Country Focus Report 2023

BOTSWANA

Mobilizing Private Sector Financing for Climate and Green Growth







AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE DE DÉVELOPPEMENT

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DE DÉVELOPPEMENT

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African Development Bank Group
Avenue Joseph Anoma
01 BP 1387 Abidjan 01
Côte d'Ivoire
www.afdb.org

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The preparation of the Botswana report was led and coordinated by Ferdinand Bakoup, Acting Director, Country Economics Department (ECCE), with a core team consisting of Herve Lohoues, Lead Economist/ECCE.2 and Acting Division Manager, Nigeria, East & South; George Kararach, Lead Economist for the Southern Africa Region, Caroline Bernice Akishule Ntumwa, Country Economist for Botswana, and Tricia Effe Baidoo, Staff Assistant, ECCE.

Peer review comments were received from Erick Mariga, Regional Fragility and Resilience Officer RDTS/RDGS, Constant Labintan Adeniyi, Consultant Climate Change & Green Growth, PECG; Antony Karembu, Principal Investment Officer/Renewable Energy Specialist, PERN, and Jectone Tocho Achieng, Senior Investment Officer PESR, under the Botswana Country Team led by Leila Mokaddem, Director General, Southern Africa Region and Kennedy Mbekeani, Deputy Director General, Southern Africa Region; and Musa Adedeji Adetokunbo Hammed, Chief Research Economist ECMR and Innocent Onah, Chief Natural Resources Officer ECNR. This work was accomplished under the respective leadership of Anthony Musonda Simpasa, Division Manager, ECMR and Vanessa Ushie, Acting Director, ECNR.

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS 3
LIST OF FIGURES 5
LIST OF BOXES 5
LIST OF TABLES 5
LST OF ANNEXES 5
LIST OF ACRONYMS AND ABBREVIATIONS 6
KEY MESSAGES 7
I. INTRODUCTION 9
II. BOTSWANA'S ECONOMIC PERFORMANCE AND OUTLOOK 11
2.1. Recent Macroeconomic and Financial Developments 11
2.2. Outlook and Risks 12
III. PRIVATE SECTOR FINANCING FOR CLIMATE CHANGE AND GREEN GROWTH 15
3.1 The imperative for climate and green growth actions and the role of private sector financing 15
3.2 Private sector finance flows, gaps and needs for green growth and climate action 21
3.2.1 Current flows of finance 21
3.2.2 Private sector financing needs for the future 22
3.2.3. Emerging innovative private sector financing mechanisms for green growth 22
3.3. Opportunities for leveraging private sector financing for green growth 22
3.3.1 Opportunities for private sector investments 22
3.3.2 Barriers to private sector investments 25
3.3.3 Pathways to mobilize private sector finance for green growth 26
IV. HARNESSING NATURAL CAPITAL FOR CLIMATE CHANGE AND GREEN GROWTH 29
4.1 Evolution of Natural Capital 29
4.2 Opportunities for Enhancing the Contribution of Natural Capital 32
4.2.1.Non-Renewable Resources 32
4.2.2. Renewable Resources 33
V. CONCLUSION AND POLICY RECOMMENDATIONS 35
5.1 Conclusion 35
5.2 Policy recommendations for private sector financing for climate change and green growth 35
5.2.1 National Government 35
5.2.2 MDBs and DFIs 36
5.2.3 Domestic and international private sector 36
5.2.4 Developed country governments. 36
5.3 Policy recommendations for increasing natural capital's contribution to climate finance and green growth 36
REFERENCES 39
ANNEX 1: Botswana Selected Indicators 40

LIST OF FIGURES

Figure 1 Botswana - Green Growth Index, 2010-21
Figure 2 Botswana – Distance to targets of green growth indicators, average 2010-21
Figure 3 Upfront Private Investment's Potential to Adapt to Droughts and Floods (% of 2021 GDP)
Figure 4 Estimated Private Climate Finance Gap for Selected Scenarios of the Potential Contribution of the Private Sector to the Residual Climate Finance Needs in Botswana (USD millions)
Figure 5 Comparison between public and private climate finance in the SACU Region
Figure 6 Composition of Botswana's Natural Capital from 1995 to 2018

LIST OF BOXES

Box 1 Initial Ten-Point Vision on Green Economy for Botswana
Box 2 Unpacking the TNDP Priority on Climate Change for FY2023/2024

LIST OF TABLES

Table 1 Key Macroeconomic Indicators
Table 2 Adaptation Measures 2016-2030
Table 3 Innovative instruments used to mobilize private sector finance in Botswana
Table 4 Evolution of Natural Capital in Sub-Saharan Africa and Botswana: 1995, compared to 2018

LIST OF ACRONYMS AND ABBREVIATIONS

AEO	African Economic Outlook
AfDB	African Development Bank
CFR	Country Focus Report
CRI	Climate Resilience Index
DFIs	Development Financial Institutions
DSA	Debt Sustainability Analysis
ERTP	Economic Recovery and Transformation Plan 2020/2021 to 2022/2023
EU	European Union
GCF	Green Climate Fund
GE	green economy
GDP	Gross Domestic Product
GGI	Green Growth Index
GHG	greenhouse gas emissions
GNI	Gross National Income
Government	The Government of the Republic of Botswana
IRP	Integrated Resource Plan
MDBs	Multilateral Development Banks
MRV	Monitoring, reporting and verification.
MW	megawatts
NDC	National Determined Contributions
NDP	National Development Plan
PPP	public-private partnerships
SACU	Southern Africa Customs Union
SEZ	Special Economic Zone
SoEs	State-owned Enterprises
SSA	Sub-Saharan Africa
TNDP	Two-Year Transitional National Development Plan 2023/2024 to 2025/2026

Botswana

KEY MESSAGES

Macroeconomic performance and outlook

- Botswana's economic growth is driven by external trade, particularly diamonds, and related revenues, which in turn are affected by any reduction in real incomes posed by external shocks. The exposure exacerbates the country's existing vulnerabilities to climate change, straining the Government budget. Real GDP expanded by 11.9% in 2021 from the pandemic-induced contraction of 8.7% in 2020 to a broad-based 5.8% growth in 2022, driven by the continued diamond market rebound, consumption-supportive Government policies, and an effective vaccination drive.
- The outlook is for a 4.0% GDP growth in 2023. Downside risks to this growth include higher inflation from global supply-chain disruptions, growth recession in diamond market economies, persistent droughts, and lower exports and Southern Africa Customs Union revenues if weak economic conditions in South Africa persist.

Private sector financing for climate and green growth

- The Government remains committed to creating a conducive environment for the private sector to explore value chain green growth opportunities. As a result, its high global green growth index position makes it one of the best performing countries on green growth. In its latest Nationally Determined Contribution (NDC) submission in November 2016, Botswana estimated that it would need about US$ 18.4 billion to achieve the set target of 15% GHG emission reduction by 2030.
- Despite forming the largest proportion of climate finance in Botswana, private climate finance flows may need to more than double annually to close the estimated climate finance gap by 2030. Opportunities for private sector investments in green growth and climate action cut across all economic sectors. However, several factors prevent the scaling up of private sector finance, including high project costs, significant project risks, limited data and capacity. Private sector financing can be further "crowded in" by the Government spending its resources to reduce these barriers to private investment in climate solutions. This can be achieved through developing robust transparent green growth frameworks for all sectors and blending public and private sector finance to lower transaction costs and first-loss investments or providing performance guarantees. Engagement with multilateral green finance institutions can be enhanced for an expanded pool of sustainable finance instruments. Technology and capacity development, as well as regional collaboration can be accelerated.

Natural capital for climate finance and green growth

- Botswana's abundant natural capital grew by 13% between 1995 and 2018 and needs to be fully harnessed. Despite this growth, the natural resource rents have been in decline, driven mainly by a decline in mineral rents. For more sustainable management of its natural environment, the Government is striving to steer away from its reliance on coal (99% of the energy mix is coal-based) for electricity generation through its Integrated Resource Plan (IRP), which aims to derive 30% of its energy mix from renewable sources by 2030, and 50% by 2036. To fully benefit from its stock of natural capital, Botswana should deliver on its renewable energy commitment by having the right fully functioning institutions, grid structures, regulatory frameworks, sectoral renewable energy strategies, and local human capacities in place.

I. INTRODUCTION

This Country Focus Report (CFR) reviews the role of the private sector in financing of climate action and green growth[1] in Botswana. It provides an overview of recent macroeconomic performance and an outlook. 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 a country level the analyses carried out at the continental and regional levels in the African Development Bank's main African Economic Outlook (AEO) and Regional Economic Outlook (REO) 2023 reports.

The CFR is structured as follows. Section II outlines Botswana's recent macroeconomic performance and outlook. Section III discusses the country's private sector financing for climate and green growth. Section IV discusses the role of natural capital for climate finance and green growth in Botswana. Section V, in conclusion, draws out policy recommendations for the Government of Botswana (the Government), the donor community, the domestic and international private sector, and developed country governments.

1 AfDB's definition of green growth: 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.

II. BOTSWANA'S ECONOMIC PERFORMANCE AND OUTLOOK

A stable macro-economic environment is one of the key ingredients for improving the investment climate for the private sector[2]. Botswana has experienced low economic transformation with limited economic diversification, slowing the country's aspirations to transform from an upper middle-income status to a high-income country by 2036. Despite continuous efforts[3] by the Government to diversify the economy away from a dependence on the mining sector, the country's growth remains linked to diamond mining, making it vulnerable to external shocks such as the COVID-19 pandemic and high imported inflation resulting from Russia's invasion of Ukraine. This exposure exacerbates existing vulnerabilities to climate change. This section discusses recent macroeconomic developments, the outlook, and risks.

