Country Focus Report 2023

SUDAN

Mobilizing Private Sector Financing for Climate and Green Growth

AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DÉVELOPPEMENT

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LIST OF ACRONYMS AND ABBREVIATIONS

AEO	African Economic Outlook
AfDB	African Development Bank
CFR	Country Focus Report
COVID-19	Corona virus disease 2019
CBOS	Central Bank of Sudan
DFIs	Development Financial Institutions
DSA	Debt Sustainability Analyses
GDP	Gross Domestic Product
GGW	Great Green Wall
GGI	Green Growth Index
GHG	global greenhouse gas emissions
GoS	Government of Sudan
HIPC	Heavily Indebted Poor Countries
ILO	International Labor Organization
IMF	International Monetary Fund
INDC	Intended Nationally Determined Contribution
MCCKP	Metadata Climate Change Knowledge Portal
MDBs	Multilateral Development Banks
MSME	Micro, Small and Medium Enterprise
MRV	Monitoring, Reporting and Verification
MW	Megawatts
NAP	National Adaptation Plan
NDC	National Determined Contributions
PPP	Public-Private Partnerships
PRSP	Poverty Reduction Strategy Paper
SoEs	State-owned Enterprises
SDRs	Special Drawing Rights
SSA	Sub-Saharan Africa
SSTL	State Sponsors of Terrorism List
UNFCCC	United Nations Framework Convention on Climate Change
$	US dollars

Sudan

KEY MESSAGES

Macroeconomic Performance and Outlook

The political instability since 2018/19 has negatively impacted economic activities, contracting growth by 3.1%. Other factors, including Russia's invasion of Ukraine and the remaining ramifications of COVID-19, also hinder Sudan's economic growth and recovery efforts.

The accomodative monetary policy adopted by the Central Bank of Sudan in 2021 to increase credit growth and boost economic activity resulted in increasing inflation to three digits. However, during 2022, the government of Sudan implemented a reserve money targeting regime, which complemented fiscal efforts to reduce money supply growth and curbed inflation. However, inflation is projected to increase again in 2023 amid the risk of increasing deficit monetization due to expanded war expenditures.

Sudan reached the decision point under the HIPC in June 2021, but progress towards the HIPC completion point by 2024 stalled. The IMF cancelled its Extended Credit Facility program and Paris Club creditors suspended bilateral discussions with Sudan following the military takeover in October 2021. This has been further complicated by the recent conflict, which derailed the road to the HIPC completion point.

Real GDP is projected to contract much faster in 2023 compared to 2022 largely due to political instability and conflict. A mild recovery is projected in 2024, driven by agriculture and mining on the supply side, and private consumption and investment on the demand side. Political instability, debt distress, and climate change remained the main downside risks to the economic growth outlook. In addition, depletion of international reserves could further depreciate the local currency with adverse effects on inflation, debt sustainability, and broader macroeconomic stability.

Private sector financing for climate change and green growth

Sudan has demonstrated strong political commitment to green growth and has made considerable progress in outlining its green growth and climate action priorities. Sudan's updated 2021 Nationally Determined Contribution (NDC) affirms the country's commitment to implementing climate change mitigation and adaptation actions as a national priority. Sudan submitted its Intended NDC to the United Nations Framework Convention on Climate Change (UNFCCC) in October 2015 and later ratified it in 2017, making it an NDC.

However, for Sudan to achieve its green growth and climate action ambitions, private sector financing will need to be mobilized at scale. With the integration of numerous innovative financing tools including green bonds, carbon markets, debt-for-nature swaps, and blend financing, current developments in the financial markets represent clear opportunities for Sudan to improve the mobilization of the financing needed to implement actions for green, sustainable and inclusive growth.

Key barriers preventing the mobilization of private sector finance at scale to meet the country's green growth and climate action goals relate to the limited access to capital, accumulation of arrears, unsustainable debt, and economic sanctions; political instability and insecurity; the low levels of skills and capacities amongst institutions to develop and implement commercially viable green growth and climate action projects for private sector investments; and weak regulatory structures and ineffective implementation of green growth strategies.

There are several pathways that Sudan can take to unlock private sector finance for green growth and climate action.

- Deepening domestic financial markets to mobilize domestic finance for green growth. Even though Sudan's domestic financial markets are constrained, they are expanding and could be used to mobilize private sector finance for targeted green growth and climate action projects.
- Developing skills and capacities, particularly for the informal sector to increase innovation and engagement with key private sector actors as well as implementing fiscal incentives to attract private sector investments, particularly towards other sectors that generate soft infrastructure outcomes.
- Increasing Multilateral Development Banks' (MDBs) and Development Financial Institutions' (DFIs) risk appetite for investments, providing more affordable capital that has low interest rates and longer repayment periods, and facilitating capacity development of national and local public and private sector institutions to enable the mobilization of private sector finance, among others.

Natural capital for climate finance and green growth

Renewable natural capital plays a major role in the economies of East Africa, and in Sudan in particular, especially renewable natural capital. The regions' natural capital has not kept pace over the last quarter century with population and so the per capita level of such wealth has declined, but Sudan presents a different trend with an increase in natural wealth and per capita level of such wealth. If East Africa's trend is to be reversed and Sudan's trend accelerated in the coming years, action will have to be taken to prevent loss of forest ecosystems and marine biodiversity as well as to harness the returns from these systems in a sustainable manner. More can also be done to exploit clean energy resources.

The role of non-renewable assets is much smaller in East Africa than in other parts of Africa but where such resources are present, care in managing them to the benefit of Sudan at large along the lines mentioned will be important. For cropland and pastureland, more goods and services can be generated in value terms by investing in new technologies, sustainable land management practices as well as extending the value chains. This may require bringing in foreign partnerships in selected cases. For forests, there are several incentives that can be introduced to reduce loss or damage to the forests and to increase the efficiency with which carbon can be captured. These should be pursued vigorously.

The flow and amount of natural resource rents to Sudan are affected by the bargaining power between the country and multinational companies. Sudan's total natural resource rents were estimated at 12.4% of GDP in 2020, down from 15.7% in 2010, indicating that Sudan is not getting a fair share of natural resource rents, given its huge resource endowments. This is because Sudan is not well equipped to negotiate with large foreign private investors due to weak bargaining and institutional capacity. Sudan, like many African resource-rich countries, has witnessed fierce contests between ruling elite factions in the process of creating, capturing, allocating, and distributing the rents.

Accessing international mechanisms to market carbon credits at higher prices will increase unit rents for some of the countries. For others, such as Sudan, more still needs to be done to regain access to the international mechanisms. For fisheries, Sudan needs to do more to stop illegal, unreported, and unregulated fishing and to sign access agreements for distant water fleets that prevent overexploitation of wild stocks while generating fair revenues for local communities. For tourism, the aim should be to increase total income, with an emphasis on ecotourism and conservation.

The analysis has been based on data collected by the World Bank for major categories of assets but the coverage of forms of natural capital is not complete. Work is needed on estimating the value of renewable energy sources such as solar, wind and hydro, as well as that of landscapes and biodiversity.

ADDENDUM: REVISED AFRICAN DEVELOPMENT BANK PROJECTIONS, OCTOBER 2023

This addendum updates the projections contained in the main Sudan Country Focus Report, which were produced in June 2023 based on certain assumptions regarding the COVID-19 remaining ramifications and other domestic, regional, and global dynamics. Since the time of production of those projections, several significant developments have been observed, particularly the eruption of armed conflict between Sudan Armed Forces (SAF) and the paramilitary Rapid Support Forces (RSF) in April 2023. Taken together with Sudan's already immense macroeconomic imbalances, Sudan's growth in 2023 is projected in October 2023 to be weaker contracting by 11.5% compared to the June 2023 projections of -3.1%. Inflation on the other hand is projected to accelerate to 212.1% in 2023 according to the October 2023 projections compared to the 191.8% projected in June 2023, mainly due to currency depreciation and increased production and transportation costs. The fiscal and current account balances on the other hand are projected to improve compared to the June projections, partly attributed to reduced imports at the result of the war, which suppressed the economic activities including imports. The full set of projections for Sudan main macroeconomic indicators are provided in the Tables below.

Table A1: Sudan's Key Macroeconomic Indicators, June & October 2023 Estimates

	AS AT JUNE 2023				AS AT OCTOBER 202			
	2021	2022(e)	2023(p)	2024(p)	2021	2022(e)	2023(p)	2024(p)
Real GDP growth	-1.9	-0.7	-3.1	1.6	-1.9	-1.0	-11.5	-1.0
CPI inflation	359.1	139.0	191.8	75.5	359.1	164.6	212.1	107.2
Budget balance % GDP	-4.7	-1.5	-6.4	-3.9	-0.3	-1.7	-4.2	-2.9
Current account % GDP	-6.0	-3.4	-5.5	-3.2	-7.3	-6.6	-1.0	-6.1

INTRODUCTION

This Country Focus Report (CFR) for Sudan reviews the role of the private sector in climate change financing and green growth. It also 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 country level the analyses carried out at continental level in the African Development Bank's main African Economic Outlook (AEO) report for 2023.

This CFR is structured as follows. Following the Introduction, Section 2 discusses Sudan's recent macroeconomic performance and outlook. Section 3 discusses the private sector financing for climate and green growth in Sudan. Section 4 discusses the role of natural capital for climate change finance and green growth in Sudan, and Section 5 concludes and draws some policy recommendations for the government, the donors' community, the domestic and international private sector, and developed country governments.

II. ECONOMIC PERFORMANCE AND OUTLOOK

As in other countries in the region, the shocks from the prolonged Russia's invasion of Ukraine[1] coupled with the slow pace in rolling out COVID-19 vaccines, rising international interest rates, and limited policy space are hampering Sudan's economic growth and recovery efforts. The political instability since the overthrow of the Al Bashir regime and the recent conflicts in the country have negatively impacted the economic activities following the destruction of means of production, infrastructure, and disruption of supply chains. In this section, recent macroeconomic developments as well as prospects and risks are discussed.

2.1 Recent macroeconomic and financial developments

Economic growth: Real Gross Domestic Product (GDP) contracted by 0.7% in 2022 after a contraction of 1.9% in 2021, reflecting the effects of the military takeover of the government in October 2021, climate change, and the effects of Russia's invasion of Ukraine through higher food and energy prices (Box 2.1). GDP growth in 2022 was supported by agriculture and mining on the supply side, and private consumption and investment on the demand side. In 2022, the services sector contributed about 49.2% of GDP, followed by the agriculture sector at 26.4% and the industrial sector at 22.2%. The 2021 and 2022 economic decline follows two years of economic contraction (2018-2020) due to macroeconomic imbalances, structural deficiencies, political instability, and COVID-19-induced reductions in trade, travel, and financial flows.

