2022 AFRICA SUSTAINABLE DEVELOPMENT REPORT

Building Back Better from the Coronavirus Disease, While Advancing the Full Implementation of the 2030 Agenda for Sustainable Development

African Union

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UNDP

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List of Acronyms

AAAA	Addis Ababa Action Agenda
AfCFTA	African Continental Free Trade Area
AfDB	African Development Bank
AGRODEP	African Growth and Development Policy
AU	African Union
AUC	African Union Commission
BAU	Business As Usual
CBD	Convention on Biological Diversity
CESA	Continental Education Strategy
CGE	Computable General Equilibrium
CO2	Carbon Dioxide
DESA	Department of Economics and Social Affairs
DRC	Democratic Republic of Congo
ECA	Economic Commission for Africa
EFA	Education For All
EPI	Environmental Performance Index
FDI	Foreign Direct Investment
FAO	Food and Agricultural Organization
GBV	Gender-based Violence
GDP	Gross Domestic Product
GEF	Global Environment Facility
GNI	Gross National Income
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus Infection
HLPF	High-Level Political Forum
ICT	Information and Communications Technology
IFs	International Futures
IHME	Institute for Health Metrics and Evaluation
IMF	International Monetary Fund
INFF	Integrated National Financing Framework
IOSCs	Isange One Stop Centres
IPCC	Intergovernmental Panel on Climate Change
IPRT	Integrated Planning and Reporting Toolkit
IUCN	International Union for the Conservation of Nature

IWRM	Integrated Water Resources Management
KBA	Key Biodiversity Areas
LDC	Least Developed Countries
LDN	Land Degradation Neutrality
LSMS	Living Standards Measurement Study
MDGs	Millennium Development Goals
MER	Market Exchange Rate
NbS	Nature-based Solutions
NBSAPs	National Biodiversity Strategy and Action Plans
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing Power Parity
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
SDGs	Sustainable Development Goals
SDGC/A	Sustainable Development Goals Center for Africa
SDSN	Sustainable Development Solutions Network
SDRs	Special Drawing Rights
SGBV	Sexual and Gender-based Violence
SIDS	Small Island Developing States
STI	Science, Technology and Innovation
TFP	Total Factor Productivity
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDP-RBA	United Nations Development Programme Regional Bureau for Africa
UNEP	United Nations Environment Programme
UNFP	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNSD	United Nations Statistics Division
UPE	Universal Primary Education
VAWG	Violence Against Women and Girls
WDI	World Development Indicators
WHO	World Health Organization
WTO	World Trade Organization

Executive Summary and Key Policy Recommendations

Context of the Report

The **Africa Sustainable Development Report** (ASDR) for the year 2022 comes at the midway of the implementation of the 2030 Agenda for Sustainable Development to which world leaders, including African leaders, made commitments in 2015, *to end extreme poverty, inequality and climate change by 2030*. In addition, the ten-year implementation plan of the African Union's *Agenda 2063*, titled, *"the Africa We Want,"* that was initiated in 2013, ends in 2023. This report is also paramount because it covers the period when the Covid-19 pandemic and the Ukraine-Russia crisis emerged with significant bearing on the implementation of both agendas.

The report is aligned with the 2022 *High-level Political Forum* (HLPF), which reviewed SDGs 4, 5, 14, 15 and 17, focussed on the theme of *"Building back better from the Coronavirus disease while advancing the full implementation of the 2030 Agenda for Sustainable Development."* It examines the impact of the Covid-19 pandemic and the Ukraine-Russia crisis in the implementation of the SDGs and related goals of Agenda 2063. It tracks the performance of all African countries using latest data and highlights critical areas that require urgent policy interventions. The report also provides a benchmark with which to assess the scale of the impacts of both shocks on the SDGs. The key findings, and messages, specific policy recommendations as well as the associated data issues that have been relied on are summarized below.

On Education (SDG 4)

Africa made slow progress in the provision of quality education for all

The Covid-19 pandemic reversed some of the gains African countries had made in the past years. Despite considerable progress in school enrolment, some (288 million school-age children remain out of school, especially in countries affected by conflicts. In 2021, proficiency levels in grades 2 or 3 for children in Africa (excluding North Africa) was estimated at 28.9 percent for mathematics and 17.82 percent for reading. This was below the global average of 62.6 percent for mathematics and 61.4 percent for reading. Most African countries continue to dedicate less than 20 percent of their national budget to education, and about one out of three dedicate less than 15 percent (AU and UNICEF, 2021). The quality of education is also compromised by inadequate school infrastructure and the lack of trained teachers. The proportion of teachers with the minimum required qualifications in Africa excluding North Africa stagnated at around 68 percent between 2017 and 2019, lower than the global average of 81 percent. However, in 2020, 86.5 percent of teachers in Northern Africa had attained the minimum qualifications, similar to the global average.

On the positive side, completion rates for primary education in Africa excluding North Africa increased from 59.6 percent in 2015 to 63.2 percent in 2020, although this varied across residence (urban and rural) and income levels and was lower than the global average of 86.7 percent. Completion rates for upper secondary school in Africa excluding North Africa increased from 24.9 percent in 2015 to 26.7 percent in 2020 and remained below the world average of 58.2 percent.

In the meantime, Official Development Assistance for scholarships in Africa was estimated at US$ 1.6 billion in 2019, the highest of all global regions. North Africa received the highest amount of US$ 98 million, followed by East Africa at US$ 95 million and Southern Africa, the least amount at US$ 12.5 million.

To strengthen the basic foundations for life-long learning, there is a need to focus on pre-primary and primary education. Pre-primary gross enrolment rate in pre-primary in North Africa increased from 41.8 percent in 2015 to 42.1 percent in 2020, while in Africa excluding North Africa, it increased from 24.9 percent in 2015 to 27.5 percent in 2020. Yet, the global average in 2020 was 60.8 percent. The educational value of pre-school is an integral part of a comprehensive education programme. In addition, school feeding programmes need to be scaled-up, as they have proved to be effective in increasing access to basic education, particularly for orphans and other vulnerable children.

A point of significant note is that the lack of adequate and timely data on indicators of learning outcomes hinders a comprehensive assessment of the SDG 4 focus on Quality Education.

On Gender Equality and the Empowerment of Women (SDG 5)

Progress towards gender inclusivity is slow and the enforcement of legal frameworks to protect women and girls against discrimination, domestic violence, child marriage, and female genital mutilation remains weak

Most African countries lack adequate policies to end the discrimination of women and girls. In 2020, only 65.6 percent of legal frameworks in Africa (excluding North Africa) addressed violence against women. This is significantly lower than the global average of 78 percent. Violence against women is attributed to factors such as conflicts, traditional gender norms and lack of prosecution of culprits of spousal rape (United Nations, 2022). During the same period, only 66.3 percent of legal frameworks guaranteed employment and economic benefits for women, compared to the global average of 76.7 percent. Modest improvements were noticeable in frameworks that support marriage and family life at 76.1 percent, compared to the global average of 79.1 percent.

Eliminating all harmful practices such as child, early and forced marriage and female genital mutilation remain critical. In Africa excluding North Africa, the proportion of women married or in a union before the age of 15 declined from 12.6 percent in 2015 to 10.8 percent in 2021, while it declined from 35.8 percent in 2015 to 34.7 percent for women married before the age of 18. Female genital mutilation in Africa excluding North Africa declined from 29.4 percent in 2015 to 24.7 percent in 2021, and from 83 percent in 2015 to 74 percent in 2021 in North Africa.

Political representation of women is on the rise, but with huge differences across regions and countries. The share of national parliamentary seats held by women in Africa excluding North Africa has steadily increased from 22.6 percent in 2015 to 25 percent in 2021 while it has stagnated at 24 percent in North Africa. Despite women comprising a large share of Africa's labour force, only 29.8 percent of managerial positions in Africa excluding North Africa in 2020 were held by women, a modest increase from 29.3 percent in 2015. In North Africa, women representation in managerial position declined from 7.3 percent in 2015 to 6.7 percent in 2020.

Legal gaps and insufficient regulations continue to hinder both men and women from enjoying full sexual rights. In North Africa, no laws and regulations in 2022 guarantee sex education while only 25 percent guarantee contraceptive consent. However, noticeable progress is registered regarding women maternity care (80 percent) and post-abortion care (80 percent). In Africa excluding North Africa, 97 percent of laws and regulations in 2022 guarantee lifesaving commodities, 81 percent guarantee maternity care but only 31 percent guarantee women full and equal access to abortion.

On Life Below Water (SDG 14)

Organic and chemical pollutants from human activities continue to endanger Africa's marine ecosystem

There are variations in the overall progress made by the African region towards the Goal 14. For many countries, intermediate progress is reported, stagnation for some, and declining trends for several others. In most countries, coastal, marine, and freshwater waters are affected by pollution and acidification, dumping of solid and liquid wastes, discharges and runoff from agricultural chemicals, and poor coastal infrastructure management. In 2021, 77 percent of beach litter originating from national land-based sources in Africa ended in the beach, compared to the global average of 65.5 percent.

The low awareness from communities on waste management and the increasing urbanization of coastal areas without adequate waste management infrastructure imposes pressure on the oceans. The lack of appropriate circular economy policies and regulations to monitor marine and freshwater resources, including protection from waste and plastic pollution, further threatens the marine ecosystem, especially in Small Island Developing States (SIDS), whose economies are highly dependent on tourism.

In 2021, Africa, (excluding North Africa) had a coverage of protected marine areas of 23 percent, greater than the global average of 20 percent. Although some countries have demonstrated a strong commitment to enhancing the conservation and sustainable use of their marine oceanic resources (17 out of 54 countries), they are constrained by various socio-demographic, technological and financial factors. These include knowledge and information gaps, finance, limited technical capacities and awareness of the importance of conserving oceans and seas.

On Life on Land (SDG 15)

Loss of forest cover, biodiversity and land degradation remains high and widespread in Africa

In 2020, the proportion of forest area in Africa was 21.3 percent, lower than the global average of 31.2 percent. From 2010-2020, Africa had the largest annual rate of net forest loss. This was mainly due to the conversion of forest land for farming and grazing, and climate change. There are, however, considerable differences in forest cover among subregions. In 2020, Central Africa had the highest proportion of forest area of 44.3 percent, while North Africa had only 3.5 percent. As the loss of forest cover continues, some countries have demonstrated good practices in the integrated and sustainable management of forests, land and water catchments, such as Ethiopia's Green Legacy Initiative.

Land degradation is widespread and affects 46 percent of Africa's land and 65 percent of the population, costing the region US$ 9.3 billion annually. The main drivers include variation in climatic conditions, demographic growth, land tenure insecurity and the expansion of settlements due to deforestation, unsustainable land and soil management, and poor farming practices.

Generally, African countries performed well in the conservation, restoration, and sustainable use of mountain ecosystems. Between 2000 and 2020, the average proportion of mountain key biodiversity areas covered by protected areas increased from 16 percent to 27.6 percent in North Africa and from 33.2 percent to 41.7 percent in Africa excluding North Africa.

Poaching for ivory and loss of habitat has decreased the number of elephants. In 2021, the African forest elephant (Loxodonta cyclotis) was listed as Critically Endangered, and the African savanna elephant *(Loxodonta africana)* as Endangered. The threat to the Maccoa Duck in Eastern and Southern Africa was elevated from Vulnerable to Endangered, due to water pollution and the drainage of wetlands.

On Partnerships for the Goals (SDG 17)

Africa needs to foster its domestic resource mobilization and savings as well as boost its ICT to accelerate implementation of the SDGs and Agenda 2063

The continent has made little progress in implementing SDG 17. Africa's domestic revenue generation continues to lag behind other regions. In Africa, excluding North Africa, revenue as a proportion of GDP declined from 16.5 percent in 2019 to 15 percent in 2020 before rebounding to 16.4 percent in 2021. Africa's proportion of the domestic budget financed by domestic taxes remained high at 65.8 percent in 2019 compared to 61.9 percent in 2015. In 2020, Africa lost about US$ 89 billion to illicit financial flows (IFFs).

OECD countries have collectively fallen short of their target to dedicate 0.7 percent of their gross national income (GNI) to Official Development Assistance (ODA). In addition, Foreign Direct Investments (FDIs) inflows to Africa continue to lag other regions such as Asia and Latin America and the Caribbean. In 2021, Africa received US$ 83 billion of FDI, far less than the US$ 690 billion received in Asia and US$ 134.4 billion received in Latin America and the Caribbean.

Debt management has been challenging for African governments, with debt servicing taking away already scarce capital resources from sustainable development and much-needed critical infrastructural projects. In Africa, excluding North Africa, debt service increased from 27.9 percent of exports of goods and services in 2019 to 32.8 percent of exports of goods and services in 2020 and 29.5 percent of exports of goods and services in 2021.

ICT in Africa remains limited despite some notable progress. Although fixed broadband subscriptions in Africa increased from 0.4 subscriptions per 100 inhabitants in 2015 to 0.60 subscriptions per 100 inhabitants in 2021, this is significantly lower than the global average of 16.7 subscriptions per 100 people. The subscription rate varies in Africa, with Egypt, South Africa, and Tunisia recording the highest subscriptions. The proportion of individuals using the internet in Africa constantly increased from 16.3 per 100 inhabitants in 2015 to 35.3 per 100 inhabitants in 2021.

Impact of Covid-19 on the implementation of the SDGs in Africa

The impact of the Covid-19 pandemic on selected SDG indicators is conducted under four scenarios: a *no Covid; a Covid baseline; a High Damage scenario*, and; *an SDG Push* scenario. The pandemic pushed 23.6 million people in Africa into extreme poverty in 2021 compared to a hypothetical world without Covid. By 2030, at least 492 million people will be left in extreme poverty and at least 350 million people by 2050. With countries accelerating the SDGs through

deliberate policies (SDG Push), the number of people in extreme poverty would decline from 489 million in 2021 to 442.4 million in 2030, and 159.7 million by 2050.

The pandemic did not significantly affect school completion rates. By implementing SDG Push policies, primary education completion rates could increase from 75.1 percent in 2021 to 85.2 percent in 2030 and 95.8 percent by 2050.

The pandemic had negligible effects on carbon emission. In 2021, African countries emitted 0.4 billion tons of carbon across all scenarios. By 2030, a high damage scenario would lead to 0.6 billion tons of carbon emission relative to an SDG push scenario with 0.58 billion tons. Adopting climate-smart policies could decrease carbon emissions in all African regions, although with varying magnitudes. While electrification rates are projected to increase from 54 percent in 2021 to 60 percent in 2030 and 79.8 percent by 2050 under the Covid baseline scenario, implementing SDG Push policies would increase access to 76.5 percent by 2030 and 92.1 percent by 2050.

Overall, with a more ambitious pursuit of the SDGs, 15 African countries can eradicate malnutrition (compared to five under the Baseline) by 2030, and 19 countries would reduce neonatal mortality to at least 12 per 1000 live births (compared to 13 countries under the baseline) by 2030. In the long term, 42 countries would have less than 3 percent of their population suffer from malnourishment (compared 19 countries under the baseline) and 33 countries would have less than 3 percent of its population in extreme poverty (compared to 20 countries).

Impact of the Ukraine-Russia crisis on the implementation of the SDGs in Africa

A steady increase in the prices of food, fuel and energy have been recorded in international markets, mainly due to the effects of the Ukraine and Russia crisis. The negative supply shock is threatening food security and economic stability and triggering social unrest in some African countries. Four scenarios (Business as usual (BAU), Covid-19, Ukraine, and Ukraine+Covid-19) are used to analyze the impact of the shocks on SDGs using price changes over the period 2020-2022.

Overall, GDP growth in Africa is anticipated to decline by negative 3.3 percent under the Ukraine+Covid-19 scenario compared to BAU. However, there are significant differences among countries, and in 2022, high commodity exports will increase GDP growth in Ethiopia by 0.2 percent, Guinea by 4.4 percent and Nigeria by 0.6 percent. The Ukraine+Covid-19 shock had a negative 0.2 percent effect on agricultural labour productivity in Africa, while the Ukraine crisis led to an overall decline of 0.7 percent in agricultural labour productivity in 2022. At the country level, both shocks led to a decline in rural household incomes in 8 out of 15 African countries analyzed. The combined effect of the shocks has increased unemployment in 11 of the 16 countries analyzed in this report.

African countries dependent on imports from Ukraine and Russia show significant delays in achieving SDG 8 on decent work and economic growth and SDG 9 on industry, innovation and technology. The effects of these shocks on the growth rates of household income among the bottom 40 percent of the population and on the share of labour in GDP is moderate.

Key policy recommendations

Overall, African countries need to invest in building and strengthening the capacities of national statistical offices for better and timely collection of highly disaggregated data that tracks the implementation of the SDGs and Agenda 2063.

On quality education (SDG 4)

Africa is progressing on the targets of universal primary education, particularly on enrolment, completion, and gender parity. However, coverage is still inadequate, and the quality of education remains low. The Covid 19 pandemic has endangered the overall moderate progress recorded over the last decade. Building and upgrading school facilities in terms of drinking water availability, electricity, computer and internet still remains a challenge.

Concerted efforts by policymakers are needed to reduce the number of out-of-school children. The educational value of pre-school is an important part of a comprehensive education programme and school feeding initiatives could be scaled up, given their effectiveness in increasing access to basic education, more so for orphans and other vulnerable children. Pre-primary and primary education is also vital for laying the basic foundations for life-long learning.

Despite significant efforts by African countries to finance education during the Covid-19 crisis, significant disruptions were observed due to inadequate financing. More public resources are needed to address the inadequate school infrastructure and equip teachers with the required training. The private sector can play a major role in filling the financing gap.

The lack of accurate and timely data, as well as data on learning outcomes impedes the measuring of progress, evidence-based planning and decision making in the education sector. There is an urgent need for countries to invest in building the necessary statistical capacities for comprehensive gathering of the appropriate data.

Main policy recommendations

- Close the education financial gap by mobilizing financial resources for school infrastructure and improving the quality of teacher training.
- Invest in building capacities of national statistical offices in collecting timely and highly disaggregated data.
- Development partners must align behind the SDG 4 monitoring agenda in countries, ensuring that all their initiatives in the education sector are consistent with the SDG 4 monitoring agenda. Donors financing for the education sector should ensure that the SDG 4 monitoring indicators, especially learning outcome indicators, are supported and funded in every national education plan and budget.
- More public and private sector resources are needed to address the inadequate school infrastructure and equip teachers with the required training. There is the need to increase the number of professionally qualified teachers. African countries need to prioritize redesigning their teacher development programmes at all levels, including digital and pedagogical skills for learner-centered, inclusive quality education.
- Focus on foundational learning from an early stage to raise learning levels and the overall quality of education by emphasizing teaching focused on basic reading and mathematics in preschool and primary school. The curricula at primary school should provide dedicated time and methodological approach on literacy and numeracy to improve foundational learning skills.
- Social protection programmes that include cash transfers or child allowances should be dedicated to groups where the school dropout rates are very high. A specific focus should be given to young Africans at secondary school that fail to participate in education.

On gender equality (SDG 5)

Mixed progress on gender equality and women's empowerment are observed in Africa. One fourth of seats in national parliaments are held by women in 2021 which is a slow upward trend since 2015. The gender With the exception of North Africa, the gap in managerial positions is gradually closing in Africa over the last 2 decades, but the situation has worsened in Northern Africa. There is the need to strengthen the region's political commitment to gender equality and empowerment, through the introduction and implementation of legal frameworks that fight discrimination on the basis of sex and also strengthen women's economic independence.

Governments in Africa must work towards addressing existing social and cultural behaviour and norms that facilitate outlawing practices such as female genital mutilation and violence against women, through advocacy and grass-root engagement on women's rights, especially in rural and marginalized settings.

Measures must be instituted to address barriers to women's integration and career progression in the labour market, as well as ensure adequate social protection measures to cushion against shocks.

Main policy recommendations

- Protect women and girls from violence, child marriage and outlawed practices such as female genital mutilation by fully implementing existing legal frameworks that criminalize such offenses.
- Barriers to women's integration and career progression in the labour market and political sphere need to be addressed through legislative provisions that impose mandatory principles of equality and those that integrate gender into workplace policies.
- Cushion the vulnerable, especially women from the negative effects of external crises through targeted social protection schemes.

On life below water(SDG 14)

The analysis shows variations in the overall progress made by the African region towards Goal 14 on life below water. For many countries, intermediate progress is reported for some indicators (littering, conservation of protected areas, and sustainable fisheries). The Chlorophyll-a indicator – a common indicator of coastal eutrophication (excess nutrient loading into coastal environments and resulting into the excess growth of plants and algae), has experienced a reverse trend. Most countries have demonstrated strong commitments to enhancing conservation and the sustainable use of marine and oceanic resources for inclusive and sustainable development.

Coastal and marine resources present huge potential for development of the tourism industry, fisheries, and aquaculture as well as a great opportunity for the Blue Economy including the creation of green jobs that can serve to curb unemployment. Despite their contribution to the economy and social life, there is limited awareness on the importance of conservation of oceans and seas in Africa. Coasts and marine waters are affected by pollution and acidification, dumping of solid and liquid wastes as well as discharges and runoffs from agricultural chemicals, and poor coastal development in many countries.

It is critical to create awareness regarding the potential negative impacts of increasing coastal population and associated infrastructure development (ports, industries, tourism, and production

facilities). Special emphasis should be given to protection of coasts and marine ecosystems to ensure sustainable development.

Main policy recommendations

- Diversify economic activities, especially in SIDS and promote the development of climate resilience and a low carbon emission tourism industry, fisheries, and aquaculture sectors.
- Encourage investment in the ocean, marine research and coastal development master plans.
- Create awareness of waste management and infrastructure development in coastal areas so as to curb pollution.

On life on land (SDG 15)

Moderate progress was recorded on Goal 15 that focuses on life on land. Given current trends, the promise of protecting, restoring, and promoting sustainable use of terrestrial ecosystems and biodiversity is unlikely to be achieved by 2030. The probability of survival of threatened species has been decreasing since 2000; the trends in overall extinction risk for species (red list index) have deteriorated over the last 2 decades.

Governments should mobilize and channel increased funding for a green and resilient recovery from Covid-19 and to scale up sustainable management of land, forests, and biodiversity. As part of this effort, they should exploit innovative sources of finance such as the Liquidity and Sustainability Facility designed by ECA and its partners, debt swaps for sustainability, green and blue bonds, and carbon credits. Increased financing should be and channelled to decentralized entities and local communities in order to achieve a tangible and meaningful impact on the well-being of people and ecosystems.

Moreover, Member States should strengthen public and private partnerships, coordination, and implement at-scale, policies, plans and legislative frameworks for the sustainable management of land, forests, and biodiversity. Governments, private sector, and other partners need to scale up investments for nature-based and integrated solutions to the interrelated problems of climate change, forest and biodiversity degradation and loss, land degradation, and natural disasters.

Governments should strengthen and scale up the valuation of natural capital and the mainstreaming of biodiversity, nature-based solutions, and climate-friendly agriculture and disaster risk reduction in voluntary national reviews and development plans and budgets.

Also, governments should endeavour to empower women, young people, indigenous peoples, and local communities by strengthening and enforcing resource tenure rights and enhancing access to finance, to achieve inclusive wealth creation and the sustainable management of forest and biodiversity resources and to manage natural resource-based conflicts and disputes.

Main policy recommendations

- Significantly scale up efforts to domesticate and implement the policy frameworks to foster sustainable management of forests, biodiversity, and land.
- Mobilize resources to increase funding for the activities related to the protection, restoration and sustainable use of forests, land and biodiversity.

- Put in place strategies to enhance alternative livelihood options for communities that heavily rely on forests for livelihood. They should empower local communities by strengthening and enforcing resource tenure rights and access to finance to accelerate the sustainable management of forest and biodiversity while also mitigating natural resource-based conflicts and disputes.

On partnerships for the goals (SDG 17)

The continent has made little progress overall on Goal 17. The enablers for the implementation of the Goals have registered only slight improvement.

New partnerships and sources of development financing are required to meet the rising needs of future development in Africa. Both regional development banks, as well as the Bretton-Woods institutions, need to urgently step up their efforts to boost their financial support to African countries. For instance, advanced economies could re-channel a share of their Special Drawing Rights (SDRs) resources to Africa. This could be a potential additional source of resources for countries, cushion against food and oil shocks, and support debt repayment.

African governments should aim to strengthen domestic resource mobilization through accelerating digitalization, improving tax policy and administration, curbing illicit financial flows, and creating the enabling governance, legal and judicial frameworks for enhanced accountability, transparency, and participation. Better alignment of development strategies with development financing frameworks through the Integrated National Financing Framework (INFF) will support efforts to improve public financial management and procurement systems, and adopt result-oriented debt management strategies.

Main policy recommendations

- Prioritize efforts to expand their fiscal space through ambitious domestic resource mobilization initiatives, eliminating unnecessary tax waivers and incentives, addressing tax leakages and improving the efficiency and effectiveness of tax administration systems.
- Tighten public financial management systems, including sound budget formulation and execution, allocating public resources to priority areas and maximizing value for money by mainstreaming procurement systems.
- Strengthen debt management policies, including debt transparency, a careful balance between increased spending and borrowing and better negotiation of debt contracts.
- Encourage strategic development cooperation, specifically through enhanced south-south cooperation, channelling foreign investments into productive sectors, and, taping into innovative financial instruments.

Building resilience from external shocks

Digital disruption and innovation will be key in addressing the challenges faced by the education system across the continent. With schools closed and stark divides in access to online learning, closing the internet access gap would halve the human development regression by getting children back to education – albeit remotely. The surge in tele-schooling, tele-working, tele-medicine, and digital payments being deployed during the Covid-19 crisis are just the tip of

the iceberg. Investments in digital transformation have been simultaneously driving pandemic response and setting the path for acceleration beyond recovery.

