SOLVING PARADOXES OF AFRICA'S DEVELOPMENT

Financing, Energy and Food Systems

United Nations
Office of the Special Adviser
on Africa

This publication has been developed as part of OSAA's mandate to undertake analytical work that contributes to improving coherence and coordination of the UN System support to Africa and to facilitate intergovernmental deliberations on the linkages between peace and development in Africa.

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In the face of mounting challenges, Africa has an opportunity to turn adversity into innovation, harnessing its rich human capital and natural and financial resources to create inclusive and sustainable financing, energy, and food systems.

Public school students in Bamako, Mali.

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Acknowledgment

This flagship report draws on the report of the Secretary-General, "**Solving the paradoxes of development in Africa: financing energy and food systems**" (A/78/309). It has been prepared by (in alphabetical order) Bitsat Yohannes-Kassahun, Liwaaddine Fliss, Rui Xu, and Utku Teksoz. Mafizul Islam coordinated the data management and visualization while Toyosi Odusola provided support and contributions during his internship at the Policy and Monitoring Branch. The team worked under the coordination of Kavazeua Katjomuise, Senior Economic Affairs Officer, the overall supervision of Jean-Paul Adam, Director of Policy, Monitoring and Global Advocacy and the leadership of Cristina Duarte, Under-Secretary-General and Special Adviser on Africa.

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Executive summary

Africa's sustainable development is hampered by three key paradoxes: rich in financial resources but in debt distress; rich in energy resources but with persistent deficits in access to electricity; rich in agricultural resources but with high levels of food insecurity. These three paradoxes intersect and feed one another. Therefore, solving the paradoxes will require a holistic and integrated approach, recognizing the interconnectedness and synergies among them as well as the multiplier effects of interventions. The report positions domestic resource mobilization (DRM) as a game changer, energy as a driver and food systems as sources of resilience, three critical dimensions of the sustainable economic transformation required, while institutions (SDG 16) are enablers to accelerate progress on the SDGs. The report shows that domestic resource mobilization, if harnessed effectively, can potentially unlock energy finance, which is key to improving energy access and just transition, which in turn will unlock Africa's agriculture and food system potential. All of these will need to be underpinned by strong institutions as cross-cutting enablers. Meanwhile, digitalization and deployment of technological solutions can help improve transparency and efficiency in resource mobilization and utilization.

Strong, effective institutions are critical in addressing the financing-energy-food system paradoxes.

Evening in the Central Business District. Kigali, Rwanda.

Introduction

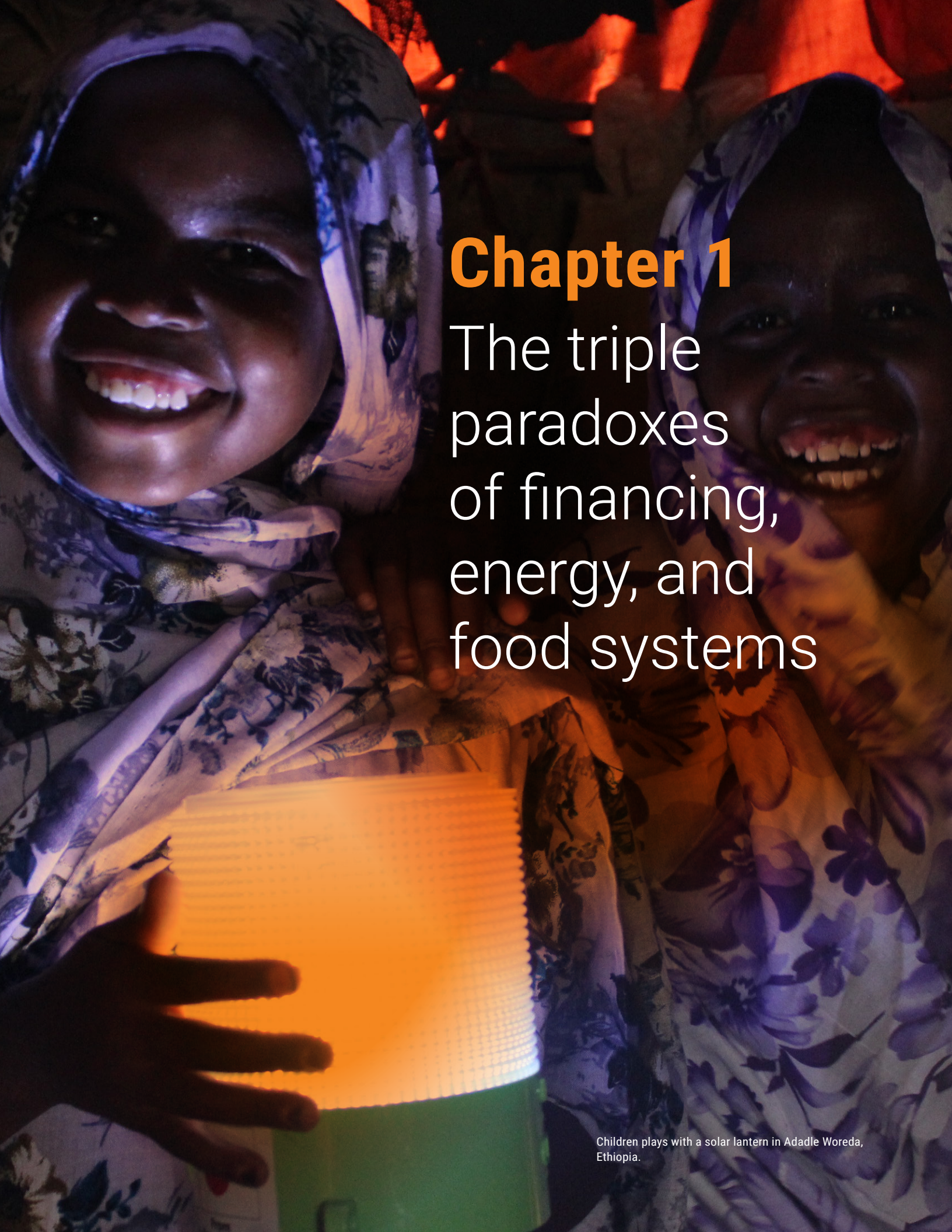
Africa is characterized by a relatively low level of development and pervasive poverty in the midst of abundant resource endowment. Despite progress in recent years, the continent remains off track in attaining the Sustainable Development Goals. The continent's development potential is hampered by three intersecting paradoxes: rich in financial resources but in debt distress; rich in energy resources but with continued deficits in access to electricity; rich in agricultural resources but with high levels of food insecurity.

A number of factors have contributed to the paradoxes. The structure of the African economies inherited from colonialism—heavily oriented towards external markets have contributed to the financing-energy-and agriculture paradoxes. These structures were essentially geared toward ensuring the extraction of surplus from African economies for the benefit of advanced economies. Consequently, the continent has become increasingly dependent on energy and food imports as well as external financial resources for its development. Thus, African economies are often unresponsive to internal stimuli for growth. Further, the cascading and intersecting global crises, including COVID-19, the war in Ukraine, and energy and climate crises, have exposed the weaknesses of the existing financing, energy and food systems in Africa. This has been exacerbated by an unfair international financing and trading system.

Therefore, solving these three paradoxes will be indispensable to unleashing Africa's development potential and further unlocking the power of the middle class. Given the weak state of the finance, energy, and food systems, solving the paradoxes will require a more holistic and integrated approach, recognizing the interconnectedness and synergies among them as well as the multiplier effects of interventions. This is important as the three paradoxes intersect and feed on one another. The lack of financing limits investment in energy, which in turn negatively impacts agricultural production.

The lack of strong institutions, which are considered enablers of sustainable development, also contributed to the three paradoxes. Though some institutions may exist in various forms, they are not sufficiently robust to prevent these paradoxes from prevailing. Therefore, strong, effective institutions are critical in addressing the financing-energy-food system paradoxes. The report is organized as follows: after a brief introduction, Chapter 1 discusses the three paradoxes, showing their interlinkages. Chapter 2 presents policy measures and actions to solve the paradoxes using the nexus between the three paradoxes as a multiplier intervention. Before concluding, Chapter 3 delves into the pivotal role of policies and institutions, particularly in the context of SDG 16, as catalysts for development.

Despite progress in recent years, the continent remains off track in attaining the Sustainable Development Goals.



Chapter 1

The triple paradoxes of financing, energy, and food systems

Children plays with a solar lantern in Adadle Woreda, Ethiopia.

Introduction

Africa finds itself at a critical juncture, grappling with the negative impacts of cascading and intersecting global crises. These crises, including the COVID-19 pandemic, climate change, and economic uncertainties, including those resulting from the war in Ukraine, have far-reaching implications for African countries' financing, energy, and food systems.

Africa, with its rich resources, cultural heritage, and rapidly growing population, stands at the forefront of triple paradoxes (Figure 1). As the continent strives for economic development, it confronts the financing paradox, wherein the need for additional financial resources to power growth clashes with the leakages of financial flows posed by a vulnerable financial ecosystem that costs the Continent to lose around $500-600 billion. Compounded by the ripple effects of global shocks, such as the pandemic-induced economic downturn and fluctuating commodity prices, Africa's financing landscape faces substantial strain.

Furthermore, the energy paradox arises as Africa simultaneously holds vast energy potential while continuously hamstrung by a lack of access to electricity, where more than half of Africa suffers from energy shortages. As the world strives for a sustainable future, Africa faces the challenge of reconciling its energy needs with the imperative to mitigate and adapt to climate change. This paradox calls for a delicate balance between exploiting its conventional energy resources and rapidly embracing clean, renewable alternatives to power its industries, cities, and rural communities to benefit from reliable and affordable energy sources.

Africa holds vast energy potential.

Africa finds itself at a critical juncture, grappling with the negative impacts of cascading and intersecting global crises.

The third paradox, the food system paradox, is equally pressing. Africa is endowed with fertile land and diverse agricultural ecosystems, yet almost 60 per cent of its population continues to grapple with food insecurity and malnutrition. The challenges of climate change, economic instability, and population growth put more stress on the continent's food systems. Climate change and extreme weather events disrupt agricultural production, exacerbating food scarcity, while economic shocks disrupt supply chains and increase food prices, further compromising food security.

As the world strives for a sustainable future, Africa faces the challenge of reconciling its energy needs with the imperative to mitigate and adapt to climate change.

Figure 1

Africa's Development paradoxes

01

Africa's Financing Paradox

DUE TO THE LACK OF DRM

Continent loses annually almost

$500 - $600 B

Which is more than the GDP of 35 African nations combined

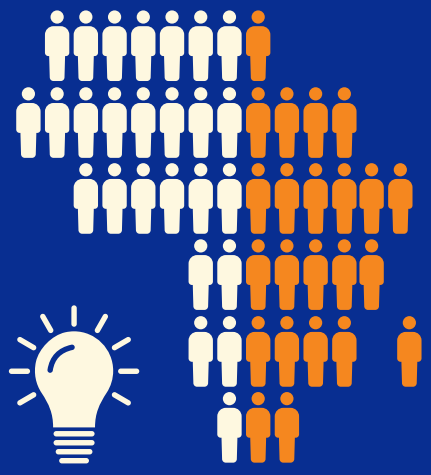
02

Africa's Energy Paradox

DUE TO THE LACK OF DRM AND ENERGY ACCESS

>50% of Africa

suffers from energy crisis



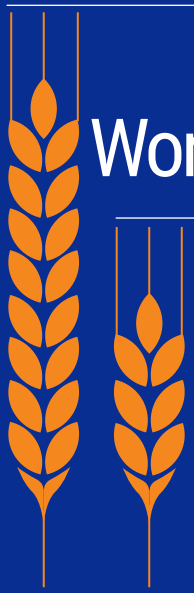
03

Africa's Food Systems Paradox

THE FINANCIAL AND ENERGY PARADOXES AS ROOT CAUSES OF THE FOOD PARADOX

Moderate or severe food insecurity

Africa **57.9%**



World **29.3%**

Source: OSAA staff calculation based on data from World Development Indicator, WB | AfDB | FAOSTAT | SDG Database, UNSD | OECD | PERI, UMASS.

These three paradoxes are not only interrelated but constitute a chain in which the financial paradox feeds and amplifies the energy paradox, which in turn also feeds the food paradox. The availability of financial resources for investment is the critical entry point to turn the vicious circle into a virtuous circle. As a result, the energy and food paradoxes can only be solved if the starting point of the chain is tackled. This explains why food insecurity remains a major challenge in Africa despite decades-long efforts. The traditional response to hunger, food insecurity, and other consequences of the food paradox has failed to address the financial and energy paradoxes as root causes of the food paradox, undermining attempts to achieve transformational change.

A number of internal and external factors have contributed to the paradoxes. One of the main contributors has been the structure of African economies, inherited from colonialism and heavily oriented to external markets. These structures were geared toward ensuring the extraction of surplus from African economies for the benefit of more advanced economies. As a result, Africa's policy-making has been shaped for the past 60 years by an inherited extractive business model focused on commodity export. The current high levels of dependency on finance, energy, and food are just one of the outcomes of this model that has prevented African countries from looking beyond extractive industries for other economic engines in the agriculture, energy and industry sectors. This has resulted in a limited economic fabric that hampers the continent's capacity to respond meaningfully to internal stimuli for growth or react to external shocks. Neo-colonial structures, which prevail until today in the international finance and trading system, contribute to the persistence of this model.

The structural nature of the problem and its sequential character requires the activation of a value chain to break the chain of paradoxes. Financing for development, as the starting point of the chain, holds the key to triggering a domino effect. A paradigm shift is required to give primacy to domestic resource mobilization as the game changer. Building country systems that support African countries in better controlling and managing their economic and financial flows would represent a major step toward unlocking energy financing, technology, and, consequently, energy access. Energy would then become a driver of development, delivering a key success factor for food systems transformation and facilitating progress in multiple areas, from health and education to industrialization. Only then would African countries be in a position to address the food paradox and achieve resilience successfully.

Leveraging domestic resource mobilization as a game changer, energy as a driver and the food systems' transformation as a path to resilience requires activating public institutions as the enablers of change. Effective public institutions guided by solid and transparent policy frameworks are indispensable to ensure the efficiency of development efforts and multiply their impact.

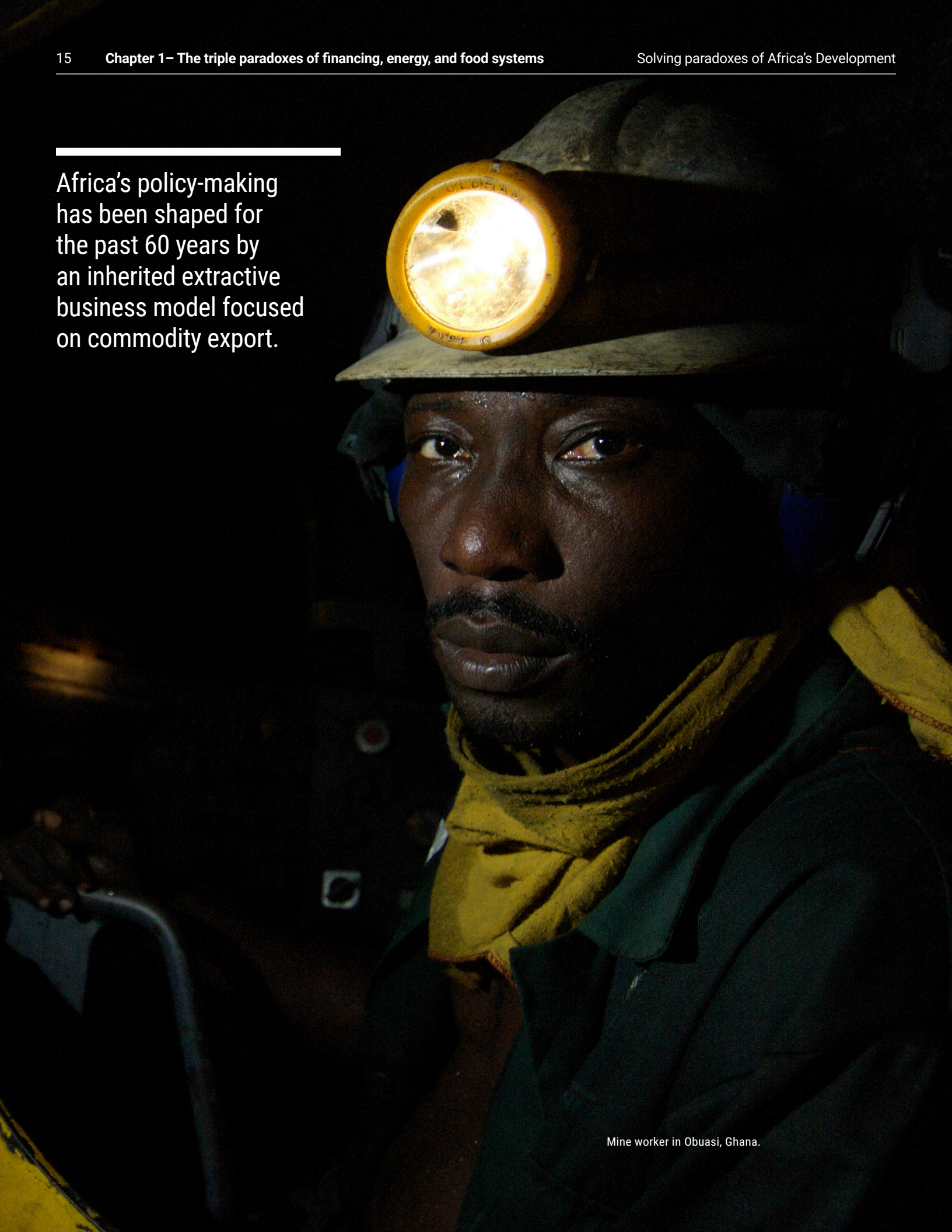
The traditional response to hunger, food insecurity, and other consequences of the food paradox has failed to address the financial and energy paradoxes as root causes of the food paradox.

Implementing this value chain is necessary for unleashing Africa's development potential and further unlocking the power of the continent's middle class to realize the vision of the 2063 Agenda.

To better understand this phenomenon, the current chapter explores the intricate dynamics of the triple paradoxes of financing, energy, and food systems in Africa. It examines the impacts of the intersecting global crises. It delves into the weaknesses of Africa's financial ecosystems, the prospects and challenges of the energy transition, and the missed opportunities of the transformative potential of sustainable agricultural practices.

In the face of mounting challenges, Africa has an opportunity to turn adversity into innovation, harnessing its rich human capital and natural and financial resources to create inclusive and sustainable financing, energy, and food systems. Only through recognizing the nature of these paradoxes, their interconnections, and implications can Africa address these challenges and maximize its chances of achieving sustainable development goals.

Africa's policy-making has been shaped for the past 60 years by an inherited extractive business model focused on commodity export.



Mine worker in Obuasi, Ghana.

Financial Paradox: Rich in financial resources but in debt distress

Africa's financial paradox is marked by two contrasting realities: the continent faces a significant financing gap while being a 'net lender' to the rest of the world as illicit financial flows out of the continent surpass what it receives in the form of foreign direct investments (FDI) and official development assistance (ODA). This dichotomy is baffling, considering Africa's abundant financial resources, which could significantly address the region's development financing needs if harnessed fully and utilized effectively.

Traditional narratives approach Africa's development as contingent upon international support and consider that achieving sustainable development in the continent depends on the amount of international support received. This logic is built on a misconception. As demonstrated in the OSAA 2022 flagship report[1] and contrary to the widespread misconception, Africa finances a significant portion of its development through tax and non-tax revenue and domestic savings, accounting for more than three-fourths of total financing in 2020—representing about 20 times more than FDI and 16 times more than ODA. Furthermore, the continent loses between $500 and $600 billion annually that are generated but not mobilized.[2]

The excessive focus of the international narrative on external sources of funding has undermined the pursuit of endogenous and home-grown solutions to the continent's sustainable development. Africa has important sources of funding that have not yet been fully tapped for financing development. These include pension funds, assurance funds, and Sovereign wealth funds, whose assets are to a large extent invested abroad. For instance, Botswana and Namibia, two countries with substantial pension funds, have more than half of their pension fund assets invested abroad. This is due to, among others, the capacity of these institutions to manage the risks associated with such investments and the absence of a fair, transparent, clear, and predictable policy framework.[3] Pension funds alone amount to approximately $1.3 trillion, and failing to mobilize their assets effectively constitutes a missed opportunity of at least $100 billion[4] that could be invested towards Africa's sustainable development.

Over the last decade, remittance flows to Africa doubled to $100 billion in 2022. However, they incur relatively high transaction costs and therefore are not being sufficiently leveraged for the continent's development, although according to recent IFAD estimates, there is potential for at least 25 per cent of remittances to be channeled towards savings or investments in the continent.[5] Africa could also take advantage of the rising carbon finance opportunities that have the potential to mobilize between $120 and 200 billion.[6] In addition to potential sources of financing that are not tapped, resources lost due to inefficient domestic resource mobilization systems (such as inefficiencies in public expenditures and redundant tax incentives) account for at least $116 billion every year.[7] Illicit financial flows also drain Africa's vital resources, diverting some $88.6 billion away from development annually.[8] (Figure 2)

Pension funds alone amount to approximately $1.3 trillion, and failing to mobilize their assets effectively constitutes a missed opportunity of at least $100 billion that could be invested towards Africa's sustainable development.

1 OSAA (2022).
2 United Nations (2022).
3 Sy, A. (2017).
4 This figure is estimated based on the hypothesis that 10 per cent of the pension funds' assets in Africa could be invested in infrastructure development.
5 IFAD Platform for Remittances, Investments and Migrants Entrepreneurship in Africa (PRIME Africa). For more details, please see: https://www.ifad.org/en/prime-africa
6 Africa's carbon finance stream can be scaled up to $200 billion per annum. Nairametrics (2022).
7 OSAA (2022).
8 UNCTAD (2020).

Figure 2

Africa's Financial paradox

Rich in financial resources

$100 B

Remittances

$427 B

Private savings

$24 B

Sovereign wealth funds

$1.3 T

Pension funds

$483 B

Public revenue

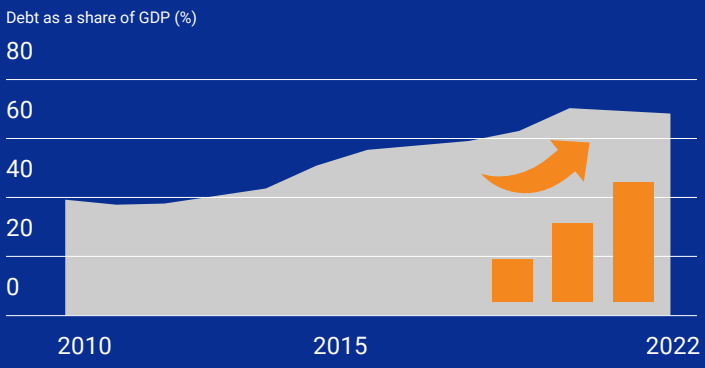
BUT

- Illicit financial flows
- Redundant tax incentives
- Weak institutions
- Missing policy actizon
- Public expenditure inefficiencies

$500 - $600 Billion

not mobilized

Debt stress

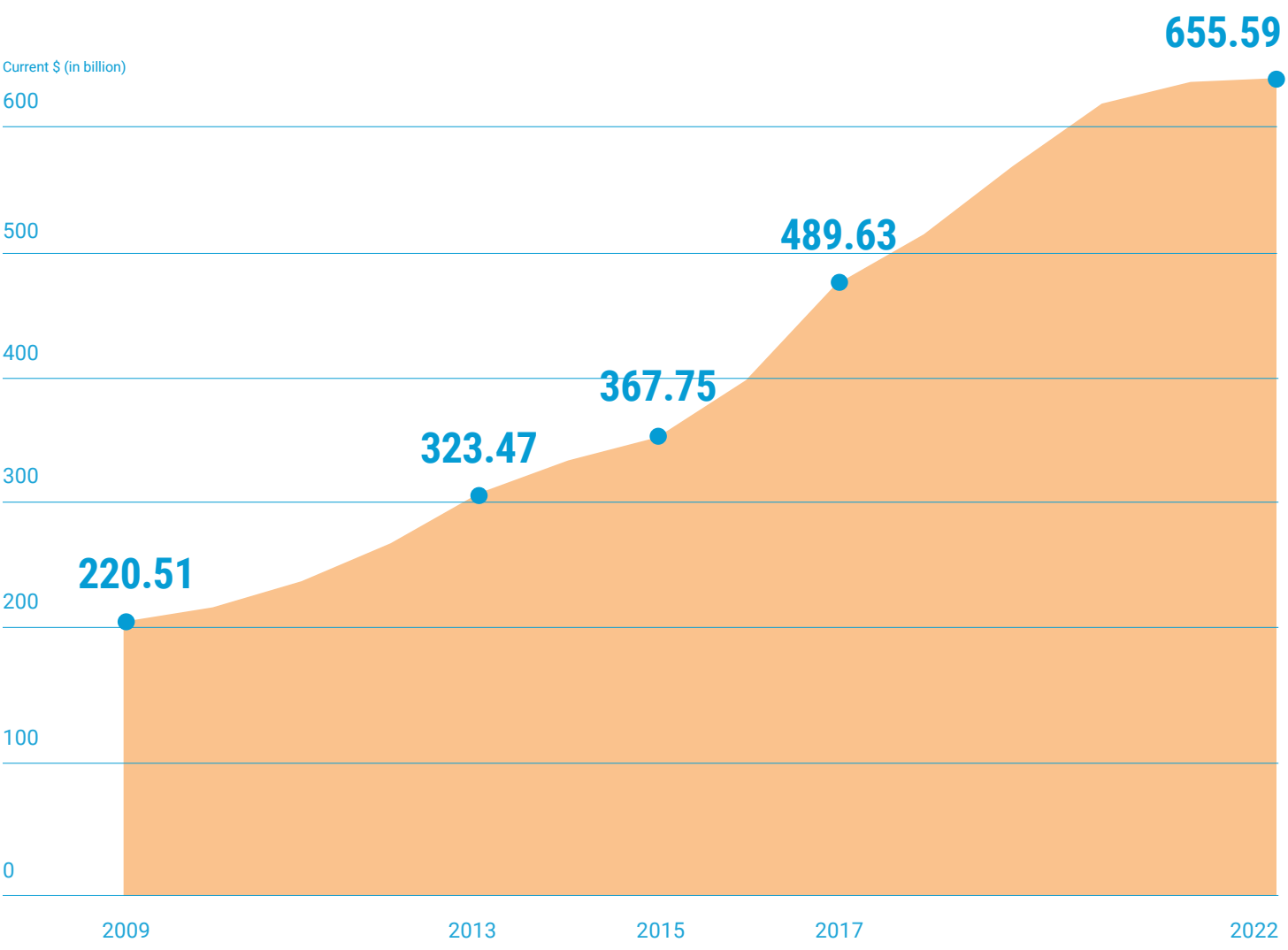


SOURCE: OSAA staff calculation based on data from World Development Indicator, WB | AfDB | OECD | PERI, UMASS | 2022 OSAA report.

A direct result of the outflow of substantial parts of the region's financial resources is that many African countries have to resort to external borrowing, often at exorbitant costs, to finance their growth, structural transformation, as well as investments in social sectors. (Figure 3). This has resulted in higher debt levels—though they are still below the averages recorded during the debt crisis of the 1980s. The composition of external debt has also changed; the share of commercial borrowing increased from 27 per cent in 2011 to 56 per cent in 2021, raising concerns about Africa's debt sustainability.[9]

Against this background, the economic disruptions caused by COVID-19, Climate Change and the war in Ukraine have exacerbated the indebtedness situation on the continent, with 63 per cent of African countries being either at high risk or already in debt distress and subject to debt relief initiatives. Ghana's default on its external debt in 2022, estimated at $28.4 billion, and Zambia's default on an estimated $17 billion external debt in 2020 are striking examples. Ghana succeeded in restructuring its $10.5 billion domestic debt and has signed up to restructure its bilateral debts under the G20's Common Framework process. Additionally, most of Africa's sovereign commercial debt is expected to mature in 2024 and 2025. This situation follows a common pattern in which debt vulnerability tends to worsen during external shocks and crises. It illustrates the gravity of the debt situation in Africa, which is structural in nature and, therefore, requires a comprehensive approach. It also explains why Africa is again facing debt distress despite its rich financial resources, portending a severe debt crisis reminiscent of the 1980s.