Monetary policy and inflation: The Central Bank of Sudan (CBOS) adopted an accomodative monetary policy in 2021 to boost credit growth and revive economic activity. During 2022, the government of Sudan (GoS) started taking steps to facilitate the transition to a reserve money-targeting monetary regime. To target reserve money, the GoS used both non-market and market-based instruments. Market-based instruments included government securities and open market operations and non-market based instruments were cash reserve ratio and import finance restrictions. Fiscal consolidation was adopted to complement efforts to reduce reserve money growth. Inflation escalated from 163.3% in 2020 to 359% in 2021, largely driven by exchange rate depreciation and removal of subsidies on fuel and other commodities. Unification of the exchange rate and fiscal consolidation moderated the inflationary pressures, reducing inflation to 139.0% in 2022. The findings of a recently completed AfDB study on the sources of inflation in Sudan revealed that domestic policy variables, notably fiscal, monetary, and exchange rate policies were the main drivers of inflation in Sudan, with the external factors (oil and wheat price shocks) playing a more limited role. Productivity growth was found to be a key element to reduce inflation, which underscores the need to expand agro-industrialization.

Fiscal and current account balance: Fiscal consolidation and improvement in public revenues following the easing of COVID-19 restrictions reduced the fiscal deficit to 1.5% of GDP in 2022 from 4.7% in 2021. The fiscal deficit

[1] Agreed wording at the African Development Bank Annual Meetings 2022 in Ghana. Algeria, China, Egypt, Eswatini, Namibia, Nigeria, and South Africa entered a reservation and proposed "Russia-Ukraine Conflict".

was financed through domestic resources, monetization, and external inflows. The GoS has maintained a modestly expansionary fiscal stance from 2016 to 2020, driven by high subsidies amid weaknesses in public revenue leading to fiscal deficits monetization. Total expenditure rose to 19% of GDP in 2019 and 2020, while tax revenues to GDP share remained below 10.0% due to various tax regime weaknesses. However, the removal of fuel and wheat subsidies in 2021 reduced expenditure and eased pressure on the fiscal space. The current account deficit reduced to an estimated 3.4% of GDP in 2022 from 6.0% in the previous year because of increased exports with an average of 12% during 2021 and 2022 following improved demand among key trading partners in the Gulf. The current account deficit was financed by portfolio investments, external borrowing, and grants. International reserves remained low at three months of import cover in 2022, a slight improvement from 2.3 months of import cover in 2021 (Sources of Inflationary Pressures in Sudan, AfDB 2023).

Public debt: Sudan's public external debt-to-GDP ratio increased from 164.7% of GDP in 2019 to 172.9% in 2020, while about 86.0% of the external debt is accumulated arrears. The 2020 World Bank-IMF Debt Sustainability Analysis (DSA) indicated that Sudan's debt burden was unsustainable as three of the four debt sustainability indicators exceeded the corresponding thresholds. Considering its large and unsustainable debt burden, Sudan was deemed eligible for debt relief under the Enhanced Heavily Indebted Poor Countries (HIPC) initiative as indicated by the preliminary debt relief analysis. Sudan reached the decision point under the HIPC in June 2021, and its $56 billion external debt (163% of GDP) in 2020 was expected to reduce by 50% by 2022. However, Sudan's progress towards the HIPC completion point by 2024, as previously envisaged, halted as discussions with Paris and Non-Paris Club creditors were paused following the military takeover in October 2021. The IMF's Extended Credit Facility was also cancelled in December 2022. Without a quick resumption of the donors' HIPC program that was suspended because of the de facto situation declared after the military takeover, realization of the HIPC completion point remains uncertain.

Table 2.1: Macroeconomic Indicators

	2018	2019	2020	2021	2022(e)	2023(p)	2024(p)
Real GDP Growth	2.8	-1.3	-1.6	-1.9	-0.7	-3.1	1.6
Real GDP Growth per Capita	-0.4	-4.3	-4.4	-4.6	-3.4	-5.8	-1.1
Inflation	63.3	51.0	163.3	359.1	139.0	191.8	75.5
Overall Fiscal Balance (% GDP)	-8.2	-11.3	-6.6	-4.7	-1.5	-6.4	-3.9
Current Account (% GDP)	-14.5	-16.2	-9.8	-6.0	-3.4	-5.5	-3.2

Source: Data from domestic authorities; estimates (e) and prediction (p) based on authors' calculations. AfDB Statistics Department, June 2023.

Financial sector: The banking sector dominates the financial sector in Sudan, accounting for over 80% of the total financial sector assets. The contribution of other non-bank financial institutions is marginal, and stock market capitalization is minimal at 3.8% of GDP. Although still below the 5% statutory limit, non-performing loans to gross loans increased to 3.5% in 2021, from 3.0% in 2020, reflecting reduced asset quality in line with the nascent

economic recovery (AEO 2023). The capital adequacy ratio dropped to 7.1% in 2021 from 11.5% in 2020. This is below the 15% regulatory requirement, largely due to reduced investment deposits following the depreciation of the exchange rate. However, the return on assets increased to 4.5% in 2021 from 3.3% in 2020.

Poverty and social indicators: According to World Bank estimates, poverty increased from 64.6% in 2021 to 66.1% in 2022 and unemployment remained high at 20.6% in 2022, partly due to rising inflation and reduced economic activity owing to political instability, the lingering effects of COVID-19 and Russia's invasion of Ukraine. Low labor productivity, high youth unemployment (26.7% in 2018) and low labor force participation for women (48% for women compared to 73% for men) are also major underlying causes of poverty in Sudan. The 2021 Human Development Index ranked Sudan in the low human development category, at 166 out of 189 countries and a score of 0.507.

Box 2.1: Impact of Russia's Invasion of Ukraine on Sudan

Sudan, being a net oil importing country, has been considerably affected by Russia's invasion of Ukraine, which led to an unprecedented increase in oil and food prices. Sudan used to spend about $2 billion to cover annual oil imports when the oil price was about $70 per barrel but this was doubled when the oil price soared to $140 per barrel, exacerbating the country's lack of country's foreign exchange reserves, which cover only 2.3 months of imports. The increase in global wheat prices by about 33% following Russia's invasion of Ukraine was directly reflected in rising prices of food items, notably the prices of bread increased by 30% toward the end of 2022. Up to 80% of total wheat consumed in Sudan is imported, of which about 70% comes from Russia and Ukraine. As wheat represents the staple food and is a major input to many food industries in Sudan, the increase of global wheat prices directly fueled inflation. Another source of inflation comes from the trickling down of escalated transport costs, which have increased as a result of the surge in oil prices. Given the substantive share of transport costs in production and distribution chains, an increase of 10% in the general price level is expected to come from transport cost escalation. Sudanese authorities responded by encouraging import substitution initiatives. The increased wheat prices accompanied by the government's inability to meet the huge import bill, necessitated the adoption of a drastic policy response to encourage import substitution through supporting domestic wheat producers via price incentives. The government has announced the import substitution policy; however, critical actions are needed to make it operational. Also, the government attempted to rationalize imports to mitigate the impact of the conflict. Although the importation of oil is somewhat inelastic and cannot be readily reduced, the government started to impose administrative measures to reduce the importation of other goods, which are considered less important for the economy. This was an attempt by the government to focus mainly on imported goods to be used as production inputs (i.e., machineries, input supplies, fertilizers, etc.). This is expected to reduce government exposure to large foreign exchange shocks. Other responses included collaboration with development partners to enhance the production of wheat through the provision of subsidized seeds, fertilizers and extension services to wheat farmers in the country. The goal is to achieve Sudan's wheat sufficiency in the medium term and make Sudan a net exporter of wheat in the long term.

Sudan's real GDP is projected to contract much faster in 2023 compared to 2022 largely due to political instability and conflict

2.2 Outlook and risks

Economic Growth: Real GDP is projected to contract by 3.1% in 2023 due to the reduction of economic activities as a result of the conflict. However, GDP is projected to grow by 1.6% in 2024, driven by agriculture and mining on the supply side, and private consumption and

investment on the demand side. The current mediation efforts by Saudi Arabia and United States of America would restore political stability, accelerate the implementation of macroeconomic and structural reforms, and boost economic activities.

Monetary policy and inflation: A tighter monetary policy stance needs to be implemented to complement the reforms aimed at reducing fiscal deficit monetization. However, such policy is highly unlikely to be implemented in 2023 due to increased war expenditures leading to inflation hiking by 191.8% in 2023, which will ease to 75.5% in 2024 with the anticipation of reduced conflict. The inflation outlook is contingent on fiscal consolidation and resolution of the ongoing political instability, which could trigger the resumption of development assistance and stabilize the exchange rate.

Debt distress, political instability, and climate change remained the main downside risks to the economic growth outlook

Fiscal and current account balance: Prior to the war, the rationalization of public spending was expected to reduce the fiscal deficit to 1.4% of GDP in 2023 and 2024. Latest projections considering the war indicated that the fiscal deficit is expected to increase to 5.8% of GDP in 2023, reflecting reduced government revenues due to the conflict. However, the fiscal deficit is expected to reduce to 1.1% of GDP with the anticipation of political reconciliation in 2024. The fiscal deficit will be financed by domestic and external borrowing, and part of Sudan's $857.7 million Special Drawing Rights (SDRs) allocation (2.6% of GDP), if the government decides to use the SDRs. The current account deficit is projected to worsen to 5.5% of GDP in 2023 and will improve to 3.2% of GDP in 2024, reflecting improved exports following the expected economic recovery.

Risks: The economic outlook is overshadowed by main downside risks of persistent political instability, debt distress, and climate change. Russia's invasion of Ukraine could further escalate global food and energy prices, and tighten global financial markets, thereby stoking inflation, and reducing financial flows to Sudan. Political instability has derailed the reform momentum including impeding progress towards the HIPC completion point and has the potential to disrupt the economic recovery. Depletion of international reserves following the suspension of development assistance could aggravate exchange rate depreciation with adverse effects on inflation, debt sustainability and broader macroeconomic stability. The Russian invasion of Ukraine has increased domestic food and energy prices by 25%, with wheat imports dropping by 40% which could stoke inflation. The tailwinds include the ongoing mediation efforts to resolve the political impasse, and the readiness of development partners to support the anticipated transitional government, both of which are expected to boost investor sentiments and catalyze private investment and finance.

III. PRIVATE SECTOR FINANCING OF CLIMATE AND GREEN GROWTH IN SUDAN

3.1 The imperative for green growth and the role of private sector financing

Green growth and climate action are important if Sudan is to achieve its national development vision of macroeconomic stability, industrial development, and sustainable peace by 2031.

Sudan is one of the highly vulnerable countries to climate change globally and in Africa due to its location in the fragile Sudano-Sahelian zone, unsustainable exploitation of natural resources, and weak institutional and human capacities. Having contributed less than 0.06% to the total global annual emissions, as shown in the Metadata Climate Change Knowledge Portal (MCCKP), Sudan is disproportionately affected by climate related risks such as floods and droughts that threaten its development gains given its marginal contribution to the global emissions. The carbon footprint of Sudan on a per capita basis was only 0.43 tCO2 in 2020, compared to developed nations such as the United States and China whose carbon footprint was 14.34 tCO2 and 7.41 tCO2, respectively. Sudan is also grappling with social inequalities. For example, as of 2021, over 40% of households did not have access to basic water services, 67% of the population did not have access to basic sanitation, and 75% did not have access to basic hygiene.

