

# Namibia QER Q4 2021

Namibia Quarterly Economic Review

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## Green Hydrogen and Namibia: Has the Future Arrived?

### Introduction

This short feature summarises the progress Namibia has made in developing its own green hydrogen and ammonia industry and highlights some of the challenging issues involved. It is not a comprehensive analysis of the economic and financial viability of such an industry which is beyond the scope of our monthly QER.

### This Time is Different...

When President Geingob launched his Harambee Prosperity Plan II in March, many people shrugged their shoulders. Another year, another plan. Thirty years of visions, manifestos, national development plans, white papers, strategies and targets had led many to think that such documents were little more than window dressing; thick documents designed to give the impression of real action while, in reality, little changed. Many of these initiatives sank without trace and there were few if any consequences from not following through. This time is different. Since March, Presidential Economic Advisor James Mnyupe and the CEO of the Namibian Investment Promotion and Development Board Nangula Uaandja have turbo-charged the initiative contained in HPPII, namely to [pages 36 and 37]:

***Investigate the feasibility of Green Hydrogen and Ammonia as a transformative strategic industry.***

*To unlock the above potential the following actions will be carried out:*

*An Inter-Ministerial Green Hydrogen Committee (GHC) shall be constituted in first quarter of the 2021/22 financial year to oversee the development of the opportunity set during the HPPII period.*

*A National Green Hydrogen and Ammonia Strategy shall be drafted by the end of third quarter of the 2021/22 financial year.*

*A detailed feasibility study shall be conducted and completed by 2023 with a Final Investment Decision (FID) expected in 2024.*

*The development of the Southern Corridor Development Initiative (SCDI) vision shall be championed by the GHC and phase 1 of the concept will be completed by fourth quarter of the 2021/22 financial year. The SCDI shall include a portfolio of complementary projects and infrastructure that maximises the opportunity presented by Green Hydrogen and Green Ammonia for the country.*

*A coordinated approach with Green Diplomacy is required to unlock support from countries with similar ambitions. This will be coordinated under Goal 3, Activity 1 above throughout the HPPII period.*

At the time, this seemed extremely ambitious, especially given Government's record on delivery. Developing countries, because they are generally technology followers rather than leaders, typically grow by developing industries already developed elsewhere but where, because of lower labour costs or other factors, they are able to get on the development ladder. Garment manufacturing and diamond cutting and polishing are good examples of this. In this case, however, Namibia's ambition is to get in on the ground floor of a new global industry at the beginning of what is likely to be a rapid growth path and become a world leader. The ambition is breath-taking. Yet the table below shows that a broad section of government has moved quickly to drive this ambitious agenda forward.

**Table 1: The story so far**

<b>Date</b>	<b>Event</b>
16 March 2020	President Geingob announces he will create a Namibia Investment Promotion and Development Board to replace the Namibian Investment Centre.
June 2020	Germany publishes a National Hydrogen Strategy, one of the first countries to do so.

1 September 2020	James Mnyupe is appointed Presidential Economic Advisor from 1 September 2020.
December 2020	World Bank publishes “Green Hydrogen Opportunities for Namibia – Phase I Report”.
1 January 2021	Namibia Investment Promotion and Development Board (NIPDB) is established in the Office of the President and Nangula Uaandja is appointed CEO.
18 March 2021	President Geingob launches the Harambee Prosperity Plan II with the Southern Corridor Development Initiative as part of the Economic Advancement Pillar.
31 March 2021	A delegation from the Fortescue Future Industries visits Namibia on an exploratory mission to establish a green hydrogen project in Luderitz and pays a courtesy call on Prime Minister Saara Kuugongelwa-Amadhila.
June 2021	Global engineering consultancy Hatch develops “Namibia’s Green Hydrogen Strategy” at the request of Government.
May 2021	McKinsey & Co publish “Roadmap to Build Namibia’s Green Hydrogen Sector”.
28 May 2021	“Namibia Port of Rotterdam Hydrogen Supply Chain Prefeasibility Report” is published
7 June 2021	The US Department of Energy launches its first Energy Earthshot – the hydrogen shot – aiming to reduce the cost of clean hydrogen by 80% to less than US\$1 for 1kg in 1 decade (“111”).
3 August	James Mnyupe is appointed Green Hydrogen Commissioner and eight-member Green Hydrogen Council is established.
3 August 2021	President Geingob launches green hydrogen Request for Proposals (RFPs) which are handled by the NIPDB.
17 August 2021	UK launches Hydrogen Strategy.
25 August 2021	NPC Director General Obeth Kandjoze signs a €40 million hydrogen partnership between Namibia and Germany and a Joint Communique of Intent in Windhoek and Berlin.
31 August 2021	US holds “Hydrogen Shot” Summit.
16 September 2021	Namibia receives nine bids from local, regional, and international developers to create large-scale green hydrogen projects for the SCDI.
2 September 2021	The Green Hydrogen Research Institute is established at the University of Namibia following Cabinet approval.
4 October 2021	Namibia hosts a Namibia Energy Roundtable at the World Economic Forum.
October 2021	The Konrad Adenauer Stiftung publishes <a href="#">“Issues, Challenges and Opportunities to Develop Green Hydrogen in Namibia”</a> by Dr Detlof von Oertzen. The report is launched in December.

4 November 2021	Energy Minister Tom Alweendo signs an MoU with the Belgian Government under which Belgium will assist Namibia develop a hydrogen refuelling station and a medium-sized solar power plant.
4 November 2021	At the COP26 in Glasgow Namibia announces Hyphen as the preferred bidder to develop a US\$9.4 billion vertically integrated green hydrogen project in the Tsau //Khaeb national park. Government states it hopes to take up a stake of between 10% and 24% in the operation.
10 November 2021	Namibia Ports Authority signs an MoU with Europe’s largest port operator the Port of Rotterdam to create the infrastructure needed to transport renewable fuels to Europe.
23 November 2021	James Mnyupe tells the Africa Green Hydrogen Forum that Namibia may release a second Request for Proposals for the development of a second large-scale green hydrogen complex at the World Economic Forum in January 2022.
16 December 2021	Inaugural meeting of the Namibia private sector green hydrogen task force takes place.

Certain aspects relating to the transparency of this process can be questioned. Who were the nine bidders that responded to the Request for Proposals (for RFPs)? Reportedly Sasol and Fortescue Future Industries were two according to an article in The Wall Street Journal. Who is Hyphen Hydrogen Energy’s shareholder Nicholas Holdings Ltd, what is its relationship to Principle Capital and why is the website of Principle Capital so outdated? Who are the local partners in the venture? Did any Chinese companies bid? But there is no doubt that things are moving forward at a rate not seen in Namibia since the days of Ramatex.

