OFFICIAL PUBLICATION

THE REPUBLIC OF NAMIBIA

FIRST CLASS INVESTMENT DESTINATION
GREEN ENERGY POTENTIAL

PUBLISHED TO MARK PROGRESS UNDER NAMIBIA'S VISION 2030

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Published by FIRST, Victory House, 99-101 Regent Street, London W1B 4EZ
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www.firstforum.org

FIRST GRATEFULLY ACKNOWLEDGES THE COOPERATION OF HER EXCELLENCY LINDA SCOTT AT THE HIGH COMMISSION OF THE REPUBLIC OF NAMIBIA IN LONDON AND THE STAFF OF THE NIPDB IN BOTH WINDHOEK AND LONDON

FIRST


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Foreword by
Rupert Goodman DL
Chairman and Founder
FIRST

It gives me great pleasure to introduce this Official Publication on the Republic of Namibia. I am extremely grateful to HE Linda Scott, High Commissioner of Namibia to the Court of St James's and HE Charles Moore, His Majesty's High Commissioner to Namibia, and their respective staff for all their help and guidance in the preparation of this publication. I am especially grateful to HE President Hage Geingob, President of the Republic of Namibia, for contributing such an important and personal message.

The Republic of Namibia gained independence in 1990 and President Geingob was elected in 2014 and re-elected in 2019. The country enjoys a unique role in Africa and the wider world. Namibia has a key geopolitical position in southern Africa bordering the South Atlantic Ocean between Angola and South Africa. Namibia's economy is underpinned by significant natural resource wealth, tourism and a growing industrial and service industry.

Diamonds, uranium, copper and gold are major mineral resources contributing to exports of more than US$4 billion. Namibia is the fourth-largest exporter of non-ferrous minerals in Africa and the world's fifth-largest producer of uranium. Rich alluvial diamond deposits contribute to Namibia's position as a primary source of gem-quality diamonds.

Since independence, the government of Namibia has pursued a free market strategy to promote economic development with the aim of creating jobs and promoting universal prosperity. Real GDP growth rose to 4.6 per cent in 2022 from 3.5 per cent in 2021. Namibia's business-friendly environment offers many opportunities to the international investment community.

Namibia is also becoming a leader in the provision of green hydrogen – its green hydrogen strategy was launched at COP 27 and is designed to ensure Namibia becomes a net exporter of energy. His Excellency the President has confirmed that Namibia *'shall deliver Namibia's green hydrogen strategy outlining a clear pathway to unlocking even greater investment and establishing Namibia as a regional and global decarbonisation champion'*. Namibia is well placed to provide green hydrogen given its significant solar and wind generation capacity. This potential provides key opportunities for energy investors with a formal agreement recently signed with Hyphen Hydrogen Energy to develop a US$10 billion hydrogen/ammonia complex.

Namibia has also become a regional logistics hub via the port at Walvis Bay enabling connections to road, rail and seaport facilities. This provides further impetus to attracting investment into key sectors such as renewable energy, green hydrogen, metals and mining, oil and gas, agriculture, tourism and chemicals.

This official publication gives us all an opportunity to study the important developments in Namibia and to weigh carefully the many opportunities to work together even more closely.

We at FIRST are delighted to have been asked to produce this official publication and hope that it contributes, in a small way, to the increasing development and strengthening of Namibia's international relationships, especially in the trade, investment and financial spheres. F


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Introduction by
Rt Hon Lord Astor of Hever PC DL

We at first are delighted to publish this official report on the Republic of Namibia. The government of Namibia emphasises the importance of a business friendly environment and has promoted measures to enhance market access. Namibia offers a wealth of trade and investment opportunities across a range of key sectors including renewable energy, mining, hydrocarbons, agriculture, tourism, logistics, chemicals and business services. Policy makers in Namibia aim to strengthen further these economic opportunities and relations.

I am certain that Namibia will continue to work ever more closely with the international community to address key global challenges including the promotion of trade and investment opportunities. F

Rt. Hon. Lord Astor of Hever PC DL

It gives me great pleasure to welcome the official FIRST publication on Namibia. This important publication highlights the significant trade and investment opportunities in Namibia and brings this key information to a wide and influential audience.

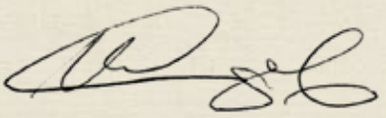
I am delighted to underline our commitment to welcoming trade and investment. Namibia offers many opportunities for the global investment community in strategic sectors of the economy including renewable energy, green hydrogen, logistics and manufacturing.

Namibia is a very attractive investment destination given its economic, political and social stability, a peaceful environment and our robust governance architecture.

We recognise and value the key role of foreign direct investment in promoting economic growth, wealth creation and poverty reduction. A key mission of the Government is to encourage both investment and bilateral trade with all those who share our ultimate goal of being a good custodian of our people and planet.

Namibia enjoys a positive investment environment, resilient regulatory framework and excellent connectivity. Investors in Namibia benefit from a sound financial system, strong macroeconomic structure, positive business environment, globally competitive infrastructure, stability, skilled workforce and wide access to regional markets.

I am very grateful for this important FIRST publication and I look forward to welcoming all those interested in establishing strategic trade and investment partnerships with Namibia.



His Excellency Hage Geingob

President of the Republic of Namibia

A bright future

By H.E. CHARLES MOORE
British High Commissioner to Namibia

CHARLES MOORE was appointed as the British High Commissioner to the Republic of Namibia in January 2021 having previously served in Zimbabwe, Oman, Botswana, Indonesia, Switzerland, Ghana, Trinidad and Tobago, and South Sudan. He has worked on diverse issues including Hong Kong, resource management, national security and the Korean Peninsula. In 2010, he joined LOCOG as head of the Dignitary Programme for the 2012 Olympic and Paralympic Games, leading a team of 600 staff and volunteers to coordinate attendance at the Games by over 120 Heads of State and Government, and 500 UK Dignitaries.

The Republic of Namibia gained independence from South Africa on 21 March 1990, and is the third youngest of Africa's 54 countries. For 30 years after independence, Namibia was not well known in the UK: businesses and investors with an interest in Southern Africa would flock automatically to South Africa which, with a population over thirty times larger than Namibia, appeared to make good business sense. Namibia found it hard to compete throughout its early years, lacking South Africa's vast and long-established business experience. But that is now changing: Namibia has now grown up. She has become more mature, educated and qualified, and she means business.

All the basics are in place. Namibia is one of Africa's most stable, democratic countries. The capital city, Windhoek, is one of the cleanest and healthiest cities in Africa. Namibia has the best roads in Africa – better too than Italy or Belgium – and is arguably the most beautiful tourist destination in Africa, offering two deserts, a coast, wildlife, multiple cultures, and scenery that is both unspoilt and unmatched.

Opportunities for trade and investment are realistic, plentiful and attractive, and the doors are wide open.

The Namibia Investment Promotion and Development Board (NIPDB) was created in January 2021. Its predecessor, the Namibia Investment Centre, sat within the Ministry of Industrialisation and Trade, but had no real authority to drive cross-governmental change. The NIPDB, however, now sits within the Office of the President with a team of over 60 staff, led by Nangula Uaandja, a hugely energetic and immensely effective CEO. Transformational change is underway, with the NIPDB promoting Namibia on a global platform and driving activity to make bilateral trade and investment easier and more attractive, by identifying and eliminating bureaucratic red tape. Such activity is now really starting to pay dividends – although it remains a work in progress after only two years.

Whilst trade and investment opportunities exist in a wide variety of sectors, the principal focus is on Green Hydrogen. Namibia has ambitious and credible plans to develop itself as a regional producer and supplier of Green Hydrogen within the next decade. Some might consider that Namibia has an exceptionally good record on planning, but not such a good record on delivery. On Green Hydrogen, however, the bar has been raised, with comprehensive and clear plans, and timelines (to date) being adhered to. Credit for much of this is due to James Mnyupe, the Green Hydrogen Commissioner for Namibia (and Economic Advisor to President Geingob) – a role also created within the Office of the President in 2021. James' commitment, energy and enthusiasm towards Green Hydrogen appears limitless, providing confidence and credibility to potential partners and international investors.