Figure 3 **Trend of Total External Public Debt (Current $) in Africa**



Source: World Bank International Debt Statistics Database.

The root cause of this paradox lies in the inherent unfairness and dysfunctionality of the global financial system coupled with African countries' weak capacity to effectively mobilize and channel adequate domestic resources toward their development priorities. Various factors, including inadequate international financial tools and frameworks, weak public institutions, poor governance, and lack of transparency, contribute to this predicament. These challenges lead to increased inefficiency in public spending and revenue mobilization, further exacerbating the paradox.

IFFs out of Africa are the heart of Africa's financial paradox. For instance, it is estimated that the continent has lost more than $2 trillion between 1970-2018, representing 94 per cent of the total GDP of the 30 countries studied.[10] Between 2010 and 2018, IFFs out of Africa amounted to more than $858 billion, representing 43 per cent of total IFFs since 1970, corresponding to an average annual loss of 3.8 per cent of its GDP.[11]

This highlights the critical importance for Africa to address its financial paradox by taking measures to curb IFFs, improving the efficiency of public expenditures, harnessing private savings and channeling them toward productive investments, de-risking country profiles as well as managing foreign reserves as a pro-development tool and grasping new opportunities such as carbon markets. This is Africa's only viable and sustainable option to increase its financial resources for development, build resilience, and help mitigate the impact of external shocks and crises.

BETWEEN 2010 AND 2018, IFFs OUT OF AFRICA AMOUNTED TO MORE THAN

$858 B

REPRESENTING

43%

OF TOTAL IFFs SINCE 1970

Illicit Financial Flows (IFFs) out of the continent are the heart of Africa's financial paradox.

This financial paradox has not only severely diminished public resources from Africa's development efforts, but it has also negatively affected the risk profile of African countries by crowding out international capital in two ways: reducing the volume of international capital flows to Africa and increasing the cost of the investment. This crowding-out effect has pushed Africa to a marginal position in international capital markets, including for potentially profitable infrastructure investments, most notably energy finance.

Without adequate financing, African countries face various hurdles in the energy sector. The lack of investment stifles the expansion of energy infrastructure, hindering the establishment of reliable and accessible electricity grids and the adoption of clean and sustainable energy technologies. This impedes the transition towards cleaner energy sources and exacerbates environmental concerns, further compounding the energy challenges the continent faces.

10 OSAA staff calculations based on Political Economy Research Institute, University of Massachusetts Amherst, available at https://peri.umass.edu/capital-flight-from-africa
11 Ibid.

The root cause of this paradox lies in the inherent unfairness and dysfunctionality of the global financial system coupled with African countries' weak capacity to effectively mobilize and channel adequate domestic resources toward their development priorities.

Evening in the Central Business District in Kigali, Rwanda.

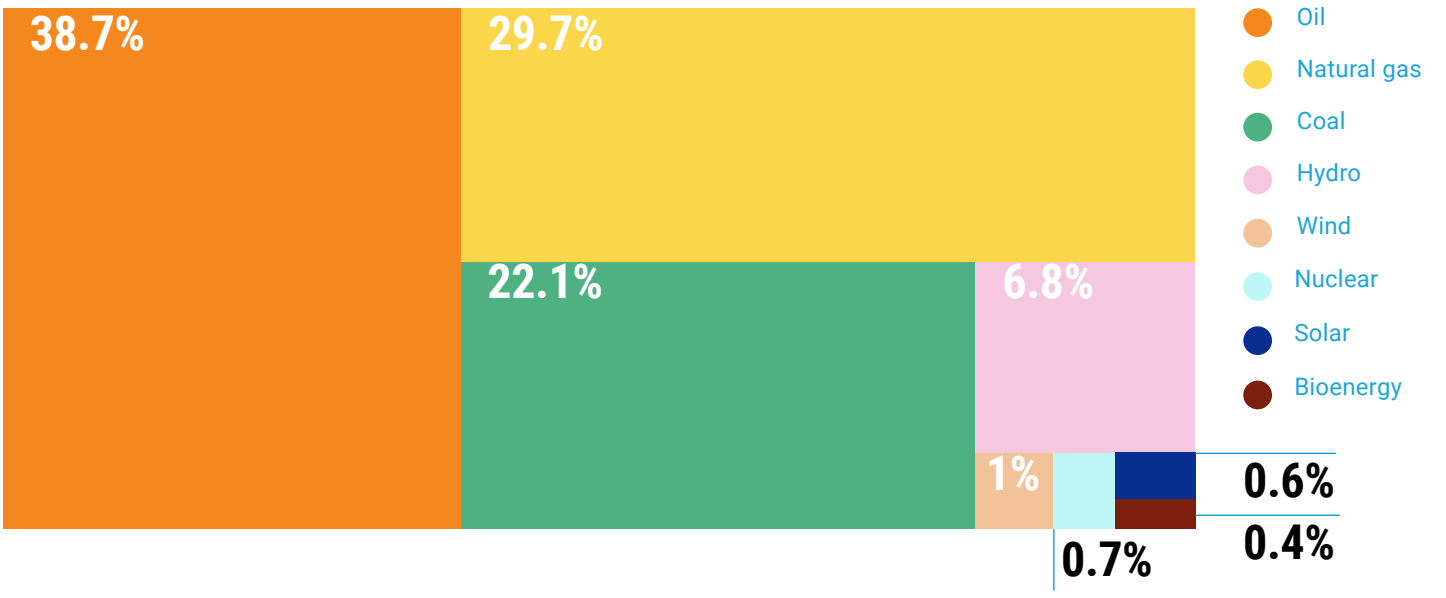
Energy Paradox: Rich in energy sources but essentially without access to electricity

Africa has vast energy resources, including 7.2 per cent of the global oil reserves and approximately 13 per cent of natural gas reserves. Oil makes up the largest share at 38.7 per cent of Africa's energy generation, followed by natural gas (29.7 per cent), coal (22.1 per cent), nuclear (0.7 per cent), hydro (6.8 per cent), wind (1 per cent), solar (0.6 per cent), bioenergy (0.4 per cent). (Figure 4)

However, its fossil-fuel production is primarily export-oriented and remains underutilized due to financing, security, regulatory, and infrastructure challenges and the global push for a carbon-neutral path. Hydropower, solar, and wind energy also have significant potential. However, investment in the sector needs to match its potential. For example, even if the Congo River alone can generate up to 100,000 MW of electricity, equivalent to one-fifth of the world's hydroelectric potential, so far, the largest installed capacity is only 1,424 MW at Inga II.[12] Similarly, the installed solar and wind capacity in Africa was only around 10 gigawatts (GW) for solar in 2023[13] and 6.4 gigawatts (GW)[14] for wind by 2020, underutilized. The continent has only about 1 GW of installed capacity despite an estimated 14,000 MW geothermal potential.[15]

12 World Bank. Available at: https://blogs.worldbank.org/nasikiliza/powering-africa-s-renewable-energy-revolution
13 OSAA Staff calculations using 2023 data from STATISTA. https://www.statista.com/statistics/1278125/leading-countries-in-solar-energy-capacity-in-africa/
14 Africa-EU Energy Partnership (2022).
15 Elbarbary, S. and others (2022).

Figure 4 **Africa's energy generation mix**



Source: Report – Africa Energy Review, 2021, PwC South Africa – using Data from BP Energy Outlook 2020.

Despite all this potential, African countries still suffer from chronic energy shortages and inadequate energy access. Africa is home to 75 per cent of the global population without access to electricity, with 580 million citizens lacking modern energy services. As a result, a significant portion of the population relies on unsustainable and inefficient energy sources such as firewood and biomass.

Moreover, even though Africa is home to 17 per cent of the world's population, the continent accounts for only 3.3 per cent of global primary energy consumption, 1.1 per cent of electricity generation, and 3 per cent of international energy use in industry. Electricity consumption per capita in Africa is among the lowest in the world, at around 600 kilowatt-hours (kWh) per year, with countries such as Niger at 54 kWh per year at the lower end of the spectrum. The global average is around 3,000 kWh per year. This paradox hinders the continent's economic development, social progress, and environmental sustainability. (Figure 5)

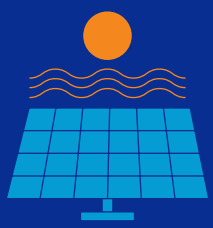
Despite all this potential, African countries still suffer from chronic energy shortages and inadequate energy access. Africa is home to 75 per cent of the global population without access to electricity, with 580 million citizens lacking modern energy services.

Hydropower, solar, and wind energy have significant potential in Africa.

Figure 5

Africa's Energy paradox

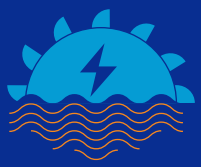
Largest
solar power potential



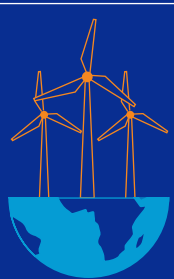
13%
global natural gas

7%
global oil

89%
unused hydropower



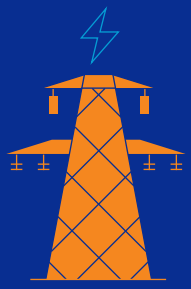
Potential to produce
90x
current global installed wind power capacity



BUT

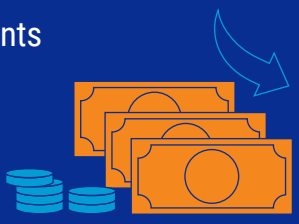
High cost of energy

Limited power transmission

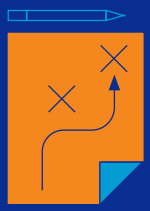


Low reliability & intermittency

Funding constraints



Poor regulatory frameworks and planning processes



580 M without electricity

SOURCE: OSAA staff calculation based on data from World Development Indicator, WB | IEA | IRENA | Statista.

Another aspect of the paradox is the sharp sub-regional disparity in energy consumption and the rural-urban divide in energy access. Only around 25 per cent of Africa's rural population has access to electricity compared with an access rate of about 75 per cent in urban areas.[16] This lack of affordable energy hampers socio-economic development by limiting opportunities for people living in predominantly rural, energy-poor regions and can also fuel grievances over the lack of service delivery. Northern African countries and South Africa make up 71 per cent of Africa's energy consumption, whereas all the other African countries combined make up 29 per cent of the continent's energy consumption. (Figure 6)

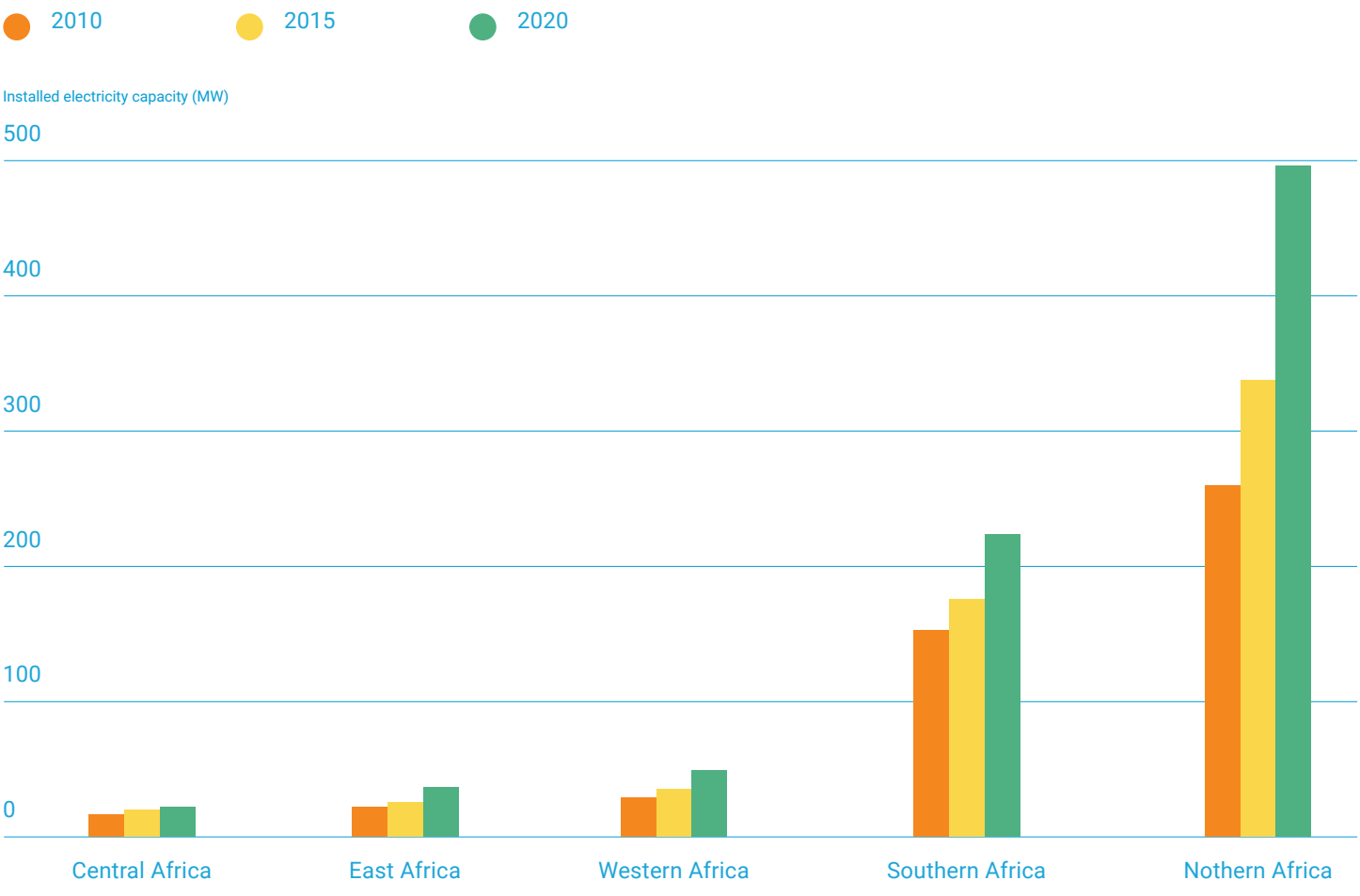
16 Blimpo,M.P and Cosgrove-Davies,M. (2019).

ONLY AROUND

25%

OF AFRICA'S RURAL POPULATION HAS ACCESS TO ELECTRICITY.

Figure 6 **Trends in installed electricity generation capacity by sub-region**



Source: IRENASTAT.

The paradox is also manifested in high power outages and load shedding due to grid failures. Inadequate energy infrastructure costs the continent 2 per cent of its GDP and firms over 6 per cent loss in annual sales and international competitiveness.[17] According to the World Bank's Enterprise Surveys, African firms (excluding North Africa) experience an average of about two months of power outages per year compared to the global average of two weeks yearly. In addition to the frequency of power outages, the duration of outages is higher, where power outages can last for several hours or even days. The average duration of power outages in Africa is around 5.7 hours per day. For example, estimates quoted in a 2023 study for South Africa show that power outages and load shedding have cost the country 1 to 1.3 per cent of its GDP annually from 2007-2022. The economy could be 17 per cent larger today had it not been for power cuts.[18]

THE AVERAGE DURATION OF POWER OUTAGES IN AFRICA IS AROUND

5.7

HOURS PER DAY

African firms (excluding North Africa) experience an average of about two months of power outages per year compared to the global average of two weeks yearly.

Further, it impacts socio-economic development and the achievement of the SDGs. Lack of electricity impacts health, education, and food security. According to the WHO[19], 80 per cent of Africans rely on unclean cooking, which causes over 600,000 Africans to die prematurely per year due to indoor air pollution.[20] It is estimated that 90 million school children do not have power at home, which can impact their educational outcomes.[21]

It is estimated that 90 million school children do not have power at home, which can impact their educational outcomes.

More recently, energy access has been impacted by the cascading and intersecting global crises. African countries are still trying to emerge from the impacts of the COVID-19 pandemic and the ensuing financing and debt crisis, for which they did not have enough resources to cushion themselves. Added to this, the war in Ukraine has led to soaring energy prices, which were unaffordable for many Africans even before the crisis. African countries are also contending with how to position themselves within the significant shifts in international energy policies.

Several factors have contributed to the energy paradox and associated weaknesses in the energy systems. These include the mismatch between Africa's natural resources versus their rate of utilization; the high cost of infrastructure and poverty hampering energy access and affordability; inadequate financing for energy projects; high energy intensity due to outdated and inefficient technologies, which results in energy waste and low productivity; regulatory frameworks that do not adequately allow the integration of the private sector, or different power generation, transmission, and distribution options, including for renewable energy.

17 Sy, M. (2020).
18 Foreign Policy (2023).
19 WHO (2019).
20 Fisher. S, et al. (2021).
21 https://www.one.org/us/stories/a-classrooms-worst-nightmare-energy-poverty/

Overview of the continent's natural resources[22]

With the population expected to reach 2.5 billion by 2050, Africa's energy demand is projected to increase significantly, potentially triple by 2030. To meet this growing demand, investment in energy infrastructure is critical, including building new power plants, upgrading existing ones, and expanding its transmission and distribution networks.

But deficient energy access on the continent is not only a consequence of external shocks. It is a reflection of structural problems that have prevented African countries from leveraging their natural endowments for powering the continent, leading to the energy paradox. The consequences of this paradox are far reaching. Energy is needed in every sector, but it is particularly relevant for transforming agriculture. Climate Smart systems to automate irrigation and promote climate adaptation, cold chains to increase the shelf life of produce, and power to industrialize food processing are just some examples of the interconnectedness of energy, water and food systems and their respective paradoxes. This is why when global energy prices rose to a three-decade high in mid-2022, Africans felt the impact heavily since food and energy costs comprise over fifty per cent of African household consumption.[23]

22 PwC (2021).
23 Ibid.

WITH THE POPULATION EXPECTED TO REACH

2.5

BILLION BY 2050, AFRICA'S ENERGY DEMAND IS PROJECTED TO INCREASE SIGNIFICANTLY, POTENTIALLY TRIPLE BY 2030

To meet this growing demand, investment in energy infrastructure is critical, including building new power plants and upgrading existing ones.

Lack of electricity impacts health, education, and food security.

Office worker in Bloemfontein, South Africa.

Food Systems Paradox: Rich in agricultural resources but a high level of food insecurity

Agriculture remains the largest employer in Africa.

Agriculture remains the largest employer in Africa, with about 70 per cent of sub-Saharan Africans deriving their livelihood from the agricultural sector.

Home to 60 per cent of the world's uncultivated arable land and an abundance of fresh water and sunshine, Africa's agricultural potential is enormous, not only to meet its own food needs but also those of the rest of the world.[24] Agriculture remains the largest employer in Africa, with about 70 per cent of sub-Saharan Africans deriving their livelihood from the agricultural sector.[25]

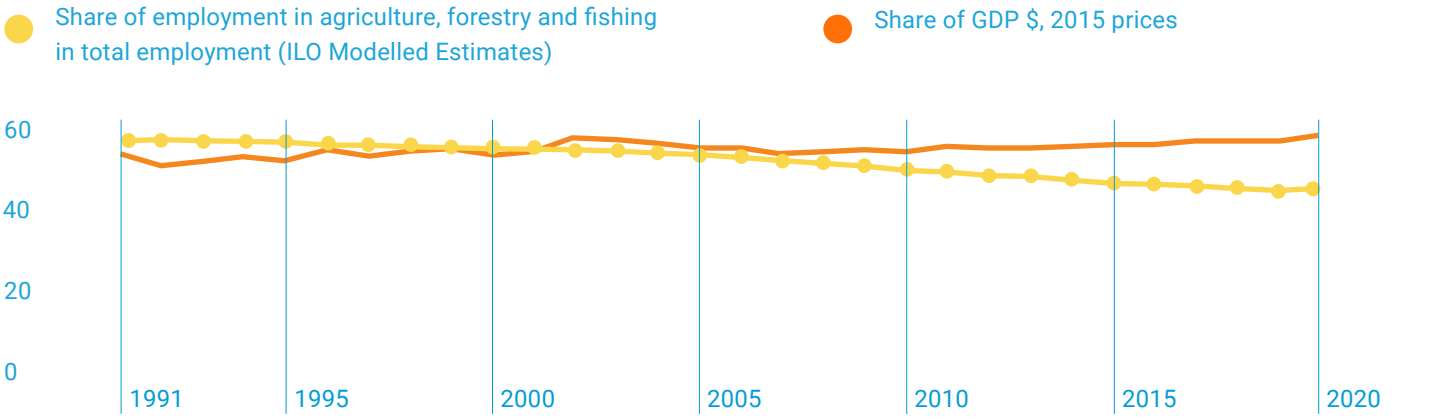
Yet, as Africa's population has doubled in the last thirty years, agricultural production has struggled to keep pace and food insecurity has become one of the region's most severe challenges. In 2021, 278 million people in Africa (20.2 per cent of the total population) were undernourished, an increase of 22 per cent from 2019 and 42 per cent from 2000.[26]

24 African Development Bank. Feed Africa. https://www.afdb.org/en/the-high-5/feed-africa
25 https://www.rockefellerfoundation.org/initiative/alliance-for-a-green-revolution-in-africa/
26 FAO (2022b).

A combined 57.9 per cent of all population suffer from moderate or severe food insecurity, nearly double the world average of 29.3 per cent, and far exceeding other regions, including Latin America (40.6 per cent), Asia (24.6 per cent), Oceania (13 per cent), and North America and Europe (8 per cent).[27] (Figure 7) Within the span of seven years, the prevalence of severe food insecurity has risen from 16.7 per cent in 2014 to 23.4 per cent in 2021, higher than other developing regions such as Southern Asia (21 per cent) and South America (15.1 per cent). Moreover, food insecurity has consistently affected more women than men in Africa.[28] Recent data show that countries in Central and Eastern Africa experience the highest level of food insecurity. (Figure 8) This combination of a sizable economic potential with dire health and nutrition conditions characterizes the food paradox. (Figure 9)

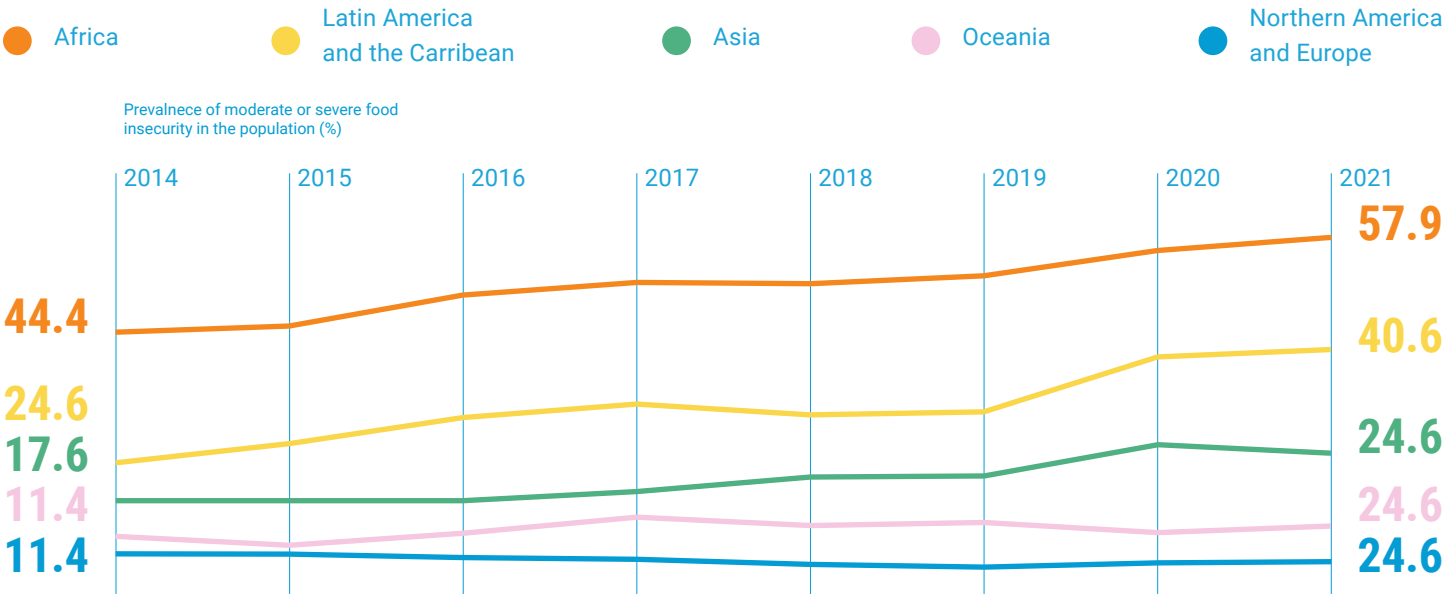
27 FAOSTAT. According to FAO definition, moderate food insecurity is when a person has: insufficient money or resources for a healthy diet; uncertainty about the ability to obtain food; probably skipped meals or run out of food occasionally. Severe food insecurity is when a person has: run out of food; gone on entire day without eating at times during the year.
28 FAOSTAT. Available at https://www.fao.org/faostat/

Figure 7 **Africa's agriculture sector continues to employ half of the work force**



Source: Food and Agricultural Organization of the United Nations

Figure 8 **Moderate and severe food insecurity in Africa**



Source: FAOSTAT. Food and Agricultural Organization of the United Nations.

Figure 9

Africa's Food paradox

60%

of global uncultivated land

Abundance of water and sunshine

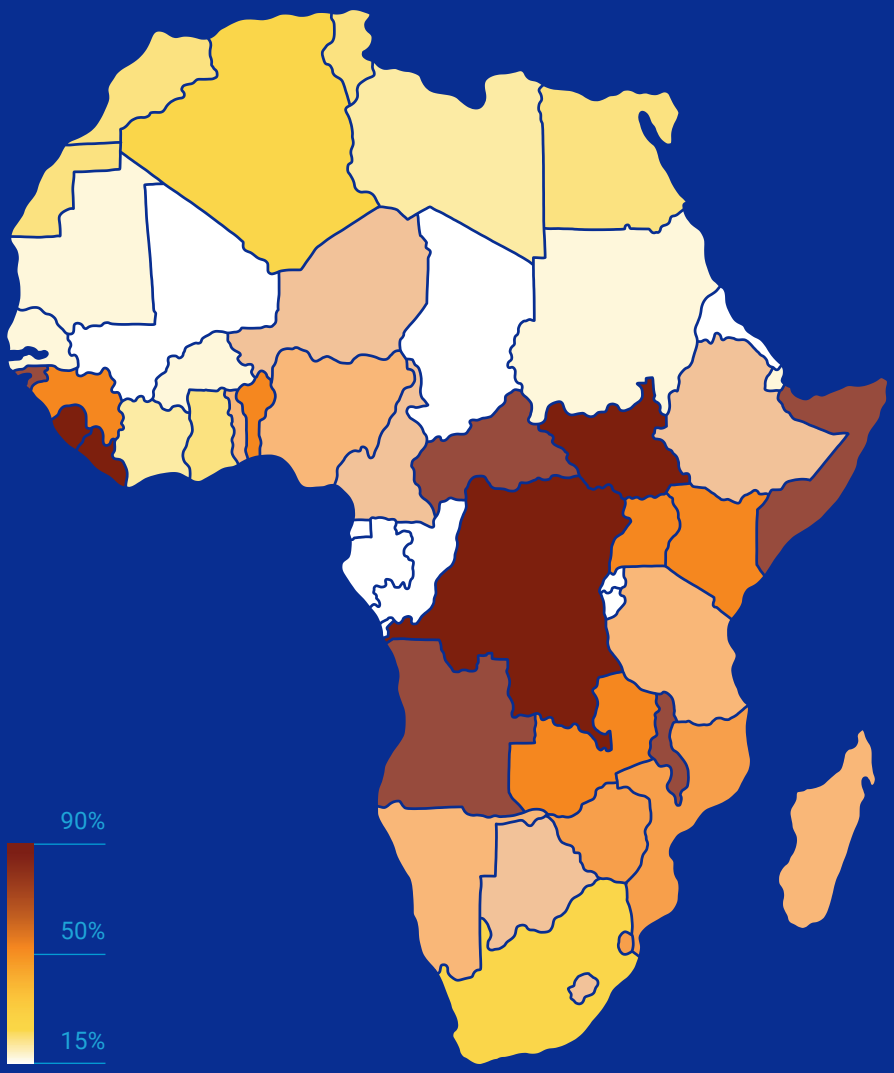
50%

of the continent's workforce

90%

produced by smallholder farmers

Prevalence of food insecurity



BUT LACK OF FINANCE & ENERGY

The map presents the average for 2019–2021, with the exception of Niger (2018–2020) and Seychelles (2016–2018).

