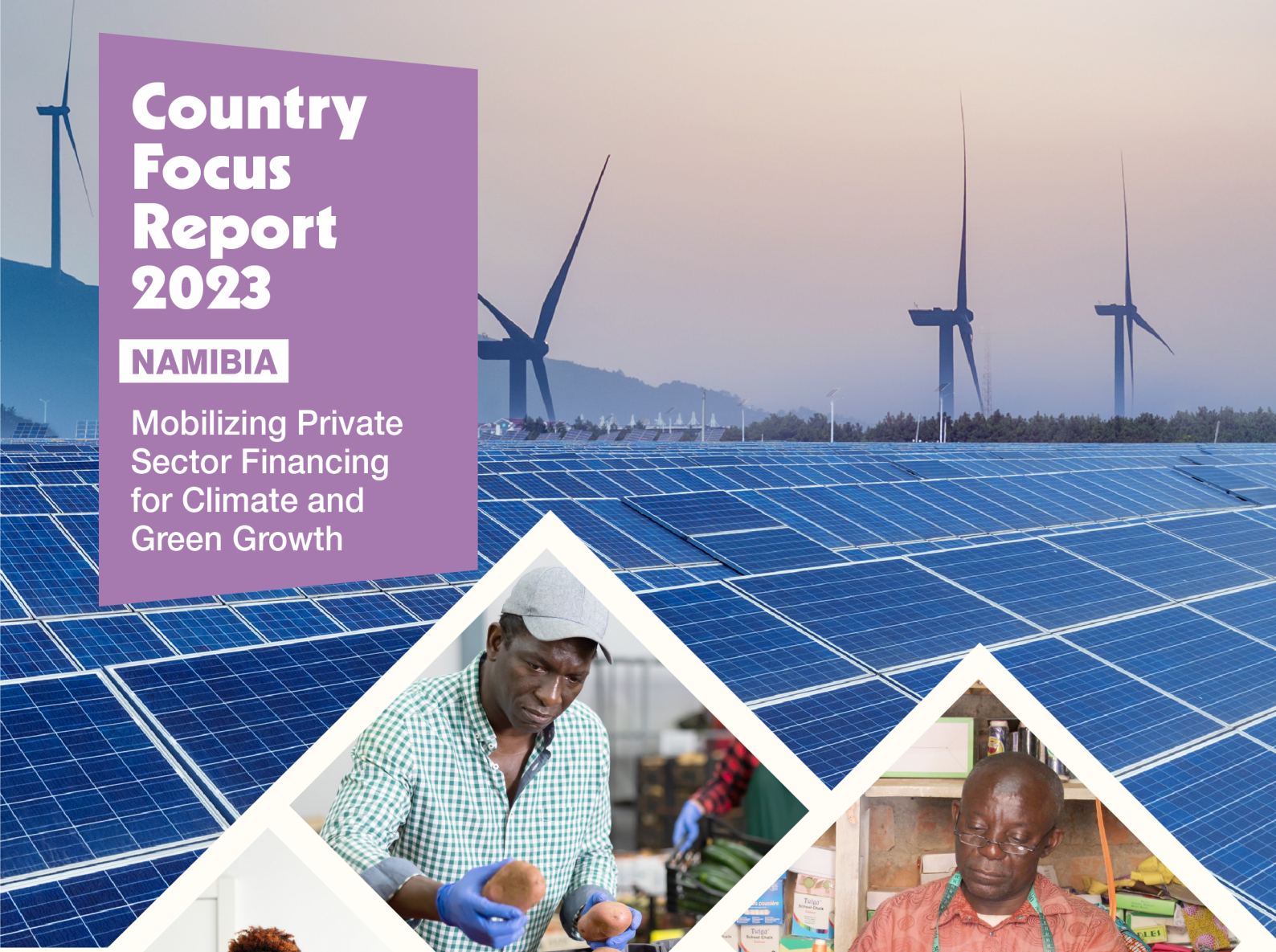
Country Focus Report 2023

NAMIBIA

Mobilizing Private Sector Financing for Climate and Green Growth



AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DÉVELOPPEMENT

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Mobilizing Private Sector Financing for Climate and Green Growth

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF BOXES

LIST OF TABLES

LIST OF ACRONYMS AND ABBREVIATIONS

AEO	African Economic Outlook
AfDB	African Development Bank
BAU	Business-as-usual
BoN	Bank of Namibia (the Central Bank)
CFR	Country Focus Report
CRI	Climate Resilience Index
DFIs	Development Financial Institutions
EIF	Environmental Investment Fund
GCF	Green Climate Fund
GCI	Global Competitive Index
GDP	Gross Domestic Product
GGI	Green Growth Index
GHG	Greenhouse Gas
IAAs	International Access Agreements
IMF	International Monetary Fund
MDBs	Multilateral Development Banks
MET	Ministry of Environment, Forestry and Tourism
MW	Megawatts
NAD	Namibia Dollar
NDC	National Determined Contributions
NDP	National Development Plan
NGE2030	New Green Economy 2030 Program
PPP	Public-Private Partnerships
SACU	Southern Africa Customs Union
SOEs	State-owned Enterprises
SSA	Sub-Saharan Africa
UNFCCC	United Nations Framework Convention on Climate Change

Namibia

KEY MESSAGES

Macroeconomic performance and outlook

- **Namibia has enjoyed economic and social progress since its independence in 1990, with a steady Gross Domestic Product (GDP) growth averaging 4.5 percent between 2000 and 2016.** The growth was underpinned by sustained political stability, sound macro-economic management and good governance. In the face of the adverse economic impact on growth of the COVID-19 pandemic and the global fallout from Russia's invasion of Ukraine, it has become increasingly difficult to preserve macroeconomic stability. The real GDP contracted by 8.1 percent in 2020 but recovered by 3.5 percent in 2021, and further by 4.6 percent in 2022 with the lifting of COVID-19 pandemic-related restrictions.
- **The economy is projected to grow by 3.5 percent in 2023** buoyant on the continued economic recovery, particularly in diamond processing and export and increased consumption in wholesale and retail trade and tourism. Downside risks to the growth projection include a higher import bill and lower Southern Africa Customs Union (SACU) revenues for Namibia as South Africa, Namibia's largest market for its external trade, struggles with the higher global commodity prices emanating from international supply-chain disruptions, higher global inflation and subsequent hikes in global interest rates.

Private sector financing for climate and green growth

- **Namibia will need about US$ 5.3 billion over 2021 – 2030** to meet its climate change targets and an average of US$ 565 million annually to meet its green growth objectives.
- **The private sector needs to play a more prominent role in closing the climate finance gap** given the limited fiscal space, with the government's budget further constrained by the adverse impact of external shocks on the economy. Scaling up of private sector finance is being hindered by (i) the constrained growth of the private sector, including existing debt vulnerabilities that may limit Namibia's access to private finance; (ii) few financial products and sources that can finance private sector investments, (iii) limited participation by the private sector in the coordination process of green growth; and (iv) limited skills to meet green growth and climate action needs. The report proposes several solutions to leverage the opportunities for, while reducing the barriers to, private sector investments in green growth. These involve (i) accelerating the doing business reforms for a conducive private sector investment environment, including sustaining macroeconomic stability; (ii) tapping into emerging innovative private sector financing mechanisms and enhancing engagement with multilateral green finance institutions for an expanded pool of sustainable finance instruments; (iii) increasing private sector representation in the existing national coordination structures around green growth; and (iv) enhancing green growth skills and capacity, including through mainstreaming green skills development into education curricula.

Natural capital for climate finance and green growth

- **Despite Namibia's abundant natural capital and value, their transformation into wealth remains largely untapped**. Key challenges include weak natural resource governance frameworks and limited monitoring tools.
- **To fully benefit from its stock of natural capital as an alternative source of financing, Namibia needs to**: (i) expand investments in appropriate technologies and natural capital data management capacity for improved valuation and to benefit from international agreements; (ii) regularly undertake comprehensive natural capital accounting to keep track of key stocks and their contribution; and (iii) widen institutional reforms targeting natural resource governance to cover all sectors.

1. INTRODUCTION

This Country Focus Report (CFR) for Namibia reviews the role of the private sector in the financing of climate change and green growth[1]. It further explores the scope for harnessing natural capital to finance adaptation and mitigation to climate change and to promote green growth. It aims to replicate at the country level the analyses carried out at the continental level in the African Development Bank's (AfDB) main African Economic Outlook (AEO) report.

This CFR is structured as follows. Section 2 discusses Namibia's recent macroeconomic performance and outlook. Section 3 discusses the country's private sector financing for climate and green growth. Section 4 discusses the role of natural capital for climate finance and green growth in Namibia. Section 5 draws policy recommendations for the government, the donor community, the domestic and international private sector and developed country governments, and Section 6 offers some concluding remarks.

1 AfDB definition: The promotion and maximization of opportunities from economic growth through building resilience, managing natural assets efficiently and sustainably enhancing agricultural productivity and promoting sustainable infrastructure.

2. NAMIBIA'S ECONOMIC PERFORMANCE AND OUTLOOK

With a gross national income per capita of US$ 4,650 (2021), Namibia is an upper middle-income country with a population of 2.1 million[2]. The country has enjoyed economic and social progress since its independence in 1990 with a steady GDP growth averaging 4.5 percent between 2000 and 2016, underpinned by sustained political stability, sound macro-economic management and good governance. However, the Namibian economy had been experiencing slow growth dynamics since 2017. Climate change has negatively affected output from the agriculture, tourism and fisheries sectors. A slowdown in global demand, especially from the Euro area, for Namibia's exports such as uranium ore, diamonds, copper, beef and fish also negatively affected domestic economic growth. In the face of the adverse economic impact of the COVID-19 pandemic[3] and the global fallout from Russia's invasion of Ukraine on growth, it has become increasingly difficult to preserve macroeconomic stability. Economic growth is gradually recovering but there are strong pressures on domestic inflation as well as the fiscal and external balances that will require the implementation of sustained macroeconomic and social policies to reduce the risk of debt distress, protect vulnerable groups and support growth. This section discusses the recent macroeconomic developments, the outlook and risks.