Photo: Charles Moore

Windhoek, Namibia's capital

Complementing the Green Hydrogen project, Namibia offers excellent opportunities for other clean energy investment. The abundance of land (in the world's second least-densely populated country), sun (over 300 days per annum), wind (arguably the world's best offshore windfarm potential) and sea (over 1500km^2 of largely empty coastline) all combine to offer significant opportunities for clean power generation and infrastructure. Other key sectors for potential investment include education, healthcare, infrastructure, logistics and extractives – all sectors where the UK has a wealth of experience. And (dare we mention) oil, following the offshore discovery of potentially one of the world's largest deposits. If developed into full-scale production, this could in itself transform Namibia's economic character, providing income to invest in Green Hydrogen as well as addressing the country's dire levels of wealth inequality (currently the second worst globally).

Tourism is another sector of fundamental importance to the Namibian economy. Like the tourism sector in many other countries, it took a serious battering through the COVID-19 global pandemic, resulting in the closure of many lodges and tourist establishments. The sector is beginning to show signs of recovery, with the UK slowly regaining its place as the third largest nationality of visitors (up to 30,000 annually before the pandemic). Much of the tourism on offer is "high-end": Namibia can be an expensive destination even for a self-drive camping holiday – but it is at least guaranteed to be the trip of a lifetime, and a truly unforgettable experience.

In Namibia you can find the world's largest population of free-roaming cheetah and black rhino, and half the world's population of giraffe. Then there is the world's oldest desert (the Namib), with giant dunes running into the ocean – and the world's largest sand dune, some 75m taller than the London Shard. The world's oldest canyon, second only in depth (but not length) to the US Grand Canyon. The oldest and largest meteorite, and largest meteorite field. The world's largest underground lake. Etosha salt pan, which is visible from space. And so much more.

It is an exciting time to be in Namibia. The country is emerging from its relatively shy obscurity, and generating substantial interest both regionally and internationally. The next few years could see the emergence of a new African economic success story – a country that no longer needs development assistance (which, with its "on-paper-only" status as an Upper Middle Income country, it currently barely attracts anyway); one that moves from importing 60 per cent of its energy needs to exporting over 50 per cent of its energy production; and one that reduces its appalling rates of poverty (60 per cent) and youth unemployment (48 per cent) to enhance the levels of wealth equality nationwide.

In the interim, however, the country is heading towards Presidential and General Elections in November 2024. The Presidential elections will mark the end of an era, as President Geingob steps down after his second term. He was Namibia's first Prime Minister back in 1990 and, in my personal opinion, is an individual who is deeply and personally committed to enhancing the prosperity of his country, and the lives of its people. His government will be looking for serious delivery and positive results over the next 12 months, as well as keeping minds focussed on the massive potential that this fabulous country offers, and keeping up the momentum on key issues including employment, housing and investment.

The future is bright. As a long-term friend and partner, the UK will be keen to support Namibia on its journey, and to celebrate its success. **F**

The abundance of land, sun, wind and sea all combine to offer significant opportunities for clean power generation and infrastructure

Photo: Charles Moore

Wild animals congregate around a waterhole in Etosha National Park in northern Namibia

Opportunity and vision

By H.E. LINDA SCOTT

HIGH COMMISSIONER OF THE REPUBLIC OF NAMIBIA TO THE COURT OF ST JAMES'S

LINDA SCOTT joined the Namibian Ministry of Foreign Affairs in 1990 serving in London and Havana. Subsequent postings saw her in Sweden, Belgium, Botswana, Nigeria and Ethiopia. After time as Director of Multilateral Affairs in Namibia, she was appointed Deputy Permanent Representative at the United Nations and then High Commissioner to the United Kingdom in 2018, and synonymously to Malta, Greece and Ireland. She holds a Masters from the University of the Free State and was involved in the anti-apartheid movement as a student.

Located in southwestern Africa, the vast and beautiful country of Namibia has a unique opportunity to transform its own energy prospects, together with those of the southern African region, into a sustainable and environmentally friendly future. With abundant renewable and non-renewable energy resources, stimulated by a growing demand for electricity nationally, regionally, and globally, Namibia is seizing this moment to develop and implement a vision for a cleaner, more efficient and resilient energy sector to enhance the well-being of its population. I have been delighted to work with FIRST and with the Namibia Investment Promotion Development Board (NIPDB) in this project to highlight Namibia's energy sector as a catalyst for growth, investment, and development both for Namibia and for potential investors.

The NIPDB was established in 2021 to facilitate easy and significant investment into Namibia and to serve as a vital bridge between investors and Namibia's potential, by offering investors a one-stop shop service. This publication aims to facilitate ease of contact between them and the investors they serve.

With the increasing global demand for clean energy linked to the need to mitigate climate change, Namibia finds itself at a critical juncture in contributing to the future of the global energy landscape and of Africa in particular. In 2023 Namibia faces its seventh year of drought in some areas of the vast country, making Government expressly aware of the importance of balancing the development of renewable energy sources with transparently and inclusively harnessing the economic benefits of its newly-discovered oil and gas reserves. Indeed, the government is determined to be a responsible custodian of these valuable resources and to manage them sustainably for the present and future generations.

The past 33 years of independence have allowed the country to set up universities, electric grids, schools, and water networks. Namibia is however, ready to move to the next level of development with scores of young people educated and ready to enter the job market while industry is challenged to meet the demand.

As a resource-rich country Namibia is gaining significant attention in the global investment community for its burgeoning energy sector. The nation has abundant natural resources coupled with supportive government policies and a strong commitment to grow both the oil and gas sector as well as its renewable energy resources to make it an attractive investor destination in sustainable power solutions. The focus here is to achieve rapid but sustainable economic growth that meet the needs of today's generations without compromising the needs of future generations.

Namibia is gaining significant attention for its burgeoning energy sector

Renewable Energy Potential

While Namibia's economy is largely dependent on fossil fuels, renewable energy has emerged as a key pillar for Namibia's sustainable development as outlined in the President's Harambee Prosperity Plan. His Excellency Dr Hage G. Geingob has used the Swahili word, Harambee, which means "pull together" to encapsulate the balance needed to develop the renewable energy sources of Namibia while harnessing the economic benefits of the oil and gas reserves and developing local skills. Namibia has also taken the lead in demonstrating how to unlock the regions potential for large green hydrogen development.

Its location in a sun-belt region of southern Africa provides Namibia with ample opportunities for the development of large-scale solar power plants. In addition, Namibia has considerable wind power potential, particularly in the long coastline area, making the country an ideal investor location for sustainable wind energy projects which can contribute to the national energy grid. That grid extends over the entire region, so that as Namibia's power base increases, that of the region's will too.

However, such a transition to renewables requires diligence in addressing not only the energy deficit we face regionally, but that we ensure that our energy basket is fully utilised and that Namibia contributes to a regional and global transition to sustainable energy over a long term while unlocking low-carbon industrialisation opportunities.

In these pages you will find more on how Namibia is developing its green hydrogen industry, especially after signing significant Memoranda of Understanding and Feasibility and Implementation Agreements with governments and private sector investors respectively, thus availing resources towards the proliferation of opportunities in this field.

Oil and Gas Reserves

While Namibia has committed itself to zero carbon emissions status through strong focus on renewable energy, Namibia possesses significant oil and gas reserves that are being developed. The offshore Kudu Gas Field, estimated to contain over 1 trillion cubic feet of natural gas, has the potential to transform Namibia into a regional energy hub. At the same time, Namibia's coastline is considered prospective for offshore oil exploration with its significant oil and gas reserves presenting an interesting opportunity for economic growth, attracting foreign investment and developing the local and regional energy industry.

In his address to the Namibia International Energy Conference in April 2023, Minister of Mines and Energy, Hon. Tom Alweendo stated that just as it saw the country benefitting from a mix of energy sources, Namibia would look at new and mixed forms of financing: "Sustainable Financing must include fossil fuels produced sustainably". By this he called for finding "the most realistic way in which we fit the current level of technology into the current energy demand structure, whilst balancing the people, the economy and the planet."