Governments should keep investing in digital transformation of public services, the education system, the health sector, etc., through digital platforms while planning broader digital transformation strategies. Digital transformation should target designing solution that allow:

- Delivering critical governments services, including healthcare, remotely;
- Supporting data integration and insights for better decision-making;
- Establishing digital payment platforms and e-commerce systems, with a focus on women-run small and medium enterprises and closing the digital divide for women and for marginalized populations;
- Enhancing digital financing options, including for improved remittance flows.

Reducing poverty will require strong investment in diversifying and transforming African countries' economies. Governments will have to create fiscal space to invest in priority markets, strengthen engagement with the private sector, and develop inclusive, green economic recovery strategies, including in partnership with development partners.

Social protection, including cash transfers, universal health coverage and access to other basic services, will be central to uprooting the inequalities that permeated societies before the pandemic, and that are starkly visible today. Public-private solidarity and partnerships will be critical to build resilient social protection systems that can weather shocks, create strategies for informal sector workers, and design a new generation of resilient, green jobs that support youth-led entrepreneurship.

Temporary Basic Income and Universal Basic Income could be part of a renewed social contract as well as social protection measures and fiscal stimuli that reflect the care economy and are inclusive, reaching domestic and informal workers, people with disabilities and women migrants.

Rebalancing nature, climate, and the economy will be key to fight against the climate change. Designing and de-risking nature-based solutions will be critical to orient African countries quest for development in a sustainable pathway. Also, encouraging sustainable public-private partnerships such as in ecotourism and green transport systems, transforming agriculture from a carbon contributor to a carbon sink, and ensuring integrated thinking and action with the health sector to tackle air pollution that kills 7 million people each year are among the policies to tackle the effects of the Covid in Africa.

African countries' must translate the Nationally Determined Contributions and adaptation plans into urban planning, agriculture and land use climate solutions. Among the opportunities, African countries should explore green recovery grants to promote and protect nature-based jobs and livelihoods, including rural entrepreneurship; promote community-based and owned solutions and approaches, especially in indigenous communities, and accelerate a green energy transition as part of the Covid-19 response, including the political economy of fossil fuel subsidy reform.

Countries must collectively adopt a set of decisions and actions that, to the greatest extent, meet the needs of all. The threats of the Covid-19 pandemic require global response, based on unity

and mutually beneficial bilateral and multilateral cooperation. It is time for selfishness and greed to be replaced by solidarity.

Main policy recommendations

- Build resilient economic systems to reduce the over-reliance on food imports by transforming agricultural productivity through modernization
- Make significant investments to promote equitable and affordable access to energy so as to sustain economic transformation.
- Global solidarity and partnership is required to address the threats of the Covid-19 pandemic.

PART 1:

BACKGROUND AND METHODOLOGY

Chapter 1:

Report Context and Background

1.1 Context and background

This report has been prepared in the wake of the Covid-19 pandemic and the Russian-Ukraine crisis. It identifies sub-regional policy solutions to the continent's structural weaknesses and vulnerabilities and offers guidance to policymakers on how to enhance resilience to external shocks. The report uses the International Futures modelling framework to understand the scope and magnitude of potential effects that the Covid-19 pandemic has, both in the short, medium and long term. Ultimately, the report aims to help African countries in the design and implementation of inclusive recovery policies.

1.2 Report methodology

The report has been prepared jointly by the African Development Bank (AfDB), the African Union Commission (AUC), the Economic Commission for Africa (ECA) and the United Nations Development Programme-Regional Bureau for Africa (UNDP-RBA). Working groups were assembled, and consultative workshops were held to establish the overall framework and parameters of the report. This was followed by the commissioning of a series of background papers for the five selected Sustainable Development Goals (SDGs). The report uses the following subregional delineation.

Table 1.1 Delineation of African subregions

Northern Africa	Algeria, Egypt, Libya, Mauritania, Morocco, Tunisia.
Western Africa	Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, the Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo.
Central Africa	Burundi, Cameroon, Central African Republic, Chad, Republic of the Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, São Tomé and Príncipe.
Eastern Africa	Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania, Uganda.
Southern Africa	Angola, Botswana, Eswatini, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe.

1.3 Data sources and limitations

Data gaps remain a major challenge for adequate reporting of Africa's progress towards the realisation of the SDGs and Agenda 2063. African States have developed different approaches and frameworks for collecting economic, social, and environmental data that can make comparisons difficult. The report therefore uses the latest data from a broad range of sources, including the United Nations Development Programme (UNDP), United Nations Economic Commission for Africa (ECA), the United Nations Conference on Trade and Development (UNCTAD), the United Nations Statistics Division (UNSD), the International Monetary Fund (IMF) and the World Bank. The international data is supplemented by national data to demonstrate best practices. To the extent possible, data is disaggregated by age, gender, and geography (Central, East, North, West, and Southern Africa). Africa's performance (North Africa and the rest of Africa) is compared with other regions of the world. Member States are urged to continue to strengthen the capacities of their statistical systems for reporting on the two Agendas.

Countries must collectively adopt a set of decisions and actions that, to the greatest extent, meet the needs of all. The threats of the COVID-19 pandemic require global response, based on unity and mutually beneficial bilateral and multilateral cooperation. It is time for selfishness and greed to be replaced by solidarity.

PART 2:

TRACKING PROGRESS THROUGH FIVE SUSTAINABLE DEVELOPMENT GOALS

Chapter 2:

SDG Four: Education

Education	2030 Agenda	Agenda 2063
	**Goal 4** - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	**Goal 1** - A high standard of living, quality of life, and well-being for all citizens.
		Goal 2 - Well-educated citizens and skills revolution underpinned by Science, Technology, and Innovation (STI).
		Goal 17 - Full gender equality in all spheres of life.
		Goal 18 - Engaged and empowered youth and children.

2.1 The overarching importance of the Education Goal

Achieving SDG 4 is critical due to its linkage with most SDGs, especially SDG 3, SDG 5, SDG 8, SDG 12 and SDG 13, which provide direct reference to education. Education can help to build behaviours and habits that have a positive impact on an individual's health. Children who complete basic education eventually become parents who are more capable of providing quality care for their own children and make better use of health and other social services. Education can also help mothers to prevent child morbidity and mortality by recognize early signs of illness and seeking medical help in a timely manner (UNFPA, 2014).

Access to clean water and improved sanitation is also linked to school attendance especially for girls' education as it influences decisions that generate health gains. Economic growth and decent work are also linked to education since higher quality education can generate productivity gains that fuel economic growth. Evidence shows that education is a key component to effective environmental governance (UNDP, 2014).

2.2 Impacts of Covid-19 and other shocks on the Education Goal

Covid-19 has eroded the gains made on education by putting 288 million school-age children out of school (Africa SDG Index and Dashboard Report, 2020), mostly from poor and rural households. It has widened existing inequities with the lack of adequate infrastructure affecting online schooling during school closure. Millions of children were also forced to drop out of school due to ongoing conflicts. The pandemic also adversely impacted the progress some African governments were making on increasing their budget on education and the gains in increasing school enrolment and the quality of education. Millions of children still remain out of school, and more than 60 percent of children and young people are not meeting the minimum proficiency requirements in reading and mathematics (UNSD, 2022). All African countries are facing challenges at different levels and are not on track to achieving goal 4 by the target date, except Mauritius and Seychelles (SDSN, 2022).

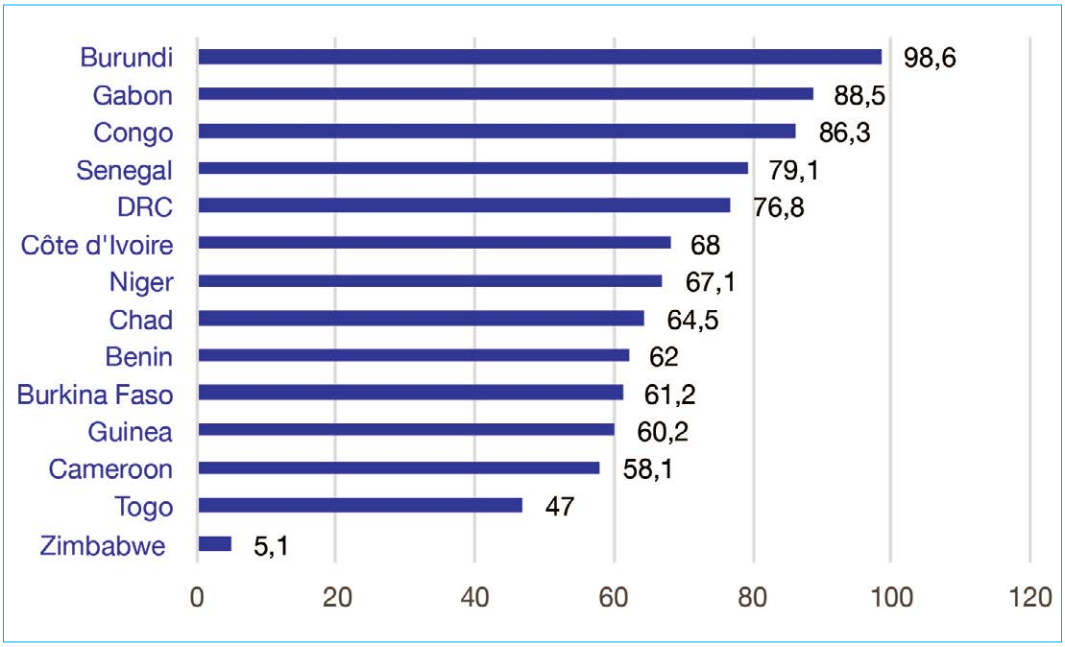
On a positive note though, many countries instituted new forms of virtual and distance learning, as well as revised their national curriculums. Due to data unavailability for some indicators, only target 4.1, 4.2, and 4.5 are assessed under this goal.

2.3 Tracking Goal Four progress by targets

Target 4.1:	By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes.
Indicator 4.1.1:	Proportion of children and young people: (a) in grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education achieving at least minimum proficiency level in (i) reading and in (ii) mathematics, by sex.

In Africa, excluding North Africa, the minimum proficiency level in grades 2 or 3 was 25.8 percent for mathematics and 24.1 percent for reading. This was significantly lower than the global average minimum proficiency level of 46.4 percent for mathematics and 47.2 percent for reading. There are considerable disparities across countries. Out of the 15 countries with data for minimum proficiency level in mathematics in grade 2 or 3, Burundi had the highest proficiency at 99 percent while Zimbabwe had the lowest at 5 percent as shown in figure 2.1.

Figure 2.1: Proportion (%) of grade 2 or 3 students (male and female) attaining minimum proficiency level in mathematics in 2019



Source: UNSD (https://unstats.un.org)

In Malawi, the proportion of children achieving at least minimum proficiency level in reading improved from 66.4 percent in 2016 to 74.3 percent in 2021. For mathematics in lower primary school, the proficiency improved from 41.1 percent in 2016 to 44.5 percent in 2021 (Malawi VNR Report, 2022).

In Ghana, the National Educational Assessment conducted in 2018 showed a decline in proficiency in English and Mathematics for both Primary 4 (P4) and Primary 6 (P6) pupils (Ghana VNR Report, 2022). Proficiency in English was 25 percent for both P4 and Primary P6, while for Mathematics, it was 19 percent for P4 and 22 percent for P6. Generally, girls outperformed boys in English in P4 and P6 while boys performed better than girls in Mathematics in P6. The National standardized test was introduced in 2021 to help improve proficiency at the basic level. The maiden edition was conducted in December 2021 for all P4 pupils in public schools.

Indicator 4.1.2: Completion rate (primary, lower secondary and upper secondary education).

Compared to the other regions, completion rates in Africa remains the lowest at primary, lower secondary and upper secondary education levels. In Africa excluding North Africa, the completion rate in primary school increased from 60.6 percent in 2015 to 64.1 percent in 2019. The completion rates at the lower secondary education level were 46.2 percent and 29.1 percent for upper secondary level in 2019.

At the country level, available data indicates that Algeria, Botswana, South Africa, and Tunisia have reached above 90 percent primary level completion rate. Yet, in 14 African countries, this was below 50 percent in 2019 (UNICEF, 2021).

Globally, the completion rate is higher for females than males in all regions except North Africa and West Asia. However, at the lower secondary and secondary level, the completion rate is higher for males than females in Africa.

There is a wide disparity by place of residence (urban, rural) and income group (poorest and richest households) in completion rates at all levels of education. Students residing in rural areas and those from the poorest households have lower completion rates compared to those in urban areas or those from the richest households.

About 69 million children were out of school in Africa in 2021 due to school closures related to Covid-19 and other factors such as school fees, child labour, school dropout especially among girls and access challenges for children with disabilities (UNICEF, 2021). Findings from the Rapid Assessment on School Absenteeism and Dropout by Girls in Ghana reveals that menstruation remains a major contributor to school absenteeism and dropout among girls, particularly in the rural areas (Box 2.1).

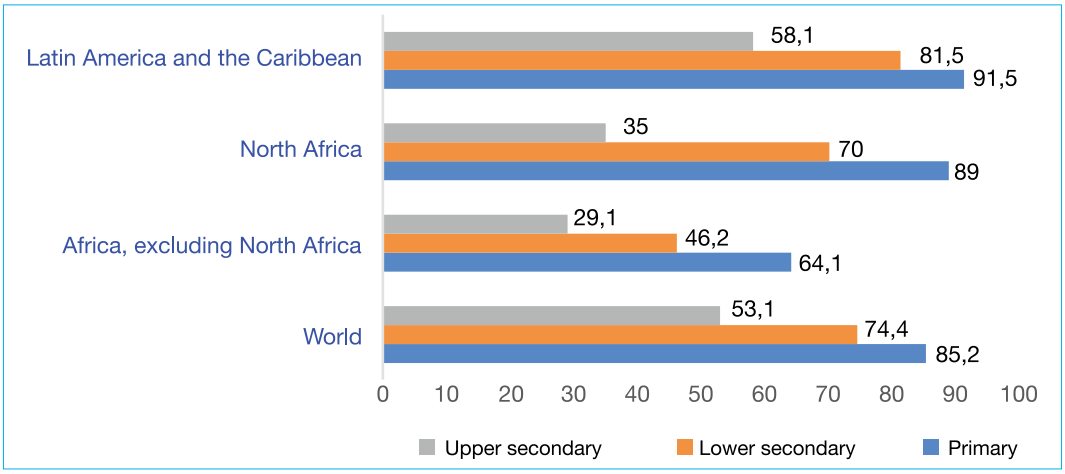
Box 2.1: Findings from the Rapid Assessment on School Absenteeism and Dropout by Girls in Ghana

Although school attendance and completion rates have improved at all levels, menstruation remains a major contributor to school absenteeism and dropout among girls, particularly in the rural areas. This is a result of a myriad of challenges including:

i. The increasing cost of sanitary materials, thereby resulting into the usage of unhygienic materials;
ii. Menstrual pain and health- related issues;
iii. Fear of staining and its perceived stigma;
iv. The absence of sick bays or rest areas for girls during painful menstrual periods;
v. The absence or limited access to water and sanitary facilities;
vi. Inaccessible washrooms for people with disabilities and
vii. Lack of convenient facilities to dispose sanitary materials.

Source: Ghana VNR Report (2022)

Figure 2.2: Completion rate primary, lower secondary and upper secondary education, both sexes in 2019



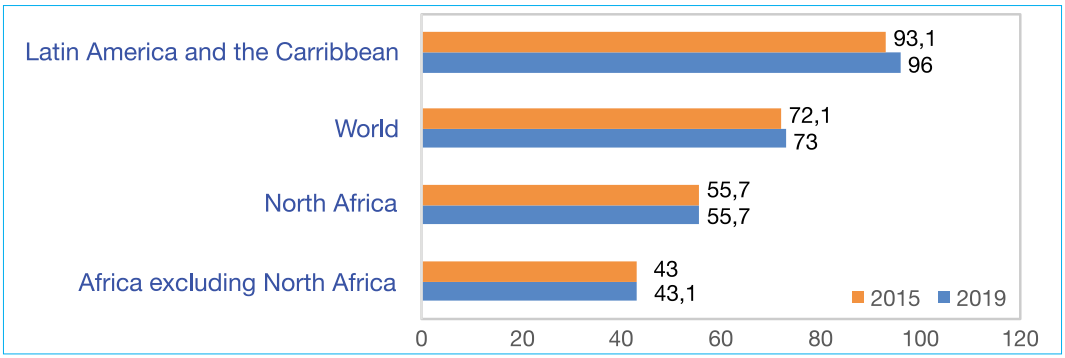
Source: UNSD (https://unstats.un.org)

Target 4.2:	By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education.
Indicator 4.2.2:	Participation rate in organised learning (one year before the official primary entry age), by sex.

Organized learning before the official start of primary school has been shown to boost a child's social, emotional, and intellectual development and build a strong base and readiness for primary education and future learning (UNICEF, 2021).

Participation rate in organized learning in Africa is the lowest globally. In Africa excluding North Africa, it stagnated at 43 percent in and 55.7 percent in North Africa between 2015 and 2019. The average participation rate globally in early childhood and primary education increased slightly from 72 percent in 2015 to 73 percent in 2019, with Latin America and the Caribbean leading at 96 percent, as demonstrated by Figure 2.3. At the country level, fifty percent of African countries have less than 50 percent enrolment in preschool. There is also wide variation among countries, ranging from 99 percent in Togo to 13 percent in Djibouti in 2020 (UNSD, 2022).

Figure 2.3: Participation rate (%) in organized learning one year before the official age of entry into primary school (2015 and 2019)



Source: UNSD (2022)

Target 4.5:	By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations.
Indicator 4.5.1:	Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated

By 2020, gender parity for achieving a minimum proficiency level in reading had been achieved at grades 2 and 3 and primary level in all regions of the world except in Africa, excluding North Africa. All regions have attained gender parity at lower secondary level by 2020. However, by 2020, none of the regions had attained gender parity in achieving a minimum proficiency level in mathematics at lower secondary level. Gender parity in pre-primary school enrolment had been attained in all regions of the world by 2019.

In Ethiopia, the gross enrolment rate for persons with disabilities is low both at primary and secondary education. Of the 35,638 primary schools, only 18.6 percent have water and 37.2 percent of schools have sanitation facilities accessible to children with disabilities, in 2020/21. Similarly, approximately 41.2 percent and 49.5 percent of the 3428 secondary schools have water and sanitation facilities accessible to children with special needs, respectively. This suggests the need for special considerations and support for persons with disabilities in school enrolment and accessing facilities (Ethiopia VNR Report, 2022).

Eritrea has experienced improvement in female enrolment, gender gap, and parity between boys and girls (Box 2.2).

Box 2.2: Enrolments and educational strategies in Eritrea

In Eritrea, enrolment rates have improved across all levels. The adjusted net enrolment rate at the primary level increased slightly from 83.5 percent (female: 81.2 percent) in 2019 to 83.7 percent (female: 81.5 percent) in 2020, which means a slight decline in the proportion of primary-age out-of-school children from 16.5 percent in 2019 to 16.4 percent in 2020. Female enrolment continues to steadily grow, and the historically huge gender gap is narrowing. Parity between boys and girls in primary education has been achieved, while gender disparities in secondary and tertiary education enrolment continue to decline.

Efforts have focused on strengthening the relevance of education, promoting student-centered learning, ensuring efficiency and effectiveness, changing the role of teachers, and improving educational management. Learner achievement levels and attainment targets are regularly assessed, with the transformation of the monitoring system being a priority.

Policy interventions have largely focused on the following initiatives

- The provision of subsidized and free learning materials, financial assistance to vulnerable households to keep children enrolled.
- The mother language policy, adult and outreach learning programs.
- The establishment of boarding schools for students from remote communities or nomadic groups, literacy and skills programs for rehabilitee prisoners, and transport assistance (such as bicycles or donkeys for disabled youth). Boarding schools have been constructed in the historically and economically disadvantaged communities, and they operate with public funding at all levels of learning.
- Substantial investment and support for technical and vocational education.

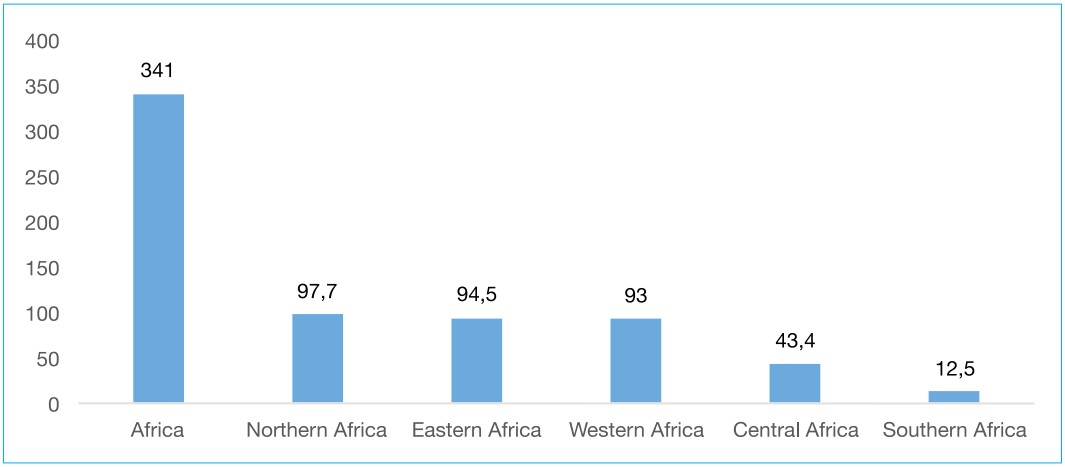
Source: Eritrea VNR Report (2022)

Target 4.b:	By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries (LDCs), small island developing states (SIDS), and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering, and scientific programmes in developed countries and other developing countries.
Indicator 4.b.1:	Volume of official development assistance (ODA) flows for scholarships by sector and type of study.

Globally, official development assistance (ODA) for scholarships amounted US$ 1.6 billion in 2019. Africa ranked above all regions in receiving ODA (US$ 341 million) for education followed by Western Asia that received US$ 160.5 million (UNSD, 2022).

Figure 2.4 shows that North Africa received the highest amount, US$ 98 million, followed by East Africa at US$ 95 million and West Africa at US$ 93 million. Southern Africa ranked below all regions with US$ 12.5 million. At the country level, Morocco was the highest recipient at US$ 25 million whereas Equatorial Guinea was the lowest recipient at half million in 2019 (UNSD, 2022).

Figure 2.4: Total official flows for scholarships, by recipient (millions of constant 2019 United States dollars) 2019



Source: UNSD (https://unstats.un.org)

Target 4.c:	By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially LDCs and SIDS.
Indicator 4.c.1:	Proportion of teachers in: (a) pre-primary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organised teacher training (e.g., pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country.

Table 2.1 presents the proportion of teachers with minimum required qualifications in primary education. Globally, the proportion of teachers who are qualified to teach at primary level fell from 84.5 percent in 2015 to 81 percent in 2019. Although Africa showed a slight increase between 2015 and 2019, it still remains the continent with the lowest proportion of qualified teachers in primary schools.

Table 2.1: Proportion of teachers with the minimum required qualifications in primary education, both sexes in %

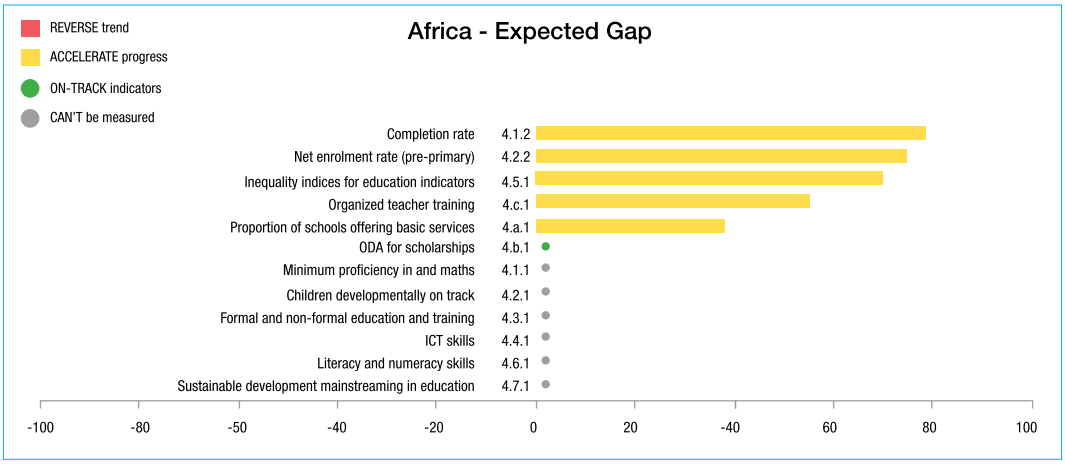
Region	2015	2017	2018	2019
World	84.5	84.5	84.4	81
Africa, excluding North Africa	63.3	65.8	65.7	65.1
North Africa	87	88.6	89.6	87.1
Latin America and the Caribbean	90.7	90.9	91	82.6

Source: UNSD (https://unstats.un.org)

2.4 Overall prospects for the Education Goal

The figure 2.5 herebelow shows that Africa will need to accelerate progress on school completion rates, net enrolment rates (pre-primary), inequality indices for education indicators, organized teacher training and the proportion of schools offering basic services to achieve most of the targets by 2030. School completion rates have been being rising over the last 20 years and in Africa excluding North Africa, primary school completion rate increased from 49.2 percent in 2000 to 64.1 percent in 2019.

Figure 2.5: Expected achievements for Africa on SDG 4 indicators



Source: Africa UN Data for Development: https://ecastats.uneca.org/africaundata

Africa is on track on ODA for scholarships. Building and upgrading school facilities (drinking water, electricity, computer, and internet) remain a critical challenge on the continent. Scholarships should be targeted to the marginalized, focus on gender balance, and support studies that are aligned with the necessary human capital required for economic transformation in Africa.