2.1 RECENT MACROECONOMIC AND FINANCIAL DEVELOPMENTS

Economic growth and drivers: The economy underwent a major contraction of 8.1 percent in 2020, because of the severe shock of the COVID-19 pandemic. The economy gradually reopened in 2021, together with the roll out of the national COVID-19 vaccine program, resulting in a recovery in most industries and GDP growth of 3.5 percent in 2021. Real GDP growth recovered even further to 4.6 percent in

Table 1: Key Macroeconomic Indicators

	2018	2019	2020	2021	2022(e)	2023(p)	2024(p)
Real GDP Growth	1.1	-0.8	-8.1	3.5	4.6	3.5	3.0
Real GDP Growth per Capita	-0.7	-2.5	-9.8	1.9	3.2	2.0	1.4
CPI Inflation	4.3	3.7	2.2	3.6	6.1	5.7	4.6
Overall Fiscal Balance, Including Grants % GDP *	-5.1	-4.5	-7.9	-7.5	-6.8	-5.6	-4.9
Current Account Balance (% GDP)	-3.5	-1.8	2.8	-9.8	-8.4	-4.5	-4.0

*Source: Data from Domestic authorities; estimates (e) and prediction (p) based on AfDB's calculations. AfDB Statistics Department, April 2023; * Year n refers to April n / March n+1*

2 As of Namibia Population and Housing Census 2011 (Source: Namibia Statistics Agency).
3 Reduced foreign direct investment, exports, employment opportunities.

2022 (Table 1), supported by the lifting of the last COVID-19 pandemic-related restrictions in July 2022 and the continued recovery in primary industries (12.9 percent from 6.4 percent in 2021), including diamond mining (a 45.2 percent growth compared to flat growth in 2021) and secondary industries (3.3 percent from minus 3.6 percent in 2021)[4].

Monetary policy and inflation: Inflation averaged 6.1 percent in 2022 up from 3.6 percent in 2021, driven by elevated global commodity prices linked to the pandemic and Russia's invasion of Ukraine. The Bank of Namibia (BoN) progressively increased its monetary policy rate to 7.25 percent in April 2023 from 6.75 percent in November 2022 and 3.75 percent in 2021. The Namibia Dollar (NAD) is pegged to the South African Rand through its membership to the Common Monetary Area.

The economy is projected to grow by 3.5 percent in 2023 mainly driven by diamond processing and export, wholesale and retail trade, and tourism.

Fiscal developments: The fiscal deficit averaged 7.5 percent of GDP in FY2021/22, financed by domestic securities issuances and multilateral financial institutions. Total revenues declined to 30 percent from 33 percent of GDP in FY2020/21 as the SACU receipts and diamond earnings declined. Total expenditure fell at a slower rate to 37 percent from 41 percent of GDP in FY2020/21 but remained elevated with expenditure pressures to cushion real incomes against the high inflation. Over the same period, the public sector wage bill remained high, and public debt stood at 67 percent of GDP.

Current account balance: The current account deficit of 9.8 percent of GDP in 2021 and 8.4 percent of GDP in 2022 deteriorated from a 2.8 percent surplus in 2020 following higher fuel import payments, and declining SACU receipts. International reserves rose marginally to 5.7 months of imports (December 2022) from 5.6 months (2021) and stood at 5.1 months of imports in March 2023.

Financial sector: Namibia's financial sector is relatively large and well developed. Most financial institutions have strong ownership links to South African financial institutions. The banking sector, with an asset value of 60 percent of GDP, is dominated by four major banks, three of which are owned by South African banks. The non-banking financial industry is even larger with total assets of around 262 percent of GDP dominated by pension funds. The banking sector's 2022 liquidity and solvency ratios stayed above the prudential requirements, demonstrating the sector's resilience. The liquidity ratio marginally declined to 17.8 percent in 2022 from 18.3 percent in 2021, above the statutory requirement of keeping 10.0 percent of total liabilities as liquid assets. The capital adequacy ratio of 17.0 percent was above the 10.0 percent statutory requirement. The asset quality improved as the non-performing loans to total loans ratio fell to 5.6 percent at end December 2022, down from 6.4 percent the year before.

Poverty and social indicators: The latest government statistics show a headcount poverty rate of 17.4 percent (2019) and an unemployment rate of 33.4 percent (2018), with youth unemployment at 46.1 percent and the female share at 48.5 percent. The World Bank has the unemployment rate in Namibia declining to 20.8 percent in 2022[5]. Inequality is high at 57.2 (Gini Index 2015). Despite Namibia's high literacy score of 0.998, its high unemployment rate is slowing the country's efforts to reduce poverty and income inequality. Youth unemployment is compounded by inadequate training, financing and the prevalent skills mismatch.

2.2 OUTLOOK AND RISKS

Economic growth: The economy is projected to grow by 3.5 percent and 3.0 percent in 2023 and 2024, buoyant on the continued economic recovery particularly in diamond processing and export and increased consumption in wholesale and retail trade and tourism.

4 Namibia 2022 National Accounts (Source: Annual National Accounts 2022)
5 Retrieved from https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS?locations=NA

Monetary policy and inflation: With the tight monetary policy stance, the inflation rate is projected to remain within the Central Bank threshold of 6.0 percent in the medium term as food and crude oil prices decline with the anticipation of weaker global economic growth.

Fiscal and current account balances: The fiscal deficit is projected to decline, driven by strong domestic resource mobilization and tax compliance efforts by the newly established Namibia Revenue Authority and expenditure rationalization efforts. The current account deficit is projected to decline with higher diamond and tourism earnings. Sustaining debt at below the debt threshold of 35 percent of GDP will hinge on the successful implementation of several fiscal reforms as contained in the Sovereign Debt Management Strategy 2018-2025. The strategy includes measures such as the use of a sinking fund to accumulate savings to redeem future bond maturities. In May 2022, Namibia launched the US$ 15 million Sovereign Wealth Fund that will support debt sustainability through expenditure stabilization. In its medium-term expenditure framework, the government is focused on returning the economy to its sustainability path through expenditure, tax reforms and using a blend of public-private sector investments to achieve a balanced fiscal stance and stabilize public debt growth. In April 2022, Moody's changed its outlook on Namibia's sovereign debt to stable from negative in anticipation that the government's fiscal consolidation efforts will eventually prove effective.

Risks: Headwinds include a higher import bill and lower SACU revenues for Namibia as South Africa, Namibia's largest market for its external trade, struggles with higher global commodity prices resulting from international supply-chain disruptions; a low COVID-19 vaccine uptake (47 percent population vaccinated; June 2023),[6] higher global inflation and subsequent hikes in global interest rates.

6 Retrieved from the World Health Organization as at June 27, 2023.

3. PRIVATE SECTOR FINANCING FOR CLIMATE CHANGE AND GREEN GROWTH

3.1 THE IMPERATIVE FOR GREEN GROWTH AND THE ROLE OF PRIVATE SECTOR FINANCING

Namibia is highly vulnerable to climate change, despite being a low carbon-emitting economy.

Namibia's share of global greenhouse gas (GHG)[7] emissions stood at 0.03 percent in 2021. Despite this low contribution, the country is highly vulnerable to the adverse effects of climate change due to a combination of geographical and social factors. Namibia is one of the largest and driest countries in Sub-Saharan Africa (SSA) with persistent droughts and floods, erratic rainfall and high swings in temperatures which drive water scarcity. The country's reliance on its endowment of natural resources (including land, minerals and biodiversity), its high-income inequality and poverty, and its high exposure to external shocks increases its vulnerability to climate change. Closing the gaps of social and economic inequalities, as well as the need to protect natural wealth, are at the core of green growth.

The country has however demonstrated its resilience and readiness in the face of climate change.

The 2022 AEO's average Climate Resilience Index (CRI) showed that over 2010 to 2019, Namibia was one of the climate resilient countries with a CRI score of 63.3. The University of Notre Dame's 2021 Global Adaptation Initiative country index, which considers both vulnerability and preparedness or readiness, ranked Namibia 109th out of 182 countries with a score of 45.8, compared to South Africa's 95th position with a score of 48.3 and Botswana's 80th rank and 50.8 score. In terms of vulnerability, the country ranked 64th with a 46.4 score and held the 107th most ready country position with a 38.0 score. The country registered high scores under the economic (0.369) and governance (0.558) indicators but did not score as high under social readiness indicators (0.214) such as education and innovation. Namibia continues to implement polices that aim to enhance its resilience to climate change. These include the country's Nationally Determined Contributions (NDC) Implementation Strategy and Action Plan 2021-2030 (replacing the Climate Change Strategy and Action Plan) and the National Climate Change Policy (2011) that emphasize improved disaster forecasting and the use of early warning systems.

Green growth and climate action are important for Namibia if it is to attain its national development vision of achieving high income status by 2030.

Namibia's Vision 2030 aims to transform Namibia from an upper middle-income country to a high-income country and in so doing improve the quality of life for Namibians to the level of their counterparts in the developed world, by 2030. Quantitatively, Vision 2030 aims at making Namibia an industrialized

7 Greenhouse gas emissions include carbon dioxide, methane and nitrous oxide.

nation with GDP growing at 6 percent per annum, unemployment at its lowest level of 5 percent, Gini-coefficient of 0.3 and substantial rural infrastructures in place. The government's policies, strategies and development priorities are articulated in the five-year National Development Plans (NDPs) which are cascaded from Vision 2030. Namibia's fifth NDP (NDP5, 2017/18-2021/2022)[8] outlines four main goals,[9] one of which is ensuring a sustainable environment and enhancing resilience. The goal focuses on: (i) conservation and sustainable use of natural resources, and (ii) environment management, and climate change. NDP5 is complemented by the Harambee Prosperity Plan II 2021-2025 which allows Namibia to respond to domestic challenges and global opportunities during and after the pandemic.

The need to respond to climate change (risks and opportunities), while at the same time correct its macro-economic imbalances for inclusive economic development is the basis for green growth in Namibia. Although the NDC articulates a 91 percent reduction of GHG emissions (mitigation) against the business-as-usual (BAU) emissions projection by 2030, Namibia's emissions are already small to begin with, which means that the country's transition to a low-carbon economy can be faster. Namibia's primary response strategy, therefore, is to build and secure sustainable resources for climate change adaptation while recognizing the need for mitigation by enhancing energy efficiency and harnessing its significant natural capital endowment.

Namibia has demonstrated strong commitment to green growth through its policies and strategies.