### Green Hydrogen – the Basics

To appreciate the challenges Namibia will face in getting this new industry off the ground, it is important to understand some of the basic characteristics of the Green Hydrogen and Green Ammonia industry. An excellent summary is contained in *The Economist* of October 9<sup>th</sup> -15<sup>th</sup> 2021.

Hydrogen is the first element in the periodic table and the most abundant element in the universe.

Hydrogen gas H<sub>2</sub> has always had three characteristics that made it attractive as a fuel even before climate change came along: it is very energy dense (2.6 times more per kilo than natural gas and three times more than kerosene) it can be made from coal or electrolysis, freeing consumers from the tyranny of oil producers. When hydrogen is combined with oxygen it releases energy to form water. In principle, therefore, it could make a good fuel and, because it forms water rather than damaging Greenhouse Gases (GHGs), could contribute towards reducing emissions.

However, at the temperature and pressure present on planet earth, molecular hydrogen H<sub>2</sub> is rare because it is so reactive. It therefore needs to be manufactured from other substances and this itself requires energy.

Different ways of manufacturing hydrogen exist, each of which is denoted by a different colour depending on the extent to which the manufacturing process emits GHGs. As one moves down the table the less GHGs are emitted in the manufacturing process.

**Table 2: The Many Colours of Hydrogen**

↓	Black hydrogen	Hydrogen manufactured from coal
	Grey hydrogen	Hydrogen manufactured from natural gas
	Blue hydrogen	Hydrogen manufactured from fossil fuels but with carbon capture and storage
	Pink hydrogen	Hydrogen manufactured using electrolyzers powered by nuclear power
	Turquoise hydrogen	Hydrogen manufactured by heating methane
	Green hydrogen	Hydrogen manufactured using electrolyzers powered by renewable energy

Most of the world's current US\$150bn 90m tonne hydrogen business is produced by burning fossil fuels with air and steam and therefore emits large quantities of GHGs. This uses up 6% of the world's natural gas and 2% of its coal and emits more than 800m tonnes of CO<sub>2</sub>, about the same as the whole of Germany.

Hydrogen can also be produced by electrolysis. There are three types of electrolysis: alkaline electrolysis, proton exchange membrane (PEM) electrolysis, and high temperature electrolysis. Hydrogen can be produced using an electrolyser powered by electricity to split water H<sub>2</sub>O into its component parts hydrogen H<sub>2</sub> and oxygen O (or O<sub>2</sub>). At the moment, electrolyser technology exists but not on the scale required to generate large quantities of hydrogen. Presently the world has about 3GW of electrolyser capacity although McKinsey expects this to grow to 100GW by 2030.

Despite its attractive properties as a fuel, current production of H<sub>2</sub> is not predominantly for use as fuel. Current production of H<sub>2</sub> is vital because one of its main uses is in the production of industrial ammonia (NH<sub>3</sub>), the main ingredient of artificial fertilizers. This is done using the famous Haber-Bosch process. Green Hydrogen could be combined with atmospheric nitrogen to produce Green Ammonia. Gaseous ammonia is readily liquefied by compression under ambient conditions making it easier to ship than hydrogen. Furthermore, much of the infrastructure already exists to do this. Ammonia can be used to transport hydrogen but this is associated with conversion losses of 40%. Ammonia can be used as a store of hydrogen although it has its dangers, being a flammable, highly corrosive and toxic gas associated with health and safety as well as environmental risks.

With the increasing need to decarbonise to reduce GHG emissions, hydrogen's qualities as a fuel are coming to the fore. Although hydrogen is unlikely to be used to decarbonise some activities (for example, for personal transport battery powered cars appear to have the

advantage in high-income countries despite the development of hydrogen-powered cars by companies such as Toyota), many other areas need to be decarbonised from heating buildings, to steel and cement production, to heavy duty vehicles and power generation.

Liebreich Associates has drawn up a hierarchy of hydrogen use viability – a hydrogen ladder – ranking how suitable hydrogen is in certain areas. Estimates by investment banks such as Goldman Sachs estimate the demand for hydrogen for many processes could reach 500Mt by 2050 from today's 90Mt.

Despite all its attractive properties, hydrogen has considerable drawbacks. At room temperature hydrogen is a gas. Although by the kilogram hydrogen contains three times more energy than kerosene, by the litre it contains 3,000 times less. The gas has to be either pressurised or liquefied if it is to be transported and used. Liquefaction requires reducing the temperature to -253 degrees centigrade. These characteristics suggest a certain amount of scepticism is in order when it comes to storing and transporting hydrogen. Many of these drawbacks have given rise to an industry joke:

**“Hydrogen is the fuel of the future – and always will be.”**

Faced with the urgent need to decarbonise, governments, especially those in high-income countries, are faced with having to create a new green hydrogen industry ensuring both supply and demand grow. Germany, the US and the UK are among the countries that are developing policies to grow the industry.

If Namibia can use its solar and wind resources and its proximity to seawater on the coast to generate green hydrogen, it can export into a market that looks set to grow up to 2050 and beyond. This will involve using its abundant solar resource to drive sea water desalination plants to provide water which is then split in electrolyzers also driven by electricity generated by renewables into hydrogen and oxygen. The hydrogen needs to be transported to major markets with the European market being the most proximate while some may be consumed locally and regionally. This will therefore require constructing an integrated green hydrogen facility involving solar PV or wind generated electricity, sea water desalination plants, pipelines, harbour and shipping facilities. The whole idea works only if all the components work and scale is critical. And the critical question is how much it will cost and what this means for the cost of delivered H<sub>2</sub> to the end consumer.

Because of the rapidly falling cost of renewable energy, the cost of green hydrogen looks set to fall from US\$10/kg in 2020 – generally higher than blue hydrogen (from coal or gas with Carbon Capture and Storage or CCS) to less than US\$2/kg by 2050 according to BloombergNEF. The US Hydrogen Shot aims to bring the cost down to US\$1/kg with a decade. McKinsey thinks Namibia could be producing green hydrogen at US\$1.5/kg by 2030 compared to an estimate of between US\$4-5.5/kg in 2020. This places Namibia among the five lowest-cost producers in the world (with Australia, Chile, Spain and Saudi Arabia).



Given these characteristics, the main elements of any green hydrogen industry in Namibia would have to incorporate the following six components:

1. Sea water desalination plants – to generate the pure water needed as an input.
2. Electrolysers – to split the water into its components of hydrogen and oxygen.
3. Renewable power (solar pv or wind) to generate the electricity to power the desalination and electrolysers.
4. On-site storage infrastructure at a suitable location
5. Pipelines to carry the hydrogen to local and regional markets or to a port.
6. Port infrastructure sufficient to be able to receive, store and load ships to carry the final product to market.