Economic growth is a priority outcome for Sudan, which is a low-income country. Sudan recognizes that economic development cannot compromise climate change green growth. For example, Sudan's 25-year National Strategy 2007-2031 aims at improving macroeconomic stability, developing industrial value-chains, particularly, in the agriculture sector, enhancing the role of the private sector to create jobs, and improving access to basic social services. The strategy also aims to promote sustainable peace and stability and reduce inequality and development disparities between regions. The 25-year strategy is broken down to medium-term plans, including the Economic Reform Program (ERP) 2015-2019, and complemented by the Poverty Reduction Strategy Paper (PRSP 2021-2023). PRSP (2021-2023) has five pillars that build an economic foundation for a diversified, inclusive, and sustainable growth path at the heart of which is the provision of opportunities for broad-based growth and poverty reduction. The pillars of the PRSP include: (i) Macroeconomic Stability; (ii) Inclusive Economic Growth; (iii) Human Capital and Social Development; (iv) Peace and equal opportunities for all Sudanese; and (v) Governance and Institutional Capacity. Macroeconomic stability is pursued alongside other priorities, such as the reduction of social inequalities and action to address climate change. Addressing the drivers and effects of climate change, ensuring sustainable use of environmental resources, and addressing inequalities are considered as conditional

requirements for sustainable development and economic growth. This is the basis for green growth in Sudan. For instance, Sudan committed to reducing greenhouse gas emissions by 38% in the energy sector, 45% in the forestry sector, and 20% in the waste sector by 2030 compared to business-as-usual. In addition, efforts made to address climate change involved investments in climate change adaptation, addressing losses and damages from climate change, investments in natural resource management and in reducing social inequalities.

As is the case across the African continent, Sudan has ample opportunities to transition to green growth while making progress on mitigating the effects of climate change. For example, Sudan is one of the countries globally that has low emissions with a small volume of stranded assets in high emitting infrastructure, meaning that its transition to low emissions can be quick and less costly. Sudan is also endowed with significant natural capital for renewable energy generation through wind, solar and geothermal, as well as forests and land that can enable Sudan to mobilize huge resources to finance climate change and support transitions to green growth.

Sudan has demonstrated strong political commitment to green growth and has made considerable progress in outlining its green growth and climate action priorities.

Sudan's updated 2021 NDC affirms the country's commitment to implementing climate change mitigation and adaptation actions as a national priority. Sudan submitted its Intended NDC (INDC) to the United Nations Framework Convention on Climate Change (UNFCCC) in October 2015 and later ratified it in 2017, making it an NDC. It has also submitted its Initial and Second National Communication to the UNFCCC. The country's NDC affirms its commitment to implementing mitigation and adaptation actions as a national priority. In the new National Development Plan, Sudan Vision 2040, which is under preparation and in line with its NDC, Sudan seeks to align its mitigation plans with national development priorities and aims to pursue low carbon development interventions in the energy, forestry, and waste sectors. In 2000, the estimated GHG emissions in the energy sector were 8,539 Gg, 9,392 Gg from land use change and forestry, and 2,015 Gg from the waste sector. For its adaptation strategy, the country seeks to focus on agriculture, water, and health sectors as well as coastal zones.

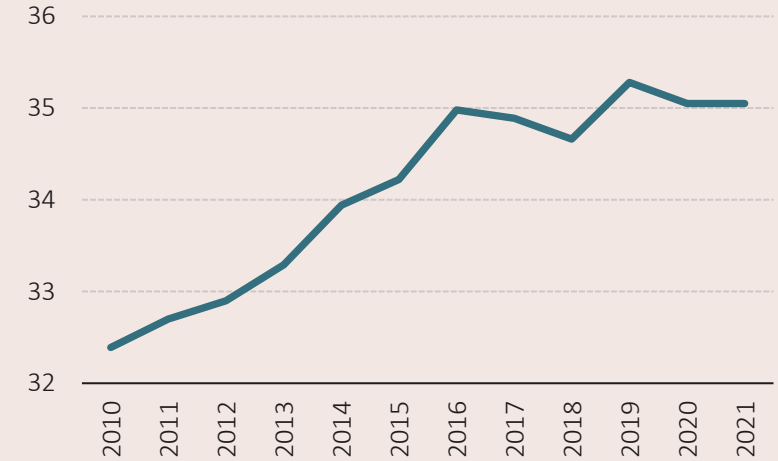
Sudan's green growth index has been stable over the past 11 years and is one of the least performing countries on green growth.

Sudan's mean green growth index (GGI) has been stable over the past 10 years, increasing from 32.4 in 2010 to 35.1 in 2021 (see Figure 3.1a). Sudan is one of the least performing countries on green growth in East Africa[2] between 2010 and 2021, with a mean index of 34.1 (Figure 3.1b). Sudan's GGI is mainly driven by high performance on waste and material use efficiency, greenhouse gas emissions reduction, social equity, environmental quality, and green investment (Figure 3.1c). Sudan, however, underperforms in relation to green trade and efficient and sustainable water use. This is further complicated by Sudan's mining industry, which involves dealing with some of the world's most toxic extraction materials, such as cyanide and mercury.

Comparing Sudan's green growth ambitions indicates that the mean index for Sudan is 34.1 on average during 2010-2021, placing Sudan far below Africa's average of 48.2. At an average GGI of 48.0, East Africa is the second lowest performer among the other regions of the continent following North Africa at 41.4 (Figure 3.2).

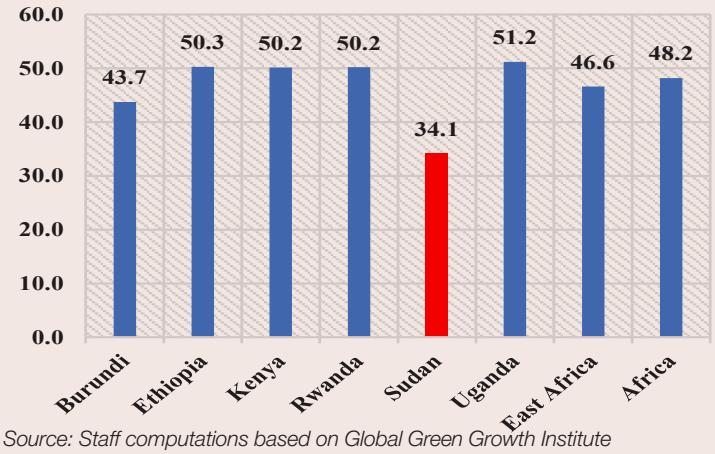
[2] Based on countries where data is available

Figure 3.1a: Green Growth Index for Sudan and Peers, 2010 – 2021



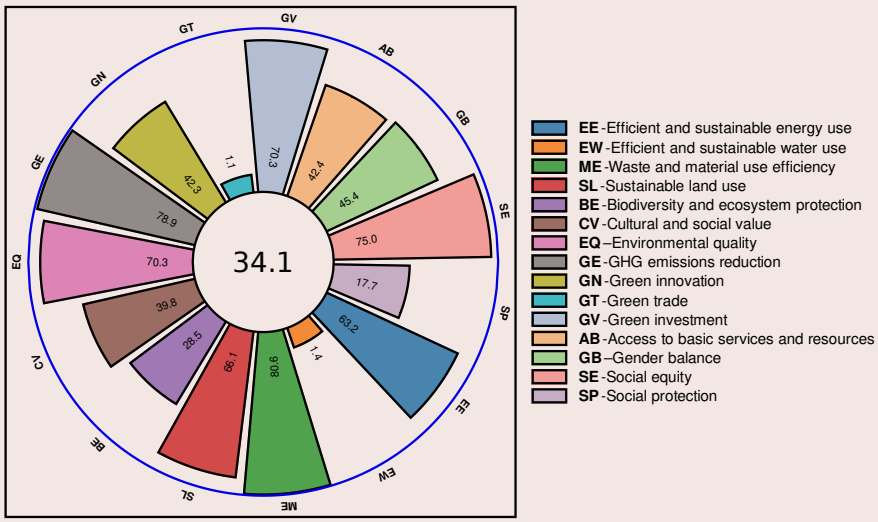
Source: Staff computations based on Global Green Growth Institute

Figure 3.1b: Sudan's GGI in comparison with other African countries, average 2010-2021



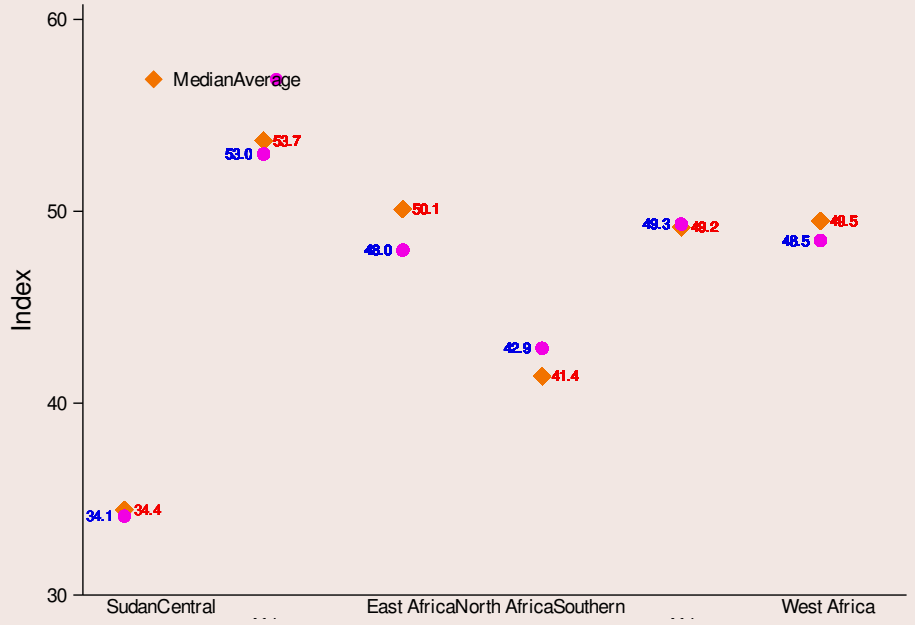
Source: Staff computations based on Global Green Growth Institute

Figure 3.1c: Components of Sudan's GGI



Source: Staff computations based on Global Green Growth Institute

Figure 3.2: Sudan GGI in comparison with Africa regions, 2010-2021



Source: Staff computations based on Global Green Growth Institute

For Sudan to achieve its green growth and climate action ambitions, private sector financing will need to be mobilized at scale

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

The need for private sector solutions to address climate change impacts is even more pronounced in Sudan. This is even more compelling given the needs to build resilience to climate and disaster risks amid limited government fiscal space resulting from reduced GoS revenues. National frameworks recognize that the private sector can play a role in catalyzing other sources of private sector finance, as well as in directing finance towards sectors and areas that are currently underfunded. Sudan's policies and strategies on green growth and climate action recognize the importance of the private sector in mobilizing the resources that are needed to meet the collective goals. For instance, the 2016 National Adaptation Plan (NAP) outlined the needs for new partnerships ranging from state governments to international donors; from the household sector to the private sector; and from one end of the national institutional spectrum to the other. The updated NDC notes that in addition to government contribution, important contributions and resources are expected from national private sector engagement.