** The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

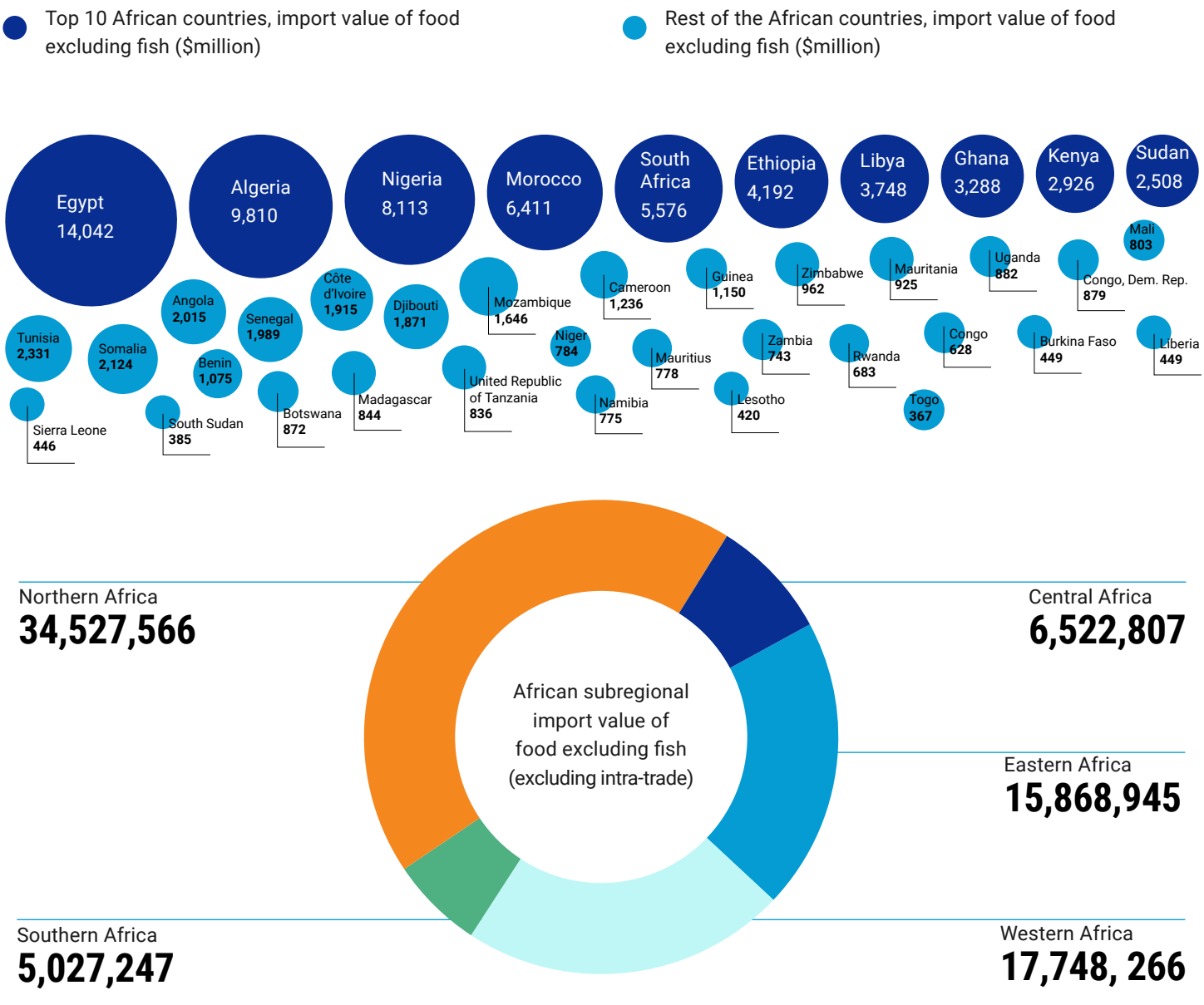
SOURCE: OSAA staff calculation based on data from World Development Indicator, WB | FAOSTAT | ILO | SDG Database, UNSD.

Another manifestation of the food system paradox is the region's heavy dependence on food imports. The 2017-2019 three-year average of cereal import dependency ratio[29] is 29.6 per cent in Africa, much higher than Asia (8.3 per cent) and other net-exporter regions (Latin America and the Caribbean, -7.2 per cent; North America and Europe -27.4 per cent, Oceania -93.3 per cent).[30] In 2021 alone, Africa's food imports (excluding fish) totaled $94.45 billion, including fruits and vegetables, cereals and cereal preparations, meat and meat preparations, beverages, fats and oil (excluding butter), dairy products and eggs, sugar and honey, and other foods. In the same year, Africa's food exports (excluding fish) only amounted to $53.03 billion, resulting in net imports of $41.4 billion. The paradox is also evident in the relation between the export and import value of food by country and by sub-region. (Figure 10) Northern African countries have the highest levels of food imports of all subregions, while Central and Southern Africa have the lowest.

29 The cereal import dependency ratio: a measure of the dependence of a country or region from cereal imports. The cereal imports dependency ratio tells how much of the available domestic food supply of cereals has been imported and how much comes from the country's own production. It is computed as (cereal imports - cereal exports)/(cereal production + cereal imports - cereal exports) x 100. Given this formula the indicator assumes only values less than or equal to 100. Negative values indicate that the country is a net exporter of cereals.

30 FAO (2022b). Table 43.

Figure 10 **African countries' food import value in 2021**



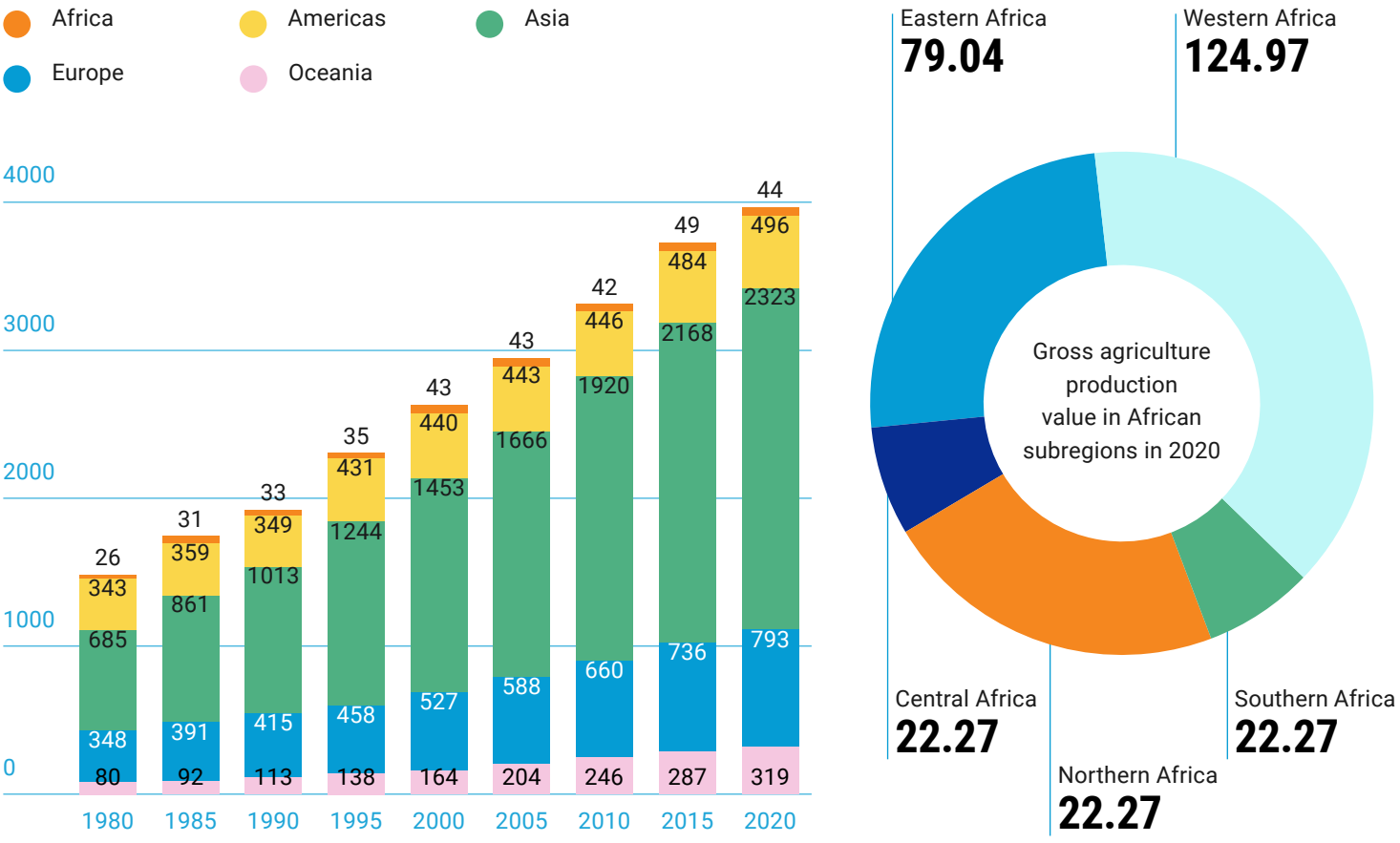
Source: FAOSTAT. Food and Agricultural Organization of the united Nations.

All in all, the food paradox demonstrates that Africa's agricultural potential remains largely untapped. While the value added of agriculture, forestry and fisheries as a share of Africa's GDP saw a gradual increase from 14.5 per cent in 2000 to 16.2 per cent in 2020, the region's share in global agriculture production value remains comparatively low. For example, from 1980 to 2020, Africa's total production value went up from $80 billion to $219 billion, but only accounted for 8.1 per cent of the world's total agriculture production value, well below its potential.[31]

At the subregional level, West Africa accounts for 39 per cent of Africa's agriculture production value, followed by East Africa (25 per cent) and North Africa (22 per cent). (Figure 11) In contrast, Central and Southern African sub-regions only contribute 7 per cent of the total production.[32] In 2020, there were 10 African countries with gross agricultural production value over $10 billion, which account for a combined 70 per cent of the region's production level. The top producers (Figure 12) are concentrated in Northern, Western, and Eastern Africa, with the exception of South Africa. Nigeria is the largest agricultural producer, contributing $66.2 billion in 2020 of the regional total. In contrast, there are nine countries that produced less than $1 billion in agricultural products – Central African Republic, Guinea-Bissau, Mauritius, Gambia, Namibia, Cabo Verde, Botswana, Seychelles, and Equatorial Guinea.[33]

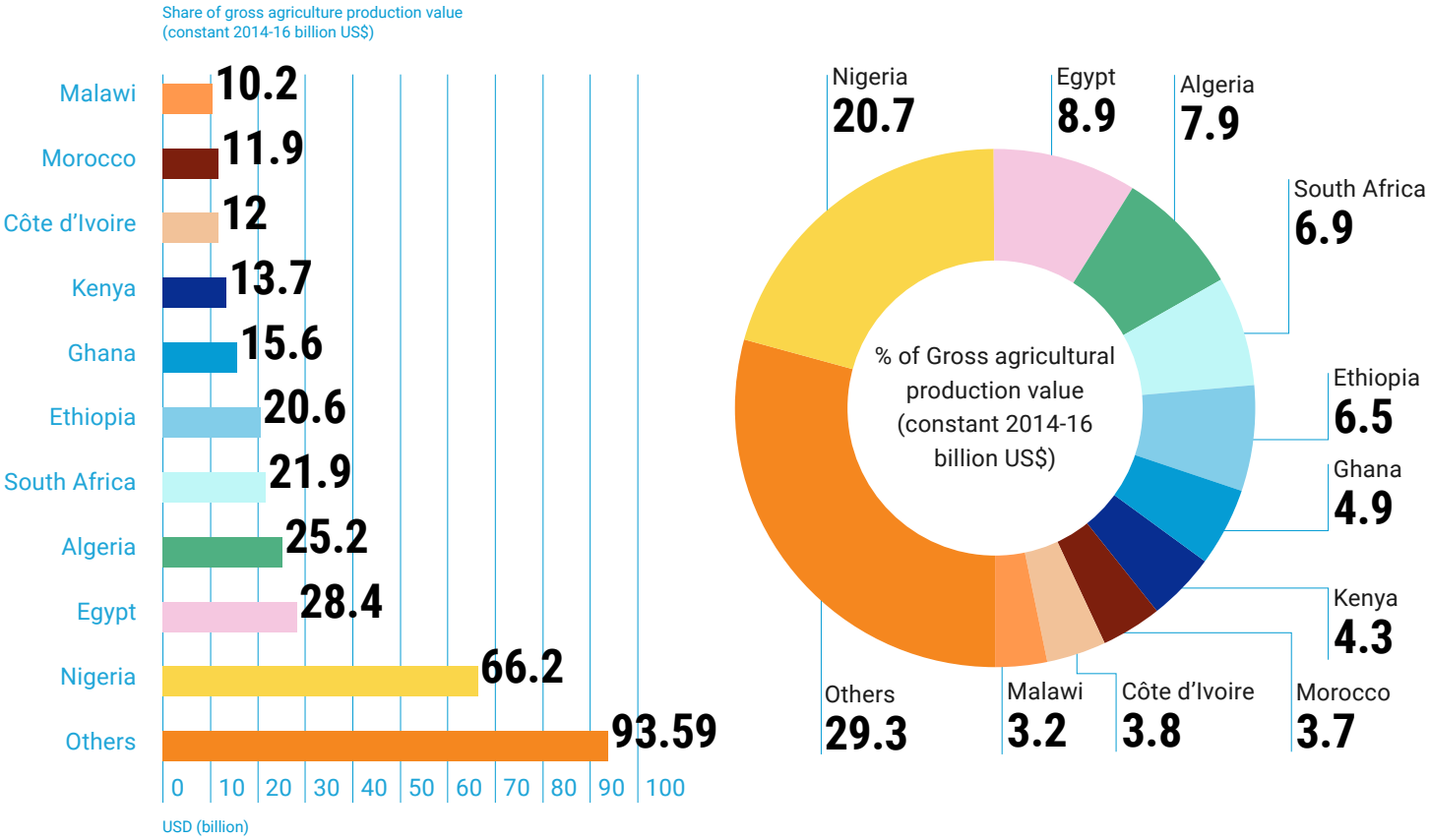
31 World Bank national accounts data, and OECD National Accounts data files.
32 FAOSTAT. Value of Agricultural Production.
33 Ibid.

Figure 11 **Africa's agriculture production value remains low and unevenly distributed**



Source: FAOSTAT. Food and Agricultural Organization of the united Nations.

Figure 12 **Top ten agricultural producers in Africa account for 70 per cent of total production value**



Source: FAOSTAT. Food and Agricultural Organization of the united Nations.

The problems bedeviling Africa's agriculture are multifaceted.[34] These include low use of agricultural inputs such as inorganic fertilizers, high-yield seeds, and pest control; lack of modern farming equipment and technology; insufficient land use; low agricultural labor productivity; climate vulnerability and losses due to weather shocks; lack of access to reliable energy; lack of access to credit especially for smallholder farmers; insufficient skills and capacity; low level of diversity in agricultural commodities, production systems, and markets; export dependency; slow progress towards industrialization and trade integration; debt problems and poor financial management. Given the importance of food and nutrition, agricultural transformation in Africa must promote agricultural value chains, improve market access, and create beneficial continental trade and global exports. This has the potential to diversify economies, create millions of local jobs, raise incomes, build social cohesion, and improve socioeconomic stability, contributing to peace building and conflict mitigation in the long-term.[35]

The problems bedeviling Africa's agriculture are multifaceted.

34 IMF (2022), World Bank (2017), Bjornlund, V, and others (2020).
35 African Development Bank. Feed Africa, available at https://www.afdb.org/en/the-high-5/feed-africa

Given the importance of food and nutrition, agricultural transformation in Africa must promote agricultural value chains, improve market access, and create beneficial continental trade and global exports.

Fruits and vegetables stands run by women cross-border traders in Central Africa.

Impacts of the cascading and intersecting global crises on the financing, energy and food systems

In the wheat trade, Africa accounted for 11 out of the 25 countries that sourced over 50 per cent of their wheat imports.

Coming on the heels of the COVID-19 Pandemic and climate crisis, the war in Ukraine exacerbated weaknesses in Africa's financing, energy, and food systems. Globally, efforts to mitigate the effects of the COVID-19 pandemic prevented the functioning of several sectors, like the agricultural sector. That led to supply chain challenges in international markets and devastating economies amidst a global health crisis. Several developed countries responded to the dire economic situation with rounds of inflationary spending (combined with other monetary and fiscal policy tools) to boost supply and demand and fast-track recovery.

The situation was worse in many African countries compared to the rest of the world, owing to their acute vulnerability to external shocks. While the COVID-19 pandemic heightened food insecurity globally, the threats were more severe in Africa owing to its heavy dependence on food imports (over 80 per cent of its food was sourced from the rest of the world in 2019, according to UNCTAD).[36] In the wheat trade, Africa accounted for 11 out of the 25 countries that sourced over 50 per cent of their wheat imports from Russia and Ukraine in 2021 – Eritrea, Somalia, Madagascar, Egypt, Namibia, Tanzania, Libya, Congo, Rwanda, Djibouti, and Senegal. Eritrea imported the entirely of its wheat supply from Russian Federation and Ukraine.[37]

36 UNCTADstats database.
37 FAO (2022b).

Disrupted agricultural supply chains coupled with lower domestic production, financial insecurity resulting from job losses, rising temperatures, and more extreme weather catastrophes increased hunger and malnutrition throughout the continent. For example, the number of South Africans affected by moderate to severe food insecurity increased by 3.8 million from 2019 to 2020, while those severely food insecure increased by 4.7 million in the same period.[38]

The War in Ukraine disrupted the supply of cereals, fertilizer, and natural gas in the international market and skyrocketed the price of energy, food, and, subsequently, other commodities. According to the data from the Food and Agriculture Organization of the United Nations (FAO) Food Price Index, commodity prices in global markets increased by 15 per cent from January 2022 to March 2022 and global oil prices increased by 26 per cent. Cereal prices increased by 19 per cent from January to their peak in May 2022. From January to March 2022, Brent Crude oil prices in South Africa increased by 27 per cent)[39], and in Nigeria, the average cost of liquified petroleum gas (cooking gas) increased by 17 per cent, white maize by 12.1 per cent, and groundnut oil by 10.6 per cent.[40] The resulting heightened inflation and cost-of-living crisis incentivized many countries to enact aggressive monetary-tightening policies.

Regarding the impact of the interlocking crisis on the financing systems, this manifested mainly through reduced inflows of external private and public financing as well as shrinking government revenue due to growth deceleration. The contractionary monetary policies pursued by the world's major central banks compounded the impact and triggered a reversal in capital flows out of Africa. To tackle inflation, the United States started rounds of interest rate hikes that raised borrowing costs by increasing the U.S. dollar's value. That incentivized lenders to move money away from riskier investments in Africa to safer and more lucrative investments in the United States. In response to these developments, African countries, in turn, have prompted hikes in interest rates across the continent to fight inflation and stem further outflow of capital. As a result of this global uncertainty, the value of several African currencies depreciated, increasing their borrowing and debt-servicing costs as they needed to borrow more to recover from the shocks. For example, the Ethiopian Birr, Nigerian Naira, South African Rand, and Kenyan Shilling depreciated by 5.45 per cent, 9.7 per cent, 18.54 per cent, and 12.5 per cent, respectively, over the period March 2022 to March 2023.[41] South Africa's Rand was especially vulnerable because of its strong integration within the global economy and financial markets. According to data from the International Monetary Fund, debt as a percentage of GDP in Africa also grew from 49.8 per cent in 2019 to 56.54 per cent in 2022. Debt servicing as a percentage of government expenditure in African countries increased from 6 per cent in 2019 to 10.6 per cent in 2023, diverting resources away from investment in productive sectors and social programes.[42]

Despite several efforts to reduce the impact of COVID-19 and the war in Ukraine—like the Black Sea Initiative brokered by the United Nations and Turkey that tried to resolve many of the supply restrictions in the Black Sea ports—inflation remained high. The World Economic Situation and Prospects 2023 report projects global inflation at 6.5 per cent in 2023. Although commodity prices in international markets decreased by 22 per cent from the record high in March 2022 to April 2023, they are still 21 per cent higher than in January 2020.[43] However, the wages of many Africans stagnated or decreased from their pre-pandemic levels as many lost their jobs. Vulnerable communities increasingly face food and energy insecurity while their governments spend more on servicing debt and imports and less on much-needed social programmes.

DEBT SERVICING AS A PERCENTAGE OF GOVERNMENT EXPENDITURE IN AFRICAN COUNTRIES INCREASED FROM

6%

IN 2019 TO

10.6%

IN 2023

38 Statistics South Africa available at https://www.statssa.gov.za/
39 South Africa's Mineral Resources and Energy Department, available at https://www.dmr.gov.za/ and Statistics South Africa, available at https://www.statssa.gov.za/
40 Nigeria's National Bureau of Statistics, available at https://www.nigerianstat.gov.ng/
41 Available at https://tradingeconomics.com/
42 World Bank (2022).
43 FAO Food Price Index.

Regarding Africa's food systems, the war in Ukraine slowed the recovery of the domestic food supply from the pandemic and disrupted the international food market. The high energy costs and supply chain challenges directly impacted Africa's agriculture. Ukraine and Russia are the two largest fertilizer exporters to Africa, and conflicts in the area have restricted their supply. High natural gas prices and fertilizer export restrictions also disincentivize fertilizer production as their inputs are natural gas intensive. As a result, in November 2022, the price of fertilizers registered an increase of 250 per cent starting in 2019. Despite successful efforts to eliminate restrictions on fertilizer exports, the International Food Policy Research Institute's (IFPRI) Food and Fertilizer Export Restrictions Tracker cites five active fertilizer export restrictions from China, Russia, Ukraine, and Vietnam. Simultaneously, the eleven African countries that sourced over 50 per cent of their wheat from Russia and Ukraine in 2021 experienced shortages in the global food supply market. According to the United States Department of Agriculture's Foreign Agricultural Service, Egypt's wheat imports from Ukraine fell by 73.6 per cent from 2021 to 2022.

The Ukraine Crisis skyrocketed already unaffordable energy prices and presented an opportunity to improve investments in the continent's energy infrastructure and draw attention to its energy insecurity. For instance, the increase in the price of gas and other fuels by 13.6 per cent in Ghana from January to May 2022 had drastic effects.[44] The energy price increase and food inflation created a cost-of-living crisis across the continent.

Africa has an opportunity to change its energy policies and role in the international energy market, moving beyond a strategy essentially focused on mineral extraction for export to one that seeks to harness its abundant mineral wealth for sustainable development, value addition, job creation and meeting its energy needs.

High energy costs and supply chain challenges related to the war in Ukraine directly impacted Africa's agriculture.

Despite the devastating effects of the war in Ukraine on household finances, it provides Africa an opportunity to change its energy policies and role in the international energy market, moving beyond a strategy essentially focused on mineral extraction for export to one that seeks to harness its abundant mineral wealth for sustainable development, value addition, job creation and meeting its energy needs. Months after the 2021 United Nations Climate Change Conference, where several developed countries stated their intentions to reduce investment in natural gas development in Africa, many of those countries renewed their interest in African natural gas to diversify away from Russian natural gas. These developments allow Africa to negotiate better deals with Europe and the United States and help to display the urgency of Africa's energy insecurity. However, African countries must be diligent in not exporting all their natural gas outside the continent and invest in the development of African natural gas infrastructure to improve energy access and address policy scenarios consistent with the Paris Climate Agreement.

44 Ghana Statistical Services, available at https://statsghana.gov.gh/

By adopting a holistic perspective and considering the complex interactions among these paradoxes, Africa can pave the way towards a more prosperous, equitable, and resilient future.

A young tree growing in Katfoura village on the Tristao Islands in Guinea.

Conclusion

The triple paradoxes of financing, energy, and food systems in Africa reveal the complex and contradictory realities faced by the continent. Africa possesses abundant financial resources, yet it grapples with a significant financing gap and increasing debt distress. The energy paradox highlights Africa's rich energy resources, yet the continent still faces chronic energy shortages and inadequate access. Similarly, Africa's agricultural potential is vast, yet it struggles with high levels of food insecurity and heavy dependence on food imports.

The financial paradox in Africa stems from the leakage of domestic resources through illicit financial flows, revenue forgone through redundant tax incentives, and inefficiencies in public spending. Failure to fully harness growing pension and sovereign funds also represents an opportunity cost, as these funds could be channeled towards the region's development. The financial paradox has also harmed African countries' credit risk profile by discouraging international investment and raising investment costs. This has marginalized Africa in global capital markets, especially for critical infrastructure and energy projects. Despite the fact that Africa may be defined as a 'net lender 'to the rest of the world due to the financing leakages from within the continent, Africa's financing gap is increasing and leading to rising debt levels and concerns about debt sustainability. The inequity of the global financial system and Africa's limited capacity to mobilize domestic resources further exacerbate this paradox.

The energy paradox is characterized by Africa's abundant energy resources, including fossil and renewable sources, juxtaposed with widespread energy shortage and limited electricity access. The continent's energy production and consumption are disproportionately low compared to its population size, hindering economic development, social progress, and environmental sustainability. Factors such as low access to financing, high indebtedness, underutilization of natural resources, high infrastructure costs, outdated technologies, and regulatory constraints contribute to this paradox.

Similarly, the food systems paradox highlights Africa's vast agricultural potential and the sector's crucial role in employment and economic growth. However, the continent struggles with high levels of food insecurity, undernourishment, and heavy dependence on food imports. Despite possessing abundant uncultivated arable land and ample freshwater resources, agricultural production has not kept pace with population growth, leading to persistent hunger and food insecurity. Disruptions to global food supply chains, such as the War in Ukraine, further exacerbate this paradox.

The impacts of the cascading and intersecting global crises on the financing, energy, and food systems in Africa have been particularly pronounced. The continent, already grappling with pre-existing challenges, has faced aggravated economic and financial strains, hindering its ability to mobilize resources at scale and scope for investment in key sectors. The energy sector has experienced setbacks in the form of disrupted supply chains, reduced investments, and fluctuating oil prices, holding its immense potential for growth. This has underscored the urgent need for Africa to improve energy access for its population. Additionally, the disruptions in global and regional production and distribution value chains severely impacted access to nutritious food system. As a result, vulnerable populations have been disproportionately affected, amplifying issues of food insecurity and malnutrition.

