected with acute food insecurity and 5.1 million children have been left acutely malnourished.

Floods hit Rwanda and the Democratic Republic of Congo, resulting in more than 500 deaths and huge loss of property. Malawi and Mozambique experienced the devastating effects of Tropical Cyclone Freddy, one of the longest-lasting tropical cyclones ever recorded, and one of the deadliest in Africa in recent years. The Sahara Desert is expanding southward, encroaching on fertile land and displacing communities. These extreme changes in weather have devastating effects on ecosystems, leading to desertification, deforestation, and loss of biodiversity. As temperatures continue to rise, these events will continue to rise in both frequency and magnitude.

The inaugural Africa Climate Summit (ACS) taking place in Nairobi, this week is a great forum to discuss the role Africa can play in bridging the gap between the Global North and South in addressing the climate crisis. Despite the many challenges facing the continent, Africa is uniquely placed to help resolve the imminent climate crisis. The African Climate Summit presents an opportunity for Kenya to lead African countries in highlighting green growth opportunities and to showcase how African countries are designing and implementing innovative solutions that can serve as a model for the rest of the world. It will also convey an important message that Africa is ready to contribute to global decarbonization efforts by leveraging its abundant resources, including renewable energy, critical minerals, agricultural potential, human and natural capital.

Africa’s Role

The continent’s ecosystems benefit the world. Africa is home some of the world’s most important biodiversity hotspots with the potential to deliver nature-based climate action. From the savannas of Kenya to the mountains of Uganda and Rwanda and the tropical rainforests of the Congo and Gabon, this region will contribute greatly to the protection, restoration and effective management of wildlife and biodiversity. The Congo Basin is one of the largest carbon sinks in the world. It stores around 29 billion tons of carbon, approximately equivalent to three years’ worth of global greenhouse gas emissions – while the Basin as a whole absorbs nearly 1.5 billion tons of carbon dioxide a year.

The continent also offers a range of investment opportunities for global capital to promote decarbonization and local economic development. Vast opportunities for the development of renewable energy exist in Africa as the continent has abundant renewable energy resources, including solar, wind, geothermal, biomass and hydroelectric power. The continent can harness...
these resources on a large scale to become a renewable energy hub while addressing its own energy needs. For instance, Africa has the world’s largest percentage of untapped hydropower potential. Hydropower on average, accounts for 17% of the electricity generation in Africa, with a potential to increase to 23% by 2040. In some countries, such as the Democratic Republic of Congo, Ethiopia, Malawi, Mozambique, Uganda, and Zambia, the share of hydropower in electricity generation exceeds 80%.

The countries of the East African Rift region hold significant geothermal potential as exploration confirms untapped resources across the region. Despite the region’s economic challenges, Ethiopia and Kenya have attained substantial geothermal power generation. Kenya now generates close to 50% of its electricity through geothermal power and has the seventh largest geothermal production capacity in the world, at around 950 MW. Electric vehicles (EV) and battery systems are also gaining traction in Africa’s decarbonization efforts. EV manufacturing in South Africa, proposed battery manufacturing plants in Morocco, Zambia and Egypt and increased popularity of cleaner two and three wheelers in East Africa will help reduce emissions in the transport sector.

The transition to renewable energy and greener transport systems requires significant investments in critical minerals like copper, aluminum, lithium, nickel, graphite, manganese and cobalt. Africa has provided the materials and played a major role in every industrial revolution in the past and it will play a key role in the energy transition through the provision of its natural resources for clean energy technologies, electric vehicles (EVs) and battery storage systems. Africa is home to some thirty percent (30%) of the world’s mineral reserves. The continent produces forty percent (40%) of the world’s gold and up to eighty percent (80%) of the world’s chromium and platinum. The largest reserves of cobalt, diamonds, platinum and uranium in the world are in Africa.

Mining is vital to the survival of many African economies, contributing about ten percent (10%) to the GDP of resource rich countries and more than fifty percent (50%) of their export earnings (IMF, 2021). These exports are predominantly in the raw to semi-processed state and Africa is keen on exploring the opportunities in the mineral supply value chain for the economic prosperity of its people in a sustainable manner (UN, 2022). Bloomberg NEF estimates that the battery minerals and EV supply chain will be worth US$8.8 trillion by 2025. The mining and metals space which involves raw materials, and some degree of smelting and refining, and the space that Africa plays in, is only US$55 billion. This shows there is a lot of scope for Africa to go further down the supply chain and create greater value for sustainable development.

