# Country Focus Report 2023

## TUNISIA

Mobilizing Private Sector Financing for Climate and Green Growth











AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE DE DÉVELOPPEMENT

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| | |
|---|---|
| **AEO** | African Economic Outlook |
| **AfDB** | African Development Bank |
| **Bcf** | Billion cubic feet |
| **BCT** | Central Bank of Tunisia |
| **CFR** | Country Focus Report |
| **DFIs** | Development Finance Institutions |
| **EIA** | Energy Information Administration |
| **FAO** | Food and Agriculture Organization |
| **GCF** | Green Climate Fund |
| **GDP** | Gross domestic product |
| **GEF** | Global Environment Facility |
| **GGI** | Green Growth Index |
| **GHG** | Greenhouse Gas |
| **IFC** | International Finance Corporation |
| **IMF** | International Monetary Fund |
| **MDBs** | Multilateral Development Banks |
| **NDC** | Nationally Determined Contribution |
| **OECD** | Organization for Economic Co-operation and Development |
| **SMEs** | Small and medium-sized enterprises |
| **SOEs** | State-owned enterprises |
| **TND** | Tunisian Dinar |
| **UNFCCC** | United Nations Framework Convention on Climate Change |
| **US$** | United States Dollar |

# Tunisia

## KEY MESSAGES

### Macroeconomic performance and outlook

- **Gross Domestic Product (GDP) growth decreased from 4.3 percent in 2021 to 2.4 percent in 2022 due to an unfavorable global environment marked by the invasion of Ukraine by Russia[1].** Inflation increased from 5.7 percent in 2021 to 8.3 percent in 2022 due to higher oil and food prices. The budget deficit narrowed from 7.6 percent of GDP in 2021 to 6.8 percent in 2022, but the current account deficit widened from 6 percent of GDP to 8.5 percent due to food and energy imports. Public debt reached 91 percent of GDP in 2022. Unemployment rate fell from 18.4 percent in 2021Q3 to 16.1 percent in 2023Q1.

- **GDP growth is projected to remain subdued over the medium term at only 1.9 percent in 2023 and 2.8 percent in 2024.** Inflation should increase in 2023 (9.2 percent) before falling in 2024 (6.8 percent) with the easing of external inflationary pressures. Fiscal and current account deficits are expected to narrow in the medium term. Growth prospects could deteriorate due to the high risk of debt distress amid limited access to external financing. Recovery could also be threatened by social tensions caused by high prices, a restrictive fiscal policy penalizing public investments or political tensions. Urgent reforms are needed to correct macroeconomic imbalances.

- **Russia's invasion of Ukraine has lowered growth expectations, increased inflation, worsened public finance and external imbalances and deteriorated the situation of the poor.** As the current inflation is largely due to global supply shocks, tightening the monetary policy too much may result in liquidity tensions on domestic financial markets and a deterioration of recovery prospects. Likewise, debt monetization should be avoided to preserve financial system stability. Further measures to curb the negative effects of the Russia-Ukraine conflict on the Tunisian economy include (i) protecting the vulnerable by monitoring the pass-through of global inflation to domestic prices, (ii) rationalizing subsidies to curb the budget deficit, (iii) reducing the imports of non-essential goods to keep the current account deficit under control, and (iv) agreeing on a program with the International Monetary Fund (IMF) to send a positive signal to investors and increase the availability of concessional resources from donors.

### Private sector financing for climate change and green growth

- **The financing needs for Tunisia to respond adequately to climate change are estimated at US$ 2.44 billion annually over 2020-2030.** Average annual climate finance inflow is estimated at only US$ 0.71 billion during this period. Hence, the climate finance gap of Tunisia is approximately 1.72 billion annually, representing 3.5 percent of GDP. Assuming that the Tunisian private sector contributes 25-75 percent to the climate financing needs of the country, the private sector climate finance gap lies in the range US$ 285.8 - 1075.4 million annually during 2020-2030.

- **Despite the Tunisian Government's efforts to attract private sector resources to finance climate action and green growth,** several barriers persist, including policy and regulatory uncertainties, limited financial and technical capacity, bad

[1] Agreed wording during the African Development Bank's Annual Meetings 2022 in Ghana. Algeria, China, Egypt, Eswatini, Namibia, Nigeria and South Africa expressed reservations and proposed "Russia-Ukraine Conflict".

perception of profitability and risk and weak institutional frameworks. There is a need to strengthen green investments with a view to limiting the effects of climate change and protecting the natural environment.

- **The development of numerous innovative financing tools including green bonds,** carbon markets, debt-for-nature swaps and blend finance mechanisms represent clear opportunities for Tunisia to improve the mobilization of private resources to close the climate finance gap and to implement actions for green, sustainable, and inclusive growth. Considerable green investment opportunities exist in the renewable energy sector, transportation, agriculture, water management, and tourism in Tunisia.

- **To encourage greater mobilization of resources from the private sector both at domestic and international levels, Tunisia must build human capacity and expertise in the technical and financial structuring of climate projects.** The country must also improve the business environment by establishing or strengthening incentive-based regulations as well as its institutional and governance framework. Development Finance Institutions (DFIs) and Multilateral Development Banks (MDBs) have a critical role to play in Tunisia in this regard. DFIs and MDBs can develop innovative risk sharing frameworks, provide financial and technical support, support the development of enabling regulatory frameworks and facilitate public-private partnerships. DFIs and MDBs must proactively work with financial institutions and private sector actors to identify investment opportunities, build capacity and develop innovative financing models.

### Natural capital for climate finance and green growth

- **Tunisia enjoys approximately 1,300 km of coastline which shelters and contributes to the support of more than two thirds of the 12 million inhabitants.** The coastline has around 64 islands that are home to varied ecosystems and a rich biodiversity. The country has large phosphate and hydrocarbon deposits that are under-exploited. Tunisia's renewable resources include fisheries, forestry, agriculture, pastures, wildlife as well as sun and wind for green energy production. Overall, Tunisia's natural resources are worth approximately US$ 11.8 billion. The sustainable management of these resources is critical for the long-term economic and social development of the country.

- **Natural resources rents, the bulk of which consists of oil rents, have been on a decreasing trend in Tunisia since a decade, falling from 5.8 percent of GDP in 2010 to only 1.4 percent in 2020.** However, natural resources rents are expected to increase in the coming years, driven by the resumption of phosphate production and exports. Tunisia also has enormous potential for various forms of green energy, ecotourism, and organic farming. The improvement of the governance of natural capital management at large will be key to harnessing more revenues that can be used to address climate challenges in Tunisia.

- **The government should legislate policies for the sustainable management and use of natural capital.** This includes measures to protect and restore ecosystems and biodiversity, reduce emissions, promote renewable energy and improve resource efficiency. In collaboration with DFIs and MDBs, the government should work to strengthen institutional capacity and governance frameworks for natural resource management. The government should continue to support the growth of the renewable energy sector through policies and regulations that promote investment, research and development, and the adoption of new technologies.

- **In collaboration with other stakeholders, the government should initiate knowledge sharing events with other countries that have successfully harnessed their natural capital for sustainable development.** This includes sharing best practices and lessons learned, promoting international cooperation to address common challenges related to natural resource management and climate change, including through the development of joint initiatives and programs.

# I. INTRODUCTION

The financing resources that are needed to face adaptation and mitigation to climate change in Tunisia are enormous. Tunisia's climate finance gap is estimated at US$ 1.72 billion annually, which represents 3.5 percent of the country's GDP. Under current trends, public and multilateral sources alone will not be sufficient to close this gap. This CFR therefore analyses the role that the private sector can play in the financing of climate action and green growth in Tunisia. It also explores options and formulates concrete recommendations for harnessing natural capital to finance adaptation and mitigation to climate change and promote green growth in Tunisia. Indeed, the current CFR proposes country-level refinements drawn from the analyses carried out at the continental level by the African Development Bank's (AfDB) African Economic Outlook 2023 report[2].

The report is structured as follows. Section 2 presents Tunisia's recent macroeconomic performance and outlook. Section 3 discusses the state and opportunities for leveraging private sector financing for climate action and green growth in Tunisia. Section 4 explores possible options to harness natural capital in the mobilization of climate finance and promotion of green growth in Tunisia. Section 5 concludes and draws policy recommendations targeting Tunisian authorities, donors, domestic and international private investors and governments of developed countries partnering with Tunisia, with a view to scale up private sector resources and harness natural capital for financing climate action and green growth in Tunisia.

[2] https://www.afdb.org/en/documents/african-economic-outlook-2023.

# II. RECENT MACRO-ECONOMIC PERFORMANCE AND PROSPECTS IN TUNISIA

***Recent Growth performance***

After rebounding at 4.3 percent in 2021, Tunisia's GDP growth decreased to 2.4 percent in 2022 due to an unfavorable global business environment marked the invasion of Ukraine by Russia which spurred hydrocarbons and agricultural price hikes. The rebound of 2021 was largely attributable to a post-pandemic catchup effect rather than to the revitalisation of investment, the main driver of growth. Indeed, GDP contracted 8.6 percent in 2020, the largest decline in thirty years, due to the Covid-19 pandemic which caused a collapse in the tourism sector and a slowdown of investment and exports. However, the Covid-19 pandemic and Russia's invasion of Ukraine have only worsened an already gloomy situation, as GDP growth was only 1.5 percent in 2019. Since the revolution of 2011, growth dynamics has been weighed down by political instability taking the form of frequent change of government. This is evidenced by the downward movement of gross domestic investment which decreased from 25.6 percent of GDP in 2010 to 18.1 percent in 2022. The political instability, which reached its climax in 2021 with the simultaneous dissolution of the government and parliament, is not conducive to the implementation of the priority reforms included in the national development plan.

**Table 1: Key macroeconomic indicators**

| | 2018 | 2019 | 2020 | 2021 | 2022(e) | 2023(p) | 2024(p) |
|---|---|---|---|---|---|---|---|
| Real GDP Growth | 2.6 | 1.5 | -8.6 | 4.3 | 2.4 | 1.9 | 2.8 |
| Real GDP per capita growth | 1.6 | 0.5 | -9.6 | 3.5 | 1.7 | 1.0 | 2.0 |
| Inflation (%) | 7.3 | 6.7 | 5.6 | 5.7 | 8.3 | 9.2 | 6.8 |
| Fiscal balance (incl. grants) (% GDP) | -4.3 | -2.9 | -8.7 | -7.6 | -6.8 | -5.2 | -4.7 |
| Current account balance (% GDP) | -10.4 | -8.1 | -6.0 | -6.0 | -8.5 | -6.4 | -5.4 |

*Source: Department of Statistics, African Development Bank and National Authorities April 2023*

***Demand-side and sectoral contributions to growth***

Growth was largely driven by net exports in 2022, contributing 46 percent to GDP growth. On the supply side, growth in Tunisia has traditionally been driven by the service sector (63 percent of GDP). Indeed, service contributed 107.7 percent to GDP growth in 2022. The agricultural sector's (11 percent of GDP)

[2] https://www.afdb.org/en/documents/african-economic-outlook-2023.

performance has been quite volatile during recent years due to climatic hazards and contributed 7.7 percent to growth in 2022. Likewise, the industrial sector's performance has been weak and erratic since the revolution of 2011 as a result of declining private investment. The private sector, which represents 60 percent of GDP and 80 percent of employment in Tunisia, contributed negatively to growth in 2022.