To these could be added an ammonia plant driven by renewable energy which would combine the hydrogen produced with atmospheric nitrogen as described above.

### **The Namibia Proposal**

The winner of the RFP was Hyphen Hydrogen Energy. Although Hyphen now has two years to conduct feasibility studies and firm up their concept, at this stage only a brief outline of the project is known. The following paragraphs are from the Hyphen website:

*“The US\$9.4 billion (about the same size as the entire Namibian economy) is planned to be developed in phases, ultimately targeting 300,000t of green hydrogen production a year for regional and global markets either as pure green hydrogen or in derivative form (green ammonia). Following the conclusion of a feasibility study and sign-off by government, Hyphen will be granted the right to construct and operate the project for a 40-year period. The first phase, which is expected to enter production in 2026, will see the creation of 2GW of renewable electricity generation capacity to produce green hydrogen for conversion into green ammonia at an estimated capital cost of US\$4.4 billion. Further expansion phases in the late 2020s will expand combined renewable generation capacity to 5GW and 3GW of electrolyser capacity, increasing the combined total investment to US\$9.4 billion.*

*“Once fully developed, the project will provide a major boost to Namibia in terms of foreign direct investment and job creation. The US\$9.4 billion investment amounts to the same order of magnitude of the country’s current GDP, and will see nearly 15,000 direct jobs created during the four-year construction of both phases, with a further 3,000 jobs created permanently during the operational phase. More than 90% of all these jobs created are expected to be filled by Namibians. In addition to taxes, HYPHEN will pay concession fees,*

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*royalties, a sovereign wealth fund contribution and an environmental levy to the Government.”*

At this stage, not much more information is available. Hyphen does not mention a government shareholding. Clearly, much has yet to be decided.

### **Conclusions – Betting the House**

The scale and ambition of what is being proposed to develop a globally competitive green hydrogen and ammonia industry in Namibia is like nothing the country has ever seen before. Rather than tread a proven path already taken by other countries that have successfully achieved rapid growth and development, Namibia is aiming to take a great leap forward and become a global leader in an almost totally new industry.

The strength of this vision is that, unlike many past plans, it is based on some economic fundamentals i.e. Namibia’s abundant solar and wind resources and the ample availability of land next to the ocean and some existing port infrastructure. In that sense it is very different from Ramatex where Namibia was trying to attract internationally footloose companies which could locate almost anywhere. However, other locations exist – nearer industrial consumers – which may prove more suitable and the presence of certain strengths does not mean the costs of delivering the end product to where it is needed necessarily stack up. Detailed costings will be required to assess whether this can be done sustainably and profitably.

The weakness is that much of the technology required is at a scale that is untested and needs more development. Furthermore, Namibia possesses little of the industry expertise required meaning foreign expertise will have to be imported. Although expertise can be purchased, it means Namibia will find itself in a weak negotiating position until it develops this capacity itself. The project entails a wide range of considerable risks: technical, capacity, legal, financial, economic, political, environmental and reputational. An [article in CleanTechnica](#) from 21 December 2021 (which specifically mentions Namibia) summarises the high degree of technical scepticism that exists in some quarters:

*“All of the projects proposing to manufacture hydrogen where sunshine and wind are constant and cheap, and ship it to where energy is consumed, are clearly based on hand-waving, ignorance, sheer #hopium or outright larceny.”*

Fortunately, Namibia seems to have accepted that it is going to be the private sector that pioneers and drives this development and bears the financial risks associated with it although it is not yet clear how the project is going to be financed. It is hard to see how the Namibian government is going to play a role of any significance given the current state of the public finances but it would not be a surprise to see the GIPF strong-armed into providing funding.



Although the US\$9.4 billion cost of the project cannot be directly compared to the country's GDP which measures value added, it does give an idea of the size of what is being proposed. It is almost like a second economy is being bolted on to an existing one with only very few linkages to it, not dissimilar perhaps to De Beers and Oranjemund with which Government has decades of experience. Given the size of the project and the 40-year contract, it is critical that the right partner is chosen. It is very much like getting married - even more so than, for example, the case of De Beers in diamond mining. Yet the choice was made hurriedly, in just a couple of months, on the basis of an RFP and an opaque selection procedure. Hopefully Government brought (and continues to bring) strong scientific and engineering expertise to bear on the decision to award the proposal to Hyphen rather than just allowing politicians to make the decisions. Admittedly, Government and Namibia are not committed to very much at this stage and a lot of what has been spent has probably been provided by foreign donors. Nonetheless, that will change by the time the really serious money will have to be spent. That also coincides with the next presidential transition in Namibia.

Because of the strategic nature of the investment, it would make sense for Government to hold a stake in the project (rather than assorted individuals chosen for their connections to Government or the ruling party). This stake could take different forms but the Namibian State will need to have a say on major decisions which will have national and macroeconomic implications. This needs to be done in a way that does not endanger commercial viability. Taking a stake without providing the funding means the hurdle rate of return will need to be higher to attract the private investment required.

At the same time Government is unlikely to be able to contribute much towards funding. If it does contribute, it will have to make sure it is covered if the private developer fails to deliver. Government does not want to be left paying the bills or left with half completed infrastructure or a severely damaged environment.

From the private investor's point of view, it is critical to know that the project has the wholehearted backing of national government. But it will be wary of any funny business such as being forced to use or pay off particular favoured individuals or companies or having to pay backhanders. If Namibia is to develop a top class international green hydrogen brand, it will have to make sure the development is clean in a political as well as an environmental sense. Furthermore, the tax regime will need to be clear from the beginning. Like other countries, Namibia has displayed a tendency to chop and change tax rules in the mining sector. As soon as profits arise, government claims it is being cheated whereas when losses are sustained government is nowhere to be seen. Talk is already of revenues accruing to a Sovereign Wealth Fund. It may take many years before the cost of development is recouped and real profits start to accrue. The state of competition in the global industry is not yet known. It is too early to judge to what extent Namibia will be a price setter or a price taker. If customers get the sense that Namibia intends to use any market power it might have to jack up prices they will go elsewhere. A green hydrogen OPEC is unlikely to last long and for the European market countries like Spain or Morocco may hold significant advantages as

transport represents perhaps the critical technical challenge for green hydrogen. It may be that ammonia rather than hydrogen needs to be produced for transport reasons. Namibia has a long-proven track record in the supply of uranium to world markets providing around 10% of new global supplies in recent years as one of the world's top four uranium-producing countries.