In order to address the various challenges, including present environmental concerns, Namibia has been working with organisations such as the Commonwealth and the International Maritime Organisation (IMO) to ensure that it adopts best practices and leverages modern technologies, legal policy frameworks to minimise impact on the environment while, at the same time, addressing disproportionately negative consequences of the energy transition on the Namibian economy. Developing a framework for sustainable environmental, social and governance practices and implementing stringent regulations while ensuring a conducive investment environment are all part of the Namibian investment vision.

Recognising the importance of a delicate equilibrium between the renewable energy development and the extraction of oil and gas reserves for the benefit of the country, Government has developed a National Integrated Resource Plan (NIRP) outlining a roadmap for energy development, setting ambitious targets for renewable energy deployment, and creating a framework for the sustainable exploitation of oil and gas resources.

Collaboration between the public and private sectors are seen as fundamental to development and has meant that Government encourages partnerships and fostering innovation to drive both the renewable and oil and gas sectors. Moreover, public awareness and education campaigns are crucial to promote a sense of responsibility and ownership among the Namibian people.

Entering International Carbon Market

Namibia was one of 120 countries which supported the climate change initiative, the Paris Agreement's Article 6, which established the post-2020 international carbon market through Nationally Determined Contributions (NDCs) for mitigation and adaptation.

In 2023, Namibia published its second and more ambitious NDC update conditionally committing to reduce GHG emissions by 11.9 $MtCO_2e$ by 2030. Namibia aims to increase the total net sink by 11.9 $MtCO_2e$ from -90.7 to -102.6 $MtCO_2e$ (through 7.99 $MtCO_2e$ removals and 3.92 $MtCO_2e$ emission reductions).

Namibia has identified 38 programmes requiring an estimated US$9.1 billion to achieve this ambitious target in mitigation outcomes. However, Honourable Pohamba Shifeta, Minister of Environment, Forestry,

Namibia has been working with organisations such as the Common-wealth and the International Maritime Organisation to ensure that it adopts best practices and leverages modern technologies

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With a stable political environment, favourable investment policies and a commitment to renewable energy development, Namibia offers a promising investment landscape for both local and international investors

and Tourism, estimates that the country would require about US$12.6 billion to allow Namibia, a country which in 2023 faces its 7th year of drought, to completely combat climate change. Namibia's NDC plans would cut emissions and adapt to climate impact and would require about US$6 billion for adaptation measures, and US$9 billion for mitigation.

To realise this goal, the Ministry is working closely with the United Nations Development Programme (UNDP) to adopt national guidelines for the international carbon market. This is apart from its programmes on climate change with the Commonwealth Secretariat in London. Namibia aims to be a strong participant in the international carbon market via the processes it is setting in place to develop and implement carbon market activities across the country.

Supportive Government Policies

Since the Namibian government believes it has a duty to generate job opportunities, local economic growth and technological advancement to benefit Namibian people, it has a demonstrated strong commitment to promoting investment in the energy sector with a focus on partnership for the benefit of both stakeholders and local people, while recognising the complexities of a local content policy, incentives include tax benefits, power purchase agreements and streamlined regulatory procedures, all of which aim to ensure a transparent and business-friendly environment.

Namibia's Renewable Energy Feed-in Tariff (REFIT) programme provided a guaranteed tariff for renewable energy producers, incentivising private investment in clean energy projects. Such initiatives offered stability and long-term revenue streams, assuring investors of a secure return on their investments.

Namibia's strategic geographic location is important to place it as the sustainable energy capital of Africa. Government is involved in regional initiatives to ensure cross-border energy trade through strengthening regional transmission lines and distribution networks in the Southern African Development Community. Off-grid opportunities, particularly in remote rural areas provide investment opportunities. Investments in mini-grids and standalone renewable energy systems can be transformative for these communities when they have reliable for households, businesses and importantly, agriculture.

Conclusion

Namibia's energy sector is just one area of potential investment. Opportunities abound in education and training, agri-processing, aquaculture, and agricultural technology, to name but a few. However, the investment in the energy sectors spans expanding power infrastructure and regional integration initiatives and sustainable energy. Namibia's aim is to ensure value creation for all stakeholders.

With a stable political environment, favourable investment policies and a commitment to renewable energy development, Namibia offers a promising investment landscape for both local and international investors. By participating in the country's energy sector, investors can contribute to regional sustainable development goals while enjoying long-term financial returns.

The NIPDB is available to support investors. As always, prospective investors will find that as they do their market research, engage with local stakeholders and seek professional advice for their informed investment decisions that Namibia holds great potential. Those who embrace the opportunities stand to benefit from the environmental and economic dividends, while contributing to the development of a country based on strong governance and social principles. F

Wind farms will reduce Namibia's reliance on imported electricity

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The Gateway to Namibia

By BISEY /UIRAB

Chief Executive Officer, Namibia Airports Company

BISEY /UIRAB previously served as CEO of the Namibia Ports Authority and worked in senior and executive management capacities in the mobile telecommunications environment at MTC, Namibia's leading mobile telecommunications provider, and Somali Telecoms Group. Prior to that he worked for Bank of Namibia as Human Resources & Training Manager and for the Legal Assistance Centre, as Paralegal & Office Manager. He has been CEO of NAC since 2019 and holds a Masters degree in Business Administration from Edinburgh Business School (Herriot-Watt University).

The Namibia Airports Company (NAC) Limited was established in 1998 as a state-owned entity under the Ministry of Works and Transport with the aim of being a world-class service provider in airport operations and management. It currently manages and develops eight airports in the country of which two are international airports:- Hosea Kutako International Airport some forty-five kilometres east of Windhoek and the Walvis Bay International Airport on the Atlantic coast.

The Hosea Kutako International Airport is the flagship airport of Namibia serviced by Discover Airlines (part of Lufthansa) from Frankfurt, Qatar Airways from Doha, Ethiopian Airlines from Addis Ababa and South Africa's Airlink and South African Airways from both Johannesburg and Cape Town. TAAG Angola serves the Luanda, Angola route, while Namibia's only airline, Fly Namibia connects from Windhoek to Cape Town. Many British visitor arrive via the good connections from London via Johannesburg. The airport is named after Namibia's first nationalist leader and it world class facilities including retailers, ground-handlers, restaurants, lounges which includes truly Namibian cuisines and souvenirs, bureau de change services, car rentals, parking(short and long-term) and tax refund facilities, amongst others. Transport to and from the airport is available by means of airport shuttles with a new dual carriage connecting the airport to the city of Windhoek to be completed next year.

Recent terminal building improvements has seen the expansion and refurbishment of a modern duty free restaurant, public parking and VAT tax refund facilities. As part of the company's strategic plan, future projects are envisaged to develop and/or upgrade infrastructure and facilities in order to increase airport capacity and the variety and quality of service.

Hosea Kutako International Airport is set to develop a hotel as part of the main airport attraction. Expansion of the terminal building, in-flight kitchen, cargo facilities, and conference facilities are additional projects envisaged by the company as immediate and future prospects. It is also aimed to doubling the handling capacity of the airport to increased passenger movements up until 2030. New terminal buildings are also planned at Katima Mulilo, Rundu and Lüderitz Airports.

Hosea Kutako International Airport

With Namibia being a preferred tourist destination with tourist arrivals by air touching one million annually, aviation has been the largest enabler of tourism in Namibia. The airports are the gateway to the country and most economic activities between Namibia and the rest of the world hinge on the aviation industry. The top ten tourist source markets in 2022 were South Africa, Angola, Germany, Zambia, Botswana, France, the United Kingdom, the United States, Italy, and Switzerland. Over the years Namibia has become a popular destination for tourists from the UK with almost 35,000 arriving annually. Many hearts and minds continue to be enthralled by this land of compelling natural wonders, unique variety of wildlife, contrasting beautiful scenery, abundant sunshine and wide open spaces not to mention the cultural diversity and hospitality accustomed to its people.

Visitors are engulfed by a sheer sense of freedom generated by wide and breathtaking horizons, the bluest of skies and a population density which ranks among the lowest in the world. Respectively, Namibia's capital Windhoek has been voted many-a-time as the cleanest city on the continent.

Namibia was one of the first countries in the world to include the protection of the environment and sustainable utilisation of wildlife in its constitution. About 15.5 per cent of the country has been set aside as national parks. Particular attractions include the Etosha National Park, one of the largest game reserves in Africa which is home to a variety of animals and birds, the Namib-Naukluft Park, a vast wilderness and the fourth largest nature conservation area in the world; the Skeleton Coast National Park; and the Fish River Canyon, the world's largest after the Grand Canyon.