***Growth prospects and risks***

By entertaining global supply chain perturbation, hydrocarbons and essential agricultural inputs price hikes, the invasion of Ukraine by Russia lowers growth expectations and makes recovery more difficult. GDP growth is expected to remain subdued over the medium term, at only 1.9 percent in 2023 and 2.8 percent in 2024 and will be driven by manufacturing and services. The growth outlook could deteriorate due to the high risk of debt distress amid limited access to external financing. The recovery could also be slowed by social tensions caused by the rise in prices in a difficult economic context for households, a restrictive fiscal policy penalizing public investments or delays in resolving the political crisis. To stabilize the macroeconomic framework, Tunisia should adopt a medium-term debt reduction strategy; implement measures to restructure the debt of state-owned enterprises (SOEs); and implement structural reforms to improve the business environment.

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***Monetary policy, Inflation and outlook***

Inflation increased from 5.7 percent in 2021 to 8.3 percent in 2022, due to Russia's invasion of Ukraine which led to higher oil and food prices on global markets. High inflation, rising rates and political tensions have deteriorated the quality of the portfolios of major banks. In addition, the banking sector is highly exposed to Tunisian sovereign risk (rated CCC+ by Fitch and Caa2 by Moody's). Inflation is projected to continue to rise in 2023 (9.2 percent) before falling in 2024 (6.8 percent) under a prudent monetary policy and the easing of external inflationary pressures. The Central Bank of Tunisia (BCT)'s inflation control objective must coexist with that of easing liquidity tensions in the banking sector. During the Covid-19 pandemic (March 2020), the BCT postponed corporate loan maturities by six months, lowered its policy rate by 100 basis points, and increased its purchases of treasury bills. However, monetary policy has become more restrictive in 2022 to address the surge in inflation following Russia's invasion of Ukraine. Indeed, the BCT's policy rate increased from 6.25 percent in April 2022 to 7 percent in May 2022, 7.25 percent in October 2022 and since January 2023 stands at 8 percent. The BCT managed to cover the bulk of the liquidity needs of banks through refinancing operations and purchases of treasury bonds.

***Domestic resource mobilization, fiscal position and outlook***

Tunisia has considerable domestic revenue mobilization capacity. Government revenue stood at 25 percent of GDP in 2022 and are expected to increase in 2023. The budget deficit decreased from 7.6 percent in 2021 to 6.8 percent of GDP in 2022. The structural drivers of the budget deficit are the wage bill, subsidies and debt service, which jointly totaled two thirds of expenditure in 2022 while the share of public investment stood at around 10 percent only. The implementation of the government's National Reform Plan should contribute to improving macroeconomic imbalances and shrinking fiscal deficit to 5.2 percent in 2023 and 4.7 percent in 2024.

***Public debt dynamics and outlook***

Tunisia's public debt, which makes up more than two-thirds of external debt, is estimated at more than 91 percent of GDP in 2022. The financial situation of SOEs has also become worrisome. According to an IMF report published in 2021, the accumulated debt of SOEs totaled at least 40 percent of GDP at the end of 2019, including 20 percent of GDP in the form of external debt and 15 percent of GDP covered

by government guarantees. The momentum of reforms since the start of 2022 that are aimed at strengthening private investment, consolidating public finance and improving the performance of public enterprises, in addition to the entry into force of the program with the IMF, should quickly reverse the upward trend in public debt.

***External positions and outlook***

The current account deficit widened from 6 percent of GDP in 2021 to 8.5 percent of GDP in 2022 with the increase in food and energy import prices. Current account deficit is expected to shrink in the medium term to 6.4 percent in 2023 and 5.4 percent in 2024. The depreciation of the Tunisian dinar (TND) against the US$ fueled by domestic inflation threatens Tunisia's external balances. In November 2022, reserves were 21.6 billion TND (6.9 billion US$) and covered 97 days of imports. A year earlier, these reserves were at the same level in local currency but were equivalent to 7.2 billion US$ and 127 days of imports.

***External financial flows and outlook***

Tunisia is currently facing restricted access to international financial markets due to several downgrades of its sovereign rating since 2021. This is compounded by difficulties in mobilizing resources from traditional donors due to the absence of a program with the IMF. In October 2022, the government reached a staff level agreement with the IMF under an extended credit facility. This mechanism, which is expected be approved in 2023 by the IMF's Board of Directors, will support reforms to restore the sustainability of public finances and provide a US$ 1.9 billion loan from the IMF. Tunisia needs to implement urgent measures to restore the sustainability of its public finance and debt, including working to improve the governance and financial situation of SOEs. The country should also accelerate dialogue with the IMF to secure a reform program that will unlock significant external resources at concessional terms and send a positive signal to investors.

***Socio-economic effects of the rising food and energy prices***

**Unemployment, poverty and inequality.** By fueling global inflation and rising oil and essential inputs prices, Russia's invasion of Ukraine has aggravated the state of vulnerable households and made economic recovery more difficult. Nevertheless, the unemployment rate which was 18.4 percent in the third quarter of 2021 fell to 15.2 percent in the fourth quarter of 2022 before increasing to 16.1 percent in the first quarter of 2023. The groups most affected by unemployment include women (21.2 percent), higher education graduates (23.1 percent) and young people aged 15-24 (40.2 percent). Poverty rate is 15.3 percent at the national level, but higher in rural areas (26 percent) than in small and medium-sized municipalities (15 percent), and much lower in large urban centers (6.3 percent).

**Food security.** Russia and Ukraine are among the largest exporters of wheat in the world, and Ukraine is one of the largest sunflower producers in the world. Russia and Ukraine are also major producers of metals (aluminum, titanium, nickel, uranium, etc.) and of ammonia used in the production of fertilizers. As the 32nd largest importers of wheat worldwide and a major importer of corn and vegetable oil, Tunisia suffers from market disruptions. By causing an increase in the price of cereals and essential agricultural inputs, Russia's invasion of Ukraine poses a direct threat to food security in Tunisia. The price of wheat also has repercussions on the cost of feeding livestock and poultry. As a staple food in North Africa, the price of bread is closely monitored because price increases may push additional people into poverty and generate popular discontent. Urgent measures must be taken to secure the availability of cereals, fertilizers and hydrocarbons (including building up security stocks) and to increase domestic food production.

**Energy security.** Tunisia's energy deficit represented 40 percent of its trade deficit in 2019. Nearly 97 percent of electricity is produced from

fossil fuels, more than two-thirds of which are imported. By disrupting oil supply circuits and causing unprecedented price increases, the Russia-Ukraine conflict reminds Tunisia of the urgency of strengthening its resilience to energy issues. Tunisia must (i) secure the availability of energy at a lower cost, (ii) limit the weight of energy consumption subsidies while achieving its energy transition, (iii) increase domestic oil and gas production to reduce imports, and (iv) reduce dependence on fossil fuels and accelerate the energy transition

Measures to address the socio-economic effects of rising inflation and subdued growth are discussed in Box 1.

### Box 1: Impact of Russia's invasion of Ukraine and policy options to address the situation

#### Impact of Russia's invasion of Ukraine

The invasion of Ukraine by Russia in February 2022 affects the Tunisian economy through two main channels: (i) the disruption of global supply chains and (ii) the surge in oil and essential agricultural inputs prices on global markets. The expected impacts on the Tunisian economy are as follows:

- **i.** Lower growth due to higher energy and agricultural inputs prices.
- **ii.** Higher inflation via the energy and food import bills.
- **iii.** Larger fiscal and current account deficits due to upward adjustments in subsidies and wider trade deficit.
- **iv.** Worsened public finance imbalances and debt situation. Indeed, Tunisia already faces a high risk of over-indebtedness, having seen its sovereign rating downgraded several times since 2021.

#### Policy options to address the negative socio-economic effects of the conflict on Tunisia

A prudent monetary, fiscal and structural policy mix is needed to address subdued growth and rising inflation. Indeed, the current inflation is largely due to global supply shocks. Therefore, tightening the monetary policy too much may result in liquidity tensions on domestic financial markets and a further deterioration of recovery prospects. Likewise, debt monetization should be avoided to preserve financial system stability. Other measures to curb the negative effects of the Ukraine-Russia conflict on the Tunisian economy include:

**A.** ***Protecting the vulnerable.*** This entails monitoring the pass-through of global inflation (particularly, food and agricultural input) to domestic prices, and building up security stocks of oil, fertilizers, and cereals to maneuver domestic supply.

**B.** ***Rationalizing subsidies to curb the budget deficit.*** This entails improving the targeting of subsidies to ensure that they reach the most vulnerable households, and gradually passing on the rise in world oil prices to consumers.

**C.** ***Reducing the imports of non-essential goods.*** This will contribute to keeping the current account deficit under control. Tunisia must also increase its production of food and energy (particularly, from renewable sources) to reduce imports.

**D.** ***Agreeing on a program with the IMF.*** This will send a positive signal to investors and open doors to substantial concessional loans from development partners. Improving the governance of SOEs will produce positive medium-term macroeconomic benefits of debt as well.

# III. PRIVATE SECTOR FINANCING FOR CLIMATE AND GREEN GROWTH IN TUNISIA

## 3.1 The imperative for green growth and the need for private sector financing

***Tunisia needs to implement bold climate actions to achieve its long-term development objectives***

Tunisia is highly vulnerable to climate change, with a high degree of risk to natural hazards. The country has experienced a significant increase in its temperatures over the last 30 years with temperatures increasing by 0.37°C per decade. Likewise, precipitation in Tunisia is highly variable and has decreased approximately by 3 percent over the past 30 years. Tunisia has also experienced reduced water availability in some areas and increased periods of drought and dry spells. Tunisia falls into the category of severe water scarcity, with less than 500 $m^3$ per inhabitant per year. These challenges are exacerbated by eutrophication, loss of biodiversity, desertification, pollution from mining and industries which impact water and air quality. The country is particularly vulnerable to water and food insecurity as well as to adverse conditions for health, human settlements and the energy sector[3].

Climate projections suggest that temperatures will increase significantly in the future in Tunisia with mean annual temperatures increasing by 2-3°C up to 2050[4]. Projections also suggest that the Mediterranean Sea level will rise between 6.86 centimeters (cm) and 17.92 cm by 2030 and between 9.8 and 25.6 cm by 2050. Indeed, more than 3,000 hectares of urban Tunisian coastal areas are at risk of submersion. By 2050, the losses in water resources of coastal aquifers have been estimated at approximately 220 million $m^3$ per year, which represents approximately 75 percent of coastal groundwater. The tourism sector could lose around 1,000 jobs per year by 2030. Likewise, the contribution of agricultural production in the GDP could decrease by between 5 and 10 percent by 2030 due to climate change. Clearly, Tunisia needs to implement bold measures to mitigate – and adapt to these risks in order to achieve strong, sustainable and inclusive growth.

***Tunisia has demonstrated strong political commitment to fighting climate change and achieving green growth***

Tunisia's First National Communication, as part of the United Nations Framework Convention on Climate Change (UNFCCC), dates back to 2001. Tunisia published a second National Communication in 2014 and a third one in 2019. The Nationally Determined Contribution (NDC) of Tunisia was released in 2016 and

[3] Republic of Tunisia (2016).
[4] Climate Service Center Germany (GERICS) 2019.

updated in 2021. Tunisia has also regularly published biennial reports on the implementation of its NDC. In addition to the UNFCCC ratified in 1993, Tunisia has also ratified the Kyoto Protocol in 2002 and signed the Paris Agreement in 2016.