The country's national synergies related to climate change provide overarching guidance to develop and implement appropriate strategies to lower the vulnerability of Namibians to climate change, and to integrate climate change effectively into existing legal frameworks. The guidance aims at enhancing capacities at all levels, ensuring successful implementation of climate change response activities, and facilitating climate proof development to reduce the climate change impact magnitude and extent.

Vision 2030 aims at facilitating social inclusion through cultivating the spirit of togetherness for a prosperous and industrialized Namibia. Gibson et al (2022) list the drivers of this goal as education, science and technology, health and development, sustainable agriculture, peace and social justice, and gender equality. Supportive of these drivers is a very comprehensive social protection system which provides for social assistance, like cash transfers, to the most vulnerable, and social insurance for public sector workers. The social protection system has served to reduce poverty and unemployment over time despite the latter's persistence.

Namibia's initial NDC submission in 2015 committed to reduce economy wide GHG emissions by 89 percent by 2030 under the BAU baseline. In its 2021 NDC submission, Namibia increased this goal to 91 percent. This commitment keeps Namibia on its low carbon path as it is already a net sink of GHG emissions.[10] The mitigation target is to reduce GHG emissions conditionally by 14 percent (under limited domestic and international support) and towards 77 percent (with substantial international support) in 2030. Namibia's 2021-2030 updated NDC Implementation Strategy and Action Plan replaces the National Climate Change Strategy and Action Plan 2013-2020. Priority areas

8 The Government has postponed the successor NDP6 by two years from 2022, to cover the period FY2024/25 to FY2030/31.

9 The other three are (i) Achieving inclusive and sustainable growth; (ii) Building capable and healthy human resources; and (iii) Promoting good governance through effective institutions.

10 Retrieved from https://ippr.org.na/wp-content/uploads/2022/12/Namibias-Green-Transition-web.pdf which argues that Namibia should focus less on mitigation and more on maintaining or enhancing its characteristic of being a net carbon sink.

for NDC adaptation are water resources, agriculture, forestry, coastal zones, tourism, human health and disaster risk management. To achieve the updated NDC targets, Namibia will need approximately US$ 5.3 billion over 10 years, of which about 10 percent will be unconditional, provided largely from domestic public funds (Table 2). 90 percent is therefore conditional upon the provision of international support.

The government has demonstrated its political commitment to tackling climate change. The climate change unit within the Ministry of Environment, Forestry and Tourism (MET) is responsible for tracking the NDC implementation progress. The MET also serves as the approver/focal point to the United Nations Framework Convention on Climate Change (UNFCCC), and as the National Designated Authority to the Green Climate Fund (GCF). One major achievement has been the creation of the Environmental Investment Fund of Namibia (EIF) which is playing a pivotal role in the mobilization of funds from the GCF. The EIF has partnered with the United Nations Development Program to support the acquisition of complementary grant funding. A summary of a key policy – The New Green Economy 2030 – for green growth in Namibia is summarized in Box 1.

Table 2: Estimated Mitigation and Adaptation Finance Needed 2021-2030

	2018	2019	2020
Uncondition-al	0.36	0.17	0.53
Conditional	3.25	1.55	4.80
Total	**3.61**	**1.72**	**5.33**

Source: Namibia's 2021-2030 NDC Update

As a result of having the appropriate strategies and polices in place, Namibia has made progress towards achieving green growth, complementing its readiness for climate change.

Box 1: Key Policies for Green Growth in Namibia: New Green Economy 2030

The New Green Economy 2030 Program (NGE2030) is aimed at generating renewable energy products such as green fuels, green electricity and green gas, along with other green co-products, for local use and export purposes while creating green development zones. These outputs are generated using the unique desert resources that will be transformed from scarcity to abundance through the greening agenda and suitable technology in the region. The key features of the NGE2030 program are it must result in:

(1) decent jobs created for people in the region,

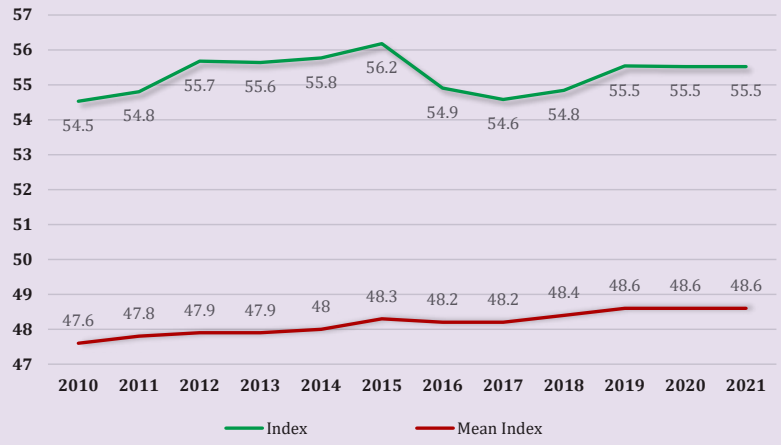
(2) more wealth transferred to rural areas,

(3) increased exports to generate positive foreign currency reserves for the countries in the region while driving a reduction in the poverty levels for people in the region.

NGE2030 is a catalytic economic program within the Green Marshall Plan for Africa. It provides a practical route, a just transition of a low-carbon path of development through an output of zero-emission products from new green industries. These new green industries are created from the sustainable utilization of Africa's natural assets that considers the interests of workers, communities and the broader society. In addition, the program is set to become the first zero emission country in Africa and to generate rural wealth in Namibia. This program also aims to address the many challenges faced in the country such as the harsh impact of climate change, lack of development, unemployment, poverty, drought and income inequality. NGE2030 is implemented by the Growth Catalyst Fund and the Environmental Investment Fund.

Source: Environmental Investment Fund of Namibia

Figure 1: Namibia - Green Growth Index, 2010-21



Source: AEO 2023, GGI Database

The Global Green Growth Institute's Green Growth Index (GGI), linked with the sustainable development goals, was used to measure Namibia's progress towards achieving green growth.[11] Namibia's Global Competitive Index (GCI) score was around 55-56 over 2010-21, above Africa's mean score of 48-50 (Figure 1).

The country's score was mainly driven by its high performance on gender balance (90.0), culture and social values (79.4), environmental quality (76.8), social equity (76.3), waste and material use efficiency (73.5) and social protection (67.4). Namibia however underperformed in green trade (5.6), green innovation (25.3) and efficient and sustainable water use (43.7) as indicated in Figure 2.

For Namibia to achieve green growth and its climate action ambitions, the private sector will need to be mobilized at scale.

Meeting green growth and climate action needs requires significant investments. For example, an assessment indicates that adaptation to the effects of droughts and floods in Namibia between 2021 and 2040 will require more than 26.7 percent of GDP equivalent in private investment (Figure 3).

All of Namibia's policies and strategies on green growth and climate action recognize the role the private sector plays in mobilizing resources for the collective goals. For instance, The NDP5 identifies funding as a very important element for its implementation.[12] All programs and projects that are expected to deliver the country's aspirations are costed in an implementation plan which then also serves as an investment catalogue for the government to target potential investors. Under the pillar of partnership, NDP5 recognizes that the government may not have sufficient implementation resources and therefore all stakeholders, including the private sector and development partners, are expected to contribute to closing the financing gap. The updated NDC is conditional on the securing of sufficient international public and private sector financing, making their enhanced access a high priority for Namibia.

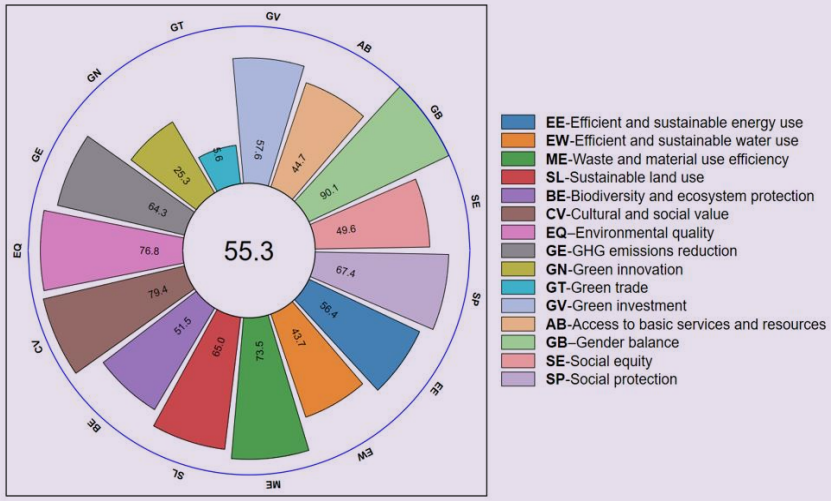
3.2 PRIVATE SECTOR FINANCE FLOWS, GAPS AND NEEDS FOR GREEN GROWTH AND CLIMATE ACTION IN NAMIBIA.

3.2.1 Current flows of finance

The largest share of climate finance flows[13] in Namibia (98 percent) is from public finance, with private finance accounting for

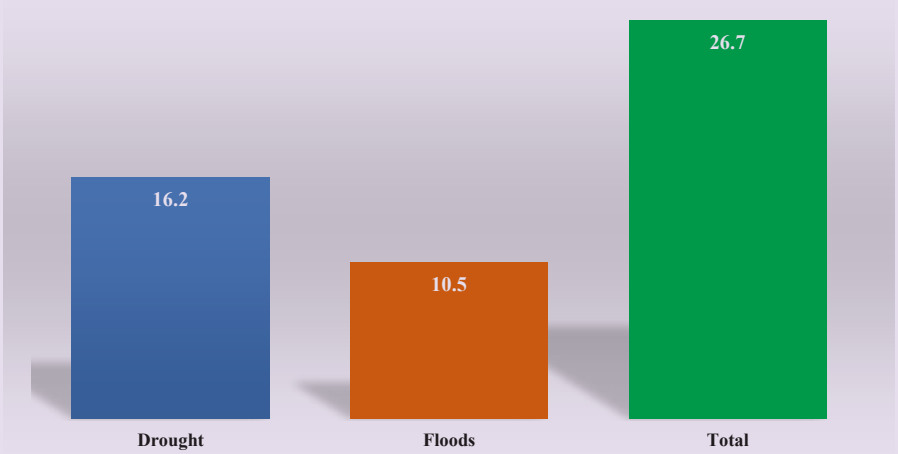
11 The higher the score, the closer the country is to reaching green growth or sustainability targets.
12 Retrieved from https://www.npc.gov.na/national-plans/national-plans-ndp-5/
13 The information in this section is derived from the report on Namibia's Landscape of Climate Finance 2015-2020