2.1 RECENT MACROECONOMIC AND FINANCIAL DEVELOPMENTS

Economic growth and drivers: Real Gross Domestic Product (GDP) expanded by 11.9% in 2021 from the pandemic-induced contraction of 8.7% in 2020. Botswana is highly dependent on its diamond industry, with diamonds being the single largest contributor to export receipts (over 85%)[4]. Mining output rose with the global diamond market recovery. Non-mining output also expanded, particularly from the sub-sectors of public administration and defence, construction, and wholesale and retail. Growth

Table 1: Key Macroeconomic Indicators

	2018	2019	2020	2021	2022(e)	2023(p)	2024(p)
Real GDP Growth	4.2	3.0	-8.7	11.9	5.8	4.0	3.9
Real GDP Growth per Capita	2.6	1.5	-10.7	9.7	4.2	2.2	2.3
CPI Inflation	3.2	2.8	1.9	6.7	12.2	8.2	5.8
Overall Fiscal Balance, Including Grants % GDP *	-5.1	-6.2	-9.5	0.0	-1.0	0.6	2.5
Current Account Balance (% GDP)	0.4	-6.9	-8.6	-0.5	2.2	2.9	3.8

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

2 According to AfDB, others are political support, a stable legal environment, transparent, fair, and effective regulation, mechanisms to promote business models such as PPPs and the availability of concessional funding and grants for project preparation and seed capital. It also means engaging financial intermediaries.
3 Efforts towards economic diversification are being channeled through initiatives such as the Economic Diversification Drive (EDD) and the Cluster Development Initiative. These initiatives aim to improve business productivity, value chains, and competitiveness in various sectors.
4 Diamonds formed 84.7% of total principal exports in April 2023 (Source: International Merchandise Trade Statistics April 2023)

was, therefore, widely dispersed across almost all sectors, albeit coming off the 2020 low base. In 2022, the broad-based 5.8% growth was driven by the continued diamond market rebound, consumption-supportive Government policies, and an effective vaccination drive (over 67% vaccinated population). Per capita GDP growth followed the same trend (Table 1). Aggregate demand rose with the increase in investments and consumption[5].

Monetary policy and inflation: At 12.2%, average inflation in 2022 remained above the Bank of Botswana's 3-6% target range, reflecting the domestic pass-through of high global commodity prices from Russia's invasion of Ukraine. The Government temporarily reduced the VAT rate to 12% from 14%, and zero-rated cooking oil and gas to ease living costs. The Bank of Botswana increased its monetary policy rate to 2.65% in August 2022, from 1.65% in May 2022.

At 4.0%, Botswana's economic growth is projected to return to pre-COVID 19 levels in 2023.

Fiscal developments: The FY2021/22 budget was balanced, from a fiscal deficit of 9.5% of GDP in FY2020/21, with higher mineral earnings, and an under-executed development budget. At 1.0% of GDP, the FY2022/23 deficit was financed through borrowing and reserves drawdown. Public debt, at 23.9% of GDP in FY2021/22, is sustainable.

Current account balance: The current account 2.2% surplus of GDP in 2022 signaled rising diamond sales, and receipts from the Southern African Customs Union. International reserves stood at US$ 4.7 billion in January 2023 (8.4 months import cover), compared to US$ 4.8 billion end-2021 (9.9 months).

Financial sector: Botswana's financial sector is well developed. The non-bank financial sector forms the largest share of financial system assets, at 55.6%, compared to the 44.4% by the banking sector. The total financial system represented 112.8% of GDP in December 2022. The banking sector has a strong capital base and is both profitable and liquid. The capital adequacy ratio averaged 19.1% in the twelve months to November 2022, above the 12.5% prudential requirement. The Non-Performing Loan (NPL) ratio fell to 3.8% in November 2022 from 4.3% in December 2021. While the non-bank financial institutions are generally safe, compliance enforcement actions increased by about 14% between March 2022 and March 2023, to maintain financial stability. Significant interlinkages persist in the financial system, with the banking sector being exposed to households (through credit), and households exposed to the non-banks (through pensions assets)[6].

Poverty and social indicators: Botswana, an upper middle-income country with a per capita income of US$ 6,640 (2020), presents a mixed social landscape. It has a low poverty headcount ratio of 20.8% (2021) but a high unemployment rate of 25.4%, driven by youth unemployment of 39.9% (2022). Youth (15-35 years) make up 53.7% of the total population. A skills mismatch, a weak entrepreneurship culture, and limited access to affordable finance contribute to persistently high unemployment levels.

2.2 OUTLOOK AND RISKS

Economic growth: GDP growth will moderate at 4.0% in 2023, supported by the anticipated higher economic activity from the beef sector liberalization, higher diamond prices, and accelerated copper and vaccine production.

Monetary policy and inflation: With the economy operating below full capacity, inflation is projected to fall to 5.8% in 2024, which lies within the central bank's target range.

Fiscal and current account balances: A fiscal surplus 0.6% of GDP will be supported

5 Statistics Botswana https://www.statsbots.org.bw/sites/default/files/Gross%20Domestic%20Product%20Q4%202022.pdf
6 Retrieved from Financial Stability Report May 2023 https://www.bankofbotswana.bw/publications.

by the full implementation of Government's consolidation and public financial management reforms. The current account may stay positive as the diamond and tourism industries rebound.

Risks: Headwinds include higher global inflation from supply chain disruptions linked to Russia's invasion of Ukraine, lower diamond earnings if diamond market economies head into recession, persistent droughts, and lower exports and SACU revenues if weak economic conditions in South Africa persist.

III. PRIVATE SECTOR FINANCING FOR CLIMATE CHANGE AND GREEN GROWTH

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

Green growth and climate action are critical if Botswana is to achieve its national development vision of becoming a high-income country by 2036.

The concept of a green economy aligns with the Government's vision 2036, in which environmental and social equity considerations are placed at the intersection of sustainable development[7]. Botswana enjoys many strengths and opportunities that it can leverage to unlock its potential to manage climate change and increase green growth, but it simultaneously faces several challenges in the same space. On one hand, having contributed only 0.02% to the global greenhouse gas emissions in 2021, Botswana is disproportionately affected by rainfall and temperature variabilities, given its semi-arid climate. Its high dependence on rain-fed agriculture combined with water scarcity is a threat to food security, nature-driven tourism, and livelihoods. On the other hand, it has several renewable energy resources[8] and a strong commitment to climate change.

The 2022 African Economic Outlook's average Climate Resilience Index indicated that from 2010 to 2019, Botswana was one of the countries with the highest climate resilience with a score of 70.2. The University of Notre Dame's 2020 Global Adaptation Initiative country index, which considers both vulnerability and preparedness of countries, ranked Botswana 89th out of 182 countries with a score of 48.3. In terms of vulnerability, the country ranked 66th with a 46.6 score, and held the 86th most climate change-ready country position with a 43.3 score.

For Botswana to transform from an upper middle-income country to high income status by 2036, high economic and inclusive growth (of about 6%) is a key ingredient to achieve this vision. To achieve and sustain this growth, there is a need to address the effects of climate change, ensure sustainable use of environmental resources, and close the income inequality gaps. This need forms the basis for green growth for the country. As far back as 2011, Botswana was already exploring the green economy concept against its basic principles of sustainable development, and defining what this would mean for the country. Back then[9], Botswana developed a ten-point vision for a green economy (details in Box 1). The vision advocated for the private sector to drive green growth (point 5) and the Government assumed the responsibility for

7 Retrieved from https://sustainabledevelopment.un.org/content/documents/18817botswana.pdf
8 Botswana has strong solar energy potential, with some of the highest levels of direct normal solar irradiation globally, over 3,000 kWh/m2 per year. However, the contribution of renewable energy to Botswana's energy mix is currently low, with only 1% of the electricity generated from renewable sources.
9 Retrieved from https://www.environmental-mainstreaming.org/botswana-green-economy.html

creating an enabling environment to enable green economic transformation (point 4).

Botswana is committed to green growth and effective climate change mitigation and adaptation, as demonstrated by its green growth and climate action policies.

Botswana has increased its resilience to climate extremes and reduced its carbon footprint, even with relatively low access to climate finance. The country has made environmental sustainability a cornerstone of achieving its vision 2036, and it is integrated into the eleventh National Development Plan (NDP11; 2017-2023) and the ERTP. To build climate resilience, the country approved its national drought management strategy in 2019 and a National Adaptation Plan roadmap in 2020. The roadmap prioritizes climate change interventions in the agriculture, water, and health sectors in line with Botswana's commitments to the Paris Agreement. Efforts to promote climate-smart agricultural practices have led to the development of a Botswana climate-smart agriculture roadmap. The 2021 National Climate Change Response Policy focuses on climate change governance, technological change, and investment.

Public and Private Partnerships (PPPs) form an integral component of the Government's efforts to enhance infrastructure financing gaps and services delivery. The country has several enabling policies in place, including the 2000 Privatization Policy, and the 2009 PPP policy and implementation framework, which led to the establishment of a PPP Unit in 2016.