Namibia, being a young and vibrant democracy, prides itself in its commitment towards the maintenance of peace, stability and socioeconomic development. Coupled with a first-world inter-connected infrastructural network, Namibia is truly a rare African gem. F

Namibia the land of infinite opportunities

Namibia offers lucrative investment opportunities in key sectors including mining and exploration, green hydrogen, renewable energy, tourism, agriculture and fintech.

The Namibia Investment Promotion and Development Board (NIPDB) serves as a one-stop shop for all companies aspiring to do business in Namibia.

As a public entity in the Office of the President, the NIPDB exists to facilitate investments into Namibia, and we pride ourselves in providing professional and personalised guidance tailored to each client's unique needs and interests. Once you have made the decision to do business in Namibia, the NIPDB is your first point of call.

Our aim is to make Namibia the investment destination of choice by improving the ease of doing business, starting with eliminating red tape and driving policy reforms.

We promote investment in key sectors including, but not limited to: mining, renewable energy, tourism, agriculture, digital and global business services.

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A green regulatory framework

By HON. YVONNE DAUSAB M.P.
Minister of Justice, Republic of Namibia

YVONNE DAUSAB is a legal practitioner of the High Court of Namibia since 2000 and a Notary Public since 2015. Prior to this she was the Deputy Dean of the Faculty of Law at the University of Namibia and a lecturer for a total period of seven years. She served as the Chairperson of the Law Reform and Development Commission before her appointment as the Minister of Justice. She holds a BA (Law), LLB from the University of the Western Cape and an LLM from the University of Pretoria and is the 2022 laureate of the Vera Chirwa Human Rights Award, in recognition of many years' effort towards the advancement of human rights.

The conceptualization, development and implementation of the green economy is taking shape steadily. It is arguably, a direct response to increasing concerns of climate change and the urgent need for action to decarbonise.

It is an undeniable fact that on various global issues, borders no longer matter, save to protect sovereignty and territorial integrity. It is for this reason that in 2021, Namibia took initiative to join the world under the UNFCC and Paris Agreement to reduce its greenhouse gas emissions. Namibia is endowed with many natural resources such as wind, solar, water and vast tracts of land which are your key components essential for climate action transition.

Namibia remains committed to its drive towards a low carbon and Green Economy trajectory, especially in ensuring that the proposed energy mix is at the forefront of energy security.

The transition to clean energy has the potential to bring numerous benefits, more generally to Africa, but specifically Namibia, and those countries in its immediate geographic proximity could become primary off takers. These benefits include but not limited to improved access to electricity, increased economic opportunities, and reduced greenhouse gas emissions. The transition to clean energy in Namibia has important justice and policy implications, including the much-anticipated tensions between business and human rights that should be carefully considered to ensure that this transition's benefits and burdens are distributed fairly. Environmental justice as guaranteed in the Namibian Constitution is a key aspect of this transition, as it involves ensuring that all people, regardless of their socioeconomic status, race, or ethnicity, have the right to live in a healthy and safe environment.

We are currently undertaking several legal and regulatory reforms. The reforms touch on a few areas including the review of energy related policies, laws, environmental, investment and tax regimes.

The National Green Hydrogen strategy must be aligned and considered in line with the national developmental policies such as the Harambee Prosperity Plan II and National Renewable Energy Policy of the Republic of Namibia. These policies make provision for implementing policies which support the deployment of clean energy technologies, such as feed-in tariffs or renewable energy targets and implementing policies that support the needs of marginalised groups and vulnerable individuals. This kind of support can be targeted support for low-income households to access clean energy technologies or training programs to help indigenous communities develop the skills needed to meaningfully participate in the clean energy sector.

Namibia's legal landscape guarantees protection of investments against nationalisation and expropriation. The Namibian Constitution sets out firm imperatives and procedures are clearly enunciated in the statutory and institutional arrangements associated with it.

Namibia is also a signatory to several multilateral and bilateral agreements on both the protection of the environment and the protection and promotion of foreign investment. To effectively transition to clean energy and ensure that the benefits are distributed fairly, it is essential that we adopt key principles and an implementation approach that is equitable, just, and inclusive.

The Ministry of Justice through its various departments is committed to ensure that the regulatory regime considers all these factors. The Law Reform and Development Commission is equipped and is ready to assist the necessary line ministries in identifying all the necessary laws that may need to be reformed to accommodate the uptake of these green energy development. The Legislative Drafting Directorate will be responsible to scrutinize and translate these policies into comprehensive legislation which purport would be to enhance social justice and to ensure that Namibians optimally benefit from its natural resources.

The President, Hage G Geingob coined the metaphoric Namibian House, which is a primary symbol of inclusivity. It speaks to the United Nations Seventeen Sustainable Development Goals (SDGs) which commit to resolving and implementing the principle of "leave no one behind". It is on this basis that the Ministry of Justice given its mandate will make sure that it supports the other government offices, ministries, and agencies in ensuring that the regulatory framework ensures environmental justice to the inhabitants of Namibia yet open our doors wide enough for foreign investment that takes into account the development and social justice aspirations of the people, consistent with the spirit and tenor as expressed in the Preamble of the Namibian Constitution. F

Namibia's Leap2Green strategy

By JAMES MNYUPE

Economic Advisor to the President of Namibia

JAMES MNYUPE is a graduate of the University of Namibia (accounting), Rhode University and the Harvard Kennedy School. He began his career with PwC later moving into asset management with Alan Grey Namibia. He was the Founding Chair of the Namibia Savings and Investment Association, was appointed to the High-Level Panel on the Namibian Economy in 2019 by President Hage Geingob and holds the CA, CFA and CFP designations. He was appointed the President of Namibia's Economic Advisor in September 2020.

Namibia is resolutely committed to the Paris Climate Agreement, and to taking practical action to reduce local and global emissions while championing a climate resilient economy. To achieve this outcome, the deployment of green hydrogen in hard to abate, energy intensive sectors is critical. Leveraging its natural endowments and buttressing same with targeted policy interventions, political stability and peace, Namibia is strategically poised to meet an anticipated surge in global demand for green hydrogen in, while simultaneously planning to meet its socio-economic goals of shared prosperity.

The production of Green Hydrogen and its derivatives underscores Namibia's ambition for sustainable economic diversification as articulated in its Vision 2030. Namibia's government recognises the fact that true long-term wealth is not purely dependent on a country's natural resources, but rather by the nation's ability to add value to those resources in a manner that improves not only the lives of its citizens but the world by extension. Economic diversification and economic complexity are thus key tenets that the Namibian government are pursuing with great vigour. In its quest to evolve its economy, the Namibian government is progressively investing its efforts to develop a sustainable, manufacturing led or secondary sector. In doing so, Namibia has concluded that championing a Green Industrialisation Agenda is critical to achieving this strategic objective.

Namibia recognises that one of the mega trends of this generation is a broad acceptance that combating climate change is an existential necessity for all humanity. There is a concerted effort to target the decarbonisation of the global economy and in particular those industries that are considered difficult to abate. Most sectors of the economy can be effectively decarbonised by electrifying them, think for example of short-term transportation. An electric scooter when powered by a battery does not substantially alter the value proposition for the user nor the economy but can meaningfully reduce its emissions profile. However, to electrify a 210,000 dead weight ton dry bulk cargo, sea going vessel is not only difficult and costly, but the battery would be so large that it would take up a lot of the space reserved for the cargo thereby limiting the economicutility of such a cargo ship. So how does one decarbonise, shipping, long-distance aviation, steel making and complex chemical industries?