Addressing these challenges requires holistic and integrated approaches, including strengthening financial systems, promoting energy investments, and prioritizing sustainable agricultural practices. By doing so, Africa can build greater resilience and transform its financing, energy, and food systems into drivers of inclusive and sustainable development. The next chapter will delve into the proposed integrated approach to addressing the triple paradoxes of financing, energy, and food systems in Africa. It will explore the interlinkages and synergies between these sectors and propose strategies for harnessing their potential to drive sustainable development. By adopting a holistic perspective and considering the complex interactions among these paradoxes, Africa can pave the way towards a more prosperous, equitable, and resilient future.

Africa can build greater resilience and transform its financing, energy, and food systems into drivers of inclusive and sustainable development.

References

Africa-EU Energy Partnership. 2022. Wind Energy: Joining Forces for an African Lift-Off. Pp. 7. Available at: https://africa-eu-energy-partnership.org/wp-content/uploads/2022/02/AEEP_Wind_Energy_Policy_Brief_2022-3.pdf

African Development Bank (AfDB). Feed Africa. https://www.afdb.org/en/the-high-5/feed-africa

Bjornlund, V., Bjornlund, H. and Van Rooyen, A.F. 2020. "*Why agricultural production in sub-Saharan Africa remains low compared to the rest of the world – a historical perspective*." International Journal of Water Resources Development, 36:sup1, S20-S53, https://doi.org/10.1080/07900627.2020.1739512

Blimpo, M.P, Cosgrove-Davies, M. 2019. Electricity Access in Sub-Saharan Africa.

Elbarbary, S. and others. "*Geothermal renewable energy prospects of the African continent using GIS*", Geotherm Energy, 10, 8 (2022).

FAO. 2022a. The importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the war in Ukraine.

FAO. 2022b. World Food and Agriculture – Statistical Yearbook 2022.

Fisher. S, et al. 2021. Air pollution and development in Africa: impacts on health, the economy, and human capital. Available at: https://doi.org/10.1016/S2542-5196(21)00201-1

Foreign Policy.2023. How South Africa's Energy Crisis Became an Economic Crisis. https://foreignpolicy.com/2023/01/25/south-africa-energy-crisis-corruption-anc/

IFAD Platform for Remittances, Investments and Migrants Entrepreneurship in Africa (PRIME Africa). https://www.ifad.org/en/prime-africa

International Monetary Fund (IMF). 2022. "*How Africa Can Escape Chronic Food Insecurity Amid Climate Change*".

Lions on the Move II: Realizing the potential of Africa's economics, McKinsey Global Institute, September 2016.

McKinsey and Company. 2019. "*Winning in Africa's Agricultural Market*".

OSAA. 2022. Financing for Development in the Era of COVID-19 Pandemic: The Primacy of Domestic Resource Mobilization.

PwC. 2021. Africa Energy Review 2021. South Africa.

Sy, A. 2017 "*Leveraging African pension funds for financing infrastructure development*".

UNCTAD. 2020. Economic Development in Africa report.

UNDESA. World Population Prospects 2022 Summary of Reports.

United Nations. 2022. New Partnership for Africa's Development: nineteenth consolidated progress report on implementation and international support. Financing for Development in the Era of COVID-19: The Primacy of Domestic Resources Mobilization. https://www.un.org/osaa/secretary-general-report-on-nepad

World Bank. 2017. "*Special Issue of Food Policy Debunks Myths about African Agriculture*".

World Bank. 2022. International Debt Statistics 2022.

World Health Organization (WHO). 2019. The Global Health Observatory: Burden of disease attributable to ambient air pollution. https://www.who.int/data/gho/indicator-metadata-registry/imr-details/2259

Chapter 2

Addressing the paradoxes through an integrated approach

Young entrepreneurs at an African technology start-up company discuss.

The Nexus as a 'Multiplier Intervention'

Energy is approached as an indispensable driver to ignite transformative change in all areas of development, from digitalization to health and industrialization.

The interrelation between the financing, energy and food paradoxes has a multiplying impact. Therefore, addressing this nexus in a comprehensive manner is critical to achieve long term solutions to solve these paradoxes. Weaknesses in the financing system feed into the energy sector, limiting the capacity to mobilize the necessary public and private funding required to develop energy infrastructures, update and enhance existing ones, and adopt cutting edge energy technologies. This undermines people's access to reliable and modern energy. The limitations of the continent's energy sector, in turn, feed into food systems, exacerbating structural weaknesses. Poor energy access affects agricultural production and hampers the food systems' transformation. Without affordable access to reliable energy, African smallholder farmers cannot implement climate adaptation strategies, increase productivity through technology, or delay the decay of their produce. The combination of the three paradoxes has a devastating effect on the continent's development, thwarting efforts to build resilience and achieve sustainability.

The ineffectiveness of development interventions in these areas is related to this interconnectedness. Projects that fail to address the way in which the financing paradox affects energy and food systems or to tackle the consequences of the energy paradox on food systems' transformation, become band-aids that only mitigate short-term challenges but are unable to promote transformative change. This risk can be mitigated by approaching the multiplying impact of this chain of paradoxes as an opportunity for leveraging the nexus between finance, energy and food systems to operationalize a value chain that will deliver resilience and long-term development.

Activating this value chain requires interventions that maximize the multiplying impact of the nexus by understanding the different roles played by each of the components and focusing actions and resources on those areas that will be able to trigger cascading effects. From this perspective, domestic resource mobilization (DRM) is considered a game changer, as it is the only element that can propitiate a shift from a development model dependent on external priorities to internally driven development strategies. Energy is approached as an indispensable driver to ignite transformative change in all areas of development, from digitalization to health and industrialization. Food systems transformation is the key to resilience. And institutions are the enablers that can ensure the effectiveness of the intervention. Discerning the factors that will allow solving each of the paradoxes is indispensable to designing these interventions. (Figure 13)

Figure 13

Addressing the paradoxes through the nexus value chain

Africa's Triple Paradox

Finance

$500 - $600 B

lost annually

IMPACTS

Energy

580 M

without electricity

IMPACTS

Food

57.9%

of total population is in moderate or severe food insecurity

Activate nexus multiplier intervention

Solving the financing paradox: The game changer

The financing paradox is a result of external and internal factors: externally, it reflects an unfair and inequitable global financial architecture that has failed to provide a global safety net as well as financing at scale and speed for Africa's sustainable development. Further and more disconcertingly, African countries pay exorbitant borrowing costs—up to eight times higher than those of advanced countries.[45] Internally, low domestic resource mobilization coupled with the inability of African countries to harness all the available resources for sustainable development financing also give rise to the financial paradox. This forces those countries to depend on external resources. Structuring effective DRM systems to mobilize resources internally enables a shift from financing for development approach focused on external resources to one that focuses on internal capacities and priorities. This will create the fiscal space required for Africa to take ownership and leadership of its development path and establish the policy space necessary to exert greater control over its development priorities. The policy space would allow countries to concentrate targeted support on transformative sectors through a set of drivers and enablers with multiplier effects. This shift will create the fiscal and policy space required for Africa to take charge of its development by making available between $500 to $600 billion every year to advance African countries' priorities.

Structuring effective DRM systems to mobilize resources internally enables a shift from financing for development approach focused on external resources to one that focuses on internal capacities and priorities.

Achieving this goal is contingent upon enhancing DRM systems, which encompasses various measures from budget management optimization (expenditures and revenues) to boosting national financial markets that contribute to the dynamization of the economy. The positive spillovers are immense. For instance, strengthening the government's ability to collect revenues from domestic sources and utilizing them more efficiently will improve African countries' risk profile, enabling them to tap into international capital markets from a stronger position and at favourable terms. This requires African countries to take bold steps to invest in building robust country systems, strengthening revenue collection, enhancing public spending efficiency, and generating predictable flows, which is the key to de-risking SDG financing.

45 UNDESA (2023).

Enhancing Revenue Mobilization

Building robust country systems in African countries, such as those related to public financial management, procurement, and revenue mobilization, is crucial since it enhances transparency, accountability, and good governance, leading to better service delivery and resource allocation. Strong institutions and systems can attract investment into priority sectors and promote inclusive and sustained economic growth. Moreover, robust systems can help governments better respond to shocks such as natural disasters and pandemics, enabling effective coordination and timely decision-making. The positive impact of effective domestic resource mobilization on revenue collection and expenditures includes $46 billion in potential taxes that are not collected due to redundant tax incentives, $70 billion in inefficient expenditures and an increase in revenues of up to 2.5 per cent of the continent's GDP as a result of curbing IFFs.[46]

The continent needs to catch up in all indicators related to the Country Policy and Institutions Assessment (CPIA), indicating the need for a drastic improvement in the governance of public institutions, regulation processes, and the fight against corruption. Addressing these challenges requires a significant investment in building the capacity of public institutions to promote transparency, accountability, and the rule of law. This involves strengthening the governance structures and national institutions to ensure efficient and effective management in revenue collection and spending processes. Interventions can range from capacity building to improving transparency and accountability, such as implementing reporting requirements and regular audits of revenue collections and creating a favorable business environment.

The use of technology and digital solutions can help improve the efficiency and effectiveness of revenue collection and spending processes. For instance, by introducing the e-taxation system in South Africa, the time and cost of VAT compliance were reduced by 21.8 per cent and 22 per cent, respectively. In addition, digitizing tax filing and payment systems could result in significant benefits to countries similar to those recorded by Rwanda, which saw its tax revenue boosted by 6 per cent.[47]

In addition, the Automated System for Customs Data (ASYCUDA) program is an example of a digitization initiative aimed at improving customs administration and trade facilitation. The program, developed by the United Nations Conference on Trade and Development (UNCTAD), is currently used in over 80 countries worldwide, including 47 African countries. Automating processes and reducing reliance on manual procedures improves the efficiency and accuracy of customs procedures, reducing the time and cost of clearing goods at the border and contributing toward reducing corruption. It also facilitates information sharing between customs authorities, stakeholders in trade, and other relevant agencies, thereby increasing transparency. In addition, ASYCUDA provides valuable data on trade flows and can assist in identifying trade trends and potential trade facilitation issues. The program is, therefore, seen as an essential tool in promoting trade and investment and improving the overall competitiveness of participating countries.

By introducing the e-taxation system in South Africa, the time and cost of VAT compliance were reduced by 21.8 per cent and 22 per cent.

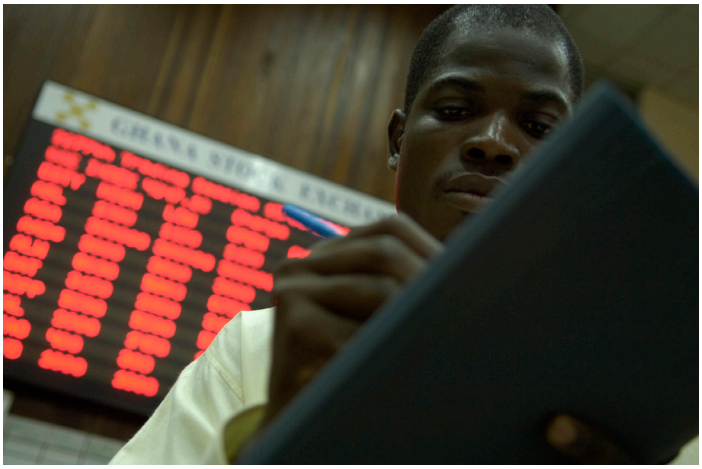
The use of technology and digital solutions can help improve the efficiency and effectiveness of revenue collection and spending processes.

46 United Nations (2022).
47 UNECA (2019).

De-risking Country Profiles

Strong national institutions are also vital in acting as de-risking agents for attracting foreign investment. The vast disparity in Foreign Direct Investment (FDI) flows between Africa and other regions and between African countries signals the urgent need for Africa to tackle the obstacles that impede investment. Africa continues to face significant barriers to attracting Foreign Direct Investment (FDI), including political instability, insecurity, inadequate infrastructure, limited access to financing, economies of small scale, high risk premiums, weak institutions, corruption, and bureaucratic red tape. These factors discourage foreign investors and create significant hurdles for businesses seeking to establish and expand their operations on the continent.

Among the most critical factors investors deem important in determining investment decisions in Africa are the existence of a stable and predictable investment climate and strong national institutions, according to peer reviewed research.[48] Additionally, empirical findings demonstrated that the rule of law and government institutional effectiveness positively and strongly influence attracting FDI inflows in Africa. Therefore, African countries must undertake reforms geared towards streamlining regulatory processes, reducing corruption, and enhancing public institutions' governance structures, which will bolster investors' confidence. Additionally, there is a need to improve the business environment and upgrade infrastructure. By prioritizing these reforms, African countries can attract more diversified foreign investment and unlock the full potential of their economies. This will help drive economic growth and job creation and contribute to the continent's overall development.



African countries must undertake reforms geared towards streamlining regulatory processes, reducing corruption, and enhancing public institutions.

Strong national institutions are also vital in acting as de-risking agents for attracting foreign investment.

Tackling Illicit Financial Flows

Illicit financial flows, such as tax evasion and money laundering, pose a significant threat to DRM. Tackling IFFs involves implementing measures to improve transparency and accountability in the financial sector, increasing cooperation between tax and financial authorities, and improving the collection and sharing of financial intelligence.

African countries face significant consequences from IFFs, such as decreased domestic investment and lower output. According to Collier et al. (2001), IFFs from Africa resulted in a 16 per cent loss in output. It leads to higher unemployment rates, decreased access to basic necessities, and a degradation in the quality of life, resulting in poor performance on most of the SDGs by African countries. Furthermore, capital flight also negatively affects the accumulation of productive capital in African countries, as stated by Ndikumana (2014), with the annual rate of productive capital accumulation in sub-Saharan Africa declining by approximately 1 per cent due to capital flight. This can lead to reduced economic competitiveness, less innovation and technological development, and ultimately lower overall economic growth in the long run.

48 Cleeve. (2008).

African countries have been at the forefront of influencing international tax negotiations and should continue to advocate for the adoption of a global tax framework that meets their expectations and needs.

A vendor uses a mobile point-of-sale system at a market in Dakar, Senegal.

The current international tax system is flawed and unable to keep up with the pace of digitalization.

The primary source of IFFs is commercial activities, which comprise around 65 per cent and include tax evasion, trade mis-invoicing, and abusive transfer pricing.[49] These activities severely undermine the efforts of countries to mobilize resources and collect taxes. By stopping IFFs, Africa could improve its tax performance and increase government revenues by almost 3 percentage points of GDP on average.[50]

The international community needs to take a comprehensive approach to address illicit financial flows, particularly tax avoidance and evasion, in the digital economy. The current international tax system is flawed and unable to keep up with the pace of digitalization, leaving many developing countries without the capacity to benefit from international tax reform. The OECD has proposed the "Two Pillar approach," which involves reallocating tax rights to market jurisdictions and implementing a global minimum tax, but concerns have been raised about its inclusivity, equity, and complexity in implementation. The UN Tax Committee has introduced Article 12B into the UN Model Treaty on Double Taxation to preserve countries' rights to tax automated digital services and ensure that corporations pay their fair share of taxes. This led to the adoption of resolution A/RES/77/244 on the Promotion of inclusive and effective international tax cooperation at the United Nations, which called for enhancing the comprehensiveness and efficacy of global tax cooperation through exploring alternative options such as creating a framework or instrument for international tax collaboration that takes into account existing international and multilateral agreements.

African countries have been at the forefront of influencing international tax negotiations and should continue to advocate for the adoption of a global tax framework that meets their expectations and needs. In addition, African countries need to push for strengthening their capacity and reciprocal information exchange mechanisms to participate fully in the international tax system and mobilize additional resources for their developmental aspirations.

Harnessing Pension Funds for Infrastructure Development

The African pension fund industry has experienced significant growth in recent years, providing immense opportunity for the continent to scale up investment in productive capacity and structural transformation. Despite the nominal investment gains realized by African pension funds averaging 11.7 per cent in 2021, their achievements needed to be improved to offset rising inflation rates. The average real investment rate of return of African pension funds in 2021 was -2.1 per cent.[51] This was mainly due to the high inflation rates that eroded the assets of some African pension funds, putting their sustainability at risk.

Overall, the pension fund market offers a unique opportunity for African countries to leverage the significant funds available to support their development goals. By utilizing these funds effectively, African countries can take a major step forward in achieving their development objectives and making significant progress toward a more sustainable and prosperous future. African pension funds' participation in financing infrastructure development is minimal compared to other regions, at around 1 per cent. However, pension funds' appetite for investment in infrastructure development is increasing in Africa and worldwide, provided the necessary conditions and mechanisms exist. Some countries, such as Croatia and Indonesia, have loosened investment limits of their pension funds and are encouraging investments in long-term infrastructure projects, and other alternative assets. Similarly, the pension funds in South Africa, Kenya, and Namibia are keenly interested in green financing as an alternative asset class and have started investing in projects in the energy, real estate, and transportation sectors. The Nigerian Pension Fund has introduced regulations encouraging investment in green bonds for infrastructure (Table 1). However, challenges remain in ensuring that risks are appropriately accounted for and reducing the risk to Pension Funds on investing in infrastructure across the continent.

IN 2021 THE AVERAGE REAL INVESTMENT RATE OF RETURN OF AFRICAN PENSION FUNDS WAS

-2.1%

49 UNCTAD (2020).
50 OSAA's staff calculation based on the Capital Flight Database of the Political Economy and Research Institute of the University of Massachusetts Amherst.
51 OECD (2023).

Table 1 **Selected African Pension Funds investment infrastructure**

Country	Pension Fund	Progress	Expected impact	Challenges
South Africa	Government Employees Pension Fund (GEPF)	• Investing in infrastructure projects, including renewable energy, housing, and transportation. • Contributing to affordable housing and healthcare infrastructure.	• Facilitating the development of renewable energy projects.	• Regulatory frameworks and governance issues. • Ensuring project viability and managing risks.
Nigeria	Pension Commission (PenCom)	• Introducing regulations to encourage pension funds to invest in infrastructure bonds and funds. Collaborating with government agencies to identify viable infrastructure projects for pension fund investments.	• Mobilizing long-term capital for infrastructure development.	• Identifying viable infrastructure projects. • Ensuring transparency and accountability in investment processes.
Kenya	National Social Security Fund (NSSF)	• Partnering with the government and private sector entities to finance infrastructure projects, including affordable housing and transportation. • Investing in the Nairobi-Nakuru-Mau Summit Highway project to enhance transportation connectivity.	• Contributing to the development of affordable housing and improved transportation connectivity.	• Assessing project feasibility and ensuring long-term sustainability. • Managing construction delays and cost overruns.
Rwanda	Rwandan Social Security Board (RSSB)	• Financing infrastructure projects such as the Kigali Convention Centre and affordable housing projects. • Partnering with institutional investors to establish the Rwanda Investment Group for infrastructure investments.	• Positioning Rwanda as a hub for conferences and events in East Africa.	• Mitigating risks associated with project financing and implementation. • Ensuring proper project monitoring and evaluation.
Ghana	Social Security and National Insurance Trust (SSNIT)	• Allocating funds for infrastructure investments, including projects like the Accra-Tema Motorway Expansion Project and the Kwame Nkrumah Interchange.	• Improving transportation connectivity and reducing traffic congestion.	• Balancing short-term liquidity needs with long-term infrastructure investment goals. • Assessing and managing project risks.

Sources: Compiled from official websites of Pension funds.

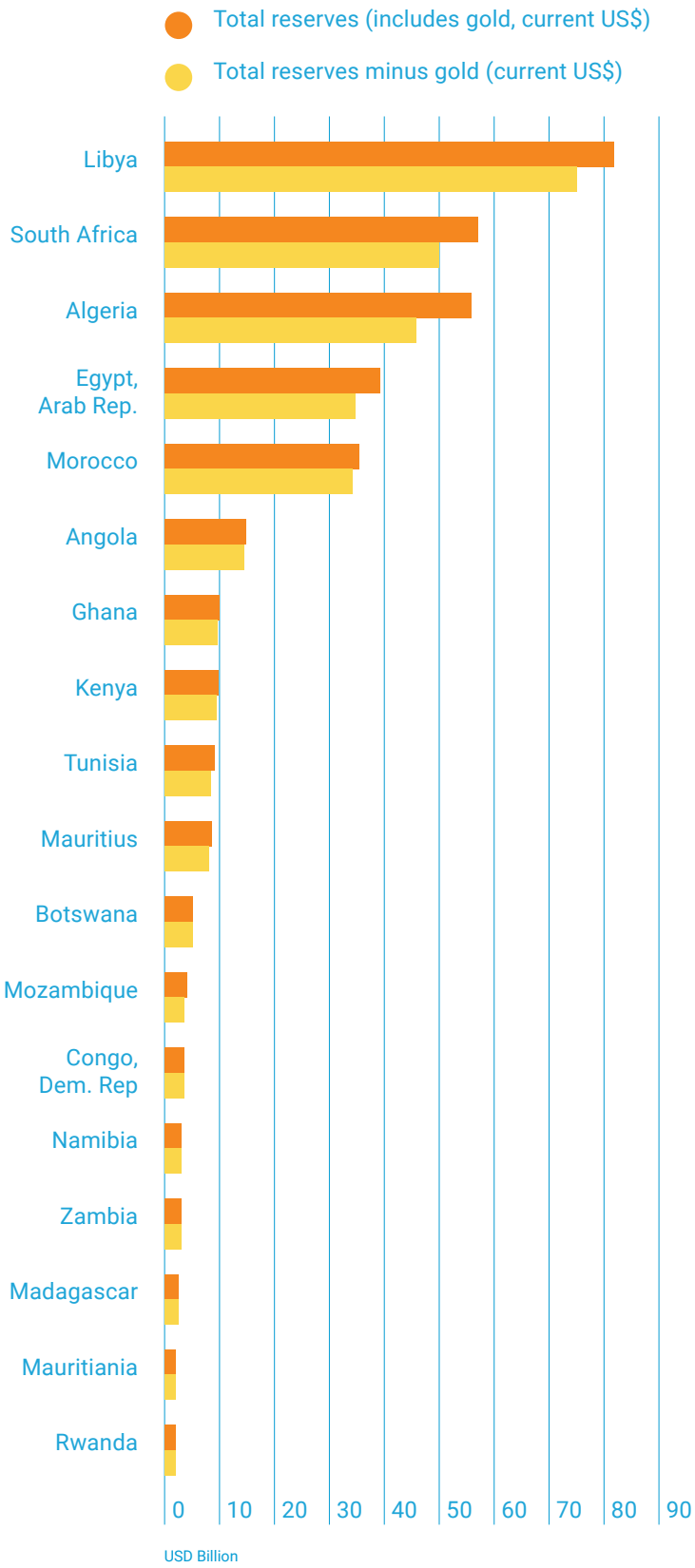
Reforming the pension fund sector is necessary to maximize its impact on the continent's development.

It is crucial to recognize that reforming the pension fund sector is necessary to maximize its impact on the continent's development. Building an African institutional investor base that can manage longer-term savings and finance sustainable economic growth effectively will enable pension funds to be a driving force for change. To do this, pension funds should diversify their assets across various categories, including equities, bonds, and other products, reducing investment risk while increasing the rate of return. Furthermore, pooling resources at national or sub-regional levels can help reduce management risk and benefit from economies of scale, as seen in Kenya's Pension Fund Investment Consortium. By adopting similar initiatives, other African pension funds can improve their participation in infrastructure investments and significantly impact the continent's development. With these reforms and a focus on investing in infrastructure development and alternative assets, African countries can leverage their pension fund market to achieve their development goals and create a sustainable and prosperous future.

Foreign Reserves surplus as a pro-growth tool

Foreign reserves are important for maintaining economic and monetary stability, especially the exchange rate, servicing external debt, managing liquidity and financing imports during times of economic stress. In 2021, the total foreign reserves of African countries, excluding gold, were more than $320 billion. (Figure 14) For instance, Algeria had accumulated almost 18 months of reserves, Namibia had seven months, and Morocco and South Africa each had more than five months.[52]

Figure 14 **Foreign reserves of African countries, $ billion in 2021**



Source: International Monetary Fund, International Financial Statistics and data files.

52 Ibid.

While foreign reserves are pivotal in ensuring economic stability and positively improving the terms of trade of African countries, they come at a cost. These costs are known as development trade-offs. The opportunity cost of hoarding massive foreign reserves is substantial, as these resources, typically invested in low-risk, low-return assets, could instead be directed towards addressing countries' development priorities. Overreliance on foreign reserves as a shield against economic shocks can discourage efforts to implement structural reforms and improve governance. It may also breed complacency, instilling a false sense of security that hampers economic diversification and stunts overall development.

Therefore, it is paramount for African policymakers to embrace a forward-thinking, growth-oriented approach to managing their surplus, similar to Botswana's experience in creating its Sovereign Wealth Fund. (Box 1) Such an approach necessitates prudent reserve management, alongside judicious allocation of a portion of excess reserves towards critical areas of development, including infrastructure, education, and healthcare. Moreover, diversifying the economy is an indispensable component of a pro-growth strategy that builds resilience and reduces vulnerability to external shocks.

The overreliance on foreign reserves as a buffer against economic shocks may discourage efforts to implement structural reforms and improve governance. Such reforms are critical in unleashing Africa's untapped potential for inclusive economic growth and enhancing competitiveness. Additionally, foreign reserves can create a false sense of security and hinder the development and diversification of the economy.

African countries must confront the development trade-offs associated with excessive reserves. Embracing a pro-growth approach to surplus reserves is not only essential but also highly advantageous. By adopting a balanced reserve management approach, directing surplus funds towards strategic investments, diversifying the economy, and implementing structural reforms, Africa can unlock its vast potential.

Africa can unlock its vast potential by adopting a balanced reserve management approach, directing surplus funds towards strategic investments, diversifying the the economy, and implementing structural reforms.

Box 1

The Pula Fund

In the 1970s, Botswana discovered substantial diamond reserves, which became the cornerstone of its economy. Recognizing the need to manage its diamond revenues effectively, the government established the Pula Sovereign Wealth Fund (the Pula Fund) in November 1993. The fund is designed to accumulate and invest surplus foreign reserves generated from diamond exports.

Botswana's Pula Fund was created with the goal of diversifying the economy, promoting sustainable development, and reducing the country's dependency on diamond revenues. The Fund has $ 4.1 billion in assets under management.

The government pursued a prudent investment strategy for the fund, focusing on long-term growth and stability. The fund's investments are primarily focused on domestic and international fixed income securities, equities, and alternative assets. The investments made by the Pula Fund have been directed towards various sectors, including infrastructure, education, healthcare, and agriculture. For instance, the fund has contributed to the development of road networks, power generation projects, and the development of the education system. By utilizing its foreign reserves surplus through the Pula Fund, Botswana aimed to ensure intergenerational equity and enhance the country's long-term development prospects. The investments have helped stimulate economic activity, create employment opportunities, and improve social infrastructure and services.

Furthermore, with transparent and accountable management of the fund and sound fiscal policies and governance practices, the government ensures effective management and utilization of the Pula Fund, maximizing its benefits for the country's sustainable development. Botswana's approach to utilizing its foreign reserves surplus through the Pula Fund showcases the country's commitment to harnessing its natural resource wealth for long-term growth and development. By investing its foreign reserves surplus in critical sectors, Botswana has sought to mitigate the risks associated with resource dependency and create a more resilient and prosperous future.

Source: Pula Fund (Pula Fund) – Sovereign Wealth Fund, Botswana – SWFI (swfinstitute.org). https://www.swfinstitute.org/profile/598cdaa60124e9fd2d05bc49

Debswana Letlhakane Diamond mine in Botswana.

Carbon finance presents a significant opportunity for Africa to mobilize additional revenues, address its climate change challenges and promote sustainable development.

A woman inspects a tree in Katfoura village on the Tristao Islands in Guinea.

Addressing the inequities in the Global Financial System

African countries' pursuit of achieving sustainable development is significantly influenced by the external environment. Africa's marginalized position in the global economy is deeply rooted in the imbalances and inequities inherent in the current global financial architecture. Created in the aftermath of World War II, when most African countries were colonies, this system has perpetuated Africa's peripheral status. Recently, the global financial system has aggravated the adverse effects of the intersecting global crises on Africa. The financial architecture not only fails to provide the necessary financing for development but also reduces countries' policy space to undertake reforms.