In 2020, Botswana developed and issued

Box 1: Initial Ten-Point Vision on Green Economy for Botswana

1. Botswana's competitiveness is improved through a preferential focus on diverse, productive, and sustainable operations.
2. Stakeholders are well networked so that information flows improve, innovation increases, and partnerships are formed to achieve shared goals.
3. Citizens and poor people are empowered and benefit through decent jobs and improved livelihoods.
4. Government incentivizes a green economy through creating enabling conditions, setting high standards across the sectors, and runs its own operations in a consistent (green, and ethical) manner.
5. Botswana's private sector leads growth, takes initiatives, and transforms itself to become more efficient and inclusive; domestic investment is mobilized, and responsible foreign investment is attracted towards green infrastructure, goods, and services.
6. Major issues are properly mainstreamed such as environment, biodiversity, desertification, and poverty eradication and there is strong leadership to move to action.
7. Resilience is improved through planning that takes a more integrated, coherent, and future-oriented approach.
8. Accountability of all stakeholders is improved, through transparent information on resource stocks, flows and damages and a robust legal framework.
9. Built on solid knowledge, scientific and cultural principles including indigenous knowledge and 'botho', the latter capturing the values of 'humanness', respect, courtesy, integrity, dignity.
10. Botswana is internationally secure and responsible – it is cognizant of, and contributing to, Botswana's effective interdependence and role in the region and the world.

Source: Green Economy Coalition[10] 2012 ; UNDO-UNEP Poverty Environment Initiative

10 Source: Green Economy Coalition 2012 ; UNDO-UNEP Poverty Environment Initiative

the IRP for electricity generation over the next 20 years, covering renewable energy technologies such as solar photovoltaic, wind, Coal Bed Methane (CBM), concentrated solar thermal, and batteries for energy storage. The IRP was revised in 2022 to capture related initiatives including the Biogas Pilot Project, the Off Grid Solar Program, and the Rooftop Solar Photovoltaic Program amounting to 135 Megawatts (MW). The IRP aims to derive 30% of its energy mix from renewable sources by 2030, and 50% by 2036. In April 2021, a Memorandum of Intent was signed for the Mega Solar initiative, a partnership among Botswana, Namibia, Power Africa, the Bank, and the World Bank Group, to harness solar energy for domestic and regional power needs.

Botswana has also strengthened its climate investment resource mobilization through the 2021 Green Climate Fund program on energy, clean technology, and natural capital. Support to improve national institutional capacities to scale up climate investment will be core to achieving the country's climate finance targets. In terms of dialogue with development partners, the Bank is a member of the Botswana Development Partners Coordination Forum, which provides a platform for high-level interactions between government officials and development partners on development assistance.

Table 2: Adaptation Measures 2016-2030

Sector	Adaptation Measures
Water	Construction of pipelines and connection to existing ones to transmit water to demand centers. Reduce water loss during transmission by investing in telemetric monitoring systems. Enhance conjunctive groundwater-surface water use.
Agriculture	Improve genetic characteristics of the livestock breeds such as the Musi breed. Improve livestock diet through supplementary feeding. A switch to crops with the following traits: drought resistance; tolerance to high temperatures; early maturity.
Health	Public education and malaria campaigns. Malaria strategy. Control of diarrheal diseases

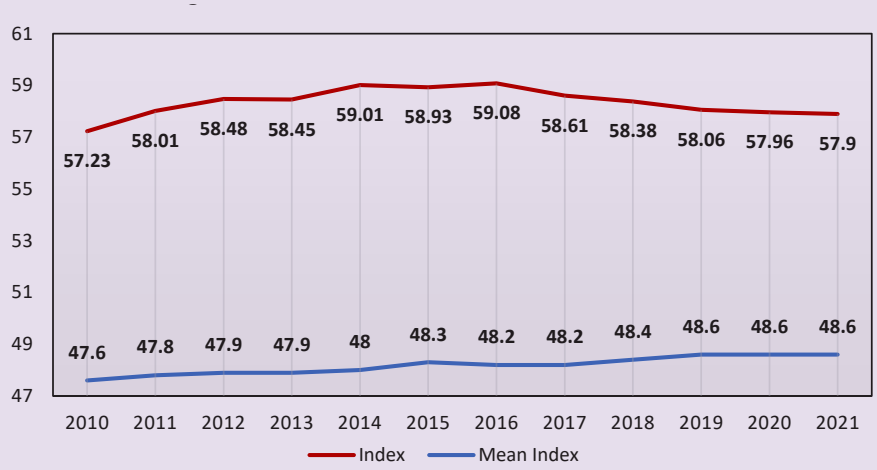
Source: Botswana's Intended NDC 2016

Botswana has committed to reducing its Greenhouse gas (GHG) emissions by 15% by 2030 with 2010 as the base year. Achieving this intention requires a comprehensive approach to addressing climate change that involves investments in climate change adaptation, addressing losses and damages from climate change, investments in natural resource management and in reducing social inequalities. Botswana's low emissions present the country with the opportunity to quickly transition to green growth while advancing on its climate change commitments. Botswana is also endowed with significant natural capital that can support its transition to green growth.

In its latest Nationally Determined Contribution (NDC) submission in November 2016[11], Botswana estimated that it would need about US$ 18.4 billion to achieve the 15% GHG

11 Retrieved from https://unfccc.int/sites/default/files/NDC/2022-06/BOTSWANA.pdf

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



Source: AEO 2023, Global Green Growth Institute databases

emission reduction target by 2030. These funds were required to mitigate emissions in the energy and transport sector infrastructure developments. Several adaptation actions were identified in the water, agriculture and health sectors as indicated in Table 2, but these were not quantified. According to the UN, Botswana is in the process of revising and expanding its NDC to include new areas for which data is available (land use, land use change and forestry, biodiversity and ecosystems and industry and manufacturing)[12], to enhance monitoring and tracking, and align the NDC to existing strategies, policies, and plans.

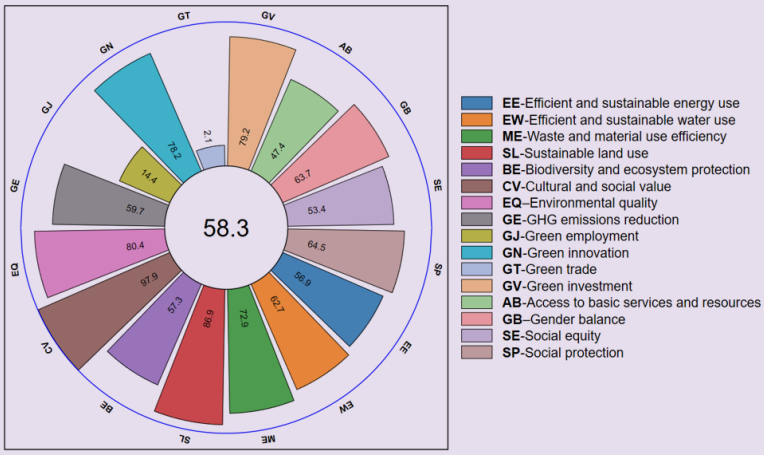
Botswana's high global green growth index position makes it one of the best performing countries on green growth.

The Global Green Growth Institute's Green Growth Index (GGI) was used to measure Botswana's progress towards achieving green growth. The higher the score, the closer the country is to reaching green growth or sustainability targets. Over 2010 to 2021, Botswana's GCI score ranged from 57.2 to 59.1, well above Africa's mean score range of 48-50 (Figure 1).

As indicated in Figure 2, the country's score was mainly driven by its high performance on cultural and social value (97.9), sustainable land use (86.9), environmental quality (80.4) and green investment (79.2). The 2000 Botswana Tourism Master Plan promotes eco-tourism and preserves local culture and traditions. The country's biodiversity finance plan includes support from the National Environmental Fund (NEF) for community organizations implementing biodiversity conservation projects. Additionally, the National Spatial Plan 2036 ensures integrated land use management that supports the preservation of natural capital. Botswana however underperformed in green trade (2.1), and green employment (14.4). The low performance may be attributed to the absence of a policy framework and insufficient technical capacity for procuring green projects by small and medium enterprises. To address these gaps, various actions are being undertaken. For example, the Greening Women Enterprises project aims to empower women to participate in decentralized renewable energy projects, by providing training, support, and access to resources. Additionally, a Green Opportunities booklet has been developed as a valuable resource for individuals, businesses, and organizations interested in engaging in climate change and environmental initiatives

12 Botswana | Climate Promise. https://climatepromise.undp.org/what-we-do/where-we-work/botswana

Figure 2: Botswana – Distance to targets of green growth indicators, average 2010-21



Source: AEO 2023, Global Green Growth Institute databases

in Botswana[13]. Aside from the latter two indicators, Botswana scored above 50 in the remaining GGI indicators. Details are provided in Figure 2.

For Botswana to fully achieve its green growth and its climate action ambitions, private sector finance needs to be mobilized at scale.

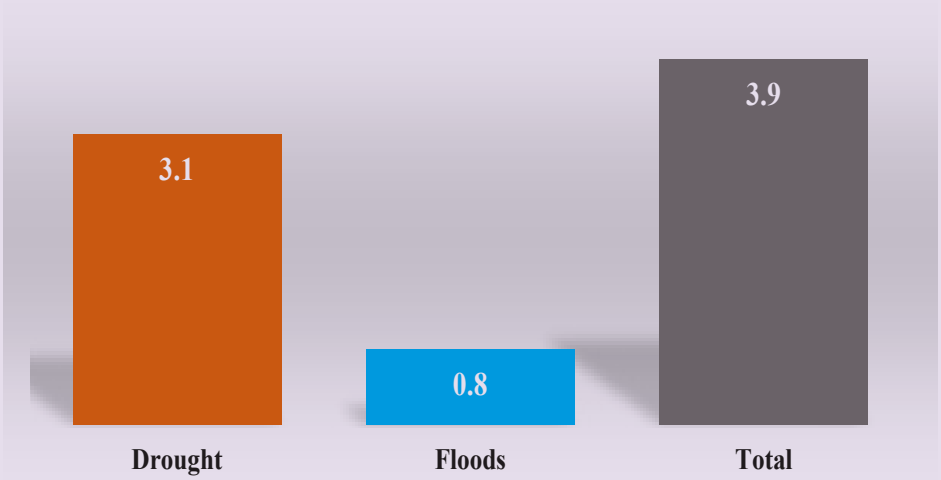
Meeting green growth and climate action requires significant green investments and innovation; two areas in which Botswana is currently lagging, as demonstrated by Figure 2. The private sector is often cited as a source of development finance, technical expertise, job creation, innovation, and efficient delivery of services. Through PPPs or direct investments, the private sector has the potential to help countries transition from environmentally harmful, resource-intensive production to cleaner technologies, to innovate in the green economy and to provide investment and know-how in sectors such as tourism, infrastructure development, and renewable energy[14]. A World Bank assessment[15] indicates that adaptation to the effects of the average frequency of droughts and floods in Botswana will require 3.9% of GDP in private investment at an internal rate of return of 8% between 2021 and 2040 (Figure 3). For context, some countries in the region, such as Eswatini, Malawi and Namibia, have adaptation investment needs that exceed 20%, making Botswana's requirements relatively modest.