Figure 2: Namibia – Distance to Targets of Green Growth Indicators, Average 2010-21



Source: AEO 2023, GGI Database

Figure 3: Upfront Private Investment Potential to Adapt to Droughts and Floods (percentage of 2021 GDP)



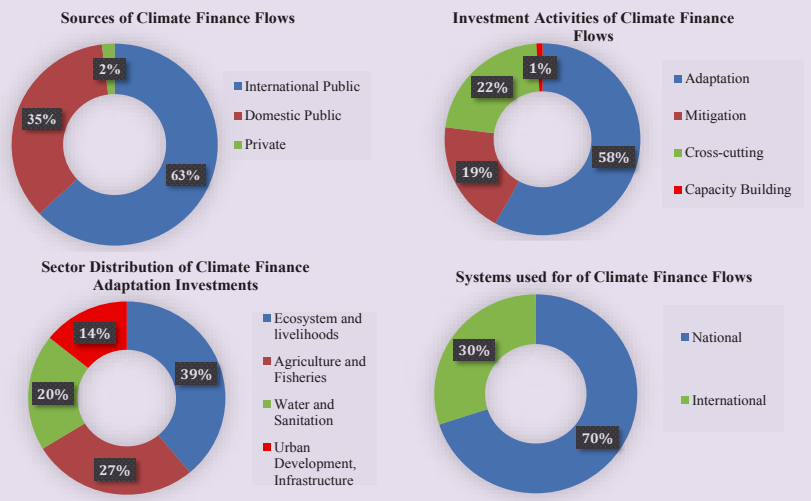
Source: AEO 2023, Global Green Growth Institute databases

only 2 percent.

Over the period 2015-2020, climate finance flows totaled US$ 0.53 billion with 63 percent of this finance coming from international public sources such as bilateral development agencies, climate funds and Multilateral Development Banks (MDBs), and 35 percent from domestic public sources – the national development budget. Private sector finance, mainly targeting the renewable energy sector, only represented about 2 percent of the total climate finance flowing into the country during this period. This low number has been attributed to limited data on private sector contribution to climate change and the private sector's low awareness of the climate change investment opportunities in Namibia, as well as the high perceived and actual risks attached to investments in the continent. Targeting the energy sector means that limited private sector finance goes to other sectors vital for green growth and climate action as identified in the NDC update.

Most funding for climate change in Namibia is allocated to adaptation.

Figure 4: Climate Finance Landscape in Namibia



Source: Namibia's Landscape of Climate Finance 2015-2020

Private climate finance flows to Namibia may need to increase by at least 7 percent annually to close the country's climate finance gap by 2030.

Adaptation investments represent most climate finance flows in Namibia, making up 58 percent of funding and 65 percent of projects. Compared to adaptation activities, Namibia invests less in mitigation activities. Mitigation makes up 19 percent of funding and 12 percent of projects. In terms of sector distribution, adaptation sectors received the most significant investments with 30 percent of funding invested in ecosystems and livelihoods, 21 percent in agriculture and fisheries, 15 percent in water and sanitation and 11 percent in urban development and infrastructure. Within mitigation sectors, renewable energy received the largest investment of 11 percent of funding, followed by forestry and land use (4 percent), transport (3 percent) and industry, building and waste (2 percent). About 3 percent went to capacity building projects and technical assistance.

The bulk of the climate change investments disbursed through national systems.

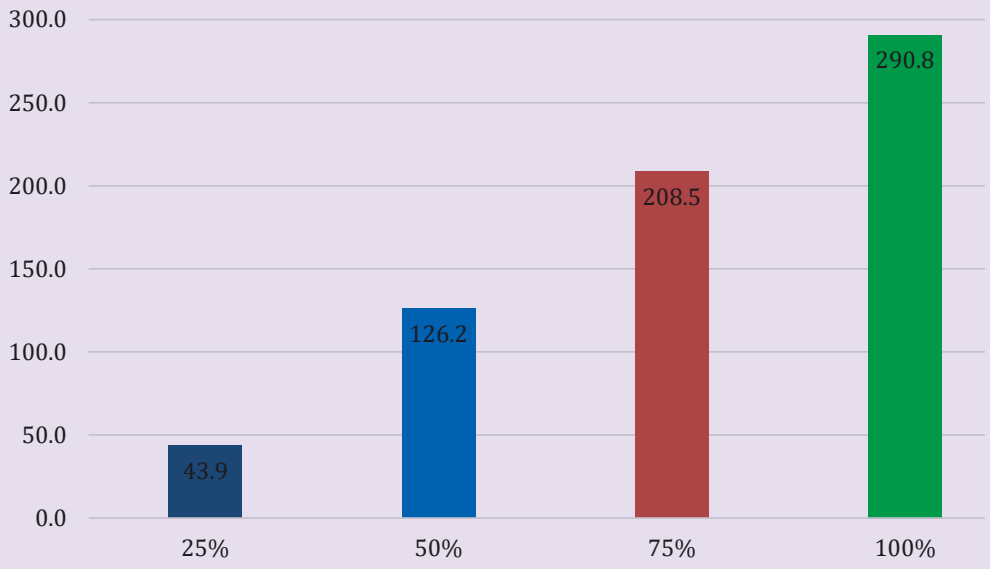
70 percent of funds and 61 percent of projects were implemented using national systems while 30 percent of funds and 35 percent of projects were implemented using international systems. This pattern reflects the confidence the international public community has in the implementation capacities of Namibia's national institutions. In terms of financial instruments, most of the funding is in the form of grant funding (69 percent) while 25 percent is in the form of loans. Only 5 percent of funding is in the form of guarantees and less than 1 percent equity investments.

3.2.2 Private sector financing needs for the future

Namibia will need about US$ 5.3 billion over 2021-2030 to meet its climate change targets and an average of US$ 565 million annually to meet its green growth objectives.

Private climate finance flows may need to increase by at least 7 percent annually to close the climate finance gap by 2030. Given the current trends in global private climate finance flows to Namibia, the private sector is likely to contribute only 2 percent of the climate financing needs of the country. Efforts to unlock private financing must therefore be scaled up. To increase this contribution to 25 percent, which represents a conservative scenario, the private sector would need to increase its finance contribution by US$ 44 million annually, equivalent to 7.2 percent of GDP. For a 50 percent contribution to climate finance by the private sector, which is a moderate scenario,

Figure 5: Estimated Private Climate Finance Gap for Selected Scenarios of the Potential Contribution of the Private Sector to the Residual Climate Finance Needs in Namibia



Source: AEO 2023 Database

private sector financing would need to grow to US$ 126 million per year (14.1 percent of GDP). A 75 percent contribution to the climate financing gap – an ambitious scenario – would see private sector finance grow to US$ 209 million (21.6 percent of GDP) annually (figure 5).

3.2.3 Emerging innovative private sector financing mechanisms for green growth

In its NDC Update, the government recognizes that the current funding available under the UNFCCC's financial mechanism that relies mainly on voluntary contributions will be insufficient to address the estimated future financial flows needed for mitigation and adaptation. Despite the shortfall in mobilizing green growth private sector finance, Namibia is an active participant in several innovative climate finance options globally to address its climate finance readiness needs. Some of the innovative financing mechanisms are summarized in Table 3. New potential sources of financing include green finance, blended finance instruments, private equity and venture capital, and carbon markets.

3.3 OPPORTUNITIES FOR LEVERAGING PRIVATE SECTOR FINANCING FOR GREEN GROWTH.

3.3.1 Opportunities for private sector investments

Namibia mobilizes more private sector finance per capita compared to its peers, only coming second to Botswana.

The AEO 2023 listed several drivers of private finance flows to Africa, the strongest one being the level of existing public climate finance. African countries with higher public climate finance per capita were found to be more likely to crowd in private climate investments. The data (Figure 6) showed that Namibia mobilized the second highest private sector finance per capita, behind Botswana in the SACU region. The data also revealed that the country also had the second largest public finance per capita after Lesotho. This is a good indicator that Namibia can use public finance much more to strategically catalyze or convene and de-risk private sector investments for green growth, than other countries in the SACU region with similar levels of public finance investments

The data shows that Namibia can use public finance much more to strategically catalyze private sector investments for green growth, than other SACU countries with similar levels of public finance investments.

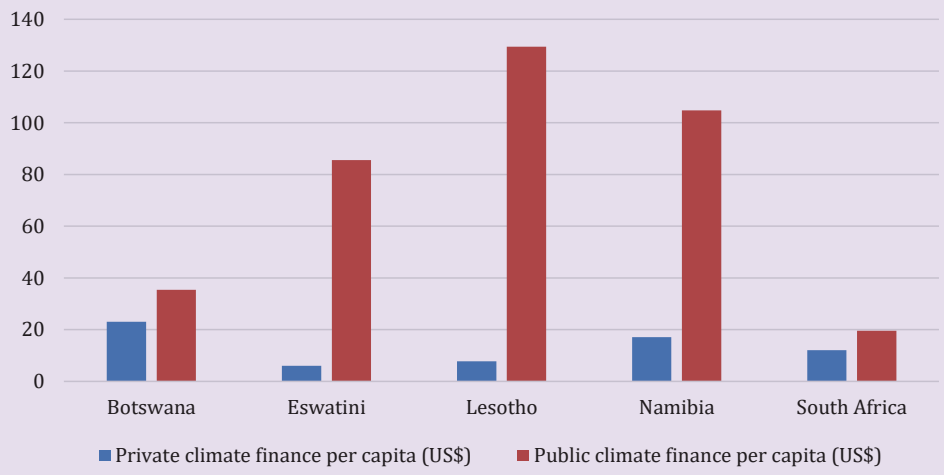
Table 3:[14] Innovative instruments used to mobilize private sector finance in Namibia