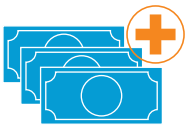
The impact of global monetary conditions, primarily driven by advanced economies, has significantly affected African economies that continued to face soaring interest rates, capital flow volatility, currency depreciation, and elevated domestic prices for essential commodities such as food and energy. These adverse outcomes have posed challenges to policymakers and governance in Africa, deepening existing inequities. By disproportionately burdening African countries, the global financial architecture has perpetuated their marginalization and hindered progress toward sustainable development.

The current global financial system is in crisis and has consistently fallen short of meeting the financing needs of Africa and other developing countries. As a result, the Sustainable Development Goals (SDGs) are drifting further away, and even the most basic goals on hunger and poverty are regressing. The COVID-19 pandemic and geopolitical tensions have exacerbated this situation. For instance, the availability of resources for pandemic response and recovery is glaringly unequal, with exorbitant interest rates imposed on African countries.

The United Nations 2023 Financing for Sustainable Development Report underscores the inadequacy of the current global financial systems to deliver for all countries and adapt to the evolving economic and social environment. While limited efforts have been made to address symptoms of instability and volatility, a comprehensive overhaul is necessary to ensure equitable development opportunities, especially in African countries. Hence, the need for a new financial architecture to correct the systemic inequities and empower African countries to unlock their full potential.

As the UN Secretary-General highlighted during his remarks at the Paris Summit on a New Global Financing Pact, "the global financial architecture is outdated, dysfunctional, and unjust, failing to provide a global safety net for developing countries". This stresses the disparity in resource allocation, with developed countries receiving significantly more financial support than developing countries. He called for a new Bretton Woods moment and emphasized the need for urgent action to meet the immediate needs of developing and emerging economies and proposed an SDG Stimulus of $500 billion annually for investments in sustainable development and climate action. The SDG Stimulus package focuses on establishing a debt relief mechanism for vulnerable countries, scaling up development and climate finance, rechanneling unused Special Drawing Rights (SDRs), and ending fossil fuel subsidies. Additionally, in his Common Agenda policy brief,[53] he emphasized the urgent need to revamp the global financial architecture and recommended reforms in the following six areas:

Transforming the governance of international financial institutions and creating a representative apex body for global economic coherence.



Implementing debt relief mechanisms and enhancing sovereign debt markets.

Scaling up international public development and climate financing.

Strengthening the global financial safety net and addressing capital market volatility.

Reforming policy and regulatory frameworks for a more sustainable financial system.

Redesigning the global tax architecture to promote equitable and inclusive sustainable development.

53 United Nations (2023).

Carbon finance presents a significant opportunity for Africa to mobilize additional revenues, address its climate change challenges and promote sustainable development.

In conclusion, resolving the financing paradox is crucial for African countries to break the chain of paradoxes and achieve sustainable development. Mobilizing domestic resources will reduce dependence on volatile external sources of financing. Building robust country systems through digitization and investing in strong national institutions are the fundamentals that can facilitate attracting investment, promote good governance, and improve service delivery. Tackling Illicit Financial Flows (IFFs) and harnessing pension funds for infrastructure development are equally important in this process. Furthermore, leveraging the potential of carbon finance and utilizing foreign reserves surplus as a pro-growth tool can provide additional resources and address the climate financing gap. It is essential for African countries to take bold steps, implement necessary reforms, and seek international support to overcome the existing challenges and unlock their full potential. By doing so, Africa can achieve sustainable and inclusive development, driving economic growth and improving livelihoods for its people.

Addressing the inequities embedded in the global financial system is also paramount to Africa's sustainable development agenda. Urgent reforms are needed to redefine financing for the development landscape. It is only through concerted efforts and bold actions that the world can rectify the systemic injustices and forge a new path towards a truly equitable and sustainable global financial order.

Moving forward, the next section will focus on addressing the energy paradox, which remains a critical challenge in Africa. Domestic resource mobilization as a game changer, if harnessed effectively, can potentially unlock energy finance, which is key to improving energy access and just transition. The availability, accessibility, and affordability of energy are fundamental drivers of economic growth and development.

Leveraging the potential of Carbon Finance

Carbon finance presents a significant opportunity for Africa to mobilize additional revenues, address its climate change challenges and promote sustainable development. Carbon finance involves the use of financial instruments, such as carbon credits, to incentivize the reduction of greenhouse gas emissions and the development of low-carbon projects. Africa could take advantage of carbon finance as it is home to a significant proportion of the world's remaining tropical forests, which play a crucial role in carbon sequestration. Africa also has substantial potential for developing renewable energy projects, such as solar and wind power, which can provide a source of clean energy while also generating carbon credits by reducing greenhouse gas emissions. Additionally, carbon finance can accelerate the transition to cleaner cooking and energy solutions, support sustainable land use practices, such as afforestation and reforestation, and energy efficiency projects in the building and transportation sectors. These projects can create jobs, improve livelihoods, and contribute to sustainable development on the continent.

Article 6 framework of the Paris Agreement specifies the modalities, procedures, and guidelines for implementing carbon markets. This paves the way for international carbon markets to play a crucial role in achieving Nationally Determined Contribution (NDC) goals and scaling up climate ambition through voluntary cooperation. As a result of this agreement, there has been a sharp increase in the number of parties indicating the planned or possible use of voluntary cooperation mechanisms under Article 6. This number has nearly doubled, from 44 per cent to 87 per cent, in the new or updated NDC submissions.[54] This indicates that countries are increasingly interested in exploring the potential benefits of international carbon markets.

With the modalities, procedures, and guidelines for implementation now agreed upon, countries started to move forward with confidence in developing and implementing carbon pricing policies that align with the Paris Agreement. These policies can help incentivize the transition to a low-carbon economy and generate revenue that can be reinvested in further climate action. Overall, the increasing adoption of carbon pricing policies and the growth of carbon markets worldwide signify a growing commitment to tackle climate change and transition towards a low-carbon economy. Ultimately, the success of international carbon markets will depend on the cooperation and responsibility of all parties involved as they work towards achieving the shared goal of limiting global warming to 1.5 degrees Celsius.

54 World Bank (2022).

In recent years, the global carbon market landscape has gained significant momentum, with approximately 23 per cent of global emissions now falling under some form of carbon pricing. This progress is evident from the record-breaking figures seen in 2021, with the value of traded carbon dioxide permits increasing by 164 per cent, reaching a staggering $851 billion.[55] Additionally, global carbon pricing revenue has risen by almost 60 per cent in the past year, totaling around $84 billion.[56]

There are 68 carbon pricing instruments (CPIs) in operation globally, including taxes and emissions trading systems (ETSs). Furthermore, some countries have taken steps towards forming international climate clubs, which are groups of countries committed to ambitious climate goals and implementing carbon pricing policies. These clubs can facilitate sharing best practices, promote technology transfer, and increase climate finance flows.

However, progress in this carbon finance has been uneven across regions. Most carbon credits have been provided by projects in Asia, Latin America, and the Caribbean. In 2021, the traded volumes of credits from Asian projects accounted for 56 per cent of the total credits transacted in the market, followed by Latin America and the Caribbean, accounting for 22 per cent of total trade. Meanwhile, credits from Africa represented 15 per cent of the total, with transacted volumes reaching their highest levels yet in the region.[57] Prices for credits from Africa increased from $4.24/tCO₂e in 2020 to $6.09/tCO₂e in 2021.[58]

Carbon finance could generate substantial revenues for governments. However, South Africa is the only country implementing a carbon tax in Africa. South Africa has announced its plan to incrementally increase the carbon tax rate from just under $10/tCO₂e to $20/tCO₂e by 2026 and, $30/tCO₂e by 2030 and $120/tCO₂e beyond 2050.[59] By doing so, the country will increase its capacity to adapt and mitigate climate change effects on its economy.

Nigeria has showcased its aspirations to be a regional leader in climate action by enacting the 2021 Climate Change Act and pledging to attain net-zero emissions by 2060 (Box 2). Nigeria has resolved to leverage carbon credits to achieve its climate and sustainable development objectives. By 2030, Nigeria could generate over 30 million carbon credits, translating to a yearly revenue of more than US $ 500 million.[60] However, to leverage these resources, governments need to implement adequate prerequisites and have the necessary capacities to be key player in the carbon market. These include putting in place the regulatory and policy frameworks for carbon markets and building their domestic capacity to value and certify credits.

55 UNDP, "Africa needs carbon markets". https://climatepromise.undp.org/news-and-stories/africa-needs-carbon-markets
56 Ibid.
57 World Bank (2022).
58 Ibid.
58 Ibid.
60 Osinbajo and Márquez (2022).

Africa's participation in the global carbon market can be massively increased to reach between $120 to $200 billion annually.

Carbon finance could generate substantial revenues for governments.

Box 2

Nigeria Energy Transition Plan

In 2021, Nigeria adopted its Energy Transition Plan (ETP) to make Nigeria carbon neutral by 2060. It sets out a framework for reducing emissions across five key sectors: Power, Cooking, Oil and Gas, Transport, and Industry. The ETP scope covers 65 per cent of Nigeria's emissions, and its implementation will require a total of $1.9 trillion, constituting an additional $410 billion annually on top of the regular projected spending of about $10 billion. The plan is estimated to create up to 840,000 jobs by 2060, lift 100 million Nigerians out of poverty and drive economic growth. The plan is expected to create significant investment opportunities in industries related to solar energy, hydrogen, and electric vehicles. The ETP raises the Nationally Determined Contribution from 45 per cent to 47 per cent conditionally and 20 per cent unconditionally below business-as-usual.

The Federal Government of Nigeria started implementing a series of reforms, including:

- Facilitating a conducive business and investment environment for the energy transition, including encouraging the establishment and development of the local private sector operating in manufacturing/assembly of critical technologies such as solar panels, inverters, standalone solar systems, and electric vehicles.
- Implementing technical assistance for skill development and knowledge transfer for deploying Electric Vehicles, establishing a carbon market, and developing a just transition pathway beyond oil and gas.
- Adopting the Climate Change Bill in 2021 with provisions for establishing key institutions such as the National Council on Climate Change, the climate change Fund, and a carbon market.
- Providing tax incentives for Pioneer companies involved in independent power generation.
- Introducing feed-in tariffs that guarantee a stable price for electricity generated from renewables for a fixed duration.

Source: Nigeria Energy Transition Plan

Marina commercial business district Lagos Island Nigeria.

Harnessing the potential of carbon markets may provide the opportunity to mobilize additional resources and close Africa's significant shortfall in climate financing.

Africa's limited participation in the carbon market highlights the significant shortfall in climate financing for Africa and the need for action to tackle the several challenges. These include the lack of regulatory and policy frameworks at the national level that align with emerging global imperatives within carbon markets, the lack of government capacity for valuing and certifying credits, and the limited private sector engagement capable of operating at large scale in these markets.[61]

The international community needs to support African governments in building their capacity to leverage the potential of carbon finance. For instance, it is estimated that with adequate support, Africa's participation in the global carbon market can be massively increased to reach between $120 to $200 billion annually.[62] In this respect, channeling support to regional initiatives, such as the Africa Carbon Markets Initiative (ACMI), can strengthen the growth of carbon credit production in the continent and mobilize additional financial resources (Box 3). In addition, African countries must overcome the existing obstacles and explore all options for increasing their participation in compliance and voluntary markets and market-based alternatives such as emissions trading schemes and carbon taxes.

In conclusion, carbon finance offers a significant opening toward meeting the goals of the Paris Agreement. Harnessing the potential of carbon markets may provide the opportunity to mobilize additional resources and close Africa's significant shortfall in climate financing.

61 Project Syndicate (2022).
62 Nairametrics (2022).

Box 3

Africa Carbon Markets Initiative (ACMI)

The Africa Carbon Markets Initiative (ACMI) is a groundbreaking effort aimed at driving the carbon market in Africa to tackle climate change. Launched during COP27, the initiative is a collaboration between the Global Energy Alliance for People and Planet (GEAPP), Sustainable Energy for All (SEforALL), and the United Nations Economic Commission for Africa (UNECA), with support from the UN Climate Change High-Level Champions. The ACMI has set an ambitious goal for Africa to produce 300 million carbon credits annually by 2030, generating a substantial $6 billion in income and creating 30 million jobs. Looking ahead to 2050, the initiative envisions Africa producing a staggering 1.5 billion credits annually and generating over 110 million jobs.

The ACMI's strategy involves the active participation of seven African countries, namely Kenya, Gabon, Malawi, Mozambique, Togo, Nigeria, and Burundi, which have committed to developing country-specific carbon activation plans. These plans align with the ACMI roadmap, which outlines comprehensive action programes to address all aspects of the voluntary credit market ecosystem. This includes activities related to the supply and standard setting, intermediation, and financing, as well as the demand side of the carbon market.

The ACMI places great emphasis on ensuring transparency and equity in the generation of revenues from carbon credits. By increasing carbon credit production in Africa, the initiative not only contributes to mitigating climate change but also presents a significant economic opportunity for the continent. The income generated through the sale of carbon credits can be reinvested in sustainable development projects, creating a positive cycle of environmental and economic progress.

Through its holistic approach and partnerships with various stakeholders, the Africa Carbon Markets Initiative is poised to make a substantial impact in combatting climate change, fostering sustainable development, and unlocking the immense potential of the carbon market in Africa.

Source: https://www.seforall.org/system/files/2022-11/ACMI_Roadmap_Report_Nov_16.pdf

The Africa Carbon Markets Initiative (ACMI) strategy involves the active participation of seven African countries.

Solving the energy paradox also requires a shift that allows African countries to capitalize on their endowments of the minerals, metals, and inputs needed for the global green transition.

Wind turbine farm in Tunisia.

Solving the Energy Paradox: The Driver

Solving the energy paradox requires, first of all, activating domestic resource mobilization as a game changer. If harnessed effectively, DRM systems will constitute a de-risking tool, enabling African countries to tap international capital markets in a better position, effectively unlocking energy finance and providing African countries with the resources needed to build an arsenal of various technologies to maximize Africa's power generation efficiency and achieve a balanced energy mix. Such an energy mix will require comprehensive energy planning considering each country's unique circumstances, energy resources, and regional interconnections.

Solving the energy paradox requires, first of all, activating domestic resource mobilization (DRM) as a game changer.

Lack of investments in affordable energy will perpetuate Africa's commodities-based economies.

Mobilizing and harnessing Energy Financing

Financing is a vital part of Africa's energy paradox, and therefore, the continent needs to go beyond traditional public sector and multilateral financing and increase the participation of the private sector and other forms of innovative financing. Lack of investments in affordable energy will perpetuate Africa's commodities-based economies, stunting the continent's ambitions towards industrialization and sustainable development. The IEA estimates that the energy sector in Africa, excluding North Africa, requires an investment of at least $ 40 billion annually (2018-2030) to reach universal energy access. However, in 2019, only $16 billion was invested in the sector, resulting in a significant gap. As discussed in section 2.2, domestic resource mobilization as a game changer, if harnessed effectively, can potentially unlock energy finance and accelerate progress towards the SDG.

Given the large financing gap for developing Africa's energy sector, public investment alone is unlikely to meet the need. Therefore, there is a need to mobilize private sector investment into the sector. In this regard, African governments have a critical role to play in incentivizing private investment in the energy sector and developing policies and regulations that promote the use of Africa's energy sources. Sections 2.2.4 and 2.2.7 discuss financing options such as harnessing pension funds for infrastructure finance and carbon finance.

While public sector investment has played a critical role in promoting energy development in the region, African countries lack access to affordable financing due to various factors, including high public debt, competing priorities over limited resources, and the high cost of borrowing. In addition, many African governments need the enhanced capacity to implement energy projects in an effective and timely manner. As a result of these limitations, most of the investments between 2010 and 2021 were directed towards the expansion of electricity access in rural areas and the upgrading of existing infrastructure.

At the same time, while the private sector is a critical source of finance for energy projects in Africa, the sector's participation in infrastructure project financing is minimal when compared to public sector or multilateral financing. Several factors, including policy reforms, improvements in the regulatory framework, and increasing investor interest in the region, have driven private sector investment in the energy sector in Africa. African countries have also implemented policy and regulatory reforms to attract private sector investment in the energy sector, including developing renewable energy targets and introducing feed-in tariffs. For example, countries like Egypt and Morocco have implemented feed-in tariff schemes to incentivize private investment in renewable energy.

With high-risk perceptions around infrastructure investment in Africa, the increased deployment of credit enhancement mechanisms to crowd in the private sector should be considered in Africa. The Blended Finance Task Force has shown that five times multiplier effect relative to direct lending based on the deployment of guarantees for leveraging private sector finance.[63]

63 Blended Finance Taskforce (2023).

Improving Regulatory Frameworks

Developing business-friendly regulatory frameworks, policies, and programmes is necessary to resolve Africa's energy paradox. Some examples of policy measures include rural electrification targets, incentives for the private sector and independent power producers, and targeted subsidies for low-income households and for the use of modern energy services. Reaching these policy targets needs regulations that foster the use of mini-grids, off-grid systems, and other decentralized energy solutions, especially in rural and hard-to-reach areas. Such interventions have shown a tremendous impact on electrification in countries such as Kenya, Guinea Bissau, and Eswatini.

Improving energy regulatory frameworks can also help to promote investment, foster competition, ensure reliability and quality of service, foster regional cooperation, and protect consumers through effective tariff-setting mechanisms. This requires a comprehensive, inclusive, evidence-based, and transparent regulatory framework that outlines clear roles and responsibilities, regulatory processes, and standards that can help to improve the predictability and transparency of the energy sector. To enforce these regulations, regulatory institutions need to be established, where necessary, and adequately resourced, staffed with competent personnel, and provided with the necessary independence and autonomy to effectively carry out their regulatory functions.

One of the most effective measures in the energy regulation ecosystem is to attract private investment by establishing effective tariff-setting mechanisms. Tariffs should be set using transparent and objective methodologies that reflect cost recovery and provide a reasonable rate of return on investment.

Developing business-friendly regulatory frameworks, policies, and programmes is necessary to resolve Africa's energy paradox.

Promoting frontier technologies and capitalizing on mineral resources

Solving the energy paradox also requires a shift that allows African countries to capitalize on their endowments of the minerals, metals, and inputs needed for the global green transition. For example, the Democratic Republic of Congo accounts for 70 per cent of the world's cobalt known reserves,[64] Rwanda has over 30 per cent of the world's tantalum,[65] and South Africa concentrates 93 per cent of the world's ruthenium, 85 per cent of iridium, 83 per cent of rhodium and 70 per cent of platinum.[66]

Moving from exporting these critical minerals to investing in capacity building and technology transfer would allow African countries to domesticate different energy technologies, realize clean energy transitions, and capitalize on potential green jobs. Affordable and reliable energy access is vital to harnessing these resources, creating green jobs, building up value-adding industries, and strengthening the continent's manufacturing capacity for renewable energy components such as solar panels, fuel cells, wind turbines, and batteries. Developing the continent's resources to build balanced energy mixes would also require specialized training, research and development, and investment in Africa-centric frontier technologies. A unified continental strategy to leverage and use critical minerals would contribute to capitalizing on these resources and maximizing benefits. Frontier and emerging technologies, such as green hydrogen, also provide an opportunity to address the energy paradox.

Several African countries are already exploring opportunities for green hydrogen production, including Egypt, Morocco, Namibia, and South Africa. For example, Morocco is developing a green hydrogen project using solar power to produce hydrogen for transportation, industry, and power generation, capitalizing on its significant renewable energy resources and existing hydrogen supply chains. Training a specialized workforce and investing in related infrastructure to be a first mover as the technology matures are critical steps to grasp this opportunity.

Frontier and emerging technologies, such as green hydrogen, also provide an opportunity to address the energy paradox.

Strengthening Regional Cooperation and cross-border energy transmission

Regional cooperation and integration are critical to reducing the cost of energy and increasing access to reliable and affordable energy services. Investment in African power pools to develop cross-border transmission and distribution systems will transform regional energy markets, allow the integration of renewable energy into the energy mix, and minimize the impact of the geographic disparities in energy resource distribution.

Many energy projects in Africa are cross-border in nature, requiring regional cooperation and coordination to develop large-scale energy projects and strengthen power pools. Securing financing for transboundary African energy projects is challenging, particularly for projects that involve multiple countries and stakeholders.

Accessing private capital for cross-border energy projects is also challenging due to the perceived risks of public sector capacities. These projects often require coordination and approval from multiple regulatory bodies in multiple countries. Different regulatory frameworks between countries can also create challenges for project planning and implementation, leading to delays, cost overruns, and even project failure.

Cross-border energy generation projects also entail additional investment. The cost of interrelated infrastructure such as power transmission lines can quickly add to land acquisition, design and engineering, construction materials, labor, and equipment expenses. Moreover, lacking the necessary funding and resources to invest in interrelated infrastructure can lead to delays and cost overruns in these power generation projects.

One of the main drivers of the high cost of installing and maintaining transmission infrastructure in Africa is many African countries' challenging geography and terrain. Africa has a very limited transmission network compared to the continent's size, a total length of 89,731 kilometers, making it difficult to scale up regional power pools and cross-country power transmission. Since many African countries have vast, sparsely populated areas with difficult-to-navigate terrain, transmission lines quickly become cost-prohibitive and time-consuming.

Since energy is a critical input for agriculture, increased energy generation would, in turn, be essential to unleashing Africa's agricultural potential, leading to increased agricultural value added and industrial production with positive spillovers to the rest of the economy.

64 Garside (2022), retrieved from Statista: https://www.statista.com/statistics/264930/global-cobalt-reserves/
65 USGS (2022).
66 Garside (2023).

Africa's leading policy framework for agriculture and agriculture-led development is aimed at reducing poverty and enhancing food security across the continent.

Kitabi tea processing facility in Rwanda

Solving the Food systems Paradox: the key to Resilience

Domestic resource mobilization will trigger a cascading effect on energy access and agricultural production. Effective DRM systems will create additional fiscal space and enhance the profitability of private investments, increasing financing for agricultural production and the food-processing industry. Increased financing in agriculture-related infrastructure will result in more competitive cost structures and enable cutting-edge technology to be utilized. Investments in affordable and renewable energy will transform agricultural productivity. The implementation of the African Continental Free Trade Area (AfCFTA) will boost intra-African trade in agriculture by building inclusive and harmonized food and business value chains, which will enhance domestic productive capacity and reduce imports. A set of policy interventions will be required to solve the food system paradox and unlock the potential of Africa's agriculture.

African countries, under the leadership of the African Union, have positioned agriculture as the main driver of inclusive growth and economic development to ensure wealth creation, food and nutrition security, poverty alleviation and prosperity, and resilience and sustainability. In 2003, the Comprehensive Africa Agriculture Development Programme (CAADP) was launched in Maputo, Mozambique, by African heads of state and governments. Africa's leading policy framework for agriculture and agriculture-led development is aimed at reducing poverty and enhancing food security across the continent. In 2014, all African heads of state re-committed to these targets and principles in the Malabo Declaration. There have since been three biennial reports published in 2018, 2020, and 2022 on the implementation progress of the seven Malabo commitments. The third biennial review process conducted in 2021 was based on reported data from all but four member states. Results of the 2021 assessment are summarized in Table 2, which shows that the performance of Africa in transforming its food systems has declined since the 2019 review. In particular, investment finance in agriculture and intra-Africa trade in agriculture are two key areas that have lagged behind.

Table 2 **CAADP Assessment: 7 commitment areas to transform African agriculture**

	2019 continent score	2021 continent score	Change	Member states on track or progressing well in 2021
1. Recommitment to the principles and values of the CAADP process	7.29	7.28	**-0.14%**	47
2. Enhancing investment finance in agriculture	3.46	3.15	**-9.84%**	11
3. Ending hunger by 2025	2.20	2.71	18.81%	2
4. Halving poverty through agriculture by 2025	1.81	2.69	31.71%	14
5. Boosting intra-Africa trade in agricultural commodities & services	2.87	2.44	**-17.62%**	51
6. Enhancing resilience to climate variability	4.59	5.71	19.61%	34
7. Enhancing mutual accountability for actions and results	5.98	6.27	4.65%	42

Source: African Union 2022. The Biennial Review Report of the African Union Commission on the Implementation of the Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods.

Boosting Agriculture Financing

Countries need to mobilize additional financing, both public and private, to improve agricultural production and reduce food insecurity across the continent. (Figure 15) In 2003, African Heads of State signed a declaration on Agriculture and Food Security in Maputo, Mozambique, with a commitment to allocate at least 10 per cent of their national budget to food and agriculture under the CAADP.[67] Now, 20 years after the signing of the Maputo Declaration, countries have yet to reach the objective. In fact, the share of agriculture in total government expenditure has decreased from 2.77 per cent in 2013 to 2.27 per cent in 2021, around half of the portion allocated to agriculture by countries in Asia. (Figure 16) It should be noted that this situation is compounded by an overall squeezing of fiscal space for the majority of African countries associated with decreasing revenues linked to global crises and the increasing cost of servicing debt burdens.

IN 2003, AFRICAN HEADS OF STATE COMMITED TO ALLOCATE AT LEAST

10%

OF THEIR NATIONAL BUDGET TO FOOD AND AGRICULTURE UNDER THE CAADP.

67 AUDA-NEPAD. https://www.nepad.org/caadp/overview

Countries need to mobilize additional financing, both public and private, to improve agricultural production and reduce food insecurity across the continent.

Figure 15

Unlocking Africa's agricultural potential

Addressing Africa's Food Paradox

Compounding drivers of food insecurity

01 Climate Change

02 Global food crisis triggered by war in Ukraine

03 COVID-19 pandemic

04 Frequent conflicts

Domestic resource mobilization is the game changer

Mobilize public finance for agriculture

Invest in infrastructure and energy access

Catalyze private sector funding

Develop agri-food value chain through AfCFTA

Public finance in agriculture should be directed toward high-value areas. While many countries are yet to meet the CAADP 10 per cent budgetary target, input subsidies account for a large share of food and agriculture expenditure in many countries.[68] Yet, this has not led to significant improvement in agricultural productivity. There is a need to redirect public investment in agriculture toward technology generation and diffusion, climate change adaptation, irrigation, and other infrastructure.