3.2 Private sector finance flows, gaps and needs for green growth and climate action in Sudan

3.2.1 Current flows of finance

Sudan has accessed limited foreign financing, including for climate finance and green growth over the last three decades due to its inclusion on the State Sponsors of Terrorism List (SSTL) and economic sanctions, which were lifted in December 2020.

External financing has largely come from United Nations Environment Program, United Nations Development Program, and the African Development Bank. Consequently, Sudan has limited readiness to access international finance and mobilize domestic finance for investments in adaptation and mitigation due to limited capacity of officials to develop bankable proposals that qualify for financing from international climate funds and lack of climate related data required for these proposals. The estimated cumulative financing needs for Sudan to respond adequately to climate change range from about $22.7 billion to $28.2 billion, averaging $25.5 billion in 2020–30. On an

annual basis, this comes to about $2.5 billion, with lower and upper amounts of $2.3 billion and $2.8 billion, respectively. The main financing flows to climate action and green growth for Sudan come from the ambitious Great Green Wall (GGW) initiative. The GGW is implemented in countries where climate shocks are causing a loss of assets, crops and livestock, disruptions to value chains and soaring food prices. The cross-cutting program enhances access to credit and technical assistance for local farmers, farmers' organizations, cooperatives, and micro and small sized enterprises, which enable them implement climate-resilient and low-emission agriculture and agroforestry.

The largest proportion of private climate financing flow in Sudan has been allocated towards mitigation and the agriculture sector.

There exist huge data gaps in needs by sector because Sudan does not disaggregate mitigation and adaptation needs further. However, based on the available data, mitigation projects for agriculture, forestry, energy for irrigation, and water and sanitation accounted for more than 50% of the total finance flows; adaptation projects accounted for 39% and the rest was used for cross-cutting mitigation and adaptation projects. Financing for both mitigation and adaptation in Sudan comes primarily from public sources and very little financing from the private finance was invested in adaptation. Adaptation is seen as risky due to perceived low returns and the long period of time it takes to generate returns. Moreover, many international donors prefer mitigation to adaptation due to the availability of reliable data and because the former can be measured, and success is visible.

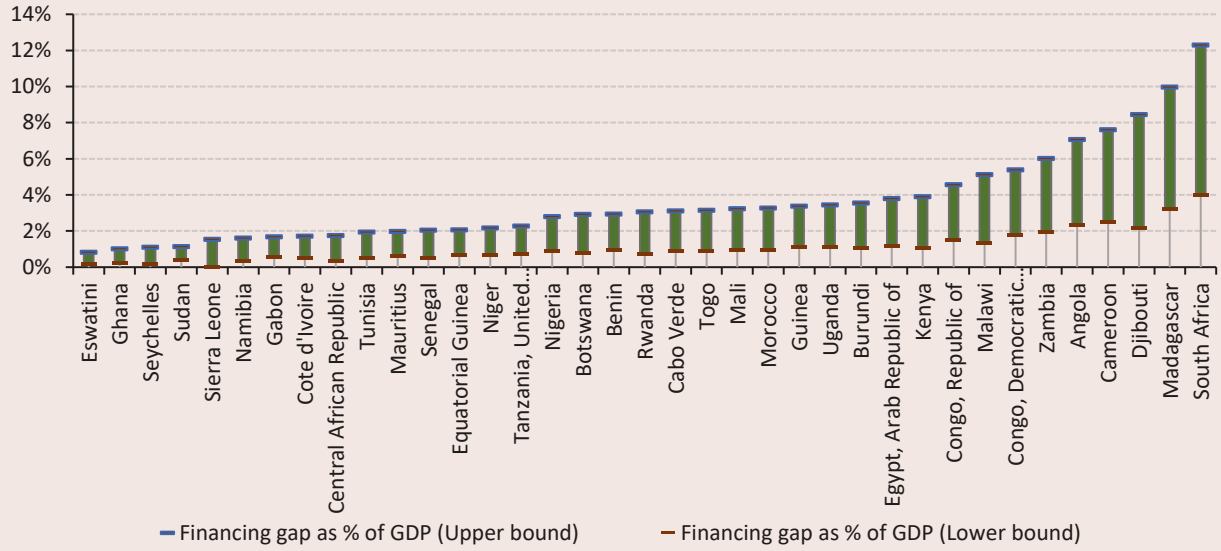
3.2.2 Private sector finance needs for the future

Sudan will need more than $2.5 billion annually up to 2030 to meet its climate change objective with lower and upper amounts of $2.3 billion and $2.8 billion, respectively.

As for many African countries, the private sector climate finance gap for Sudan is huge (figure 3.3). According to Sudan's updated NDC, meeting adaptation and mitigation costs outlined in this policy will require $25.5 billion between 2020 and 2030, which translates to $2.5 billion annually between this period. About 39.2% of this would be allocated towards adaptation and resilience goals, with the government committing to financing 15% of the estimated cost of NDC implementation. The remaining $22 billion would need to come from private and international public sources. For Sudan, the agriculture sector receives the highest financing, though the gap remains substantial. It is estimated that an annual amount of $0.8 billion is required to bridge the financing gap in agriculture, forestry, and other land use. Current private climate investments in other sectors such as transport, buildings, industry, and others and cross-sectional activities are very low if not nil. The private sector financing gaps in these sectors are massive. For example, in the transport sector, the annual needs of Sudan are estimated to be about $0.75 billion per year.

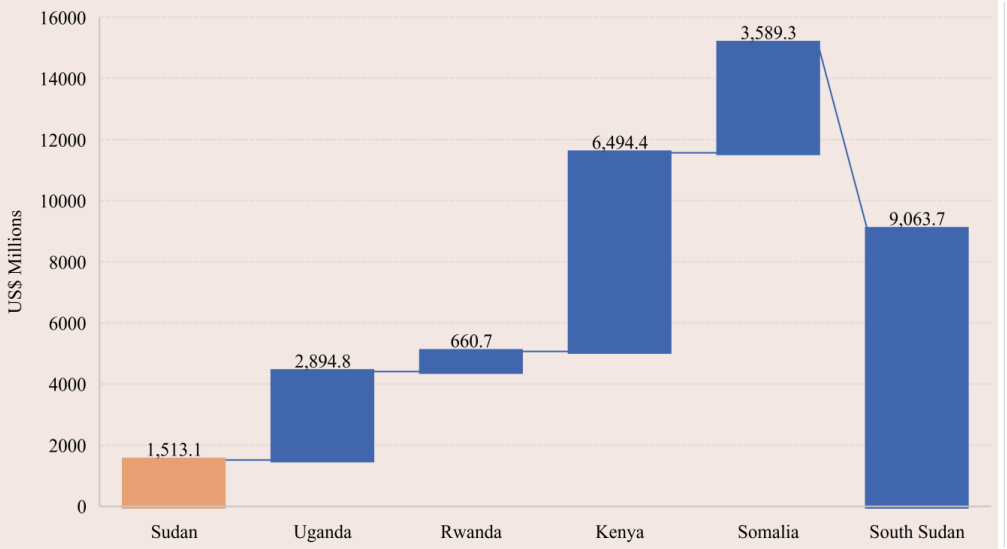
Given recent trends in global private climate finance flows to Sudan, the private sector is likely to contribute between 25%-75% of the climate financing needs of the country. For a 25% contribution to climate financing needs, which represents a conservative scenario, then the private sector would need to increase its financing by $44 billion annually. For a 50% contribution to climate finance by the private sector, which is a moderate scenario, private sector financing would need to grow by $53 billion annually. A 75% contribution to the climate financing gap, which is an ambitious scenario, would see private sector finance grow by $59 billion annually.

Figure 3.3: Estimated annual private climate finance gap for African countries, lower and upper bounds



Source: AfDB staff computation using submitted NDCs and CPIs - Africa landscape of climate finance data

Figure 3.4: Total Annual private climate finance gap at 100% contribution from the private sector, 2020-2030, Million USD – Selected East African Countries



Source: Based on World Bank 2021

3.2.3 Emerging innovative sources of private sector financing mechanism for green growth and climate action

Sudan is yet to tap into the new and innovative instruments for mobilizing private sector finance towards green growth and climate action due to years of economic sanctions and international isolation.

Africa accounted for just 0.1% of the global green bond issuance in 2022, a share that is far below the continent's 2.8% of global GDP and 17% of the world's population. Furthermore, the green bonds issuance in Africa was dominated by only three countries which accounted for more than 90% of total green

bonds, with South Africa accounting for over 65% and Egypt and Benin accounting for 25%. Sudan is yet to join countries such as Nigeria and Morocco who continue to strengthen their position, and other economies such as Kenya, Tanzania and Namibia who have just entered the green bond issuance market. Debt for swaps can help reduce the fiscal burden of external debt and has been used in some African countries (e.g., Ghana, Cameroon, Madagascar). However, these have been issued at a small scale. For this instrument to enable significant financial flows into climate action and green growth in Africa, more players and bigger deals are needed. Sudan was isolated from the international community for decades and had just begun its journey to resolve its debt using the HIPC initiative. Therefore, it has yet to develop mechanisms for using debt for swaps. The global voluntary carbon market has grown by 4 times in just a year, primarily driven by increased corporate pledges, and was valued at $2 billion in 2021 in Africa. Today, the voluntary carbon market is generating modest flows of finance from the private sector into climate change mitigation projects in Africa, but this is based on a level of only 2% of the maximum potential of carbon credits that can be generated. Given the turbulent macroeconomic landscape in Sudan, developing a voluntary carbon market will take some time as corporations refrain from making pledges in situations of economic instability.

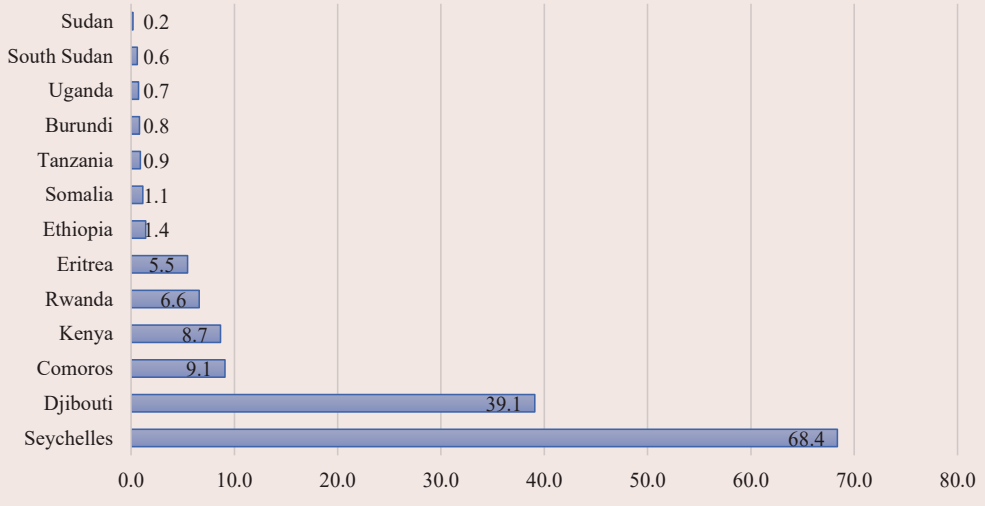
3.3 Opportunities and barriers for mobilizing private sector finance for green growth and climate action

3.3.1 Opportunities for private sector investments

Among the African countries, Sudan mobilizes the least private sector finance.