2.5 Policy frameworks to support achievement of the Goal

The Incheon declaration on education is an extension of the education for all (EFA) movement and the Millennium Development Goals on Education. It sets out a new vision for education for 15 years. The decaration is based on the pricinciple that education is a fundamental human right, it is a public good, of which the state is the duty bearer and gender equality is inextricably linked to the right to education for all. As such, achieving SDG 4 necessitates the mobilization of national,

regional and global efforts that are aimed at achieving effective and inclusive partnerships; improving education policies, ensuring highly equitable, inclusive and quality education systems for all, mobilizing resources for adequate financing for education and ensuring monitoring, follow-up and review of all targets. At the global level, the Education 2030 Framework for Action (FFA) outlines how to translate into practice, the commitment made in Incheon, at national, regional and global levels. It aims at mobilizing all countries and partners around the SDG on education and its targets, and proposes ways of implementing, coordinating, financing and monitoring Education 2030 in order to ensure inclusive and equitable quality education and lifelong learning opportunities for all.

At the continental level, the African Union Commission (AUC) has developed and adopted a comprehensive ten-year Continental Education Strategy for Africa 2016-2025 (CESA). This strategy is driven by the desire to set up a system of education and training that builds quality human capital to deliver on the vision and mission of the AU. The CESA has twelve strategic objectives that are aligned with most of the SDG targets. The twelve strategic objectives are as follows:

- Revitalize the teaching profession to ensure quality and relevance at all levels of education
- Build, rehabilitate, preserve education infrastructure and develop policies that ensure a permanent, healthy and conducive learning environment in all sub-sectors and for all, so as to expand access to quality education
- Harness the capacity of ICT to improve access, quality and management of education and training systems
- Ensure acquisition of requisite knowledge and skills as well as improved completion rates at all levels and groups through harmonization processes across all levels for national and regional integration
- Accelerate processes leading to gender parity and equity SO 6: Launch comprehensive and effective literacy programmes across the continent to eradicate the scourge of illiteracy
- Strengthen the science and math curricula in youth training and disseminate scientific knowledge and culture in society
- Expand TVET opportunities at both secondary and tertiary levels and strengthen linkages between the world of work and education and training systems
- Revitalize and expand tertiary education, research and innovation to address continental challenges and promote global competitiveness
- Promote peace education and conflict prevention and resolution at all levels of education and for all age groups Pillars
- Improve management of education system as well build and enhance capacity for data collection, management, analysis, communication
- Set up a coalition of stakeholders to facilitate and support activities resulting from the implementation of CESA 16-25. The African Union has also established a Committee of ten Heads of State and Government to champion education, science, and technology development. The committee aims to develop ICT capacity and the use of technology platforms at all levels of the education system in order to promote access to quality education, research, knowledge creation and innovation so as to exploit opportunities in the digital technology space.

2.6 Summary observations and policy recommendations

Ensuring access to quality education for all is central to attaining full and productive life for all individuals and the realization of the SDGs and Agenda 2063. Despite considerable progress in school enrolment, millions of children still remain out of school especially in African countries affected by conflicts. Covid-19 pandemic also reversed some of the gains made in the past years.

Despite significant efforts made by African countries and development partners to finance education during the Covid-19 crisis, a lot of disruptions were observed due to inadequate financing. Most African countries dedicate less than 20 percent of their national budget to education and about one out of three African countries dedicate less than 15 percent of their national budget to education (AU and UNICEF, 2021). To address the financing gap, countries need to allocate more domestic resources to ensure sustainable financing for emergency responses. Both the public and the private sectors should also invest in ICT infrastructure to facilitate distance learning during emergencies and crisis.

Policymakers and development partners must work towards bringing the out-of-school children back to school. There is a need to focus on pre-primary and primary education to strengthen the basic foundations for life-long learning. The educational value of pre-school, even in its care-focused form, is an important part of a comprehensive education programme; and the school feeding programmes have proved to be effective in increasing access to basic education particularly for orphans and other vulnerable children.

This Report presents the following recommendations for transforming education systems in Africa towards 2030:

- Considering the lack of adequate and timely data on the education system indicators for a comprehensive assessment of this goal, the report calls for an urgent need for African countries to invest in building capacities of national statistical offices in collecting timely and highly disaggregated data. African countries must increase domestic expenditures to cover multipurpose school and household surveys and learning assessments that would generate data on multiple indicators.

  The international community must finance SDG 4 data collection and capacity development mechanisms. Development partners must align behind the SDG 4 monitoring agenda in countries, ensuring that all their initiatives in the education sector are consistent with the SDG 4 monitoring agenda. Donors financing for the education sector should ensure that the SDG 4 monitoring indicators, especially learning outcome indicators, are supported and funded in every national education plan and budget.

- More public and private sector resources are needed to address the inadequate school infrastructure and equip teachers with the required training. There is the need to increase the number of professionally qualified teachers. Qualified teachers are integral to robust education systems, and schools across Africa faced a chronic shortage of qualified teachers. African countries need to prioritize redesigning their teacher development programmes at all levels, including digital and pedagogical skills for learner-centered, inclusive quality education. As the Covid-19 school closures have shown, it is now critical for teachers to possess skills as learning facilitators and instructional designers, using a wide range of technologies to meet students' varying needs.

- African countries should focus on foundational learning from an early stage to raise learning levels and the overall quality of education by emphasizing teaching focused on basic reading and mathematics in preschool and primary school. The curricula at primary school should provide dedicated time and methodological approach on literacy and numeracy to improve foundational learning skills.
- Social protection programmes that include cash transfers or child allowances should be dedicated to groups where the school dropout rates are very high. A specific focus should be given to young African at secondary school that fail to participate in education.
- The quality of education in Africa is also compromised by inadequate school infrastructure. Investments in WASH infrastructure, development of detailed protocols on hygiene measures (including handwashing, use of protective equipment, and safe food preparation practices), are needed for access to basic handwashing facilities in African schools.
- Digital innovation and technology should be incorporated in new education priorities to build innovative teaching and learning approaches that expand access to online learning resources to all children, including the most disadvantaged and vulnerable. An education compact with telecom companies will be a key enabling factor to provide ICT infrastructure and digital connectivity to bring down the cost of airtime, mobile data and broadband services for the education system including the most vulnerable children.

Chapter 3:

SDG Five: Gender Equality and Empowerment of all Women and Girls

Gender	2030 Agenda	Agenda 2063
	**Goal 5** - Achieve gender equality and empower all women and girls.	**Goal 1** - A high standard of living, quality of life, and well-being for all citizens.
		Goal 17 - Full gender equality in all spheres of life.

3.1 Gender equality, empowerment and the impact of Covid-19

Gender as a cross-cutting issue is based on the recognition that, men and women, boys and girls often have different priorities, constraints, and preferences with respect to development. As such, they can contribute to, and be affected differently by development interventions. As stated way back by the former Secretary General of the United Nations:

> *"Gender equality is more than a goal. It is a precondition for meeting the challenge of reducing poverty, promoting sustainable development, and building good governance"* (Kofi Annan, 1998).

The Covid-19 pandemic has unleashed devastating effects on women and girls, and significantly delayed the attainment of most gender-related SDGs (Box 3.1). African countries will need to confront structural obstacles to gender equality and strengthen policies and initiatives to accelerate women's economic empowerment amidst prevailing social-economic and political challenges. Social protection measures need to be enhanced and targeted to the most vulnerable, while harmful social norms need to be addressed through legal frameworks that protect women and girls against violence, child marriage and female genital mutilation.

Box 3.1: The effects of the Covid-19 pandemic on women and girls

Gender inequality has occurred through multiple channels, including:

- **Education:** Disruptions in learning due to school closures, with women and girls more likely to drop out of school;
- **Health:** High maternal death due to disruption in the delivery of health services;
- **Poverty and inequality**: Unequal income loss with female headed businesses experiencing significant losses;
- **Decent work**: More women than men losing jobs and relying on unpaid domestic work.

3.2 Tracking Goal Five progress by targets

Target 5.1:	End all forms of discrimination against all women and girls everywhere.
Indicator 5.1.1:	Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex.

Table 3.1: Legal frameworks that promote, enforce, and monitor gender equality (%) in 2020.

Regions	Overarching legal frameworks and public life	Violence against Women	Employment and economic benefits	Marriage and Family
World	70.9	78	76.7	79.1
Africa, excluding North Africa	65.5	65.6	66.3	76.1
Northern Africa and Western Asia	54.1	63	63.3	59.3
Latin America and the Caribbean	71.4	83.8	75.5	85
Land Locked Developing Countries	79.8	81.4	71.5	79
Least Developed Countries	67.3	65	59	74.5
Small Island Developing States	54.5	78.1	71.3	79.5

Source: United Nations (2022).

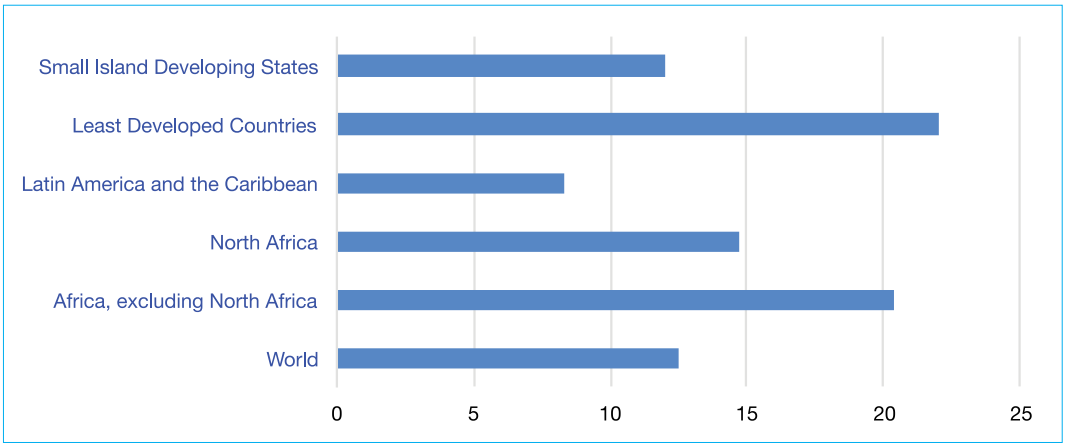
The Table 3.1 depicts regional trends of legal frameworks that promote, enforce, and monitor gender equality and reveals that most African countries lack sufficient policy measures to safeguard gender equality in the public life. In 2020, only 65.6 percent of legal frameworks in Africa excluding North Africa provided provisions to address violence against women, significantly lower than the global average of 78 percent. Africa, excluding North Africa performed relatively well in legal frameworks securing marriage and family life for women (76.1 percent), which was higher than the average for LDCs (74.5 percent), but still slightly lower than the global average of 79.1 percent. In Northern Africa and Western Asia, the region performed lower than Africa, excluding North Africa in all dimensions of legal frameworks, with only 54.1 percent of all legal frameworks providing provisions to secure gender equality, and 63 percent addressing both violence against women and women's employment and economic benefits.

Overall, legal frameworks remain weakly enforced, restricting the participation of women in the labour force, hindering equality in the workplace, recognition of care responsibilities among men and women, as well as, persistent gender pay gaps (OECD, 2021).

The 2003 Constitution of the Republic of Rwanda enshrines the principles of gender equality and women's rights and provides for a minimum of 30 percent quota for women in all decision-making organs (Rwanda VNR Report, 2022). The proportion of seats held by women in national parliament in Rwanda increased from 56 percent in the 2008 elections to 64 percent in the 2013 elections to 61 percent in 2021, while the average for Africa excluding North Africa marginally increased from 18 percent in 2008 to 22 percent in 2008 before slightly increasing to 26 percent in 2021 (World Bank, 2022).

Target 5.2:	Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.
Indicator 5.2.1:	Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual, or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age.

Figure 3.1: Proportion of ever-partnered women and girls aged 15-49 subjected to physical and/or sexual violence by a current or former intimate partner in the previous 12 months (%) in 2018.



Source: United Nations (2022).

It is clear from Figure 3.1 that gender-based violence remains pervasive at both the global and regional level. In Africa excluding North Africa, an estimated 20.4 percent of women in 2018 experienced either physical or sexual violence or both by an intimate partner. The region ranks above the global average of 12.5 percent. There is also significant variation across countries. Violence against women was high in countries such as Equatorial Guinea (43.6 percent), Democratic Republic of Congo (36.8 percent), Liberia (35 percent), Cameroon (32.7 percent) and Gabon (31.5 percent), due to various factors such as conflict-related sexual violence, acceptance of traditional gender laws, the failure of authorities to prosecute the guilty party and laws that do not address spousal rape (United Nations, 2022). On the other hand, this was low in countries such as Comoros (4.9 percent), Gambia (7.3 percent), Cabo Verde (7.8 percent) and Burkina Faso (9.3 percent) – WHO (2022) due to factors such as awareness-raising campaigns, comprehensive laws against violence on women and developing national strategic action plans (United Nations, 2021). North Africa performed relatively well, with violence from a current or former intimate partner estimated at 14.7 percent. At the country level, Rwanda is strengthening integrated services for sexual and gender-based violence victims (Box 3.2). Lesotho has instituted measures to reduce the prevailing economic cost of violence against women (Box 3.3).

Some African countries are making progress toward achieving the triple zero targets (zero preventable maternal deaths, zero unmet need for family planning, and zero gender-based violence) as agreed upon in the Nairobi Summit. Eswatini is instituting measures to ensure behavioural changes at the family level. Zimbabwe is embarking on the young women empowerment project. South Africa has embarked on Comprehensive Sexuality Education (CSE) training for youths. Tanzania has engaged in CSE and Sexual Reproductive Health information through youth clubs and youth corners (Save the children ASRHR project, 2019).

Box 3.2: Gender-based violence in Rwanda

The Government of Rwanda is strengthening integrated services for victims of SGBV through the establishment of Isange One Stop Centres (IOSCs) which provide comprehensive services to victims of SGBV under the same roof free of charge on a 24 hours 7 days basis. Having increased from 23 to 44 over the last three years, they provide various services such as medical care, psychosocial support, legal services, relief, temporary shelter and re-integration. Other initiatives to combat SGBV include

- The enactment of the Law governing matrimonial regimes, donations and successions.
- Criminalization of offenses for child defilement, marital rape, sexual violence and harassment of a spouse.
- The establishment of the National Women Council with structures from national to village level to mobilize and empower women to participate in national development programs.
- Establishment of community level forums to discuss GBV and child abuse.

Source: Rwanda VNR Report, 2022

Box 3.3: Case study of economic cost of violence against women in Lesotho

The economic cost of violence against women and girls in Lesotho is estimated at 1.3 percent of its GDP or an equivalent of M462.9 million. The direct costs, estimated at M428.2 million (1.23 percent of GDP) include out-of-pocket expenses by victims and income loss while indirect costs, estimated M34.7 million (0.10 percent of GDP), include national output loss due to a reduction in consumption. The cost of VAWG to girls was estimated at 0.82 percent of GDP or learning time lost in school) while the cost to the public sector was equivalent to 2.26 percent of GDP. This situation calls for more intensive and extensive strategies to change the perception of the girlchild.

Several initiatives that the government is undertaking include

- Capacity building workshops for police, prosecutors and judicial officers on laws to counter domestic violence.
- Translation of international conventions and protocols and national legal documents into indigenous and simple language.

Source: Lesotho VNR Report, 2022

Target 5.3:	Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation.
Indicator 5.3.1a:	Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18.

Table 3.2: Proportion of women aged 20-24 years who were married or in a union before age 15, (%).

Regions	2000	2005	2010	2015	2021
World	9.3	8.3	7.2	6.2	4.7
Africa, excluding North Africa	14.6	12	13.8	12.6	10.8
North Africa	5.8	4.8	4	4.2	3.5
Latin America and the Caribbean	4.2	4.5	4.5	5.1	4.0
Least Developed Countries	19.3	16.6	16.3	13.3	10.5
Small Island Developing States	6.5	6.8	7.5	6.8	5.3

Source: United Nations (2022).

The Table 3.2 shows that the prevalence of child marriage before the age of 15 in Africa excluding North Africa has declined from 12.6 percent in 2015 to 10.8 percent in 2021, although there are substantial disparities across regions. In North Africa, child marriage is significantly lower than on the rest of the continent, having declined from 4.2 percent in 2015 to around 3.5 percent in 2021, due to the implementation of laws that guide the role and status of women in marriage, and rights in divorce and custodial matters (Kimani, 2008).

Table 3.3: Proportion of women aged 20-24 years who were married or in a union before age 18, (%)

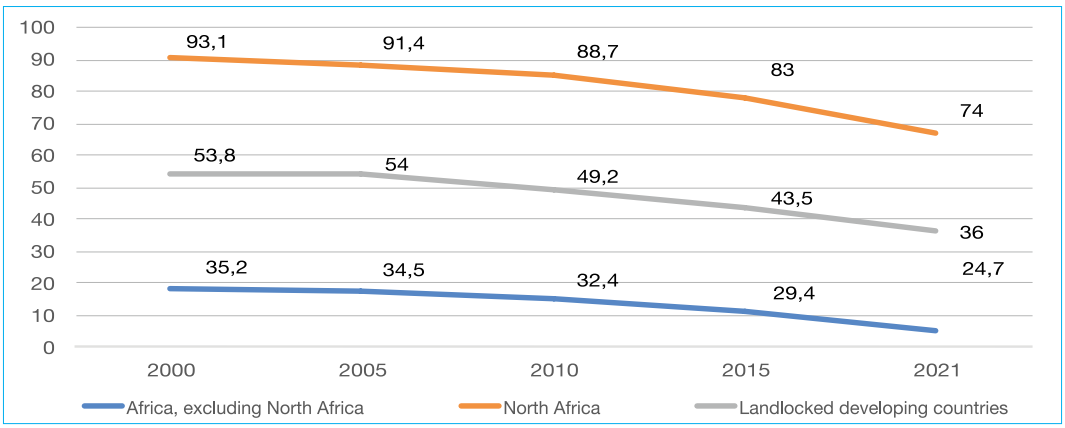
Regions	2000	2005	2010	2015	2021
World	25.4	23.8	22.6	21.3	19.5
Africa, excluding North Africa	38.3	36.2	37.8	35.8	34.7
North Africa	21.4	19.2	18.4	18	17.7
Least Developed Countries	47.1	45.5	44.4	39.9	36.8
Small Island Developing States	23.9	25.1	25.4	23.3	22.4

Source: United Nations (2022)

However, the proportion of women married before the age of 18 was still high in Africa excluding North Africa and was estimated at 34.7 percent in 2021, a slight reduction from 35.8 percent in 2015. In North Africa, child marriage before 18 years slightly declined from 18.4 percent in 2015 to around 17.7 percent in 2021 (Table 3.3). African countries with the highest proportion of child married between 2005 and 2017 included Ethiopia, Eritrea, Madagascar, Mozambique, and South Sudan (UNICEF, 2022a). This has been driven by several interrelated factors such as inadequate access of quality education to girls and weak legal services. Poverty is also a major driver, with girls from the poorest households twice as likely to get married before the age of 18 (Klugman et al., 2014).

Indicator 5.3.2: Proportion of girls and women aged 15-49 years who have undergone female genital mutilation/cutting, by age.

Figure 3.2: Proportion of girls aged 15-19 who have undergone female genital mutilation/cutting (%).



Source: United Nations (2022).

Female genital mutilation (FGM) in Africa excluding North Africa has declined from 35.2 percent in 2000 to 29.4 percent in 2015 and to 24.7 percent in 2021, while in North Africa, it declined from 83 percent in 2015 to 74 percent in 2021. However, it is estimated to be very high in several countries such as Djibouti, Somalia and Guinea (UNICEF, 2022b), largely due to religious and socio-cultural and traditional beliefs (Awolola and Ilupeju, 2019).

Target 5.5: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.

Indicator 5.5.1: Proportion of seats held by a woman in (a) national parliaments and (b) local governments.

Table 3.4: Regional trends in the proportion of seats held by a woman in national parliaments and local governments.

Regions	2000	2005	2010	2015	2020	2021
World	13.3	15.9	19	22.3	24.9	25.6
Africa, excluding North Africa	11.5	14.4	18.4	22.6	24.3	25
North Africa	5.4	10.9	13.2	24.6	20.1	24.3
Least Developed Countries	9.3	13.1	19.3	21.7	23.1	24.3
Small Island Developing States	14	18	20.5	23.3	25.6	27.7

Source: United Nations (2022).

The share of national parliamentary seats held by women in Africa excluding North Africa has constantly increased from 11.5 percent in 2000 to 22.6 percent in 2015 and to 25 percent in 2021 (Table 3.4). The best performing countries in terms of women representation include Rwanda (61 percent), South Africa (46 percent), Namibia (44 percent), Senegal (43 percent) and Mozambique (43 percent) – (International Institute for Democracy and Electoral Assistance, 2021). North Africa's proportion also increased from 5.4 percent in 2000 to 24.3 percent in 2021. This positive trajectory is also reflected in other regions although with differentiated magnitudes, due to quotas that reserve seats for women or initiatives that enhance women's leadership skills through training on public speaking and leadership (UN Women, 2018). Although women's participation is crucial for public decision-making processes such as gender responsive laws and gender budgeting, their under-representation and the pace of increasing the number of women in politics remains slow to achieve gender parity by 2030 (United Nations, 2022).

Indicator 5.5.2: Proportion of Women in Managerial Positions

Table 3.5: Regional trends in the proportion of women in managerial positions

Regions	2000	2005	2010	2015	2020
World	25.3	26.8	27.4	27.2	28.3
Africa, excluding North Africa	27.6	26.5	27.1	29.3	29.8
North Africa	9.2	9.6	12.5	7.3	6.7
Least Developed Countries	24.2	19.9	19.5	21.2	22.8
Small Island Developing States	29.1	32.9	34.6	34.9	36.4

Source: United Nations (2022).

While women continue to account for nearly 62 percent of the labour force across African countries (World Bank, 2022), they only held 29.8 percent of managerial positions in Africa excluding North Africa in 2020 (Table 3.5), a modest increase from 29.3 percent in 2015. In North Africa, only 6.7 percent of women in 2020 held managerial positions, a decline from 7.3 percent in 2015 and this has disproportionately affected women entrepreneurs. Several countries such as Morocco are turning this around (Box 3.4).

Box 3.4: Boosting women's representation in the public life in Morocco

The economic cost of violence against women and girls in Lesotho is estimated at 1.3 percent of its GDP or an equivalent of M462.9 million. The direct costs, estimated at M428.2 million (1.23 percent of GDP) include out-of-pocket expenses by victims and income loss while indirect costs, estimated M34.7 million (0.10 percent of GDP), include national output loss due to a reduction in consumption. The cost of VAWG to girls was estimated at 0.82 percent of GDP or learning time lost in school) while the cost to the public sector was equivalent to 2.26 percent of GDP. This situation calls for more intensive and extensive strategies to change the perception of the girlchild.

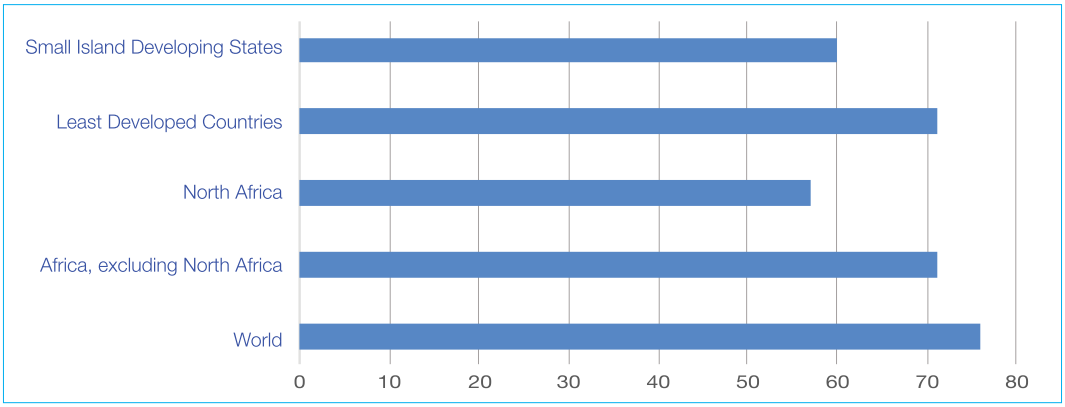
Several initiatives that the government is undertaking include

- Capacity building workshops for police, prosecutors and judicial officers on laws to counter domestic violence.
- Translation of international conventions and protocols and national legal documents into indigenous and simple language.

Source: CFA and IFC (2022) and OHCHR (2022).

Target 5.6:	Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences.
Indicator 5.6.2a:	Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education.

Figure 3.3: Extent to which countries have laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education, total (%), 2022.



Source: United Nations (2022).

Access to information on sexual health care remains pervasive and varies across regions. In 2022, only 71 percent of laws and regulations in Africa excluding North Africa and 57 percent in North Africa fully guaranteed access to sexual and reproductive health care, information and education to both women and men (Figure 3.3). This is however below the global average of 76 percent.

Indicator 5.6.2b: Extent to which countries have laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education, by thematic areas (sections).

Table 3.6: Extent to which countries have laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education, by thematic areas (sections) (%), 2022.

Regions	Maternity Care	Contraceptive Services	Sexuality Education	HIV and HPV
World	74	76	65	81
Africa, excluding North Africa	71	71	55	79
North Africa	77	49	0	67
Least Developed Countries	71	70	56	78
Small Island Developing States	58	49	65	66

Source: United Nations (2022).

In Africa excluding North Africa, laws and regulations were particularly encouraging for HIV and HPV (79 percent), contraceptive services (71 percent) and maternity care (71 percent), while below par for sexuality education (55 percent, Table 3.6). In North Africa, performance across all the key dimensions indicate the need to enact legislation on sexuality education and promote the open discussion of contraceptive services (49 percent). In Botswana, progress has been achieved against sexual and reproductive health and rights indicators. There has been a decline in AIDS-related deaths from 5300 in 2017 to 5100 in 2020. The total fertility rate has declined from 3 to 2.8 births per woman and contraceptive prevalence rate has increased from 53 percent in 2017 to 64.7 percent in 2020 (Botswana VNR Report, 2022).