These sectors currently all use carbon-based solutions, whether be they fuels as in the case of heavy fuel oil for ships, aviation fuel, coking coal in the case of steel making or indeed natural gas in the case of fertiliser manufacturing. Finding alternatives to all these carbon-based drivers of industry is key. Here green hydrogen comes in particularly handy. Making green hydrogen entails electrolysis powered by renewable energy which effectively splits the hydrogen molecule from the oxygen molecule in desalinated water. Namibia benefits from world class renewable energy resources and has thus decided to pursue cost effective production of green hydrogen, which by itself is not the easiest or cheapest molecule to transport over very long distances. Therein lies the opportunity to foster the successful incubation of a Namibian Green Industrialisation Agenda. Instead of just being content with manufacturing green hydrogen and trading that product, Namibia is looking to champion subsequent value addition processes that when applied to this molecule can result in new complex products. Namibia is working closely with local and global private sector players to build green ammonia industrial facilities which add nitrogen captured from the air to the green hydrogen to produce a compound that is a key ingredient to the fertiliser industry and could be a potential new fuel for shipping and electricity generation. This additional process is a classic example of an attempt to add value to a nation's basic output in responding to global demand for a specific product or service, thereby justifying the viable deployment of economic capital.

However, green ammonia is but one of the new products that Namibia is championing. Iron ore is a commodity whose molecular structure contains iron and oxygen. To transform the ore and make it useful for steel making, the oxygen needs to be separated from the iron ore before being further processed. Currently the steel making industry uses coking coal (which is substantially just carbon) to bind with the oxygen molecule. The result is the release of carbon monoxide and carbon dioxide which are of course major contributors to climate change. Alternative processes are looking to combine the oxygen in iron ore with hydrogen, the

by product is essentially water vapour as the hydrogen and oxygen bind. Given its ambition to pursue cost effective green hydrogen production at scale, Namibia is attracting new industries such as these and is beginning to put in place appropriate policies and public goods to cost effectively cluster these industries next to one another, effectively beginning to alter the structure of its economy and increasing its economic complexity. Using this novel approach, a company called HyIron is exploring the possibility of producing an annual output of 15,000 tonnes of Direct Reduced Iron in Namibia by late 2024. The facility named Oshivela, will be one of the biggest primary production sites of green iron worldwide. Already at this stage, the project is expected to avoid 27,000 tonnes of CO_2 emissions per year, equivalent to 50% of the CO_2 emissions of Namibia's Power industry. This is the essence of the Namibian Green Industrialisation Agenda.

In partnership with its development partners, Namibia launched a Green Hydrogen Programme under the Ministry of Mines and Energy that is to assist the Ministry with its responsibility of coordinating efforts to realise the goals of the country's Hydrogen and Derivatives Strategy which was launched in 2022. This is the effective execution of the directives outlined in the Harambee Prosperity Plan II which outlined Namibia's plans to explore Green Hydrogen and Ammonia as strategic industries.

Over the past 12 months, post the articulation of HPPII's economic ambition, various green hydrogen projects have emerged in the 3 hydrogen valleys envisioned in Namibia's Green Hydrogen Strategy. Hyphen, the largest of these projects concluded a Feasibility Implementation Agreement with the Government of the Republic of Namibia in May 2023 and is currently pursuing its feasibility study. The first phase of this project alone, which is expected to enter production in 2026, will see the deployment of 2 gigawatts of renewable electricity generation capacity to produce over a million tonnes of green ammonia. A potential by product of this project could be more than 4 terawatt hours of electricity that will have to be curtailed due to the project's inability to consume it all. Part of the feasibility study is examining the viability of capturing some of this excess electricity and feeding it into the local and regional grids. This excess electricity will further entrench the viability of energy intensive green industries setting up within Namibia's borders.

Capturing the benefits of a green hydrogen economy will require unprecedented national and international coordination and collaboration. It is crucial to link Namibia's Green Industrialisation Agenda to a comprehensive sustainable financing strategy to support the commercialisation and growth of the industry – including streamlining access to development finance, accelerating project development and mitigating key investor risks. A new Namibian blended financing platform – "SDG Namibia One" – housed within Namibia's Environment Investment Fund has been established to accelerate the development of Namibia's green economy by reducing transaction costs of accessing and deploying public, private and fit for purpose capital.

Further to this, Namibia has launched a Youth for Green Hydrogen Scholarship which seeks to enhance the technical skillset in the country in partnership with the German government. At the core of this burgeoning portfolio of new industries is the need to develop new skills to further entrench Namibia's competitive edge. Building dedicated capacity within government and strategically orchestrating the formulation of progressive policy and regulation, while managing dynamic project pipeline should result in an unprecedented creation of new jobs and investment for Namibia.

Namibia is fondly referred to as the land of the brave by its citizens and when one zooms out and looks at the scale and complexity of this undertaking, one begins to realise why such a name may be befitting for the citizens of this tiny nation with vast lands and a plethora of economic opportunities. The Namibian Green Industrialisation Agenda attempts to chart a developmental course that is comfortable with skipping carbon based industrial ecosystem and establishing cleaner industries that are future proof and eco friendly, leaving behind a more hospitable planet for all our children. Resultantly, the #LeapToGreen motto is quietly gaining momentum in the hallways of schools, chambers of parliament and boardrooms of pioneering companies in Namibia. The land of the brave is about to scribe a new thrilling chapter in its young history, but don't just read about it, grab a shovel and your cheque book and join these young Namibians as they build a nation that is hell-bent on calling earth home. F

Namibia recognises that one of the mega trends of this generation is a broad acceptance that combating climate change is an existential necessity for all humanity

Green hydrogen is the road to the future

Photo: Charles Moore

Andrada Mining

"Andrada aims to be a tier one technology metals mining company, sustainably creating value for all stakeholders."

Anthony Viljoen,
Chief Executive Officer

Andrada Mining Limited is a LSE AIM-listed technology metals mining company with a vision to create globally significant, conflict-free assets. The Company's flagship operation is the Uis Mine in Namibia, formerly the world's largest open-cast tin mine. Andrada's assets are in the mineral-rich Erongo Region and the Company aims to use first mover advantage to develop a vertically integrated lithium industry in Namibia.

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A nation powered by nature

By NANGULA UAANDJA

Chairperson and Chief Executive Officer, Namibia Investment Promotion and Development Board

NANGULA UAANDJA is a chartered accountant by profession. She led PwC Namibia as managing partner for 10 years and was a partner for a total of 18 years. Over the years she has grown a deep concern for the triple challenges of unemployment, inequality and poverty facing Namibia. This led her to serve as Deputy Chairperson on the President's high-level panel on the Namibian economy and compelled her to accept the appointment as the first CEO and Chairperson of Namibia Investment Promotion and Development Board in 2020.

Greetings from Namibia, a nation of breathtaking beauty and untapped potential. Namibia stands at the precipice of an extraordinary transformation, catalysed by her abundant natural resources and leveraging the power of strategic partnerships to meaningfully contribute towards creating a sustainable future for her people and the world at large.

Nestled in the heart of Southern Africa, Namibia is what one would refer to as a natural beauty, characterised by endless horizons and picturesque landscapes. This is juxtaposed by modern infrastructure including sophisticated financial systems, a world class port and according to the Competitiveness Report published by the World Economic Forum (2016- 2019), the best roads on the African continent. These are but some of the cornerstones of our economy, and equally our comparative advantage as an investment destination.

The allure of Namibia as an investment destination is not solely a matter of happenstance or geographical providence, but rather the result of deliberate, strategic and concerted efforts by the government to create a conducive environment that is responsive to the needs and expectations of investors. Political stability, sophisticated financial systems, trainable workforce and guaranteed investor protection make Namibia an extremely attractive destination. Ultimately, our aim is to attract foreign direct investment needed to enable the country to build a strong, private sector led economy and inclusive growth that drives employment creation and other economic opportunities for Namibians.

Aerial view of Tsau ǁKhaeb national park

Green Hydrogen Potential

Namibia is one of about four countries in the world with the abundance of the natural resources required to produce green hydrogen competitively, enabling the country to position itself to potentially become a renewable energy capital for Africa hub, and an international green hydrogen exporter within the next 10 years. The economic impact from the realisation of these ambitions cannot be overstated, particularly from the perspective of attracting foreign direct investment and related employment creation.

In May 2023, Namibian signed a historic Feasibility and Implementation Agreement with Hyphen Hydrogen Energy, the company that was selected as the preferred bidder to develop the country's first large-scale vertically integrated green hydrogen project in the Tsau ǁKhaeb national park in 2021. With this agreement in place, Namibia is coming closer to realising her ambitions, while playing a significant role in decarbonising the planet and creating a sustainable future for generations to come.