Analyses carried out for the AEO 2023 found that public sector finance investments (proxied by public finance investment per capita) were a significant determinant of private sector investment. A closer look at the data reveals that Sudan mobilizes the least private sector finance per capita compared to the other East African countries, and in the entire African continent (Figure 3.5). This is also true for public finance, where Sudan has the third lowest public climate finance per capita on the continent, ahead of Libya and Algeria. This could also imply that Sudan has a huge potential to tap into both public and private climate finance opportunities that are available for the African and developing countries provided that the current conflict is resolved.

Figure 3.5: Sudan's private climate finance per capita, compared to other East African Countries, US$



Source: Based on World Bank 2021

Opportunities for private sector investments in green growth and climate action in Sudan cut across the economy.

Sudan holds various opportunities for investments in green growth in different sectors, including agriculture, infrastructure, health, education, transport, and water and other resource management. Most of these private sector investment opportunities are driven by several factors. First is the increasing population size. Analysis suggests that Sudan's population is expected to rise to 85 million people by 2086, up from approximately 47 million in 2022. Most of this population is projected to be composed of young and middle-aged, and residing in urban areas. This opens investment opportunities for the private sector to invest in the provision of affordable and green urban housing and transport, food and waste management services. These goods and services will also need to be provided in the rural areas to cover the existing gap. Already, technology is contributing to the strengthening of the Sudan agriculture sector by enhancing resilience and productivity, and further investments in this sector will be essential to meet the expected increases in demand as population increases.

Sudan was a low middle income country until 2020 when it was reclassified to low-income status due to years of economic decline and structural imbalances. The country was developing a new strategy (Sudan Vision 2040) which was intended to transition the country back to middle-income status, which would imply increased demand for products such as those that provide energy for cooking and other productive uses. These, however, have now been derailed following the ongoing political instability in the country. The increased demand for energy and other products would, however, provide an opportunity for private sector investments to provide alternative clean fuels such as those derived from renewable energy, and to enable Sudan make progress on its green growth objectives.

3.3.2 Barriers to private sector investments

a. Political instability and insecurity

Sudan has experienced political instability and sporadic civil protests, which caused insecurity, since the military takeover of the government in October 2021. This has worsened since April 15, 2023, when an armed confrontation erupted between the Sudanese Armed Forces and the paramilitary group known as the Rapid Support Forces. In the absence of lasting political and security solutions, it is unlikely that the required private investment and finance for climate action and green growth will be mobilized.

b. Limited access to capital, accumulation of arrears, unsustainable debt, and economic sanctions

Sudan has suffered under the weight of accumulated arrears, unsustainable debt, and years of economic sanctions hindering its access to capital offered by international lenders including MDBs and DFIs as well as other private sector lenders.

Sudan's $56 billion external debt (163% of GDP) in 2021 was another hinderance to unlocking private sector potentials. Although the HIPC decision point was reached in June 2021 and was expected to reduce debt burden by 50% by 2022, progress towards the completion point stalled due to the military takeover in October 2021. Debt distress or risk of debt distress means that the country is facing higher borrowing costs from domestic and international lenders but is also likely to lose access to international markets. Also, the high debt burden for Sudan implies high spending on debt servicing, which will take huge government revenues on servicing external debt. This diversion of resources away from key sectors, particularly those that are critical for green growth in the long term, as well as reduced rates of economic growth and overall resilience to climate and economic risks,

might push away potential investors fearing the risk of debt default. Also, for more than three decades, Sudan has suffered from its inclusion on the State Sponsors of Terrorism List (SSTL) and economic sanctions, which were lifted only in December 2020. This also limited Sudan's access to foreign financing, including for climate finance and green growth.

The effects of COVID-19 and Russia's invasion of Ukraine reduced the already weak link with international capital markets. The socio-economic and political landscape constrained Sudan's access to international capital markets. This has been aggravated by the COVID-19 pandemic and recent disruptions of global supply chains caused by Russia's invasion of Ukraine, which also reduced the liquidity of international investors, including those looking to invest in Sudan. For example, investors recovering from the COVID-19 pandemic and dealing with the recent food and energy crisis have stressed out balance sheets, meaning that there is limited scope for them to increase investments in green growth sectors. The liquidity of most potential domestic private sector investors in Sudan is also low. Financial institutions, which have a high potential contribution to financing green growth on the continent in general are also unable to provide long term funding to infrastructure projects.

c. Low levels of skills and capacity within the country to meet green growth and climate action needs.

Low technical, human, and institutional capacity in Sudan also hinders utilization of private sector finance for climate change and green growth. In this regard, Sudan faces a variety of gaps that limit the ability to successfully identify and engage with private sector investors for complete project cycles. For example, almost all infrastructure projects in Sudan do not get past the feasibility/planning stage because they lack access to the financial resources and capacity required to complete the required feasibility and business planning analysis. Although capacity gaps are across the whole private sector financing landscape, the problem is even more acute in projects targeting climate change and green growth.

Capacity gaps also exist in areas of standardisation on regulations, which limit private sector engagement, particularly for those looking to make cross-boundary investments. Regulations incentivise private sector investments by signalling stability and political willingness to engage in green growth and the presence of an enabling environment for the establishment of these investments. Some African countries have made efforts to develop and streamline policies and regulatory structures for private sector investments, but Sudan is lagging behind others in these efforts, which include the use of targeted financial incentives to enable compliance with green growth measures, etc.

d. Weak regulatory structures and ineffective implementation of green growth policies and strategies

Sudan suffers from a lack of effective implementation of green growth policies and strategies, with poor coordination among ministries and weak regulatory structures.

Although all African countries including Sudan have established strategies for climate action, there is still an absence of policies and strategies for green growth in many of these countries to provide policy direction for green growth investments. While Sudan has developed climate change strategies, including submitting NDCs, the country lacks a concrete action plan for mobilising private sector finance towards specific priority sectors. Hence, Sudan still lacks policy tools and strategies to provide long-term policy guidance on green growth and green growth investment needs and opportunities. This results in a lack of clarity on the needs and gaps in reaching green growth in the country. For example, although Sudan has already identified its climate financing needs through its NDC, priority projects in specific

sectors remain either fully or partly unquantified, which limits engagement with interested private sector investors.

The level of planning for policies related to green growth has not reached that which has been observed for climate action. Part of this can be attributed to the comparably limited global attention to green growth, but also to the limited government capacities in Africa to generate detailed green growth strategies and plans and to implement them. This is mainly due to the absence of technical capacity at the national level. The outcome, at least at the national level, is the absence of sufficient bankable projects that contribute to green growth. This is further translated into an absence of local plans, particularly amongst domestic private sector for transitions to green growth. The limited coverage of policies and regulations in Sudan and across the continent implies the need for a more comprehensive development of policies and regulations that can address the different private sector investment needs in Sudan.

3.3.3 Pathways to mobilizing private sector finance for green growth and climate action in Sudan

There are several pathways that Sudan can take to unlock private sector finance for green growth and climate action. These are discussed below.

a. Deepening domestic financial markets to mobilize domestic finance for green growth.

Even though Sudan's domestic financial markets are constrained, they are expanding and could be used to mobilize private sector finance for targeted green growth and climate action projects.

The mobilization of private sector finance through domestic financial markets reduces currency risk. The potential of Sudan's domestic financial markets could, therefore, be exploited to contribute towards the mobilization of private sector finance in the country. Strengthening domestic financial institutions to address the Micro, Small and Medium Enterprise (MSME) finance gap is paramount. Sudanese firms, regardless of their size and sector, rely most on internal funds, earned savings and other informal sources to finance both their investment and working capital. Therefore, these companies have the lowest share of firms that obtain financing from private commercial banks for their working capital (7.7%) compared to other regions of the world. Addressing this constraint will require Sudan's public sector institutions to create favourable conditions to incentivize private sector financiers to serve MSMEs, and particularly those in the climate and green growth sectors. This could include developing the domestic banking sector to address the financing gap by MSMEs.

There is also a great opportunity for tapping into the expanding global and domestic private equity and venture capital appetite for the Sudan market. Private equity and venture capital can provide long-term patient and risk agnostic capital to investments that advance green growth. They also provide alternative financing for companies or investments that would not qualify for traditional forms of financing, e.g., commercial debt or bonds. Private equity and venture capitalists become shareholders in the companies they invest in, thus making them like equity or stock market investors, only that these deals are private. This financing is available to small and young firms that are not large enough to be listed on the stock market. Furthermore, there is a great opportunity for public-private partnerships (PPPs) in various sectors related to climate change, particularly energy. Therefore, DFIs and MDBs in Sudan could direct private sector financing towards climate transition and green growth sectors and developing instruments for risk-sharing to encourage building PPPs. Although it is difficult to foresee an immediate engagement due to political dynamics, the opportunities are there for Sudan to develop PPPs, access equity and venture capital markets.

b. Stronger integration and implementation of sustainable and green finance policies and regulations

Sudan has developed some policies for sustainable finance, but more regulations are required as well as their integration and implementation.

Besides the development of green growth strategies and action plans, Sudan needs to integrate and implement the existing strategies, and develop regulations that are comparable across different green growth sectors. Standardizing regulations across sectors and boundaries, as well as developing monitoring frameworks for green growth will make it easier for investors to determine what counts as investments that contribute towards green growth in the country. Also, Sudan can use blended finance to increase private sector participation in infrastructure for green growth. The existing private sector participation is now mostly focused on financing agriculture with limited investments going towards infrastructure, which is equally important for green growth. Therefore, there is a need to ensure that allocation is diversified to other sectors that are important for green growth, such as energy, social, and water.

c. Skills and capacity, particularly for the informal sector to increase innovation and engagement with key private sector.

The development of green skills and capacities needs to be integrated into existing institutions, including education institutions and innovation centers.

Existing skills and capacities in Sudan are limited across all sectors. However, skills and capacities are relatively higher in a specific set of sectors, mostly those related to agriculture as this is where most of the private sector financing is directed. This means that Sudan needs to focus on further deepening and expanding its skills and capacities across sectors, as well as promote innovation in other sectors to attract private sector investors. The existing private sector participation is now mostly focused on financing agriculture with limited investments going towards infrastructure, which is equally important for green growth. Therefore, there is a need to ensure that allocation is diversified to other sectors that are important for green growth, such as energy, social, and water. Addressing the skills and capacity gap such as ability to mobilize private sector financing for climate change that has been identified in Sudan through several assessments by the government and development partners and has become priority areas for investment in the country. There is need for further integration of innovation that contributes to green growth and climate action into institutions of learning to ensure that the workforce is equipped with the skills for mobilizing private sector finance.

d. Development and implementation of fiscal incentives to attract private sector investments particularly towards other sectors that generate soft infrastructure outcomes.

More policies on appropriate fiscal incentives need to be developed at the national level in Sudan, while the existing fiscal incentives need to be fully working to take advantage of the global momentum on green growth and climate action.