Indicator 5.6.2c: Extent to which countries have laws and regulations that guarantee full and equal access to women and men aged 15 years and older to Maternity care, by component (%).

Table 3.7: Regional trends in the extent to which countries have laws and regulations that guarantee full and equal access to women and men aged 15 years and older to Maternity care, by component (%) in 2022.

Regions	Maternity Care	Life-Saving Commodities	Abortion	Post-Abortion Care
World	85	90	43	78
Africa, excluding North Africa	81	97	31	76
North Africa	80	87	25	80
Least Developed Countries	79	96	29	79
Small Island Developing States	63	85	38	54

Source: United Nations (2022).

The Table 3.7 shows that in 2022, 97 percent of laws and regulations in Africa excluding North Africa safeguarded access to life-saving commodities and 85 percent on maternity care. Laws and regulations that safeguard abortion are estimated at only 31 percent in Africa excluding North Africa, and 25 percent in North Africa. This is largely due to highly restrictive abortion laws, despite an estimated 49 to 145 unintended pregnancies per 1,000 in Africa excluding North Africa (WHO, 2022). On the other hand, North Africa's performance was relatively encouraging for maternity care and post abortion care (80 percent) in 2022, partly driven by increased investment in human health, nurses and midwives and reproductive health (Doraiswamy et al., 2022). Lesotho has made important progress in sexual and reproductive health and reproductive rights (Box 3.5).

Box 3.5: Sexual and Reproductive Health in Lesotho

Lesotho has made significant progress in ensuring universal access to sexual and reproductive health and reproductive rights with most women aged 15–49 years making their own informed decisions regarding sexual relations, contraceptive use and reproductive health care. The Government has strengthened adolescent health programmes aimed at educating young girls and boys about reproductive health issues and integration of Comprehensive Sexuality Education into the school curriculum. The Ministry of Gender and Youth, Sports and Recreation through the assistance of the United Nations Population Fund revitalized youth resource centres in ten districts by engaging elders to educate the youth on sexual and reproductive health and rights, as well as HIV & AIDS. Furthermore, the Ministry of Health is supporting adolescent girls and boys get education on sexual and reproductive health issues.

Key initiatives implemented by the Government of Lesotho include

- The establishment of a one stop center that provides temporary shelter for survivors of sexual and gender-based violence (GBV).
- The establishment of a toll-free number for reporting GBV cases.
- Sensitisation campaigns to raise awareness about the Convention on the Elimination of all forms of Discrimination against Women.
- Enactment of new legislation and policies, including the Disability Act, Anti-trafficking Act, child mirage and social security programmes for children and the elderly.

Source: Lesotho VNR Report (2022)

Indicator 5.6.2e: Extent to which countries have laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexuality education, by component (%).

Table 3.8: Regional trends in the extent to which countries have laws and regulations that guarantee full and equal access to women and men aged 15 years and older to Contraceptive services, by component (%) in 2022

Regions	Contraceptive Services	Contraceptive Consent	Emergency Contraception
World	78	82	70
Africa, excluding North Africa	71	73	69
North Africa	68	25	63
Least Developed Countries	72	70	68
Small Island Developing States	48	63	34

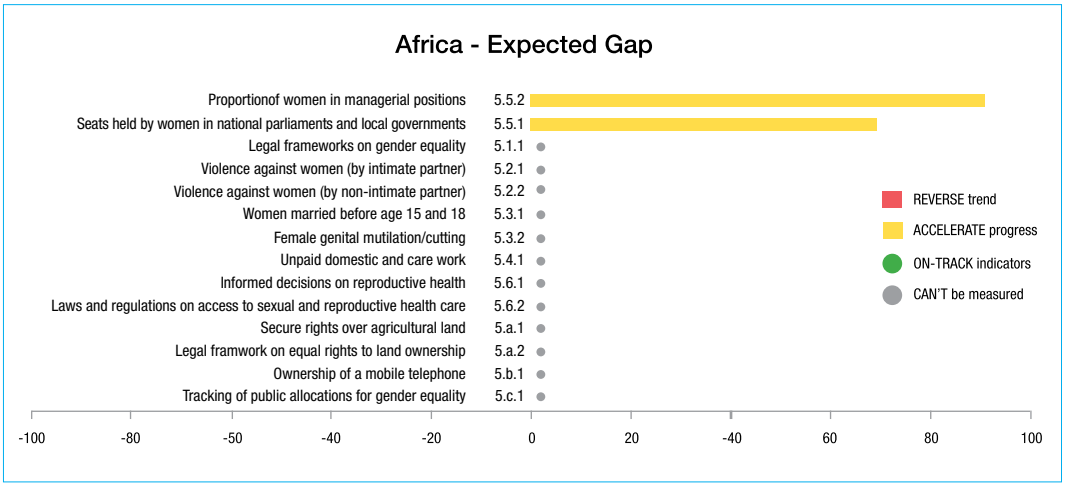
Source: United Nations (2022).

Legal gaps and the lack of sufficient regulations on the use of contraceptives continue to hinder both men and women from enjoying their full sexual rights. In Africa excluding North Africa, 69 percent of laws and regulations guaranteed consent on the use of emergency contraceptives while this was 63 for North Africa, both below the global average of 70 percent. In North Africa, only 25 percent of laws and regulations guarantee consent on the use of contraceptives, which is significantly lower than the global average of 82 percent and 73 percent for Africa excluding North Africa. Countries that are classified as Small Island Development States (SIDS) have exhibit lower proportion of laws and regulations safeguarding emergency contraception and services (Table 3.8).

3.4 Overall prospects

In general, low progress was experienced on Gender equality. For targets where data is available, ECA projections show that countries will need to accelerate progress on increasing the proportion of women in managerial positions and women representation in national parliaments and local governments (Figure 3.4). While one-fourth of seats in national parliaments were held by women in 2021 (a slow upward trend since 2015), disparities among countries are high, with only 12 countries reporting more than 30 percent of seats held by women in national parliaments in 2020. Gender gap in managerial positions is gradually closing in Africa excluding North Africa yet worsening in North Africa.

Figure 3.4: Expected Gap for Africa on SDG 5 indicators



Source: Africa UN Data for Development: https://ecastats.uneca.org/africaundata https://ecastats.uneca.org/africaundata

3.5 Policy frameworks to support achievement of the Gender goal

African countries need to urgently implement regional and continental policy frameworks to accelerate the achievement of SDG 5 and reaffirm gender equality and inclusiveness. These include, among others, the African Union's Strategy for Gender Equality and Women's Empowerment to facilitate full gender equality in all spheres of life, the African Gender Equality and Women's Empowerment Scorecard to track country's efforts in empowering women, the Protocol on Human and People' Rights on the Rights of Women in Africa and the Convention on the Elimination of all Forms of Discrimination against Women.

3.6 Summary observations and policy recommendations

African countries need to urgently eliminate all forms of violence against women and girls and strengthen women's empowerment. This needs to include the full implementation of legal frameworks that recognize harmful practices such as child defilement, marital rape and sexual violence and include provisions to criminalize such offenses. Concerted efforts are also required to eliminate social and cultural behaviour and norms that facilitates outlawed practices such as female genital mutilation (FGM) and child marriage. This could include advocacy and grass-root engagements that educate girls on their rights, raise the risks associated with FGM, challenge outlawed traditions, and involve men in conservations regarding the control of women's sexuality. Strengthening women's empowerment will require governments to ensure equitable access to financial assets, equity in economic opportunities and closing the gender pay gap.

It is also important to ensure that women participate at all levels of decision-making in political, economic and public life. This will require deliberate efforts to revise electoral laws and increase women's representation in the political sphere as well as mandatory provisions to ensure gender equality in corporate structures. Integrating gender into workplace policies will require incorporating parental leave to ensure that both men and women exercise family responsibilities while effectively engaging in work life. Deliberate efforts are required to address barriers to women's integration and career progression through talent outreach, job search, grievance and complaints mechanisms and childcare benefits policies.

Policymakers should also implement social protection mechanisms to cushion women from external shocks, while promoting access to quality and affordable social services through gender budgeting and planning. This could include risk reduction policies such as training programs to reduce income loss or childcare policies to enable women re-enter the labour market or risk mitigation policies such as enhanced access to financial services to help cope due to adverse events. Relevant government institutions must also mobilize sufficient resources to close the gender financing gap, which is estimated at US$ 42 billion for African women across business chains (AfDB, 2022).

Chapter 4:

SDG Fourteen: Life Below Water

Life Below Water	2030 Agenda	Agenda 2063
	**Goal 14** -Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.	**Goal 6** - Blue/ocean economy for accelerated economic growth.

4.1 The imperative of conserving marine resources

Deep-water energy exploration, including oil extraction is a major source of ecological pollution in Africa, resulting in marine and freshwater biodiversity-ecosystem losses and loss of tourism revenue. This is in addition to other land-based activities that end up in similar losses. This situation calls for the need to strengthen national Environmental and Social Governance (ESG) frameworks, in order to avoid marine and freshwater pollution. Moroever, such frameworks will ensure the sustainable development of the blue economy and use of deep-water resources to support low carbon emission economies.

The Covid-19 pandemic affected SDG 14 by reducing fishing along some coastal states in Africa and increasing single-used plastic waste. The continent's population exposed to coastal vulnerability is estimated to be at 54 million in 2000 and is projected to increase to 100 million by 2030. The increase in climate physical risks such as drought and heatwaves, heavy rains and tropical storms are threatening oceans, seas, marine and freshwater resources. These, in turn, are threatening the balance between the economic potential of the sea, rivers and lakes and the exploitation of their resources in a manner that ensures their conservation and sustainable usage as well as biodiversity protection in order to achieve resilience and inclusive economic growth.

4.2 Tracking Goal Fourteen progress by targets

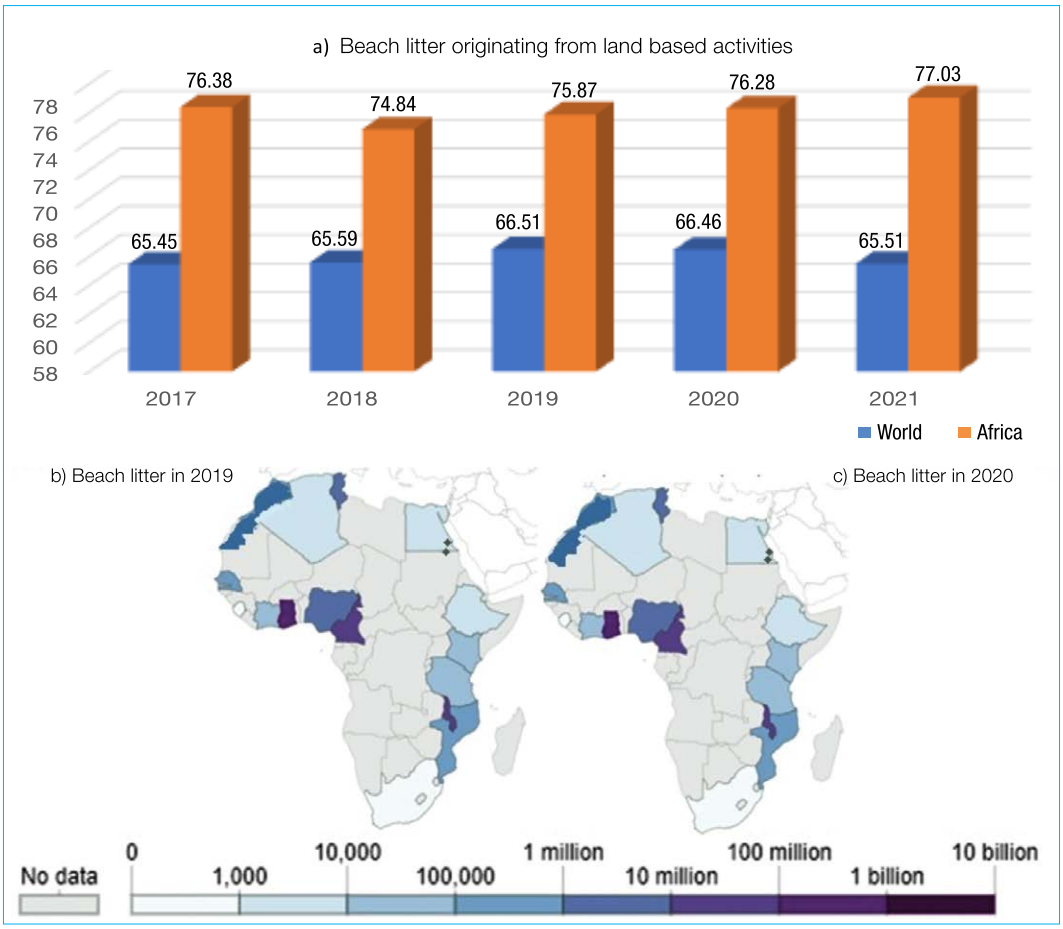
Target 14.1:	By 2025, prevent and significantly reduce marine pollution of all kinds, from land-based activities, including marine debris and nutrient pollution
Indicator 14.1.1:	Index of coastal eutrophication and floating plastic debris density

Marine pollution originates from several land-based and marine sources. These include discharges; agricultural and industrial run-off; urban outfalls; municipal and industrial wastewater as well as atmospheric deposition. Moroever, the other sources are the illegal and indiscriminate dumping, accidents such as oils spills; fishing operations; maritime transport and offshore activities such as seabed mining. Access to sanitation remains a challenge in many coastal cities while the limited wastewater infrastructure results in sewage entering coastal areas untreated. In 2020, only an estimated 6% of urban areas in Africa had access to sewerage connections (2020). However, in

Algeria the proportion of the population using safely-managed sanitation services increased from 87% in 2013 to 94% in 2020.

Coastal *eutrophication*, or simply, the accumulation of nutrients in lakes and other water bodies, can cause serious damage to the marine ecosystems and habitats. Africa's coastal areas are facing huge problems from plastic waste which poses enormous threats to the marine species, human health, and environment. With less than 10 percent of urban areas in Africa accessing sewerage services, poor sanitation and health risk is increasing with annually reported cholera outbreaks (World Bank 2013 & JMP 2022). Furthermore, Africa's marine ecosystem continues to be threatened from organic and chemical pollutants from human activities, as well as from marine litter funnelling by freshwater. In general, 80% of marine litter, originates from land-based sources while the remaining 20% comes from sea-based sources such as maritime transport, fishing, and industrial exploration. Malawi, Ghana and Cameroon have the highest beach litter volume in Africa (Figure 4.1). Some 75,000 tons and 1 million tons of plastic are produced in Malawi and Ghana respectively per year, of which 80% are discarded after usage (Kalina M et al,2022; Global Plastic Action Partnership (GPAP, 2022). Meanwhile, Lilongwe, Blantyre, Zomba, and Mzuzu have a population of about 1.5 million and they generate more than 1000 tons in solid waste per day. On the other hand, Accra which is a city of 2.9 million, generates 2000 tons of solid waste per day.

Figure 4.1: Beach litter originating from national land-based sources that ends in the beach (%)



Source: UNSD (2022)

The low awareness by communities on solid waste management including processes such as plastic recycling is enhancing rivers' channels exposure to blockage by solid waste. This is more so in high density population within the urban settlements. It is also enhancing pollution of fisheries habitats and rivers flooding (Kalina M et al,2022). The increasing urbanization of coastal areas (SDG 11) unaccompanied by adequate disposal of human bodily wastes, imposes pressures on the oceans. Ghana has established a National Plastic Action Partnership (NPAP) to enhance the implementation of a circular economy while also reducing plastic pollution on ocean and freshwater health (Box 4.1).

Box 4.1: Ghana's National Plastic Action Partnership (NPAP)

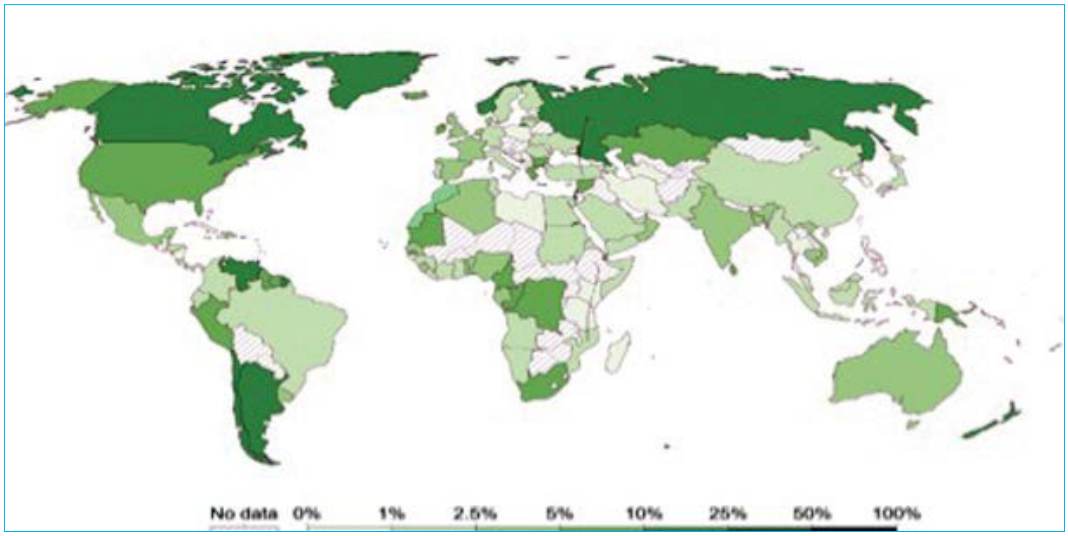
Rapid economic expansion coupled with poor waste management is creating a significant plastics pollution crisis in Ghana. The NPAP is supporting Ghana in the transition towards a fully circular economy for plastics. A financing roadmap is developed by NPAP Ghana's Financing Task Force. The road map outlines recommendations to unlock financing for the circular economy for plastics and to attract investment in sustainable solutions. In addition, the Financing Task Force will work to identify some of the common objectives that can motivate the relevant organizations to join efforts for achieving their shared goals. With the high population growth rate of 2.2% and a high per capita consumption of plastics growing at 3.4% per annum, Ghana is struggling with huge volumes of plastic waste, aggravated by lack of proper waste management and recycling facilities, and poor governance systems. It is estimated that Ghana generated about 0.84 million tonnes of plastic municipal solid waste (MSW) in 2020, with 9.5 % of this plastic waste leaking into water bodies. The NPAP estimates that between 2020 and 2040, operating costs of US$ 5.1 billion will be needed for the realistic scenario and US$ 6.1 billion for the ambitious scenario to achieve the desired pollution reduction outcomes. These estimates include investments in recycling plants, collection vehicles and landfills.

Beyond the above-referenced *coastal eutrophication*, the decline of *phytoplankton* production is a threat to aquatic species including fisheries development. An analysis of *chlorophyll-a* deviation rate across the continent compared to the global mean has revealed a decrease in *phytoplankton* production especially along coastal states. The growing development of Exclusive Economic Zones (EEZs) without an integrated waste management facility is an additional threat to marine health (Figure 4.2). Generally, the unsustainable economic activities along the coastline and rivers are affecting ocean and freshwater health.

Overall, freshwater and the marine health problem is severe in the Special Economic Zones (SEZs), including resort areas, especially in the Small Island Development States (SIDS). The SIDS economies are highly dependent on the tourism industry and they lack appropriate circular economy policies and regulations that can help monitor their marine and freshwater resources including protection from waste and plastic pollution. Thus, promoting the circular economy to support integrated waste management and improving WASH infrastructure management especially in high density population areas will significantly contribute to the reduction of marine and freshwater pollution.

Ghana is struggling with huge volumes of plastic waste, aggravated by lack of proper waste management and recycling facilities, and poor governance systems.

Figure 4.2: Chlorophyll-a deviation from the global average 2021



Source: UNSD (2022)

Target 14.2: By 2020, sustainably manage and protect marine and coastal ecosystems

Indicator 14.2.1: Ecosystem-based approaches to Manage Marine Areas

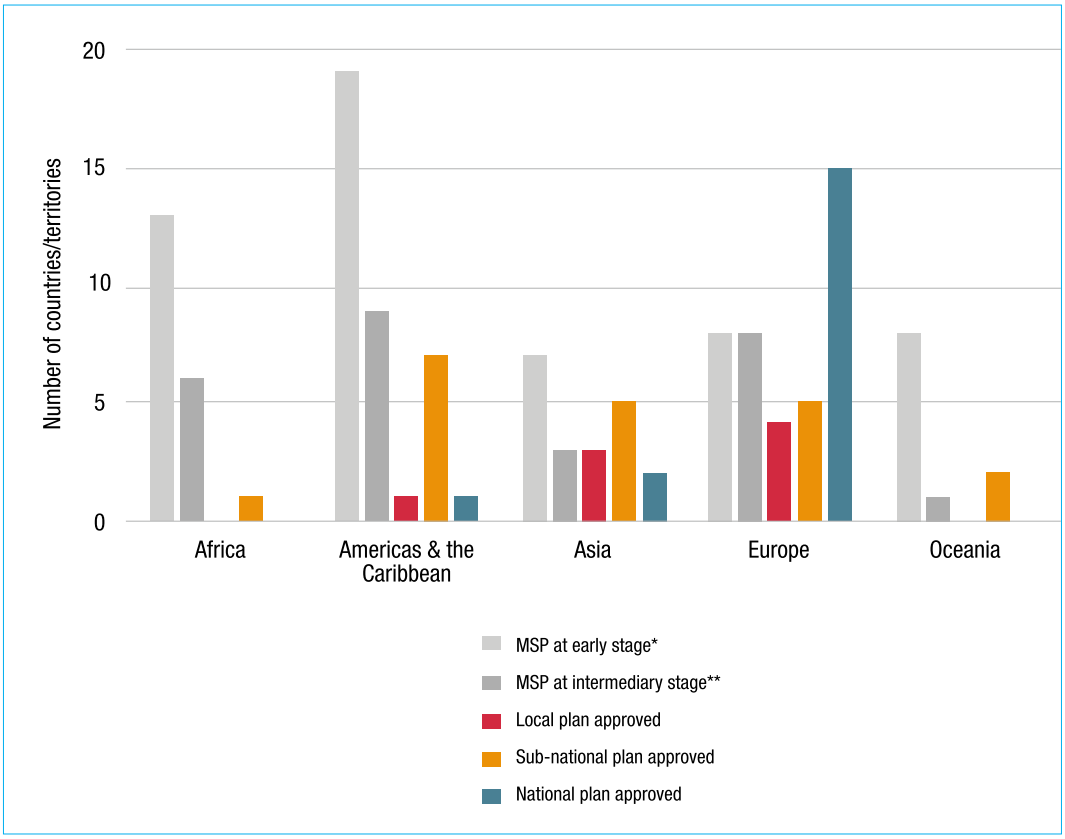
This indicator aims to capture Integrated Coastal Zone Management (ICZM) and other area-based, integrated planning and management put in place in waters under national jurisdictions, including within the EEZs. These include marine/maritime spatial planning, the Marine Protected Areas (MPAs), marine zoning and, sector specific management plans. Marine Spatial Planning (MSP) has gained momentum across the world, including in Africa (figure 4.3). Seventeen African states namely Angola, Benin; Cote d'Ivoire; Cameroon; Ghana; Guinea; Kenya; Madagascar; Mauritania; Mauritius; Morocco; Namibia; Mozambique; Tanzania; South Africa; Togo; and Seychelles have made a relatively good progress toward the development of MSP (MSP Global 2030; 2020). Of the 17 countries, only Seychelles has finalized it MSP with 3 zones left for allowable activities (see Box 4.2) while in the remaining 16 countries, the MSP processes are still in their early development stages. From 2019 to 2021, little progress has been made largely because the continent lacked Marine Areas Plans (MAPs) as well as a financing plan for down- streamed investment which can enhance the benefits of freshwater and marine ecosystem services.

Angola, Namibia and South Africa have established a MSP as an integrated ecosystem-based approach to facilitate sustainable use of the shared territorial water and EEZ resources. This has been done through the *Benguela Current Large Marine Ecosystem* which is one of the world's most productive marine regions in the South-East Atlantic. The triparty ocean governance arrangement also aims to address conflict and protect the area's marine resources. The MSP arrangement through the Benguela Current Commission (BCC) enables similar actions at the national level. For instance, South Africa established an MSP National Working Group (MSP-NWG) in 2015; developed a National MSP framework in 2017); gazetted the MSP Act in 2018),

and has further developed a National Data and Information Report (NDIR) for MSP in 2020. The NDIR is a knowledge and information baseline for the development of an integrated MSP (Department of Forestry Fishery and Environment, 2020). The MSP for South Africa aims to unlock the country's ocean economy and to enable society to engage with the ocean. It also aims to ensure a healthy marine ecosystem and to achieving good ocean governance.

Overall, the MSP process provides an opportunity to enhance the understanding of the state of biodiversity, water quality, habitat quality, ecosystem health and other ecological parameters. It also enables better planning for their protection. Meanwhile, such plans should promote nature-based infrastructure so as to contribute to the non-degradation of freshwater and coastal ecosystems while also strengthening freshwater and coastal infrastructure resilience to climate extremes. This approach will further enable Africa-wide actions for ecosystem restoration, in order to achieve healthy and productive oceans.

Figure 4.3: Marine Spatial Planning around the world, according to the stage of the MSP process by April 2022



Source: IOC-UNESCO and MSP survey, 2022

Box 4.2: Seychelles is leading in MSP, including marine conservation and climate change in Africa

Seychelles is a small island nation with less than 1 percent land and 99 percent ocean. Seychelles' waters provide opportunities with food, and jobs, considered the foundation of our economy and the country's prosperity. The MSP in Seychelles is an integrated, multi-sector approach to expand the protection of marine waters to 30 percent, address climate change adaptation, and support the Blue Economy.