The objectives of the revised NDC are part of the vision developed in the National Strategy for Climate Resilient Development which proposes to enhance resilience defined by axes of intervention and measures to limit the impacts of climate change by 2050. In line with Tunisia's overall objectives to reduce its vulnerability and achieve a sustainable economy, the updated NDC identifies eight priority areas on which to focus adaptation and resilience efforts: agriculture and food, water, social, territorial, economy, health, ecology and natural disasters. As specified in its NDC, Tunisia committed to increase the share of renewable energy in the national energy-mix to 30 percent and to reduce its carbon footprint by 41 percent by 2030.To this end, the country is (i) implementing a project to modernize its power transmission grid to incorporate renewable energy sources, and (ii) preparing the "Kairouan Solar Power" that will increase the production capacity of renewable (photovoltaic) energy by 100 Megawatts. Both interventions are supported by the AfDB.

***Tunisia needs to deploy more efforts to improve its Green Growth Index (GGI)***

Tunisia's GGI has been improving over the past decade, moving from below to above the African mean and close to the African median (Figure 1.1). While Tunisia performs better than the North African mean and median as shown by Figure 1.2, it underperforms all other regions on average. The country performs particularly well along the following dimensions of the index: Greenhouse Gas (GHG) emissions reduction, waste and material use efficiency, social equity, access to basic services and resources and environmental quality. The main areas of underperformance include green innovation, efficient and sustainable water use, efficient and sustainable energy use, and biodiversity and ecosystem protection (Figure 2). Indeed, a diagnostic recently produced by the AfDB have identified the efficient management of energy and water resources as a priority axis of policy intervention in Tunisia[5].

**Figure 1: Tunisia's Green Growth Index (GGI)**

**Figure 1.1 : Evolution of Tunisia's GGI during 2010-2021**

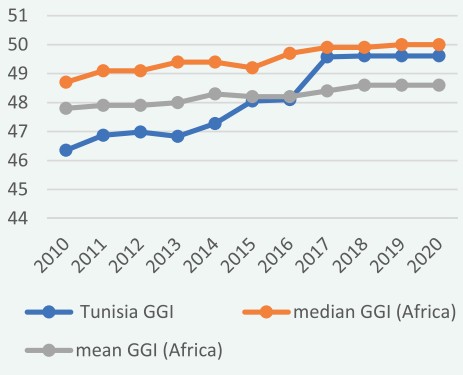
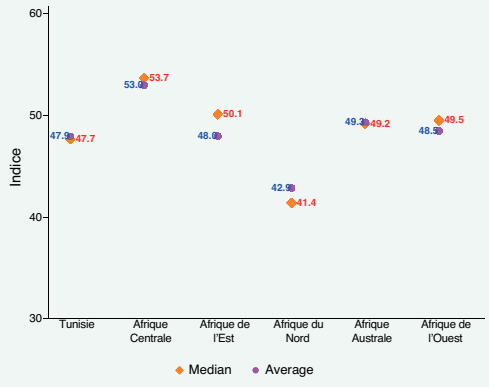


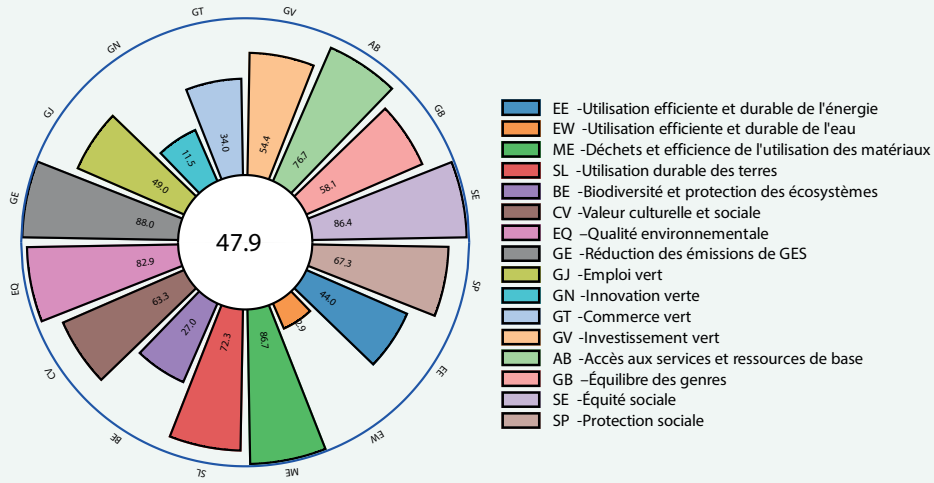

**Figure 1.2 : Tunisia's average GGI performance compared to other regions**




*Source: African Economic Outlook (AEO) 2023*

[5] African Development Bank Group (2021).

**Figure 2: Tunisia's Green Growth Index performance by component**




*Source: African Economic Outlook (AEO) 2023*

One of the main pathways for green growth in Tunisia is the promotion of renewable energy. The country has significant renewable energy potential, particularly in solar and wind power. Tunisia's National Renewable Energy Plan aims to increase the share of renewable energy in the country's energy mix to 30 percent by 2030, up from less than 4 percent in 2018. Solar energy is a particularly promising sector, given Tunisia's high levels of solar irradiation. The country's 2016-2030 Energy Transition Strategy identifies the development of solar energy as a key priority for the country and several large-scale solar projects are currently under development, such as the Tozeur photovoltaic plant and the Tataouine solar complex.

Agriculture is also a priority area for green growth in Tunisia, as a significant contributor to the country's GDP. The National Strategy for Sustainable Agriculture, developed in 2015, emphasizes the importance of promoting agro-ecological practices, reducing the use of chemical inputs, and improving water management. The government has introduced several initiatives to promote sustainable agriculture practices, such as the National Plan for the Development of Organic Agriculture and the National Strategy for Climate-Smart Agriculture.

***Tunisia has taken steps to mobilize more resources for climate action and green growth***

In 2015, the country launched its National Fund for the Environment and Climate Change, which aims to finance projects that promote environmental sustainability and climate resilience. The fund targeted the mobilization of US$ 440 million by 2020, with a focus on supporting small and medium-sized enterprises (SMEs) and promoting sustainable agriculture and forestry. Tunisia has also received significant support from international organizations, including the World Bank, the European Union and the African Development Bank. In 2013, the AfDB issued green bonds, the proceeds of which were partially used to finance a project in Tunisia. In 2019, the World Bank approved a US$ 300 million loan to support Tunisia's transition to a low-carbon, climate-resilient economy. In addition, Tunisia has accessed climate finance through international climate

[16] https://www.undp.org/libya/environment-and-climate-change.
[17] AfDB, 2022b.

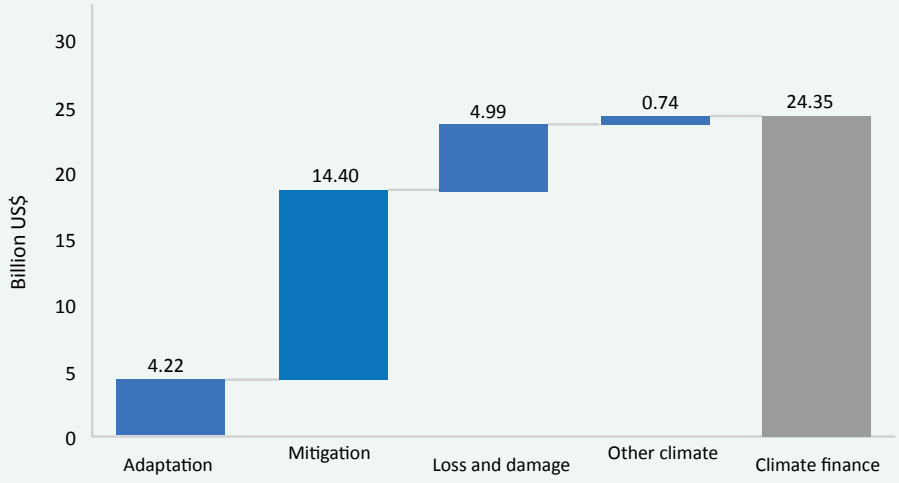
funds such as the Green Climate Fund (GCF) and the Adaptation Fund. The country has received a US$ 30 million grant from the GCF to support the development of renewable energy projects, energy efficiency, and climate-resilient agriculture. Tunisia has also accessed finance from the Global Environment Facility (GEF) to support its climate and environmental objectives.

***The private sector will need to be mobilized at scale for Tunisia to achieve its climate resilience and green growth ambitions***

Meeting green growth and climate action needs in Tunisia will require significant investments. However, Tunisia faces a lack of funding to face climate change and build the foundations for low-carbon development. The cumulative financing needs for Tunisia to adequately respond to climate change are estimated at US$ 24.35 billion during 2020–2030 (Figure 3). This implies an estimated annual need of US$ 2.44 billion. This amount includes adaptation costs which are estimated at US$ 4.22 billion, or around 17.3 percent of Tunisia's total needs during 2020-2030. At US$ 14.39 billion, mitigation accounts for 59 percent of the estimated needs during 2020-2030. Loss and damage costs due to climate change are projected at US$ 4.99 billion on average, with estimates ranging from US$ 4.28 billion in the low warming scenario to US$ 5.70 billion in the high warming scenario. Annual climate finance inflow was estimated at only US$ 0.71 billion in the AEO 2022. Hence, the climate finance gap of Tunisia is expected at approximately US$ 1.72 billion annually, which represents approximately 3.5 percent of GDP (Figure 4).

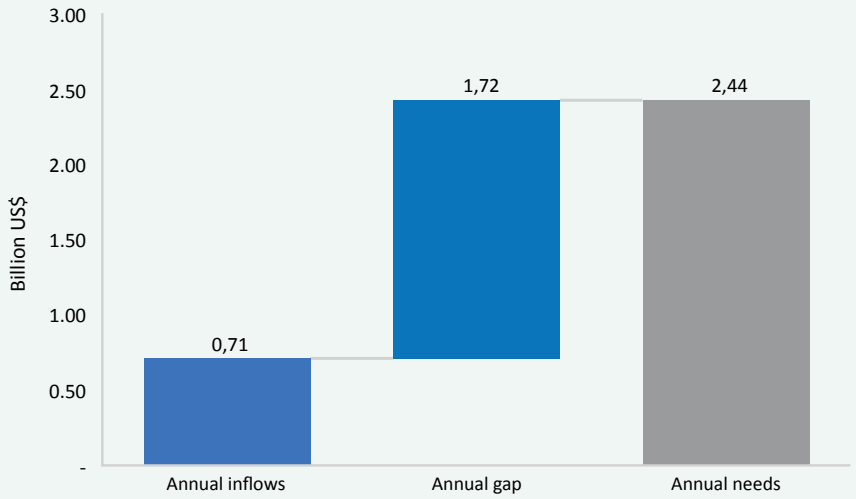
National development, green growth and climate action strategies and policies all recognize that the private sector must play a critical role in mobilizing the resources that are needed to meet collective goals and to direct resources towards sectors that are currently underfunded. Private sector financing can provide the necessary capital to develop renewable energy projects, energy-efficient buildings, energy efficiency in industry, smart agriculture and sustainable transport systems. Likewise, the private sector can support the development of green finance mechanisms, such as green bonds and green loans which can attract additional financing for climate action. To engage the private sector in climate action financing, Tunisia has implemented policies and incentives that promote a favorable investment climate. These include creating an enabling regulatory framework that supports renewable energy and energy efficiency investments, providing fiscal incentives such as tax breaks and subsidies and establishing public-private partnerships for green infrastructure development.