From an investment attraction perspective, the NIPDB remains committed to collaborating with relevant public and private sector stakeholders to ensure Namibia sustains a conducive investment environment, underpinned by progressive policy frameworks and predictable structures and processes. In our quest to ensure that Namibia remains an attractive investment destination, we are deliberate in eliminating constraints that impact the ease of doing business in the country, from advocating for policy reforms to establishing an Investor One Stop Centre. One of the pivotal milestones in our journey so far as an IPA, the Investor One Stop Centre serves as a physical, single point of access to information and our facilitation services for investors. Essentially, with direct access to a host of business related services in a single location, investors no longer have to singlehandedly navigate through complex administrative processes in order to establish businesses in Namibia.

In closing, I would like to reiterate that Namibia is open for business. We welcome investors who are keen on developing and sustaining reciprocal relationships that create shared value - in which the investor is guaranteed a return on investment, while the government reaps economic benefits that enable a better quality of life for all Namibians.

We look forward to welcoming you to Namibia. F

A lithium leader

By JOE WALSH
Managing Director, Lepidico

JOE WALSH is a resources industry executive, mining engineer and geophysicist with over twenty five years' experience working for mining companies and investment banks in mining related roles. He was the General Manager Corporate Development with PanAust and was instrumental in the evolution of PanAust from an explorer in 2004 to a US$2+billion, ASX 100 multi-mine copper and gold company. He also has extensive equity capital market experience and has been involved with the technical and economic evaluation of many mining assets and companies around the world.

As the CEO of Lepidico Ltd, I strongly believe that developing a lithium industry in Namibia will complement the global lithium market with much needed new sources of raw material supply and bring significant benefits to the country. At Lepidico, we have been developing innovative technologies for the sustainable extraction of lithium and other critical minerals from lithium bearing mica ores. Our plan is founded on the redevelopment of several brownfield lithium mines near Karibib in Namibia, with ground work planned to start later this year. This operation includes two open pit mines with a collective life of 19 years currently, with the potential to both expand output and extend life, coupled with a new mineral concentrator. Initially, the beneficiated mineral concentrate will be bagged and transported to Walvis Bay for export to Abu Dhabi. Here a dedicated chemical processing plant will convert the concentrate to a suite of saleable products including lithium hydroxide, caesium and rubidium compounds, sulphate of potash, amorphous silica and a gypsum residue. Lithium, caesium and rubidium are all on the US Government's Critical Minerals List.

Lithium demand forecasts have evolved rapidly over recent years with several commentators including the US Government's Department of Energy predicting demand to exceed 3 million tonnes of lithium carbonate equivalent (LCE) by 2030.

At Lepidico, we have developed unique and patented processes for extracting lithium and other valuable metals from certain mica minerals. These technologies, L-Max® and LOH-Max®, have industry leading sustainability credentials. The processes use a series of chemical reactions in a novel flowsheet to separate and concentrate the lithium and other metals, resulting in a high-purity lithium product. This process is not only environmentally friendly, with planned zero solid process waste, but is also cost competitive with other forms of lithium production and is energy efficient, as no high temperature processing is required.

The hydro-metallurgical processes also have the potential to significantly reduce the environmental impact of lithium production. Traditional hard rock mining and processing can be energy intensive, detrimental to the natural environment and result in significant greenhouse gas emissions. In contrast, the hydro-metallurgical processes are designed to be highly efficient and environmentally friendly, using, where possible, renewable energy sources to power the process, while minimising waste and emissions,

Ore from the Karibib mine on the way for processing

particularly when green hydrogen is employed.

Developing a lithium industry in Namibia using the hydro-metallurgical processes would have significant benefits for the country's economy. This is being evaluated as part of Lepidico's Phase 2 development study. Namibia has historically been reliant on the mining and agriculture industries, and the development of a lithium chemical industry would provide much-needed diversification of the country's economy. The creation of new employment and opportunities for skills development and training would assist in building a stronger more skilled workforce while generating significant revenue, helping to boost the country's overall economic growth. Development of domestic natural gas and green hydrogen industries would be significant enablers for new lithium chemical conversion facilities.

Lithium is a critical component in the production of batteries for electric vehicles and energy storage, and the demand for lithium is expected to grow significantly in the coming years as these industries continue to expand. By developing its own lithium resources, Namibia could become a significant supplier of lithium minerals and potentially chemicals to these industries, helping to meet the growing demand for this critical metal.

At Lepidico, we are committed to working with local communities and stakeholders to ensure that the development of a lithium industry in Namibia is undertaken responsibly and sustainably. This includes minimising the impact on the environment and surrounding communities, and ensuring that local people have access to the associated economic and social benefits from the operations. Lepidico's development will also result in considerable indirect job creation that will boost associated services industries and logistics in the region. This in turn will amplify employment opportunities for the surrounding communities. Our Social value creation programs are aligned with the Namibian National Development Plan (NDP5), the Sustainable Development Goals and developed in partnership with the community, to ensure shared value creation and ownership. In terms of enterprise development, Lepidico has already implemented several micro-finance projects that provide sustained income mostly for women entrepreneurs, augmented with business registration support to ensure participation in the marketplace beyond the mine.

The health sector is identified as another area for support. We are currently providing the community at Otjimbingwe with an emergency maternity unit, a need that was identified by the community. We continue to work with the Tsoaxudaman Traditional Authority and their Community Trust as we jointly explore innovative ways for social and environmental enhancement in the areas of education, heritage preservation, health, water and biodiversity conservation.

In conclusion, developing new mines producing much needed minerals for the global energy transition represents an essential first step for developing the lithium industry in Namibia. Lepidico is committed to evaluating the deployment of its proprietary process technologies in Namibia with the objective of bringing further benefits to the country and its people, and the global lithium market through participation in the green energy revolution. F

At Lepidico, we are committed to working with local communities and stakeholders to ensure that the development of a lithium industry in Namibia is undertaken responsibly and sustainably

Lepidico geologists at the drilling station logging drill chips

Energy transition trailblazers

By ANTHONY VILJOEN
Chief Executive Officer, Andrada Mining

ANTHONY VILJOEN is a mining entrepreneur with over two decades experience of operating in Africa. He was a founding director, and former CEO of Australian listed Lemur Resources. Anthony was a co-founding director of Bushveld Minerals Limited. He holds a Bachelor of Business and Agricultural Economics degree and a postgraduate diploma in banking and investment management. Anthony has served as the CEO of Andrada Mining (formerly AfriTin Mining Limited) since 2021.

Andrada Mining is an AIM-listedtechnology metals mining company with a vision to create a portfolio of globally significant, conflict-free, production and exploration assets. Our flagship asset, Uis Mine in Namibia, is located in the mineral -rich Erongo region. It is formerly the world's largest opencast hard rock tin mine.

We have expanded the existing tin operations to incorporate, for example, a tantalum concentrate production stream. We aim to use our asset position and first mover competitive advantage to rapidly develop a vertically integrated lithium industry within the country.

We commenced a pilot testing programme for lithium during the first quarter of the calendar year, through the Dense Medium Separation ("DMS") processing of bulk samples from the Lithium Ridge licence at Bond Equipment ("BondQuip"), a specialist in mineral processing solutions and a test work provider in South Africa. The first saleable concentrate of high purity lithium petalite was produced in May 2023. The test work to convert lithium petalite concentrate to battery-grade lithium hydroxide was initiated with Nagrom, a leading Australian mineral processing company, and commercial engagements with lithium petalite concentrate industrial off-takers are ongoing.

Construction and commissioning of an on-site lithium bulk sampling pilot plant was completed at the end of September 2023. The on-site pilot plant will expedite Andrada's bulk sample test work and potentially produce small quantities of lithium concentrate for the glass-ceramics industry. The pilot plant's processing capacity is 20 tonnes per hour with targeted minimum annual commercial production of 2,400 tonnes. This facility could generate annual revenues of US$5 million, assuming an average grade of 4.0 per cent Li_2O at an average petalite price of US$2,000 per tonne.

Simultaneously, an exploration drilling programme is ongoing, with the aim of expanding the tin, lithium and tantalum resources over the historically mined pegmatites, all of which occur within a 5km radius of the current processing plant. We have set a mineral resource target of 200 Mt to be delineated within the next 5 years.