The spatial plan divides the country's waters into three zones. Zone 1 is a high biodiversity protection zone as they tend to be habitats for rare or endangered species and according to the plan, these areas are not suitable for extraction or seabed alteration. Zone 2 covers areas of medium biodiversity protection which allows for sustainable use. The Zone 2 includes habitats and species that have some tolerance to disturbance and human activities hence the reason certain activities are allowed there, but with proper management. The Zone 3 has high value and high priority areas for the marine sectors that use Seychelles waters for economic, social, and cultural benefits.

The three zones cover 30 percent or 410,000 square kilometers of the island nation's Exclusive Economic Zone (EEZ) of 1.4 million square kilometers. These zones will be fully safeguarded to encourage sustainable development and adapt to the effects of climate change. With the designation of 30 percent of its waters as Marine Protected Areas, the country is one of very few countries that has exceeded the expectations of a global 30 by 30 target for land and sea areas.

The island nation has also exceeded its 10 percent protection of its EEZ by 2020 commitment under the United Nations' Sustainable Development Goal (SDG) 14.5.

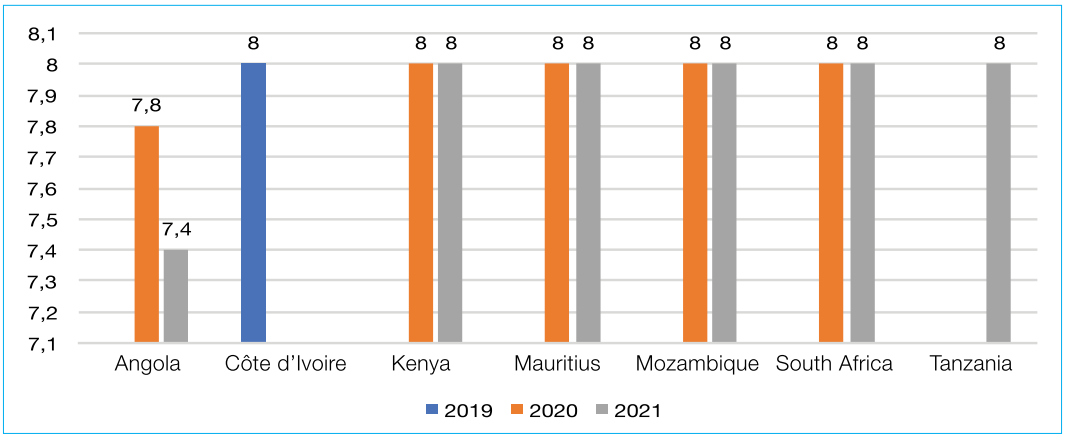
The development of a MSP in Seychelles is a collaborative process between the government of Seychelles (GOS); Nature Conservancy (TNC); the United Nations Development Program-Global Environment Facility coordination unit (UNDP GEF Programme Coordinating Unit). It is guided by the International Union for the Conservation of Nature's (IUCN) ecological and socio-economic criteria for MPA networks; the IUCN guidelines for MPAs on protected area categories, lessons learned from other countries, tools for biodiversity prioritization (e.g., Marxan), and consultations with experts. It is also a result of the Seychelles Debt-for-Climate-Adaptation Swap initiative co-designed by the government of Seychelles and the Nature Conservancy. Overall, US$ 4.9 million has been secured from the Nature Conservancy, Blue Nature Alliance, Oceans, the Waitt Institute, and the Waitt Foundation to support activities for the transition from zoning to implementation.

Source: Commonwealth Secretariat (2021); Seychelles News Agency(2022)

Target 14.3:	Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels
Indicator 14.3.1:	Average marine acidity (pH) measured at agreed suite of representative sampling stations

Many African countries are still within the average marine acidity limit (Figure 4.4) except Angola which is due to climate change, informal settlements; urban and industrial pollution including the unsustainable activities of the oil and gas sector (Angola VNR,2021).

Figure 4.4: Average marine acidity (pH) measured at agreed suite of representative sampling stations



Source: UNSD (2022)

Box 4.3: Ocean and freshwater acidification in Angola

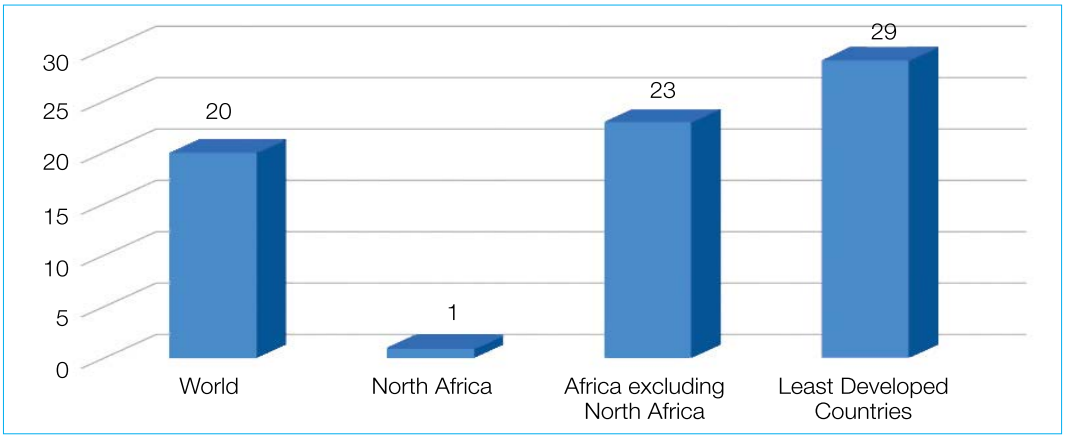
Through the Nationally Determined Contribution (NDC, 2021), the Government of Angola has prioritized assessing the impact of climate change on fishing productivity and the coastal economy. Between 2016 and 2020, the Ministry of Agriculture and Fisheries in partnership with the Norwegian Institute of Research conducted 351 sampling collections from micro-plastic retention areas to assess the level of ocean acidification.

Target 14.5: By 2020, conserve at least 10 percent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.

Indicator 14.5.1: Coverage of protected areas in relation to marine areas.

Africa, excluding North Africa, has coverage of protected marine areas of 23%, which is greater than the global average of 20% as shown in Figure 4.5. However, this varies across countries (Figure 4.6), from 98 percent in Côte d'Ivoire to 3 percent in Comoros.

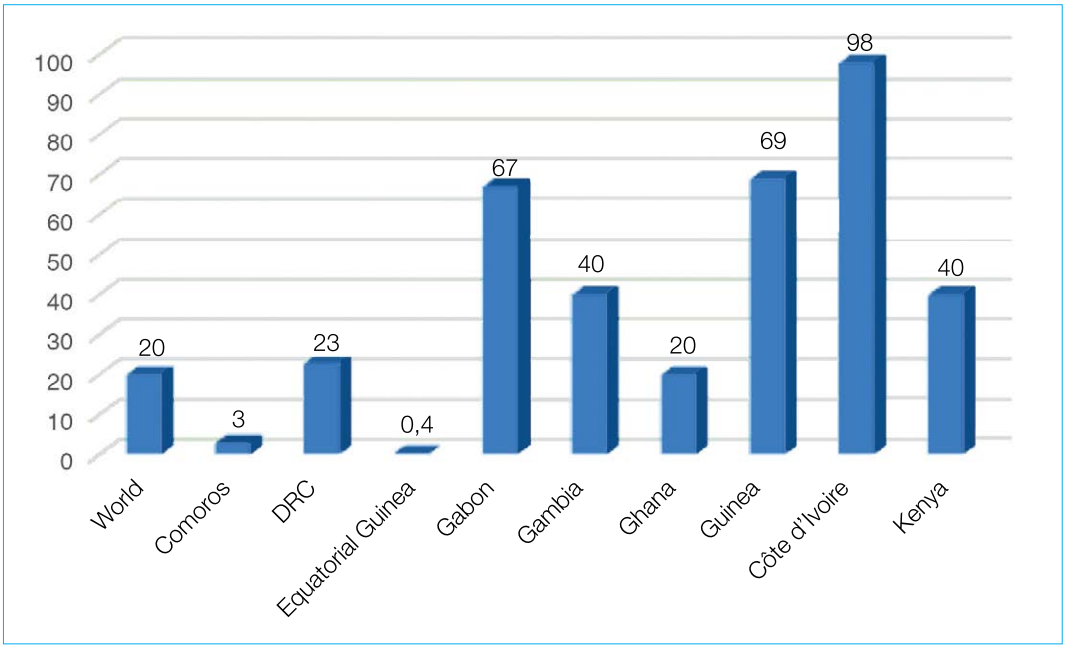
Figure 4.5: Coverage of protected areas in relation to marine areas in selected regions 2021



Source: UNSD (2022)

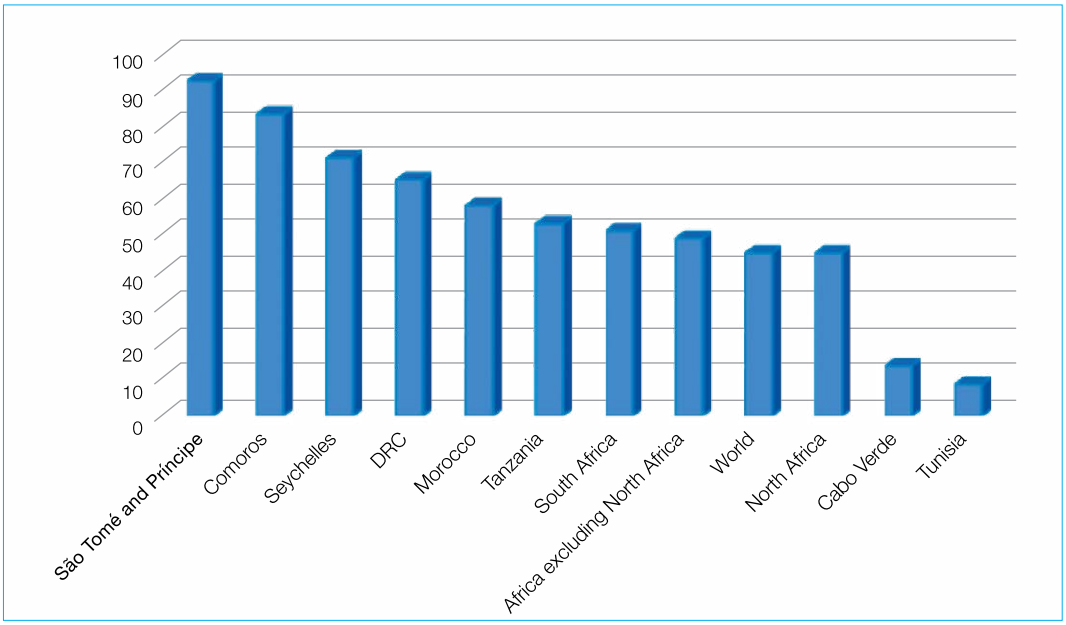
The proportion of coverage for Biodiversity Areas is higher in São Tomé and Príncipe and Namibia, both of which are above the global average (Figure 4.7).

Figure 4.6: Coverage of protected areas in relation to marine areas in selected countries 2021



Source: UNSD (2022)

Figure 4.7: Average proportion of Marine Key Biodiversity Areas (KBAs) covered by protected areas (%)-2021

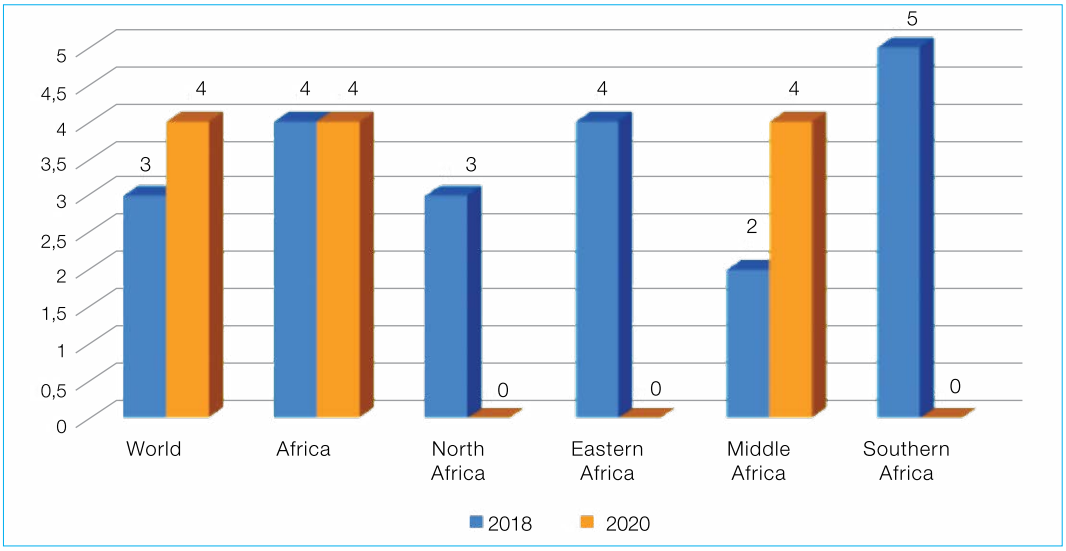


Source: UNSD (2022)

Target 14.6:	By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.
Indicator 14.6.1:	Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing.

Between 2018 and 2020, the world average degree of implementation of international instruments to combat illegal, unreported and unregulated fishing showed relative improvement. While no change was observed in Africa as a whole, there was significant sub-regional variation. Middle Africa showed good progress in 2020 while Eastern and Southern Africa showed worsening trends (Figure 4. 8).

Figure 4.8: Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing

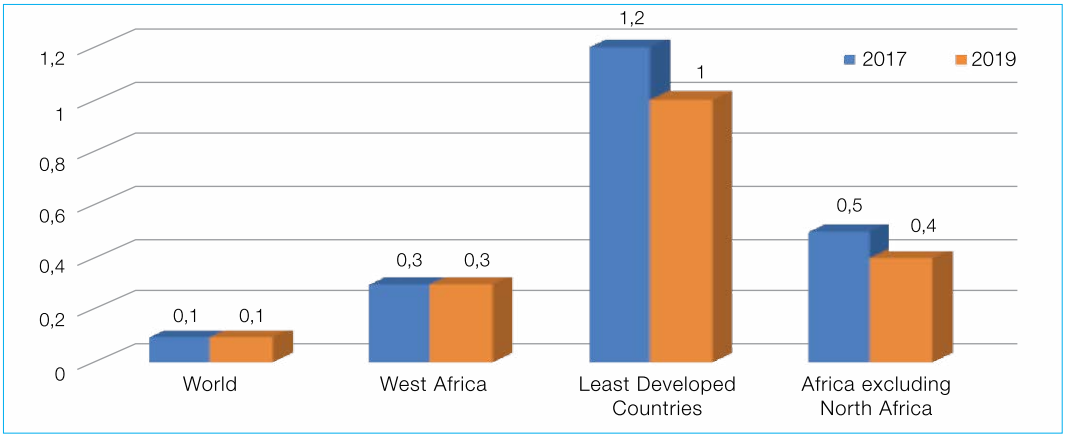


Source: UNSD (2022)

Target 14.7:	By 2030, increase the economic benefits to SIDS and LDCs from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism
Indicator 14.7.1:	Sustainable fisheries as a percentage of GDP in small island developing States, least developed countries and all countries

The Figure 4.9 shows that at the regional and global levels, the percentage of fish resources that are within biologically sustainable levels are on a downward trend, especially in Africa (excluding North Africa). Over-exploitation negatively impacts the ecology and reduces long-term fishery yields. This will have social and economic implications, particularly for vulnerable and highly dependent communities in Africa's LDCs and SIDs.

Figure 4.9: Sustainable fisheries as a proportion of GDP

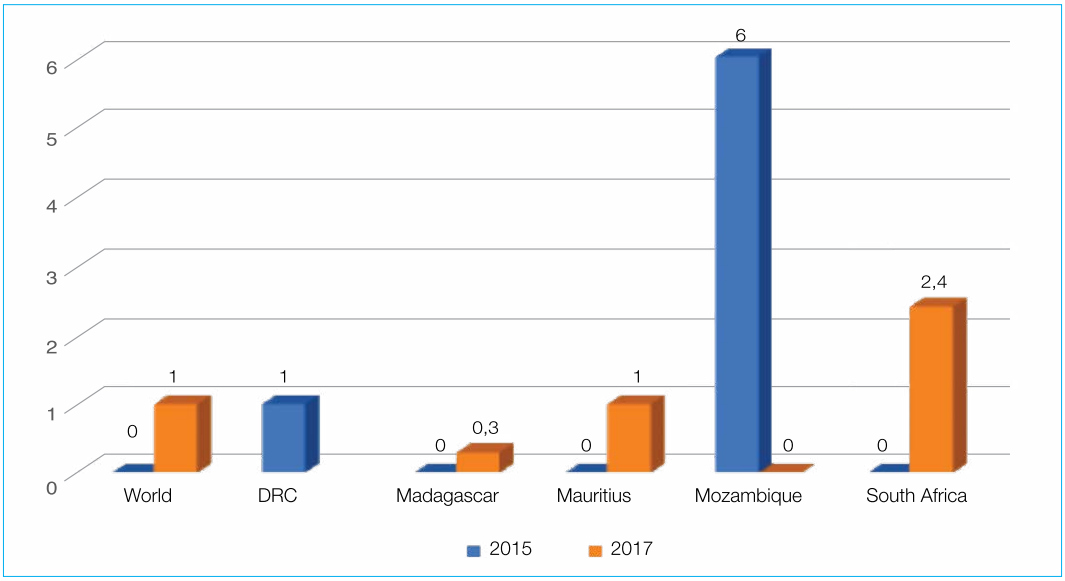


Source: UNSD (2022)

Target 14.a:	Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries
Indicator 14.a.1:	Proportion of total research budget allocated to research in the field of marine technology

Less than 1 percent of the global research budget was allocated to ocean science in 2017. At the national level, the amounts allocated in 2017 ranged from 0.2 percent in Madagascar to 0.95 percent in Mauritius and to 2.3 percent in South Africa. Mozambique allocated close to 6 percent in 2015 but this declined to less than 0.1 percent in 2017 (Figure 4.10).

Figure 4.10: National Ocean science expenditure as a share of total research and development funding (%)

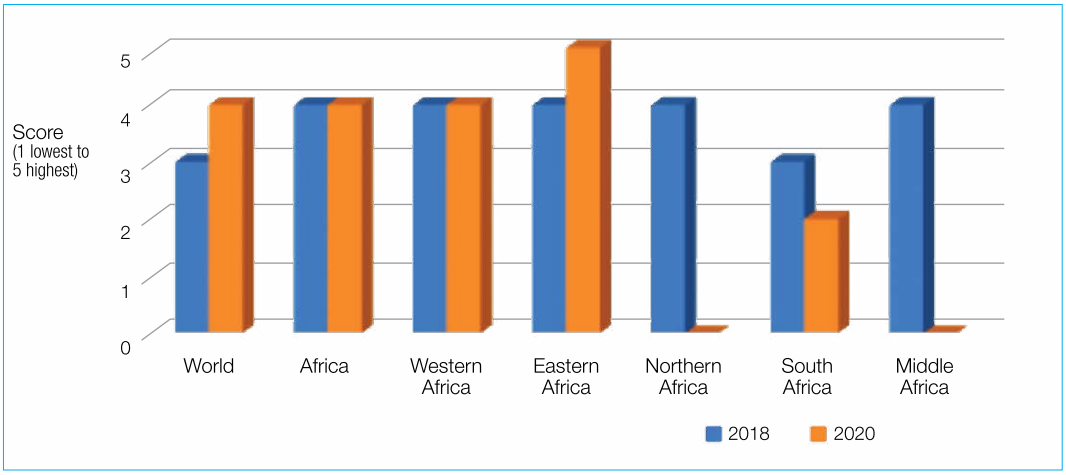


Source: UNSD (2022)

Target 14.b:	Provide access for small-scale artisanal fishers to marine resources and markets
Indicator 14.b.1:	Progress by countries in the degree of application of a legal/regulatory/policy/framework which recognizes and protects access rights for small-scale fisheries.

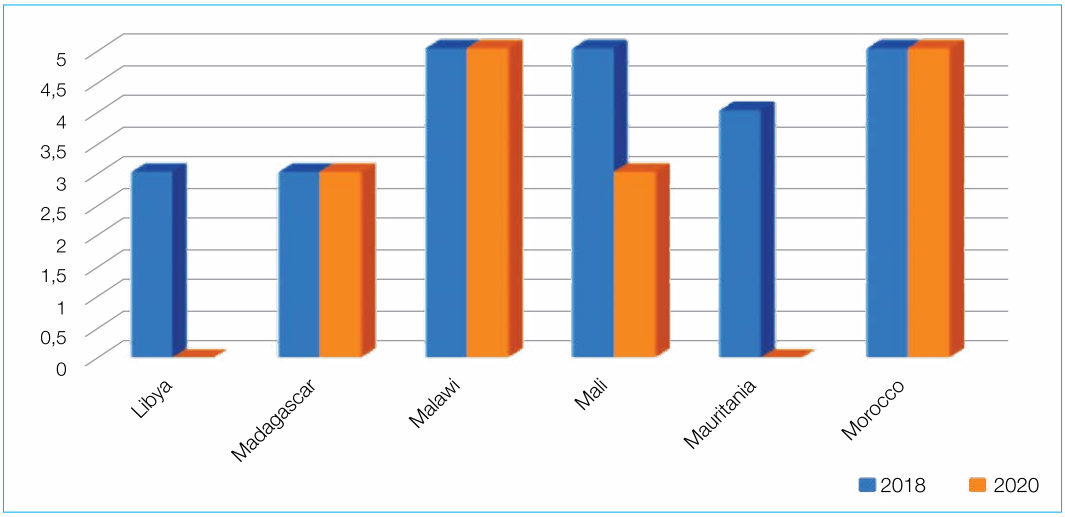
Between 2018 and 2020, Africa performed better than the world average in implementing institutional frameworks that recognizes and protects access rights for small-scale fisheries. The Eastern Africa region showed an increasing trend between 2018-2020 while this declined in Northern and Southern Africa (Figure 4.11). At the national level, Morocco and Malawi showed a higher level than the world average while Mali, Mauritania, and Libya portrayed a decreasing trend. Madagascar showed moderate progress (Figure 4.12).

Figure 4.11: Degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries (level of) in selected regions



Source: UNSD (2022)

Figure 4.12: Degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries in selected countries (scores 1= lowest, 5= highest)



Source: UNSD (2022)

Box 4.4: Seychelles' Blue Bonds

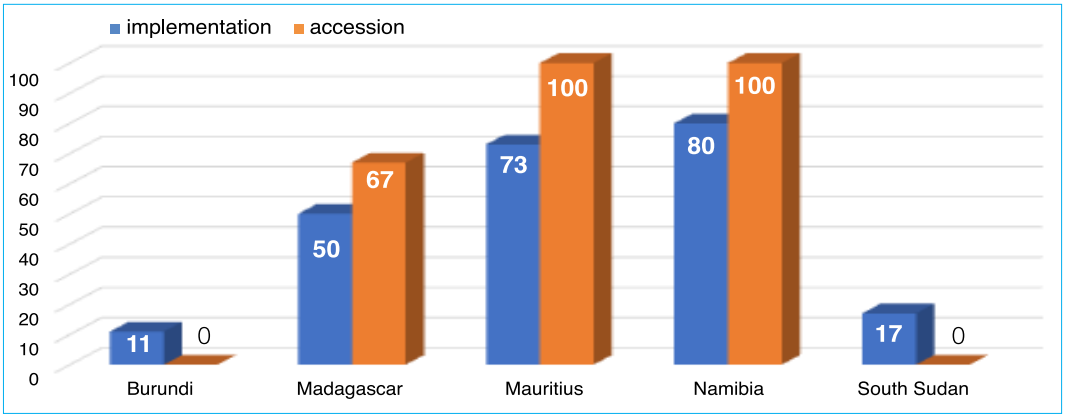
To strengthen governance and management of its marine resources and the promotion of its Blue Economy, Seychelles launched the world's first sovereign blue bond in October 2018, with a ceiling value of US$ 15 Million and a maturity of 10 years. Proceeds from the bond are used to support the expansion of marine protected areas, improve governance of priority fisheries and the development of the Seychelles' Blue Economy. The blue bond was prepared with the assistance of the World Bank and the Global Environment Facility. The proceeds are used to capitalize a Blue Grants Fund (US$ 3 million) and a Blue Investment Fund (US$ 12 million), each of which provides financing for sustainable marine and ocean-related activities. The main beneficiaries are the Seychellois whose livelihoods depend on marine resources and the ocean.

Source: World Bank, 2018 and www.seyCCAT.org

Target 14.c:	Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want.
Indicator 14.c.1:	Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nation Convention on the Law of the Sea (UNCLOS), for the conservation and sustainable use of the oceans and their resources. UNCLOS is frequently referred to as the 'constitution for the oceans'. It sets out, as recognized by the General Assembly, the legal framework within which all activities in the oceans and seas must be carried out, including with regard to the conservation and sustainable use of the oceans and their resources. To enhance the implementation of agreed commitments, including those contained in UNCLOS and its related legal instruments, three fundamental aspects can be highlighted: awareness-raising and increasing scientific knowledge; enhancing financing and developing capacity; and strengthening implementation and cross sectoral cooperation.[1]

The score of implementations of the agreed commitments varies in Africa from 80% in Namibia, 73% in Mauritius, 50% in Madagascar, to 11% in Burundi (Figure 4. 13).