Namibia appears to be putting all its development eggs in the green hydrogen basket. It is to the country's credit that it has moved so quickly on something so visionary. Yet it is hard not to see this progress and wonder why the same energy could not have been put into the less glamorous and high-profile business of improving the country's overall investment environment (over which legislation like the Namibian Investment Promotion Act and the National Equitable Economic Empowerment Bill continue to hang like dark clouds). Will Green Hydrogen be a "reserved sector" and what does this mean? Ironically, many of the issues which will have to be faced in getting a green hydrogen industry off the ground – taxation, regulation, ownership, strategic stakeholders – are precisely those which Namibia's broader investment policies would have to address anyway. While clearly not as high profile and glamorous as Green Hydrogen, it is quite possible that modest improvements in the investment environment would have many smaller, more dispersed but positive effects which together could make as much of an impact on growth, employment, and incomes. Whether this happens or not, it is likely that a longer and more considered period of courtship is required if Namibia's green hydrogen marriage is to be a successful and lasting one.

## News Highlights

Date	Highlight	Commentary
28 December	US lifts travel restrictions (CGTN)	On 28 December the US lifted travel restrictions on eight southern African countries including Namibia.
22 December	Green hydrogen likely to be relatively jobless (The Namibian)	Cirrus Capital's Rowland Brown called Namibia's green hydrogen project a "dreamy long-term megaproject" which is likely to be relatively jobless given the capital-intensive nature of green hydrogen production.
22 December	Namibia vaccination rate too low (Namibia Fact Check)	According to Namibia Fact Check, too few Namibians are getting vaccinated and this would prolong the Covid pandemic and its impacts on society. By the end of December, Namibia had missed the WHO target of having 40% of the population vaccinated.
22 December	BIPA to go after defaulters (The Namibian)	The Business and Intellectual Property Authority's Ockert Jansen warned that it would soon go after registered businesses which were not up to date with their registration levies.
16 December	Namibia ranks 19 <sup>th</sup> on African visas (The Namibian)	Namibia has been ranked as the 19 <sup>th</sup> most visa open country in Africa and fourth in southern Africa in the African Development Bank's Africa Visa Openness Index. Namibia has risen 21 places since the first ranking in 2016.
14 December	UK drops Namibia from Red List (BBC)	The UK dropped all eleven African countries, including Namibia from its Red List.
14 December	President confirms fourth wave (CGTN Africa)	President Geingob confirmed Namibia was experiencing a fourth wave of Covid infections as he introduced some modest tightening of Covid restrictions.
13 December	Shell spuds Graaff-1 exploration well (Energy Voice)	Shell announced that it has spudded the offshore Graaff-1 exploration well in Namibia's Orange Basin located near the TotalEnergies Venus well.
13 December	ReconAfrica water drilling illegal (The Namibian)	Agriculture Minister Calle Schlettwein summoned ReconAfrica to explain why it drilled for water for industrial use in the Kavango region without permits.
10 December	ACC reports decline in corruption cases (The Namibian)	The Anti-Corruption Commission (ACC) reported that there had been a reduction of reported corruption cases from 385 in 2017/18 to 380 in 2018/19, 187 in 2019/20 and 120 in 2020/21.
8 December	Bank of Namibia leaves repo rate at 3.75% (BoN)	The Bank of Namibia's Monetary Policy Committee (MPC) again left the repo rate at 3.75% and raised its growth forecast for 2021 from 1.4% to 1.5%. Namibia's repo is now on par with that of South Africa.
8 December	NamRA owed N\$162bn (New Era)	Namibia Revenue Authority (NamRA) spokesman Tonateni Shidhudhu announced that 264,710 taxpayers owed it N\$162bn. NamRA is currently running an Electronic Filing Tax Relief Programme to assist taxpayers in becoming tax compliant. Shidhudhu said the relief, which waives 100% of penalties and 75% of interest

		on the settlement of the capital overdue tax amount will expire on 31 January 2022.
7 December	South African GDP contracts 1.5% quarter-on-quarter (StatsSA)	Quarterly GDP in South Africa contracted 1.5% quarter-on-quarter in Q3 2021 from a revised 1.1% growth in Q2.
6 December	Bank of Namibia revises growth to 1.5% (Namibia Economist)	The Bank of Namibia revised its growth forecast from 1.4% to 1.5% for 2021 and 3.3% in 2022.
3 December	Novanam acquires two new trawlers (Namibia Economist)	NovaNam acquired two new deep-sea trawlers MFV NovaNam I and NovaNam II valued at N\$320m. They come on top of the MFV Lalandii I which entered service in 2020. All three vessels are based at Luderitz.
3 December	Namibian Investment Promotion Bill withdrawn (New Era)	Namibia's draft investment legislation was withdrawn after the Namibia Investment Promotion and Development Board (NIPDB) published a letter criticising its contents. Deputy Executive Director at the Ministry of Industrialisation and Trade Dr Michael Humavindu published an article in New Era entitled "Decoding the Draft Namibia Investment Promotion and Facilitation Bill".
2 December	Gawaxab appointed for five more years (The Namibian)	President Geingob appointed Bank of Namibia Governor Johannes Gawaxab for a further five years from 1 January 2022. Gawaxab was appointed from 1 June 2020 to serve the remainder of Governor Shiimi's term of office after Shiimi was appointed Minister of Finance.
2 December	Bank of Namibia launches strategic plan (The Namibian)	Bank of Namibia Governor Johannes Gawaxab launched the Bank's 3-year strategic plan which sees it becoming a driver of digital transformation, financial inclusion and economic growth.
1 December	TotalEnergies spuds Venus well (Offshore)	TotalEnergies announced that its vessel Maesk Voyager has spudded the Venus-1X exploration well in 3,000m water depth offshore southern Namibia. TotalEnergies operates the surrounding block 2913B in partnership with Impact Oil & Gas, QatarEnergy and Namcor.
27 November	WHO classes new variant "of concern" and name Omicron (BBC)	The World Health Organisation (WHO) classed the new variant of Covid first identified in South Africa on 24 November as "of concern" and named in Omicron.
26 November	Namibia to receive N\$1bn grant from China (Namibia Economist)	The Chinese Government will provide the Namibian Government with a RMB400m grant for projects that will be mutually agreed. According to the Chinese Ambassador Zhang Yiming, since the Johannesburg Summit of the Forum on China-Africa Cooperation (FOCAC) in 2015, China has completed nearly 20 projects grants in Namibia worth RMB1.4bn (N\$3bn).
25 November	Namibia placed on UK Red List	The UK announced Namibia and five other southern African countries would be placed on its Red List from midday Friday 26 November. This was later followed by other countries in Asia, Australia, Europe and the Americas.