Type of instruments	Green and sustainable finance e.g., sustainable bonds, sustainability-linked loans/bonds, social bonds	Blended financing instruments e.g., guarantees, first loss	Private equity and venture capital	Carbon markets
Current performance	Bank Windhoek (BW) and First National Bank (FNB) Namibia have each issued one green bond in the domestic capital market. BW is using the proceeds to finance eligible green projects and assets throughout Namibia while the FNB will apply the proceeds of the green bonds to eligible green loans for Namibian green buildings and renewable energy generation projects.	Over 2015 to 2020, only 5% of climate change investments came in the form of guarantees.	Over 2015 to 2020, only 1% of climate change investments came in the form of equity.	Namibia is working with its development partners to develop carbon market-based options, a region-wide framework for carbon market mechanisms or an Emissions Trading System (ETS), This involves the identification of a robust carbon market policy framework, carbon market process flows, including authorization processes, issuance of the emission credits, establishment of transparent national emission registries, as well as capacity-building initiatives for both public and private actors as the building blocks for ETS to work.
Contextual challenges to scaling up in Namibia	-Market conditions, policy. -Insufficient operationalization of regulation and governance. -Smaller ticket size project opportunities. -Limited technical capacity.	-Absence of conducive supporting frameworks for the use of blended finance instruments across sectors. -The limited technical capacity for blending of finance, particularly at the sub-national level.	-Shallow domestic financial markets that limit sources to only international investors.	-Limited awareness of how carbon markets work and the lack of the necessary infrastructure to support the trading of carbon credits.
Key factors enabling successful use of instrument	-High volume of national wealth held by the domestic private sector which could be used to mobilise sustainable finance in domestic currency. -Presence of legislation and pol-icy reforms that support fur-ther expansion of sustainable finance.	-A government commitment to financing climate action using public sector domestic finance. -Presence of strong public finance management systems eg that track public finance allocation and spending.	-Presence of regulatory frameworks that encourage innovation. -Presence of a deep consumer market for products.	-Increased carbon pricing globally which provides a positive market signal for current investments in carbon reduction. -The high potential for carbon credits given the carbon sink characteristic that Namibia possesses. - The establishment of the African Carbon Markets Initiatives means that Namibia can learn from existing experiences.

In addition, government intervention is necessary in the face of profit-maximizing private agents who, if left to themselves, would not absorb the external costs of climate change (like carbon emissions) imposed by their actions.[15]

14 The data on financing is derived from the report on Namibia's Landscape of Climate Finance 2015-2020
15 Retrieved from https://ippr.org.na/wp-content/uploads/2022/12/Namibias-Green-Transition-web.pdf

Figure 6: Comparison Between Public and Private Climate Finance in the SACU Region



Source: AEO 2023

Opportunities for private sector investments in green growth and climate action in Namibia cut across all sectors of the economy.

Namibia has several sectoral opportunities for investments in green growth. Namibia's 2022 World Economic Forum catalogue[16] of projects presents these opportunities for both the public and private sectors in energy, agriculture, infrastructure, transport and logistics, water, housing and real estate, mining and tourism.

The catalogue has several public projects that promote green growth and target private sector investment under the Public-Private Partnership (PPP) arrangement. The energy utility, NamPower, has several renewable energy projects using wind, biomass and solar that are at various stages of development. The US$ 965 million 135 Megawatts (MW) Concentrated Solar Power Project is at the feasibility stage. The City of Windhoek's US$ 28 million 25 MV Solar PV project, aimed at reducing the city's carbon footprint, is also to be undertaken as a PPP. Under the initiative to increase agricultural output through irrigation-based agro-production, the government plans to lease out eleven green schemes through competitive outsourcing or PPP. Among the four green field projects up for development is the US$ 200 million Neckartal Irrigation Scheme. Set up to produce dates and grapes for export, the project is one of several in which the government is giving the private sector investor the flexibility to produce any crops and target any markets based on market demand assessment. Water conservation projects include: the desalination plant at the central coast, City of Windhoek direct water reclamation plant and Otjiwarongo wastewater treatment plant.

The private sector projects on offer that are also environmentally sustainable and socially inclusive include: US$ 75 million Schonau Solar Energy, the US$ 6 million (average) AMTA Packhouses that promote smart partnerships in agro-processing, US$ 12.5 million Future Yield Hydroponics – a project developed around a technology that uses less water than traditional farming methods – the US$ 19.7 million Gibeon Agricultural irrigation scheme for fruits and gains, the large-scale US$ 70 million Kelp Blue cultivation project aimed at sequestering carbon

16 Costs are estimated and may fluctuate depending on the exchange rate movement.

on a globally significant scale while boosting biodiversity in local ecosystems and the US$ 27 million Kahakwena Smart cattle farming that uses renewable energy and bio fuels.

To make the most of the awareness and interest that the catalogue has generated, Namibia will need to accelerate the ongoing reforms in policy incentives and regulations that will create a supportive environment to sustain the anticipated increase in private sector investments in these sectors. The focus should be on deepening financial markets, both conventional (i.e., debt and equity markets) and non-conventional (i.e., carbon markets), through direct investment and capacity-building activities. An even higher dividend will come from improved inter-agency coordination systems for blended finance among the public finance providers, private investors and local policymakers.

3.3.2 Barriers to private sector investments

Several factors are preventing the scaling up of private sector finance in Namibia.

(a) **Constrained private sector development.** The private sector in Namibia has a dualistic structure with a formal sector consisting of few medium to large-scale enterprises co-existing with a large informal sector dominated by micro enterprises. Namibia ranks 94th out of 141 economies on the World Economic Forum 2019 GCI, up from the 100th in the 2017/18 GCI edition. Despite these improvements, the sector faces several challenges that limit its meaningful contribution to production. The World Bank[17] lists these as: limited skills, markets, affordable finance and access to land; an uncompetitive business environment that increases business costs; low rates of digital technologies adoption; inadequate access to affordable and reliable infrastructure and business support services; low rates of entrepreneurship and business creation; lagging levels of financial inclusion despite a well-developed financial sector; and the dominance of state-owned enterprises (SOEs) which crowds out private participation and contributes to inefficiencies in key economic sectors. These align with the government's own assessments of the private sector challenges.

(b) **Pre-existing debt vulnerabilities that may limit Namibia's access to private finance**. In April 2021 the International Monetary Fund (IMF) assessed Namibia's debt dynamics to be sustainable but with significant risks to the debt outlook. In its 2022 Article IV mission to Namibia, the IMF observed that spillovers from the war in Ukraine, a slowdown of the global economy and weaker non-oil commodity prices could further exacerbate inflation, worsen imbalances and undermine economic recovery. The perception of such headwinds deters access to international finance generally which in turn constrains Namibia's capacity to develop blended financing instruments for green growth and climate action. High debt levels also constrain the fiscal space available to the government to effectively pursue PPP arrangements to leverage private sector financing.

(c) **Limited financial products and sources that can co-finance private sector investments.** Several adaptation actions listed in the NDC Update have public funding as they address national development objectives such as integrated water management and promoting sustainable crop and livestock farming. However, other adaptation actions like climate-smart agriculture may need innovative blended finance approaches to attract private investment which are limited in Namibia. The Namibian pension and insurance industries are relatively mature with assets worth around 153 percent of GDP in 2021, the highest ratio in Africa. Pension funds, if harnessed well, can become a

17 The July 2022 World Bank Namibia Country Private Sector Diagnostic (CPSD)

significant and steady source of private sector investment for climate change.

(d) **Limited skills to meet green growth and climate action needs.** The implementation of climate change adaptation and mitigation requires green skills and capacities within key sectors. However, the most dependent on climate-vulnerable sectors in Namibia are the poorest communities which have the least capacities to adapt. An assessment by the International Labour Organisation[18] in the country found that a lack of the necessary skills for green investment and green economic development was hampering the greening of the economy. New sets of professional skills are required in renewable energies, green construction methods, water resource management as well as recycling and waste management. The absence of adequate skills and capacities increases the risks that the private sector attaches to green growth, making the investment effort unattractive to them.

3.3.3 Pathways to mobilizing private sector finance for green growth.

There are several pathways that Namibia can follow to create an attractive environment for sustainable private sector investment in green growth and climate action.

(a) **Ensure sustained macroeconomic stability**. As earlier mentioned, Namibia has the tools in place to sustain its debt levels to below the debt threshold of 35 percent of GDP, including the full implementation of the measures contained in the Sovereign Debt Management Strategy, and its medium-term expenditure framework. The ongoing fiscal consolidation efforts are expected to deliver stability in debt dynamics and put the country on a stable macroeconomic path.

(b) **Develop robust transparent green growth frameworks that will shape the progress on climate action**. Namibia has a green growth framework for the energy sector, which has been instrumental in directing private sector finance towards energy, but other sectors are left behind as they lack similar frameworks. The frameworks need to be developed in tandem for all sectors of the economy that contribute to green growth. In addition, all roadmaps for investment in climate action should be integrated to provide the needed clarity to private investors on financing. The regulations should be comparable across all green growth sectors to ease meaningful private sector investments in climate action. To manage exit risk, the ongoing doing business reforms to strengthen governance mechanisms based on accountability and transparency should be accelerated, so that the rights and responsibilities of the different stakeholders in green growth are known.

(c) **Develop blended finance instruments and regulations that can support private sector green growth investments**. Blending public and private sector finance is useful to de-risk investments in private sector capital through, for example, first-loss investments or performance guarantees. These will require the development of sector-relevant regulatory frameworks for blending of finance and the provision of the associated technical assistance for structuring of blended finance projects. Supportive regulations should be developed simultaneously to incentivize pension funds into long term investments in climate action.

(d) **Enhance engagement with multilateral green finance institutions for an expanded pool of sustainable finance instruments.** Namibia needs to continue

18 https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_250689.pdf

harnessing the finance mechanisms of the Paris Agreement to mobilize resources and fill the climate financing gaps. National climate funds are among the best ways to mobilize climate finance at the national level. These are catalytic financing mechanisms driven by the country and designed to mobilize private investment. Already, two national institutions are accredited to international climate funds. These are the EIF, linked to the GCF, and the Global Environment Facility and the Desert Research Foundation of Namibia, linked to the Adaptation Fund. National ownership of international climate finance should be scaled up by increasing the number of national institutions, like national development banks. Private sector players can then access the funds and technical expertise for large scale strategic climate action projects such as sustainable transportation, renewable energy, climate-smart agriculture, green cities and waste management. Such linkages will also strengthen the country's capacity in understanding the policies and procedures of global climate fund facilities and institutions.