Figure 4.13: Score for the implementation and accession of UNCLOS and its two implementing agreements (%) in 2021



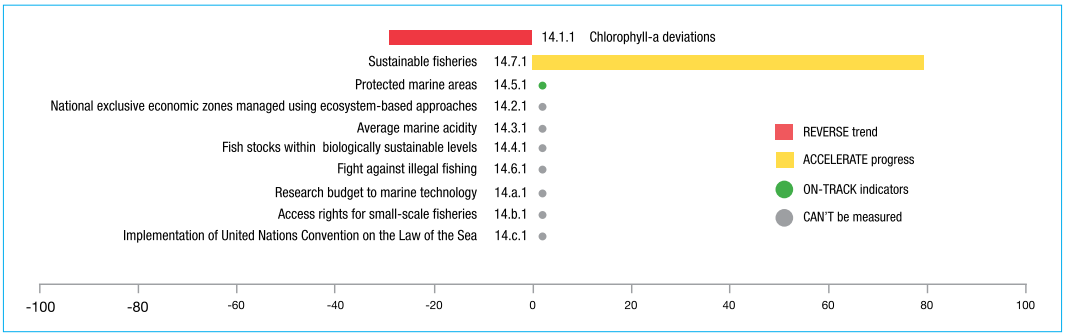
Source: UNSD (2022)

1 https://www.un.org/en/chronicle/article/achieving-sdg-14-role-united-nations-convention-law-sea

4.3 Overall prospects

The ECA projects that to achieve most of the goal fourteen targets by 2030, Africa will need to accelerate progress on sustainable fisheries and the conservation of marine resources for sustainable development (Figure 4. 14). Compared to the year 2000, the continent has more than doubled its protected area coverage of marine Key Biodiversity Areas (KBA) in 2020 (14.5.1: protected marine area). The progress on indicator 14.7.1 (sustainable fisheries) is low and needs to be accelerated. The Figure 4.14 shows that the progress in most of the indicators cannot be measured due to lack of monitoring information.

Figure 4.14: Expected achievements for Africa on SDG 14 indicators (see legend)



Source: Africa UN Data for Development: https://ecastats.uneca.org/africaundata

4.4 Policy frameworks to support achievement of goal fourteen

The 1982 United Nations Convention on the Law of the Sea (UNCLOS) is often referred to as the 'constitution for the oceans.' It sets out, as recognized by the General Assembly, the legal framework within which all activities in the oceans and seas must be conducted, including the conservation and sustainable use of the oceans and their resources. The Convention recognizes the desirability of establishing, with due regard for the sovereignty of all states, a legal order that will ensure international communication and promote the peaceful uses of the seas and oceans. The United Nation's Food and Agriculture Organization Blue Growth Initiative aims at harmonizing the environmental, social, and economic aspects of living aquatic resources to ensure equitable benefits for communities.

4.5 Summary observations and policy recommendations

The analysis shows variations in the overall progress made by the African region towards Goal 14. For many countries, intermediate progress is reported, stagnated for some, and decreased for several others. It is evident that in most African countries coastal, marine, and freshwater waters are affected by pollution and acidification, dumping of solid and liquid wastes, discharges and runoff from agricultural chemicals, and poor coastal infrastructure management.

Meanwhile some African states (17 countries out of 54 states) have demonstrated a strong commitment to enhancing conservation and sustainable use of their marine oceanic resources to move towards inclusive and sustainable development pathways. The evolving process of MSPs offers opportunities for countries to adopt an integrated ecosystem-based approach and a multi-sector approach to address the Blue Economy support needs as well as climate change adaptation and biodiversity protection.

Despite the existing commitments, implementation has been slow as most African states are constrained by various factors such as knowledge and information gaps, finance, limited technical capacities and awareness of the importance of conservation of oceans and seas.

Meanwhile, in enhancing sustainable use of resource of marine and freshwater resource, there is need for African states to diversify economic activities especially in the SIDS. They should also promote the development of climate resilience and a low carbon emission tourism industry, fisheries, and aquaculture sectors. This actions will also enable countries to progress their goal on responsible production and consumption (SGD 12) as well as the goal on achieving food security, zero hunger (SGD 2) and reducing poverty (SDG 1). Countries should also promote climate proof aquaculture through increased fish production from fish farming.

Furthermore, it is important in African states to enhance investment in integrated coastal infrastructure development as well as integration of Nature-based Solutions (NbS) in coastal development master plans. These include planting mangrove trees or building soft structures to trap sediment which will reduce land base pollution while also enhancing marine and freshwater natural habitat protection. In enhancing investment in ocean and marine research, including in statistics, strengthening ocean observation system and modeling, countries will bridge data and information gaps required in developing the MSPs.

Measures can be instituted to scale-up the use of modernized climate information and Early Warning Systems (EWS) for marine and freshwater areas. Further measures should include building coastal natural and physical infrastructure (port; coastal cities, including fisheries sector infrastructure), that are climate change resilient.

To address the “Ocean Emergency” countries and development partners should explore innovative ways to collect data and monitor life below water. It is as critical to create awareness regarding the potential negative impacts of increasing coastal pollution and associated infrastructure development (ports, industries, tourism, and production facilities). Special emphasis should be given to the protection of coasts and marine ecosystems to ensure sustainable development.

Chapter 5:

SDG Fifteen: Life on Land

Life on Land	2030 Agenda	Agenda 2063
	**Goal 15:** Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	**Goal 7:** Environmentally sustainable and climate resilient economies and communities.

5.1 The importance of biodiversity and land resources

Forests, biodiversity, and other land resources are crucial for the attainment of most of the SDGs and for fostering transformation towards a green, inclusive, and resilient Africa. The Covid-19 pandemic compelled the poor to depend on actions that are harmful to the ecosystems. Loss and degradation of forests and biodiversity will impact negatively about 30 percent of Africa's total population. In Africa, most nature-dependent people (53 percent or 249 million) rely on nature for energy, occupation, housing material and water,[2] signifying strong linkages with SDG 6, 7, 8 and 11. Forest and wood resources contribute on average, up to 6 percent of GDP in Africa excluding North Africa and they provide up to 80 percent of energy in some countries (Goals 7 and 8).[3] More than 62 percent of Africa's population depends directly on ecosystem services for food, water, energy, health and livelihood needs (Goals 2, 3, 6 and 7).[4] Notably, the pandemic reduced pressure on the environment due to a reduction in economic activities.

5.2 Tracking Goal Fifteen progress by targets

Target 15.1:	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.
Indicator 15.1.1:	Forest area as a proportion of total land area

The proportion of forest area in Africa in 2020 was 21.3 percent and lower than the global average of 31.2 percent. Africa's forest cover has declined by about 0.7 percent from 656 million hectares

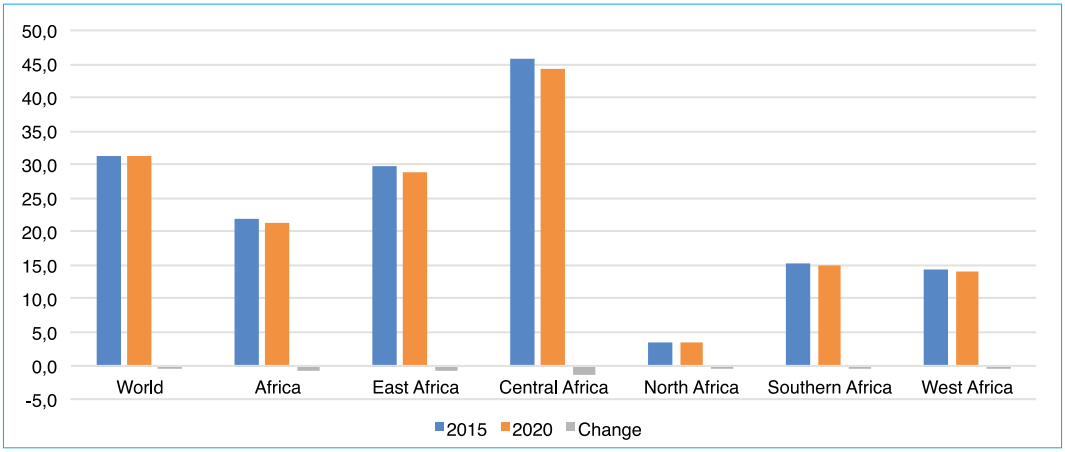
2 Giacomo Fedele, Camila I. Donatti, Ivan Bornacelly, David G. Hole (2021). Nature-dependent people: Mapping human direct use of nature for basic needs across the tropics. Global Environmental Change,Volume 71, 2021. (https://www.sciencedirect.com/science/article/pii/S0959378021001473)

3 See Economic Commission for Africa and others, Managing Africa's Natural Resource Base for Sustainable Growth and Development. Sustainable Development Report on Africa IV (Addis Ababa, 2013).

4 See Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, "Summary for policymakers of the regional assessment report on biodiversity and ecosystem services for Africa of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services" (Bonn, Germany, IPBES Secretariat, 2018).

in 2015 to 637 million hectares in 2020.[5] This is in contrast with Asia, Europe and Northern America where forest area increased between 2010 and 2020. Africa had the largest annual rate of net forest loss in 2010–2020 mainly due to the conversion of forest land for farming and grazing.[6] There are considerable differences in forest cover among subregions. In 2020, Central Africa had the highest proportion of forest area, with 44.3 percent, while North Africa had only 3.5 percent (Figure 5.1). A good practice in the integrated and sustainable management of forests, land and water catchments is demonstrated by Ethiopia's Green Legacy Initiative (Box 5.1).

Figure 5.1: Forest area as a proportion of total land area (%)



Source: FAO (2020).

Box 5. 1: Ethiopia's Green Legacy Initiative (GLI)

This initiative was launched in June 2019 and seeks to build a green and climate-resilient Ethiopia. It is making a significant contribution to forest conservation, reforestation, restoration of degraded land and soil as well as promoting sustainable management of forests. Since its launch, the initiative has mobilized more than 20 million citizens throughout the country and 25 billion seedlings have been planted, exceeding the set target of 20 billion seedlings within four years. The development of more than 120,000 nurseries throughout the country has created more than 767,000 jobs, mostly for women and the youth. The GLI is a demonstration of Ethiopia's long-term commitment to a multifaceted response to the impacts of climate change and environmental degradation that encompasses agroforestry, forest sector development, greening and renewal of urban areas, as well as, integrated water and soil resources management.

Source: Ethiopia Green Legacy Report (2020)

In Botswana, total forest area has declined from 25.3 percent in 2017 to 24.7 percent in 2020 mainly due to habitat fragmentation and climate change. The decline is partially due to the national forestry management architecture. To compensate for current and future forest area decline, Botswana has set aside a total of 4, 372.64 KM as forest reserves under preservation status. The state of Environment report (2022) revealed that 22 percent of Botswana is under land degradation while 70 percent remains in a natural condition. (Botswana VNR report, 2022).

5 Refer to https://www.fao.org/3/ca9825en/ca9825en.pdf
6 Refer to https://www.fao.org/sdg-progress-report/2021/en/

Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

Indicator 15.2.1: Progress towards sustainable forest management

The rate of forest loss in Africa is not only higher than the global average, but it has also increased. The Table 5.1 presents five sub-indicators that show whether there is progress (green), no change (yellow) or worsening trends (red) in forest management. Changes in the above-ground biomass stock in forests is stable across all subregions. The other three sub-indicators show an overall positive change, except in West Africa, where the proportion of forest area within protected areas and under long-term management plans has declined. In North Africa, there has been a decrease in certified forest area.

Table 5.1: Dashboard of indicators for target 15.2 of the SDGs

Region	Forest area annual net change rate	Above-ground biomass stock in forest (t/ha)	Proportion of forest area within legally established protected areas	Proportion of forest area under a long-term forest management plan	Forest area certified
World		1.01	1.06	1.07	1.27
Africa		1.00	1.07	1.29	1.23
North Africa		0.99	1.00	1.14	0.00
West Africa		0.99	0.97	0.92	15.59
Southern Africa		1.00	1.01	0.97	1.27
Central Africa		1.01	1.25	1.50	1.20
East Africa		0.99	1.03	1.34	1.26

Source: FAO (2020).

Target 15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought, and floods, and strive to achieve a land degradation-neutral world

Indicator 15.3.1: Proportion of land that is degraded over total land area

Land degradation is widespread in Africa. The main drivers are variation in climatic conditions, demographic growth, insecurity in land tenure and expansion of settlements due to deforestation, unsustainable land and soil management and farming practices. Land degradation affects 46 percent of Africa's land, costs the region US$ 9.3 billion annually[7] and affects 485 million people or 65 percent of the population.

As of May 2022, most African countries (45) were among the 129 countries worldwide that were setting land degradation neutrality targets under the land degradation neutrality target-setting programme of the United Nations Convention to Combat Desertification.[8]

7 See Policy Brief No. 2. Land Degradation and Climate Change in Africa. March, 2020. Available at https://agnes-africa.org/wp-content/uploads/2020/07/Policy-brief-2_Land-Degradation_Final_09032020.pdf

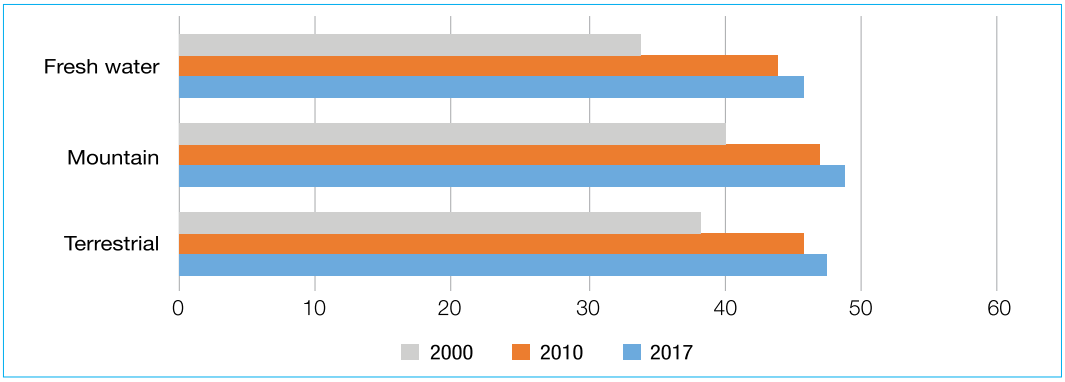
8 See United Nations Convention to Combat Desertification, Voluntary LDN targets. Available at https://www.unccd.int/our-work/country-profiles/voluntary-ldn-targets

Target 15.4: By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, to enhance their capacity to provide benefits that are essential for sustainable development

Indicator 15.4.1: Coverage by protected areas of important sites for mountain biodiversity

In Africa, the average proportion of mountain key biodiversity areas covered by protected areas has increased significantly between 2000 and 2020 (Figure 5.2). In North Africa, it increased from 16 percent to 27.6 percent over this period and, in Africa excluding North Africa, it increased from 33.2 percent to 41.7 percent (FAO, 2022). This illustrates progress towards the conservation, restoration, and sustainable use of mountain ecosystems.

Figure 5.2: Proportion of key biodiversity areas covered by protected areas in Africa (%)

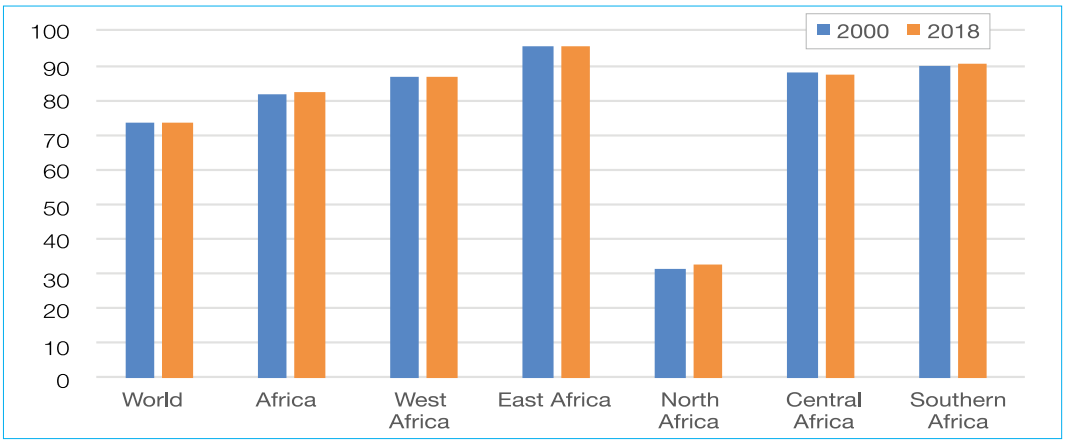


Source: UNDESA (2017).

Indicator 15.4.2: Mountain Green Cover Index

In Africa, the proportion of mountain green cover has grown marginally between 2000 and 2018, illustrating progress towards the conservation of the environment (Figure 5.3). However, there are notable differences between subregions, ranging from 95.2 percent in East Africa to 32.7 percent in North Africa.

Figure 5.3: Proportion of mountain green cover land versus areas of mountains, by subregion (%)



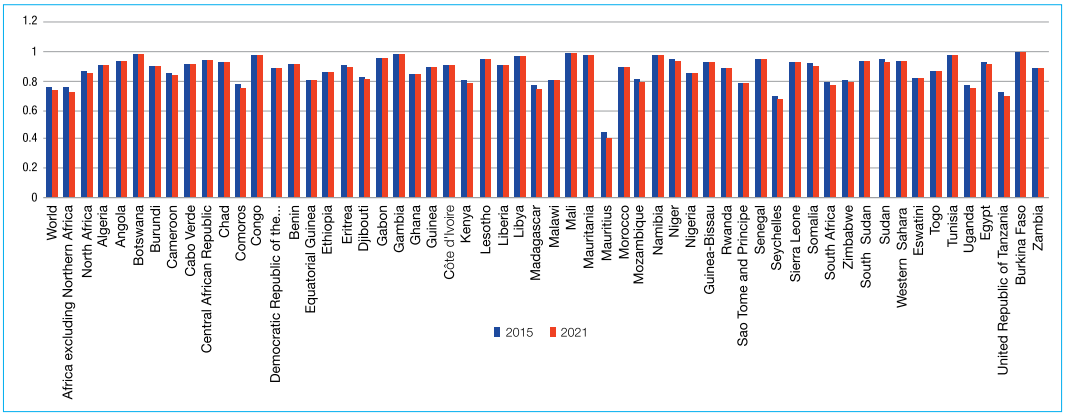
Source: FAO (2020).

Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

Indicator 15.5.1: Red List Index

There is a downward trend of the Red List Index[9] score for Africa (Figure 5.4). From 2015 to 2021, the Red List Index score for Africa excluding North Africa dropped from 0.74 to 0.72 and from 0.88 to 0.86 in North Africa. Most countries are not on track in reducing the degradation of natural habitats and protecting threatened species. In 2021, the African forest elephant *(Loxodonta cyclotis)* was listed as Critically Endangered and the African savanna elephant *(Loxodonta africana)* as Endangered.[10] Poaching for ivory and loss of habitat have led to a decline of elephants. The threat to the Maccoa Duck in Eastern and Southern Africa was elevated from Vulnerable to Endangered, due to threats such as water pollution and drainage of wetlands (BirdLife International, 2022).

Figure 5.4: Red List Index



Source: BirdLife International and IUCN (2022).

Target 15.6: Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed

Indicator 15.6.1: Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits

Most African countries are parties to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity. As at June 2022, 47 African were among 135 countries that were parties to the Protocol. The protocol provides a transparent legal framework for the fair and equitable sharing of benefits arising from the use of genetic resources.[11] In addition, African countries are also Parties to the International Treaty on Plant Genetic Resources for Food and Agriculture. The treaty among other objectives, seeks fair and equitable sharing of the benefits arising out of

9 The Red List Index value ranges from 1 (all species are categorized as 'Least Concern') to 0 (all species are categorized as 'Extinct'). A downward trend in the Red List Index over time means that the expected rate of future species extinctions is worsening (rate of biodiversity loss is increasing). See http://datazone.birdlife.org/species/spcrli

10 Refer to https://www.iucn.org/news/species/202103/african-elephant-species-now-endangered-and-critically-endangered-iucn-red-list

11 Information on national development plans to implement the Nagoya Protocol is available on the Access and Benefit-sharing Clearing-House website. Available at https://absch.cbd.int/.

the use of all plant genetic resources for food and agriculture, as of May 2022, 149 countries, 44 of them in Africa were parties to this Treaty.[12] Across the world, 75 countries, have provided information on their access and benefit-sharing measures relating to plant genetic resources in their compliance reports. Of the 79 countries, 22 were received from the Africa Region (49 percent of Contracting Parties of the Region), 21 from the European Region (54 percent), 14 from the Latin America and the Caribbean Region (67 percent), 11 from the Asia Region (61 percent), 2 from the North America Region (100 percent), 5 from the Near East Region (42 percent) and 4 from the Southwest Pacific Region (40 percent).[13]

Target 15.7:	Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products
Indicator 15.7.1:	Proportion of traded wildlife that was poached or illicitly trafficked

Estimates of government annual losses on tourism activities due to illegal trade on wildlife in east, central, southern, and west Africa was US$ 0.64 million to US$ 4.26 million in 2016 (World Bank, 2019). In East Africa, the northern white rhino species had been reduced to three in 2016. Poaching and illegal trafficking of wildlife is also linked to the spread of zoonotic diseases such as the Corona virus disease. Despite notable successes in tackling poaching and illegal trafficking of wildlife, financing remains insufficient. Policies and legislation are not adequately enforced and implemented, while corruption compounds these challenges.

Target 15.8:	By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species
Indicator 15.8.1:	Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species

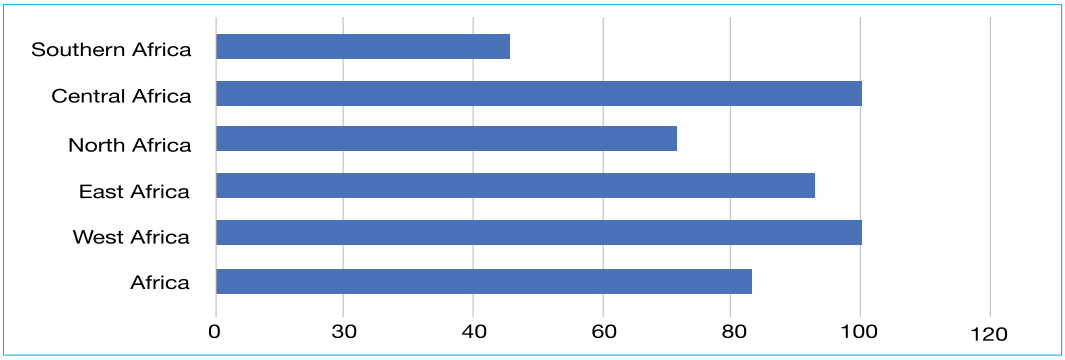
All 55 African countries are parties to the Convention on biological and have adopted overarching national legislation to prevent, control and or limit the spread and impact of invasive alien species.[14] [15] Examples include South Africa's NEMBA Alien and Invasive Species Regulations of 2014 which were updated in 2020. Existing legislation could be strengthened through implementation of the Strategy for Managing Invasive Species in Africa, 2021–2030 (Nampala, 2020). which seeks to guide and coordinate actions at the continental, regional and national levels towards prevention and eradication of all forms of invasive species in Africa. Moreover, some countries have adopted strategic frameworks and undertaken initiatives that can be the steppingstone for strengthening legislation and policies to address invasive alien species. Examples include the national invasive alien species strategy for the republic of Mauritius, 2008-2017; Ghana invasive alien species policy; Mozambique country strategy and programme evaluation; assessment of the status of biological invasions and their management in South Africa; and analysis of Uganda bio invasion and global environmental governance (Nampala, 2020).

Target 15.9:	By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts
Indicator 15.9.1:	Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020

12 Refer to https://www.fao.org/plant-treaty/countries/membership/en/
13 Refer to https://www.fao.org/3/ni529en/ni529en.pdf
14 Refer to https://unstats.un.org/sdgs/tierIII-indicators/files/Tier3-15-08-01.pdf
15 Refer to http://bfis.bforest.gov.bd/SDG/SDG/indicator-15-8-1/

Most African countries (45) have established national targets in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020 (Figure 5.5). All countries in Central and West Africa have established targets while southern Africa followed by North Africa have made the least progress in setting the targets. Despite the overall commendable progress, implementation remains slow. With the expiry of the Strategic Plan, countries will be faced with the challenge of aligning and implementing national targets in accordance with the anticipated Post-2020 Global Biodiversity Framework.

Figure 5.5: Share of African Countries by region that established national targets in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020 in their National Biodiversity Strategy and Action Plans (%)



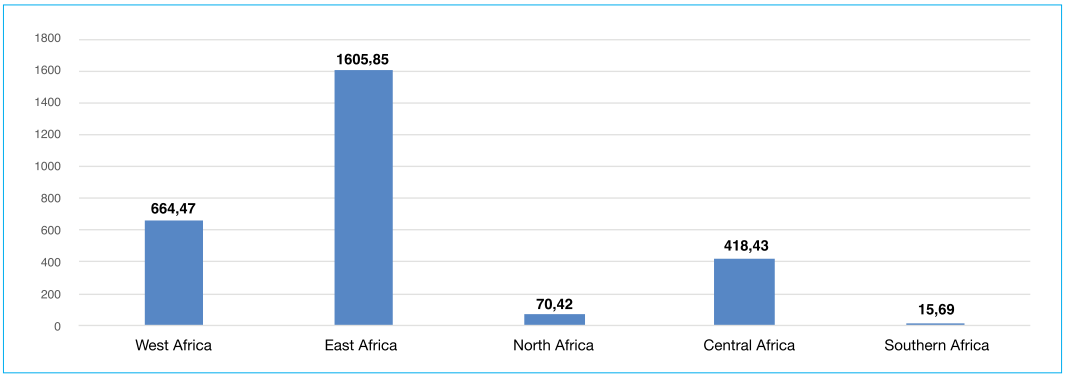
Source: UNEP (2021).