The Government has demonstrated its political commitment to tackling climate change.

Pillar 3 in Botswana's Vision 2036 captures the importance of a sustainable environment. The pillar covers healthy ecosystem functions and services that support the economy, livelihoods, and cultural heritage, and enhanced resilience to climate change; sustainable utilization of natural resources; water security; energy security; sustainable land use and management; sustainable human settlements; climate resilience and disaster risk reduction for a low carbon footprint and managing pollution and waste. The six national priorities in the country's two-year Transitional

13 Retrieved from Botswana Climate Change Network
14 Retrieved from https://www.undp.org/sites/g/files/zskgke326/files/publications/RIO+20_ENGLISH_WEB.pdf
15 Bari, M., and S. Dessus. 2022

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



Source: AEO 2023 database

National Development Plan (TNDP)[16] are digital transformation; business environment reforms; infrastructure development; value chain development; sustaining livelihoods; and climate change (Box 2).

National frameworks recognize that the public sector plays a critical role in catalyzing private sector finance, as well as in directing this finance towards areas that are currently underfunded. To support its ambition of diversifying the economy and speeding up structural transformation for sustainable and inclusive growth, the Government is committed to a private sector-driven economy. It is targeting economically viable projects that are not only supportive of private sector-led development but are also those with the highest potential to increase productivity. Botswana's post-COVID-19 Economic Recovery and Transformation Plan contained reforms to the business environment and investments in infrastructure that supported private sector economic activity. The Government also considers PPPs as a financing option to reduce its capital spending. The Presidential Reset Agenda emphasizes value chain development to unlock opportunities for new, high growth companies in the private sector, and to drive export diversification. The implementation of the IRP, which aims to achieve 30% of its energy mix from renewable sources by 2030, through independent power producers, is expected to enhance the country's energy system resilience to climate risks and facilitate the low-carbon transition.

All of Botswana's policies and strategies on green growth and climate action recognize the role the private sector plays in mobilizing resources for collective goals. For instance, Botswana has developed its GCF country program targeting energy and natural capital sectors, providing an opportunity to strengthen private sector partnerships on climate investment/finance. Under stakeholder engagement, the Botswana 2021 Climate Change Response Policy emphasizes that the private sector must take the lead in identifying market opportunities and assisting communities with business development initiatives that can significantly contribute to job creation. It recognizes that the private sector can provide finance for accessing and transferring green technologies. The policy therefore promotes the active participation of the private sector through incentives, such

16 The eleventh National Development Plan expired in March 2023. The twelfth National Development Plan was deferred to FY2025/26, with Botswana following a TNDP in the interim.

Box 2: Unpacking the TNDP Priority on Climate Change for FY2023/2024

1. Guidelines incorporating climate change into environmental impact assessments are to be finalized in 2023.
2. The country is receiving technical assistance to embed climate change considerations in sectoral and infrastructure development plans through the IMF's Climate Public Investment Management Assessment.
3. The Government is to mobilize climate financing through green bonds, participating in carbon credit markets, and accessing the Green Climate Fund, with seven projects worth US$ 81 million already approved.
4. There is EU support for Botswana's green transformation energy mix initiatives.

Source: Botswana Ministry of Finance FY2023/2024 Budget Speech

as facilitating easy access to markets and formulating and monitoring carbon budgets. The policy also provides space for the private sector to critically evaluate, engage with and respond to climate change response measures. Botswana's 2016 NDC lists the need to estimate the share of Government and international contribution to support the mitigation measures, as a future activity, making access to international financing (both private and public) a clear priority.

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

3.2.1 Current flows of finance[17]

Private finance formed the largest proportion of climate finance flows in Botswana.

Over 2019 and 2020, climate finance flows totaled US$ 61 million, with 75% coming from private sources (commercial financial institutions, corporations and households/individuals) and 25% from public sources (multilateral development finance institutions, multilateral climate funds, and the Government through the national budget).

The use of climate finance emphasized mitigation over adaptation and targeted the energy sector.

In the same period, mitigation investments represented most of the climate finance flows in Botswana, representing 89% of funding. 9% was invested in both adaptation and mitigation activities (multiple objectives), while 2% was devoted solely to adaptation. Energy systems received the largest share of investment at 87%. Agriculture, forestry, other land uses and fisheries received 6% of the funding, while building and infrastructure took up 2%. 5% went to cross-sectoral activities, like technical assistance and capacity-building. According to the Climate Change Policy, mitigation plans in Botswana cover the formulation of carbon budgets, the development of carbon markets, investments in green energy technologies to facilitate low carbon development, reforming the transport sector to mitigate its emissions potential alongside improved performance, promotion of integrated approaches and best practices in waste management, and reducing the carbon footprint from procurement processes. Adaptation measures cover agriculture and food security; water; human health; human settlements; forest management; land use and land use allocation; disaster risk reduction; biodiversity and ecosystems; infrastructure development, and gender mainstreaming.

17 The information in this section is derived from the September 2022 Climate Policy Initiative's Methodology for Landscape of Climate Finance in Africa https://www.climatepolicyinitiative.org/wp-content/uploads/2022/09/Methodology-l-Landscape-of-Climate-Finance-in-Africa.pdf

Targeting the energy sector means that less finance goes to other sectors vital for green growth and climate action.

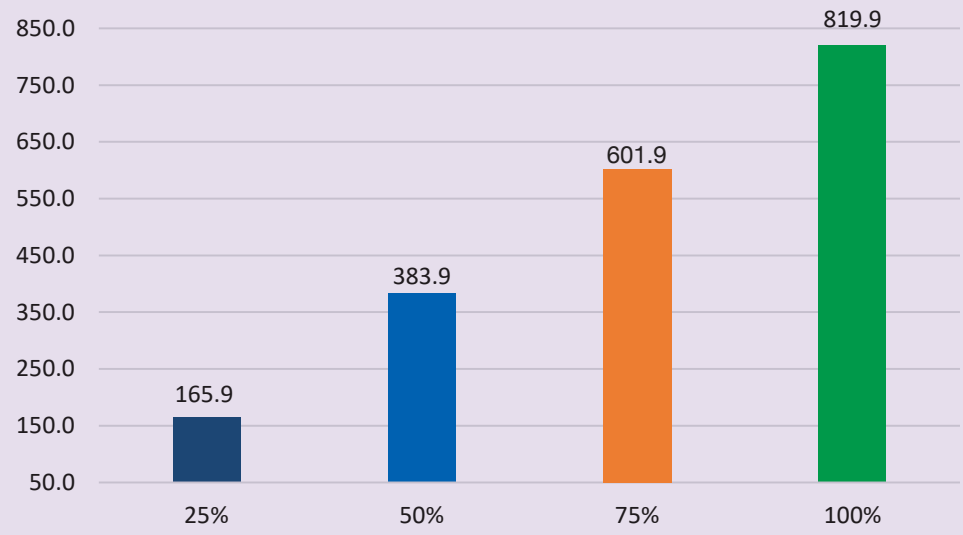
3.2.2 Private sector financing needs for the future

Private climate finance flows to Botswana may need to more than double annually to close the estimated climate finance gap by 2030.

The Botswana 2016 NDC estimated a finance need of US$ 18.4 billion to achieve the set target of a 15% GHG emission reduction by 2030. Given the current trends in global private climate finance flows to the country, the private sector is contributing only about 6% of the climate residual financing needs, risking the achievement of the country's climate action objectives. Efforts to unlock private financing must therefore be scaled up. To increase this contribution to 25%, which represents a conservative scenario, the private sector would need to increase its finance contribution to US$ 166 million annually, which is more than double their current US$ 52 million. For a 50% contribution to climate finance by the private sector, which is a moderate scenario, private sector financing would need to grow to US$ 384 million per year. A 75% contribution to the climate financing gap – an ambitious scenario – would see private sector finance grow to US$ 602 million annually (figure 4).

The private sector is contributing only 6% of the climate residual financing needs in Botswana, demonstrating the need to mobilize private sector financing to scale.

Figure 4: Estimated Private Climate Finance Gap for Selected Scenarios of the Potential Contribution of the Private Sector to the Residual Climate Finance Needs in Botswana (USD millions)



Source: AEO 2023 database

3.2.3 Emerging innovative private sector financing mechanisms for green growth

Despite the estimated shortfall in the mobilization of private sector finance for green growth and climate action, Botswana has observed an emergence of innovative mechanisms that could contribute to tapping the available private sector finance. Some innovative financing mechanisms are summarized in Table 3.