Fiscal incentives have already been used in Sudan to direct investments to key sectors, particularly the energy sector. For example, the government has removed subsidies on petroleum products, thus making investment in clean energy much more desirable. Also, Sudan has identified agriculture, water, energy and health as key priority sectors where urgent and immediate adaptation actions are required. More fiscal incentives are needed to attract more private sector investment in these sectors, to meet the national green growth objectives. This underscores the need for a cross-sectoral approach to the development and implementation of fiscal incentives for private sector investments in green growth. Sudan has put in place a relatively open investment

legislative framework and many laws are in line with international best practices. However, their implementation is often impeded by the absence of secondary legislation, insufficient institutional capacity, and lack of coordination between different levels of government. The Investment Encouragement Act of 2021 establishes equal treatment to foreign and domestic business owners, allowing foreign investors to own business enterprises in Sudan and would, therefore, attract private investment into the country.

e. The role of MDBs and DFIs

Sudan needs more affordable capital from MDBs and DFIs

Sudan's inflow of MDB and DFI finance has been limited over the last three decades due to isolation from international community following economic sanctions and accumulation of debt arrears. However, with the formalization of international relations in 2020 and clearance of debt arrears in 2021, Sudan had started to receive increasing financing from MDBs and DFIs. The resumption of inflows from MDBs and DFIs was, however, short-lived as Sudan was again suspended from international assistance following the October 2021 takeover of government by the military, which is further complicated by the conflict started in April 2023.

MDBs and DFIs can play a more significant role in private sector finance mobilization to Sudan through increasing their risk appetite for investments through credit risk guarantees and partial risk guarantees, providing more affordable capital that has low interest rates and longer repayment periods. Additionally, MDBs and DFIs and funding interventions enable capacity development of national and local public and private sector institutions to mobilize private sector finance. Lastly, MDBs and DFIs can work with the Sudan government and other key private sector actors (particularly financial institutions) to increase the country's credit rating, which will enable it to acquire more affordable capital from other lenders.

f. Enhancing stakeholder collaboration

Collaborations across different stakeholders, particularly between government and the domestic and international private sector to identify and address primary risks to investments in green growth and climate action.

Multistakeholder partnerships are important for strengthening collaborations for the mobilization and use of private sector finance in supporting green growth. The Sudan government already recognizes the importance of these partnerships and continues to work with stakeholders such as 'Friends of Sudan on the ground Plus'[3], private sector associations, civil society, and other local and international organizations. These have been instrumental in conducting consultation processes in developing and implementing climate policies and programs and creating spaces for collaborative learning and developing strategies for private sector involvement in the financing of green growth. However, these networks and collaboration should be further strengthened such as the domestic private sector engaging with the international private sector, MDBs and DFIs to generate a deeper understanding of financing needs, capacities, and existing mechanisms.

[3] The Friends of Sudan Group includes the European Union, France, Germany, Norway, the Kingdom of Saudi Arabia, Sweden, the United Kingdom, and the United States.

IV. NATURAL CAPITAL FOR CLIMATE FINANCE AND GREEN GROWTH

4.1 The Evolution of Natural Capital

While natural capital has significantly increased in Sudan over the last quarter of a century, it declined rather sharply in East Africa in per capita terms, more so than for Africa as a whole. Natural capital is tracked in three 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[4]. The data for (a) and (b) is from the World Bank, covering the period 1995-2018. The findings for East Africa are summarized in Table 4.1, while Table 4.2 provides the summarized findings for Sudan. Compared to the whole of Africa, the following observations can be made.

In total natural capital East Africa is the fourth richest region of the five on the continent – after North Africa, West Africa, Southern Africa and ahead of Central Africa.

The renewable assets have increased 3% in total value over the period 1995-2018, which is a little less than that for all of Africa (6%). Sudan had an increase in the value of renewable resources over the period of 236%. Only Burundi had a decline in total renewable capital among the countries in the region. In per capita terms the fall in renewable natural capita in East Africa is very similar to that for all of Africa – around 43%. In Sudan it is 94%, which is relatively higher than the rest of Africa. In the sub-region this is mainly the result of declines in almost all categories except mangroves. The largest fall is in the per capita value of cropland.

East Africa is much less endowed with non-renewable capital than the continent. It had only $168 of such capital per capita in 2018 compared with $1,084 for the whole of Africa. To be sure, there has been a large percentage increase in non-renewable assets (primarily metals and minerals) in the sub-region but that has come from a very low base.

An indicator of sustainable growth proposed in the AEO 2023 report is to have an increase in natural capital in per capita terms. In this respect, the region (and Sudan as a single country) has not met that. It suffered a decline over the period 1995-2018 of 42%. Hence, it has done much worse than the continent which experienced a decline in per capita natural wealth of 21%.

Further investigations into the reasons for the decline in renewable natural capital in East Africa have focused on forests, cropland, and pastureland. There are three trends to consider: a change in the areas of land that are under each category, the unit income that these lands provide and the sustainability of these rents (measured in terms of the lifetime of the return). This decomposition is important because it directs the policymakers to where action is needed to increase the value of natural capital.

[4] The World Bank data can be accessed at: Explore data (worldbank.org). The study covers 146 countries. It excludes those with no data, mainly small island states. In Africa, Djibouti is the only country excluded from the list.

Table 4.1 : Evolution of Natural Capital in East Africa, 1995-2018

East Africa	Total US$2018 Mn.			Per Capita US$2018		
	1995	2018	% Increase	1995	2018	% Increase
Renewable natural resources	452,150	464,505	3%	20,671	11,746	-43%
Forests, timber	96,886	93,880	-3%	3,745	2,120	-43%
Forests, non-timber	33,997	35,213	4%	1,333	746	-44%
Mangroves	397	770	94%	14	15	3%
Fisheries	631	608	-4%	21	11	-47%
Protected areas	52,603	62,994	20%	1,959	1,338	-32%
Cropland	176,906	159,659	-10%	9,980	5,090	-49%
Pastureland	90,730	111,381	23%	3,619	2,427	-33%
Sub-soil assets	523	7,558	1346%	25	168	564%
Oil	0	17	n.a	0	0	n.a
Natural gas	0	459	n.a.	0	8	n.a.
Coal	33	227	594%	1	4	266%
Metals and minerals	490	6,855	1299%	24	156	542%
Total	452,672	472,063		20,696	11,915	-42%

Source: World Bank

Table 4.2 : Evolution of Natural Capital in Sudan, 1995-2018

Sudan	1995	2018	% Increase	1995	2018	% Increase
Renewable natural resources	20,666	69,440	236%	858	1,661	94%
Forests, timber	n.a	14,288	n.a	n.a	342	n.a
Forests, non-timber	20,666	19,692	-5%	858	471	-45%
Mangroves	1	105	12142%	0	3	6956%
Fisheries	0	4	n.a	0	0	n.a
Protected areas	n.a	n.a	n.a	n.a	n.a	n.a
Cropland	n.a	19,211	n.a	n.a	460	n.a
Pastureland	n.a	16,141	n.a	n.a	386	n.a
Sub-soil assets	34	23,234	68553%	1	556	39472%
Oil	14	18,281	128566%	1	437	74064%
Natural gas	0	n.a	n.a	0	n.a	n.a
Coal	0	0	n.a	0	0	n.a
Metals and minerals	20	4,952	25123%	1	118.5	14439%
Total	20,700	92,674	348%	859	2,217	158%

Source: World Bank 2021

In the case of Sudan, the area of agricultural land (cropland and pastureland) declined from 1,296,150 km2 in 1995 to 694,058 km2 in 2018 (largely due to the secession of South Sudan in 2011), which reflects a decrease of 46.5%[5]. There is considerable variability in terms of the value of natural capital in the form of cropland and pastureland across the region. In Burundi in 2018 it was $3,194/ha; in Rwanda it is much higher at $15,557/ha, in Tanzania it was $1,962/ha, and in Uganda it was $3,092/ha. While some of these figures are high compared to many other more developed countries, the potential is there for raising the value of cropland and pastureland by adding value through the agrifood supply chain in the whole

[5] Figures for agricultural land area are from the World Bank: Agricultural land (sq. km) - Sudan | Data (worldbank.org).

region. Also, it is important to note that East Africa has not experienced a decline in net unit rents from agriculture that was observed in the analysis by the World Bank, which found that the global level agricultural land areas increased on average from 1995-2018, although unit rents fell quite sharply[6].

The other category of capital that is undervalued is forests. As noted in the AEO 2023 report, the efficiency of sequestering carbon in terrestrial ecosystems (particularly forests) can be increased. By choosing more selective land use and land management methods to increase GHG storage without compromising the use for forests for productive purposes, the amount that is stored can be increased globally around 20%. Much of this gain is in a few countries; of the ones in Africa with the greatest gap between the actual carbon sequestration and potential sequestration are Burundi, Gambia, and Uganda --two of them lying in East Africa. For Sudan, the maximum potential to increase GHG storage is estimated to be 17 Mt for the period 2000 to 2100. In addition to increasing the storage of carbon, however, it is critical to increase the price received by these countries from storage. Ways of doing that are discussed in the next section.

The AEO 2023 report noted that the categories of natural capital evaluated do not cover all sources of such capital on the continent. Sub-soil assets in Sudan have been found substantive (Table 4.2), with a huge potential to increase resources that can be used to finance climate change and green growth activities. Africa benefits particularly from sunshine, wind, and hydro resources that can generate clean energy. Sudan has geothermal resources, which can contribute to increasing local energy and the low carbon pathway. The climate, together with the landscape, fauna and flora form a strong basis for tourism. The contribution of natural capital to the flows of goods and services from all these sources of natural wealth, however, is not estimated, which then underestimates their contribution to the economy. In East Africa, the role of tourism is particularly important. The World Tourism Council estimated the contribution of tourism in Sudan to GDP to be 2.4%.[7] In 2019, the industry accounted for about 7% of Africa's GDP and contributed $169 billion to its economy—about the size of Côte d'Ivoire's and Kenya's combined GDP[8]. The amount varies with travel and other restrictions and was particularly affected by the COVID-19 outbreak but there is no denying the significance of natural capital in generating this contribution although that share has not been estimated. Furthermore, given the countries' exceptional landscapes, fauna and flora, an increase in the share of GDP from tourism can be an objective. Other contributions of natural wealth, such as solar or hydro in generating electricity, have not been estimated either and is something that should be done as a matter of urgency.

An important component of the natural capital of Sudan and other East Africa countries lies in their marine wealth, which has not been covered in the wealth accounts prepared so far. As the AEO 2023 notes, capture fishery provides protein, minerals, and micronutrients for over 400 million people on the continent and employs around 13 million people. There is concern, however, about over-exploitation of the wild stocks, which are decreasing. Key factors contributing to overfishing in Sudan and Africa in general are overcapacity; illegal, unreported, and unregulated (IUU) fishing activities; poor resource governance; and insufficient knowledge and misperception. IUU is a composite index that measures the state of fishing practices and vulnerability in global coastal African countries on a score ranging from 1 to 5, where one is the best and five is the worst. It found an improvement in some countries between 2019 and 2021 but a decline in others (i.e., both Kenya and Tanzania showed significant declines). Overall, natural

[6] World Bank (2021), Op Cit. Table 3.5.
[7] WTTC Data Gateway
[8] https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/reinventing-africa-tourism

capital in Sudan has generally been increasing, but affected by the secession of South Sudan in 2011 where it showed a declining trend. Other factors reducing the natural capital in Sudan include lack of tenure, poor natural capital governance and management, and illegal activities. This underscores the need to transform to a sustainable growth approach.