Target 15.a: Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

Indicator 15.a.1: Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems

Total ODA in support of biodiversity in Africa increased from US$ 345 million in 2000 to US$ 2.77 billion in 2018, with significant variation across regions[16] (Figure 5. 6). The major international financial mechanism for biodiversity conservation is the Global Environment Facility (GEF).[17]

Figure 5.6: Total official development assistance for biodiversity, by donor countries (millions of constant 2018 United States dollars)



Source: OECD (2021).

16 Sustainable Development Goal indicators 15.a.1 and 15.b.1: official figures.
17 Refer to https://www.cbd.int/gbo/gbo4/outlook-africa-en.pdf

Achieving the biodiversity targets will require a significant increase of financing up to US$ 700 billion each year to halt global biodiversity decline by 2030.[18] To step up efforts and ambition, 17 African countries are among the 93 countries across the globe that have signed up to undertaking urgent actions over the next ten years to put nature and biodiversity on a path to recovery by 2030. The challenge is for the signatories to fulfil their commitments.[19] Countries are exploring and pursuing innovative sources of finance for biodiversity and forest conservation, such as through conservations trusts, green and blue bonds and debt for nature, climate or sustainability swaps (Box 5.2).

Box 5.2: Capitalizing the Seychelles Environment Trust Fund through Voluntary donations from travellers to Seychelles

In June 2022, the voluntary donations from travellers to Seychelles to the Environment Trust Fund had surpassed 600,000 Euros. The funds collected are used to support national conservation efforts. All visitors to the Seychelles are able to contribute to the protection of Seychelles' flora and fauna via the Seychelles Islands Travel Authorization platform, powered by Travizory Border Security. Since its launch on 1st September 2020, the Travel Authorization system has a received a total of 44,602 individual donations, amounting to over €600,000. Most of the donations are from foreign visitors. Noteworthy, however is more than 372 Seychelles passport holders have also made contributions to the Fund. The donation options range from 10€ to 500€, allowing travellers to donate flexibly within their budget. The government of Seychelles remains committed to working with Travizory to strengthen its borders, facilitate passenger arrivals and explore new ways to support national initiatives such as the Fund.

Source: https://www.travizory.com/environment-trust-fund-receives-more-than-600000-euros-in-donations-from-travelers

Target 15.b:	Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation
Indicator 15.b.1:	Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems

Under the 2021 Glasgow Leaders' Declaration on Forests and Land Use, more than 100 heads of state and government and other leaders, 33 of them from Africa, have pledged more than US$ 20 billion of public and private funds to reverse forest loss by 2030.[20,21] This declaration needs to be paired with monitoring and accountability mechanisms to ensure effective use of funding in ensuring the restoration and sustainable management of land, forests, and biodiversity.

5.3 Overall prospects

The Economic Commission of Africa (ECA) projects that to achieve most of the targets by 2030, Africa will need to accelerate progress in most of targets including the sustainable forest management and conservation of mountain ecosystems (Figure 5.7). Countries will have to

18 Andrew Deutz and others, Financing Nature: Closing the Global Biodiversity Financing Gap (Paulson Institute, The Nature Conservancy and Cornell Atkinson Center for Sustainability, 2020. https://www.paulsoninstitute.org/wp-content/uploads/2020/10/FINANCING-NATURE_Full-Report_Final-with-endorsements_101420.pdf

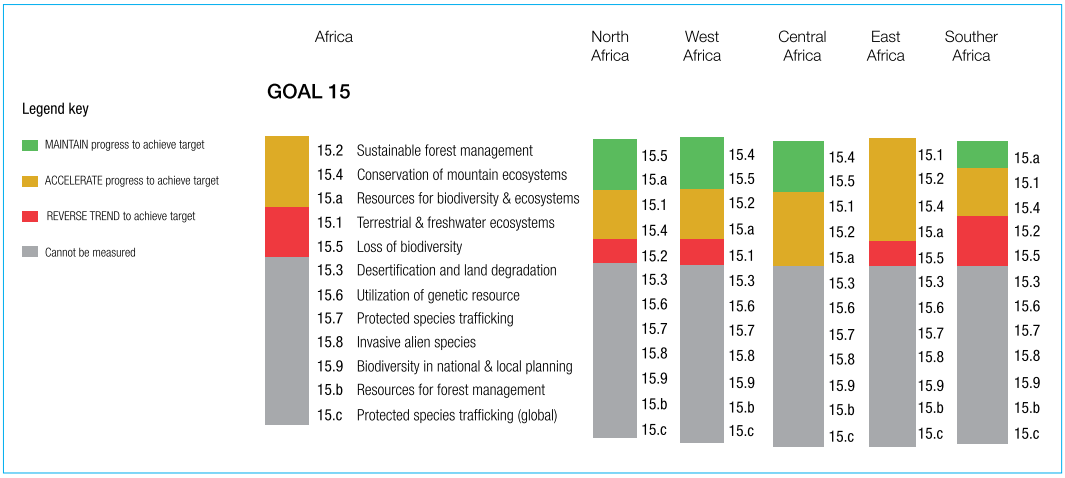
19 Refer to Home - Leaders Pledge for Nature at https://www.leaderspledgefornature.org

20 Refer to https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/

21 Refer to https://forestsandfinance.org/news/financial-incentives-to-slow-deforestation-are-helpful-but-public-policies-to-stop-it-are-essential/

dramatically scale up efforts to reverse the negative trends on conservation and sustainable management of terrestrial and freshwater ecosystems and stemming the loss biodiversity.

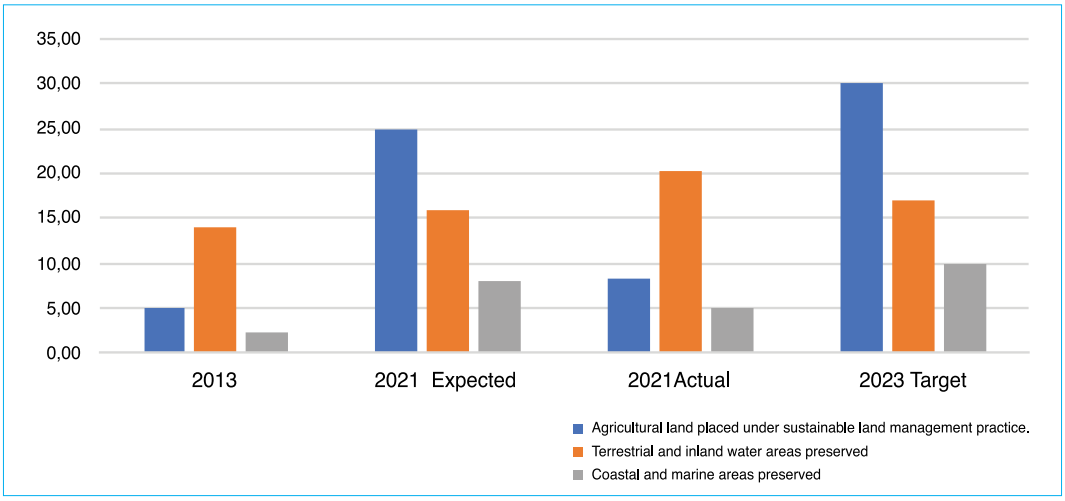
Figure 5.7: Expected Achievements for SDG 15 by target and African regions



Source: Africa UN Data for Development: https://ecastats.uneca.org/africaundata

As shown in Figure 5.8, Africa met 64 percent of its 2021 targets on sustainable land management and preservation of natural resources. However, the continent missed the targets on the preservation of coastal and marine areas and in the proportion of agricultural land placed under sustainable land management. The continent has lost more than 3.5 million hectares per year over the last two decades, contributing to more than 70 percent of the global forest loss. This was attributed to the slow pace of implementing sustainable land management and climate adaptation policies and frameworks.

Figure 5.8: Biodiversity, conservation, and sustainable natural resource management in Africa (%)



Source: AU (2022)

North, West and Central Africa are each projected to achieve at least 2 targets by maintaining the current progress in those targets including the sustainable management of forests (AU, 2022).

5.4 Policy frameworks to support achievement of Goal Fifteen

African countries have adopted several strategic frameworks, including policies, plans and programmes to foster sustainable management of forests, biodiversity, and land. Some of these frameworks are listed in Box 5.3.

Box 5.3: Policy frameworks to support the achievement of SDG 15

- Algerian authorities developed the Green Dam project as a massive reforestation program aiming.
- The African Union Climate Change and Resilient Development Strategy and Action Plan.
- The African Continental Free Trade Area agreement.
- African Forest Landscape Restoration Initiative.
- Sustainable Forest Management Framework for Africa 2020–2030.
- Initiative on Sustainability, Stability and Security.
- African Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa.
- African Convention on the Conservation of Nature and Natural Resources.
- Congo Basin Blue Fund.
- Liquidity and Sustainability Facility.
- African Union Green Recovery Action Plan.
- Africa Green Stimulus Programme.

The AU Great Green Wall initiative[22] aims to create an 8,000 km swathe of restored land across the width of Africa. By 2030, the initiative aims to restore 100 million hectares of land, sequester 250 million tons of carbon and create 10 million jobs in rural areas. The case of Algeria (Box 5.4) highlights country-led interventions in line with the Great Green wall initiative.

Box 5.4: Great green wall initiative: case of Green Dam project in Algeria

Algerian authorities developed the Green Dam project as a massive reforestation program aiming to safeguard and to develop of the pre-Saharan areas.

The Algerian authorities have developed the Green Dam project as a massive reforestation program to safeguard and to develop areas in the fringes Sahara Desert. The green dam covers an area of 3.7 million hectares and set to be expanded the medium term to 4.7 million hectares with an additional 1 million trees. The dam stretches 1,500 km across the country from East to West with a width of 20 km. It covers nearly 28 wilayas.

Source: Review input from Algerian expert in the Expert Group Meeting of the present report.

22 Refer to https://www2.unccd.int/actions/great-green-wall-initiative

5.5 Summary observations and policy recommendations

There is varied progress toward set targets for SDG 15 and Goal 7 of Agenda 2063. Overall, Africa continues to experience high rates of loss of forest cover and biodiversity, and land degradation remains high and widespread. The most progress is in the conservation of mountain ecosystems. Countries need to dramatically scale up effort to domesticate and implement policy frameworks for the protection, restoration and sustainable use of forest, land and biodiversity.

Governments and their partners should mobilize and channel increased funding for a green and resilient recovery from the Covid-19 pandemic. As part of this effort innovative sources of finance such as the Liquidity and Sustainability Facility by ECA and its partners, debt swaps for sustainability, green and blue bonds and carbon credits should be exploited. Increased financing should be channelled to decentralized entities and local communities in order to achieve tangible and meaningful impact on the wellbeing of people and ecosystems.

> Policymakers should intensify awareness campaigns on the dangers of deforestation through grassroot and Civil Society Organizations. Strategies must be put in place to enhance alternative livelihood options for communities that heavily rely on forests for livelihood; and promote forest-based enterprises such as apiculture, curios, and mushroom production.

Governments and partners should strengthen and scale up the valuation of natural capital and the mainstreaming of biodiversity, nature-based solutions and climate-friendly agriculture and disaster risk reduction in voluntary national reviews and development plans and budgets.

Member States should endeavour to empower women, young people, indigenous peoples, and local communities by strengthening and enforcing resource tenure rights and access to finance. This could accelerate the sustainable management of forest and biodiversity resources and mitigate natural resource-based conflicts and disputes.

Chapter 6:

SDG Seventeen: Partnerships

Partnership	2030 Agenda	Agenda 2063
17 PARTNERSHIPS FOR THE GOALS	**Goal 17:** Strengthen the means of implementation and revitalise the global partnership for sustainable development.	**Goal 1:** A high standard of living, quality of life, and well-being for all citizens.
		Goal 4: Transformed economies and job creation.
		Goal 10: World-class infrastructure criss-crosses Africa.
		Goal 19: Africa as a major partner in global affairs and peaceful co-existence.
		Goal 20: Africa takes full responsibility for financing her development.

6.1 The importance of global solidarity

The Covid-19 pandemic has been associated with a long-term risk of reduced official development assistance, despite an increase in international commitments for budgetary support. The pandemic underscores the importance of 'global solidarity, shared responsibility, streamlining cooperation and fostering means of implementation' for sustainable development. This same commitment, urgency, drive and togetherness is crucial to revitalizing international cooperation and transnational partnerships, as well as establishing capable global, regional and national institutions to deal with universal risks in a sustainable manner.

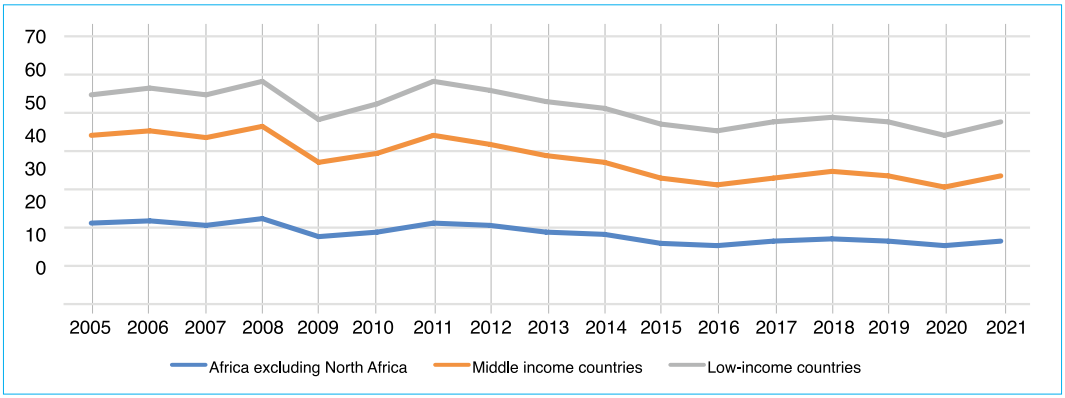
6.2 Tracking Goal Seventeen progress by targets

Target 17.1:	Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity
Indicator 17.1.1:	Total government revenue as a proportion of GDP

Africa's domestic revenue generation continues to lag other regions and is below the average of LDCs. For Africa excluding North Africa, revenue as a proportion of GDP declined from 16.5 percent in 2019 to 15 percent in 2020 before rebounding to 16.4 percent in 2021. The highest revenue generating countries in 2021 were Lesotho and South Sudan, both at 42 percent of GDP, and Botswana, Eritrea, and Seychelles at 31 percent of GDP. On the other hand, revenue collection in countries such as Central African Republic and Nigeria was less than 10 percent of GDP. The Covid-19 pandemic disrupted economic activities and revenue collection leading to

unexpected contractions in GDP, employment, and income. Inefficiencies in tax administration, leakages through corruption and the narrow tax base, and a large informal sector have also contributed towards the low revenue-to-GDP ratio.

Figure 6.1: Total government revenue as a proportion of GDP % –2005-2021



Source: IMF (2022).

Box 6.1: Total Government Revenue as a proportion of GDP in Malawi

Government revenue as a percentage declined from an average of 19.9 percent of GDP in 2019/2020 to 16.5 percent of GDP in 2020/2021, mainly due to the economic slowdown induced by the Covid-19 pandemic. Malawi is unlikely to meet the SDG target of mobilizing at least 50 percent of revenues as a share of GDP by 2030. To address this, the government developed the Domestic Revenue Mobilization Strategy (2021-2026) to ensure stability and transparency in the revenue policymaking process, reduce dependence on external and domestic loans, and increase fiscal discipline and control.

Source: Malawi VNR Report (2022)

Curbing illicit financial flows (IFFs) can help African countries mobilize capital to finance the achievement of the SDGs and other national priorities as well as increase the stock of capital available for businesses to build productive capacity and create jobs.[23] According to UNCTAD, IFFs contribute to US$ 88.6 billion of capital flight per year from the continent.

> The highest revenue generating countries in 2021 were Lesotho and South Sudan, both at 42 percent of GDP, and Botswana, Eritrea, and Seychelles at 31 percent of GDP.

23 https://unctad.org/webflyer/curbing-illicit-financial-flows-finance-sustainable-development-africa

Box 6.2: Illicit Financial Flows is a key Barrier to Achieving the United Nations 2030 Agenda and the African Union 2063 Agenda for Africa

According to the Report of the High-Level Panel on Illicit Financial Flows, US$ 50 billion per year in 2015 leave the continent due to capital flight. This amount has changed dramatically over the years, as a UNTACDT report states that US$ 89.9 per year will leave the continent due to capital flight in 2020.

Reducing illicit financial flows must therefore be at the heart of the development challenges facing African countries in the coming decades. However, the fight seems to be difficult given the complexity of the problem, the specificity of the stakes and the diversity of the actors involved in this phenomenon

Increasing financial transparency and curtailing illicit outflows will require the implementation of anti IFF tools such as:

- **Beneficial Ownership**

  Governments should establish public registries of verified beneficial ownership information on all legal entities, and all banks should know the true beneficial owner(s) of any account opened in their financial institution.

- **Anti-Money Laundering:** Governments should adopt and fully implement all of the Financial Action Task Force's anti-money laundering recommendations; laws already in place should be strongly enforced.

- **Country-by-Country Reporting:** Policymakers should require multinational companies to publicly disclose their revenues, profits, losses, sales, taxes paid, subsidiaries, and staff levels on a country-by-country basis.

- **Tax Information Exchange:** All countries should actively participate in the worldwide movement towards the automatic exchange of tax information as endorsed by the OECD and the G20.

- **Trade Mis invoicing:** Customs agencies should treat trade transactions involving a tax haven with the highest level of scrutiny. Governments should significantly boost their customs enforcement by equipping and training officers to better detect intentional mis invoicing of trade transactions, particularly through access to real-time world market pricing information at a detailed commodity level.

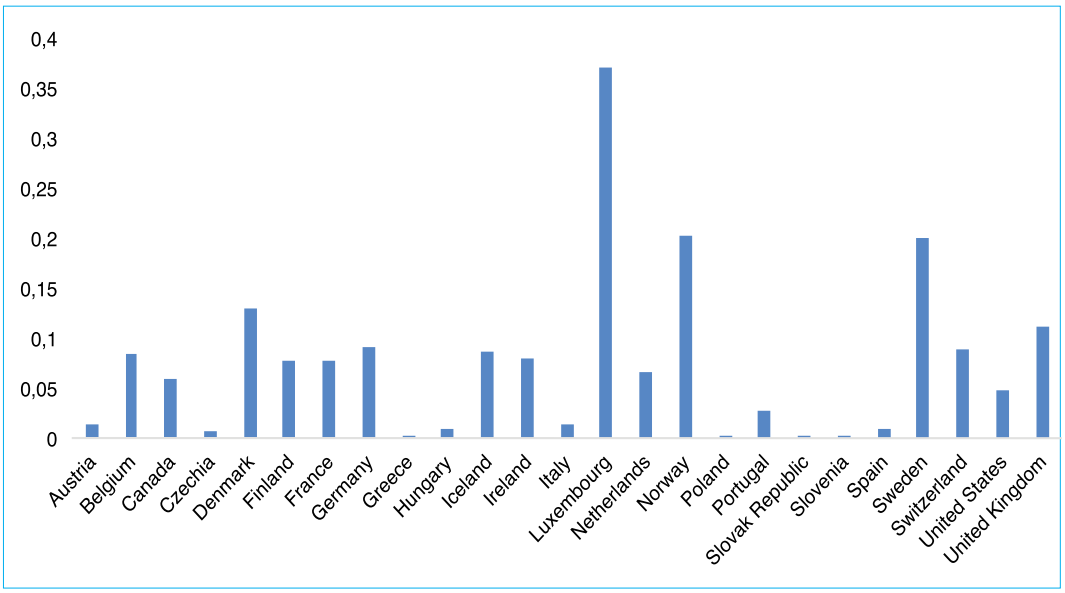
- **Sustainable Development:** The indicator for SDG goal 16.4 should be country-level estimates of illicit outflows related to mis invoiced trade and other sources based on currently available data, and the International Monetary Fund or another qualified international institution should conduct and publish the analysis annually. Governments should sign on to the Addis Tax Initiative to further support efforts to curb IFFs as a key component of the development agenda.

- **Global Financial Integrity:** The massive outflows of illicit capital are likely to adversely impact domestic resource mobilization and hamper sustainable economic growth. The monitoring of financial flows should consider not only the volume of resources flowing into developing countries but also the illicit leakages of capital from the balance of payments and trade mis invoicing. Governments and international organizations must strengthen policy and increase cooperation to combat this scourge.

Target 17.2:	Developed countries to implement fully their ODA commitments, including the commitment by many developed countries to achieve the target of 0.7 percent of GNI for ODA to developing countries and 0.15 to 0.20 percent of ODI/GNI to least developed countries.
Indicator 17.2.1:	Net ODA, total and to least developed countries, as a proportion of OECD DAC donors' GNI

Figure 6.2 shows that OECD countries have collectively fallen short of their target to dedicate 0.7 percent of their gross national income (GNI) to official development assistance (ODA). Of the 25 OECD countries, only 13 dedicated more than 0.7 percent or more of their GNI as ODA to LDCs.

Figure 6.2: Net ODA provided to the least developed countries (% of GNI), 2020

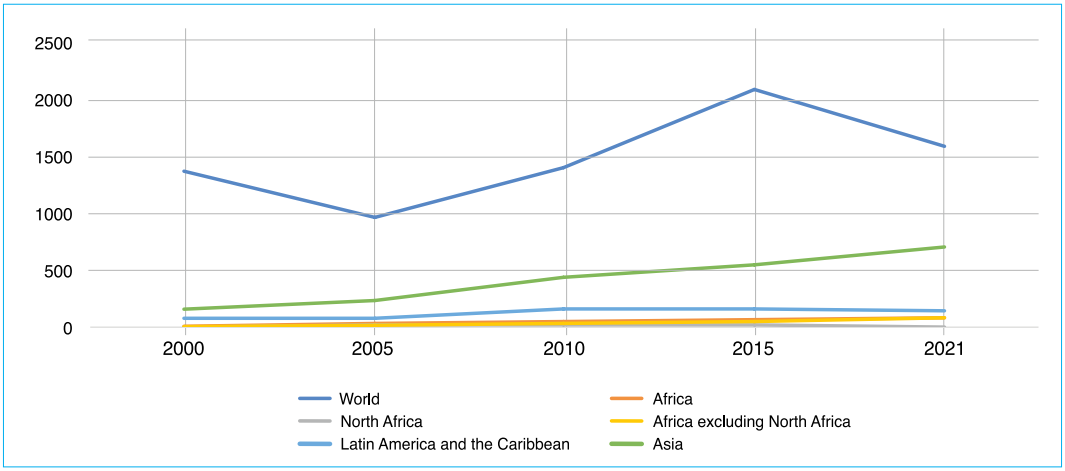


Source: World Development Indicators (2022)

Target 17.3:	Mobilize additional financial resources for developing countries from multiple sources
Indicator 17.3.1:	FDI, official development assistance and South-South cooperation as a proportion of total domestic budget

The figure 6.3 shows that inward FDI Africa continues to lag other regions such as Asia, Latin America and the Caribbean. In 2021, Africa received $ 83 billion of FDI, far less than the US$ 690 billion received by Asia and US$ 134.4 billion received in Latin America and the Caribbean. In West Africa, Nigeria was the largest recipient, with US$ 4.8 billion inflows in the oil and gas sector while in East Africa, FDI to Ethiopia amounted to US$ 4.3 billion, and mainly into renewables. In Central Africa, FDI to the Democratic Republic of Congo was estimated at US$ 1.9 billion and channelled to offshore oil fields and mining. In southern Africa, FDI increased by almost tenfold between 2020 and 2021 to US$ 42 billion (UNCTAD, 2022).

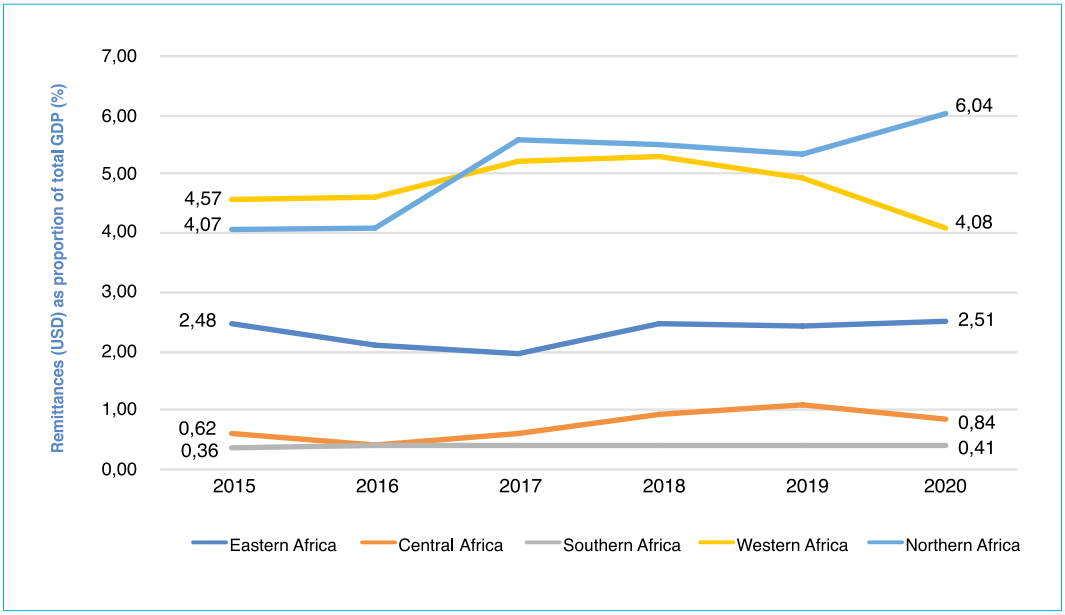
Figure 6.3: Foreign direct investment (FDI) inflows (in billions, US$), 2000-2021



Source: UNCTAD (2022).

