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Actualizing Africa's Green Dream

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Abstract

The paper critically discusses the concept of 'green economy' in Africa. It argues that green growth is vital in Africa in the wake of the threat of climate change among other concerns. It further asserts that green growth in Africa can aid in achieving Sustainable Development by striking a balance between human development, environmental conservation and economic development. The paper examines the progress made towards achieving green growth in Africa. It further explores the challenges facing realization of green economy in Africa. The paper also proposes solutions towards actualizing Africa's green dream.

1.0 Introduction

The concept of 'greening' economies has become a pertinent concern in global politics in the wake of challenges facing the planet including the threat of climate change¹. Effects of climate change such as rising temperatures, drought, crop failure, desertification, depletion of natural resources, water scarcity and rising sea levels have had significant impacts on human development, economic development and environmental sustainability². Consequently, climate change

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¹ Bergius. M., 'Towards a Green Modernization Development Discourse: The New Green Revolution in Africa.' *Journal of Political Ecology*, 2019

² Muigua. K., 'Nurturing Our Environment for Sustainable Development.' Glenwood Publishers Limited, 2016

mitigation and adaptation are vital in fostering Sustainable Development³. Proponents of green growth view it as an opportunity to strike a balance between human development, environmental conservation and economic development⁴. Greening growth can thus support the realization of Sustainable Development by taking into account environmental protection, economic development and social concerns which are key considerations in the Sustainable Development agenda⁵.

The term 'green economy' has been defined as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities⁶. It has also been defined as policy focus that emphasizes environmentally sustainable economic progress to foster low-carbon, socially inclusive development⁷. Green Growth is one of the strategies to achieve sustainable development that focuses on greening conventional economic systems and developing a green economy, where economic

³ ³ United Nations., 'Transforming Our World: The 2030 Agenda for Sustainable Development.' Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 03/07/2022)

⁴ Bergius. M., 'Towards a Green Modernization Development Discourse: The New Green Revolution in Africa.' Op Cit

⁵ Fitzmaurice. M., 'The Principle of Sustainable Development in International Development Law.' *International Sustainable Development Law.*, Vol 1.

⁶ United Nations Economic Commission for Europe., 'Greening the Economy: Mainstreaming the Environment into Economic Development.' Available at <https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=796&menu=1515> (Accessed on 03/07/2023)

⁷ United Nations Economic and Social Commission for Asia and the Pacific., 'Green Growth Uptake in Asia-Pacific Region.' Available at https://unece.org/fileadmin/DAM/env/cep/CEP-20/ppp/Item10_b__ESCAP_GreenGrowthUptake_e_sm.pdf (Accessed on 03/07/2023)

prosperity can go hand-in-hand with ecological sustainability⁸. Various approaches have been taken towards greening economies. In the global North, the main components in the green economy transition have been technological and market-based solutions to existing industrial sectors as well as fiscal instruments in environmental governance⁹. Further, in the global South, green economy implementation majorly focuses on environmental protection along with modernization and shifts in access to and control over forestry, freshwater, fisheries, energy and agriculture among other natural resources¹⁰.

The paper critically examines actualization of Africa's green dream. It explores the progress made towards greening economies in Africa. The paper further discusses opportunities and challenges facing the attainment of green growth in Africa. It also suggests recommendations towards actualizing Africa's green dream for Sustainable Development.

2.0 Green Growth in Africa: Opportunities and Challenges

The concept of 'green economies' has received widespread attention since the Rio+20 conference.¹¹ The outcome of the Conference affirmed the role of green economy in the context of sustainable development and poverty eradication as one of the important tools available for achieving Sustainable Development¹². It calls upon

⁸ Ibid

⁹ Bailey, I & Caprotti, F. 'The Green Economy: Functional Domains and Theoretical Directions of Enquiry.' *Environment and Planning*, No. 46 of 2014.

¹⁰ Ibid

¹¹ Bergius, M., 'Towards a Green Modernization Development Discourse: The New Green Revolution in Africa.' Op Cit

¹² United Nations., 'The Future we Want: Outcome document of the United Nations Conference on Sustainable Development held in Rio de Janeiro, Brazil, from 20–22 June 2012.' Available at

states to embrace green economies as a tool of eradicating poverty as well as sustained economic growth, enhancing social inclusion, improving human welfare and creating opportunities for employment and decent work for all, while maintaining the healthy functioning of the Earth's ecosystems¹³. The outcome of the Rio+20 Conference further recognizes the importance of green economy in enhancing our ability to manage natural resources sustainably and with lower negative environmental impacts, increasing resource efficiency and reduction of waste¹⁴.