3.3 OPPORTUNITIES FOR LEVERAGING PRIVATE SECTOR FINANCING FOR GREEN GROWTH.

3.3.1 Opportunities for private sector investments

Botswana mobilizes the most private sector finance compared to its peers.

Table 3: Innovative instruments used to mobilize private sector finance in Botswana.

Type of instruments	Green and sustainable finance	Blended financing instruments	Private equity and venture capital	Carbon markets
Current performance	The Government is to mobilize climate financing through green bonds, participating in carbon credit markets, and accesing the Green Climate Fund (GCF), with seven projects worth US$ 81 million already approved.	Climate action data in this area is not readily available from the private sector.	Climate action data in this area is not readily available from the private sector.	Botswana is home to about 84 metric tons of irrecoverable carbon in the Okavango Basin. It is therefore vital to the country that carbon markets where carbon emitters can meet their climate targets by purchasing carbon credits, grow and are accessible. Private companies, such as the carbon tracking solutions company, Seed10X, plan to establish a secure carbon register for trading.
Contextual challenges to scaling up in Botswana	- Limited SADC investor base except for South Africa. - Less developed renewable sector. - Lack of expertise and a perception of higher transaction costs in identifying and developing bankable projects to be financed by green bonds. - An inadequate enabling environment (regulatory & capital market barriers). - A low demonstration of the financial benefits - Most potential issuers in the region, outside South Africa, were unfamiliar with the specific internal and external processes required in raising a green bond.	-Absence of conducive supporting frameworks for using blended finance instruments across sectors. -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. - Lack of the necessary infrastructure to support the trading of carbon credits.
Key factors enabling successful use of instrument	- Increasing shareholder demand for higher investment based on positive environmental, social and governance impacts. - Access to international capital markets as an alternative to the domestic investor base. -Presence of legislation and policy reforms that support green bonds. - Green bonds are investment opportunities for pension funds in Botswana, as outstanding domestic bonds may be re-financed with green bonds as a part of a broader debt management strategy.	-A government commitment to financing climate action using public sector domestic finance. -Presence of strong public finance management systems e.g., 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 characteristics that Botswana possesses. - The establishment of the African Carbon Markets Initiatives means that Botswana can learn from existing experiences.

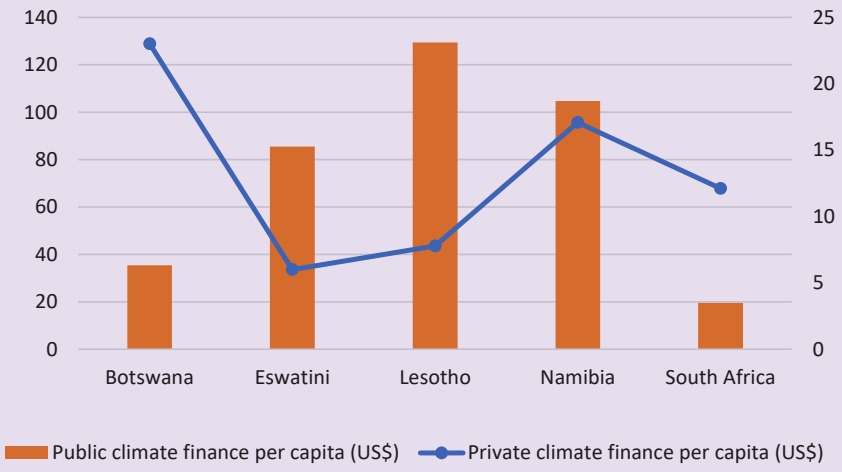
Source: Botswana Country Focus Report (2022): Supporting Climate Resilience and a Just Energy Transition in Botswana

The African Economic Outlook 2023 listed several drivers of private finance flows to Africa, with the strongest being the level of existing public climate finance. African countries with higher public climate finance per capita and higher income per capita were more likely to crowd in private climate investments. Botswana transitioned to an upper middle-income country in 2005 having attained middle income status in 1986. The data (Figure 5) shows that Botswana mobilized the highest private sector finance per capita in the Southern Africa Customs Union region, allowing for less public sector interventions. The same data revealed that the country had second lowest public finance per capita after South Africa.

Opportunities for private sector investments in green growth and climate action in Botswana extend across all sectors in the economy.

The Government remains committed to creating a conducive environment for the private sector to expand value chain green growth opportunities in strategic sectors such as tourism, minerals, energy, manufacturing, and agriculture. The 2022 Minerals Policy will enhance domestic economic benefit from minerals development through beneficiation and local value addition activities. Other value chain opportunities exist in the sunflower oil and dairy industries, as well as from the SACU Strategic Plan 2022–2027 which prioritizes value chain development in meat, horticulture and textile industries.

Figure 5: Comparison between public and private climate finance in the SACU Region



Source: AEO 2023

Through fiscal reforms, the Government continues to create an enabling environment to promote business and entrepreneurial development that empowers the private sector to pursue green initiatives. By the FY2023/2024 budget reading, the reforms passed include the Credit Information and Movable Property Act to improve access to credit, and the Public Procurement Act promoting citizen participation in the procurement process and covering PPPs, including related contingent liabilities. There is huge potential for the development of PPP projects in Botswana and the Government has embraced the concept as an innovative financing tool for sustainable infrastructure financing. Several Government Ministries have identified suitable PPP projects including the Zambezi Integrated Agro-Commercial Development project, the Glen Valley Wastewater Reclamation project, as well as several road and railways projects. The Industry Development Act and Trade Regulations 2020 allow for over-the-counter

issuance of licenses and registration certificates for the private sector.

For more integrated private sector support, the Local Enterprise Authority and Citizen Entrepreneurial Development Agency are to be merged. Other parastatals to be merged are the Botswana Investment and Trade Centre, the Special Economic Zones (SEZ) Authority and the Botswana Tourism Organization for efficient investment promotion. The foreign direct incentive package includes low corporate tax rates, transfer duty waivers, and temporary property tax exemptions. For example, SEZ-licensed companies can apply for 5% corporate tax rate for five years, and 10% thereafter. The companies are exempt from paying transfer duty on immovable business property. All these initiatives are building blocks for increased private sector investments across Botswana, including in green growth. The IRP is being fast-tracked for improved energy security. The green technology projects therein will address climate change and reduce the electricity import bill. The alignment of industrial bills with the IRP can enhance the effectiveness of rooftop solar guidelines for solar power generation.

3.3.2 Barriers to private sector investments

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

a) **Private sector investments are discouraged by the high costs involved in mitigation and adaptation investments.** The IMF[18] lists these as a long-term horizon of related infrastructure projects, lack of large investment-grade investments and liquid markets, high upfront capital expenditure, and transaction costs. Restrictions placed on foreign investors by Botswana's National Trade Policy, such as limits on foreign shareholdings, may also discourage foreign direct investments in green growth.

b) **Significant project risks.** Even with a clearly demonstrated and strong Government commitment, shorter-term risks discourage the private sector from making climate investment decisions. These can be in the form of uncertainties around future and emerging climate polices, technological costs, and the unknown extent of the actual economic climate impact. The IMF classifies the risks as: regulatory and political (contract renegotiation, change in taxation or regulatory environment); macroeconomic and business-related (volatility of demand, exchange rate fluctuations); and technical (construction delays and cost overruns, technology and obsolescence, force majeure).The limited understanding of how these climate change risks affect the different types of investments needed makes it difficult for the private sector to clearly articulate and implement mechanisms to address these risks.

c) **Botswana's capital markets are shallow and illiquid,** with limited capital markets instruments, such as stocks, derivatives, bonds, and mutual funds, for both household and institutional savings. The Government has increased its bond issuance to develop domestic capital markets, as a step in the right direction.

d) **There is limited data and capacity to inform meaningful private sector investments:** Botswana needs a more comprehensive costing of its climate finance needs, particularly those for adaptation. With no centralized database that consolidates private sector climate projects in the country, and little disclosure by the private sector of their expenditure on climate change investments, it is very difficult to estimate and accurately

18 Retrieved from https://www.imf.org/en/Publications/staff-climate-notes/Issues/2022/07/26/Mobilizing-Private-Climate-Financing-in-Emerging-Market-and-Developing-Economies-520585

plan for these costs. There is insufficient national technical expertise to identify adaptation pathways that correspond to different emission scenarios by 2040, and to cost the activities required for each of these pathways.