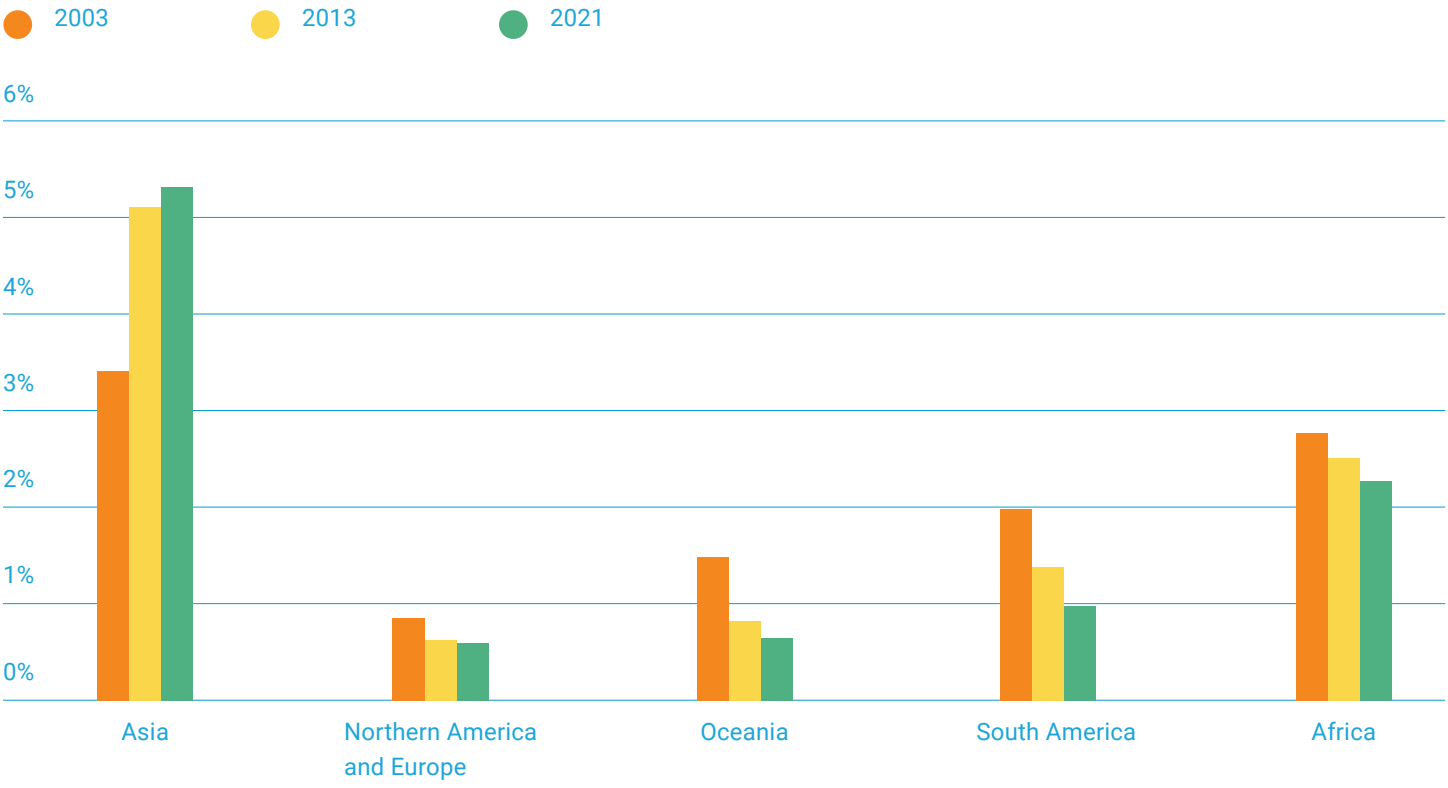
Financing and investments in agriculture must be combined with efforts to improve efficiency in spending. Inefficiency in public expenditure diverts precious resources away from development. Therefore, countries must make efforts to strengthen public financial management and governance frameworks, especially given the elevated public debt caused by the COVID-19 pandemic.[69] Countries should carry out a comprehensive audit of existing agriculture spending programes to identify wastages and potential savings and narrow down on areas of agriculture production where additional investments can generate maximum impact.

African countries could produce two to three times more cereals and grain if they intensify their agricultural productivity from yield improvement, land expansion growth, and postharvest-loss reduction. This would add 20 per cent to the worldwide cereal and grain outputs. Similar gains could be seen in the production of horticulture crops and livestock.[70] Realizing Africa's full agricultural potential will require significant investments in agricultural input and market development. Africa will need to invest in agricultural inputs, including eight times more fertilizer and six times more improved seeds.[71]

Development partner support plays an important complementary role in government investments. At the second Africa food summit (Dakar 2 Summit) held in January 2023 under the theme "Feed Africa: food sovereignty and resilience", development partners pledged to commit $30 billion to support Africa to boost agricultural productivity and become a breadbasket for the world. This includes $10 billion from the African Development Bank over five years and $5 billion from the Islamic Development Bank. This shows the resounding support from development partners to build more resilient food systems and unlock their agricultural potential.[72] Focusing a share of those funds on strengthening country systems could help ensure long-term impact and sustainability.

68 FAO (2021). E.g., In Burkina Faso, Burundi, Malawi, Mali and Senegal, input subsidies accounted for over 20 per cent of expenditures on food and agriculture in almost every year during 2009-2018.
69 United Nations (2022).
70 McKinsey and Company (2019).
71 Ibid.
72 AfDB (2023a).

Figure 16 **Government expenditure on agriculture is insufficient to meet food needs in Africa**



Source: FAOSTAT. Food and Agricultural Organizationof the United Nations. SDG 2.1.1: Agricultural share of Gov't expenditures (highest government level).

Investing in agriculture-related infrastructure to improve competitiveness

High logistics costs arising from poor transport and infrastructure make it challenging for African countries to supply competitively priced agricultural products. African Development Bank's Strategy for Agricultural Transformation in Africa 2016-2025 identifies infrastructure as one of the common constraints in the African agricultural commodity value chains. Insufficient transport, irrigation, storage, and roads result in uncompetitive cost structures.

Governments should work with development partners to channel investments into hard infrastructure.

Increased public and private investments in infrastructure are key to enhancing the feasibility and cost competitiveness of scaling Africa's agricultural production and agribusiness.

Increased public and private investments in infrastructure are key to enhancing the feasibility and cost competitiveness of scaling Africa's agricultural production and agribusiness. The Strategy for Agricultural Transformation in Africa 2016-2025[73] identifies infrastructure investment as one of the seven enablers for agricultural transformation across the continent. Governments should work with development partners to channel investments into hard infrastructure, especially rural roads, irrigation, storage facilities, and logistics, and focus on developing rural infrastructure to both improve potential output and connect rural farmers to local and regional markets. McKinsey estimates that requirements for infrastructure investment in Africa (minus North Africa) of at least $8 billion in basic storage and up to $65 billion in irrigation, as well as investments in roads, ports, and electricity.[74] Funding should also be made available to develop ICT platforms to support financial transactions, disseminate market information, and support value chain modernization.[75]

Infrastructure investment in traditionally underserved rural areas has the potential to revive agricultural production and drastically improve livelihood. The African Development Bank financed the South-West Region Agricultural Infrastructure Rehabilitation Project in the Ambahikily and Andranomangatsiaka municipalities in Madagascar. About 80 per cent of the residents are engaged in agriculture, mostly fishing, livestock, rice, sugar cane, cassava, lima beans, potato, and cowpea farming. The rehabilitation project resulted in the refurbishment of water intake, improvement of water resource infrastructure, development of irrigated plots, and the use of improved seeds.[76] The intervention has revived the agrarian economies of the two towns improved agricultural productivity, and farmers' income. The project is estimated to have benefited 79,000 residents, of whom 42 per cent are women.[77]

73 AfDB. Strategy for Agricultural Transformation in Africa 2016-2025.
74 McKinsey and Company (2019).
75 AfDB. Strategy for Agricultural Transformation in Africa 2016-2025.
76 AfDB (2019).
77 AfDB (2023).

Energizing Food Systems

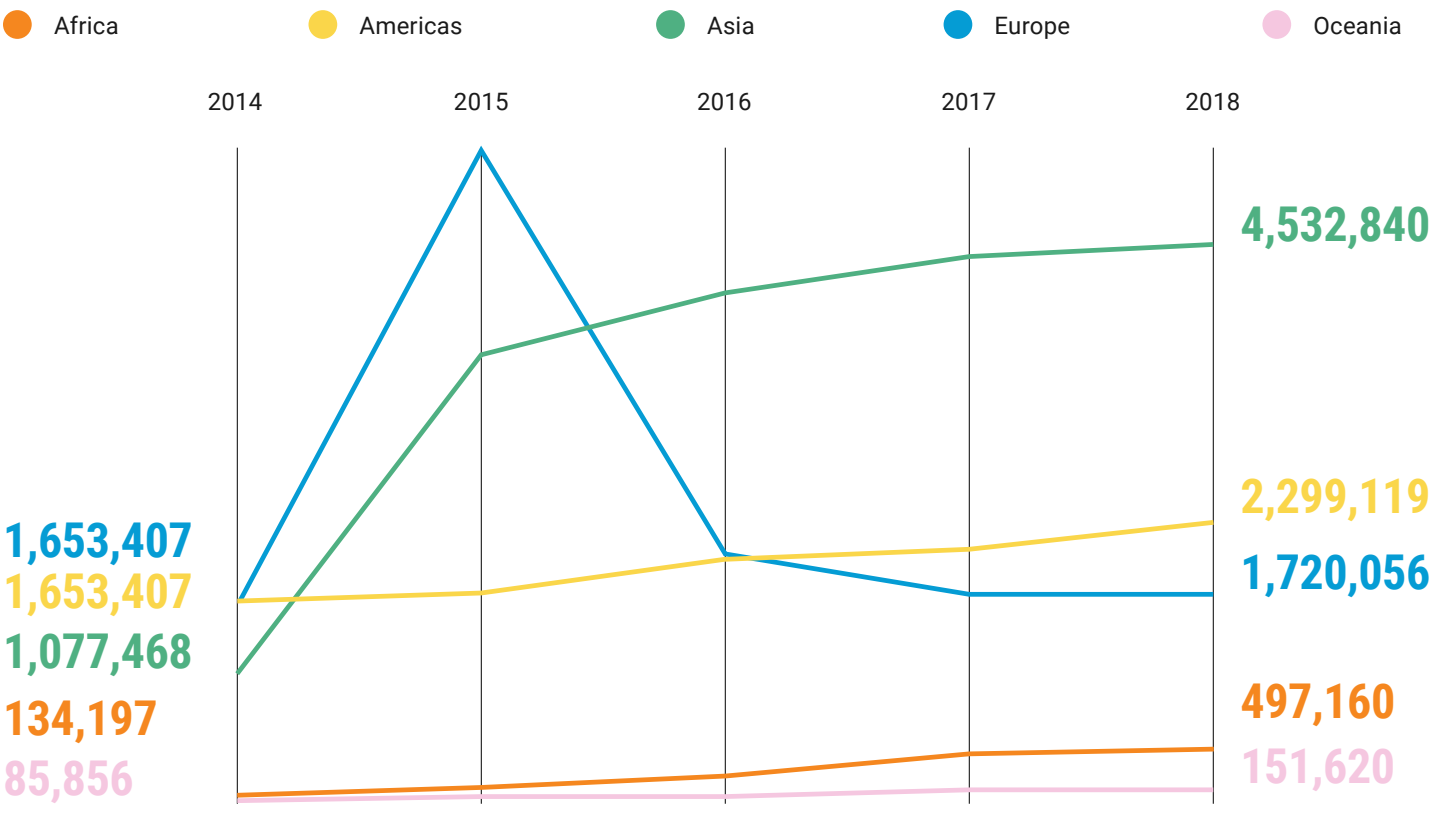
Africa's agricultural transformation needs to be underpinned by better energy infrastructure and increased energy access. Although agriculture remains the backbone of Africa's economy employing more than half of the population, the region's persistent lack of energy access means that Africa continues to have the lowest share in the total agriculture-related energy use worldwide, rising only slightly in the last four decades from 2.9 per cent in 1980 to 5.4 per cent in 2020 (Figure 17).

Nevertheless, the growing demand for energy access to fuel agricultural production presents a severe challenge. From 1980 to 2020, while agriculture-related energy use went up by 200 per cent worldwide, the African region saw a greater increase of 370 per cent, far exceedingly more developed regions and second only to Asia (421 per cent).[78] Given the continent's agricultural potential is still largely untapped due to the lack of financing, limited use of fertilizers, and reliance on antiquated technologies, among other reasons, the energy demand will only grow higher as countries implement necessary policies to fulfill their agricultural potential.

Lack of energy access creates huge inefficiencies in the African agriculture sector. African countries have an electricity access rate of just over 40 per cent.[79] And currently, Africa's agriculture sector accounts for only 2 per cent of total electricity consumption. Energy demand in agriculture comprises both irrigation and agro-processing. Irrigation can boost crop yields by up to four times, yet only 5 per cent of Africa's farmland is irrigated.[80] Energy is also important for post-harvest storage, as well as for developing aggregated processing technologies and trade-related capacities that support agriculture value chains. Lack of energy for storage and postharvest processing infrastructure leads to high postharvest losses, estimated at $4 billion per year for Africa.[81]

78 FAOStats
79 AfDB. "Light Up and Power Africa – A New Deal on Energy for Africa".
80 OSAA (2022b).
81 Ibid.

Figure 17 **Africa's share in world total energy use in agriculture remains minimal**



Source: FAOSTATS.

In this regard, Africa should adopt an integrated approach to energy access and agriculture value chains. This requires at-scale investments from the government to build energy infrastructure, invest in rural electrification, and partner with the private sector to offer innovative solutions. For example, renewable energy can be used on smallholder farms to tap into groundwater available in shallow aquifers for irrigation. The government can prioritize the targeted deployment of mini-grids and off-grid capabilities through structured farming cooperatives, thus leveraging economies of scale and making energy more affordable.[82]

Governments should partner with private sector companies to bring affordable and renewable energy solutions to smallholder farmers, who are the backbone of Africa's agricultural sector. Ninety per cent of the food in sub-Saharan Africa is produced by smallholder farmers, yet they often lack the inputs and tools that could increase their productivity (seeds, irrigation, fertilizers, post-harvest processing, cold storage) and suffer from unreliable energy access, which compromises farming productivity.[83] Governments in Africa should create an enabling environment for energy innovations for agriculture and provide funding where necessary to facilitate the adaptation of new, sustainable technology.

Attracting Private Sector Funding in Africa's Agri-food Industry

Besides public investments, African governments should take actions to catalyze and crowd in funding from private sector partners by helping to reduce the risk of agribusiness in their countries. Governments can set up facilities to reduce the risk and cost to serve under-financed areas of the agribusiness sector and develop structured finance facilities to leverage private sector capital and scale up agribusiness.

The African Union and NEPAD, in partnership with the World Economic Forum, established the Grow Africa initiative in order to increase private sector investment in agriculture and enable countries to realize the potential of their agriculture sector for economic growth and job creation. Rather than providing direct investment and project implementation, Grow Africa plays a unique role as a convener and catalyst. It works to incubate and support agricultural value chain platforms, mobilize new investments, incubate new business models, share best practices, facilitate access to affordable finance, and help maintain African leadership commitment to agriculture. Grow Africa facilitates collaboration between governments, companies, and smallholder farmers to lower the risk and cost of investing in agriculture and improve the speed of return to all stakeholders.[84]

Ninety per cent of the food in sub-Saharan Africa is produced by smallholder farmers.

It is important to identify bankable businesses with sustainable competitive advantages and unique selling points that will attract large and long-term investments. Examples may include a dairy processing plant in East Africa where raw milk can be sourced cost-efficiently or products like cocoa from Côte d'Ivoire and Ghana, vanilla from Madagascar, tea from Kenya, and fruits from South Africa.[85] The International Finance Corporation (IFC), the private sector arm of the World Bank Group, has positioned agribusiness as a strategic priority in Africa and applies an "upstream" approach that helps create and expand markets through targeted sector and project-level interventions to attract private investment. IFC has partnered with several private equity firms to support agribusiness ventures in Africa. In addition, IFC focuses on promoting access to finance for smallholder farmers by investing in financial institutions within Africa so they can increase lending for farmers and cooperatives.[86]

Beyond financial investments in agribusiness projects, private sector funding can also be channeled towards capacity development to improve agricultural productivity. IFC provides advisory services that help clients strengthen their operations in areas including productivity improvement, climate-smart practices, food safety, and better engagement with smallholder supply chains. In Rwanda, for example, IFC partnered with the World Food Programme (WFP) to work with 145 farmer cooperatives across the country and trained nearly 40,000 farmers over the span of 2016-2022 to build their skills in proper planting techniques and post-harvest handling, as well as contract negotiation and record keeping. The project helped establish more than 700 women's saving groups, mobilizing around $120,000 in savings that farmers were able to use to access loans.[87]

82 Ibid.
83 The Rockefeller Foundation. "Alliance for a Green Revolution in Africa".
84 World Economic Forum (2017).
85 International Finance Corporation (IFC). https://www.ifc.org/wps/wcm/connect/REGION__EXT_Content/IFC_External_Corporate_Site/Sub-Saharan+Africa/Priorities/Agribusiness/
86 IFC (2021).
87 IFC (2023).

Developing Agri-food Value Chains through the AfCFTA

To boost agriculture production and value added from agriculture, African countries should prioritize the development of whole agri-food value chains to foster resilient food systems and improve food security. Implementation of the AfCFTA will boost intra-African agriculture trade by exploiting the full range of the agri-food value chain. To date, Africa's agricultural trade has largely comprised commodities and raw materials (cocoa, coffee, cotton, tobacco, and spices) with a mix of processed goods (fruits and nuts, cane and beet sugar, prepared or preserved tunas, wine, and other food preparations). Under the AfCFTA, countries can unlock their agricultural potential through inclusive and harmonized food and business value chains.[88] It is estimated that the AfCFTA could possibly increase intra-African agricultural trade by 20-35 per cent.[89] By pooling resources and harmonizing trade policies, the AfCFTA will also help attract private sector investment flows. Beyond the value chain, increased intra-regional trade could create more off-farm jobs in the agricultural sector for the youth in Africa in areas such as marketing and sales.

To realize the full potential of the AfCFTA, African governments, and development partners need to step up policy and capacity-building support to take advantage of what pan-African trade has to offer. In support of AfCFTA implementation, FAO, in collaboration with the African Union Commission, launched the Framework for Boosting Intra-African Trade in Agricultural Commodities and Services in April 2021 to guide policymakers, the private sector, and civil society to develop and expand sustainable, inclusive and resilient intra-African trade.[90] In order to help countries enhance food control systems and grow intra-Africa trade, FAO provides the necessary support to strengthen the capacity of countries to comply with food safety standards and facilitate trade.

IT IS ESTIMATED THAT THE AFCFTA COULD POSSIBLY INCREASE INTRA-AFRICAN AGRICULTURAL TRADE BY

20 - 35%

Agricultural transformation will need dedicated people with the right knowledge and skills.

Supporting knowledge and skill building

In addition to physical infrastructure, African governments should also direct support to the development of soft infrastructure, innovative technology, and human capital. ICT platforms are important in supporting financial transactions, disseminating market information, and supporting value chain modernization. Fintech improves access to finance for smallholder farmers and lowers transaction costs.[91] African Development Bank's Technologies for African Agricultural Transformation (TAAT) Program aims to propel the continent's goals in agricultural transformation by employing high-impact technologies at scale along nine commodity value chains: maize, rice, wheat, high-iron bean, cassava, orange-fleshed sweet potato, sorghum/millet, livestock, and aquaculture.[92]

Agricultural transformation will need dedicated people with the right knowledge and skills. Only 2 per cent of Africa's students specialize in agriculture, even though agriculture[93] accounts for half of Africa's employment. Governments should support initiatives that help develop the level of human capital in agribusiness by attracting talent and developing necessary skills. This may include the establishment of specialized university degrees and vocational training programes focused on agricultural engineering, natural resource management, agricultural entrepreneurial skills, environmental science, food science, etc.

88 Mbonde, A (2022).
89 AUC/OECD (2022).
90 Mbonde (2022).
91 AfDB. Feed Africa: Strategy for Agricultural Transformation in Africa 2016-2025.
92 AfDB. Available at https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/technologies-african-agricultural-transformation-taat/about-taat. TAAT Program has six enabler compacts address cross-cutting issues such as soil fertility management, water management, capacity development, policy support, fall armyworm response, and attracting African youth in agribusiness.
93 Ehui and Klytchnikova (2020).

Conclusion and Recommendations

Africa's sustainable development potential is hampered by three paradoxes: a Continent rich in financial resources but in debt distress; rich in energy resources but largely restricted in access to electricity; and rich in agriculture resources with high levels of food insecurity. These paradoxes intersect and feed on one another. The lack of financing limits investment in energy, which in turn negatively impacts agricultural and food production.

The cascading and intersecting global crises have exposed the weaknesses and vulnerabilities of the financing, energy, and food systems in Africa. Through a complex web of macroeconomic, trade, and financial channels, the crises have affected financing, energy, and food systems across Africa in different ways, including through deteriorating fiscal positions, tightening financial conditions, rising interest rates, elevated debt levels, soaring prices for food and energy—fueling civil unrest and political instability across much of the continent. Addressing the financing, energy, and food system paradoxes will be crucial to unleashing Africa's potential.

African countries need to take the lead in calls for a comprehensive reform of the global financial system, in line with the Secretary-General's push for reform.

United Nations Secretary-General António Guterres speaks at the African Union Summit in Addis Abeba, Ethiopia

Against this backdrop, the following policy recommendations are proposed:

Financing Paradox

- African countries should prioritize consolidating holistic, integrated, and robust domestic resource mobilization systems and leverage them as tools for de-risking SDG investments. This requires enhancing revenue collection and public expenditure efficiency through the digitalization of public financial processes. It also entails the establishment of policy and regulatory frameworks that are anchored on sustainable development goals, are fair, and facilitate the generation of flows and their mobilization as indispensable tools to tap into capital markets and ensure the sustainability of debt and long-term and affordable financing for development.

- To unlock the game-changing power of domestic resource mobilization (DRM), African countries should work toward strengthening their institutions and systems through digitizing public financial management, procurement, and revenue mobilization processes. In turn, this can act as de-risking agents for attracting foreign investment, enhancing transparency, accountability, and good governance, leading to effective resource allocation, public spending, and better service delivery. Additionally, African countries need to prioritize re-evaluating and rationalizing their tax incentive systems through a holistic approach that aligns the country's investment promotion goals with their resource mobilization strategies.

- African pension funds and Sovereign Wealth funds need to strengthen their long-term capacity to manage savings and invest them back into national priorities. In this respect, Further measures are required to fully harness pension funds for investment in productive capacity, including in energy and food system financing through loosening long-term investment limits in infrastructure projects, as well as further diversifying their assets across various categories to reduce investment risks and increase the rate of return. Additionally, pension funds need to benefit from economies of scale and reduce management risk by pooling their resources at national or sub-regional levels.

- African Carbon markets are still at nascent stages but hold enormous potential for mobilizing additional financial resources. Hence, African countries need to put in place the necessary regulatory and policy frameworks for carbon markets at the national level in line with the emerging global imperatives. Support will be needed from the international community to strengthen African countries' capacity to value and certify carbon credits and encourage the African private sector's participation in the carbon market. These frameworks must focus on providing high integrity and confidence in the value of these carbon credits and also must deliver high-impact benefits to communities in the form of improved income and revenue streams or access to energy and clean cooking solutions.

- Some African countries are holding excessive foreign reserves and bearing an important opportunity cost to their economies. Taking into account their respective contexts and recognizing their importance as tools for liquidity management, African countries are encouraged to adopt balanced approaches to keep adequate foreign reserves that sustain economic stability, maintain the exchange rate, service short-term external debt, and guarantee financing imports, and use the reserves surplus as a pro-growth tool by investing it back into the structural transformation of the economy. By doing so, countries can reduce the financing gaps and drive sustainable economic growth.

- African countries need to take the lead in calls for a comprehensive reform of the global financial system, in line with the Secretary-General's push for reform and the international community to adopt the SDG Stimulus, which aims at rescuing the SDGs and address Africa's triple paradox. The recent acceptance of the African Union as a participating member in the G20 group has strengthened African voices at the table to influence the direction of reform. However, the institutional make-up and – processes of International Financial Institutions (IFIs) and Multilateral Development Banks (MDBs) must reflect the urgency of delivering on the SDGs in the world's most vulnerable countries.

African countries need to put in place the necessary regulatory and policy frameworks for carbon markets at the national level in line with the emerging global imperatives.

Energy Paradox

- African countries should unlock energy financing to crowd in private sector actors and mobilize the massive funding needed to reach sustainable energy access for all. This requires the establishment of an investment-friendly environment through sound DRM systems, regulatory frameworks, and regional harmonization. It also entails undertaking medium and long-term energy planning exercises to ensure that African countries maximize all energy sources available, including those linked to frontier technologies, and particularly renewable energy infrastructure.

- African countries should promote sound regulatory frameworks in the energy sector to encourage innovation and crowding in private sector actors to foster market competition through measures such as unbundling utilities, establishing independent system operators, and incentivizing investment through feed-in tariffs that provide a reasonable return on investment.

- Foster regional cooperation to harmonize energy regulatory frameworks, promote cross-border infrastructure development, and facilitate regional energy trade through cross-border energy infrastructure such as generation and transmission grid networks.

- There is a need to leverage the continent's resources through investments in Africa-centric frontier technologies and manufacturing capacities to mainstream African products in global green technology value chains. To complement this investment, invest in capacity building in these areas through specialized training, research and development, and investment in institutions.

African governments should strengthen support for the development of ICT infrastructure

Food Systems Paradox

- African countries need to mobilize additional financing to improve the agricultural and food systems in Africa from both public and private sources. Domestic resource mobilization enables African countries to lower their dependency on foreign financing and will create a cascading effect that frees up more funding for investments in agriculture.

- Governments should allocate more budgetary resources towards food and agriculture in line with the commitment under the CAADP. Investments should be targeted toward high-value areas such as technology generation and diffusion, climate change adaptation, irrigation, and critical infrastructure.

- African countries should increase the availability of reliable and sustainable energy to increase food systems' productivity. In the short term, this requires a tenfold increase in the use of energy to support agricultural production. It also entails introducing technologies that support climate adaptation and the development of agri-business processes to their full potential. Governments should partner with the private sector to bring affordable and renewable energy solutions to smallholder farmers, who are the backbone of Africa's agricultural sector.

- Increased public spending must go hand in hand with a boost in private sector funding. Governments can work with development institutions to develop structured finance facilities to leverage private sector capital, scale up agribusiness, and identify bankable business projects with sustainable competitive advantages and unique selling points that will attract large and long-term investments.

- Implementation of the AfCFTA will potentially unlock the full potential of Africa's agri-food value chain by creating inclusive and harmonized agricultural and food value chains across producers, processors, and exporters. Governments and development partners need to step up policy and capacity building to take advantage of what pan-African trade has to offer.

- Agricultural transformation will need dedicated people with the right knowledge and skills. African governments should strengthen support for the development of ICT infrastructure, invest in human capital, and encourage innovative technology.

References

African Development Bank (AfDB). Feed Africa: Strategy for Agricultural Transformation in Africa 2016-2025. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/Feed_Africa-Strategy-En.pdf

African Development Bank (AfDB). "*Light Up and Power Africa – A New Deal on Energy for Africa*".

African Development Bank (AfDB). "*Technologies for African Agricultural Transformation (TAAT)*" https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/technologies-african-agricultural-transformation-taat/about-taat

African Development Bank (AfDB). 2019. Madagascar: African Development Bank agriculture infrastructure projects revive local economies of Indian Ocean Island nation. https://www.afdb.org/en/news-and-events/Madagascar-african-development-bank-agriculture-infrastructure-projects-revive-local-economies-of-indian-ocean-island-nation-18999

African Development Bank (AfDB). 2023a. https://www.afdb.org/en/news-and-events/unlock-impact-potential-agricultural-smes-africa-experts-urge-dakar-2-food-summit-58888

African Development Bank (AfDB). 2023b. Madagascar: South-West Region Agricultural Infrastructure Rehabilitation Project (PRIASO) project completion report. https://www.afdb.org/en/documents/madagascar-south-west-region-agricultural-infrastructure-rehabilitation-project-priaso-project-completion-report

African Development Bank (AfDB). "*Technologies for African Agricultural Transformation (TAAT)*" https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/technologies-african-agricultural-transformation-taat/about-taat

African Union (AU). 2022. The Biennial Review Report of the African Union Commission on the Implementation of the Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods.

AUC/OECD. 2022. Africa's Development Dynamics 2022: Regional Value Chains for a Sustainable Recovery, AUC, Addis Ababa/OECD Publishing, Paris, https://doi.org/10.1787/2e3b97fd-en

AUDA-NEPAD. https://www.nepad.org/caadp/overview

Awadhi, M., James, M., Byaro, M. 2022. Does Institutional Development attract Foreign Direct Investments in Sub-Saharan Africa? A Dynamic Panel Analysis. African Journal of Economic Review, Volume 10(1), January 2022.

Bjornlund, V., Bjornlund, H. and Van Rooyen, A.F. 2020. "Why agricultural production in sub-Saharan Africa remains low compared to the rest of the world – a historical perspective." International Journal of Water Resources Development, 36:sup1, S20-S53, https://doi.org/10.1080/07900627.2020.1739512

Blended Finance Taskforce. 2023. Better Guarantees Better Finance Consultation Paper.