Since the outcome of the Rio+ 20 Conference, the concept of green economy has been embraced at the global, regional and national levels. The universal call for green growth is stipulated under the United Nations 2030 Agenda for Sustainable Development which envisions development which balances social, economic and environmental sustainability¹⁵. The Sustainable Development Goals seek to promote green economies through measures such as ensuring access to affordable and clean energy; promoting sustainable industrialization, innovation and infrastructure; promoting the growth of sustainable cities and communities and combating climate change¹⁶. Achieving the Sustainable Development agenda is essential in fostering green economies in Africa.

<https://sustainabledevelopment.un.org/content/documents/733FutureWeWant.pdf>
(Accessed on 03/07/2023)

¹³ Ibid

¹⁴ Ibid

¹⁵ United Nations Development Programme., 'Sustainable Development Goals.' Available at

https://www.google.com/search?q=undp&oq=UNDP&gs_lcrp=EgZjaHJvbWUqDwgAEAAAYQxjAhixAxiKBTIPCAAQABhDGOMCGLEDGloFMhIARAUgEMYxwEYsQMY0QMYigUyCQgCEAAAYQxiKBTIJCAMQABhDGloFMgYIBBBFGDwyBggFEEUYPDIGCAYQRRg8MgYIBxBFGDzSAQgyNzM2ajFqN6gCALACAA&sourceid=chrome&ie=UTF-8 (Accessed on 03/07/2023)

¹⁶ Ibid

At the regional level, the *Africa Union's Agenda 2063* sets out the aspirations of prosperous Africa based on inclusive growth and Sustainable Development¹⁷. It seeks to achieve this goal through measures such as promoting sustainable and inclusive economic growth; ensuring sustainable management of natural resources in Africa; fostering sustainable consumption and production patterns; fostering climate resilience and natural disasters preparedness and prevention and embracing renewable energy in Africa¹⁸. Realizing the aspirations of Agenda 2063 is paramount in actualizing Africa's green dream. In addition, the *Agreement Establishing the African Continental Free Trade Area (AfCFTA)*¹⁹ seeks to promote and attain sustainable and inclusive socio-economic development in the region. It recognizes the need to promote sustainable development in accordance with the Sustainable Development Goals as vital in achieving the economic integration of the African continent²⁰. There is need to promote the vision of the AfCFTA in order to actualize Africa's green dream.

In Kenya, the Constitution embraces Sustainable Development as one of the national values and principles of governance²¹. It further encompasses several provisions that are vital in attaining green growth in Kenya including the recognition of the right to a clean and healthy environment²². The Constitution also stipulates certain

¹⁷ Africa Union., 'Agenda 2063: The Africa we Want.' Available at https://au.int/sites/default/files/documents/33126-doc-framework_document_book.pdf (Accessed on 03/07/2023)

¹⁸ Ibid

¹⁹ African Union., 'Agreement Establishing the African Continental Free Trade Area.' Available at https://au.int/sites/default/files/treaties/36437-treaty-consolidated_text_on_cfta_-_en.pdf (Accessed on 03/07/2023)

²⁰ Ibid

²¹ Constitution of Kenya, 2010., Article 10 (2) (d), Government Printer, Nairobi.

²² Ibid, Article 42

obligations in respect of the environment which include ensuring sustainable exploitation, utilisation, management and conservation of the environment and natural resources; achieving and maintaining a tree cover of at least ten per cent of the land area of Kenya; establishing systems of environmental impact assessment, environmental audit and monitoring of the environment and eliminating processes and activities that are likely to endanger the environment²³. Implementing these among other provisions of the Constitution will enhance green growth in Kenya.