**Figure 3: Tunisia's estimated climate financing needs in 2020–2030 (in billion US$)**




*Source: Staff computations based on AEO (2022), Africa NDC Hub, Integral Consult data, Organization for Economic Co-operation and Development (OECD) data, and the Updated NDC of Tunisia.*

**Figure 4: Estimated climate finance gap of Tunisia**




*Source: Staff computations based on AEO (2022), Africa NDC Hub, Integral Consult data, OECD data and the Updated NDC of Tunisia*

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

### 3.2.1 Current climate finance inflows to Tunisia

***The bulk of climate finance flows in Tunisia is public with private sources accounting for only 11.2 percent of total flows***

In 2019, climate finance totaled US$ 969.8 million in Tunisia. Public climate finance totaled US$ 860.8 million in Tunisia (88.8 percent of total flows) while private sources contributed US$ 109 million (11.2 percent of total flows). About 45.5 percent of public climate finance flows are sourced from bilateral DFIs, 27.2 percent from multilateral DFIs, 0.5 percent from multilateral climate funds and 26.7 percent from domestic sources (government and SOEs). Considering private flows, 42 percent were provided by corporations; 28.4 percent from households or individuals; 10.1 percent was obtained from unknown or unspecified sources; 9.8 percent were mobilized from commercial financial institutions; 5 percent came from institutional investors; and 4.8 percent came from funds.

***The bulk of private sector finance flows in Tunisia is directed towards the energy sector with limited investments towards the industrial and transport sectors that are important for effective climate action and green growth***

In 2019, around 44 percent of total climate finance flows was directed to the energy sector while 23 percent went to water, wastewater and waste management. Multisector projects received approximately 19 percent of climate finance flows and 4.9 percent were directed toward agriculture, forestry and fisheries. Other sectors that are important for effective climate action (industry, information and communication technology, and transport), are largely excluded. Adaptation efforts received nearly 62 percent of climate finance flows while mitigation efforts received only 31 percent and the remainder went to both adaptation and mitigation as well as unspecified types of use (Figure 5).

**Figure 5 : Climate finance flows, needs, and uses in Tunisia**

**Figure 5a : Climate finance flows and needs millions US$**

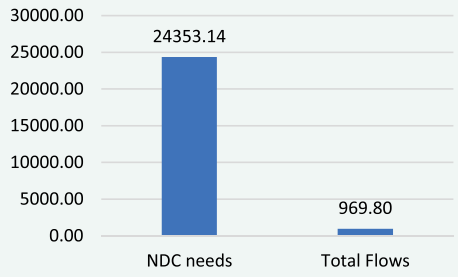



**Figure 5b : Sources of private climate finance in %**

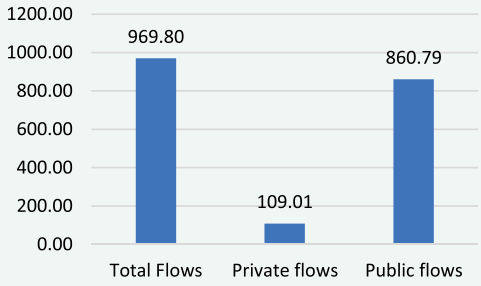



**Figure 5c : Public finance flows by sources (%)**

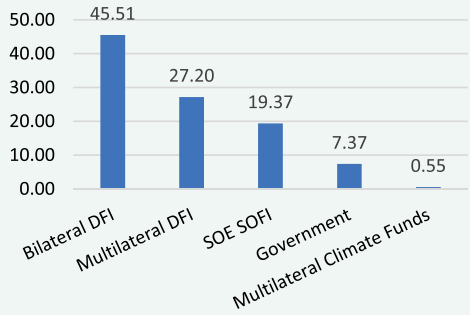



**Figure 5d : Private finance flows by sources (%)**

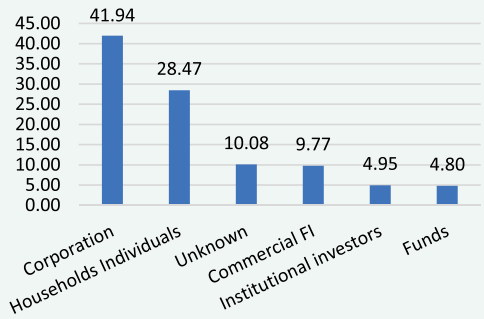



**Figure 5e : Climate finance flows by sector**

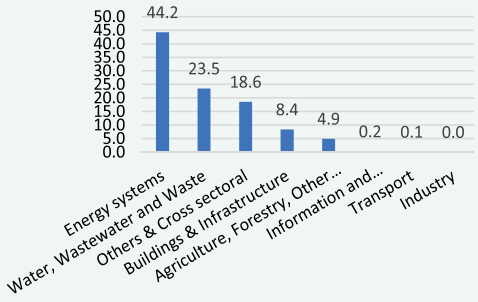
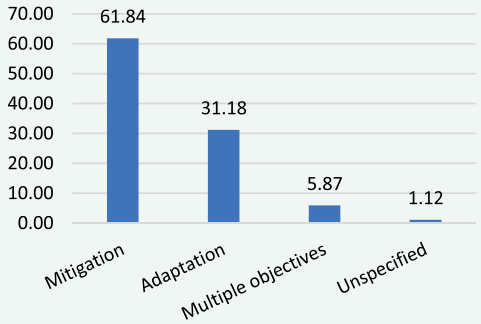



**Figure 5f : Climate finance flows by use**

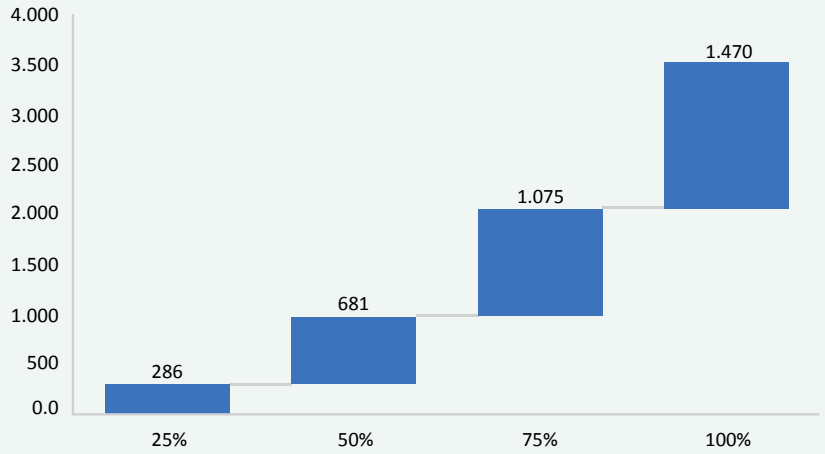



*Source: Department of Statistics, African Development Bank*

### 3.2.2 Private sector financing needs and gap in Tunisia

Current trends suggest that the Tunisian private sector is likely to contribute at most 25-75 percent to the annual climate financing needs of the country during the next decade. Based on the estimates of 2019, the private sector would need to increase its contribution by US$ 285.8 million annually to achieve a 25 percent contribution to closing the climate financing gap (i.e. the gap after removing the 2019 contribution of the public sector from the annual needs). To achieve a performance of 50 percent, the private sector would need to increase its contribution by US$ 680.6 million annually. Under the ambitious scenario of a 75 percent contribution to closing the climate financing gap, the private sector finance would need to increase its contribution to US$ 1,075.4 million annually (Figure 6).

**Figure 6: Private sector climate finance gap simulations**




*Source: Department of Statistics, African Development Bank*

Based on the estimates of 2019, the private sector would need to increase its contribution by US$ 285.8 million annually to achieve a 25 percent contribution to closing the climate financing gap (i.e. the gap after removing the 2019 contribution of the public sector from the annual needs). To achieve a performance of 50 percent, the private sector would need to increase its contribution by US$ 680.6 million annually. Under the ambitious scenario of a 75 percent contribution to closing the climate financing gap, the private sector finance would need to increase its contribution to US$ 1,075.4 million annually.

### 3.2.3 Innovative private sector financing mechanisms for climate and green growth

***Tunisian financial markets need to be further developed***

The banking sector is made up of a relatively large number of banking institutions operating in a noncompetitive environment. Indeed, the country has 23 domestic banks, 12 other financial institutions, 2 merchant banks, 7 banks with special status and 6 representative offices of foreign financial institutions. Despite the weak competition, the sector's average profitability is moderate, reflecting inefficiencies in the management and governance of some of these institutions. In 2019, the return on assets was 1.1 percent, while the return on equity was 13.3 percent. The rate spread remains relatively high at 3.9 percent in 2018 and 4.4 percent in 2019.

The Tunisian banking sector does quite well in terms of bank credit allocated to the private sector. The credit to the economy provided by banks and other financial institutions stands at 71.24 percent on average of GDP between 2010 and 2020. However, this does not yet benefit the SMEs, which still face serious constraints in terms of access to financing. There are disparities between Tunisian banks in terms of compliance with regulatory solvency ratios. Of the 23 domestic banks, only 15 had a solvency ratio above 11 percent. Their key shortcomings are asset quality and risk monitoring, dysfunctions in the credit allocation process results, a high rate of non-performing loans (10.6 percent for private banks and 17.3 percent for public banks in 2019) and poor portfolio diversification.

The non-banking financial sector (insurance, leasing, microfinance) remains underdeveloped by international standards. The government has adopted measures to encourage venture capital activities through tax incentives. Nevertheless, the role of venture capital in financing private investment and the economy remains quite limited. The role of the Tunis Stock Exchange in financing the economy remains feeble, despite the increase in the number of listed companies from 57 in 2011 to 81 in 2019. Market capitalization and assets under management stand at only 22 percent of GDP and 3.4 percent of GDP respectively in 2019. The primary equity and corporate bond markets are small and the secondary market lacks liquidity. The bond market remains underdeveloped and plays a very limited role in financing the economy.

***Mobilizing the private sector will be crucial to meeting the challenge of climate finance***

Private sector participation in climate finance is still in its infancy in Tunisia. The country has

taken steps to create an enabling environment for private sector investment in renewable energy and energy efficiency such as introducing regulatory frameworks and incentives. However, more needs to be done to attract private sector investment in other priority sectors, such as sustainable transport and sustainable agriculture. Tunisia has also established partnerships with international organizations to mobilize private sector finance for climate action and green growth. For example, the country has partnered with the International Finance Corporation (IFC) to promote private sector investment in renewable energy and energy efficiency. In 2019, the IFC announced a US$ 100 million investment in renewable energy projects in Tunisia, which is expected to support the country's target of increasing the share of renewable energy in its electricity mix to 30 percent by 2030. Promising options for involving the private sector in climate finance include:

**Equity and Guarantees:** Equity financing involves the sale of shares in a company to investors, while guaranteed financing involves the provision of credit enhancements to support investments. In Tunisia, the IFC provides equity and guaranteed financing to support private sector investments in various sectors, including renewable energy, agribusiness and financial services. For example, in 2020, the IFC provided a US$ 20 million loan and equity investment to support the expansion of a Tunisian pharmaceutical company[6].