3.3.3 Pathways to mobilize private sector finance for green growth.

There are several pathways that Botswana can follow to unlock private sector finance for green growth and climate action[19], and build resilience.

a) **Develop robust transparent green growth frameworks that will shape progress on climate action.** Botswana's legal, regulatory, and institutional frameworks are strong, which builds private sector investor confidence (Box 1; 8). However, while progress has been made in terms of PPP policy enablers, Botswana lacks a PPP law. There is need to fully domesticate the existing frameworks for all economic sectors that contribute to green growth, not only for the energy sector. In addition, all roadmaps for investment in climate action should be integrated to provide the clarity needed by private investors on financing and other resource needs for implementation. 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 reforms strengthening 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. These are especially important when it comes to labor markets and ownership of foreign assets.

b) **De-risk private sector climate and green growth investments.** Botswana's public investment in climate change is relatively low. Blending public and private sector finance is useful to reduce transaction costs and de-risk investments in private sector capital, through for example, first-loss investments or performance guarantees. These will serve to bring down the higher capital upfront investment costs usually associated with green technologies. For local adaptation actions, including several in the agriculture and ecosystems and livelihoods sectors, the use of decentralized financial models such as small grant programs or revolving funds should be prioritized to empower stakeholders at the local level and ensure locally relevant adaptation.

c) **Deepen domestic financial markets to mobilize finance for green growth.** A developed financial and capital market will provide a sustainable financing source for both the Government and the private sector. Commercial banks, such as the Standard Bank Group and ABSA[20], are supporting renewable energy projects in the region (Box 1; 2 and 5). The Botswana's pension industry is relatively mature, with assets worth around 58% of GDP (2020). Supportive regulations should be developed simultaneously with capital markets development to incentivize these long-term funds into green companies listed on the Stock Exchange.

d) **Enhance engagement with multilateral green finance institutions**

19 Adopted from https://www.greeneconomycoalition.org/news-and-resources/national-vision-green-economy-emerges-botswana

20 For example, Standard Bank Group funded 55 billion Rands in renewable energy projects in 2022 and ABSA and IFC entered Africa's first certified green loan of US$ 150 million to boost funding for biomass and other renewable energy projects.

for an expanded pool of sustainable finance instruments. 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 are designed to mobilize private investment. Botswana's strategic Green Climate Fund country program prioritized energy, clean technology, and natural capital. Accrediting national institutions like the National Environment Fund, and the Botswana National Development Bank is essential to effectively channel global climate resources to the private sector, and promote a transition to low carbon economy.

e) **Accelerate capacity and technological development.** The private sector in Botswana has limited skills to shift to greener and cleaner alternatives for economic growth. Existing skills are mostly limited to renewable energy where most private sector financing is currently directed. The country should deepen and expand the skills base and capacities across sectors to promote innovation and attract private sector investors (Box 1; 3 and 9). The development of green skills and capacities can be integrated into the education curricula of tertiary, technical and vocational training colleges. Given the potential of green growth to spur investments in low carbon technology, there is urgent need for new technology transfer, including intellectual property rights on favorable terms to aid the transition. It is crucial to enhance climate-smart PPP financing and procurement processes in Botswana through skill and capacity building. New and more tailored metrics on social and environmental indicators, as well as reinforced data collection systems and capacities are needed. It is also important to continuously develop and pursue new potential sources of climate financing supported by expert human capacity, especially carbon market financing, for which some of the building blocks are already in place in Botswana.

f) **Development Finance Institutions (DFIs) and Multilateral Development Banks (MDBs) are key to unlocking private sector climate action finance in Botswana.** The DFIs and MDBs provide concessional finance for green infrastructure projects, which have the potential to be refinanced later in the project cycle by commercial investors (Box 1; 2). 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, can also support the channeling of private sector finance into adaptation. Risk-sharing is critical to encourage private sector investment, therefore any instruments that help manage risk remain relevant.

g) **Regional cooperation:** As a landlocked country, Botswana needs to pursue private sector investment in green growth within the context of regional cooperation (Box 1; 10). These growth opportunities could be in the areas of transportation and communications infrastructure, energy, land and water resources management, trans-boundary protected areas and natural resource management, trade, and customs. Existing initiatives, such as the Okavango Water Commission and the Common Zambezi Water System, can also be refined to target or attract further private sector investment.

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

Mobilizing private sector finance for green growth further will need strong sector-wide green growth frameworks; de-risking private investments through innovate instruments; deepening domestic financial markets; enhanced multilateral, regional, and stakeholder engagement; and accelerated capacity and technological development.

to identify and address primary risks to investments in green growth and climate action (Box 1; 6). The Government regards the strengthening of coordination across national and international stakeholders to fast-track decisions and promote interagency collaboration as a priority area to deliver its NDC progress. Such partnerships should be strengthened further to generate a deeper understanding of financing needs, capacities and existing mechanisms that will support future private sector investments in climate action.

IV. HARNESSING NATURAL CAPITAL FOR CLIMATE ACTION AND GREEN GROWTH

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[21]. The data for (a) and (b) comes from the World Bank, covering the period 1995-2018. Table 4 presents the summary for Sub-Saharan Africa (SSA) and Botswana for the two years – 1995 and 2018.

Botswana's position, relative to Sub-Saharan Africa (SSA) between 1995 and 2018 is worthy of analysis.

The following observations are drawn from the data shown in Table 4. SSA's total wealth increased by 118%, but Botswana's was even higher at 127%. Botswana's wealth was significantly better distributed, with per capita wealth growing by 48% compared to SSA's 19%, with a 53% increase in population, compared to SSA's 84%.

a) The country's expanding wealth was derived from growth in all forms of capital, mainly from produced; followed by human; and then natural capital.

b) The AEO 2023 report proposed using an increase in natural capital in per capita terms as an indicator of sustainable growth. Although Botswana's natural capital rose by 13%, its per capita natural capital declined by 26%. SSA's per capita natural capital also fell by 36% against a backdrop of a strong population growth.

c) The increase in natural capital in Botswana (Figure 6) was driven by a net rise in renewable natural resources, in particular forests (timber, ecosystem services), and cropland that more than offset a decline in non-renewables such as metals and minerals. The increase in forest area followed the introduction by the Government of assistance programs to enable individuals and rural community groups to invest in the forestry sector to combat deforestation. The rise in renewables is encouraging for Botswana where a large part of the population depends on natural resources for their livelihood. Any decline in renewable natural capital exacerbates poverty and inequality and increases vulnerability to climate risks.

d) In terms of land use, the land area being utilized for crop production increased by 76%, while land devoted to pasture and wild flora and fauna (protected areas) declined by 26% and 9%, respectively. This may point to rangelands and pasturelands being increasingly converted to crop farming, with a recent

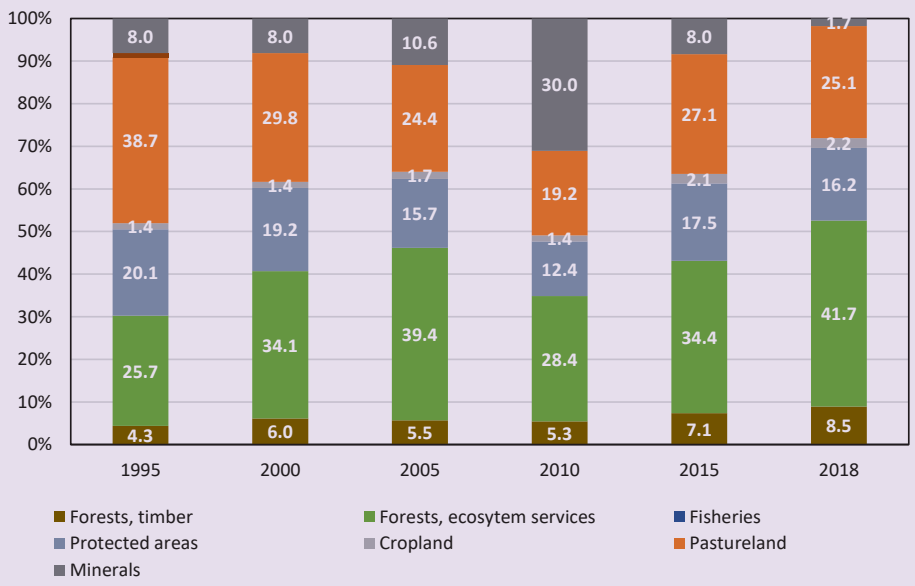
21 Retrieved from Explore data (worldbank.org). The study covers 146 countries.

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

	Total in Millions, constant 2018 USD			Per Capita, constant 2018 USD		
	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				
Botswana						
Total wealth	79,991	181,687	127%	54,447	80,602	48.04%
Produced capital	13,463	64,359	378%	9,164	28,552	212%
Human capital	45,214	93,301	106%	30,775	41,391	34%
Natural capital	16,034	18,156	13%	10,913	8,055	-26%
Renewable natural resources	14,463	17,005	18%	9,844	7,544	-23%
Forests, timber	696	1,540	121%	474	683	44%
Forests, ecosystem services	4,115	7,564	84%	2,801	3,356	20%
Mangroves	0	0	..	0	0	..
Fisheries	0	0	..	0	0	..
Protected areas	3,227	2,942	-9%	2,196	1,305	-41%
Cropland	226	399	76%	154	177	15%
Pastureland	6,199	4,560	-26%	4,219	2,023	-52%
Non-renewable	1,571	1,151	-27%	1,069	511	-52%
Oil	0	0	..	0	0	..
Natural gas	0	0	..	0	0	..
Coal	281	846	201%	191	375	96%
Metals and minerals	1,290	305	-76%	878	135	-85%
Net foreign assets	5,280.5	5,870	11%	3,594	2,604	-28%
Population, millions	1.469	2.25	53%			

Source: World Bank 2021

Figure 6: Composition of Botswana's Natural Capital from 1995 to 2018



Source: World Bank 2021

high mortality of cattle, mainly to food-and-mouth disease. It may also be an outcome of the Government's policies that promoted self-sufficiency in food security during this period.

e) Natural resource rents have been in decline. As a percentage of GDP, the rents fell from 2.1% in 2010 to 0.7% in 2020 (annex 1), driven mainly by a decline in mineral rents. Rents from coal peaked at 0.5% of GDP in 2018 but have since stabilized at 0.3% as of 2020. For the sustainable management of its natural environment, the Government is striving to move away from its current reliance on coal for electricity generation through its IRP, which emphasizes a shift to power production from renewable sources for a climate-resilient economy.

Botswana's Irrecoverable Carbon Country Profile[22] shows that 58% of its 84 million metric tons of irrecoverable carbon lies within protected areas, of which 87% is within indigenous and community lands. Between 2011 and 2020, 0.1% of irrecoverable carbon was lost.

According to the World Bank, "Natural Capital Accounting" offers a way to take stock of a country's natural assets to assess its value and measure the condition of the environment, its contribution to the economy, as well as the impact of the economy on the environment.