Green growth has been embraced in Africa through measures such as promoting the use of clean and renewable sources of energy. There have been increased investments in renewable sources of energy such as solar, wind, hydro, geothermal and green hydrogen²⁴. Clean and renewable sources of energy are essential in climate change mitigation and adaptation and actualizing the green dream²⁵. Agenda 2063 recognizes the importance of renewable sources of energy in ensuring environmental sustainability and climate resilient economies and communities towards attaining Sustainable Development in Africa²⁶. Africa has vast resource potential in wind, solar, hydro, and geothermal energy and falling costs are increasingly bringing renewables within reach²⁷. It has been pointed out that renewable sources of energy can help address many of Africa's social,

²³ Ibid, Article 69

²⁴ Hafner. M et al., 'Prospects for Renewable Energy in Africa.' *Energy in Africa*, 2018, pp 47-75

²⁵ Crane. D., 'My Clean-Energy Green Dream.' Available at <https://www.greenbiz.com/article/myclean-energy-green-dream> (Accessed on 03/07/2023)

²⁶ Africa Union., 'Agenda 2063: The Africa we Want.' Op Cit

²⁷ International Renewable Energy Agency., 'Renewable Energy Market Analysis: Africa and its Regions.' Available at <https://www.irena.org/publications/2022/Jan/Renewable-Energy-Market-Analysis-Africa> (Accessed on 03/07/2023)

economic, health and environmental challenges and foster the realization of a climate-safe future in which sustainable development prerogatives are met²⁸. There is need for increased investments in renewable sources of energy in Africa in order to actualize the green dream.

In addition, green revolution is also being witnessed in the agricultural sector in Africa. Technologies such as genetic engineering have been adopted to transfer the nitrogen-fixing capabilities of legumes such as peas and beans into cereal crops²⁹. This has facilitated the attainment of higher yields, without the use of expensive fertilizers³⁰. This approach also aids in the reduction in the use of chemical nitrogen fertilizers, which contribute substantially to both carbon emissions and environmental pollution³¹. Some African countries have also adopted regenerative agricultural practices such as crop rotation, agroforestry, use of drought- and heat-resistant crops, integrated pest control systems, water harvesting and irrigation³². This has helped in fostering high-yielding, resilient, and adaptive practices that constitute an African approach to climate-smart agriculture³³. Greening of the agricultural sector is vital in actualizing Africa's green dream.

²⁸ Ibid

²⁹ Conrow. J., 'Borlaug's Dream is Being Realized.' Available at <https://allianceforscience.org/blog/2017/04/borlaugs-dream-is-being-realized/> (Accessed on 03/07/2023)

³⁰ Ibid

³¹ Ibid

³² Climate Champions. 'How Regenerative Agriculture Can Increase Africa's Food Production.' Available at <https://climatechampions.unfccc.int/call-to-action-for-climate-resilient-sustainable-food-systems-in-africa/> (Accessed on 03/07/2023)

³³ Ibid

Further, there has been progress towards actualizing Africa's green dream through the adoption of sustainable waste management practices. Countries such as Rwanda and Kenya have banned the use of plastic bags due to their negative environmental impacts³⁴. This has promoted improved waste management and environmental conservation in these countries³⁵. In addition there has been growth of sustainability startups aimed at promoting efficient waste management through measures such as treatment, recycling of waste and conversion of waste into useful products such as compost and biofuel briquettes³⁶.

Progress has also been made towards fostering green growth in the African tourism sector through eco-resorts or family villages in countries such as Rwanda³⁷. Africa is a continent that is rich in cultural and ecological heritage and recreational development has been identified as one of the measures of promoting green growth in the tourism sector³⁸. This has enhanced sustainability and social growth through a combination of agriculture, the commitment of local businesses and educating and recruitment of local staff in such projects³⁹.

³⁴ Behuria. P., 'Ban the (plastic) Bag? Explaining Variation in the Implementation of Plastic Bag Bans in Rwanda, Kenya and Uganda.' *EPC: Politics and Space*, 2021, P 1-18

³⁵ Ibid

³⁶ Forbes., 'Meet The African Green Entrepreneurs Showing the West How It's Done.' Available at <https://www.forbes.com/sites/davidroetter/2021/12/14/meet-the-african-green-entrepreneurs-showing-the-west-how-its-done/?sh=6d46b5bf51cb> (Accessed on 03/07/2023)

³⁷ MTD., 'Green Dream Rwanda.' Available at <https://www.mtdls.nl/en/news/newsarchive/q/nid/337/title/green-dream-rwanda> (Accessed on 03/07/2023)

³⁸ Ibid

³⁹ Ibid

Despite the progress made towards actualizing Africa's green dream, several concerns have hindered the attainment of this ideal. It has been pointed out that the transition towards renewable energy has not been fully embraced due to factors such as insufficient investments with only 2% of global investments in renewable energy in the last two decades being made in Africa, with significant regional disparities⁴⁰. This has significantly affected access to clean cooking fuels and technologies in most parts of Africa⁴¹. Further, it has been asserted that African countries especially those in the North African region which have untapped renewable energy sources including hydrogen have struggled to meet their own renewable energy targets, often as a result of unattractive investment conditions, insufficiently developed legal frameworks for renewable energy development and uneven and inconsistent implementation of regulations⁴². It is necessary to address these challenges in order to actualize Africa's green dream in the energy sector.