**Technical Assistance:** Technical assistance involves the provision of expertise and resources to support the development of projects. In Tunisia, the European Bank for Reconstruction and Development provides technical assistance to help businesses and governments access financing for various projects, including renewable energy, energy efficiency and financial inclusion. For instance, it has provided technical assistance to a Tunisian company to develop a solar photovoltaic power plant[7].

**Green bonds:** Tunisia issued its first sovereign green bond worth $70 million in 2020, which will be used to fund renewable energy and energy efficiency projects. This marks an important step in the country's efforts to mobilize private sector investment in its green growth agenda.

**Impact investing:** Impact investing is becoming increasingly popular in Tunisia, with investors looking to support sustainable development projects. For example, a Tunisian social enterprise called Up-Fuse received $70,000 in impact investment funding from a Swiss company in 2020 to expand its production of eco-friendly bags and accessories made from recycled materials.

**Crowdfunding:** Crowdfunding platforms are also emerging as a way to finance climate action and green growth projects in Tunisia. For instance, in 2020, a crowdfunding campaign was launched to raise funds for the development of a solar-powered water desalination system in the coastal city of Zarzis.

**Public-private partnerships:** Public-private partnerships are being used to finance large-scale renewable energy projects in Tunisia. For example, a consortium of private companies and public institutions partnered to build the country's first wind farm, the 120 MW Kchabta wind farm, which was inaugurated in 2020.

Other instruments that may be used to scale up private finance include:

i) Blended financing instruments that combine public and private instruments. Results-based financing from DFI and MDBs can serve as a catalyst for blended financing.

[6] IFC, 2020.
[7] European Bank for Reconstruction and Development: https://ebrdgeff.com/tunisia-gvc/

ii) Islamic financing through SUKUKs[8].
iii) Financial products targeting expatriates, to turn remittances into green investments.
iv) Carbon markets.

Overall, Tunisia's efforts to promote innovative financing mechanisms and sources of private sector finance for climate action and green growth are encouraging and suggest a growing recognition of the need for a sustainable, low-carbon economy.

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

### 3.3.1 Opportunities for private sector climate investments

There are considerable opportunities for private climate investment in Tunisia, particularly in the renewable energy sectors, water and sanitation, energy efficiency, agriculture, etc. The country has a relatively strong institutional and policy framework for climate action and green growth, which provides a favorable environment for investment. In addition, Tunisia's location on the Mediterranean coast makes it well-placed to take advantage of opportunities for regional cooperation and integration in areas such as renewable energy and sustainable transport. Tunisia has introduced policies and regulatory frameworks to encourage private sector investment in renewable energy and energy efficiency. For example, the country has introduced a feed-in tariff system to incentivize private sector investment in renewable energy projects and has established energy efficiency standards for buildings and appliances.

### 3.3.2 Barriers to private sector climate investments

Despite Tunisia's efforts to mobilize finance for climate action and green growth, there are several challenges that need to be addressed. One of the main challenges is the limited availability of domestic and international finance for climate action and green growth, particularly in priority sectors such as sustainable transport and sustainable agriculture. The current economic and socio-political context and the level of debt also come into play as a blocking factor for private climate investment in Tunisia. In addition, there is a need to improve the coordination and alignment of finance mechanisms to ensure that finance is channeled effectively to support Tunisia's climate and green growth goals. Other barriers to attracting and scaling up private sector climate finance include lack of visibility on the profitability of green projects, difficulties in assessing the risks incurred and pricing them correctly, the investment horizons which can be very long, and the quantification of positive externalities which can be very complex. New regulatory frameworks and incentives will be key to channeling private finance towards green growth and climate action in Tunisia.

### 3.3.3 Pathways to mobilizing private sector finance for climate and green growth

Enabling conditions for the success of innovative sources and mechanisms for private sector financing for climate action and green growth in Tunisia include:

**Enabling regulatory frameworks and policies:** Clear and consistent regulatory frameworks and policies that provide incentives for private sector investment in climate action and green growth can help create an enabling environment for innovative financing mechanisms. Addressing policy and regulatory barriers that impede private sector investment in climate action and green growth is crucial for creating a favorable environment for innovative financing mechanisms.

[8] A SUKUK is an Islamic certificate, a Sharia-compliant bond.

**Access to finance:** The availability of diverse and flexible sources of finance, including public and private, is critical for scaling up investment in climate action and green growth.

**Public-private partnerships:** Collaborative efforts between the public and private sectors can help leverage the strengths of both sectors to mobilize finance and achieve shared goals.

**Capacity building and technical assistance:** Capacity building programs and technical assistance can help increase the skills and knowledge of private sector actors to identify, assess, and manage climate risks and opportunities.

**Demonstrating the profitability of climate action and green growth:** Successful examples of profitable investments in climate action and green growth can help attract private sector investment and build momentum for further investment.

**Clear and transparent information:** Reliable and transparent information on climate risks and opportunities, as well as the performance of green investments, can help increase investor confidence and attract private sector investment.

**Strong political will and commitment:** Political will and commitment to climate action and green growth is needed to create a supportive environment for private sector investment and innovation.

### Box 2: Measures taken by Tunisia to unlock private sector investments

Tunisia has taken several measures to unlock private sector investments in climate action and green growth. Some of these measures include:

- ***The adoption of the Tunisian Solar Plan:*** In 2017, Tunisia launched its ambitious Tunisian Solar Plan, which aims to install 3,800 MW of solar capacity by 2030. The plan is expected to attract $4 billion in investments and create around 27,000 jobs.
- ***The establishment of the National Agency for Energy Management (ANME):*** The ANME was created in 2015 to promote energy efficiency and renewable energy in the country. The agency offers technical support, training and financial incentives to companies that want to invest in energy efficiency and renewable energy projects.
- **The adoption of a feed-in tariff system:** In 2015, Tunisia adopted a feed-in tariff system to encourage private sector investment in renewable energy. The system guarantees a fixed price for renewable energy producers for a period of 20 years, making renewable energy investments more attractive to private investors.
- **The development of a green investment fund:** The Tunisian Government, with the support of the European Investment Bank, established a green investment fund in 2018. The fund aims to mobilize private sector investments in green projects, including renewable energy, energy efficiency, and waste management.
- **The adoption of a green economy roadmap:** In 2016, Tunisia adopted a green economy roadmap that outlines the country's strategy for transitioning to a green economy. The roadmap includes measures to promote sustainable agriculture, green tourism, and renewable energy.

# IV. HARNESSING NATURAL CAPITAL AS A COMPLEMENTARY FINANCING OPTION FOR CLIMATE AND GREEN GROWTH IN TUNISIA

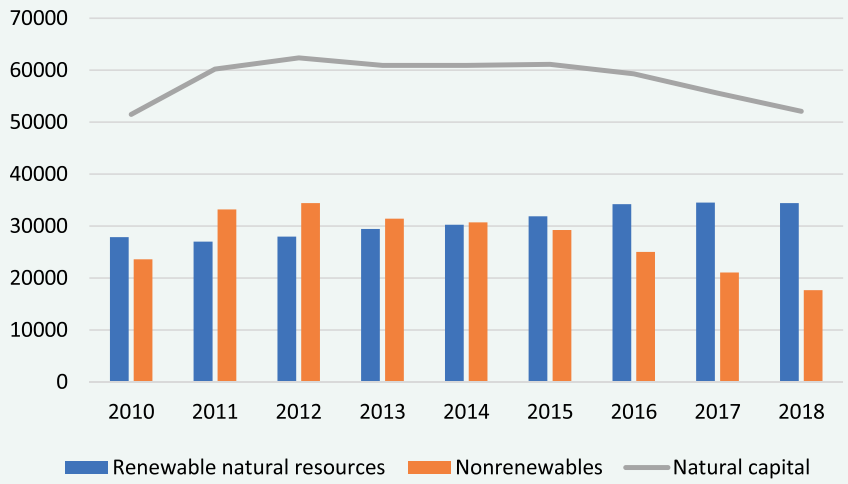
## 4.1 The Evolution of Natural Capital of Tunisia

4.1 The Evolution of Natural Capital of Tunisia

Tunisia enjoys approximately 1,300 km of coastline which shelters and contributes to the support of more than two thirds of its population of 12 million inhabitants. The coastline has around 64 islands that are home to varied ecosystems and rich biodiversity. Tunisia covers an area of 163,610 $km^2$, of which 30-40 percent is occupied by the Sahara Desert which gives the country very high solar and wind potential. The country also has large phosphate and hydrocarbon deposits that are largely underexploited.

According to the World Bank's estimates, Tunisia's natural capital increased from US$ 51.5 billion (constant 2018 US$) in 2010 to above US$ 60 billion between 2011 and 2016 (Figure 7). Tunisia's natural capital has been decreasing since 2016 and stands at approximately US$ 52 billion in 2018. While the value of renewable resources has increased by 23.5 percent with respect to its 2010 level and currently dominates the composition of Tunisia's natural capital, the value of non-renewable resources has decreased by 25.3 percent. The accounting includes the value of forests, cropland and pastureland, minerals and energy resources, etc. but does not include sun and wind. Tunisia's forests are estimated to be worth approximately US$ 4.1 billion in 2018 (including timber and ecosystems) while mineral resources are valued at US$ 2.8 billion. The country's energy resources, including oil and natural gas, are estimated to be worth approximately US$ 14.8 billion. Annex 2 provides details on the values of each subcategory of natural capital.

**Figure 7: Evolution of natural capital in Tunisia (million US$)**




*Source: World Bank. 2021. https://datacatalog.worldbank.org/dataset/wealth-accounting*

## 4.2 Opportunities to increase the contribution of natural capital to climate finance and green growth

Natural resources rents have been on a decreasing trend in Tunisia for a decade, from 5.8 percent of GDP in 2010 to only 1.4 percent in 2020. The bulk of these rents comes from oil, which weighed 4 percent of GDP in 2010 and only 1 percent in 2020. For the reasons mentioned earlier, mineral resources rents decreased as well from 1.2 percent of GDP in 2010 to roughly 0.3 percent currently. Interestingly, natural resources rents are expected to increase in the coming years, driven by the resumption of phosphate production and exports. Tunisia also has enormous potential for various forms of green energy, ecotourism and organic farming. The implementation of Tunisia's green growth strategy will require the development of specific human capital, an area in which the private sector can also be called upon. The improvement of the governance of natural capital management at large will be key to harnessing more revenues that can be partially used to address climate and green growth challenges.

### 4.2.1 Non-renewable resources

Tunisia's non-renewable resources present significant opportunities for economic growth and development. The mining sector, as well as the oil and gas sector, have the potential to contribute significantly to the country's GDP and create job opportunities. However, the challenges faced by these sectors require significant investment and expertise to unlock their full potential.