25 November	Health ministry warns of slow uptake of Covid vaccines (Reuters)	Health Ministry spokesman Ben Nangombe warned that 268,000 doses of AstraZeneca and Pfizer vaccine may have to be destroyed due to the slow uptake by Namibians. A total of 298,503 people or 20% of the eligible population have been vaccinated.
24 November	Mining expert appointed Fishcor CEO (The Namibian)	Public Enterprises Minister Leon Jooste confirmed that Alex Gawanab has been appointed the new CEO of the state fishing company Fishcor from December. Gawanab has a background in mining.
24 November	Passenger ships return to Walvis Bay (The Namibian)	The port of Walvis Bay welcomed the MS Europa, ending more than a year of passenger vessels' absence from Namibian ports due to the Covid pandemic.
19 November	MTC lists on the NSX (Namibia Economist)	In the first ever listing of a public enterprise in Namibia, MTC listed on the NSX at N\$8.50 a share. The free float of MTC at listing is 39.9% with Government continuing as the majority shareholder.
18 November	South African Reserve Bank raises repo rate by 25bp (SARB)	The South African Reserve Bank raised the key repo rate 25 basis points to 3.75% bringing it into line with Namibia's repo rate.
18 November	Public Enterprises to become part of Ministry of Finance (press release)	In a press release Public Enterprises Minister Leon Jooste announced that the Ministry of Public Enterprises would be phased out and transformed into a new Department for Public Enterprises within the Ministry of Finance.
17 November	Hosea Kutako commissions new check-in facilities (The Namibian)	Hosea Kutako International Airport commissioned new check-in counters and other facilities in a newly expanded check-in hall.
17 November	Government cancels two drilling permits (The Namibian)	The Ministry of Agriculture cancelled two prospecting permits issued to Russian-owned Headspring Investments because of gross negligence. Farmers in the Stampriet area had complained about the drilling affecting aquifers.
15 November	Heineken to buy Namibia Breweries (Reuters)	Dutch brewing giant Heineken announced its plan to buy South Africa's Distell Group Holdings and Namibia Breweries to form a southern African drinks group worth €4bn. Heineken will buy the 50.01% interest of Ohlthaver & List Group of companies in NBL Investment Holdings and already owns the remaining 49.99% of the holding vehicle.
10 November	Namport signs MoU with Port of Rotterdam (Namibia Economist)	Namport and the Port of Rotterdam in the Netherlands signed an MoU to collaborate on the handling of green hydrogen.
10 November	Farmworkers to receive rise of 18% from January (Namibia Economist)	The Agricultural Employers Association, the Namibia National Farmers' Union, the Namibia Emerging Commercial Farmers' Union and the Namibia Farm Workers' Union signed an agreement that will see the minimum wage agreed in 2017 rise by 18% from 1 January.
4 November	Hyphen announced as preferred bidder (Xinhua)	Presidential Economic Advisor and Hydrogen Commissioner James Mnyupe announced Hyphen Hydrogen Energy as the preferred bidder to develop a

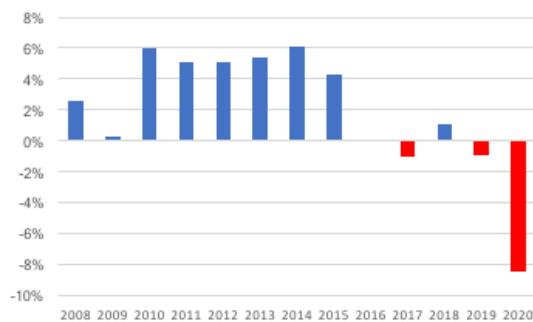
		green hydrogen project in the southern region of //Kharas. Hyphen will now commence a two-year N\$250m feasibility study.
3 November	Finance Minister delivers Mid-Term Review (The Namibian)	Finance Minister Iipumbu Shiimi delivered the Mid-Term Review. Revenues were higher than forecast earlier in the year and the Minister chose to spend and reallocate N\$2.2bn of spending rather than pay down debt (see <a href="#">IPPR Briefing Paper</a> ).
2 November	Otjikoto mine produces 68,959 ounces of gold in Q3 2021 (B2Gold)	B2Gold reported that its Otjikoto mine produced 68,959 ounces of gold in Q3 2021, 3% above budget.
26 October	Namibia to create Sovereign Wealth Fund (Bloomberg)	Finance Minister Iipumbu Shiimi confirmed that Government is to establish a Sovereign Wealth Fund (SWF) to serve as a buffer against future economic shocks.
21 October	Namdeb produces 399,000 carats in Q3 2021 (AA)	Anglo American reported that Namdeb Holdings produced 399,000 carats in Q3 2021 compared to 338,000 carats in Q2 2021 and 242,000 carats in the same quarter of 2020. Out of this total 90,000 carats came from land-based operations.
20 October	Bank of Namibia leaves repo rate at 3.75% (BoN)	The Bank of Namibia's Monetary Policy Committee (MPC) again left the repo rate at 3.75%. The next MPC meeting is due on 8 December.
19 October	FNB Namibia terminates accounts of Fishrot accused (The Namibian)	As part of a de-risking exercise, FNB Namibia is moving to close the bank accounts of three accused linked to the Fishrot anti-corruption case. This comes two years after it closed accounts of oil speculator and wheeler dealer Knowledge Katti.
19 October	Trigon announces recommencement of mining at Kombat (Street Insider)	Toronto-listed Trigon Metals announced it had commenced mining at Kombat copper mine after 14 years with a successful blast at the open pit mine. Trigon holds an 80% interest in five mining licences in the Otavi mountainlands. Trigon says it plans to ramp up production at Kombat to 14,500t of copper concentrate per year by 2024 by bringing both open and underground pits on stream.
15 October	President Geingob announces further relaxation of Covid restrictions (Xinhua)	In his 35 <sup>th</sup> public briefing, President Geingob announced further relaxations to Covid restrictions including increasing the number of people who can gather from 150 to 200 while the 11pm curfew time was suspended effective from 16 October.
14 October	Namdeb to extend land-based operations to 2042 (De Beers)	Government of Namibia and De Beers 50:50 joint venture Namdeb announced that as a result of royalty relief (from 10% to 5%) from 2021 to 2025, a new business plan could see land-based operations continue as long as 2042. Land-based operations were due to come to an end in 2022.
11 October	NamRA to focus on fishing industry (The Namibian)	Namibia Revenue Authority CEO Sam Shivute revealed that it had commenced an investigation about compliance in the fishing industry in August which was