Cleeve, E. 2008. How effective are fiscal incentives to attract FDI to sub-Saharan Africa? The Journal of Developing Areas, vol. 42, No. 1.

Collier, P., Hoeffler, A., & Pattillo, C. 2001. Flight capital as a portfolio choice. The World Bank Economic Review, 2001, vol. 15, no. 1 (2001), pp. 55-80 (pp. 55–80).

Czajkowski, M. and Gomez, A. 2022. Bringing affordable and renewable energy to smallholder farmers. https://climatechampions.unfccc.int/bringing-affordable-and-renewable-energy-to-smallholder-farmers/

Delgado, C., Tschunkert, K., and Smith, D. 2023. Food Insecurity in Africa: Drivers and Solutions. SIPRI Research Policy Paper.

Ehui, S. and Klytchnikova, I.I. "*Doing more—and better—for Africa's food system in the face of climate change*." World Bank Blogs. January 8, 2020. https://blogs.worldbank.org/climatechange/doing-more-and-better-africas-food-system-face-climate-change#:~:text=Only%202%25%20of%20Africa's%20students,to%20continue%20into%20the%20future

Fisseha, F.L., Cogent Economics & Finance. 2022. Effect of capital flight on domestic investment: Evidence from Africa.

Food and Agriculture Organization of the United Nations (FAO). 2021. " Public expenditure on food and agriculture in sub-Saharan Africa: trends, challenges and priorities". https://www.fao.org/3/cb4492en/cb4492en.pdf

Food and Agriculture Organization of the United Nations (FAO). 2022a. The importance of Ukraine and the Russian Federation for global agricultural markets AND the risks associated with the war in Ukraine. 10 June 2022 update. https://www.fao.org/documents/card/en/c/cb9013en/

Food and Agriculture Organization of the United Nations (FAO). 2022b. World Food and Agriculture – Statistical Yearbook 2022. Rome. https://doi.org/10.4060/cc2211en

Garside, M. 2022. Major countries based on cobalt reserves 2021.

International Monetary Fund (Garside, M. 2023. Platinum-group metal reserves worldwide in 2022, by country. Retrieved from Statista: https://www.statista.com/statistics/273624/platinum-metal-reserves-by-country/#:~:text=Total%20worldwide%20reserves%20of%20platinum,the%20United%20States%2C%20and%20Canada

IMF). 2022. "*How Africa Can Escape Chronic Food Insecurity Amid Climate Change*". https://www.imf.org/en/Blogs/Articles/2022/09/14/how-africa-can-escape-chronic-food-insecurity-amid-climate-change

International Energy Agency (IEA). 2022. Africa Energy Outlook 2022, IEA, Paris. https://www.iea.org/reports/africa-energy-outlook-2022, License: CC BY 4.0

International Financial Cooperation (IFC). 2021. "*Attracting Investment into Africa's Food Industries*". https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/attracting_investment_into_africas_food_industries

International Financial Cooperation (IFC). 2023. "*Training for Women Farmers Boosts Opportunity—and Ambition*". https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/training-for-women-farmers-boosts-opportunity-in-rwanda

McKinsey and Company. 2016. "*Lions on the Move II: Realizing the potential of Africa's economics*". https://www.mckinsey.com/featured-insights/middle-east-and-africa/lions-on-the-move-realizing-the-potential-of-africas-economies

McKinsey and Company. 2019. "*Winning in Africa's Agricultural Market*". https://www.mckinsey.com/industries/agriculture/our-insights/winning-in-africas-agricultural-market

McKinsey and Company. 2023. "*McKinsey co-founds effort to transform agriculture and food systems in Africa*". https://www.mckinsey.com/about-us/new-at-mckinsey-blog/mckinsey-co-founds-effort-with-global-partners-to-transform-agriculture-and-food-systems-in-africa

Mbonde, A. "*AfCFTA: What has worked and the way forward on agricultural trade.*" Africa Renewal, January 2022. https://www.un.org/africarenewal/magazine/january-2022/afcfta-what-has-worked-and-way-forward%C2%A0-agricultural%C2%A0trade

Nairametrics. 2022. Africa's carbon finance stream can be scaled up to $200 billion per annum. Okonkwo, O. https://nairametrics.com/2022/12/11/africas-carbon-finance-stream-can-be-scaled-up-to-200-billion-per-annum-osinbajo/

Ndikumana, L., and Boyce, J.K. 2021. Capital flight from Africa 1970-2018: New estimates with updated trade misinvoicing methodology. Political Economy Research Institute (PERI) University of Massachusetts-Amherst.

OECD. 2023. Pension Markets in Focus 2022.

OSAA. 2022a. Financing for development in the Era of COVID-19: the primacy of domestic resource mobilization- https://www.un.org/osaa/content/financing-development-era-covid-19-primacy-domestic-resources-mobilization

OSAA. 2022b. "*Africa's Practical Realities for COP 27 and Beyond: The food, energy and climate nexus*". https://www.un.org/osaa/news/africa%E2%80%99s-practical-realities-cop-27-and-beyond-food-energy-and-climate-nexus

Osinbajo, Y. and Márquez, I.D. 2022. Unlocking the Potential of African Carbon Markets. https://www.project-syndicate.org/commentary/africa-carbon-markets-credits-to-finance-sustainable-development-by-yemi-osinbajo-and-ivan-duque-marquez-2022-11

Project Syndicate. 2022. Unlocking the potential of African carbon markets. https://thebftonline.com/2022/11/09/unlocking-the-potential-of-african-carbon-markets/

Simola, A.M., Boysen, O., Ferrari, E., Nechifor Vostinaru, V. and Boulanger, P., Potential effects of the African Continental Free Trade Area (AfCFTA) on African agri-food sectors and food security, EUR 30804 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-41023-2, doi:10.2760/740480, JRC126054. https://publications.jrc.ec.europa.eu/repository/handle/JRC126054

The Rockefeller Foundation. "*Alliance for a Green Revolution in Africa*". https://www.rockefellerfoundation.org/initiative/alliance-for-a-green-revolution-in-africa/

UNCTAD. 2020. Economic Development Report 2020: Tackling Illicit Financial Flows for Sustainable Development in Africa.

UNDESA. 2022. World Population Prospects 2022 Summary of Reports. https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/wpp2022_summary_of_results.pdf

UNDESA. 2023. Financing for Sustainable Development Report 2023.

UNDP, "*Africa needs carbon markets*". https://climatepromise.undp.org/news-and-stories/africa-needs-carbon-markets

UNECA. 2019. Economic Report on Africa 2019: Fiscal Policy for Financing Sustainable Development in Africa.

UNIDO. 2011. Africa Investor Report 2011: Towards Evidence-based Investment Promotion Strategies.

United Nations. 2022. New Partnership for Africa's Development: nineteenth consolidated progress report on implementation and international support. Financing for Development in the Era of COVID-19: The Primacy of Domestic Resources Mobilization. https://www.un.org/osaa/secretary-general-report-on-nepad

United Nations. 2023. Our Common Agenda Policy Brief 6, Reforms to the International Financial Architecture.

US Geological Survey (USGS). 2022. Minerals Commodity Summaries https://pubs.usgs.gov/periodicals/mcs2022/mcs2022-tantalum.pdf

World Bank. 2017. "*Special Issue of Food Policy Debunks Myths about African Agriculture*". https://blogs.worldbank.org/opendata/special-issue-food-policy-debunks-myths-about-african-agriculture

World Bank, 2021. "*World Bank's Response to COVID-19 (Coronavirus) in Africa*". https://www.worldbank.org/en/news/factsheet/2020/06/02/world-banks-response-to-covid-19-coronavirus-in-africa

World Bank. 2022. "*State and Trends of Carbon Pricing 2022*" (May), World Bank, Washington, D.C.

World Economic Forum. 2017. "*Grow Africa: Partnering for agricultural transformation*". https://www3.weforum.org/docs/IP/2016/NVA/WEF_FSA_GrowAfricaBrochure_Jan2017.pdf

World Economic Forum. 2023. "*How Africa's new Free Trade Area will turbocharge the continent's agriculture industry*". https://www.weforum.org/agenda/2023/03/how-africa-s-free-trade-area-will-turbocharge-the-continent-s-agriculture-industry/

Chapter 3

The role of strong institutions in overcoming the triple paradoxes

Swearing in of Members of Parliament in Kigali, Rwanda.

Activating the Enablers: Policies and Institutions

The absence of robust and transparent institutions accounts for much of the triple paradoxes of financing, energy, and food systems in Africa.

The role of institutions in explaining economic prosperity

In alignment with the analyses presented in chapters 1 and 2, this chapter views Africa's triple paradoxes of finance, energy, and food systems through the lens of institutions and governance, arguing that these three paradoxes exist because the enablers in the form of comprehensive and coherent policies and robust institutions were either not in place, or they were not sufficiently robust to prevent their emergence. Consequently, the much-needed resilience in African economies and societies to handle endogenous and exogenous shocks was not built.

It is important to start the discussion in this chapter by outlining the key concepts and definitions. Nobel laureate and one of the pioneers of New Institutional Economics, Prof. Douglass C. North, defines institutions as the rules of the game in a society. They are formally defined as "humanly devised constraints that shape human interaction".[94] It follows, therefore, that institutions play a significant role in shaping the incentive structure in social, economic, and political interactions and, as such, are a fundamental determinant of economic performance. A critical understanding of how institutional change occurs and the direction it takes is the key to understanding historical change.[95]

There is an empirical strand of economic literature that has analyzed the role of institutions in explaining the divergence of incomes between countries. Studies like Knack and Keefer (1995 and 1997), Hall and Jones (1999), Acemoglu, Johnson, and Robinson (2001 and 2002), and Rodrik, Subramaniam, and Trebbi (2002) have successfully brought the concept of institutions to the center of the debate about economic growth and performance. Using proxy measures, such as secure property rights, to capture the institutional setting in reduced-form regressions, these studies conclude definitively that differences in institutional arrangements explain the differences in per capita incomes across the world.[96] Prior, there was a multiplicity of explanations ranging from total factor productivity to the importance of geography in determining growth outcomes. The aforementioned studies settled the debate in favor of the role of institutions. In one of the most definitive treatises on this subject by Acemoglu and Robinson (2012) summarize their conclusions, arguing that the nations rise and fall not on the back of random factors, such as geography, cultural traits of societies, or pure luck, but rather on the back of the strength of their institutions.

94 North (1992).
95 North (1990).
96 Acemoglu and others. (2001) introduced a new instrumental variable in the form of settler mortality thereby establishing the direction of causality from institutions to economic performance.

How do weak institutions undermine social cohesion and resilience?

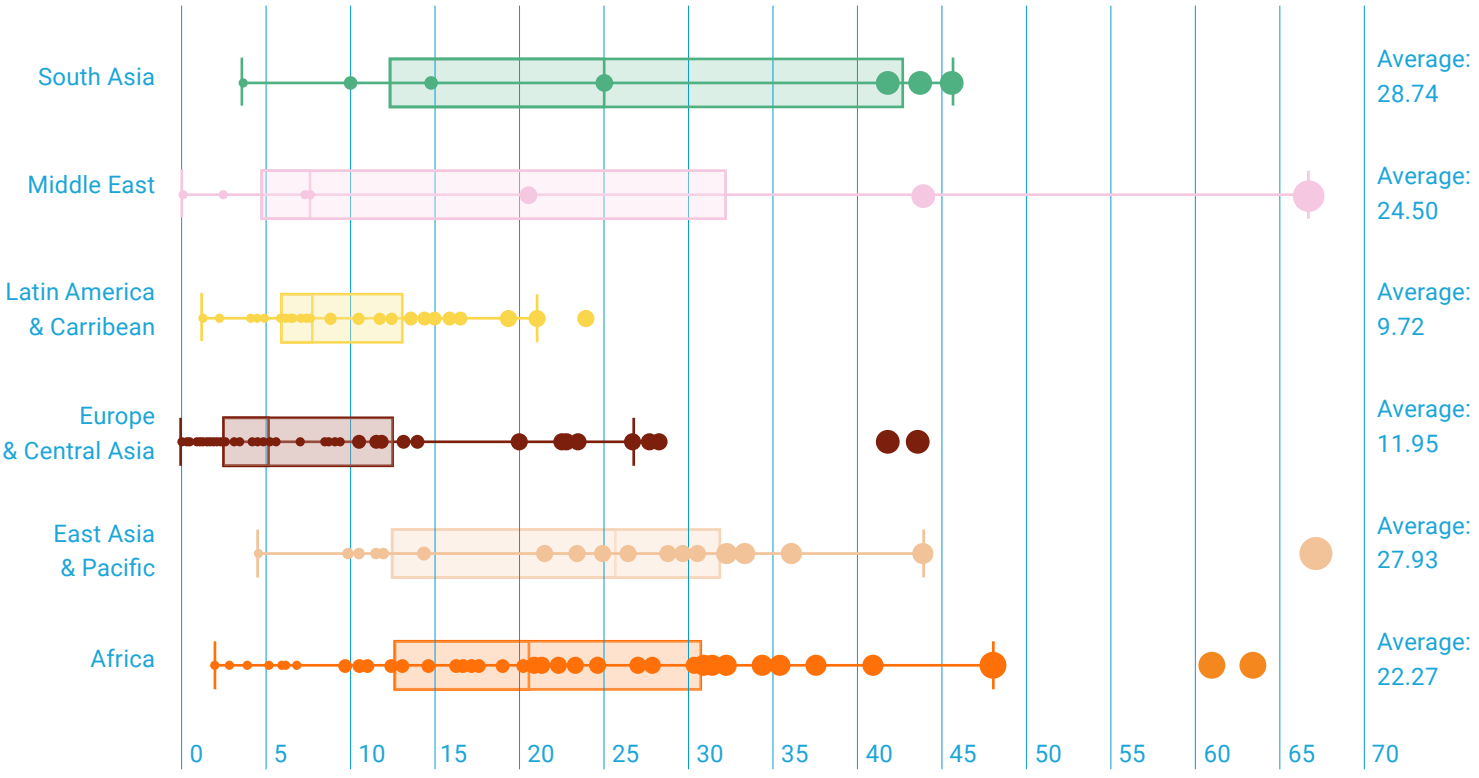
In light of the discussion above, it is evident that the absence of robust and transparent institutions accounts for much of the triple paradoxes of financing, energy, and food systems in Africa. This section discusses the channels through which weak institutions undermine social cohesion and resilience, leading to sub-optimal outcomes in Africa's sustainable development.

However, it is worth emphasizing at the outset that governance failure is by no means an African problem alone. In fact, 1 in 6 businesses globally reported having been asked to pay a bribe over the decade and a half from 2006 to 2021, as captured by the SDG indicator 16.5.2. At 22.3 per cent, the average incidence of bribery in Africa is lower than that in East Asia and the Pacific, the Middle East, and South Asia. (Figure 18) While these numbers correct a common misperception about corruption in Africa, corruption and illicit financial flows still drain billions of dollars from the continent's economies every year, hence the need to intensify efforts to address these menaces.

Corruption and illicit financial flows still drain billions of dollars from the continent's economies every year.

Figure 18 **SDG indicator 16.5.2**

SDG 16.5.2 - Description Bribery incidence (% of firms experiencing at least one bribe payment request) in 2021 or the most recent available data Africa, as compared with other regions.



Source: SDG Indicator Database managed by UN Statistics.

Weak institutions erode the security of property rights, including intellectual property rights, and the basis for the rule of law.

The prevalence of corruption and bribery leads to a waste of resources and inefficient spending decisions, reducing the fiscal space that is needed to address the financial, food and energy systems paradoxes. Furthermore, the lack of good governance is harmful to social cohesion as it destroys the sense of fairness and exacerbates further illicit activities, such as tax avoidance, corrupt trade practices, and illicit financial flows out of the continent. Consequently, corruption erodes the basis for social trust – an intangible asset with exponential impact on mobilizing resources and facilitating investment-friendly business environments.[97] African policymakers can reduce the incidence of bribery by requiring that common business processes, such as applications and payments for permits and licenses, are conducted in online one-stop shops and are fully transparent and accountable. Investing in the digitalization of the revenue collection and expenditure systems will also contribute to rebuilding social cohesion and a sense of fairness

Weak institutions also have a direct negative impact on domestic resource mobilization in both the revenue collection and expenditure management aspects. The lack of accountability in revenue collection and expenditure mechanisms leads to a lower tax base due to tax avoidance becoming more prevalent, potentially pushing economic activity into the fringes of the informal economy. Other channels through which bad governance weakens resource mobilization are through the increased risk perceptions and an opaque and unpredictable regulatory environment in Africa that impact negatively on savings and investment decisions.

Finally, weak institutions erode the security of property rights, including intellectual property rights, and the basis for the rule of law. All these factors combined reduce the incentives for socio-economic activity within Africa's vibrant private sector, dominated by micro, small, and medium enterprises (MSMEs) and the much-needed investments from domestic and external sources. Wei (1997), a widely cited empirical study, compares the impact of corruption on Foreign Direct Investment to that of an increase in the tax rate. For instance, an increase in the level of perceived corruption from the level of Singapore to that of Mexico is equivalent to increasing the tax rate on multinationals by almost 21 per cent.[98] More recent empirical studies focused on Africa, such as Cleeve (2008) and Awadhi and others (2022), highlight the importance of a stable and conducive business environment characterized by the rule of law, government effectiveness and robust institutions in attracting FDI to the continent's economies.

From lack of social cohesion to lack of resilience: capacity building for SDGs

A recent study by the African peer review mechanism (APRM) examines Africa's resilience in the post COVID-19 era, taking a closer look into three particular domains, namely healthcare, the economy, including debt sustainability issues, and socioeconomic factors.[99] This is in conjunction with the African Union's Agenda 2063 goals and aspirations towards a resilient Africa with geopolitical influence and prosperity coupled with strong and people-centered institutions. In the African context and many other developing countries, resilience means strong economies, robust domestic institutions, equality, and the ability to overcome internal and external shocks. As we have seen all too vividly during the COVID-19 pandemic, many countries in Africa suffered from a combination of weak institutions and a lack of resilience.

The study argues that there is a strong correlation between good governance and resilience. For instance, countries that were able to respond quickly and strongly to the COVID-19 pandemic are also those with strong institutions well managed resources and clear and accountable frameworks and tools to respond to shocks.

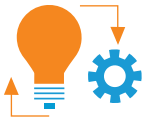
97 Rothstein and Uslaner (2005).
98 Wei (1997).
99 Mpungose (2022).

Based on the work of Pospisil and Kühn (2016) and DeBoer et al (2016), the APRM defines a resilient state as one that incorporates:

Functioning state institutions that prioritize the rule of law, good governance, democracy, human rights, and security;

Institutions that can cope with shocks;

A social contract between government and citizens based on mutual trust;



Implementable development frameworks;

Provision for humanitarian relief;

Effective diplomatic channels.[100]

In the lead-up to the SDG Summit of September 2023, the Secretary General's Report on the Progress towards Sustainable Development Goals (special edition): Towards a Rescue Plan for People and Planet shows that both globally and in Africa, the SDGs are off track. This constitutes a wake-up call for SDG acceleration. African countries struggle with governance and corruption, environmental degradation, conflict, and humanitarian emergencies that undermine their progress while they are at the same time trying to diversify their economies and make the most out of the opportunities that are afforded to them by the launch of the AfCFTA.

Looking forward, an Africa that can overcome these challenges and turn them into opportunities will be defined by strong and accountable institutions and robust policy frameworks that set the rules of the game for everyone equitably. This will go a long way toward addressing the triple paradoxes of finance, energy and food systems.

Governance Lens within the 2030 Agenda for Sustainable Development

It has long been argued that sustainable development cannot take root without peace and security and vice versa. Among the 17 sustainable development goals, SDG 16 is unique in its emphasis on governance and institutions, as well as the nexus between peace and security and sustainable development. SDG 16 aspires to promote peace and inclusive societies based on effective, inclusive, and accountable institutions and justice for all. As such, SDG 16 can be considered both an outcome and an enabler at the same time. Achieving SDG 16 and its targets will unlock synergies and have positive multiplier effects on most other goals and there will be a feedback loop from the progress made towards the other goals to SDG 16. The opposite scenario is also possible – shortfalls in achieving other SDGs, for instance, SDG 13 on climate action, could weigh down on the progress achieved towards SDG 16 with increased potential for social unrest and conflict.

This point drives home the importance of getting the institutional and governance structure and the policy frameworks right in order to solve the triple paradoxes by leveraging on the interlinkages between SDG 16 and SDGs 2 (Zero Hunger) to overcome the food systems paradox, SDG 7 (Affordable and Clean Energy) to overcome the energy paradox and SDG 17 (Partnerships for the Goals) to overcome the financing paradox. Against that backdrop, the following section presents a snapshot of governance trends in the continent over the past decade.

SDG 16 aspires to promote peace and inclusive societies based on effective, inclusive, and accountable institutions and justice for all. It is an outcome and an enabler.

100 Op cit p.59.

African countries had made progress in several key SDGs prior to the COVID-19 pandemic, including in areas such as poverty reduction, health, especially maternal and child health, access to electricity and gender equality.

A registered nurse look after newborns at a maternity in Freetown, Sierra Leone.

Governance in Action in Africa

African countries had made progress in several key SDGs prior to the COVID-19 pandemic, including in areas such as poverty reduction, health, especially maternal and child health, access to electricity and gender equality.[101] Yet, this progress was neither rapid nor broad-based enough. Therefore, the continent is considerably off-track in meeting the SDGs by 2030. The lack of strong institutions has contributed to the shortcomings of Africa's financing-energy-food systems.

As explained in the previous chapters of this report, the COVID-19 pandemic and the war in Ukraine have combined to reverse whatever progress that Africa had made toward the SDGs since the adoption of the goals in 2015. Regrettably, the rate of extreme poverty in Africa (minus North Africa) is projected to keep increasing at least until 2030.[102] Many countries in Africa are struggling to deal with debt sustainability and build resilience against further external shocks. Typically, analyses of the quality of governance rely on Worldwide Governance Indicators (WGI), a poll of polls type dataset produced by the World Bank, or the Country Policy and Institutional Assessment (CPIA) indicators. Both have their legitimate uses: for instance, the former aggregates data from a wide variety of sources and allows for cross-country or cross-region comparisons at a specific point in time. Such databases are less susceptible to bias or noise from one single source dominating the analysis as they aggregate the data from diverse sources, leading to the elimination or minimization of such potential bias. The latter contains detailed assessments and data that were initially developed for operational purposes within the context of the International Development Association (IDA)-eligible countries but does not provide full coverage of Africa for the same reason.

Governance is the provision of the political, social, economic and environmental public goods and services that every citizen has the right to expect from their state, and that a state has the responsibility to deliver to its citizens.

In an attempt to present a comprehensive deep dive into governance in Africa, this report will explore data and outputs from one of Africa's homegrown institutions specialized in governance, namely the Mo Ibrahim Foundation, and complement the analysis with the latest installment of the World Bank's Worldwide Governance Indicators

There are several advantages to working with an index, such as the Ibrahim Index of African Governance (IIAG). First, it covers 54 African countries across a broad range of governance dimensions. In other words, unlike most other datasets, full geographical coverage of the continent is achieved here. Second, each data set covers a ten-year period within which it presents comparable data. While time-series comparisons might be problematic in some aggregate datasets, the IIAG's methodology is calibrated to overcome this problem.

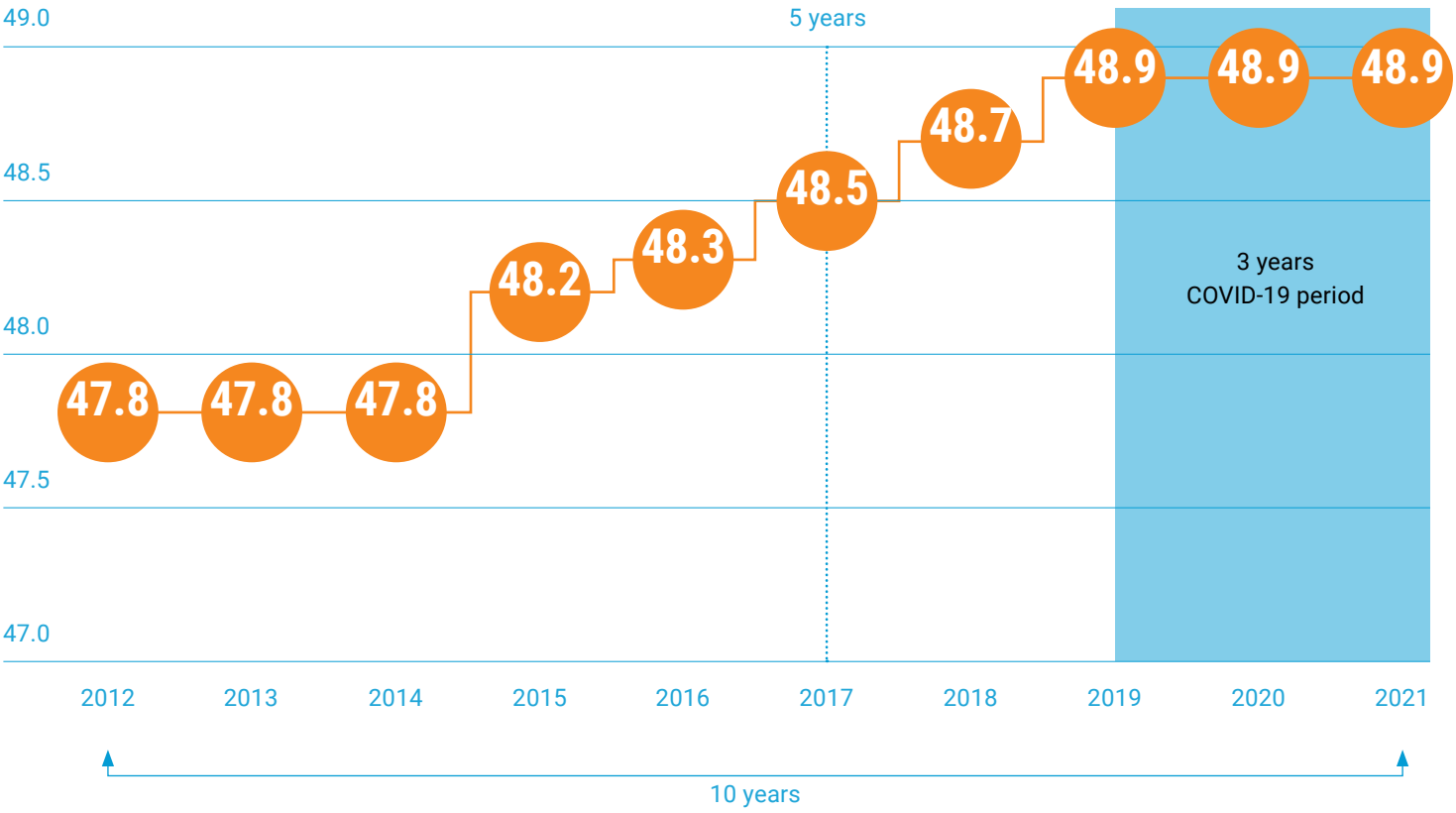
The Mo Ibrahim Foundation defines the concept of governance broadly as the "provision of the political, social, economic and environmental public goods and services that every citizen has the right to expect from their state, and that a state has the responsibility to deliver to its citizens." The Index is a complex aggregate consisting of four broad categories, namely (i) Security and the Rule of Law; (ii) Participation, Rights, and Inclusion; (iii) Foundations for Economic Opportunity; and (iv) Human Development. Among them, these four categories can further be disaggregated into 16 sub-categories and 81 indicators.[103]

101 Global Sustainable Development Report 2023 – advance unedited version.
102 LaFleur and others. (2022).
103 For the details of the methodology of the IIAG as well as its accompanying data set Citizens Voices, please refer to Mo Ibrahim Foundation (2022).