**Oil and Gas:** Tunisia has limited non-renewable wealth in fossil fuels compared to other countries in the region. Oil and gas production currently contribute 2.6 percent to GDP. According to the US Energy Information Administration (EIA), Tunisia had an estimated 2.3 billion barrels of proved oil reserves as of January 2021 which ranks it 55th in the world. The country also has an estimated 450 billion cubic feet (Bcf) of proved natural gas reserves which ranks it 73rd in the world[9]. Tunisia's oil production has been in decline since the early 2000s, with production averaging around 38,000 barrels per day (b/d) in 2020[10]. This is down from

[9] Energy Information Administration, 2021.
[10] Energy Information Administration, 2021.

a peak production of 120,000 b/d in the mid-1980s. Most of Tunisia's oil production comes from offshore fields in the Gulf of Gabes and the Mediterranean Sea. Tunisia's natural gas production has also been in decline since the mid-2000s, with production averaging around 233 Bcf in 2020, down from a peak production of 331 Bcf in 2004[11]. Most of Tunisia's natural gas production comes from offshore fields in the Gulf of Gabes and the Mediterranean Sea.

**Minerals:** Tunisia has a variety of minerals, including phosphate, iron ore, lead, zinc, and salt. Tunisia's mining sector is an important contributor to its economy, employing over 25,000 people and accounting for approximately 0.4 percent of the country's GDP[12]. Phosphate is the most significant mineral resource and Tunisia is one of the world's largest producers of phosphate. In 2020, Tunisia produced approximately 3 million tons of phosphate rock[13], 3.7 million in 2022 and expects to produce 5.6 million tons in 2023. The mining sector in Tunisia faces significant challenges, including governance issues and production disruptions caused by social unrest. The sector is largely dominated by state-owned companies which have limited resources and expertise. In addition, the sector is vulnerable to fluctuations in commodity prices which can have a significant impact on the country's economy. These challenges have hindered the development of the sector and limited its potential. Despite these challenges, there are opportunities for growth in the mining sector. The price of a metric ton of phosphate has more than quadrupled in three years, from US$ 83 in February 2021 to US$ 345 in March 2023.The government has taken steps to attract investment and develop the sector, including the recent launch of a new mining code aimed at improving the legal framework for the sector and attracting investment. These initiatives have the potential to attract investment and expertise to the sector and unlock the country's vast mineral resources.

### 4.2.2 Renewable resources

Tunisia is endowed with a diverse range of renewable resources that play a vital role in the country's economy and provide essential ecosystem services. Tunisia's renewable resources include fisheries, forestry and agriculture which jointly contribute approximately 10 percent to GDP, but also pastures, wildlife as well as sun and wind for green energy production. The sustainable management of these resources is critical for the long-term economic and social development of Tunisia.

**Fisheries:** Tunisia has a long coastline of approximately 1,300 km, which is home to a wide variety of marine species. The fishing sector employs over 100,000 people and accounts for approximately 1 percent of GDP[14]. In 2020, Tunisia's fish production was estimated at 126,739 metric tons. The Tunisian Government has implemented policies to promote the sustainable development of the fisheries sector. For example, it has established marine protected areas, implemented fishing quotas and provided support to small-scale fishermen. However, the sector faces challenges such as overfishing, illegal fishing and climate change, which could have a significant impact on fish populations and the livelihoods of communities.

**Forestry:** Tunisia has a significant forest area of approximately 916,730 hectares, which covers around 6 percent of the country's land area. The forest sector is an essential source of livelihood for many rural communities and provides a range of ecosystem services, including soil conservation, water regulation and biodiversity conservation. In 2020, Tunisia's total roundwood

Tunisia is endowed with a diverse range of renewable resources that play a vital role in the country's economy and provide essential ecosystem services. Tunisia's renewable resources include fisheries, forestry and agriculture which jointly contribute approximately 10 percent to GDP, but also pastures, wildlife as well as sun and wind for green energy production. The sustainable management of these resources is critical for the long-term economic and social development of Tunisia.

[11] Energy Information Administration, 2021.
[12] This brings the total contribution of extractives to 3% of GDP, including 2.6% for oil and gas.
[13] US Geological Survey, 2021.
[14] FAO, 2021a.

production was estimated at 2.2 million cubic meters[15]. The forestry sector contributes to the Tunisian economy through the production of timber, fuelwood and non-timber forest products. However, the forestry sector in Tunisia faces many challenges, including deforestation, degradation and illegal logging. To address these challenges, the Tunisian Government has developed a national strategy for sustainable forest management which aims to promote reforestation, combat desertification and improve the livelihoods of rural communities.

**Agriculture:** Agriculture contributes approximately 10 percent to the Tunisian GDP and employs over 15 percent of the population. Tunisia has a diverse range of crops, including olives, dates, citrus fruits, vegetables and grains. In 2020, Tunisia's agricultural production was estimated at US$ 4.7 billion[16]. The government has implemented policies to promote the sustainable development of the agriculture sector such as providing support to small-scale farmers, promoting the use of sustainable farming practices and investing in irrigation infrastructure. However, the sector still faces challenges such as water scarcity, climate change and soil degradation, which could affect the productivity and sustainability of agricultural systems. Furthermore, there are opportunities for Tunisia to capitalize on the growing global demand for sustainable and organic agriculture.

**Pastures:** Tunisia's natural pastures cover around 3.3 million hectares, representing approximately 18 percent of the country's land area[17]. Pastoralism is an important livelihood strategy for many rural communities in Tunisia, particularly in arid and semi-arid regions. Pastoralists rely on natural resources such as grazing land and water sources to support their livestock which includes cattle, sheep and goats. According to the Food and Agriculture Organization (FAO), Tunisia's livestock sector produced approximately 505,000 tons of meat in 2019 with a value of over US$ 1.2 billion[18]. However, pastoralism in Tunisia is facing many challenges including land degradation, overgrazing and conflicts over access to natural resources. To address these challenges, the Tunisian Government has developed policies to promote sustainable pastoralism such as providing support to pastoral communities and implementing programs to restore degraded grazing land.

### 4.2.3 Other opportunities for harnessing natural capital

In recent years, there has been growing interest in identifying and promoting opportunities for resource conservation and sustainable development in Tunisia. In addition to the opportunities discussed previously, there are several other opportunities for sustainable development in Tunisia, including designing policy instruments, avoided deforestation and voluntary buying of bonds, debt-for-nature swaps, re-assessment of climate adaptation programs, etc.

**Effective policy instruments:** Designing and implementing policy instruments such as taxes, subsidies and regulations can encourage sustainable practices and discourage environmentally damaging activities. For example, the Tunisian Government could introduce a carbon tax or a tax on pollution to encourage companies and individuals to reduce their carbon emissions and adopt more sustainable practices. Likewise, a reduction of subsidies to fossil fuel can contribute to reducing pollution while increasing the resources available to finance green projects. According to the International Energy Agency, Tunisia's carbon dioxide emissions from energy consumption reached 38.5 million metric tons in 2019[19] which represents a signifi-

[15] FAO, 2021b.
[16] World Bank, https://data.worldbank.org/indicator/NV.AGR.TOTL.CD?locations=TN .
[17] FAO, 2021a.
[18] FAO, 2020.
[19] IEA, 2021.

cant environmental challenge that could be addressed through policy interventions.

**Avoided deforestation and voluntary buying of bonds:** Deforestation is a major environmental problem in Tunisia. To address this issue, the Tunisian Government could promote avoided deforestation programs where individuals or companies are paid to protect forested areas from being cleared. In addition, voluntary buying of bonds can be an effective way to finance conservation efforts. For example, the government could issue conservation bonds that would allow individuals and companies to invest in conservation efforts in exchange for a financial return. This approach has been used successfully in Costa Rica.

**Debt-for-nature swaps:** Debt-for-nature swaps are another opportunity for promoting sustainable development in Tunisia. This approach involves the cancellation of a portion of a country's debt in exchange for the country's commitment to invest in conservation efforts. This approach can help to address both environmental and economic challenges, as it reduces a country's debt burden while promoting sustainable practices. For example, in 2015, the United States cancelled US$ 60 million of Tunisia's debt in exchange for Tunisia's commitment to invest in environmental conservation and sustainable development programs[20].

**Re-assessment of climate adaptation programs:** Tunisia is highly vulnerable to climate change, with rising temperatures and changing precipitation patterns posing significant risks to the country's agricultural sector, water resources and infrastructure[21]. The government has implemented several climate-adaptation programs to address these risks. However, there is a need to evaluate these programs to ensure that they effectively address the most pressing environmental risks. For example, it might be the case that the government needs to prioritize investments in water conservation and irrigation systems to ensure that farmers have adequate access to water resources.

**Sustainable agriculture:** The government could promote sustainable agriculture practices such as agroforestry, which involves the integration of trees and crops on farms to improve soil health, conserve water resources and provide additional income streams for farmers. According to the World Agroforestry Centre, agroforestry can increase crop yields by up to 50 percent while also providing other environmental benefits such as carbon sequestration and biodiversity conservation[22].

**Sustainable tourism:** This has the potential to provide significant economic benefits while also promoting environmental conservation. The Ministry of Tourism has developed a strategy for the development of ecotourism in Tunisia, which emphasizes the need to protect natural and cultural heritage sites while also promoting sustainable tourism practices. Ecotourism has the potential to generate up to 3 billion TND (approximately 1.1 billion US$) per year by 2020[23].

**Other opportunities:** Finally, there is an opportunity for Tunisia to engage in international partnerships and initiatives to promote sustainable development. For example, the country could participate in the United Nations REDD+ program, which aims to reduce emissions from deforestation and forest degradation while also promoting sustainable forest management and conservation. Tunisia could also participate in the GEF which provides financing for projects aimed at addressing environmental challenges such as climate change, biodiversity loss and land degradation.

[20] United Nations Development Program, 2019.
[21] World Bank, 2018.
[22] World Agroforestry Centre. (n.d.).
[23] Ministry of Tourism, 2016.

# V. CONCLUSION AND POLICY RECOMMENDATIONS

## 5.1 Conclusion

Tunisian GDP growth has been weighed down by political instability since 2011, the Covid-19 pandemic in 2020 and Russia's invasion of Ukraine in 2022. In particular, Russia's invasion of Ukraine has lowered growth expectations (via the surge in oil and agricultural inputs prices), increased inflation, worsening public finance and external imbalances which have deteriorated the livelihood of the poor in Tunisia. Growth will remain subdued over the medium term. Inflation is predicted to increase in 2023 before falling in 2024 with the easing of external inflationary pressures. Fiscal and current account deficits are expected to narrow in the medium term. However, growth prospects could deteriorate due to the high risk of debt distress amid limited access to external financing, social tensions caused by high prices, a restrictive fiscal policy penalizing public investments or delays in normalizing the political situation.

Tunisia has significant potential for mobilizing private resources and harnessing natural capital to finance climate action and green growth. To this end, Tunisia must implement policies to promote sustainable practices, incentivize the transition to a green economy and attract private investment in sustainable projects. However, this will require strong political will, institutional capacity and public participation, as well as the active engagement of civil society organizations and the private sector. By taking these steps, Tunisia can promote economic development, improve the quality of life for its citizens and contribute to global efforts to address climate change.

Below is a set of 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 for addressing the socio-economic challenges

A prudent monetary, fiscal, and structural policy mix is needed to address subdued growth, curb rising inflation and correct macroeconomic imbalances. As the current inflation is largely imported, tightening the monetary policy too much may result in liquidity tensions on domestic financial markets and a further deterioration of recovery prospects. Likewise, debt monetization should be avoided to preserve financial system stability.