As a result of these ongoing initiatives, Andrada has received entities within the lithium value-chain unsolicited approaches from international entities seeking to participate in the acceleration of the lithium strategy by partnering to develop the Uis mining licence ML134. We appointed Barclays through its Investment bank to lead the strategic process.

Finally, we have a board of directors with extensive industry knowledge and a management team with deep commercial and technical skills. We are committed to the sustainable development of our operations and the growth of the business. The leadership team places significant emphasis on creating value for the wider community, investors, and other key stakeholders. We have established an environmental, social and governance system that is implemented at all levels of Andrada and aligns with international standards.

We want to be trailblazers in terms of identifying and developing technology metals across Africa, and we want to play our part in the energy transition. F

Aerial view of the operations at Uis including the bulk sampling (lithium) plant in the foreground taken 20 June 2023

Why Namibia?

By MARCO RAFFINETTI
Chief Executive Officer, Hyphen Hydrogen Energy

MARCO RAFFINETTI has had a successful career spanning 20-years, and his track record includes the execution of over US$1 billion in transactions. He has detailed knowledge of developments in the port, rail and energy sectors and led the development of a 320MW thermal power plant in Richards Bay, to be operated in a system together with 350MW of renewable generation (250MW solar and 100MW of wind), in partnership with two international developers. He was instrumental in the phased development and expansion of the Port of Maputo.

Why Namibia? That is a question I'm often asked when I speak with people that know little about this established democracy. To answer the question, you have to look at the country in its entirety, from its geography and economy to the unique characteristics defining Namibian society and its people.

At its core, our company, Hyphen, is a Namibian green hydrogen company working alongside the Government of the Republic of Namibia (GRN) to develop a first of its kind project that will put Namibia firmly on the global energy map and establish it as a leader in the global decarbonisation race.

Yet over the past 18 months we and our partners are realising our project will do much more than that.

The longer I spend embedding myself in the country and getting to know my Namibian colleagues and communities, the more I feel truly humbled and inspired by the transformational role Hyphen will play for the Namibian economy and most importantly its people and the weight of responsibility that rests upon us.

If you start with the bigger picture, the Global North is firmly set on decarbonising. But there is a disparity with the demand centres for renewable power residing in the Global North while the best and most valuable natural resources – sun and wind – are located in the Global South. This gives Africa a once in a generation opportunity to industrialise and lead the green energy revolution.

This is where our project comes in. Namibia is one of the top three locations in the world for co-located wind and solar power, the resources required to create green (zero carbon) hydrogen. Hyphen's project will convert the country's abundant renewable energy to ammonia and ship it to global demand centres like Europe, South Korea and Japan, to help decarbonise their heavy industries.

Alongside decarbonising global industries, excess clean energy will be provided to Namibia's national grid, helping to meet its own clean energy ambitions and making the country energy independent. Additionally, with all the high renewable resource land owned by the GRN, Namibia is planning for green hydrogen production volumes that are 50 times than that produced by Hyphen, sufficient to sustain as many as 200,000 direct jobs annually. In this Namibia is unique globally as GRN has a high degree of certainty and control over the long-term development of its green energy industry. Namibia is highly attractive to investors given the abundance of clean energy, available land, stable and low risk investment climate and robust democracy - which together will enable Namibia to be amongst the lowest cost producers of green hydrogen in the world.

We have an enormous responsibility, working closely with GRN to ensure the success of the first project as the platform to launching GRN's ambition to establish an entire industry.

Namibia's journey starts with our project which will be sub-Saharan Africa's largest, and its only fully vertically integrated, green hydrogen project. At full-scale development, anticipated before the end of this decade, our project will produce 2 million tonnes of green ammonia annually for regional and global markets. This project alone will cut 5-6 million tonnes of global CO_2 emissions annually. That's more than Namibia's total emissions in 2021 (4.01 million tonnes) and roughly the equivalent to the emissions created from powering 1 million houses for a year.

With a total capital investment of over US$10 billion, roughly equivalent to Namibia's current annual GDP, the project will support the local economy through employment, local procurement and the industrial development of Namibia.

In May this year we signed a landmark concession agreement with the GRN that governs the process for the development, implementation, and operation of this project, which we believe, sets the global benchmark for sustainable development that puts inclusivity and socio-economic development at its heart. We are delighted that GRN has taken up our offer to become a 24 per cent shareholder in the project which further extends the benefit of the development of this sector to the Namibian people.

It's a huge task which will require collaboration with government, partners, and local communities, to establish an entirely new industry. Transformational projects like this will enable the world to decarbonise, and we're incredibly excited about the future and confident in the progress we are making together so far.

Moving forward, in partnership with the GRN, we look forward to working with Namibia and its people to unlock its true green hydrogen potential. F

A hub for SADC

By MBAHUPU H. TJIVIKUA

Chief Executive Officer, Walvis Bay Corridor Group

MBAHUPU H. TJIVIKUA has over 15 years experience in the corridor management, transportation and logistics industry. He served in various senior and executive management roles as well as a part time lecturer in Business Management, Strategic Leadership and Quality Management Systems. He holds an MSc (Operations Management & Leadership) from Worcester Polytechnic Institute, Massachusetts, USA, a B.Ed (Hons), Rhodes University, an HED (Sec), University of Namibia, a Certificate in Project Management, University of Stellenbosch, and a Certificate in Financial Management, Namibia University of Science and Technology.

The Walvis Bay Corridors are positioned to give Namibia a competitive edge as a logistics hub for all regional and international trade between the Southern African Development Community (SADC), Europe, the America's and the rest of the world. Through its world-class commercial ports at Walvis Bay and Lüderitz, international shipping connections and the added advantage of being a gateway to the west coast of Africa, Namibia plays an increasingly important role in trade, linking the global economic centres to over 330 million consumers in southern Africa.

The Walvis Bay Corridor Group (WBCG) was established in 2000 to engage in business development activities aimed at increasing cargo for the Namibian ports and Walvis Bay Corridor, as well as to facilitate corridor and infrastructure development. Based on the track record on corridor development, the WBCG was mandated by the Government of the Republic of Namibia (through the National Planning Commission) as the implementing agency of realising Namibia's vision of becoming a logistics hub for SADC.

The Walvis Bay Corridors are an integrated system of well maintained tarred roads and rail networks – accommodating all modes of transport – from the Port of Walvis Bay via the Trans Kalahari Corridor, Walvis Bay-Ndola-Lubumbashi Development Corridor (previously known as the Trans-Caprivi), Trans-Cunene Corridor, as well as from the Port of Lüderitz via the Trans-Oranje Corridor providing landlocked SADC countries access to transatlantic markets.

The Trans-Kalahari Corridor links the Port of Walvis Bay to Botswana and South Africa. From there, this Corridor links with the Maputo Corridor on the east coast of southern Africa. The Walvis Bay-Ndola-Lubumbashi Development Corridor links the Port of Walvis Bay to the landlinked countries of the Democratic Republic of Congo, Zambia and Zimbabwe. The Trans-Cunene Corridor links the Port of Walvis Bay through northern Namibia to southern Angola, and the Trans-Oranje Corridor links the Port of Lüderitz with the Northern Cape Province of South Africa.

The WBCG's main organisational strength is its unique public-private partnership (PPP) set-up of transport and logistics stakeholders from both the public and private sector. The partnership allows for the pooling of resources, expertise and authorities from both the regulators and the operators, who together form an integrated transport and logistics service for potential customers. Since inception, the WBCG has established a good support system through its model, which enables it to work with both the public and private sector.

Through its regional and global footprint, the WBCG is well positioned to engage cargo owners, shipping lines, and supply chain decision-makers, to divert cargo from competing routes to the Walvis Bay Corridors. The WBCG headquartered in Windhoek, Namibia, currently has offices in Johannesburg, South Africa; Lusaka, Zambia; Lubumbashi, DRC and São Paolo, Brazil.

One of the factors that distinguishes the WBCG from other Corridor Management Institutions, is its Wellness Service, which provides comprehensive health and wellness-related services to long distance truck drivers and communities along the Walvis Bay Corridors.

I believe the disruption in the regional supply chain due to the security incidences, loadshedding and congestion at some ports, has created an opportunity for the Walvis Bay Corridors to increase transit cargo via the ports of Walvis Bay and Lüderitz as well as our corridors.