		due to be completed by November. NamRA has so far raised N\$23bn out of a target of N\$48.8bn for FY21/22.
11 October	Air Namibia staff owed N\$105m in severance packages (The Namibian)	Air Namibia's joint liquidators David Bruni and Ian McLaren are reported to have paid Air Namibia employees their 12-month salaries of N\$278m but are still owed N\$105m in leave days and pension payments.
8 October	Development Bank of Namibia confirms climate change facility (New Era)	Development Bank of Namibia CEO Martin Inkumbi confirmed a facility to finance climate change adaptation.
5 October	Namibia poised to become renewable energy hub of Africa (Namibia Economist)	President Geingob's address to the World Economic Forum laying out Namibia's future plans to become a hub for renewable energy including solar power and green hydrogen was republished in the Namibia Economist.
4 October	Fuel prices set to rise (The Namibian)	The Ministry of Mines and Energy announced that petrol and diesel prices would rise by 30 cents to N\$14.45 and N\$14.18 respectively by midnight on 4 October.
1 October	SWAPO unveils new think tank (New Era)	At a media briefing in Windhoek, the governing SWAPO Party unveiled a new 34-person think tank consisting of members from academia and state-owned enterprises. The think tank will guide party policy and consist of eight sectoral clusters including economics, infrastructure and services and will serve for one year.
1 October	FENATA members concerned about NTTFF (New Era)	The member associations of FENATA distanced themselves from what they deemed attacks from the newly established Namibia Travel and Tourism Forum ( <a href="http://www.namibiantourism.com">www.namibiantourism.com</a> ) which they believe could be damaging to Namibia's tourism industry. Membership organisations reaffirmed their support for FENATA as the voice of tourism in Namibia.
1 October	US Delegation arrives to discuss climate change and clean energy (US Embassy)	A US delegation led by Deputy Secretary Jonathan Pershing arrived in Namibia to discuss climate change and clean energy with Government and civil society partners. The delegation included Mark Carrato Coordinator of Power Africa which is behind the 5GW Mega Solar Partnership between the Governments of Namibia and Botswana as well as the African Development Bank, the World Bank, the International Finance Corporation and the African Union Development Agency.

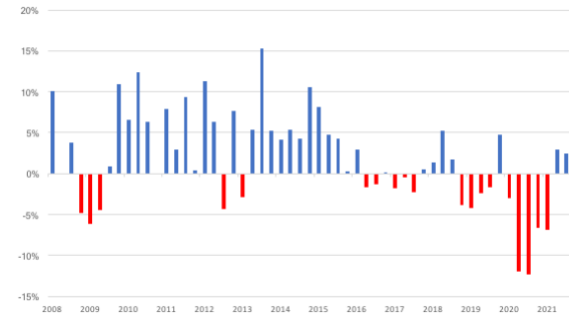
## Key Economic Variables

### GDP Growth (%)



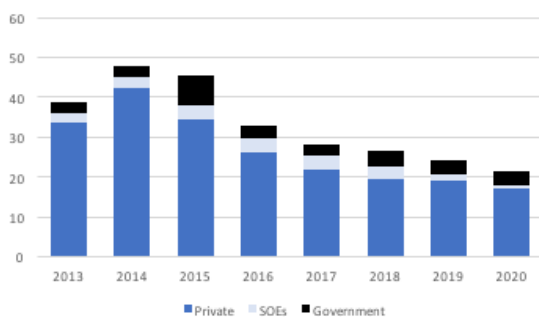
The full national accounts have been released for 2020. The NSA has revised the change in GDP further from -8.0% in the preliminary national accounts to a historically unprecedented -8.5% in 2020.

### GDP Quarterly Growth (%)



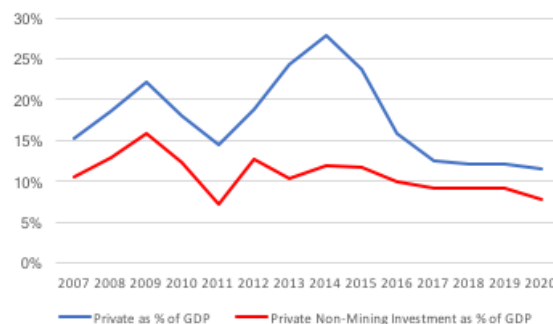
After five consecutive quarters of contraction, GDP grew in Q2 and Q3 of 2021 by 3.0% and 2.4% respectively.

### Fixed Investment (N\$bn in 2015 prices)



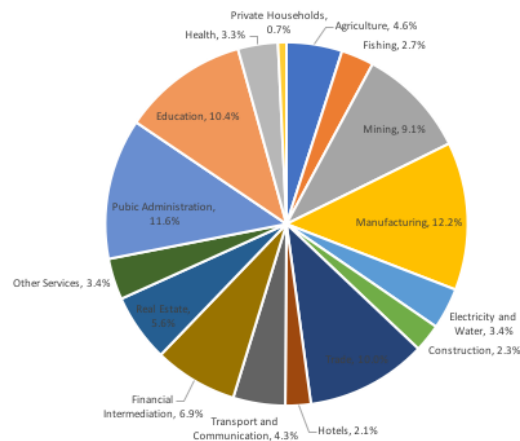
Investment by the private sector, SOEs, and government measured in 2015 prices declined further in 2020 continuing a trend seen since 2014.

### Private Fixed Investment (% of GDP)



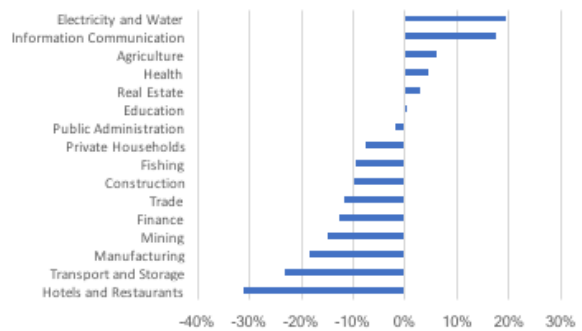
Total private fixed investment has reached its lowest level since at least 2007 whilst non-mining private fixed investment has reached the lowest level since just after the Global Financial Crisis.

### Sectoral Breakdown of GDP in 2020 (%)



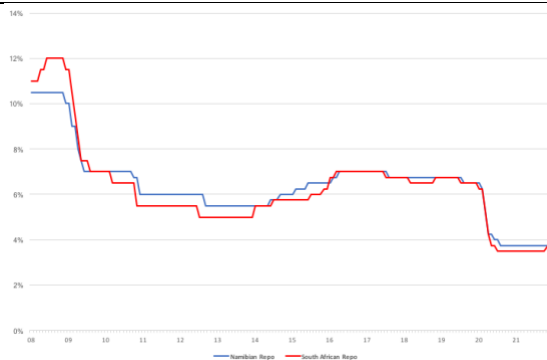
The chart shows the contributions made to overall economic activity in 2020 by the different sectors of the economy according to the national accounts. Service sectors contributed 57.6% while primary and secondary sectors contributed 16.4% and 17.9% respectively.