Other measures to curb the negative effects of the Russia-Ukraine conflict on the Tunisian economy include:

- [S] ***Protecting the vulnerable*** by building up stocks that will help monitor the pass-through of energy, agricultural input and food global price hikes to domestic prices.
- [S] ***Accelerating the dialogue with the IMF to agree on a program*** to send a positive signal to investors and open doors to substantial concessional resources from development partners.
- [S, M] ***Keeping the current account deficit under control*** by reducing the imports of non-essential goods.
- [S, M; L] ***Keeping the fiscal deficit under control*** by rationalizing subsidies through a

better targeting of beneficiaries and by passing through part of the oil inflation to customers.

## 5.3 Policy recommendations for increasing the contribution of the private sector to climate finance and green growth

### 5.3.1 National government

Mobilizing adequate financial resources for climate action and green growth in Tunisia will require significant contribution from the private sector. The Government of Tunisia should implement the following measures to create an enabling environment that favors the contribution of the private sector to financing climate action and green growth.

- [S, M] ***Encourage banks to adopt green and climate-friendly lending policies.*** Provide support to financial institutions to increase their capacity to finance green and climate-friendly projects. Create a strong incentive and accountability framework encouraging banks to finance climate action and green growth.
- [S, M] ***Encourage public-private partner ships.*** The government can work with private sector investors to co-finance climate action and green growth projects. This approach can help to leverage private sector capital and expertise while sharing risks and rewards between the public and private sectors.
- [S, M] ***Strengthen regulatory frameworks.*** The government can strengthen regulatory frameworks to create a supportive environment for private sector investment in climate action and green growth projects. This can include developing clear policies and regulations, providing transparent and predictable decision-making processes and ensuring effective enforcement of environmental standards.
- [S, M] ***Provide economic incentives for private sector investment.*** The government can provide tax incentives, subsidies and other financial incentives to encourage private sector investment in climate action and green growth projects. This can help to reduce the perceived risks of such investments and make them more attractive to private sector investors.
- [M, L] ***Promote green finance.*** Develop a deep secondary market for green bonds. The government can establish green finance mechanisms, such as green bonds or green funds, to mobilize private sector capital for climate action and green growth projects. These mechanisms can help to pool resources and reduce transaction costs for private sector investors.
- [M, L] ***Building capacity:*** 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. Moreover, the government should invest in capacity building programs to help private sector investors better understand climate action and green growth opportunities and risks. This can include training programs, workshops and other educational initiatives.
- [S, M, L] ***Improving governance.*** Social unrest has resulted in constant under-production in the Phosphate sector in Tunisia, leading to around a 50 percent slump in production between 2010 and 2017. Disputes manifest in the form of protests, sit-ins and disruption of production. Improving the overall governance of the extractive sector can help Tunisia increase its aggregate output as well as export revenue. Other governance challenges include improving transparency of exploitation contracts and fighting illicit activities.

### 5.3.2 Multilateral Development Bands and Development Finance Institutions

To unlock private sector financing for climate action and green growth, MDBs and DFIs must prioritize approaches that favor private capital mobilization and private capital enabling environments. A wide range of measures encompassing products and risk-taking

behavior must be implemented for that purpose.

- [S, M] ***Reforming existing products to address the principal risks that the private sector finds most difficult to accommodate***. Long-term project-based loans can be designed with a private sector tranche that begins amortizing earlier than the MDB/DFI tranche. Guarantee instruments can be designed in collaboration with private insurers for different layers of risk. Likewise, A/B loans can be designed such that the A tranche is held by the MDB/DFI while the B tranche is structured as a bond and distributed to the capital markets.
- [S, M, L] ***Introducing new tools or products.*** MDBs and DFIs could repackage and securitize some of their assets, use blended finance tools involving private funds, push private sector enabling environment reforms, implement mechanisms to de-risk private sector capital, design new tools to drive the development of carbon markets and bridge developed market players (in need of carbon credits) and developing market players (generators of carbon credits from energy transition projects), etc.
- [S, M, L] ***Provide technical assistance and capacity building:*** The AfDB can provide technical assistance and capacity building to the Tunisian Government and other relevant private sector stakeholders in order for the country to develop strategies for sustainable management of these resources. This can include training on sustainable forestry practices, conservation of biodiversity and sustainable agricultural practices.
- [S, M, L] ***Finance sustainable development projects:*** The AfDB and other international actors can finance sustainable development projects such as renewable energy projects, sustainable agriculture and ecotourism. This can help reduce GHG emissions and promote sustainable economic growth.
- [S, M, L] ***Support public-private partnerships:*** The AfDB and other international actors can promote public-private partnerships to develop and implement sustainable development projects. This can help leverage private sector financing and expertise to achieve sustainable development objectives.
- [S, M, L] ***Facilitate knowledge sharing and capacity building.*** DFIs and MDBs can facilitate knowledge sharing and capacity building among private sector financing stakeholders. This can include providing training and technical assistance to local financial institutions and project developers, and sharing best practices and lessons learned from other countries and regions.
- [S, M, L] ***Support policy and regulatory reforms:*** DFIs and MDBs can support policy and regulatory reforms that promote sustainable investment and enable private sector financing for climate action and green growth. This can include supporting the adoption of international climate agreements, as well as working with governments to develop policies and regulations that create incentives for private sector investment in sustainable projects.

### 5.3.3 Domestic and international private investors

Private investors can also contribute to easing their own participation to climate finance by taking specific measures.

- Collaborate with national government, MDBs and DFIs and other private sector actors to identify key risks to climate investments and propose approaches to address these risks.
- Collaborate with various stakeholders to design innovative climate finance enabling investment vehicles.

### 5.3.4 Developed countries' government

As shareholders of MDBs and DFIs, developed country governments can:

- **Encourage these institutions to take more risks on climate related projects as well as other green investments perceived as risky.** This entails modifying the models that are used to evaluate climate related projects.

- ***Encourage various institution to increase the pool of information that is publicly available to assess the risk on climate related projects.*** By doing so, they will help financial institution design better risk sharing instruments that will help crowd private resources into climate finance.
- ***Create incentives to promote green growth.*** For instance, the European Union Carbon Border Adjustment Mechanism encourages cleaner industrial production in non-EU countries.

## 5.4 Policy recommendation for increasing the contribution of the natural capital to climate finance and green growth

The Government of Tunisia can adopt several measures to harness natural capital for financing climate action and green growth, including:

### 5.4.1 National government

- [M, L] ***Promote renewable energy:*** Tunisia has significant potential for solar and wind energy and the government has already made significant strides in promoting the development of renewable energy sources. The government can continue to support the growth of the renewable energy sector through policies and regulations that promote investment, research and development and the adoption of new technologies.
- [M, L] ***Encourage sustainable fishing:*** The fisheries sector is an important contributor to the Tunisian economy, but overfishing and illegal fishing practices can threaten fish stocks and marine biodiversity. The government can adopt policies and regulations that promote sustainable fisheries, including the establishment of marine protected areas, the use of selective fishing gear and the adoption of sustainable fishing practices.
- [M, L] **Encourage sustainable agriculture:** Agriculture is a major contributor to GHG emissions, but sustainable agriculture practices can help mitigate these emissions and promote climate resilience. The government can invest in sustainable agriculture practices, including the promotion of organic farming, the use of agroforestry, and the establishment of sustainable land management practices (including recovering degraded lands).
- [M, L] ***Promote ecotourism.*** Seaside tourism is threatened due to the degradation of the coastal lines and rising sea levels. Ecotourism, which is still underdeveloped in Tunisia, offers an environmentally friendly alternative that will contribute to ensure the sustainability of the tourism sector.
- [M, L] ***Promote sustainable infrastructure.*** The transport sector is a significant contributor to GHS emissions, and the government can adopt policies that promote sustainable transport. This can include the development of public transport systems, the promotion of electric vehicles and the establishment of bike-sharing schemes.
- [M, L] **Facilitate knowledge sharing and collaboration.** In collaboration with other stakeholders, the government can initiate knowledge sharing events with other countries that have successfully harnessed their natural capital for sustainable development. This includes sharing best practices and lessons learned.

The recommendations above are aligned with the pillars of the 2021–2025 Private Sector Development Strategy, notably (i) improving the business environment (particularly, for green projects); (ii) addressing energy, transport and communications gaps, and (iii) improving access to finance for MSMEs, particularly for those involved in green value chains.

# REFERENCES


African Development Bank 2023. "*Mobilizing Private Sector Financing for Climate and Green Growth in Africa.*" Available at: https://www.afdb.org/en/documents/african-economic-outlook-2023.

African Development Bank 2022. "*Supporting Climate Resilience and a Just Energy Transition in Africa.*" Available at: https://www.afdb.org/en/documents/african-economic-outlook-2022.

African Development Bank 2021. "*Tunisie : Note de diagnostic pays*" Available at: https://www.afdb.org/fr/documents/tunisie-note-de-diagnostic-pays.

Energy Information Administration 2021. Tunisia: Country Analysis Brief. Available at: https://www.eia.gov/analysis/studies/worldshalegas/pdf/fullreport.pdf .

Food and Agriculture Organization 2018. *Sustainable Land Management and Climate-Smart Agriculture in Tunisia*. Available at: http://www.fao.org/3/I9373EN/i9373en.pdf.

Food and Agriculture Organization 2021a. *Global Forest Resources Assessment 2020.* https://www.fao.org/forest-resources-assessment/past-assessments/fra-2020/en/.

Food and Agriculture Organization 2021b. *The State of World Fisheries and Aquaculture 2020*. https://www.fao.org/documents/card/en/c/ca9229en.

Climate Service Center Germany 2019. *Climate Fact Sheet – Tunisia*. https://www.climate-service-center.de/products_and_publications/fact_sheets/climate_fact_sheets/index.php.en.

International Finance Corporation 2019. *Climate Investment Opportunities in Emerging Markets – Tunisia*. Washington, DC: IFC.

International Finance Corporation 2020. *Creating Markets for Climate Business: An IFC Climate Investment Opportunities Report.*

Ministry of Tourism 2016. *Ecotourism Development Strategy in Tunisia*. Available at: https://tourisme.gov.tn/fileadmin/user_upload/STRATEGIE_ECO-TOURISTIQUE_TUNISIE_EN.pdf .

Republic of Tunisia 2016. *Nationally Determined Contribution*. Available at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Tunisia%20First/INDC-Tunisia-English%20Version.pdf.

United Nations Development Programme 2019. *Tunisia: Unlocking Private Sector Investment for Green Growth United Nations Development Program.*

US Geological Survey 2022. Tunisia: Mineral Commodity Summaries. https://pubs.usgs.gov/periodicals/mcs2022/mcs2022.pdf.

World Bank 2018. *Tunisia Municipal Solid Waste Management Diagnostic*.