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 include both domestically driven as well as internationally driven actions. On the former, the importance of good governance in the management of the returns from natural capital and in bringing together physical and human capital to add value to exports where opportunities for that are available is significant. On the latter, 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 endowments of natural assets in the region that can serve the global goals in these areas. Measures to reverse the trend of natural capital in East Africa and accelerate the positive trend in Sudan are divided into those pertaining to non-renewable natural capital and those pertaining to renewable natural capital.

Sudan, like many African resource-rich countries, has witnessed fierce contests between ruling elite factions in the process of creating, capturing, allocating, and distributing the rents

4.2.1 Non-renewable resources

Sudan is rich in non-renewable natural capital such as minerals, as the geology of Sudan is dominated by the basement complex formation that covers more than 50% of its area. Sudan has a long history of mining culture dating back three thousand years, when gold was found in the Arabian-Nubian Shield, and later in North Kurdofan, Blue Nile regions, and along the Nile River. The extractive industry in Sudan, especially mining, contributes about 90 tons of gold to the global market per annum, making Sudan the 10th largest gold producer in the world. The extractive sector significantly contributes to public and private finance in Sudan and the country heavily relies on them for public revenue. The total annual average natural resource rents for Sudan are estimated at 11% of GDP, which is about $3.5 billion (Annex 1), having dropped from 15.7% of GDP in 2010 to 12.4% in 2020. The flow and amount of natural resource rents are affected by the bargaining between Sudan and multinational companies. In this regard, the government of Sudan is not well equipped to negotiate with large foreign private investors because of weak bargaining and institutional capacity, leading to a reduced share of natural resource rents. Before the secession in 2011, the country reached a daily production of 500 thousand barrels per day and used to generate 50% of its revenue and 95% of foreign exchange earnings from oil. Currently, Sudan produces 107,852.58 barrels per day of oil, ranking 48th in the world. However, it produces only an amount equivalent to 0.8% of its total proven reserves every year, implying huge potential. Mineral resources that are not yet explored include gypsum, iron, natural gas, silver, copper, phosphates, lithium, zinc, lead, nickel, aluminum, and cobalt. However, the current conflict in Sudan decreases the country's ability to extract these resources to boost green growth and development.

The AEO 2023 report notes that revenues from the extractive sector contribute a lot to the private and public finances of many African countries. Sudan also needs to ensure that it receives a fair share of resource rents from these resources and effectively manage the revenues; the negotiated royalty rates for example 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 as there are issues of corruption and weak institutions in mineral rich countries. Such countries in Africa including Sudan and elsewhere in the developing world experience low growth and high poverty rates.[1] Sudan, like many African resource-rich countries, has witnessed fierce contests between ruling elite factions in the

process of creating, capturing, allocating, and distributing the rents. The resource curse has been manifested in Sudan, casting a negative socio-economic and political outcome from the mismanagement of rents of extractive sectors, leading to severe insecurity and prolonged political instability. Sudan should improve its bargaining power to maximize revenues from natural resource rents and take proper account of how rents obtained from non-renewable natural resources are used by improving transparency and accountability.

For East Africa, these issues are less important than for other regions on the continent, where the value of the stocks of such assets are much larger. The richest country in extractive resources in East Africa is South Sudan, which, on the estimates for 2018, has $42 billion in oil reserves, making up 47% of all its natural capital. The recommendations from the AEO 2023 report for ensuring a fair share of rents for the state and for ensuring transparency, efficiency, and good governance in managing them are also valid for Sudan. For the other states, with small but nevertheless important amounts of minerals, the same strictures apply to the management of those sectors.

Aside from improving transparency and accountability in the resource rents, the region should align its industrial policies with current trends and opportunities in the energy transition. The region possesses some of the green minerals needed for the energy transition such as copper, iron ore and rare earth elements. A regional approach to their exploration towards minerals-based industrialization will help in maximizing their contribution to sustainable growth. This way, local content and other industrial linkages can be improved for job creation among other benefits. Sudan is a source of huge conventional energy (biomass, petroleum products and electricity), and the country uses this source to generate 44% of its energy. Cognizant of the climate crisis, pollution and other negative impacts caused by fossil fuels, there are policy transition and activist movements focused on ending the use of fossil fuel in favor of renewable energy. Sudan is committed to transition to renewable energy using the huge potential of generating hydropower in the Nile River in line with the agreement with the Nile basin countries.

4.2.2 Renewable resources

Renewable resources are at the heart of sustainable development in Sudan. Several ways in which they can be exploited more effectively and yet sustainably have already been touched upon. Sudan is an agricultural country with fertile land, plenty of water resources, livestock, forestry resources and agricultural residues. The land use in Sudan is classified into four main categories including, the arable land (8.4 million hectares), pasture (29.9 million hectares), forest (108.3 million hectares), and about 38.2 million hectares used for other purposes. Water resources are estimated at 84 billion cubic meters (m3), this includes the river Nile and its tributaries. Underground water is estimated at 260 billion cubic meters, only 1% of this amount is currently being utilized. The annual average rainfall ranges from about 1 mm in the northern desert to about 1600 mm in the southern regions. The total annual rainfall is estimated at 1093.2 billion m3. Sudan is the second richest nation with livestock in Africa, after Ethiopia, with approximately 103 million heads, of which there are 70 million sheep and goats, 30 million cattle and 3 million camels. In addition, Sudan has a great wealth of wild-life, birds, reptiles, and fish. These opportunities represent encouraging elements for investors to engage in Sudan pending the restoration of the prolonged political instability in the country. About cropland and pastureland, East Africa has not experienced a large expansion in the areas of such land over the last quarter century (unlike some other parts of the continent and other developing countries).[9] There may be potential for making a small increase if this

[9] In Rwanda, there was a steep decline in land under agriculture between 1991 and 2002 but land in 2018 is like that in 1992. In Uganda and Tanzania land under agriculture increased 18% while in Burundi and Kenya it changed very little.

can be done without deforestation, to add to the stock of land that can generate a long-term income flow. The main effort, however, will have to be to raise unit value from the land, by moving up the value chain for the agrifood system.

For forests, the area has declined in most East African countries. The greatest was in Uganda (28%), followed by Tanzania (15%), Rwanda (9%), Kenya (8%), while Burundi saw an increase of forest area of 19%. Sudan's forest area has declined by over 5% since 2012 (after the secession of South Sudan)[10]. Countries where there has been a decline will need to reverse it through conservation measures as well as replanting and recovery where appropriate. The AEO 2023 report proposes several measures in this regard. Governments should promote and enforce policies and regulations protecting forests, including protecting reserved 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 by governments using instruments such as performance bonds for forest lessees. Indeed, there is evidence that some countries in the sub-region have begun to reforest in the last few years.

In terms of unit values, per hectare, these rose sharply over the 25 years to 2018 in Rwanda (by 380%), moderately in Tanzania (by 28%), were steady in Burundi and Kenya but fell sharply in Uganda (by 31%). Policies for green growth in countries can raise revenue from forests by both increasing the efficiency of carbon capture (as discussed earlier) as well as raising the price received for carbon sequestered through accessing international agreements on carbon. The AEO 2023 report noted that an important channel for doing this is the creation of a single market for the trade of emissions credits (under Article 6 of the Paris International Agreement). This requires countries to establish Monitoring, Reporting and Verification (MRV) procedures and to participate in the market by establishing NDCs with clear mitigation targets. Sudan, as other East Africa countries, stands to benefit from the sale of significant amounts of such credits.

At the same time as taking this route, countries in the sub-region can also increase participation in the voluntary market, where new opportunities are arising. Among these is an ambitious new Post-2020 Global Biodiversity Framework, to scale up ecosystem restoration, reduce the extinction risk of species, and protect 30% of land, freshwater and marine areas by 2030. The AEO 2023 report notes that for Africa to benefit from such arrangements, there may be need for the establishment of an Africa Biodiversity Fund to attract private capital. To service this demand, many project developers that offer a range of greenhouse gas emission offsets have emerged. Many of these are nature-based solutions related to forestry and land use, agriculture and soil sequestration, and blue carbon. These credits would expand the voluntary market greatly, so the countries in East Africa should prepare themselves to be part of the growth by developing new offsets and ensuring the integrity of certification of carbon markets and voluntary biodiversity market.

Reforms are needed in renewable energy, especially increasing agricultural production and productivity through modernization of the agricultural systems and improving agricultural management. Also, there is a need to develop agricultural support services and establish knowledge and information networks, address issues of agricultural land, and protecting and developing natural resources, including wildlife. Regarding other forms of natural capital, the roles of fisheries and landscapes (for tourism) have been noted. Sudan has a long coast within the Red Sea (750km) and the potential of the fisheries sector is high. Some international partners including the International Labor Organization (ILO) are providing technical support to the government and fishermen to increase production. Sudan and other countries in East Africa clearly need

[10] Data are from the World Bank: Forest area (sq. km) - Uganda | Data (worldbank.org)

to do more to tackle IUU fishing. But they also need to make sure that access agreements for distant water fleets do not over-exploit stocks and revenues generated benefit coastal communities, while also promoting sustainable fisheries management practices and protecting marine biodiversity. The agreement should be structured in such a way that the African countries receive a fair share of the economic benefits generated by the fishing activities.

To exploit landscapes more effectively for tourism, East African countries are looking to develop ecotourism further. As the AEO 2023 report notes, the potential for ecotourism in Africa is significant but not fully realized. If properly utilized, it could yield considerable economic and social benefits for local communities while safeguarding natural resources. While specific data on the revenue generated by ecotourism in Africa is not readily available there is evidence that ecotourism is growing in Africa. The significant ecotourism sites in East Africa include Port Sudan in Sudan, the Maasai Mara National Reserve in Kenya, Serengeti National Park in Tanzania, Bwindi Impenetrable Forest in Uganda, and the Volcanoes National Park in Rwanda. The government of Sudan has identified about 76 potential sites for tourist villages along the country's 750 km Red Sea coast, which are planned for development.

5 CONCLUSION AND POLICY RECOMMENDATIONS

5.1 Conclusion

Sudan's prolonged political instability and the recent conflict, which destroyed the means of production, infrastructure, and disrupted the supply chains, negatively affected economic growth. The economic growth outlook will continue to be dominated by the risks of persistent political instability, climate change, and Russia's invasion of Ukraine. These risks have the potential to further reduce financial flows to Sudan and increase global food and energy prices thereby stoking inflation and disrupting Sudan's economic reforms.

Mobilizing finance for green growth and climate action in Sudan to meet its estimated needs will require that the private sector plays a major role. 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 for green growth and climate action.

Natural capital in East Africa has not kept pace over the last quarter century with population and so the per capita level of such wealth has declined. Sudan, however, presents a different trend with an increase in natural wealth and per capita level of such wealth. If East Africa's trend is to be reversed and Sudan's trend accelerated in the coming years, action will have to be taken 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.

Below is a set of policy recommendations for different sets of stakeholders with indications of whether these should be implemented in the short term [S], medium term [M] or long term [L].