### Sectoral Growth in 2020 (%)



Although electricity and water, information communication, agriculture and health experienced positive growth during 2020, most sectors suffered badly with hotels and restaurants, transport and storage, manufacturing, mining, finance, trade, construction and fishing being particularly hard hit.

### Namibian and SA Repo Rates (%)



In response to the impact of the national lockdown on an already weak economy, the Bank of Namibia cut the repo rate throughout the first three quarters of 2020 and has maintained the rate at 3.75% ever since including at its last meeting in December.

### Namibian and SA Inflation (% y-o-y)



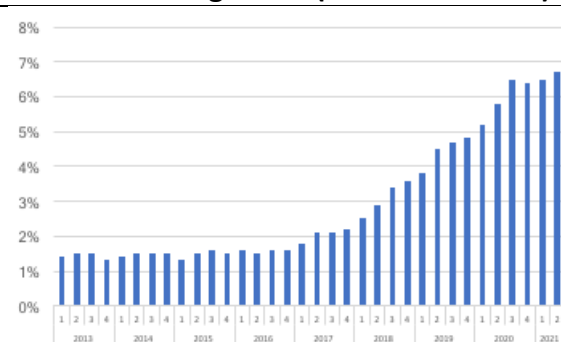
Namibian consumer inflation climbed over the quarter since August reaching 4.1% in November, rather lower than the 5.5% experienced in South Africa.

### Private Sector Credit Extension (% y-o-y)



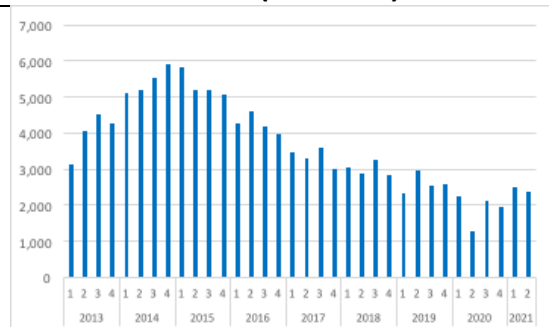
There are signs of moderate growth in credit extended to businesses, households and residential mortgage lending up to May 2021.

### Non-Performing Loans (% of Total Loans)



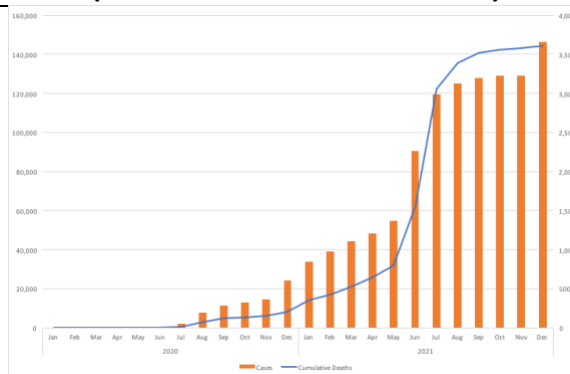
The ratio of Non-Performing Loans (NPLs) reported by the commercial banks to the Bank of Namibia rose to 6.7% at the end of Q2 2021.

### New Vehicle Sales (Unit Sold)



The combined sales of new commercial and private vehicles fell slightly in Q2 compared to Q1.

### Covid (Cumulative Cases and Deaths)



As of 26 December the number of Covid infections had jumped in the last month of the year to reach 146,459 due to the more contagious Omicron variant. The cumulative total number of deaths since the beginning of the pandemic totalled 3,613 according to Ministry of Health/WHO statistics.

## Data Trends

	Unit	2015	2016	2017	2018	2019	2020
<b>Annual Economic Growth</b>							
GDP	%	4.3%	0.0%	-1.0%	1.1%	-0.9%	-8.5%
GDP current prices	N\$m	146,019	157,708	171,570	181,067	180,559	174,827
Change in Mining Value Added	%	-4.0%	-10.7%	14.2%	16.1%	-9.5%	-14.9%
Change in Manufacturing Value Added	%	-3.2%	10.0%	-1.6%	-0.4%	4.7%	-18.3%
<b>Fixed Investment</b>							
Fixed Investment	% of GDP	31.0%	21.8%	17.9%	16.9%	15.9%	14.7%
Change in Fixed Investment	%	-5.1%	-27.7%	-13.7%	-6.0%	-8.9%	-11.2%
Fixed Investment - Government	'000 N\$m	7,382	5,586	5,127	4,858	4,793	4,517
Fixed Investment - SOEs	'000 N\$m	3,359	4,000	4,068	3,678	2,033	1,118
Fixed Investment - Private	'000 N\$m	34,507	24,836	21,570	22,008	21,927	20,050
<b>Prices and Interest Rates</b>							
Average Inflation	%	3.4%	6.7%	6.1%	4.3%	3.7%	2.2%
Year End Prime Lending Rate	%	10.25%	10.75%	10.50%	10.50%	10.25%	7.50%
Year End Repo Rate	%	6.50%	7.00%	6.75%	6.75%	6.50%	3.75%
<b>Trade and Balance of Payments</b>							
Exports - total goods	N\$bn	41.6	48.0	49.8	56.6	57.4	53.8
Exports - total services	N\$bn	10.0	7.2	7.9	8.4	8.4	4.6
Imports - total goods	N\$bn	81.7	82.9	73.8	75.2	76.0	67.5
Imports - total services	N\$bn	8.7	10.1	7.9	7.8	8.9	7.7
Trade Balance	N\$bn	-38.7	-37.8	-24.0	-18.0	-19.1	-16.9
Balance of Payments	N\$bn	-21.0	-25.2	-8.0	-6.1	-4.7	3.3
as % of GDP	%	-13.4%	-14.7%	-3.2%	-2.4%	-1.8%	2.8%
<b>Foreign Exchange</b>							
Year End Exchange Rate (N\$ to USD)	N\$	15.5553	13.6240	12.3930	14.4116	14.0418	14.6246
Year End Exchange Rate (N\$ to EUR)	N\$	16.9997	14.3403	14.8063	16.4848	15.7437	17.9897
Year End Exchange Rate (N\$ to GBP)	N\$	23.0652	16.7264	16.6789	18.3424	18.4383	19.9801
Foreign Exchange Reserves	N\$bn	23.6	24.7	30.2	31.0	28.9	n/a
Fitch credit rating (at year end)		BBB-	BBB- (-ve)	BB+ (stable)	BB+ (stable)	BB	BB (negative)
Moody's credit rating (at year end)		Baa3 (stable)	Baa3 (-ve)	Ba1 (-ve)	Ba1 (-ve)	Ba2 (stable)	Ba3 (negative)
<b>Financial Sector</b>							
Private Sector Credit Extension Growth	%	13.5%	8.9%	5.1%	6.6%	6.8%	2.0%
Non-Performing Loans	% of total loans	2.2%	2.5%	2.9%	3.6%	4.8%	6.4%
NSX Overall Index	Index	865	1,069	1,206	1,303	1,306	1,238
NSX Local Index	Index	498	547	591	621	614	456
New Local Listings		0	0	1	0	1	0
<b>Business Indicators</b>							
Namdeb Diamond Production	'000 carats	1,764	1,573	1,805	2,008	1,700	1,448
Uranium Production	tonnes	2,994	3,654	4,224	5,525	5,476	5,413
Gold Production	kg	6,009	6,604	7,272	6,171	6,526	6,254
Mining Licences Granted	number	0	1	2	3	4	6
Exploration Licences Granted	number	56	142	174	259	297	243
Number of Companies Formed	number	1,226	1,409	1,110	2,851	1,153	852
New Vehicle Sales	number	21,224	17,038	13,352	11,998	10,379	7,606
Tourist Arrivals	'000	1,388	1,469	1,499	1,557	1,596	170
- From Africa	'000	1,083	1,094	1,091	1,164	1,252	112
- From Europe	'000	234	295	312	306	256	45
- From RoW	'000	71	81	97	87	89	12
International Arrivals at HKIA	'000	128	143	213	247	215	46
Regional Arrivals at HKIA	'000	239	248	242	239	223	45