With its vast natural capital, Botswana started natural capital accounting in the late 1990s, before taking up environmental economic accounting in 2012, to monitor the flows and stocks of its natural resources for proper management, as well as, at a later stage, being able to enable efficient monitoring of progress towards its SDG targets. Supported by the World Bank's wealth accounting and valuation of ecosystem services (WAVES) program at the time, Botswana prioritized the water, minerals, and energy resources accounts given their strategic importance, including compiling macroeconomic indicators of sustainable development. WAVES promoted sustainable development by mainstreaming natural capital

22 Retrieved from https://www.conservation.org/projects/irrecoverable-carbon/botswana

in development planning and national economic accounting systems. However, its support to Botswana ended in June 2016 and natural capital therefore has no dedicated systems of measurement, monitoring, and reporting in the country.

4.2 OPPORTUNITIES FOR ENHANCING THE CONTRIBUTION OF NATURAL CAPITAL

Botswana has enjoyed growth in its natural capital endowments over the years. According to the World Bank[23], Botswana will need to focus on leveraging its natural resource endowments through fresh investment in high potential complementary sectors for green competitiveness and growth. Tourism is one such area in which synergies between wildlife protection, and sustainable cattle rearing can be taken advantage of, through active community involvement. To some extent, this is happening in Botswana, where land, wildlife, and other resources are all already communally owned and therefore poor communities are already empowered by tourism through employment. The benefits or losses from tourism based on land use or wildlife should accrue to the entire community, requiring a level of communal organization. Communities in or adjacent to a hunting area zoned for community management can apply for a wildlife quota, provided they are organized in a participatory and representative manner sanctioned by the district authorities and the Department of Wildlife and National Parks. Tourism activities include controlled trophy-hunting in the hunting season, photographic, nature-based safaris, overnight accommodation for self-drive visitors, culture and handicrafts[24].

Botswana will need to focus on leveraging its natural resource endowments through investment in high potential complementary sectors for green growth.

Botswana is among the 34 countries that implement the United Nation's System of Environmental Economic Ecosystem Accounting, adopted in March 2021, which represents an integrated and comprehensive statistical framework compiled using spatially explicit data and information about the functions of ecosystem assets and the ecosystem services they produce.

4.2.1 Non-Renewable Resources

Well-endowed with natural resources, Botswana's economic growth is closely linked to developments in the diamond trade industry. The extraction and processing of diamonds for export is the single largest contributor to public revenues (27%), and export goods receipts (over 89%). However, mining's capital-intensive nature and weak linkages with other sectors have limited the sector's job creation, and by 2020, it employed only about 1.1% of the labor force. The sector's contribution to gross domestic product (GDP) fell to 10.1% in 2020 from 47.0% in 1986. 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.

Botswana is an example of a resource-dependent country that has managed to follow these principles to a large extent. Its successful policies include creating savings of

23 Retrieved from https://www.ifc.org/wps/wcm/connect/bb819007-f6ba-43bc-a6f5-13cd0508790f/CPSD+Botswana+Exec+Summary+CW05.pdf?MOD=AJPERES&CVID=o7gbctI
24 Retrieved from https://bibalex.org/baifa/Attachment/Documents/116197.pdf

diamond revenues in a Sovereign Wealth Fund, securing resource rents through negotiation with external agents, the formation of private-public partnerships, and investment in human capital[25]. These are among the several policy measures that have resulted in the prudent management of its natural resource revenues. The diamond value chain can be scaled up through beneficiation and further exploitation of supply chains including increasing the number of diamond-cutting and polishing factories, to allow Botswana to become a leading jewelry center, like Dubai's gold markets.

4.2.2 Renewable Resources

Renewable resources are increasingly at the heart of sustainable development in Botswana. Between 1995 and 2018, more land was devoted to crop production than to pastureland. However, the country's semi-arid climate is more suited for cattle farming. As of 2022, Botswana boasted 2.5 to 2.8 million heads of cattle, a demonstration of its potential to increase the unit value of land by developing competitive livestock value chains. This potential will need to be carefully balanced with the conflict that may arise with tourists, as expanding livestock may limit their access to land through fencing.

Renewable energy is a key solution to both the challenges of energy security and climate change. Botswana's national electricity access rate increased from 62.6% in 2017 to 81.5% in 2020, in line with achieving its Vision 2036 targeting universal access by 2030. Botswana generates 48% of its power and imports 52% from the Southern African Power Pool. The energy sector faces several challenges, notably, over-reliance on a coal-fired generation of electricity, the sub-standard performance of Morupule B Power Station and the unreliable electricity imports due to shortfalls in the regional power market, especially from Eskom. The absence of operational independent power producers and limited private investment in power generation assets also affects the security of power supply. The country has significant solar potential, receiving over 3,200 hours of sunshine per year with an average insulation on a flat surface of 21 megajoules per square meter. This rate of irradiation is among the highest in the world and it also has strong potential for wind generation. Regions with the highest wind potential are in the South-West and Eastern parts of Botswana, with average wind speeds above 7 miles per second. Botswana also has strong potential for biogas generation. The high quantities of manure from its large cattle population enables the necessary capacity to establish independent biogas-based power plants in addition to solar farms. Biogas, which is generated from waste, can replace coal sources, thus reducing greenhouse gas emissions while recycling agro-waste. Pipeline biogas projects include Botswana Meat Commission's biogas plant (2.5 MW), the Mmamashia Biogas plant (1 MW), the Mabesekwa Bio plant (50 kW) and household biogas plants (6 m3 x 1500).

The International Renewable Energy Association's 2021 Renewables Readiness Assessment of Botswana[26] identified 13 critical actions that could support the energy transition in the country. These included the need to: promote and facilitate implementation of a clear long-term vision for renewable energy development; operationalize the Botswana Energy Regulatory Authority which was established in 2017 but remained (at the time of publication) largely non-operational; establish a grid code conducive to variable renewable power; revise the tariff-setting structure; define a clear regulatory framework to manage the risks involved in private sector participation; perform a location-specific (pre-feasibility) study for renewable energy generation; integrate rural electrification strategies into a single, comprehensive document and consolidate rural electrification

25 Retrieved from https://thenewglobalorder.com/world-news/how-botswana-is-an-exception-to-the-resource-curse/

26 Retrieved from https://www.irena.org/publications/2021/Aug/Renewables-Readiness-Assessment-Botswana

activities; support the growth of solar rooftop and home systems through strong incentives and policy instruments; develop a strategy for renewable energy in agriculture, and transport sectors; promote the role of renewable energy for heating, cooling and cooking; and develop local human capacities along the project value chain. However, due to the high initial cost of renewable energy technologies, the Government plans to gradually transition from a coal-based power system over a period of two decades from 2020.

Botswana has major opportunities to develop its forest industry. The country has adequate forest cover over 21-30% of its land area but also has one of the lowest performing forest industries in the Southern African Development Community. The country suffers from a total annual trade deficit of over US$ 107 million for primary, secondary and tertiary wood products (ANRC, 2021). This is indicative of the potential opportunities for jobs and wealth creation in this sector, which are currently lost.

Other ways to make natural capital more productive in Botswana include pursuing opportunities for increasing value added through strategic partnerships with state-owned enterprises, such as with the Botswana Development Corporation or the Mineral Development Company of Botswana, as well as foreign investors, to foster innovation and create an environment conducive for private investment in natural capital. The AfDB is supporting Botswana's transition to clean energy through the Renewable Energy Support Project, backed by the Sustainable Energy Fund for Africa. The technical assistance project will support the Government in closing the critical policy and regulatory gaps for increased private sector investment in renewable energy projects.

Apart from local content, AEO 2023 also recommends that countries explore franchising agreements with foreign firms to complement existing local content policies and requirements, especially where capacity (both technical and financial) is lacking.

Other opportunities lie in renewable natural resources, such as through exports earnings from timber and fish production, and through tourism as discussed above.

V. 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 Botswana. Action should be taken to leverage the opportunities for private sector investments in adaptation and mitigation of climate change, while also reducing 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 coverage and data points for a complete natural capital analysis, which should include renewable energy sources such as sun, wind and hydro, as well as reviewing the potential of landscapes and biodiversity. Action is also needed to exploit clean energy resources. For non-renewables, extending the value chains and investing in new technologies for crop and livestock production will be highly beneficial. Below is a set of recommendations for different 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 accelerating business reforms to usher in a conducive environment. This includes providing innovative financing arrangements and some strategic deployment of public capital. For example, the Government's provision of partial credit guarantees through the Citizen Entrepreneurial Development Agency can partly target climate change and green growth priority projects. This would strengthen CEDA facility schemes. Furthermore, the government can improve its domestic resources for project preparation funds, ensuring better support for project development. This policy can be complimented by issuing tax credits and establishing corporate social responsibility for climate finance. 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.

Mainstreaming green skills development into education institutions will ensure that there is a continuous supply of appropriate skills that the private sector can tap into domestically. This will also help tackle the youth unemployment challenge in Botswana. With the support of development partners and international climate funds, Botswana can also strengthen its technical capacity to design climate-smart strategy, international negotiations and accreditation, develop bankable projects and generate up-to-date data to stimulate climate investment.

Botswana needs to strengthen its capacities to collect natural capital data, and design and implement environmental and social impact assessments in extracting natural resources.

More effort is needed to safeguard biodiversity and ensure that the use of natural resources follows sustainable and equitable approaches which also consider the needs of communities and civil society. Raising awareness of and mainstreaming climate and green growth policies in public and private investments, especially in the natural resource sector, is critical to sustainably benefit from natural capital's potential.

The private sector should have access to and be well 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 multi-stakeholder platforms that can link the private sector effectively to other international actors for better collaboration.