# ANNEXES

# Annex 1: Private sector climate finance gap under alternative scenarios

**Private sector climate finance gap under alternative scenarios**

| | Public sector contrib. 2019 (million US$) (a) | Private sector contrib. 2019 (million US$) (b) | Annual climate finance needs (million US$) (c) | Gap with respect to public sector (million US$) (d)=(c)-(a) | Expected private sector contrib. to gap with respect to public sector (%) (e) | Expected private sector contrib. to gap with respect to public sector (million US$) (f)=(e)*(d) | Expected public sector contrib. (million US$) (g)= (c)-(f) | Private gap (million US$) (h)= (f)-(b) | Public gap (million US$) (i)=(g)-(a) |
|---|---|---|---|---|---|---|---|---|---|
| Scenario 1 | 860.8 | 109 | 2440 | 1579.2 | 25 | 394.8 | 2045.2 | 285.8 | 1184.4 |
| Scenario 2 | 860.8 | 109 | 2440 | 1579.2 | 50 | 394.8 | 1650.4 | 680.6 | 789.6 |
| Scenario 3 | 860.8 | 109 | 2440 | 1579.2 | 75 | 1184.4 | 1255.6 | 1075.4 | 394.8 |
| Scenario 4 | 860.8 | 109 | 2440 | 1579.2 | 100 | 1579.2 | 860.8 | 1470.2 | 0.0 |

*Source: African Economic Outlook (AEO) 2023*

# Annex 2: Evolution of Tunisia's natural capital since 2010

| Evolution of Tunisia's natural capital since 2010 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Change 2010-2018 (%) |
| **Natural capital** | **51494** | **60220** | **62373** | **60901** | **60947** | **61129** | **59295** | **55592** | **52073** | **1.1** |
| **Renewable natural resources** | **27885** | **26995** | **27956** | **29465** | **30239** | **31900** | **34243** | **34526** | **34428** | **23.5** |
| Forests, timber | 439 | 502 | 411 | 461 | 590 | 713 | 799 | 878 | 876 | 99.6 |
| Forests, ecosystem services | 3417 | 2804 | 3126 | 3133 | 3244 | 2711 | 2672 | 2821 | 3269 | -4.3 |
| Fisheries | 349 | 378 | 423 | 423 | 445 | 508 | 532 | 517 | 504 | 44.4 |
| Protected areas | 1154 | 1247 | 1379 | 1531 | 1687 | 2196 | 2752 | 2802 | 2799 | 142.5 |
| Cropland | 14072 | 13537 | 13836 | 14701 | 14610 | 15523 | 16646 | 16423 | 15853 | 12.7 |
| Pastureland | 8455 | 8526 | 8781 | 9216 | 9662 | 10250 | 10842 | 11086 | 11127 | 31.6 |
| **Non-renewables** | **23609** | **33225** | **34417** | **31436** | **30708** | **29229** | **25053** | **21066** | **17645** | **-25.3** |
| Oil | 16582 | 19608 | 20131 | 20814 | 22928 | 21790 | 18581 | 16085 | 12658 | -23.7 |
| Natural gas | 1725 | 2092 | 2575 | 2956 | 3255 | 3498 | 2989 | 2536 | 2137 | 23.9 |
| Metals and minerals | 5301 | 11525 | 11712 | 7666 | 4525 | 3941 | 3482 | 2445 | 2850 | -46.2 |

*Source: Department of Statistics, African Development Bank*

# Annex 3: Tunisia key economic indicators

| Indicators | Unit | 2010 | 2015 | 2018 | 2019 | 2020 | 2021 | 2022 (e) | 2023 (p) | 2024 (p) |
|---|---|---|---|---|---|---|---|---|---|---|
| **National Accounts** | | | | | | | | | | |
| GNI at Current Prices | Million US $ | 44,561 | 47,040 | 43,556 | 42,655 | 39,282 | 43,411 | ... | ... | ... |
| GNI per Capita | US$ | 4,090 | 4,070 | 3,650 | 3,540 | 3,230 | 3,540 | ... | ... | ... |
| GDP at Current Prices | Million US $ | 44,051 | 45,779 | 42,687 | 41,905 | 42,540 | 46,688 | 42,453 | 46,901 | 50,407 |
| GDP at 2010 Constant prices | Million US $ | 44,051 | 47,574 | 50,460 | 51,218 | 46,802 | 48,826 | 50,022 | 50,958 | 52,388 |
| Real GDP Growth Rate | % | 3.0 | 1.0 | 2.6 | 1.5 | -8.6 | 4.3 | 2.4 | 1.9 | 2.8 |
| Real per Capita GDP Growth Rate | % | 1.9 | -0.1 | 1.5 | 0.5 | -9.5 | 3.5 | 1.7 | 1.0 | 1.9 |
| Value Added: Mining and quarrying | Million US $ | 3,181 | 1,812 | 1,510 | 1,389 | 1,024 | 1,407 | 1,319 | ... | ... |
| Value Added: Mining and quarrying | % GDP | 6.9 | 4.0 | 3.5 | 3.3 | 2.4 | 3.0 | 3.1 | ... | ... |
| Value Added: Fishing | Million US $ | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Value Added: Fishing | % GDP | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **Prices and Money** | | | | | | | | | | |
| Inflation (CPI) | % | 4.4 | 4.4 | 7.3 | 6.7 | 5.6 | 5.7 | 8.3 | 9.2 | 6.8 |
| Exchange Rate (Annual Average) | local currency/US$ | 1.4 | 2.0 | 2.6 | 2.9 | 2.8 | 2.8 | 3.1 | 3.1 | 3.2 |
| **Government Finance** | | | | | | | | | | |
| Total Revenue and Grants | % GDP | 23.5 | 22.4 | 24.6 | 26.3 | 25.5 | 25.7 | 26.0 | 25.4 | 24.9 |
| Total Expenditure and Net Lending | % GDP | 24.5 | 26.6 | 28.9 | 29.2 | 34.2 | 33.3 | 32.8 | 30.6 | 29.6 |
| Overall Deficit (-) / Surplus (+) | % GDP | -0.9 | -4.2 | -4.3 | -2.9 | -8.7 | -7.6 | -6.8 | -5.2 | -4.7 |
| **External Sector** | | | | | | | | | | |
| Terms of Trade Growth | % | 6.4 | 3.3 | -3.2 | -2.3 | 3.6 | -4.8 | -5.2 | 1.5 | 3.6 |
| Current Account Balance | Million US $ | -2,104 | -3,850 | -4,443 | -3,391 | -2,534 | -2,781 | -3,612 | -3,003 | -2,714 |
| Current Account Balance | % GDP | -4.8 | -8.4 | -10.4 | -8.1 | -6.0 | -6.0 | -8.5 | -6.4 | -5.4 |
| **Debt and Financial Flows** | | | | | | | | | | |
| Debt Service | % exports | 11.6 | 10.9 | 14.1 | 16.8 | 19.1 | 19.9 | 13.2 | 16.8 | 18.4 |
| External Debt | % GDP | 46.2 | 59.5 | 80.9 | 90.9 | 98.7 | 87.7 | 90.6 | 85.8 | 85.1 |
| Net Total Financial Flows | Million US $ | 695 | 1,483 | 1,861 | 1,636 | 1,595 | 1,117 | ... | ... | ... |
| Net Official Development Assistance | Million US $ | 550 | 496 | 807 | 979 | 975 | 1,093 | ... | ... | ... |
| Net Foreign Direct Investment | Million US $ | 1,513 | 1,003 | 1,036 | 845 | 652 | 660 | ... | ... | ... |
| **Demography** | | | | | | | | | | |
| Total Population | Millions | 10.9 | 11.6 | 11.9 | 12.0 | 12.2 | 12.3 | 12.4 | 12.5 | 12.6 |
| Population Growth Rate | % | 1.0 | 1.1 | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 |
| Urban population | % of total | 65.1 | 66.4 | 67.4 | 67.7 | 68.1 | 68.5 | 68.9 | 69.3 | 69.6 |
| Life Expectancy at Birth | Years | 75.4 | 75.7 | 76.0 | 76.0 | 75.3 | 73.8 | 74.3 | 76.9 | 77.2 |
| Fertility Rate | births per woman | 2.1 | 2.3 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 |
| **Poverty and Income Distribution** | | | | | | | | | | |
| Pop. living below national poverty line | % of total population | 20.5 | 15.2 | ... | ... | ... | ... | ... | ... | ... |
| Population living be ow $2.15 a day | % of total population | 1.5 | 0.1 | ... | ... | ... | ... | ... | ... | ... |
| Gini Index | % | 35.8 | 32.8 | ... | ... | ... | ... | ... | ... | ... |
| **Labor Indicators** | | | | | | | | | | |
| Labor Force participation (total) | % | 46.9 | 47.1 | 46.9 | 46.9 | 44.6 | 45.2 | 45.7 | 45.9 | ... |
| Labour Force participation (youth) | % | 31.2 | 28.9 | 30.2 | 30.1 | 27.7 | 28.4 | 28.9 | 29.1 | ... |
| Unemployment rate (total) | % | 13.1 | 15.2 | 15.5 | 15.1 | 16.4 | 16.3 | 16.1 | 16.1 | 16.1 |
| Unemployment rate (youth) | % | 29.3 | 35.1 | 36.0 | 35.3 | 38.5 | 37.3 | 37.1 | 37.1 | 37.1 |
| **Natural Resources rents** | | | | | | | | | | |
| Total natural resources rents | % GDP | 5.8 | 2.4 | 2.6 | 2.1 | 1.4 | ... | ... | ... | ... |
| Oil rents | % GDP | 4.0 | 1.2 | 1.8 | 1.6 | 1.0 | ... | ... | ... | ... |
| Natural gas rents | % GDP | 0.5 | 0.4 | 0.3 | 0.2 | 0.1 | ... | ... | ... | ... |
| Mineral rents | % GDP | 1.2 | 0.4 | 0.3 | ... | ... | ... | ... | ... | ... |
| Forest rents | % GDP | 0.2 | 0.4 | 0.2 | 0.3 | 0.3 | ... | ... | ... | ... |
| Coal rents | % GDP | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **Natural Capital Renewable Resources** | | | | | | | | | | |
| Arable land | 1000 hectare | 2,823.0 | 2,570.0 | 2,569.5 | 2,595.0 | 2,595.0 | ... | ... | ... | ... |
| Agricu tural land | 1000 hectare | 10,038.0 | 9,834.0 | 9,700.5 | 9,731.0 | 9,731.0 | ... | ... | ... | ... |
| Other land | 1000 hectare | 4,810.6 | 5,006.9 | 5,135.8 | 5,103.8 | 5,102.3 | ... | ... | ... | ... |
| Forest land | 1000 hectare | 687.4 | 695.1 | 699.7 | 701.2 | 702.7 | ... | ... | ... | ... |
| Planted Forest | 1000 hectare | 197.7 | 206.1 | 211.1 | 212.8 | 214.5 | ... | ... | ... | ... |
| Annual freshwater withdrawals, tota | % of internal resources | 74.3 | 86.4 | 90.1 | 90.1 | ... | ... | ... | ... | ... |
| Total Fisheries Production | metric tons | 98,625.8 | 130,326.4 | 125,430.2 | 128,565.8 | 126,739.3 | ... | ... | ... | ... |
| **Climate Finance and Green Growth** | | | | | | | | | | |
| Total Climate Finance* | Million US $ | ... | ... | ... | ... | 969.8 | ... | ... | ... | ... |
| Green Growth Index** | % | 46.3 | 47.3 | 49.6 | 49.6 | 49.6 | 49.6 | ... | ... | ... |

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

Notes: ... Data Not Available (e) Estimations (p) Projections

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