		2013	2014	2015	2016	2017	2018	2019	2020		
<b>Employment</b>											
Government		82,844	95,873	n/a	88,421	n/a	86,587	n/a	n/a		
Parastatals		30,253	32,983	n/a	25,558	n/a	30,654	n/a	n/a		
Private Companies		231,703	245,437	n/a	235,877	n/a	214,693	n/a	n/a		
Private Households		92,555	105,460	n/a	136,417	n/a	70,036	n/a	n/a		
Total		437,355	479,753	n/a	486,273	n/a	401,970	n/a	n/a		
<b>Government Finances</b>											
		FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	
Revenue	N\$bn	41.9	49.9	52.2	50.9	58.7	55.9	58.4	57.8	53.6	
Expenditure	N\$bn	46.7	58.7	64.6	62.2	67.5	65.1	67.3	72.0	69.7	
Balance	N\$bn	-4.8	-8.8	-12.4	-11.4	-8.9	-9.2	-8.9	-14.2	-16.1	
Public Debt	N\$bn	30.9	35.9	59.8	69.9	74.5	87.5	100.4	110.6	127.7	
Interest Payments	N\$bn	1.8	2.1	2.6	4.3	5.4	6.3	7.0	7.7	8.3	
Public Guarantees	N\$bn	7.4	6.4	6.5	6.4	11.0	10.9	11.2	12.7	13.0	
Revenue	% of GDP	33.0%	35.4%	34.6%	31.6%	33.7%	30.9%	32.6%	32.5%	28.8%	
Expenditure	% of GDP	36.8%	41.6%	42.8%	38.6%	38.8%	36.0%	37.6%	40.4%	37.5%	
Balance	% of GDP	-3.8%	-6.2%	-8.2%	-7.1%	-5.1%	-5.1%	-5.0%	-8.0%	-8.6%	
Public Debt	% of GDP	24.3%	25.5%	39.6%	43.4%	42.8%	48.4%	56.0%	62.1%	68.7%	
Interest Payments	% of revenue	4.3%	4.1%	5.0%	8.5%	9.3%	11.3%	11.9%	13.2%	15.5%	
Public Guarantees	% of GDP	5.8%	4.5%	4.3%	3.9%	6.3%	6.0%	6.3%	7.1%	7.0%	
<b>International Rankings</b>											
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Global Competitiveness Index Ranking		90/148	88/144	85/140	84/135	99/135	100/140	94/141	n/a	n/a	
Global Competitiveness Index		3.9	4.0	4.0	4.0	4.0	4.0	54.5	n/a	n/a	
Energy Transition Index	55.4	54.5	55.3	54.9	57.6	56.9	57.4	58.1	57.7	58.2	
Energy Transition Index Ranking	59/113	67/114	63/114	64/114	53/114	56/114	59/114	58/115	63/115	59/115	
Ease of Doing Business Ranking		87/185	98/189	88/189	104/189	108/190	106/190	107/190	104/190	scrapped	
Ease of Doing Business Index		n/a	61.15	57.16	59.61	59.57	60.29	60.53	61.4	n/a	
Corruption Perceptions Index Ranking				45/168	n/a	53/180	52/180	56/180	57/180	n/a	
Corruption Perceptions Index		48	49	53	52	51	53	52	51	n/a	
Ibrahim Index of African Governance		69.5	70.3	70.4	69.3	71.2	68.6	n/a	65.1	n/a	
Ibrahim Index of African Governance Ranking		6/52	6/52	5/54	5/54	5/54	4/54	n/a	7/54	n/a	
Investment Attractiveness Index		68.97	76.37	69.78	66.11	60.67	56.66	58.22	59.72	n/a	
Investment Attractiveness Index Ranking		35/112	21/122	33/109	53/104	54/91	60/83	55/76	52/77	n/a	
Open Budget Index (out of 100)		55*	n/a	46	n/a	50	n/a	n/a	51	n/a	
World Press Freedom Index - Ranking		19/180	22/180	17/180	17/180	24/180	26/180	23/180	23/180	24/181	

Sources: Anglo American, Bank of Namibia, Business and Intellectual Property Authority, Chamber of Mines of Namibia, Fitch Ratings, Fraser Institute, International Budget Partnership, Ministry of Environment and Tourism, Ministry of Finance, Mo Ibrahim Foundation, Moody's Investor Services, Namibia Airports Company, Namibia Statistics Agency, Namibian Stock Exchange, Reporters Without Frontiers, Transparency International, World Bank, World Economic Forum, World Nuclear Association

Note: On 16 September 2021 the World Bank issued a statement announcing it would discontinue its flagship Doing Business report. This followed a detailed investigation after data irregularities in Doing Business 2018 and 2020 were reported internally in June 2020. We will keep the Index and Rankings in our table for the time being.

Note: From Q4 2021 we will include the annual Energy Transition Index and Ranking produced by the World Economic Forum. In 2021 Namibia ranked 59<sup>th</sup> out of 115 countries.