There are globally prominent mining countries in Africa that will share best practice from the traditional mining sector and lead the way for the green mining revolution. The DRC will produce about seventy percent (70%) of the Cobalt the world needs for the energy transition, it is also a significant producer of copper, manganese and graphite. South Africa has more than 130 years of active mining and is home to diversified mineral resources such as diamonds, gold, coal, iron ore, platinum group metals (PGMs), manganese, chromium, copper, vanadium and uranium amongst others. Zimbabwe, Ghana, Namibia and Mali are some of the countries that will produce the lithium needed for batteries. The nickel from Tanzania is regarded as one of the world’s largest development-ready, high-grade nickel sulphide deposits and Zambia’s copper belt will continue to be a significant contributor to global copper supply.

The Colorado School of Mines and the Payne Institute for Public Policy have been deeply involved in the role that these critical minerals will play in the energy transition and unlocking the social and economic potential of the African continent and the rest of the world. This commitment once again came through, in the organization and preparation for the inaugural Africa Climate Summit. The Payne Institute for Public Policy helped to shape the Critical minerals and green
industrialisation agenda, which led to a Presidential panel comprising the Presidents of the Democratic Republic of Congo, Zambia, Sierra Leone, Kenya, Namibia, the U.S Presidential Special Envoy on Climate, the European Commission, and the International Energy Agency (IEA).

This session is expected to galvanise momentum around the opportunity that critical minerals and green industrial development present for Africa and the world as an engine for economic growth, development, and climate action. Here are the key outcomes for the session:

1. Explore the opportunity presented for Africa from the global need to green production capacity, and specifically the global demand for critical (transition) minerals
2. Demonstrate Africa’s potential for mineral beneficiation in the form of green industrialisation and manufacturing in order to meet the growing demand
3. Present the positive impact green industrialisation has to improve livelihoods and generate additional revenue
4. Highlight how green industrialisation would develop energy infrastructure on the continent
5. Discuss how African leaders can shape and scale the opportunities in this space
6. Showcase innovation models to access global markets with low-emission products and Africa’s capacity to meet the green standards set by demand markets for these products

The President of Ghana, Nana Akuffo Addo, will be delivering a keynote address on the new green mining policy Ghana recently passed, offering guidance for resource-rich countries saddled with old mining laws and policies. There will also be an announcement by the AU-AMDC/ AfDB Africa Green Minerals Strategy which aims at a continent-wide approach to the critical minerals that will drive the energy transition.

A second panel session on driving investment, conducive trade and industrial policy will be led by the CEO of Africa Finance Corporation (AFC), Chairman of Fortescue Metals Group, the UN Climate Change High-Level Champion for COP27, the Secretary-General of the African Continental Free Trade Area, the Special Envoy of the President for the Alliance for Green Infrastructure in Africa and the Assistant Secretary for the United States Department of Energy. This session will amplify the opportunity for local job creation, international collaboration, infrastructure development and sustainable finance in Africa’s minerals sector.

The Africa Climate Summit is a great start to a multifaceted effort to resolve climate impacts not only in Africa, but globally. Leaders will be called upon to make ambitious pledges and commitments. A comprehensive "Pledging and Commitment Framework" will be developed to guide these actions which have the potential to turn the tide on climate change. The Payne Institute for Public Policy will continue to support such fora for the sustainable development of critical minerals required for the energy transition to avert the climate crisis.

References:
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Juliet is an experienced Corporate & Investment banking professional with more than 15 years across global markets, client coverage and risk management. She has been named one of the 100 Global Inspirational Women in Mining by Women in Mining (WIM) UK for her contributions to the mining industry and diversity. She recently graduated with a Masters in Mineral & Energy Economics from the Colorado School of Mines, where she is currently employed as a Critical Minerals Demand Researcher. While in school, she was involved in research around sustainable finance, building ESG frameworks, critical minerals security partnerships and shaping policy for a more sustainable future. Prior to moving to the U.S, Juliet was the Head of Mining & Metals for West Africa for the Standard Bank Group. She holds an MBA from the Paris Graduate School of Management and a bachelor’s degree from the University of Ghana Business School.

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