In addition, it has been observed that agricultural practices that supported African communities in the past such as slash-and-burn cultivation and crop rotation are now driving the sector's decline⁴³.

⁴⁰ International Renewable Energy Agency., 'Renewable Energy Market Analysis: Africa and its Regions.' Op Cit

⁴¹ Ibid

⁴² EN: Former., 'North Africa's Hydrogen Potential.' Available at https://www.enformer.com/en/north-africashydrogenpotential/?etcc_med=SEA&etcc_par=Google&etcc_cmp=Energysystems&etcc_grp=135634609600&etcc_bky=hydrogen%20africa&etcc_mty=p&etcc_plc=&etcc_ctv=580888668376&etcc_bde=c&etcc_var=CjwKCAjw44mlBhAQEiwAqP3eViMmP67xkwwqMl4FIRbBPvWOgaNcBckR9BJMhu0bOUf1s-OG4JKuwhoCga4QAvD_BwE&gad=1&gclid=CjwKCAjw44mlBhAQEiwAqP3eViMmP67xkwwqMl4FIRbBPvWOgaNcBckR9BJMhu0bOUf1s-OG4JKuwhoCga4QAvD_BwE (Accessed on 03/07/2023)

⁴³ African Wildlife Foundation., 'Sustainable Agriculture.' Available at <https://www.awf.org/community/sustainable-agriculture> (Accessed on 03/07/2023)

These practices combined with long-term ecological impacts of chemical-heavy farming systems contribute to land degradation and crop failure⁴⁴. The situation is worsened by changing weather patterns as result of the threat of climate change and unstable sociopolitical dynamics hindering the attainment of food security⁴⁵. There is need to address concerns in the agricultural sector in order to actualize Africa's green dream.

It also been asserted that despite the abundance of water resources in Africa including lakes, rivers, swamps and underground aquifers, there has been degradation and underutilization of these water resources⁴⁶. Concerns such as pollution, poor agricultural practices and the effects of climate change have affected the quality and quantity of water resources in Africa⁴⁷. This has hindered actualizing Africa's green dream in other areas including agriculture and food production, energy, manufacturing and processing, tourism and health due to the centrality of water in Africa's pursuit of the Sustainable Development Goals⁴⁸. It is imperative that concerns in the water sector be addressed in order to foster Sustainable Development and actualize Africa's green dream.

As a result of the foregoing concerns, it has been observed that Africa continues to lag behind other regions of the world in achieving the

⁴⁴ Ibid

⁴⁵ Ibid

⁴⁶ Mugagga. F, & Nabaasa. B., 'The Centrality of Water Resources to the Realization of Sustainable Development Goals (SDG). A Review of Potentials and Constraints on the African Continent.' *International Soil and Water Conservation Research*, Volume 4, No. 3, 2016

⁴⁷ Ibid

⁴⁸ Ibid

Sustainable Development agenda⁴⁹. The continent has huge potential to achieve green growth and the transition into green economies. There is need to deal with the above concerns in order to actualize Africa's green dream.

3.0 Way Forward

In order to actualize Africa's green dream, it is necessary to upscale investments in green energy sources as renewable energy⁵⁰. The continent has vast potential for renewable sources for energy which remains untapped⁵¹. Challenges such as unattractive investment conditions, insufficiently developed legal frameworks for renewable energy development and uneven and inconsistent implementation of regulations have hindered attainment of the green dream in the energy sector in Africa⁵². African countries must address these concerns by creating attractive investment environments, developing efficient legal frameworks on renewable energy and implementing effective regulations in order to enhance the uptake of renewable sources of energy.⁵³ Further, there is need for adoption of market liberalization policies in the energy sector such as supporting public-private investment, improved private sector access to electricity generation and issuing of green bonds in order to promote renewable sources of energy in Africa⁵⁴. This will fast track realization of Africa's green dream in the energy sector.