The Mo Ibrahim Foundation rates Africa's overall governance score at an average of 48.9 (out of 100), showing a slight improvement of +1.1 points over the decade 2012 to 2021. However, within this decade, the comparison of the last five years (2017 to 2021) to the whole decade shows a slowing of improvement, which suggests that the improvements observed in the decade were mostly front loaded and stalled during the second half of the decade. Among the possible causes are the impact of worsening peace and security outlook due to increasing social unrest and political instability resulting from the worsening of living standards emanating from the COVID-19 pandemic and the economic disruptions it brought.[104]
In fact, a closer inspection of Figure 19 below clearly shows that there was steady progress in the overall governance score at an average increase of 0.16 per year. However, the index plateaued between 2019 and 2021 – the three consecutive years that were characterized by the COVID-19 pandemic.

104 For a more detailed analysis of the regional conflicts and their severity, please refer to the ACLED Database: https://acleddata.com/regional-overviews/

Figure 19 **Overall Governance – Africa (2012–2021)**



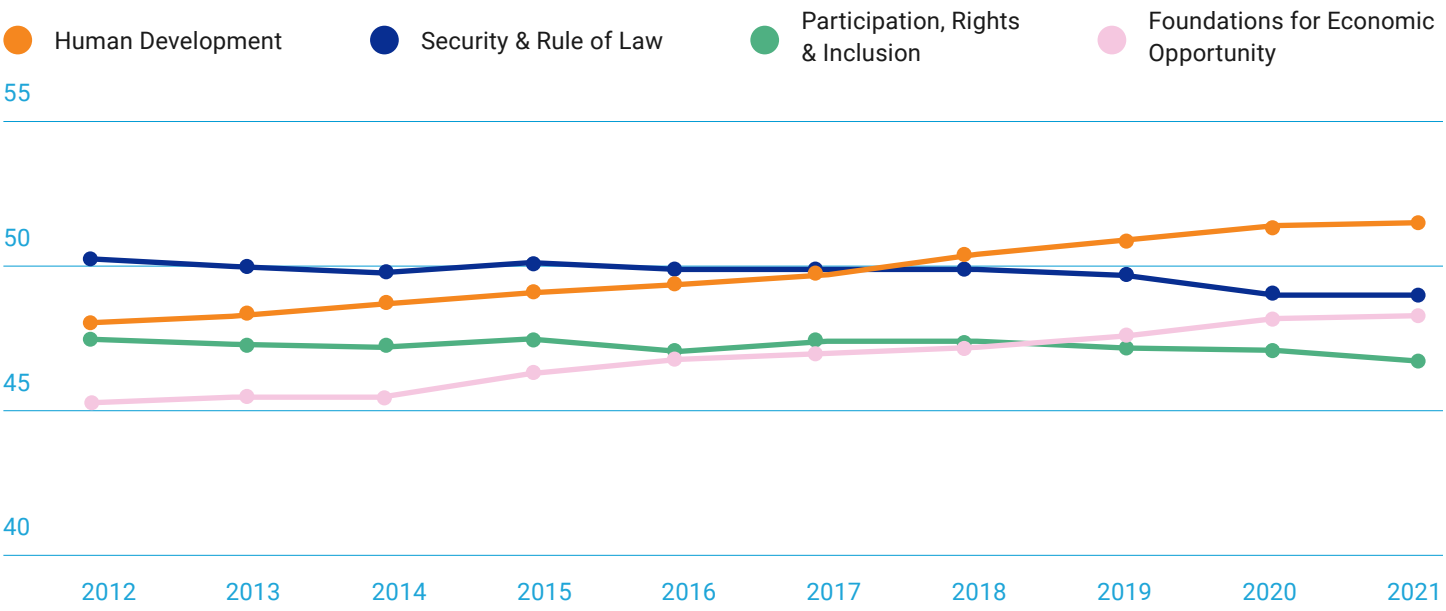
Source: Ibrahim index of African Governance, Mo Ibahim Foundation

Table 3 **Mo Ibrahim Index – Breakdown of main components**

Mo Ibrahim index	2012		2017		2021	10 years trend
Foundation for economic opportunity	45.3	↑	47	↑	48.3	↑ 3
Human Development	48	↑	49.7	↑	51.5	↑ 3.5
Participation, Rigths & Inclusion	47.5	↓	47.4	↓	46.7	↓ -0.8
Security & Rule of Law	50.3	↓	49.9	↓	49	↓ -1.3

Source: Mo Ibrahim Foundation, 2022.

Figure 20 **Mo Ibrahim Index — 10-year Trend (Components)**



Source: Mo Ibrahim Foundation, 2022.

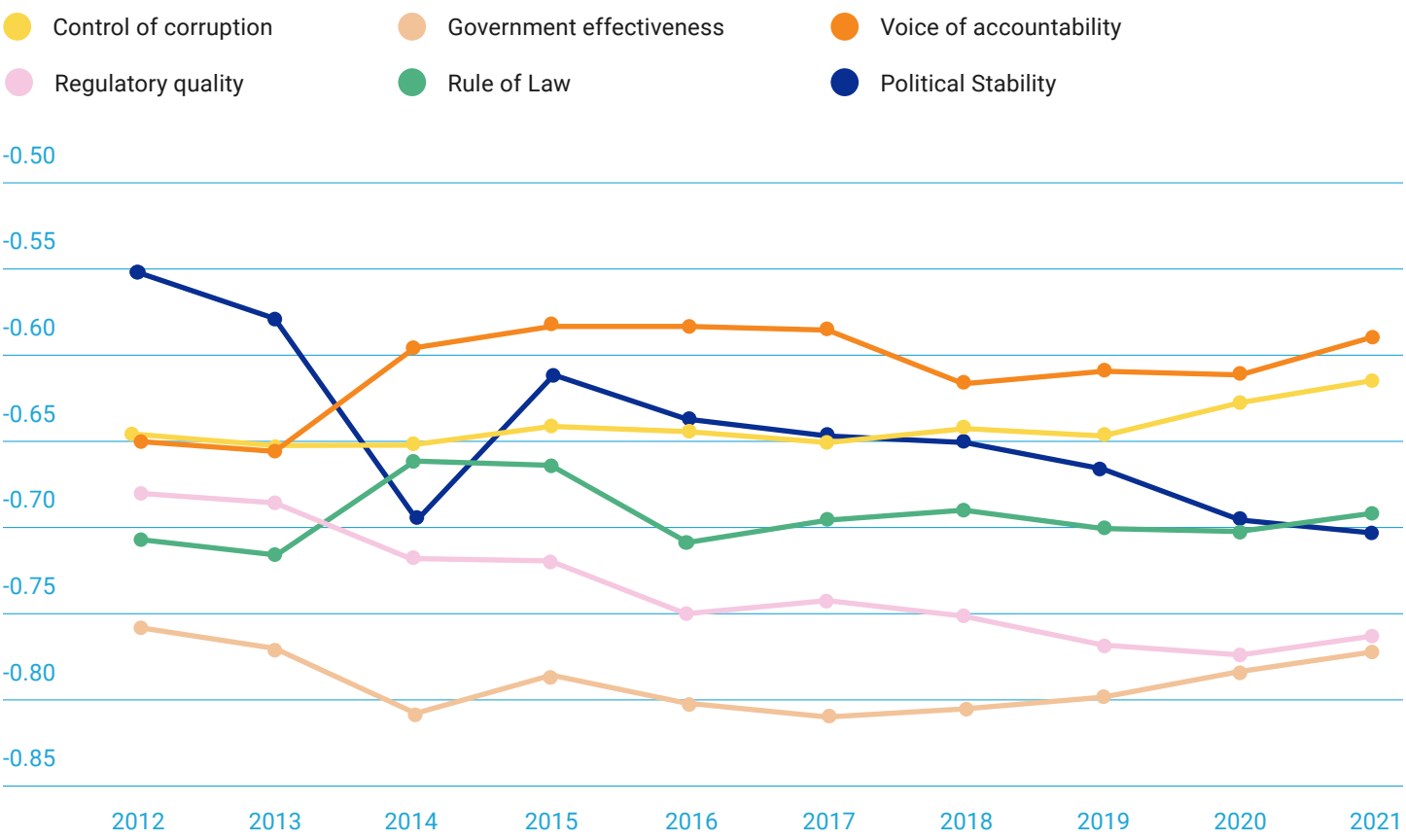
Progress at the overall governance level masks diverging trends at the category level. As can be seen in Table 3 and Figure 20 above, the two fundamental components, Security and Rule of Law and Participation, Rights and Inclusion, which constitute the main enablers of economic activity and prosperity, seem to have worsened over the decade in spite of improvements in the other two components, namely Foundation for Economic Opportunity and Human Development. Over the decade, more than 40 countries have improved in the categories "Foundations for Economic Opportunity" and "Human Development", but at the same time, more than 30 countries have deteriorated in the categories "Security & Rule of Law" and "Participation, Rights & Inclusion".[105]

This detailed picture suggests that structural reforms of the continent's economies should be complemented with capacity-building initiatives and institutional reforms custom-tailored to specific country situations and relative progress in their path to good governance in order to get the most out of the enablers to overcome the triple paradoxes facing Africa.

Structural reforms of Africa's economies should be complemented with capacity-building initiatives and institutional reforms custom-tailored to specific country situations.

105 For a detailed breakdown of trend at the country level, please refer to Mo Ibrahim Foundation (2022), p. 18.
106 https://info.worldbank.org/governance/wgi/

Figure 21 **Worldwide Governance Indicators – Africa aggregates**



Source: OSAA staff calculations based on the Worldwide Governance Indicators (2022) database.

World Bank's Worldwide Governance Indicators (WGI), published in 1996, constitute one of the most widely cited datasets on the theme. Initially published every other year until 2002, the dataset has been updated on a yearly basis since then. WGI defines governance as "traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them."[106]

Instead of an aggregate governance score, the WGI database publishes time series data on the six dimensions of governance, namely control of corruption, government effectiveness, political stability, regulatory quality, rule of law and voice and accountability. Since the World Bank publishes aggregate data separately for their operational regions, Sub-Saharan Africa and Middle East and North Africa separately, OSAA staff calculations were used to arrive at the Africa aggregates presented in Figure 21 above. Each series varies between -2.5 (worst outcome) and +2.5 (best outcome).

Although the aggregation at the continental level masks country-level differences, the most remarkable improvement appears to have been recorded in the voice and accountability measure, which rose from -0.65 to -0.58 throughout the decade from 2012 to 2021. A slight improvement in the control of corruption from -0.65 to -0.61 is also evident throughout the same period. However, this improvement is not matched by a similar trend in government effectiveness and regulatory quality indicators – both of which ended the decade lower than where they started in spite of a small uptick from 2020 to 2021. Initial rapid improvement in the rule of law indicator up to 2015 seems to have tapered off towards the end of the decade, although the indicator closes the decade slightly above where it started.

The most concerning trend is seen in the political stability indicator, where the continent as a whole started the decade at a relatively high reading of -0.55 but reached as low as -0.70 after a rollercoaster ride at the end of the decade.

This section's review of the governance indicators in Africa shows that the continent lacks the strong institutional infrastructure that is required to underpin the structural transformation of its economies and its inclusive and sustainable development drive backed by durable peace. The trend analysis above shows that it is difficult to move the needle quickly in the right direction in governance indicators. Capacity building and institutional reforms in Africa require significant investments and political will and these often yield their results gradually. Irrespective of the source data, the analysis of Africa's governance indicators shows that there is considerable room for improvement in this sphere to ensure that institutions and policy frameworks act as the enablers to help resolve the triple paradoxes examined in this report. Although the positive impact may take time to materialize, institutional reforms to move the needle in the right direction will be critical as they will constitute the basis for Africa's sustainable development and durable peace.

Furthermore, a revitalized institutional architecture in Africa, based on transparency and accountability, will furnish policymakers of the continent with the credibility and the right tools to anticipate and mitigate risks and address them with flexibility and ingenuity. This will also help build forward better in the post-COVID-19 era and strengthen resilience in the continent in the face of food, energy, and financial crises. Strong and accountable institutions complemented with policy frameworks informed by data and evidence will be the key for the continent to resolve the triple paradoxes.

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Leveraging digitalization for stronger institutions

Weak institutions have been the bane of Africa's sustainable development. Throughout the decades, the continent has had to grapple with the challenges of poor governance, corruption, political instability, and weak regulatory infrastructure, which have had adverse negative impacts on its development. As mentioned elsewhere in this report, the weaknesses of the financing, energy, and food systems, though heightened by the cascading and intersecting crises, have not been caused by these external shocks. Rather, they are reflections of decade-long under-investment in these areas, combined with the legacy of colonialism and neo-colonialism, which have undermined the emergence of strong endogenous institutions.

Digitalization can help overcome some of the challenges for Africa's sustainable development.

Digitalization can be an effective tool to address the problem of weak institutions.

Weak institutions have had far-reaching adverse negative effects on Africa's sustainable development. The triple paradox is partly a reflection of weak institutions. One of the manifestations of weak institutions is corruption. Corruption diverts resources away from development. It also leads to inefficient resource allocation and a weak regulatory environment—increasing the country's risk profile. For example, weak institutions through corruption affect domestic resource mobilization by discouraging citizens from paying taxes as well as through facilitating illicit financial flows and money laundering. Residents of countries where corruption is very high may be unwilling to pay taxes because of the perception that such resources would be misused.

This, in turn, deprives the energy and food systems of vital financing for investment to increase energy access and unleash agricultural productivity for food sovereignty. There is growing recognition that institutions matter for sustainable development. Both the 2030 Agenda for Sustainable Development and African Union Agenda 2063 recognize this.

As experiences of other developing countries have shown, digitalization can be an effective tool to address the problem of weak institutions. While digitalization has been a transformative force—as powerful as the advent of the printing press in the 15th century or electricity in the 19th, African countries have been slow to harness the potential of digital technology to strengthen resource mobilization and improve the delivery of public services. Digitalization can help overcome some of the challenges posed by weak institutions for Africa's sustainable development in several ways.

Through improving transparency, digitization can reduce the scope for corruption, leading to efficiency in resource allocation.

First, through improving transparency, digitization can reduce the scope for corruption, leading to efficiency in resource allocation. Further, the shift toward paperless systems occasioned by digitization also reduces the opportunity for engaging in corrupt and rent-seeking practices. From a resource mobilization point of view, it has been shown that robust country systems enhance transparency, accountability, and good governance. When applied to public financial management, procurement, and revenue mobilization, they lead to better service delivery and resource allocation.

Another way through which digitization can help overcome the challenges of weak institutions is through engendering an environment that promotes transparency and great accountability. For example, through digitization, citizens will have access to important government documents and data, including budgets and procurement processes. This will facilitate greater transparency and accountability, giving the citizens the opportunity to hold their government accountable.

As shown in the 2022 OSAA flagship Report,[107] the use of technology and digital solutions, such as introducing electronic tax filing and payment systems and digitizing VAT operations, can help improve the efficiency and effectiveness of DRM institutions. For instance, by introducing the e-taxation system in South Africa in 2003, the time and cost of VAT compliance were reduced by 21.8 per cent and 22 per cent, respectively. In addition, digitizing tax filing and payment systems could result in significant benefits to countries like those recorded by Togo, which saw its customs revenue boosted by 20 per cent between 2020 and 2021.[108] Similar positive results have been recorded following the digitalization of custom administrations.[109] The digital maturity of tax administration can also enhance the exchange of tax information between tax jurisdictions, which has been proven efficient in reducing tax abuse, and has a positive and statistically significant impact on tax revenue, estimated between 5 to 19 per cent in recent research.[110]

The Kenyan Revenue Authority (KRA) introduced electronic banking in 2016 to expedite the payment of taxes through a secure electronic payment. This, coupled with the launch of iTax, has enabled a single view of taxpayer information, allowing for real time monitoring of revenue collection—leading to improved efficiency of payment to government suppliers and social protection grants. This has enabled countries to build effective and strong DRM systems, which is critical to ensuring Africa's recovery from COVID-19.[111]

African countries have the most potential to leapfrog their development trajectory by adopting digital technologies. They lag considerably behind in internet connectivity, a key enabler for adopting and using digital technologies. Within countries, a digital divide persists across age and gender. Bridging this divide and leveraging the benefits of digitalization for Africa's development will require specific measures.

African countries should invest in digital infrastructure, including broadband networks and data centers, which will create a platform for innovation. A necessary corollary of this would be to create an enabling, stable and transparent regulatory environment, which will be crucial for mobilizing investment into the digital economy.

Evidence from other countries that have been able to harness fully the benefits of digitalization shows that promoting and encouraging digital literacy has been one of the key success factors. Therefore, African countries should invest in digital literacy programes. As David Amaglobeli and Ruud de Mariano (2023)[112] argue, promoting digital literacy programes is essential to overcome reluctance among specific populations, particularly older individuals, to embrace new digital technologies.

107 OSAA (2022).
108 Data resulting from the implementation of UNCTAD's Automated System for Custom Data (ASYCUDA).
109 United Nations (2023b).
110 Traore and others (2023).
111 Katjomuise (2022).
112 Blog, 2023. Harnessing GovTech to Tax Smarter and Spend Smarter. IMF.

Addressing the financing, energy and food system paradoxes will require a number of interventions along the financial, energy and agriculture-food value chains.

Workers at a greenhouse in Katibougou Village, outside Bamako, Mali.

Conclusion and Policy Recommendations

The analysis presented in this report makes it clear that the absence of effective and transparent institutions and reliable regulatory frameworks leads to a loss of resources and inefficient spending decisions that have prevented African countries from addressing the financing, energy, and food system paradoxes. The lack of accountability in revenue collection and expenditure mechanisms leads to a lower tax base and pushes economic activity into the fringes of tax evasion and avoidance and the informal economy. Lack of good governance exacerbates illicit activities, such as tax avoidance, corrupt trade practices, and illicit financial flows out of the continent. Weak institutions erode the security of property rights, including intellectual property rights, and the basis for the rule of law. All these factors combined increase risk perceptions and reduce the incentives for socio-economic activity, negatively impacting Africa's private sector, dominated by micro, small and medium enterprises, and much-needed investments from domestic and external sources.

The existence of opaque and unpredictable regulatory frameworks is particularly damaging for the energy sector. The limited capacity to mobilize domestic savings, pension and Sovereign funds and influence investment decisions toward essential energy infrastructure on the continent are directly linked to the lack of realistic energy planning processes and long-term regulatory frameworks. The reduced investments in energy infrastructures have prevented African countries from keeping up with the needs of a growing population, resulting in an energetic darkness that is a major contributing factor to poverty and underdevelopment. These deteriorating socio-economic conditions increase inequalities, undermine social cohesion, and represent a risk to peace and stability.[113]

113 United Nations (23021).

Investing in governance is, consequently, a necessary step to achieve sustainable development and durable peace in the continent, not only due to increased political participation, rights and freedoms but also as a result of the critical role that governance plays in ensuring the efficiency and effectiveness of public action and in creating trust, an intangible asset with exponential impact on mobilizing resources and facilitating investment-friendly environments.

African countries must undertake reforms geared towards streamlining regulatory processes, reducing corruption, and enhancing public institutions' governance structures, which will bolster investors' confidence. Additionally, there is a need to improve the business environment and upgrade infrastructure. By prioritizing these reforms, African countries can attract more diversified foreign investment and unlock the full potential of their economies. This will help drive economic growth and job creation and contribute to the continent's overall development while helping address the triple paradoxes at the same time.

While building forward better from the pandemic, it is critical to ensure that Africa benefits from robust institutional arrangements that will uphold secure property rights and mutual accountability. Stronger institutions unlock the productive and creative potential of Africa's young and bulging population.

It is vital to leverage partnerships, including targeted technical assistance and project finance, to help strengthen and or re-build these institutions from the ground up to empower Africa's women and youth. Among the ways in which this can be done is to channel at least a portion of ODA flows to Africa toward institutions and capacity, including through the digitalization of revenue collection and expenditure systems. Against this backdrop, Africa's development partners should step up policy and institutional capacity support to contribute to addressing the triple paradox. This requires allocating at least 10 per cent of ODA to strengthening country systems as well as facilitating technology transfers and investments in the energy and agriculture sectors in Africa.[114]

114 United Nations (2023a).

Digitization can help overcome the effects of weak institutions on the financing, energy, and food systems. By creating paperless systems, digitization reduces opportunity cost for bribery and corruption, leading to transparency and greater efficiency in resource mobilization and utilization. Enhanced transparency, including through increased data access on government processes such as public expenditure and procurement, would increase government accountability to citizens.

Finally, African countries cannot resolve all these paradoxes alone. The international community should address existing inequalities in the global financial architecture to create a global environment that supports African countries' efforts to undertake the structural and institutional reforms needed to address the triple paradox.

The international community should address existing inequalities in the global financial architecture to create a global environment that supports African countries' efforts.

References

Acemoglu, D., S. Johnson, and J. Robinson. 2001. "*The Colonial Origins of Comparative Development: An Empirical Investigation*", American Economic Review, 91(5), 1369-1401.

Acemoglu, D., S. Johnson, and J. Robinson. 2002. "*Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution*", Quarterly Journal of Economics, 117, 1231-1291.

Acemoglu, D., & Robinson, J. A. 2012. *Why Nations Fail: the Origins of Power*, Prosperity and Poverty, New York, Crown Publishers.

Awadhi, M., James, M. and Byaro M. 2022. "*Does Institutional Development Attract Foreign Direct Investments in Sub-Saharan Africa? A Dynamic Panel Analysis*", African Journal of Economic Review, Volume 10(1).

Cleeve, E. 2008. "*How effective are fiscal incentives to attract FDI to sub-Saharan Africa?*", The Journal of Developing Areas, vol. 42(1).

De Boer, J., Muggah, R. and Patel, R. 2016. "*Conceptualizing City Fragility and Resilience*", United Nations University Centre for Policy Research, Working Paper 5.

Global Sustainable Development Report 2023 – advance unedited version.

Hall, R. E. and C. I. Jones, C. I. 1999. "*Why Do Some Countries Produce So Much More Output Than Others?*" Quarterly Journal of Economics, 114(1), 83-116.

Mo Ibrahim Foundation. 2022. Ibrahim Index of African Governance (IIAG).

Knack, S., and Keefer, P. 1995. "*Institutions and Economic Performance: Cross-Country Tests Using Alternative Measures*" Economics and Politics, 7, 207-227.

Knack, S., and Keefer, P. 1997. "*Why Don't Poor Countries Catch Up? A Cross-National Test of an Institutional Explanation*", Economic Enquiry, 35, 590-602.

LaFleur, M.T., Helgason, K., S. Vieira, S., Julca, A., H. W. J. Cheng, H. W. J., and Hunt, N. 2022. Ensuring SDG Progress amid Recurring Crises, UN-DESA Policy Brief No. 137.

Mauro, P. 1995. Corruption and Growth, Quarterly Journal of Economics 110 (3), 681–712.

Mpungose, L. 2022. "*Reimagining Africa: State Resilience and Governance in a Post COVID-19 Era*" in African Governance Insights, Volume 1, African Peer Review Mechanism, August 2022.

North, D.C. 1992. "*Institutions, Ideology and Economic Performance*", Cato Journal, Vol. 11 No. 3, p. 477.

North, D.C. 1990. Institutions, Institutional Change and Economic Performance, Cambridge University Press, Cambridge, MA.

OSAA. 2022. Financing for development in the Era of COVID-19: the primacy of domestic resource mobilization- https://www.un.org/osaa/content/financing-development-era-covid-19-primacy-domestic-resources-mobilization

Pospisil, J. and Kuhn, F.P. 2016. "*The resilient state: new regulatory modes in international approaches to state building?*", Third World Quarterly, 37 (1), pp. 1-16.

Katjomuise, K. 2022. *Digitalization key for building strong institutions*, Africa Renewal. Oct 2022.

Rodrik, D., Subramanian, A. and Trebbi, F. 2002. "*Institutions Rule: The Primacy of Institutions over Integration and Geography in Economic Development*", IMF Working Paper 02/189.

Rothstein, B. and Uslaner, E.M., "*All for All: Equality, Corruption and Social Trust*", World Politics 57 (October 2005).

Traore, M., Coulibaly, S., and Arvanitis, Y. 2023. Cross-Border Exchange of Information and Tax Revenue Mobilization in Africa. World Bank Policy Research Working Paper Number 10299.

United Nations. 2021. New Partnership for Africa's Development: progress in implementation and international support: causes of conflict and the promotion of durable peace and sustainable development in Africa. https://documents-dds-ny.un.org/doc/UNDOC/GEN/N21/150/61/PDF/N2115061.pdf?OpenElement

United Nations. 2023a. New Partnership for Africa's Development: nineteenth consolidated progress report on implementation and international support. Solving the paradoxes of development in Africa: financing, energy and food systems. https://documents-dds-ny.un.org/doc/UNDOC/GEN/N23/238/27/PDF/N2323827.pdf?OpenElement

United Nations. 2023b. New Partnership for Africa's Development: progress in implementation and international support. Biennial report on the review of the implementation of commitments made towards Africa's development. https://documents-dds-ny.un.org/doc/UNDOC/GEN/N23/161/08/PDF/N2316108.pdf?OpenElement

Wei. S.J. 1997. "*How Taxing is Corruption on International Investors?*", NBER Working Paper No. 6030.

Conclusion

Africa's sustainable development potential is hampered by three paradoxes: rich in financial resources but in debt distress; rich in energy resources but essentially without access to electricity; and rich in agriculture resources with high levels of food insecurity. These paradoxes intersect and feed on one another. The lack of financing limits investment in energy, which in turn negatively impacts agricultural and food production.

These three paradoxes are not only interrelated, but they constitute a chain in which the financial paradox feeds and amplifies the energy paradox, which in turn also inputs the food paradox. Therefore, the starting point for solving the triple paradox is to strengthen domestic resource mobilization as a game changer to underpin sustainable financing for Africa's development priorities. Unlocking the potential of the energy and food systems is contingent upon solving the financing paradox. Institutions are the key enablers that can ensure the effectiveness of the interventions aimed at addressing the three interrelated paradoxes of financing-energy and food systems.

Building strong country systems that support African countries to better control and manage their economic and financial flows would be crucial to unlocking energy financing, energy technology and, consequently, energy access, which would then unleash Africa's agricultural and food system transformation.

The unfairness and dysfunctionality of the global financial system have exacerbated the continent's difficulties in building effective domestic resource mobilization systems. The cascading and intersecting global crises have aggravated the weaknesses and vulnerabilities of the current development model in Africa. Through a complex web of macro-economic, trade and financial channels, the crises have affected financing, energy and food systems across the continent in different ways, including through deteriorating fiscal positions, tightening financial conditions, rising interest rates, elevated debt levels, soaring prices for food and energy, and eventually fueling civil unrest and political instability in several African countries.

Resolving this situation will require addressing the financing, energy and food system paradoxes. This requires robust institutional arrangements as key enablers to unlock the productive and creative potential of Africa's young and growing population. Digitalization can be instrumental in streamlining processes, reducing opportunity costs, enhancing cross-border market integration, strengthening networks, and supporting transparency and greater efficiency in resource mobilization and utilization. This, in turn, will increase government accountability to citizens and contribute to rebuilding social cohesion and a sense of fairness and equitable burden sharing, creating the conditions for sustainable development and peace in the continent.

Addressing the financing, energy and food system paradoxes will require a number of interventions along the financial, energy and agriculture-food value chains. These include enhancing revenue mobilization, eliminating inefficiency in public expenditure, harnessing untapped sources of financing such as pension and sovereign wealth funds, leveraging foreign reserves as a pro-development tool, grasping new opportunities such as carbon finance; capitalizing on critical mineral resources and harnessing frontier technologies; improving regulatory frameworks, mobilizing and harnessing energy financing; boosting agriculture financing, energizing food systems; leveraging AfCFTA to develop agri-food value chains, among others.

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