5.2.2 MDBs and DFIs

MDBs and DFIs can become less risk averse by further engaging with the Government to identify ways to provide affordable capital for green growth and climate change investments. They can help Botswana to access innovative financing instruments including existing and future climate and environmental financing mechanisms. They can use innovative financing instruments that can address imperfect markets, environmental externalities, and reduce investment risks to attract private sector financing particularly into non-energy sectors. Concessional and non-concessional finance can draw in commercial investors at a later stage of the project cycle and 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.

The AfDB hosts several funds and instruments that are relevant to green growth. These include the African Water Facility, the Sustainable Energy Fund for Africa, the Africa Climate Change Fund, Climate Investment Funds, the Global Environmental Facility, and ClimDev-Africa Special Fund.

5.2.3 Domestic and international private sector

The international private sector can work with the Government, MDBs and DFIs and local private sector actors to identify key transition risks (such as innovation, technology, competitiveness) to climate investments and propose solutions that take local conditions into consideration. If done well, the international private sector can become a well-targeted source of climate finance and expertise.

5.2.4 Developed country governments

As shareholders of MDBs and DFIs, developed country governments can influence these institutions to be less risk averse when financing green growth in Botswana and provide additional capital where needed. Developed countries can more easily mobilize financing for climate action to compensate the developing countries for green growth initiatives and to promote the use of climate-smart technologies.

5.3 POLICY RECOMMENDATIONS FOR INCREASING NATURAL CAPITAL'S CONTRIBUTION TO CLIMATE FINANCE AND GREEN GROWTH.

1. On Botswana's natural capital derived from renewables.
   a) As a net importer of energy and electricity production, Botswana predominantly depends on thermal (mainly coal) power. Diversifying the energy mix would improve the country's economy and climate resilience and contribute to improving energy security. Currently about 6% of electricity generation comes from renewable sources, and the country aims to source 15% of its energy from renewables, given its potential, by 2030, mainly from solar,

wind, and biogas. Further investment in renewable energy, especially with the potential available, could increase Botswana's self-sufficiency and attract private sector capital.

b) Given the high initial cost of renewable energy technologies, the Government's efforts to put structures in place to encourage independent power producers is a step in the right direction. Their involvement, with sufficient financing support to grow the renewable energy industry, where public financing is limited, can also attract international private sector investments in the sector.

c) Although Botswana ranks highly on both readiness and climate resilience in comparison to other African countries, it still needs to increase its investments in adaptation while pursuing low carbon goals. Doing this effectively will require increased investments in activities that generate mutual benefits for adaptation and mitigation, such as in climate smart agriculture, which in turn will increase the unit value of the land. Data on adaptation financing needs should be estimated to the furthest extent possible and made public.

d) Through private sector investment support, Botswana can also seek to explore methane capture technologies for local energy options while also reducing greenhouse gas emissions.

2. To be part of the growth in carbon sequestration, Botswana will need to develop a low carbon pathways methodology and guidance toolkit for all relevant ministries overseeing carbon-intensive sectors to adopt a consistent low carbon pathway approach into their planning cycles, and effectively guide private sector investments. Already, Botswana's Climate Change Policy provides for carbon budgets and markets, and investments in green energy technologies, especially in transport and waste management. The implementation of the policy will be enhanced by the proposed toolkit.

3. Botswana needs to build on the work initiated by the WAVES project to produce all natural capital accounts across all sectors of the economy. The country can take advantage of its membership of the System of Environmental Economic Accounting, to build its human capacity to collect natural capital data in line with global best practices. In the short term, sharing progress in capacity-building can be monitored through the existing technical committees in line ministries that are regularly steered by the Ministry of Finance. Longer term, comprehensive data can then be reflected and integrated in the country's System of National Accounts and be made available to inform further polices around natural capital management.

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Annex 1: Botswana Selected Indicators

Indicators	Unit	2010	2015	2018	2019	2020	2021	2022 (e)	2023 (p)	2024 (p)
National Accounts										
GNI at Current Prices	Million US $	10,918	13,577	15,248	16,548	15,304	16,644	...	...	...
GNI per Capita	US$	5,220	5,890	6,220	6,620	6,010	6,430	...	...	...
GDP at Current Prices	Million US $	12,787	13,531	17,032	16,726	14,985	18,768	20,185	20,614	21,712
GDP at 2010 Constant prices	Million US $	12,787	15,846	18,424	18,983	17,326	19,388	20,518	21,329	22,164
Real GDP Growth Rate	%	8.6	-4.9	4.2	3.0	-8.7	11.9	5.8	4.0	3.9
Real per Capita GDP Growth Rate	%	6.3	-6.7	2.1	1.0	-10.4	10.1	4.1	2.2	2.2
Value Added: Mining and quarrying	Million US $	2,434	2,485	2,725	2,246	1,305	2,003	3,034	...	...
Value Added: Mining and quarrying	% GDP	19.0	18.4	16.0	13.5	8.7	11.4	15.2	...	...
Value Added: Fishing	Million US $	...	...	...	...	...	...	...	...	...
Value Added: Fishing	% GDP	...	...	...	...	...	...	...	...	...
Prices and Money										
Inflation (CPI)	%	6.9	3.1	3.2	2.8	1.9	6.7	12.2	8.2	5.8
Exchange Rate (Annual Average)	local currency/US$	6.8	10.1	10.2	10.8	11.5	11.1	12.4	13.8	14.4
Government Finance										
Total Revenue and Grants	% GDP	36.7	33.5	30.3	30.0	28.7	33.9	30.7	31.1	32.7
Total Expenditure and Net Lending	% GDP	44.2	38.5	35.3	36.2	38.3	33.9	31.8	30.5	30.3
Overall Deficit (-) / Surplus (+)	% GDP	-7.5	-4.9	-5.1	-6.2	-9.5	0.0	-1.0	0.6	2.5
External Sector										
Terms of Trade Growth	%	6.3	50.5	-3.9	-4.2	11.6	2.7	-6.5	-1.2	5.1
Current Account Balance	Million US $	-533	301	67	-1,155	-1,292	-90	440	591	834
Current Account Balance	% GDP	-4.2	2.2	0.4	-6.9	-8.6	-0.5	2.2	2.9	3.8
Debt and Financial Flows										
Debt Service	% exports	14.7	10.3	15.3	19.4	29.4	16.3	14.9	15.3	13.7
External Debt	% GDP	30.0	26.6	28.6	34.5	33.8	28.7	29.1	29.6	27.5
Net Total Financial Flows	Million US $	231	-54	-84	-75	31	335	...	...	...
Net Official Development Assistance	Million US $	155	66	86	68	79	96	...	...	...
Net Foreign Direct Investment	Million US $	218	379	286	94	32	55	...	...	...
Demography										
Total Population	Millions	2.1	2.3	2.5	2.5	2.5	2.6	2.6	2.7	2.7
Population Growth Rate	%	2.1	2.0	2.1	2.0	1.9	1.7	1.6	1.7	1.7
Urban population	% of total	60.1	64.4	66.1	66.7	67.2	67.9	68.6	69.1	69.6
Life Expectancy at Birth	Years	60.0	63.8	65.4	65.5	65.6	61.1	65.9	66.1	66.2
Fertility Rate	births per woman	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.7	2.7
Poverty and Income Distribution										
Pop. living below national poverty line	% of total population	...	...	...	...	...	...	...	...	...
Population living below $2.15 a day	% of total population	...	15.4	...	...	...	...	...	...	...
Gini Index	%	...	53.3	...	...	...	...	...	...	...
Labor Indicators										
Labor Force participation (total)	%	59.1	61.8	63.4	63.9	62.7	64.3	65.0	64.9	...
Labour Force participation (youth)	%	38.4	36.9	35.9	35.6	35.0	35.2	35.8	35.7	...
Unemployment rate (total)	%	17.9	19.3	19.8	20.1	21.0	21.2	20.7	20.8	20.7
Unemployment rate (youth)	%	34.8	35.7	35.3	35.3	41.7	38.6	37.8	37.9	37.7
Natural Resources rents										
Total natural resources rents	% GDP	2.1	0.8	0.8	0.6	0.7	...	...	...	...
Oil rents	% GDP	...	...	...	...	...	...	...	...	...
Natural gas rents	% GDP	...	...	...	...	...	...	...	...	...
Mineral rents	% GDP	1.3	0.0	0.1	0.1	0.1	...	...	...	...
Forest rents	% GDP	0.3	0.4	0.3	0.3	0.3	...	...	...	...
Coal rents	% GDP	0.4	0.3	0.5	0.3	0.3	...	...	...	...
Natural Capital Renewable Resources										
Arable land	1000 hectare	259.0	259.6	259.6	260.0	260.0	...	...	...	...
Agricultural land	1000 hectare	25,861.0	25,861.6	25,861.6	25,862.0	25,862.0	...	...	...	...
Other land	1000 hectare	14,374.3	14,965.2	15,320.1	15,438.0	15,556.3	...	...	...	...
Forest land	1000 hectare	16,437.7	15,846.2	15,491.3	15,373.0	15,254.7	...	...	...	...
Planted Forest	1000 hectare	...	...	...	...	...	...	...	...	...
Annual freshwater withdrawals, total	% of internal resources	8.2	7.8	8.5	8.4	...	...	...	...	...
Total Fisheries Production	metric tons	60.0	101.0	63.0	73.0	179.0	...	...	...	...
Climate Finance and Green Growth										
Total Climate Finance*	Million US $	...	...	...	...	132.4	...	...	...	...
Green Growth Index**	%	57.2	58.9	58.4	58.1	58.0	57.9	...	...	...

Source : AfDB Statistics Department: African; 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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