(e) **Enhance skills and capacity**. Namibia has limited skills and capacities to realize its green growth and climate action plans. Existing skills are mostly limited to renewable energy where most of private sector financing is directed. The country needs to exapnd skills and capacities across sectors that will promote innovation and attract private sector investors. The development of green skills and capacities needs to be integrated into the education curricula of tertiary, technical and vocational training colleges.

(f) **Development Finance Institutions (DFIs) and Multilateral Development Banks (MDBs) are key to unlocking private sector climate action finance in Namibia**. The DFIs and MDBs provide concessional finance for green infrastructure projects which then have the potential to be refinanced later in the project cycle by commercial investors. DFIs and MDBs can also attract commercial investment by facilitating risk-adjusted returns for green growth projects through risk mitigation tools such as guarantees, first-loss equity, grants and insurance products. Non-market instruments, such as the Bank's Adaptation Benefits Mechanism (ABM), can support the channeling of private sector finance into adaptation by attaching value to resilience. ABM facilitates payments by certifying the adaptation activities of a country, which in turn increases their attractiveness to potential investors or lenders.

(g) **Use of transparent incentives at the national and sectoral levels is critical.** A combination of incentives for investment in climate compatible sectors and disincentives for investment in carbon-intense sectors can be used to shift and scale up private investment. These could include requirements for financial sector actors and listed companies to disclose their climate-related risk, introducing green business certification and promoting green businesses within the public procurement framework, as well as introducing tax incentives for green businesses or employment creation in climate-aligned sectors.[19]

(h) **Stakeholder collaboration can be enhanced, for the private sector's views to be taken into consideration.** The government will need to continuously engage with the domestic and international private sector players to identify and address primary risks to investments in green growth and climate action. The government takes the strengthening of coordination across national and international stakeholders to fast-track decisions and inter-agency collaboration as a priority area to deliver its NDC Update.

19 https://www.meft.gov.na/files/downloads/Namibia's%20Landscape%20of%20Climate%20Finance_Jan_06.pdf.

4. HARNESSING NATURAL CAPITAL FOR CLIMATE CHANGE AND GREEN GROWTH

Namibia's economic development can be measured not only by its GDP growth, but also by its wealth, which is composed of natural, human and social capital. As a resource-rich country, it is important for Namibia to transform the returns from its natural capital into the other forms of capital or assets for the benefit of future generations.

4.1 EVOLUTION OF NATURAL CAPITAL

Natural capital is tracked in two groups: (a) renewable capital, consisting of forest timber, forest non-timber, mangroves, fisheries, protected areas, cropland and pastureland; (b) non-renewable assets, separated into oil, natural gas, coal and minerals. In addition, non-measured forms of natural wealth, such as renewable energy potential from solar, wind and hydro-resources, landscapes, and marine assets are also reviewed but qualitatively.[20]

The data for (a) and (b) is from the World Bank and covers the period 1995-2018. Table 4 presents the summary for SSA and Namibia for the two end data points.

Between 1995 and 2018 – compared to SSA – the following observations can be made about Namibia.

- SSA's total wealth increased by 118 percent, almost 1.5 times that of Namibia, which increased by 81 percent. Namibia's per capita wealth increased by 20 percent compared to SSA's 19 percent.
- The country's expanding wealth was derived from positive growths in both produced/manufactured and human capital but not natural capital.
- The AEO 2023 report proposed an increase in natural capital in per capita terms as an indicator of sustainable growth.
- Namibia's total natural capital declined by 20 percent (per capita by 47 percent) while the total natural capital of SSA increased by 18 percent but fell by 36 percent in per capita terms against a backdrop of a strong population growth.
- The decline in natural capital in Namibia was driven by a net fall on renewable natural resources, in particular fisheries and pastureland, that more than offsets a significant increase (670 percent) in sub-soil assets (metals and minerals). The Institute for Public Policy Research, in October 2020, found that much of the damage to Namibia's natural capital – through poaching, illegal logging and forest harvesting, and illegal sand-mining – was due to misgovernance and maladministration since 2015. The decline in renewables is discouraging

20 The World Bank data can be accessed at: Explore data (worldbank.org). The study covers 146 countries.

for Namibia where a large part of the population – the indigenous people of the San, Ovatwa, Ovatjimba, Ovahimba and Ovazemba tribes – depends on natural resources for their livelihood and culture. Any decline in renewable natural capital exacerbates poverty and inequality and increases vulnerability to climate risks.

- Natural resource rents fell in the past but are displaying signs of cautious recovery recently. As a percentage of GDP, the rents fell from 2.4 percent in 2010 to 1.4 percent in 2019, before increasing to 2.0 percent in 2020 (Annex 1), driven mainly by a decline in mineral and forest rents. Mineral rents declined from 1.9 percent of GDP in 2010 to 0.8 percent in 2019, with an uptick to 1.2 percent in 2020. Rents from forests peaked at 0.9 percent of GDP in 2015 before stabilizing at 0.8 percent in 2020.

According to the World Bank, "natural capital accounting" offers a way to take stock of a country's natural assets with the purpose of placing value and measuring the condition of the environment, its contribution to the economy, as well as the impact of the economy on the environment.

Namibia's natural capital is abundant with natural resources stocks (diamonds, uranium, copper, magnesium, zinc, silver, gold, lead, semi-precious stones and industrial minerals), land (8.1 percent forest cover (2020)) and a significant aquatic ecosystem with over 1,570 kms of coastline. The country's blue economy encompasses fisheries, marine mining and tourism, maritime transport and coastal infrastructure such as ports, towns and coastal industries. Namibia is endowed with vast renewable energy potential that includes solar, wind, bioenergy, hydropower and green hydrogen (Box 2).

Namibia's Vision 2030 emphasizes the sustainable use of natural resources in the country by promoting the creation of a diversified, open market economy with a resource-based industrial sector and commercial agriculture. The country's second National Biodiversity Strategy and Action Plan (NBSAP2, 2013-2022),[21] seeks to maximize on existing areas of comparative advantage in natural resource management, nature-based tourism and environmental protection by mainstreaming biodiversity in all sectors other than the environmental sector. That noted, Namibia does not have an explicit overall policy that targets the use of natural capital to build national wealth. However, the country has been compiling Natural Capital Accounts since the 1990s for various natural capitals. These include water, forest, wildlife, fishery and land. The exercise is intended to result in the construction of a robust information system for natural capital to underpin national priorities and strategies.

Namibia should leverage its natural capital to stimulate development. However, this wealth of natural resources is threatened by climate change and weak resource governance. Public policy measures to sustainably maximize Namibia's natural capital, including the appropriate laws and their strict implementation and the requisite capacity-building of government officials, should be put in place. The government could use optimal fiscal instruments to maximize resource rents from non-renewable resources and sustainably manage renewable resources including controlling illegal, unreported and unregulated mining and curbing deforestation. The monitoring of natural capital is still not sufficiently covered, and the establishment of a comprehensive updated database remains a priority.

4.2 OPPORTUNITIES FOR ENHANCING THE CONTRIBUTION OF NATURAL CAPITAL

The channels for increasing the returns from natural capital, without damaging the base that provides these returns, can be both domestically and internationally driven actions. On the domestic front, the emphasis should

21 https://www.fao.org/faolex/results/details/en/c/LEX-FAOC169118/

Table 4: Evolution of Natural Capital in Sub-Saharan Africa and Namibia: 1995 compared to 2018

	Total in Millions, constant 2018 US$			Per Capita, constant 2018 US$		
	1995	2018	% change	1995	2018	% change
Sub-Saharan Africa						
Total wealth	9,126,768	19,904,322	118.1%	17,273	20,473	18.5%
Produced capital	2,132,222	4,490,723	110.6%	4,035	4,619	14.5%
Human capital	4,158,247	11,936,632	187.1%	7,870	12,278	56.0%
Natural capital	3,283,876	3,879,247	18.1%	6,215	3,990	-35.8%
Renewable natural re-sources	2,669,748	2,825,724	5.8%	5,053	2,906	-42.5%
Forests, timber	581,892	719,515	23.7%	1,101	740	-32.8%
Forests, non-timber	338,453	356,695	5.4%	641	367	-42.7%
Mangroves	3,718	7,631	105.2%	7	8	11.5%
Fisheries	31,985	14,642	-54.2%	61	15	-75.1%
Protected areas	164,362	282,394	71.8%	311	290	-6.6%
Cropland	1,214,774	992,769	-18.3%	2,299	1,021	-55.6%
Pastureland	334,564	452,079	35.1%	633	465	-26.6%
Sub-soil assets	614,128	1,053,522	71.5%	1,162	1,084	-6.8%
Oil	424,722	626,495	47.5%	804	644	-19.8%
Natural gas	3,122	118,367	3691.7%	6	122	1960.7%
Coal	82,957	150,748	81.7%	157	155	-1.2%
Metals and minerals	103,328	157,913	52.8%	196	162	-16.9%
Net foreign assets	-447,577	-402,280	-10.1%	-847	-414	-51.2%
Population, millions	528	972	84.0%			
Namibia						
Total wealth	89,580	161,880	81%	55,029	66,120	20.16%
Produced capital	7,946	32,038	303%	4,881	13,086	168%
Human capital	56,823	112,423	98%	34,907	45,920	32%
Natural capital	24,632	19,652	-20%	15,132	8,027	-47%
Renewable natural re-sources	24,314	17,206	-29%	14,936	7,028	-53%
Forests, timber	521	2,474	374%	320	1,010	215%
Forests, non-timber	5,179	5,310	3%	3,181	2,169	-32%
Mangroves	0	0	..	0	0	..
Fisheries	9,600	454	-95%	5,897	186	-97%
Protected areas	1,846	3,496	89%	1,134	1,428	26%
Cropland	733	1,214	66%	450	496	10%
Pastureland	6,436	4,258	-34%	3,954	1,739	-56%
Sub-soil assets	318	2,446	670%	195	999	412%
Oil	0	0	..	0	0	..
Natural gas	0	0	..	0	0	..
Coal	0	0	..	0	0	..
Metals and minerals	318	2,446	670%	195	999	412%
Net foreign assets	178.6	-2,234	**	110	-912	**
Population, millions	1.628	2.45	50%			

Source: World Bank 2021

be on good governance in the management of natural capital returns on the integration of physical and human capital to add value to exports. On the international front, there is a special role for making greater use of international agreements on climate change and biological diversity to finance higher returns from the substantial natural assets. Namibia's review for the period 1995 to 2018 indicates a decline in natural capital. Measures to reverse this trend pertain to non-renewable natural capital and to renewable natural capital.