5.2 Policy recommendations to enhance macroeconomic performance and outlook

5.2.1 National Government

[S, M] The GoS should restore political stability, rebuild macroeconomic resilience, and strengthen institutional capacities to foster the country's economic transformation to achieve inclusive and green growth.

[M, L] The GoS should create an enabling environment for agriculture to combat food insecurity while building the resilience of Sudan's agriculture and promoting the promising agro-industrial value-chains sector to foster inclusive and green growth.

5.2.2 MDBs and DFIs

[S, M] MDBs and DFIs should accompany Sudan to improve public financial management, decentralize governance and support Sudan to implement, in coordination with other development partners, the HIPC completion point reforms.

[M] MDBs should provide support to Sudan to strengthen the legal, regulatory, and institutional framework for PPPs, to build the capacity of the public and private sector on various policy and technical aspects on the potential of PPPs to diversify development financing sources.

5.2.3 Domestic and international private sector

[M, L] The domestic and international private sector should build a partnership with government to finance development projects using PPP modalities. This partnership should give priority to infrastructure projects (i.e., energy projects) to catalyze green growth and sustainable development.

5.2.4 Developed country governments

[S] Given the constrained fiscal space, developed countries need to support Sudan's reconstruction and development following years of conflict that led to the destruction of infrastructure and the country's economic base.

[M, L] The GoS should be supported to explore funding from international environmental and climate change funds to buttress public and private investments in agricultural value chain development.

5.3 Policy recommendations for private sector financing for climate change and green growth

5.3.1 National Government

[S] Ensure vertical coordination by national-level institutions responsible for facilitating the implementation of green growth and climate action frameworks and strengthen the integration and implementation of sustainable and green finance policies and regulations.

[M, L] Mainstream green skills development into education institutions to ensure that there is a continuous supply of green skills to enable the transition to green growth. Also, develop skills and capacities, particularly for the informal sector, to increase innovation and engagement with key private sector.

[M] Develop a list of bankable investments which articulate the proposed climate action projects, their viability, timelines, costs and return on investments, which private sector investors (local and international) can easily access and select.

5.3.2 MDBs and DFIs

[S] Increase their risk appetite for investments and provide more affordable capital that has low interest rates and longer repayment periods and provide partial and credit risk guarantees to investors.

[M, L] Facilitate capacity development of national and local public and private sector institutions to enable the mobilization of private sector finance.

[M, L] Work with the GoS and other key private sector actors (particularly financial institutions) to increase the country's credit rating, which will enable it to acquire more affordable capital from other lenders.

5.3.3 Domestic and international private sector

[M, L] Collaborate with the GoS, state governments, MDBs and DFIs and other private sector actors to identify key risks to investments and propose ways of addressing these investment risks.

5.3.4 Developed country governments

[S] As members of international financial institutions, developed country governments should encourage these institutions to be less risk-averse when financing climate change and green growth. Developed countries should also provide additional capital to these institutions to meet financing needs for Sudan.

5.4 Policy recommendations for increasing the contribution of natural capital to climate finance and green growth.

5.4.1 National Government

[S] The GoS should increase investment and efficiency to increase rents on cropland, forest and pastureland, and provide incentives that can reduce loss or damage of natural capital to increase the efficiency with which carbon can be captured.

[S] For fisheries, the GoS needs to do more to tackle IUU fishing. It also needs to work with development partners and developed country governments to make sure that access agreements for distant water fleets do not over-exploit stocks and that the revenues are fair.

[S, M] The GoS should exploit landscapes more effectively for tourism by further developing ecotourism.

[S, M] The GoS needs to build human and institutional capacity to enhance bargaining power with international investors in natural resources and implement reforms to improve resource use and efficiency.

[M] Sudan needs to consider joining the Extractive Industries Transparency Initiative to increase transparency and accountability in the use and allocation of natural resource rents, especially in oil and mining industries.

5.4.2 MDBs and DFIs

[S] MDBs and DFIs should support the government of Sudan to 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.

5.4.3 Domestic and international private sector

[S, M] Domestic and international private sector actors should work together with the government to increase participation in the voluntary biodiversity market, where new opportunities are arising through the Post-2020 Global Biodiversity Framework.

5.4.4 Developed country governments

[M] Development partners and developed countries should look at means for making natural capital more productive in the country through strategic partnerships with state-owned enterprises and foreign investors.

[M, L] Development partners should support Sudan to develop carbon markets and use nature-based solutions concerning forestry and land use, agriculture and soil sequestration, and blue carbon.

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ANNEX 1: SUDAN SELECTED INDICATORS

Indicators	Unit	2010	2015	2018	2019	2020	2021	2022 (e)	2023 (p)	2024 (p)
National Accounts										
GNI at Current Prices	Million US $	48,248	74,434	58,379	40,638	27,998	29,677	...	...	...
GNI per Capita	US$	1,430	1,950	1,390	940	630	650	...	...	...
GDP at Current Prices	Million US $	69,665	64,459	32,353	32,250	29,170	43,944	85,589	99,333	151,547
GDP at 2010 Constant prices	Million US $	69,665	63,776	71,092	70,149	69,053	67,759	67,259	65,174	66,217
Real GDP Growth Rate	%	6.5	4.0	2.8	-1.3	-1.6	-1.9	-0.7	-3.1	1.6
Real per Capita GDP Growth Rate	%	4.0	0.8	-0.4	-4.1	-4.2	-4.5	-3.3	-5.8	-1.1
Value Added: Mining and quarrying	Million US $	5,853	6,096	2,671	3,033	2,532	3,278	3,344	...	...
Value Added: Mining and quarrying	% GDP	8.9	9.4	8.0	9.0	7.4	9.3	8.7	...	...
Value Added: Fishing	Million US $	...	...	...	...	...	...	...	...	...
Value Added: Fishing	% GDP	...	...	...	...	...	...	...	...	...
Prices and Money										
Inflation (CPI)	%	13.0	17.3	63.3	51.0	163.3	359.1	139.0	83.2	75.5
Exchange Rate (Annual Average)	local currency/US$	2.6	7.8	40.7	60.5	150.4	425.6	504.5	804.2	943.4
Government Finance										
Total Revenue and Grants	% GDP	18.2	8.5	9.2	8.2	12.3	7.5	5.4	5.0	4.2
Total Expenditure and Net Lending	% GDP	17.9	12.4	17.4	19.5	18.9	12.2	7.0	6.4	5.7
Overall Deficit (-) / Surplus (+)	% GDP	0.3	-3.9	-8.2	-11.3	-6.6	-4.7	-1.5	-1.4	-1.4
External Sector										
Terms of Trade Growth	%	37.3	-14.5	-2.4	3.7	12.5	0.7	3.8	-2.8	-2.3
Current Account Balance	Million US $	-1,768	-5,436	-4,679	-5,222	-2,870	-2,620	-2,883	-2,503	-3,516
Current Account Balance	% GDP	-2.5	-8.4	-14.5	-16.2	-9.8	-6.0	-3.4	-2.5	-2.3
Debt and Financial Flows										
Debt Service	% exports	3.3	8.0	4.3	4.2	4.4	4.0	17.2	9.2	9.0
External Debt	% GDP	60.1	77.9	165.0	168.0	167.5	169.4	118.5	126.6	143.4
Net Total Financial Flows	Million US $	2,140	953	969	1,505	2,472	3,561	...	...	...
Net Official Development Assistance	Million US $	2,026	970	968	1,535	2,348	3,765	...	...	...
Net Foreign Direct Investment	Million US $	2,064	1,728	1,136	825	717	462	...	...	...
Demography										
Total Population	Millions	33.7	38.2	42.0	43.2	44.4	45.7	46.9	48.1	49.4
Population Growth Rate	%	2.4	3.2	3.2	2.9	2.8	2.7	2.7	2.6	2.6
Urban population	% of total	33.7	34.3	34.2	34.4	34.5	34.8	35.0	35.3	35.6
Life Expectancy at Birth	Years	63.0	64.7	65.7	65.9	65.6	65.3	65.6	66.1	66.4
Fertility Rate	births per woman	5.0	4.9	4.7	4.6	4.5	4.5	4.4	4.3	4.3
Poverty and Income Distribution										
Pop. living below national poverty line	% of total population	...	...	...	...	...	...	...	...	...
Population living below $2.15 a day	% of total population	...	...	...	...	...	...	...	...	...
Gini Index	%	...	...	...	...	...	...	...	...	...
Labor Indicators										
Labor Force participation (total)	%	49.2	48.6	48.5	48.5	48.1	48.5	48.8	48.8	...
Labour Force participation (youth)	%	30.5	28.3	26.9	26.5	26.2	26.3	26.5	26.5	...
Unemployment rate (total)	%	15.1	17.4	17.6	17.6	19.3	19.1	18.7	18.5	18.1
Unemployment rate (youth)	%	27.6	32.4	32.7	32.7	36.0	34.8	34.5	34.2	33.6
Natural Resources rents										
Total natural resources rents	% GDP	15.7	5.0	9.2	10.7	12.4	...	...	...	...
Oil rents	% GDP	15.1	1.4	3.8	4.2	3.2	...	...	...	...
Natural gas rents	% GDP	...	...	...	...	...	...	...	...	...
Mineral rents	% GDP	0.6	1.3	2.7	3.3	5.1	...	...	...	...
Forest rents	% GDP	...	2.3	2.7	3.2	4.1	...	...	...	...
Coal rents	% GDP	...	...	...	...	...	...	...	...	...
Natural Capital Renewable Resources										
Arable land	1000 hectare	19,877.7	20,080.1	20,994.8	20,994.8	20,994.8	...	...	...	...
Agricultural land	1000 hectare	137,246.2	68,491.1	69,405.8	69,405.8	69,405.8	...	...	...	...
Other land	1000 hectare	73,115.6	99,099.0	98,690.3	98,862.5	99,034.6	...	...	...	...
Forest land	1000 hectare	27,238.2	19,209.9	18,703.9	18,531.7	18,359.6	...	...	...	...
Planted Forest	1000 hectare	314.9	130.0	130.0	130.0	130.0	...	...	...	...
Annual freshwater withdrawals, total	% of internal resources	...	673.4	673.4	673.4	...	...	...	...	...
Total Fisheries Production	metric tons	73,358.0	40,008.0	51,041.0	50,770.0	47,510.0	...	...	...	...
Climate Finance and Green Growth										
Total Climate Finance*	Million US $	...	...	...	...	243.3	...	...	...	...
Green Growth Index**	%	32.4	34.2	34.7	35.3	35.1	35.1	...	...	...

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) ProjectionsLast 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 performanceSelected*

ENDNOTES

[1] https://blogs.worldbank.org/water/road-recovery-how-sudan-saving-its-water-sector

[2] AEO (2023).

[3] https://doi.org/10.1016/S0140-6736(20)30677-2

[4] World Bank 2021. The study covers 146 countries. It excludes those with no data, mainly small island states. In Africa Djibouti is excluded from the list.

[5] World Bank (2022). A Balancing Act: Efficiency, Sustainability, Prosperity. World Bank, Washington DC.

[6] www.iuufishingindex.net

[7] Barbier 2011.

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