Further, there is need to adopt green agricultural practices such as regenerative agriculture. Regenerative agricultural practices can aid

⁴⁹ Begashaw. B., 'Africa and the Sustainable Development Goals: A long Way to go.' Available at <https://www.brookings.edu/articles/africa-and-the-sustainable-development-goals-a-long-way-to-go/> (Accessed on 03/07/2023)

⁵⁰ Hafner. M et al., 'Prospects for Renewable Energy in Africa.' Op Cit

⁵¹ Ibid

⁵² EN: Former., 'North Africa's Hydrogen Potential.' Op Cit

⁵³ Ibid

⁵⁴ Ibid

in fostering climate resilient and sustainable green economies in Africa by avoiding the key problems of highly industrialized agriculture production that damage soil health, including vast tracts of mono-cultivated land, chemical runoffs, overexploitation of water resources, and high chemical and hormonal residue levels in food⁵⁵. This will promote the attainment of food security in Africa while also contributing towards climate change mitigation and adaptation in the quest towards Sustainable Development⁵⁶. African countries should thus adopt regenerative agricultural practices such as effective soil systems including no tilling and low tilling, crop rotation, use of drought and heat resistant crops, agroforestry, water harvesting, irrigation and green pest control measures⁵⁷. This will enhance actualization of the green dream in the agricultural sector in Africa.

In addition it is vital to promote sustainable utilization and management of water resources in Africa. Water plays a fundamental role in the attainment of Sustainable Development. To this extent, it has been observed that there is a clear nexus between properly managed water resources, economic development and social wellbeing which are key pillars of the sustainable development agenda⁵⁸. The importance of water is recognized under the 2030 Agenda for Sustainable Development which seeks to ensure the availability and sustainable management of water and sanitation for

⁵⁵ Climate Champions. 'How Regenerative Agriculture Can Increase Africa's Food Production.' Op Cit

⁵⁶ Davis. L.R et al., 'Farmer Led Regenerative Agriculture for Africa.' Available at <https://discovery.ucl.ac.uk/id/eprint/10106717/1/LunnRockliffe%2C%20Davies%20et%20al.%202020%20RA%20report.pdf> (Accessed on 03/07/2023)

⁵⁷ Ibid

⁵⁸ Koudstaal.R et al., 'Water and Sustainable Development' available at <https://www.ircwash.org/sites/default/files/210-92WA-11000.pdf> (Accessed on 03/07/2023)

all⁵⁹. However, challenges have been witnessed in the water sector in Africa such as degradation and underutilization of these water resources⁶⁰. It has been observed that sustainable management of water resources and access to safe water and sanitation are essential for unlocking economic growth and productivity, and providing significant leverage for existing investments in health and education⁶¹. There is need to improve the management of water and water resources in Africa through measures such pollution control, effective waste management, use of water smart landscaping and irrigation and sustainable utilization of water through reusing among other measures⁶². This will promote the attainment of sustainable development goal 6 geared towards enhancing access to clean water and sanitation for all while also actualizing Africa's green dream in the water sector.

Further, Africa should adopt green value chains for minerals. It has been observed that Africa is endowed with a variety of minerals that are central to decarbonization such as the Democratic Republic of the Congo (DRC) which produces over 70% of the world's cobalt, DRC and Zambia which supply 10% of global copper and Mozambique and South Africa which hold significant reserves of graphite,

⁵⁹ United Nations, Department of Economic and Social Affairs, Sustainable Development goal 6- clean water and sanitation, available at <https://sdgs.un.org/goals/goal6> (Accessed on 03/07/2023)

⁶⁰ Mugagga. F, & Nabaasa. B., 'The Centrality of Water Resources to the Realization of Sustainable Development Goals (SDG). A Review of Potentials and Constraints on the African Continent.' Op Cit

⁶¹ United Nations Environment Programme, 'Goal 6: Clean Water and Sanitation' available at <https://www.unep.org/explore-topics/sustainable-development-goals/why-do-sustainable-development-goals-matter/goal-6> (Accessed on 03/07/2023)

⁶² Mugagga. F, & Nabaasa. B., 'The Centrality of Water Resources to the Realization of Sustainable Development Goals (SDG). A Review of Potentials and Constraints on the African Continent.' Op Cit

platinum metals, lithium among other countries⁶³. It has been observed that the opportunities presented by the global green mineral boom and domestic achievements such as the African Continental Free-Trade Area can help facilitate development of regional value chains for green economy products in the mining sector⁶⁴. There is need to tap into these opportunities in order foster green value chains towards actualizing Africa's green dream.