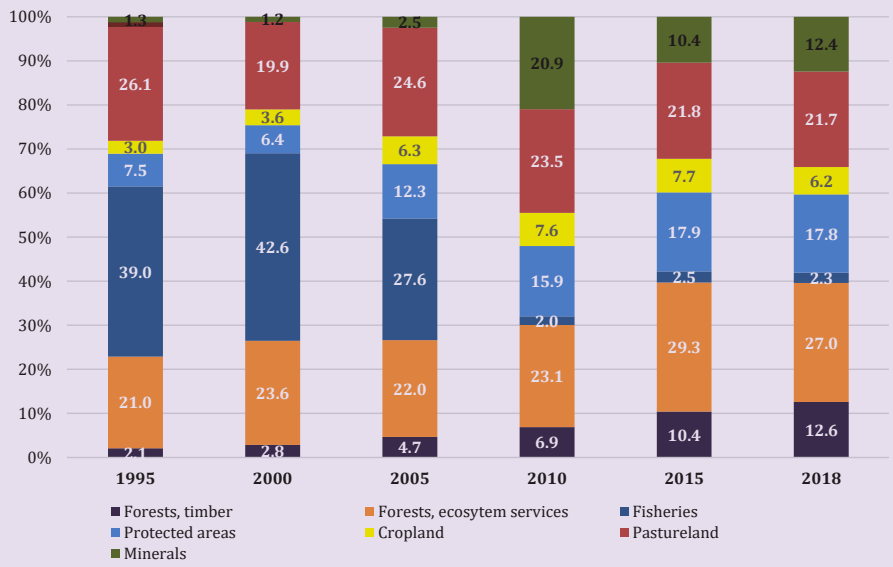
4.2.1 Non-renewable resources

Well-endowed with natural resources, Namibia's economic growth is dependent on its extractive industries but with limited value-addition and job creation. The mining sector's contribution to GDP stood at 12.2 percent in 2022, up from 9.2 percent in 2021. The sector is the largest single contributor to public revenues (27 percent of total revenues) and goods export receipts (over 60 percent of total exports). The AEO 2023 argues that countries need to ensure that they receive a fair share of resource rents from their non-renewable resources (for example, the negotiated royalty rates are often too low). However, obtaining a "fair share" of the revenue from non-renewable resources does not guarantee economic development if the revenues are not well spent. Corruption and weak institutions in mineral rich countries translates into low growth and high poverty rates. The report advocates for transparency, efficiency and good governance if fair resource rents are to be reaped. Aside from improving transparency and accountability in the resource rents, the report recommends the alignment of the country's industrial policies with current trends and opportunities in the energy transition in the region. A regional approach not only maximizes mineral wealth contribution to sustainable growth but will also create jobs through ensuring that local content is emphasized.

Namibia can efficiently increase its natural capital returns through good governance, and use of financing from climate change international agreements to harness these returns.

Namibia needs to follow a pragmatic transition process to reduce emissions while allowing communities to use their natural resources sustainably. Namibia's national electricity access rate increased from 49 percent in 2019 to 56 percent in 2021 in line with Vision 2030 targeting universal access. Namibia generates 35 percent of its electricity domestically and imports 65 percent mainly from the Southern

Figure 7: Composition of Namibia's Natural Capital from 1995 to 2018



Source: World Bank 2021

Box 2: Renewable Energy Potential in Namibia

Solar: Namibia's solar irradiation values are among the highest in the world. With around 300 sunny days and over 3,000 sun hours per year, the annual solar irradiation reaches values of 2,200 to 2,400 kWh/m^2. Due to the constantly high irradiation, PV systems in Namibia generate twice as much electricity as comparable systems in Germany on an annual average.

Wind: Natural conditions for wind power are limited in the region. High, constant wind speeds which offer ideal conditions for the construction of wind power plants are found on the south coast in the region around Lüderitz, and in the coastal region on the border to Angola. According to an analysis by the Ministry of Mines & Energy, an annual electricity yield of around 2,800 MWh per installed MW of wind power can be expected in Lüderitz.

Bioenergy: In the bioenergy sector, the use of invasive bush wood (encroacher bush) offers potential for biomass plants to produce and use wood chips, pellets or for wood gasification. NamPower is also planning a 40 MW biomass power plant. The bush encroachment affects up to about 45 million hectares, offers large quantities (approx. 14 million t/a) that can be sustainably harvested annually with positive ecological effects on the environment. However, it is challenging to harvest the bush wood as well as the logistics required. As a result, only about 10 percent of the biomass potential is currently commercially exploited, primarily for charcoal production and increasingly for material use pathways (animal feed, biochar). Namibia is the world's fifth largest charcoal exporter with about 210,000 tons. Bioenergy from specially cultivated energy crops is not possible due to land competition with food production and water scarcity.

Hydropower: The natural potential for hydropower is estimated at 2,250 MW of which 347 MW is produced by Ruacana hydroelectric power station. However, hydropower potential in Namibia is mostly theoretical as limited water resources and regular drought make the continuous operation of hydropower plants difficult. For example, Ruacana can only be operated at maximum capacity during the rainy season.

Green Hydrogen: Green hydrogen is likely to encourage further renewable energies (PV, wind power, Biomass). Namibia is positioning itself internationally as a production location for green hydrogen due to its very good renewable energy potential. Model calculations assume that green hydrogen can be produced for 25 to 33 NAD (1.50 to 2 Euro) per kilogram in Namibia. The country is cooperating with Germany on this topic. In November 2021, the Namibian Government announced the preferred bidder for a vertically integrated hydrogen project near Lüderitz: The Hyphen Hydrogen Energy consortium, with the participation of the German company Enertrag, is to realize and operate the plant. Starting in 2026, the first build-up stage (2 GW renewables) is expected to start producing hydrogen. By the end of the decade, the entire plant is to be realized: 5 GW of renewables and 3 GW of electrolysis will produce up to 300,000 tons of green hydrogen and/or ammonia. The investment volume is estimated at $9.4 billion.

Source: GIZ's 2022 Sector Brief Namibia: Renewable Energies

Africa Power Pool. To eliminate energy poverty, the country needs to accelerate its efforts to expand electricity generation capacity using clean sources to support industrialization.

4.2.2 Renewable resources

Renewable resources are increasingly at the heart of sustainable development in Namibia. Namibia has the potential to become a renewable energy hub in the region. As demonstrated in Box 2 and section 3.3, the country is blessed with abundant renewable energy sources (solar, wind, water) that can be harnessed not only for national purposes but also be used to decarbonize the Southern African Power Purchase pool.

Between 1995 and 2019, more land was devoted to crop production than to the rearing of animals. The unit value of the land can be raised through increased agro-processing for a higher value in agricultural output and in exports. This can be observed in the increase in the value of forests through the processing of timber. Namibia needs to preserve its characteristic of global GHG mitigation as a net carbon sink. The government can promote and enforce policies and regulations that protect forests including setting up more reservation areas and preventing illegal logging through increased enforcement and greater penalties for illegal logging. Sustainable forestry practices such as selective logging practices and reforestation should also be promoted, for example by using performance bonds for forest lessees.

Namibia needs to do more to address the huge decline in fisheries. Robust International Access Agreements (IAAs) would avoid the over exploitation of fish stocks and any revenue generated from these agreements would benefit the coastal communities through employment and financial training in sustainable fisheries management practices.

To exploit landscapes more effectively for tourism, Namibia should develop its ecotourism potential further with the involvement of Civil Society and local communities along the tourism value-chain.

Other means for making natural capital more productive in Namibia are via opportunities for increasing value added through strategic partnerships with SOEs and foreign investors, for fostering innovation and creating a conducive environment for African-owned firms to emerge and thrive. Apart from local content, AEO 2023 also recommends countries explore franchising agreements with foreign firms to complement existing local content policies and requirements, especially where technical and financial capacity is lacking.

CONCLUSION AND POLICY RECOMMENDATIONS

5.1 CONCLUSION

Given the limitations and demands on public finance, the private sector needs to play a major role in mobilizing finance for green growth and climate action in Namibia. Actions should be taken to leverage the opportunities for private sector investments in adaptation and mitigation of climate change while reducing the barriers to private sector investments. This will involve tapping into the emerging innovative private sector financing mechanisms and making use of the already established and functioning national institutions.

Natural capital also plays a major role in climate finance. However, more work is needed to increase the sector and indicator coverage and data points for a complete natural capital analysis. Action is also needed to prevent loss of forest ecosystems and marine biodiversity as well as harnessing the returns from these systems in a sustainable manner. More can also be done to exploit clean energy resources. For non-renewables, extending the value-chains and investing in new technologies for crop and livestock production will be beneficial. Incentives to reduce loss of forest cover to preserve carbon capture can be pursued. Fisheries stock can be regenerated and then preserved at a higher level through entering IAAs with Distant Water Fleets that prevent overexploitation while generating fair revenues for local communities. For tourism, the aim should be to increase total income with an emphasis on the involvement of communities in ecotourism.

Below is a set of recommendations for different sets of stakeholders.

5.2 POLICY RECOMMENDATIONS FOR PRIVATE SECTOR FINANCING FOR CLIMATE CHANGE AND GREEN GROWTH

5.2.1 National Government

"Crowding in" private sector investment in green growth requires the acceleration of doing business reforms for a conducive environment. This includes the provision of innovative financing arrangements and strategic deployment of public capital. Tax credits, establishing domestic climate and corporate social responsibility for climate finance are needed to improve capital efficiency and overcome the barriers to finance which have stifled climate investment. The traditional financial instruments, such as concessional debt and grants could be deployed more efficiently to target specific barriers such high up-front costs and currency risks. Fobissie K and Mantlana B (2021) list sector-specific incentives as:

a) **Transport sector:** tax incentives that can encourage the private sector switch to the production of alternative fuels and low-emission technologies; preferential funding channeled through finance institutions to support private transport businesses convert to dual-fuel vehicles.

b) **Water sector:** PPPs can facilitate private sector investment and expertise in the water and sanitation sector. The PPP contracts should contain performance standards, environmental levies and extended producer responsibility clauses on waste management, promoting an

efficient circular economy.

c) **Agriculture sector:** Through scientific and market research, large and small businesses can work with the government to better understand and predict climate change and identify location-specific agricultural production systems that maximise adaptation and mitigation along the value-chain. Best adaptation business practices and opportunities should be shared and communicated with the large businesses and SMEs to attract them into adaptation businesses in agriculture, forestry and other land use. Targeted trainings on these best practices should be conducted by the government in collaboration with development partners and other technical stakeholders, such as the Civil Society.