Our corridors are the safest, secure and most efficient trade routes for exports and imports in the SADC region. F

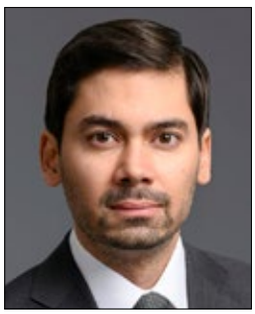
Photo: Charles Moore

Namibia's Skeleton Coast

Investing in Namibia's potential

By MICHAEL W. SCHERB

Founder and Chief Executive Officer, Appian



MICHAEL SCHERB is the founder and CEO of Appian Capital Advisory LLP, the investment advisor to long-term value-focused private capital funds that invest solely in mining and mining-related companies. After a career at JPMorgan, Michael set up Appian in 2012 and has developed the company into the largest PE Fund in the metals and mining sector. Today, Appian manages over US$4 billion for institutional investors including sovereign wealth funds, family offices and pension funds, with a global operating portfolio overseeing nearly 6,300 employees.

Look around and almost everything you see comes from mining. Despite being a global industry steeped in thousands of years of history, it is often underserved and overlooked due to misconceptions over its practices and impact. Those of us in the industry need to be more vocal about the good mining can do. When it is done sustainably and efficiently, mining provides huge benefits for businesses, communities and investors.

Only in recent years has mining's potential become apparent to decision-makers. It is the first link in the entire economic chain, providing the raw materials for everything we use on a daily basis, without which modern life could not function. At the same time, its global reach enables foreign investment to flow to countries around the world. Mining has a 3-5x multiplier effect, meaning for every direct job created, a further 3-5 jobs are created to support the operation. No other industry has this impact.

We are in the midst of the energy transition – which is six times as resource intensive as non-renewables – and mining is playing a fundamental role in sourcing the critical minerals and base metals needed.

At Appian, we are deeply involved in supporting this transformational period. Since 2012, our strategy has been to match quality assets – with a focus on decarbonisation commodities – with long-term capital and technical operating expertise. This means we remain the partner of choice for investors in the metals and mining space. With around US$4 billion of assets under management, we are the largest dedicated mining and metals private equity and credit firm with a world-class portfolio of mines across the Americas, Australia, Africa and Europe.

We look to do business in attractive operating jurisdictions, prioritising environmental, social and governance issues by incorporating them into our investment thesis, while proactively engaging with government, businesses and local communities. This enables us to operate small-footprint mines at peak efficiency, delivering substantial value for all stakeholders.

Rosh Pinah by night

With a strong international reputation for its democratic principles, robust infrastructure and sustainability ambitions, there are few better countries across Africa to invest in than Namibia. The government has projected the country on the world stage and is focused on attracting investment and trade – efforts that have been bolstered by the good work of organisations such as the Namibia Investment Promotion and Development Board, as well as the innovation and energy of the Namibian people.

Appian's acquisition of the Rosh Pinah zinc mine, located in the Kharas region, is one of our three recent investments in this attractive base metal which is playing an increasingly important role in the transition – and Appian's first in Namibia. While the country has rightly championed industries such as clean energy, there is untapped potential in mining to source the critical metals needed to enable decarbonisation.

Having operated almost continuously since 1969, producing up to 2,000 tonnes per day mostly zinc and lead, as well as smaller amounts of copper, silver and gold, the mine has a proven track record of delivery. Appian wants to build on this with the existing management team, using our extensive operational and project development expertise to maximise the potential of the mine for future generations.

More specifically, the ambition for Rosh Pinah 2.0 is to capitalise on the mine's potential through expansion. This includes the construction of new processing facilities, as well as doubling the mine's annual ore throughput each year. But at the heart of the project will be prioritising the safety and environmental performance at Rosh Pinah, a principle that applies to our entire world-class portfolio across several markets.

Appian's entry into the Namibian market has only been possible thanks to the government, our partners and the local community. Their trust and support is something we value deeply, and that we will return through our considerate management of high-profile projects. We look forward to demonstrating the global natural resources potential of Namibia, all the while ensuring the benefits of our industry – in economic, environmental and social terms – are felt at a local level. F

A global green journey

By PROF. DR ANICIA PETERS

Chief Executive Officer, National Commission of Research, Science and Technology of Namibia

ANICIA PETERS was previously Pro Vice-Chancellor for Research, Innovation and Development at the University of Namibia and was also the Chairperson of the Namibia Presidential Task Force on the Fourth Industrial Revolution. Her specialisation is human computer interaction. She holds two undergraduate degrees cum laude from the Namibia University of Science and a Doctor of Philosophy for the Iowa State University and a Post Doctorate from Oregon State University. She is passionate to see tech, research and innovation take off fully across Africa.

Namibia's President introduced the Harambee Prosperity Plan II in early 2021, with a focus on exploring the production of green hydrogen and ammonia. The plan was ambitious and required significant research and development, skills enhancement, infrastructure development, and partnerships. James Mnype, Namibia's Green Hydrogen Commissioner then called upon the two public universities and the education sector to actively participate in the national green hydrogen initiative.

Namibia's tertiary education system comprises only two public universities, several Vocational Training Centres (VTCs), one private university, and private training institutions. Despite considerable investments in education, Namibia's R&D sector is considered weak.

While the two public universities possess some capacity and specialised researchers in certain aspects of the green hydrogen value chain, there is a significant need for specialised skills, research and development funding, as well as access to laboratories and equipment.

In response to these needs, the University of Namibia established the Namibia Green Hydrogen Research Institute.

Initially, the institute operates virtually and involves over 70 existing academic staff distributed across six research areas. These research centres are grouped into thematic clusters, focusing on clean hydrogen production (desalination, solar, wind, electrolysis, etc.), storage and new materials, fuel cell technologies and mobility, local utilisation, regulations, economics, communities, and the environment, capacity building and standards, as well as digital and emerging technologies.

To bridge the skills and equipment gap, the institute has established partnerships with national and international universities, research institutions, and private sector organisations. These collaborations have led to joint research projects, limited upskilling of university staff, and scholarships for postgraduate studies. Additionally, the German Ministry of Education and Research (BMBF) funded four green hydrogen pilot projects, including R&D components, and provided initial scholarships for 93 master's and vocational students.

Another crucial factor for the advancement of green hydrogen is the Information and Communication Technology (ICT) ecosystem in Namibia. In July 2021, I was appointed as Chairperson of an 8-member Task Force on the Fourth Industrial Revolution (4IR). A country readiness assessment to leverage 4IR technologies, focusing on the theme of "4IR as an enabler for a green and inclusive industrialisation," encompassing contextualised predeterminants, the World Economic Forum's Future of Production instrument, and broad 4IR application areas in Namibia. Thirteen recommendations were approved by Cabinet.

In mid-2021, an initial technical committee was formed within the Namibia Green Hydrogen Council, but it was dissolved in November 2021 after fulfilling its assigned tasks. The committee played a vital role in initiating the call for proposals for the development of green hydrogen, and Hyphen Hydrogen Energy was selected as the preferred bidder. As the Chairperson of the Presidential 4IR Task Force, I served on the Green Hydrogen Technical Committee to ensure that the national R&D components and technology requirements were incorporated. However, to achieve the rapid developments in Namibia's green hydrogen plans, R&D needs to be elevated to a national coordination level that will encompass the entire education and R&D sector.

The National Commission of Research, Science, and Technology (NCRST) is Namibia's national agency for research, science, technology, and innovation, created through the Research Science and Technology Act of 2004. Besides its role as a national regulator and funder for research, it is responsible for the promotion, coordination, and development of research, science, and technology across all institutions. The NCRST is also responsible for setting the national research agenda, defining priority research programs, and developing national R&D infrastructure. Green Hydrogen will be one of the national research priorities for the next five years. However, the NCRST is heavily underfunded and relies on external funding and partnerships for national programs and infrastructure.

Namibia's green hydrogen journey is an integrated, multi-faceted global journey as the world strives to decarbonise. Investing in Namibia's capacity in R&D, science, technology, skills development, entrepreneurship and enterprise development, national research institutions, and a conducive policy and regulatory framework with adequate tax incentives and reduced trade barriers is critical. Join us on our journey. F

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