Finally, Africa must fast track the attainment of the Sustainable Development goals and the Sustainable Development agenda. It has been argued that Africa continues to lag behind other regions of the world in achieving the Sustainable Development agenda⁶⁵. The continent has made slow progress in attaining goals such as ending extreme poverty, promoting access to clean water and sanitation, promoting quality education and achieving gender equality⁶⁶. There is need to enhance the attainment of Sustainable Development Goals in Africa through measures such as increased funding, improved public and private partnerships, strengthening domestic legislations, embracing technology and support from the international community⁶⁷. This will accelerate attainment of Sustainable Development in Africa whilst actualizing Africa's green dream.

⁶³ Economic Commission for Africa., 'African Countries Urged to Prioritize Green Value Chains for Minerals.' Available at <https://www.un.org/africarenewal/magazine/february-2023/african-countries-urged-prioritize-green-value-chains-minerals> (Accessed on 03/07/2023)

⁶⁴ Ibid

⁶⁵ Begashaw. B., 'Africa and the Sustainable Development Goals: A long Way to go.' Op Cit

⁶⁶ UNDP., 'New Africa SDGs Report shows Slow Progress, Calls for Greater Action to Meet Targets.' Available at <https://www.undp.org/africa/press-releases/new-africa-sdgs-report-shows-slow-progress-calls-greater-action-meet-targets> (Accessed on 03/07/2023)

⁶⁷ Ibid

4.0 Conclusion

The concept of 'green economy' is vital in fostering Sustainable Development at the global, regional and national levels⁶⁸. Green growth has been embraced in Africa through measures such as adoption of renewable sources of energy, regenerative agricultural practices and sustainable waste management⁶⁹. However, despite this progress, several concerns hinder effective attainment of green growth in Africa. These include insufficient investments in renewable energy, underutilization and degradation of water resources, poor agricultural practices in some areas and failure to accelerate attainment of the Sustainable Development Goals⁷⁰. There is need to address these challenges by upscaling investments in green energy sources such as renewable energy, adopting green agricultural practices such as regenerative agriculture, promoting sustainable utilization and management of water resources, adopting green value chains for minerals and fast tracking attainment of the Sustainable Development Goals⁷¹. This will enhance green growth and attainment of Sustainable Development in Africa. Actualizing Africa's Green Dream is an idea worth implementing.

⁶⁸ Bergius. M., 'Towards a Green Modernization Development Discourse: The New Green Revolution in Africa.' Op Cit

⁶⁹ Climate Champions. 'How Regenerative Agriculture Can Increase Africa's Food Production.' Op Cit

⁷⁰ Begashaw. B., 'Africa and the Sustainable Development Goals: A long Way to go.' Op Cit

⁷¹ UNDP., 'New Africa SDGs Report shows Slow Progress, Calls for Greater Action to Meet Targets.' Op Cit

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Economic Commission for Africa., 'African Countries Urged to Prioritize Green Value Chains for Minerals.' Available at <https://www.un.org/africarenewal/magazine/february-2023/african-countries-urged-prioritize-green-value-chains-minerals>

EN: Former., 'North Africa's Hydrogen Potential.' Available at https://www.enformer.com/en/northafricashydrogenpotential/?etcc_med=S&etcc_par=Google&etcc_cmp=Energysystems&etcc_grp=135634609600&etcc_bky=hydrogen%20africa&etcc_mty=p&etcc_plc=&etcc_ctv=580888668376&etcc_bde=c&etcc_var=CjwKCAjw44mlBhAQEiwAqP3eViMmP67xkwkqMl4FIRbBPvWOgaNcBckR9BJMhu0bOUf1sOG4JKuwhoCga4QAvD_BwE&gad=1&gclid=CjwKCAjw44mlBhAQEiwAqP3eViMmP67xkwkqMl4FIRbBPvWOgaNcBckR9BJMhu0bOUf1s-OG4JKuwhoCga4QAvD_BwE

Fitzmaurice. M., 'The Principle of Sustainable Development in International Development Law.' *International Sustainable Development Law.*, Vol 1.

Forbes., 'Meet The African Green Entrepreneurs Showing the West How It's Done.' Available at

<https://www.forbes.com/sites/davidroetter/2021/12/14/meet-the-african-green-entrepreneurs-showing-the-west-how-its-done/?sh=6d46b5bf51cb>

Hafner. M et al., 'Prospects for Renewable Energy in Africa.' *Energy in Africa*, 2018, pp 47-75

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