Mainstreaming green skills development into education institutions will ensure that there is a continuous supply of green skills that the private sector can access domestically. With the support of development partners and international climate funds, Namibia can also strengthen its technical capacity to design climate-smart strategy, international negotiations and accreditation, development of bankable projects and generate up-to-date data to promote climate investment.

The private sector should have access to and be represented in the coordination structures around green growth. These include national level institutions responsible for facilitating the implementation of green growth and climate action frameworks, as well as the multistakeholder platforms that can link the private sector effectively to other international actors for better collaboration. Micro, small and medium enterprises can be integrated into the national climate and green growth strategy of Namibia, for example, through affordable finance and skill development programs.[22]

5.2.2 MDBs and DFIs

MDBs and DFIs can use innovative financing instruments to attract private sector investments, particularly into non-energy sectors in Namibia. Concessional and non-concessional finance can draw in commercial investors at a later stage of the project cycle. They can attract commercial investment through risk mitigation tools and approaches. They can supplement blended finance structures with a combination of structured finance strategies and risk mitigation instruments. They also act as intermediaries in blending finance from donor governments and investors to scale up commercial investment in green growth in Namibia.

5.2.3 Domestic and international private sector

The private sector can collaborate with the government, MDBs and DFIs and other private sector actors to identify key risks to investments and propose ways of addressing these investment risks.

5.2.4 Developed country governments

By honoring their Paris Agreement commitments to mobilize US$ 100 billion of climate finance annually for developing countries, governments of developed countries can compensate highly vulnerable countries like Namibia for the adverse impact of climate change. They can also commit to a higher post-2025 climate finance target that is sufficient to meet needs in developing countries and target flows toward climate action and green growth.[23]

5.3 POLICY RECOMMENDATIONS FOR LEVERAGING NATURAL CAPITAL TO FINANCE CLIMATE CHANGE AND GREEN GROWTH.

Namibia needs to design a strategy for natural resource wealth management

22 AEO 2023.
23 Ibid.

to drive inclusive and sustainable development. This will help to address natural resource governance issues, including internalizing environmental opportunity costs associated with the exploitation of natural resources and investment in natural capital. This calls for the mainstreaming of natural capital in development planning and integrating natural capital accounting in the national system of accounts to track better the contribution of natural resources to GDP. This could inform the way rents from natural capital are used and distributed. Increased investment in natural capital and reform of land-use policies are needed to expand the productivity of agriculture, forestry and related value chains and contribute to building climate smart cities and green infrastructure.

Namibia needs to strengthen its capacities for the design and implementation of Environmental and Social Impact Assessments in the extraction of natural resources. More effort is needed to safeguard biodiversity and ensure that extraction of natural resources follows sustainable and equitable approaches, taking into consideration the role of communities and civil societies. Raising awareness of, and mainstreaming, climate and green growth policies in public and private investments, especially in the natural resource sectors, are important to exploit the natural capital potential.

The government should promote and enforce stricter policies and regulations protecting forests and preventing illegal logging. Sustainable forestry practices such as selective logging practices and reforestation should also be promoted through instruments such as performance bonds for forest lessees. These are short term measures. In the long term, the government should prepare to be part of the growth in carbon sequestration related to land use (forestry and agriculture) by developing new offsets and ensuring the integrity of certification of voluntary carbon markets. The government can partner with developed country governments in the creation of a single market for the trade of emissions credits[24] which will raise the price of carbon credits in forests. This is something that can start right away but may take a few years to mature.

24 Under Article 6 of the Paris International Agreement.

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Annex 1: Namibia Selected Indicators

Indicators	Unit	2010	2015	2018	2019	2020	2021	2022 (e)	2023 (p)	2024 (p)
National Accounts										
GNI at Current Prices	Million US $	9,531	12,281	12,028	12,894	11,574	11,765	...	...	...
GNI per Capita	US$	4,540	5,380	5,000	5,270	4,650	4,650	...	...	...
GDP at Current Prices	Million US $	11,282	11,450	13,676	12,539	10,581	12,307	12,100	12,952	13,520
GDP at 2010 Constant prices	Million US $	11,282	14,530	14,538	14,416	13,248	13,712	14,346	14,846	15,284
Real GDP Growth Rate	%	6.0	4.3	1.1	-0.8	-8.1	3.5	4.6	3.5	3.0
Real per Capita GDP Growth Rate	%	4.5	2.5	-0.7	-2.5	-9.7	1.8	3.1	2.0	1.3
Value Added: Mining and quarrying	Million US $	1,174	1,017	1,210	1,140	981	1,124	1,069	...	...
Value Added: Mining and quarrying	% GDP	10.4	8.9	8.8	9.1	9.3	9.1	9.0	...	...
Value Added: Fishing	Million US $	392	303	341	324	278	314	312	...	...
Value Added: Fishing	% GDP	3.5	2.6	2.5	2.6	2.6	2.6	2.6	...	...
Prices and Money										
Inflation (CPI)	%	4.9	3.4	4.3	3.7	2.2	3.6	6.1	5.7	4.6
Exchange Rate (Annual Average)	local currency/US$	7.3	12.8	13.2	14.5	16.5	14.8	16.4	17.1	17.8
Government Finance										
Total Revenue and Grants	% GDP	24.8	35.0	30.9	32.4	33.3	29.8	31.5	30.9	30.6
Total Expenditure and Net Lending	% GDP	29.8	41.2	36.0	36.9	41.2	37.3	38.3	36.5	35.5
Overall Deficit (-) / Surplus (+)	% GDP	-5.0	-6.1	-5.1	-4.5	-7.9	-7.5	-6.8	-5.6	-4.9
External Sector										
Terms of Trade Growth	%	-5.9	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Current Account Balance	Million US $	-537	-1,562	-479	-224	295	-1,206	-1,020	-584	-546
Current Account Balance	% GDP	-4.8	-13.6	-3.5	-1.8	2.8	-9.8	-8.4	-4.5	-4.0
Debt and Financial Flows										
Debt Service	% exports	32.0	54.5	60.7	64.4	72.0	75.4	55.6	56.9	53.6
External Debt	% GDP	32.4	49.6	61.7	66.4	77.6	66.5	65.4	60.6	57.2
Net Total Financial Flows	Million US $	34	271	347	148	215	-35	...	...	...
Net Official Development Assistance	Million US $	261	142	160	144	180	182	...	...	...
Net Foreign Direct Investment	Million US $	284	888	209	-179	-156	412	...	...	...
Demography										
Total Population	Millions	2.1	2.3	2.4	2.4	2.5	2.5	2.6	2.6	2.6
Population Growth Rate	%	1.5	1.8	1.7	1.7	1.7	1.6	1.5	1.4	1.6
Urban population	% of total	43.1	49.8	53.8	55.1	56.4	57.6	59.0	60.3	61.5
Life Expectancy at Birth	Years	56.0	60.7	62.6	63.1	62.8	59.3	58.1	59.5	64.1
Fertility Rate	births per woman	3.6	3.6	3.5	3.4	3.3	3.3	3.2	3.2	3.2
Poverty and Income Distribution										
Pop. living below national poverty line	% of total population	...	17.4	...	...	...	...	...	...	...
Population living below $2.15 a day	% of total population	...	15.6	...	...	...	...	...	...	...
Gini Index	%	...	59.1	...	...	...	...	...	...	...
Labor Indicators										
Labor Force participation (total)	%	57.0	60.6	58.9	58.9	58.2	58.5	58.9	59.0	...
Labour Force participation (youth)	%	30.9	34.6	29.2	29.2	28.7	28.7	29.2	29.3	...
Unemployment rate (total)	%	22.1	20.9	19.9	20.0	21.2	21.3	20.8	20.6	20.4
Unemployment rate (youth)	%	44.5	41.3	38.0	38.2	41.0	40.1	39.8	39.5	39.3
Natural Resources rents										
Total natural resources rents	% GDP	2.4	1.9	1.2	1.4	2.0	...	...	...	...
Oil rents	% GDP	...	...	...	...	...	...	...	...	...
Natural gas rents	% GDP	...	...	...	...	...	...	...	...	...
Mineral rents	% GDP	1.9	1.0	0.8	0.8	1.2	...	...	...	...
Forest rents	% GDP	0.5	0.9	0.5	0.6	0.8	...	...	...	...
Coal rents	% GDP	...	...	...	...	...	...	...	...	...
Natural Capital Renewable Resources										
Arable land	1000 hectare	800.0	800.0	800.0	800.0	800.0	...	...	...	...
Agricultural land	1000 hectare	38,809.0	38,809.0	38,810.0	38,810.0	38,810.0	...	...	...	...
Other land	1000 hectare	36,171.0	36,526.1	36,738.1	36,809.1	36,880.1	...	...	...	...
Forest land	1000 hectare	7,349.0	6,994.0	6,780.9	6,709.9	6,638.9	...	...	...	...
Planted Forest	1000 hectare	...	...	...	...	...	...	...	...	...
Annual freshwater withdrawals, total	% of internal resources	4.6	4.6	4.6	4.6	...	...	...	...	...
Total Fisheries Production	metric tons	382,624.6	510,488.7	490,491.3	467,429.4	329,935.6	...	...	...	...
Climate Finance and Green Growth										
Total Climate Finance*	Million US $	...	...	...	...	273.8	...	...	...	...
Green Growth Index**	%	54.5	56.2	54.8	55.5	55.5	55.5	...	...	...

Source : AfDB Statistics Department: IMF: World Economic Outlook,April 2023 and International Financial Statistics, April 2023; AfDB Statistics Department: Development Data Portal Database, April 2023. United Nations: OECD, Reporting System Division.

Notes ... Data Not Available (e) Estimations (p) Projections Last Update: June 2023

** Source: Climate Policy Initiative (www.climatepolicyinitiative.org)*

***Source: Global Green Growth Institute (GGGI). The scores for the Green Growth Index range from 1 to 100, with 1 having the lowest or very low performance and 100 having the highest or very high performance*

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