Indicator 17.3.2: Volume of remittances (in US$) as a proportion of total GDP

Figure 6.4: Volume of Remittances (US$) as a proportion of total GDP (%)

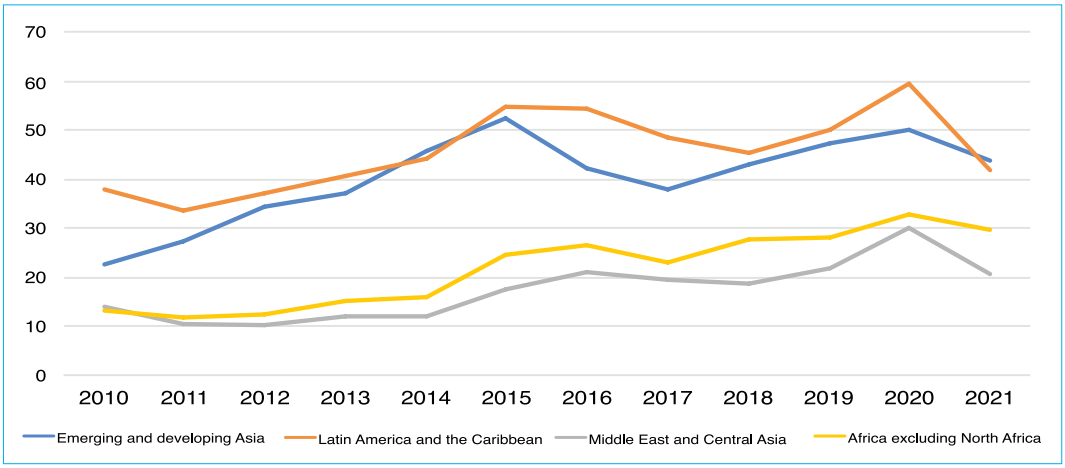


Source: UNSD (https://unstats.un.org)

Remittances, which have been important in enabling households to attain smooth consumption were highest in North Africa at 6 percent of GDP and West Africa at 4.1 percent of GDP in 2020 (Figure 6.4). In Africa, excluding North Africa, remittances were highest in the smaller countries such as Lesotho (25%), Somalia (24.9%), the Gambia (22.3%), Comoros (18.4%), Cabo Verde (14.4%) and Liberia (10.4%) in 2020, while in North Africa, the largest recipients were Egypt (8.1%), Morocco (6.4%) and Tunisia (5.6%).

Target 17.4:	Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress.
Indicator 17.4.1:	Debt service as a proportion of exports of goods and services

Figure 6.5: External debt service as a percent of exports of goods and services



Source (IMF, 2022).

Debt management has been challenging for African governments. Debt servicing has been taking away already scarce capital resources from sustainable development and much needed critical projects aimed at improving infrastructure. The debt servicing in Africa, excluding North Africa, increased from 27.9 percent of goods and services in 2019 to 32.8 percent of goods and services in 2020. (Figure 6. 5). Of the nine countries worldwide which were in debt distress in September 2022, eight of them were in Africa, while 14 of the 26 countries worldwide in high risk of debt distress were also in Africa (IMF, 2022).

Target 17.6.1:	Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism.
Indicator 17.6.1:	Fixed Internet broadband subscriptions per 100 inhabitants, by speed.

Table 6.1: Fixed broadband subscriptions (per 100 people)

Regions	2015	2016	2017	2018	2019	2020	2021
World	11.4	12.2	13.6	14.1	14.9	15.8	16.7
Africa	0.4	0.4	0.4	0.4	0.5	0.6	0.6
Least Developed Countries	0.8	0.9	1.0	1.1	1.2	1.4	1.4
Land Locked Developing Countries	1.9	2.1	2.3	2.5	2.7	2.9	3.0
Small Island Developing States	6.7	7.0	7.0	7.1	7.5	8.0	8.4

Source: ITU World Telecommunication/ICT Indicators database (2022).

Despite some notable progress, ICT in Africa remains limited. While 85 percent of the population in Europe and Northern America in 2019 had internet access, this was only 20 percent in LDCs (United Nations, 2021). Fixed broadband subscription in Africa increased from 0.4 subscriptions per 100 inhabitants in 2015 to 0.60 subscriptions per 100 inhabitants in 2021 (Table 6.1). However, this was significantly lower than the global average of 16.7 subscriptions per 100 people in 2021. African countries such as Egypt, South Africa, and Tunisia recorded the highest subscriptions per 100 people while subscriptions were low in several countries including Burundi and Malawi.

Target 17.7:	Promote the development, transfer, dissemination, and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed
Indicator 17.7.1:	Total amount of funding for developing countries to promote the development, transfer, dissemination, and diffusion of environmentally sound technologies.

Table 6.2: Amount of tracked exported Environmentally Sound Technologies (current United States dollars, billions).

	Africa	LDCs	Northern Africa	Africa excluding North Africa	Latin America and the Caribbean
2010	8.13	1.48	2.05	6.08	33.45
2011	9.77	1.63	2.60	7.17	40.41
2012	9.09	1.88	2.64	6.45	41.76
2013	9.29	1.69	2.86	6.43	42.00
2014	9.73	0.90	3.17	6.56	41.32
2015	8.71	1.93	2.47	6.25	40.24
2016	7.85	1.17	2.41	5.45	37.10
2017	8.52	1.01	2.94	5.57	38.51
2018	8.94	1.00	3.12	5.82	41.13
2019	7.99	0.96	2.78	5.21	42.81
2020	6.05	0.77	1.50	4.55	40.09

Source: United Nations Statistics Division (2022)

Investments in environmentally-sound technologies (ESTs) remain low in Africa relative to other regions such as the Latin America and the Caribbean, although higher than of the LDCs. In Africa, ESTs declined over the period 2015-2020 by 30 percent, from US$ 8.71 billion in 2015 to US$ 6.05 billion in 2020 (Table 6. 2). Northern Africa also experienced a sharp decline, from US$ 2.47 billion in 2015 to US$ 1.5 billion in 2020. In 2020, Africa's ESTs funding lagged behind Latin America and the Caribbean by US$ 34 billion. African countries with strong economies and a large manufacturing sectors are anticipated to increase their investment and trade in ESTs (United Nations, 2022).

Target 17.8:	Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology
Indicator 17.8.1:	Proportion of individuals using the Internet.

Table 6.3: Individuals using the Internet, per 100 inhabitants

	World	Least Developed Countries	Land Locked Developing Countries	Small Island Developing States	Africa
2015	40.5	10.8	19.2	39.4	16.3
2016	43.3	13.9	21.1	44.5	18.3
2017	45.8	16.8	23.8	49.4	21.2
2018	49.1	20.0	26.4	54.4	24.2
2019	53.7	23.5	27.0	55.9	27.7
2020	59.6	27.6	29.7	60.0	31.8
2021	62.6	31.2	32.6	62.2	35.3

Source: ITU World Telecommunication/ICT Indicators database (2022).

The proportion of individuals using the internet in Africa has constantly increased 16.3 per 100 inhabitants to 35.3 per 100 inhabitants in 2021 (Table 6.3). The best performing countries in terms of population usage of internet in 2021 included Morocco (88 percent), Seychelles (79 percent), Tunisia (71.9 percent) and South Africa (70 percent). Countries that have limited individuals using the internet include South Sudan (6.5 percent), Burundi (9.4 percent), Central African Republic and Chad, both at 10.4 percent. The positive trend in internet penetration is also reflected in other regions such as SIDS and LDCs, although varying in magnitude. Increasing internet coverage, especially in rural areas, addressing gender gap in the use of the internet and targeting micro, small and medium sized business remain urgent policy actions for the region (UNDP, 2021).

Target 17.9:	Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals, including through North-South, South-South and triangular cooperation.
Indicator 17.9.1:	Dollar value of financial and technical assistance committed to developing countries

Table 6.4: Net official development assistance and official aid received (constant 2020 US$, in billions)

	Latin America & Caribbean	Africa excluding North Africa	Middle East & North Africa
2015	10.46	47.54	19.66
2016	11.66	47.46	26.54
2017	8.52	52.18	27.80
2018	10.00	51.35	31.65
2019	8.50	54.52	27.65
2020	13.05	66.84	28.10

Source: World Development Indicators (2022).

Net official development assistance (ODA) in Africa, excluding North Africa, increased from US$ 47.5 billion in 2015 to US$ 66.8 billion in 2020 (Table 6.4). The major aid recipient countries in 2020 included Ethiopia (US$ 4.8 billion), Nigeria (US$ 3.6 billion) and Kenya (US$ 3.3 billion).

In North Africa and the Middle East, ODA increased from US$ 19.7 billion in 2015 to US$ 28.1 billion in 2020, with Egypt and Morocco receiving the highest inflows. However, most advanced economies continue to fall short of their commitment to deliver 0.7 percent of GNI towards ODA, at a critical time when African countries require additional resources for economic recovery (United Nations, 2022).

Box 6.3: SDGs Good Practice: Kenya's SDGs Stakeholders Engagement Framework

Kenya has an Inter-Agency Technical Working Committee (IATWC) on SDGs that was set up in early 2016. This Committee brings together state and non-state actors towards implementation of SDGs through their umbrella bodies. The IATWC is Co-chaired by the State Department for Planning through SDGs Coordination Directorate (National Government), Kenya Private Sector Alliance (KEPSA) for Private Sector and SDGs Kenya Forum (Civil Society). The membership of the IATWC comprises of National Government Ministries Departments and Agencies (MDAs), Council of Governors (CoG), KEPSA, Kenya Association of Manufacturers (KAM), Parliamentary Caucus on SDGs and Business, SDGs Kenya Forum, United Nations Resident Coordinator's Office (UNRCO), United Nations Development Programme (UNDP), Media and Academia. A sub-committee of the IATWC has been set up to work closely with the National Government SDGs Secretariat whose membership include State Department for Planning, CoG, KEPSA, KAM, SDGs Kenya Forum, UNRCO, UNDP, Parliamentary Caucus on SDGs and Business, Media Council of Kenya and University of Nairobi. As a result of this partnership, the IATWC has been able to prepare 2 Voluntary National Reviews (VNRs), SDGs Progress Reports, Country Position Papers on SDGs, held various capacity building forums, 3 annual multi-stakeholders' forums, 3 SDGs Awards processes and ceremonies, and SDGs Recovery and Acceleration Strategy (2022 - 2030).

Target 17.10:	Promote a universal, rules-based, open, nondiscriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda.
Indicator 17.10.1:	Worldwide weighted tariff-average

Table 6.5: Weighted Average (%) for All Products

	2015	2016	2017	2018	2019	2020
Africa, excluding North Africa	6.98	6.75	5.7	6.74	6.81	7.50
Middle East and North Africa	4.06	4.07	4.85	4.39	5.82	4.42
East Asia and Pacific	3.15	3.07	2.52	2.53	2.04	2.17
World	4.22	4.26	4.05	4.22	4.46	3.91
Latin America and the Caribbean	5.36	5.77	3.52	3.27	5.13	4.94

Source: World Integrated Trade Solutions (2022).

Tariff rates have largely remained stable in most regions. In Africa excluding North Africa, the weighted tariff increased from 6.81 percent in 2019 to 7.50 percent in 2020 (Table 6. 5). Tariff rates were lower in North Africa and the Middle East, estimated at 4.42 percent in 2020 and above the global average of 3.91 percent. In 2020, Africa excluding North Africa, textile and

clothing continue to face the highest tariff rates of about 19 percent, followed by food products at 12.7 percent and agriculture and raw materials at 10.5 percent.

Target 17.11: Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020

Table 6.6: Developing countries and least developed countries share of global exports (Indicator 17.11.1)

	Developing economies' shares of global exports of goods and services (%)	LDCs' share of global exports of goods and services (%)
2015	38.9	0.91
2016	37.8	0.91
2017	38.5	0.94
2018	38.8	0.97
2019	39.0	0.98
2020	39.0	0.94
2021	40.1	0.93

Source: UNCTAD (2022).

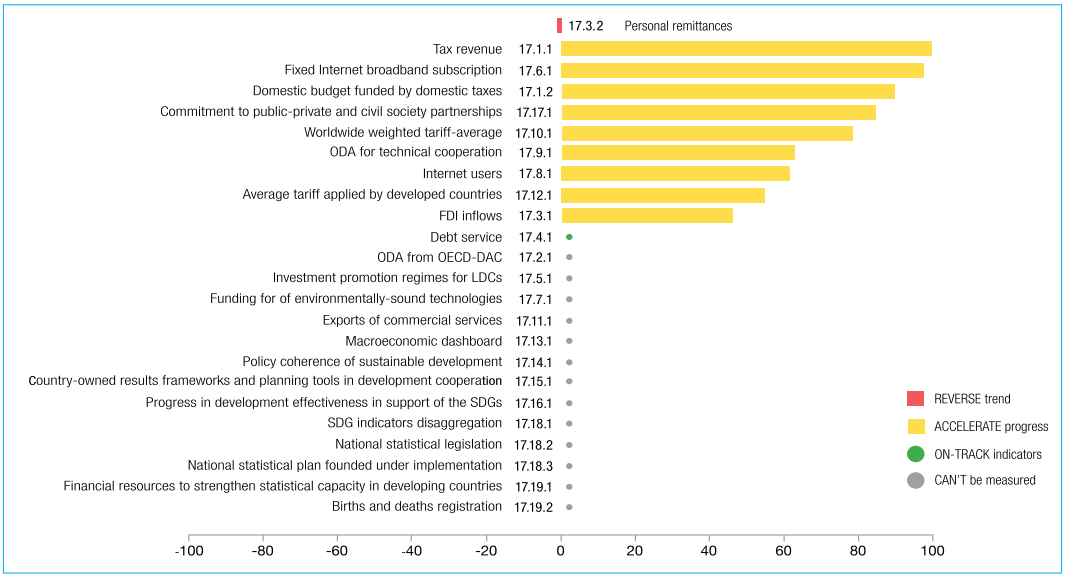
Developing countries' share of global exports of goods and services has slightly increased from 39 percent in 2020 to 40.1 percent in 2021, while LDC's share of global exports of goods and services slightly declined from 0.94 percent in 2020 to 0.93 percent in 2021 (Table 6. 6). In Africa, the top service exporters in 2020 included Egypt with 0.6 percent in world trade, Morocco (0.3 percent), Ghana and South Africa (0.2 percent) and Ethiopia (0.1 percent) – UNCTAD (2021). In 2020, the top 5 partners for African countries in merchandise exports are China, India, United Arab Emirates, Switzerland, and South Africa (UNCTAD, 2021).

6.3 Overall prospects

Overall, the continent has made little progress on Goal 17. The enablers for the implementation of the goal have only registered a slight improvement. There is need to work towards the acceleration of tax revenue and FDI (Figure 6. 2). In 2019, 66% of the domestic budget was funded by domestic taxes, compared to 62.7% in 2015. The FDI inflows were US$ 45.4 billion in 2019; a decrease of US$ 10 billion compared to 2015 but an increase of 370 percent compared to 2000 (World Bank, 2022). The Covid-19 has caused a 16% fall in FDI. Remittances in 2019 represented 3.6% of GDP compared to 3.1% in 2015 and 2.8% in 2010. It can be deduced from Figure 6. 2 that Africa is on track on target debt sustainability and servicing (indicator 17.4.1).

> In 2000, half of African countries had a debt service above 13% while in 2019, they have a debt service below 4.3%.

Figure 6.6: Expected achievements for Africa on SDG 17 indicators



Source: Africa UN Data for Development: https://ecastats.uneca.org/africaundata

6.4 Policy frameworks to support achievement of goal seventeen

The overall key for Africa in achieving the SDGs and Agenda 2063 is the ability to finance her own development through domestic resource mobilization and savings. New partnerships and sources of development financing are required to meet the rising needs of future development in Africa. The existing public sustainable financing facilities, such as the Global Fund, Global Environment Facility, Green Climate Fund and Clean Development Mechanism could also be transformative tools for development financing, given their concessional terms, their linkage to green growth as well as their increased accessibility to African countries, as compared to bond markets.

Box 6.4: African Union (AU) initiatives on financing Africa's development

The African Union Heads of State and Governments continue to prioritize financing for Africa's development by heightening efforts toward financial integration and bolstering domestic resource mobilization, a path toward the continent's financial autonomy.

The African Union continues to work toward the speedy implementation of the African Union Financial Institutions (AUFIs), namely— the African Central Bank, African Investment Bank (AIB), African Monetary Fund (AMF), and the Pan African Stock Exchange (PASE). The AUFIs is a flagship project of Agenda 2063. These financial institutions will be crucial in driving Africa's financing for the development agenda. Recently, the African Union Commission (AUC) and the African Securities Exchanges Associations (ASEA) forged a Memorandum of Understanding to strengthen coordination between the parties in deepening and creating robust Africa's capital markets. The capital markets will be a vehicle that will assist in availing additional capital to the private sector and small and medium-sized enterprises (SMEs) to facilitate their expansion to strategic economic sectors. The Commission has also joined forces with the African Development Bank (AfDB) to develop an African Financial Stability Mechanism that will cushion the continent from future shocks. The AUFIs can facilitate the development of such mechanism, specifically the African Monetary Fund.

The realization of Agenda 2063, Africa's blueprint, and master plan for transforming Africa into the global powerhouse of the future, is centered on mobilizing resources domestically. To make this a reality, the African Union (AU) has stepped up efforts toward curbing illicit financial flows, strengthening revenue collection by developing robust tax administrations, and amplifying Africa's voice in the global arena when negotiating for an effective international tax. The Commission continues to work with various partners and, in 2020, launched the multi-donor action financed by the European Union (EU), the Government of Finland, and the German Federal Ministry of Economic Development and Cooperation (BMZ) and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) through the Good Financial Governance in Africa Programme. The project builds on existing activities and aims to strengthen the capacities of the AU Commission to play a pivotal role in coordinating anti-IFFs policies on the continent. Additionally, the African Union Member States have developed a common position for negotiating international tax rules to increase revenue collection from Multinational companies.

The implementation of the AfCFTA provides a platform with which to raise Africa's low productivity, accelerate industrialization and promote higher investment in the continent. It will especially help LDCs and SIDS to reduce their dependency on global commodity markets, imports from outside Africa and vulnerability to exogenous shocks. The AfCFTA will positively impact Africa's GDP levels, trade, output and welfare. By strengthen the continent's productive capacities, the Agreement will lead to greater industrialization, increased access to new technologies, innovation and improved developments in the services sector.

Harnessing digital technologies and promoting free and fair competition will be fundamental in revitalizing African economies. In 2020, mobile technologies and services generated US$ 130 billion of economic value-added in Africa excluding North Africa, equivalent to 8% of GDP, and contributed about US$ 15 billion in the form of taxes. Digital technologies can stimulate innovation, economic growth, and job creation in critical sectors of the economy by allowing better interconnection of African markets with the rest of the world. They can also increase market access and financing for the marginalized population, usually excluded by the formal financial system. Thirdly, digital technologies also help leapfrog energy efficiency, create smart grids and are the basis for delivering energy as a service.

6.5 Summary observations and policy recommendations

The entire development community must commit to closing the US$ 2.5 trillion per annum funding gap required by developing countries to achieve the SDGs. New partnerships and sources of development financing are required to meet the rising needs of future development in Africa.

African governments must prioritize immediate efforts to expand their fiscal space and stabilize economies through enhanced bilateral assistance and innovative multilateral initiatives, including the Special Drawing Rights). On the revenue side, there is a need to raise tax collection by expanding tax bases, eliminating unnecessary tax waivers and incentives that are detrimental to revenue generation, rationalizing tax expenditures and improving the efficiency and effectiveness of the tax administration. Profit-shifting activities of multinational corporations are estimated to cost Africa (excluding North Africa) at least 2 percent of GDP in foregone tax revenue, which needs to be addressed. It also remains vital for governments to tighten public financial management, including sound budget formulation and execution. Tax expenditure systems should be re-designed to

ensure that public resources are allocated to strategic priorities and reallocated from lesser to higher priorities programs. Governments should also ensure operational efficiency by achieving maximum value for money in the delivery of services through sound procurement and addressing leakages.

To address the looming debt crisis, African countries need to implement robust debt management policies and cautiously balance the need for increased public spending and borrowing. This would require improving debt transparency and disclosure, strengthening contractual provisions in debt contracts, and enhancing sovereign access to international bond markets. On the other hand, the international community should urgently step-up efforts to avert debt distress through debt relief and innovative mechanisms such as debt swaps. In addition to debt rescheduling, creditors should consider comprehensive debt restructuring measures that cancel the debt to allow countries to reallocate resources from debt serving to finance development. Efforts are also required to address the high-interest rates in international capital markets, including the revision of sovereign credit ratings that penalize borrowing by African countries. Concessional financing for African countries should be enhanced to reinvigorate development. In contrast, developed countries should expeditiously reallocate Special Drawing Rights to countries in most need.

There is a need to move away from the conventional ODA, which is unpredictable, volatile and fragmented and reset the international financial system. This will require a renewed focus on innovative alternatives such as private sector development, mobilizing additional domestic resources and tapping into global markets through instruments such as diaspora bonds. Enhancing remittances will require addressing several structural barriers, such as the high cost of remitting money by leveraging technological innovation and digital platforms. New modes of international cooperation that focus on collective investments in global public goods and reforms that align ODA with the continent's development agenda are urgently needed. ODA conditionalities that are detrimental to sustainable development need to be eliminated. On the other hand, donor countries must honour their commitment to disburse at least 0.7 percent of their GNI to ODA. At the same time, the collection and reporting of data must be strengthened to provide for better reporting and policy making.

While policies that attract FDI are essential, it remains vital to ensure that it is re-channelled to growth-enhancing and productive sectors rather than enclave ones. This could be through several initiatives such as modernizing the mining industry, promoting technology transfer and adopting international agreements on foreign direct investments. Efforts are also needed for strategic development cooperation, specifically through enhanced south-south cooperation and trade.

PART 3:

ACHIEVEMENT OF THE SDGs AND SENSITIVITY TO SHOCKS IN AFRICA

Chapter 7:

Covid impacts on the 2030 Agenda and Africa's Agenda 2063

7.1 A rather uncertain post-Covid-19 future

The Covid-19 pandemic has disrupted people's lives, damaged economies, and threatened to reverse the development gains that most countries had achieved. Its unprecedented impacts on societies, livelihoods, and the wellbeing of families and communities is still under assessment as new variants emerge, governments gradually lifting containment restrictions while uncertainties on future waves of the Covid-19 pandemic remain.

The Human Development Index (HDI) was estimated to suffer a "steep and unprecedented decline" in 2020 for the first time in the 30 years since its inception[24]. While extraordinary scientific breakthroughs have led to the creation and distribution of vaccines to millions of people across the world, vaccine inequity remains a crucial challenge on the African continent, with the region lagging behind others in terms of vaccine uptake. This makes African countries, especially those with low vaccine rates, vulnerable to future waves as well as restrictions in global movement.

Using the International Futures (IFs) modelling framework[25], the potential pathways for Covid-19 recovery are assessed to highlight how the pandemic can impact development outcomes under different scenarios[26]. The analysis is a useful and analytical process aimed at understanding the scope and magnitude of potential effects (or alternative futures) that the pandemic may have in the medium to long term and help countries in the design and implementation of inclusive recovery policies.

The IFs model is a recursive model system that provides annual forecasts of development outcomes from its base year of 2015, through 2030 and up to 2050 beyond the current SDG horizon. Additionally, while it includes 186 countries and several categories of countries based on regions and income levels, the model integrates almost all areas of the SDGs, including demographics, health, education, economics, governance, agriculture, energy and the environment. This allows for the exploration of the dynamic inter-connectedness across the SDGs. These connections involve causal linkages that can be reinforcing or can have opposing effects. They also include representations of action-constraining accounting systems for finances (e.g., government revenues and expenditures) and physical resources (e.g., agricultural land and water limitations).

24 HDRO: Covid-19 and Human Development: Assessing the Crisis, Envisioning the Recovery, http://hdr.undp.org/en/hdp-covid

25 See also the study using IFs model for COVID impact on poverty analysis in Moyer JD, Verhagen W, Mapes B, Bohl DK, Xiong Y, Yang V, et al. (2022) How many people is the Covid-19 pandemic pushing into poverty? A long-term forecast to 2050 with alternative scenarios. PLoS ONE 17(7): e0270846. https://doi.org/10.1371/journal.pone.0270846

26 Data and visualization by country on different indicators on the Data Futures Platform developed by UNDP (Assessing Covid-19 impact on the Sustainable Development Goals) can be found at https://data.undp.org/content/assessing-covid-impacts-on-the-sdgs/.

7.2 Scenario-based analysis with multi-dimensional effects

The analysis undertaken in this report is conducted under four scenarios which capture the multidimensional effects of the pandemic on key quantitative indicators of the SDGs, thus covering poverty reduction, gender, education, climate change and, access to electricity over the next decades.

The *first scenario* is one of *No COVID*, an exploration of the development path that the world seemed to be on before the pandemic. The *second scenario* is *COVID Baseline* which incorporates analysis from the International Monetary Fund (IMF) on the impact of the Covid-19 pandemic on Gross Domestic Product (GDP) growth in 2020 and 2021 and projections of possible mortality patterns from the Institute for Health Metrics and Evaluation (IHME). Within the IFs framework, it is estimated that relative to the No COVID scenario, global loss of GDP in 2020 is about 6.6 percent, measured using the market exchange rate (MER) or purchasing power parity (PPP).

The *third scenario* is *High Damage*. It assumes a higher magnitude of GDP losses in 2020-21 (approximately 8 percent in 2020 compared to the *No COVID* scenario); higher mortality and, reduced economic recovery (equivalent of a global GDP reduction of approximately 7 percent at MER in 2030 and a loss of about 13 percent in lower-income countries). Greater post-pandemic inequalities and significant increases in national debt are also incorporated as factors contributing to the increased long-term economic loss.

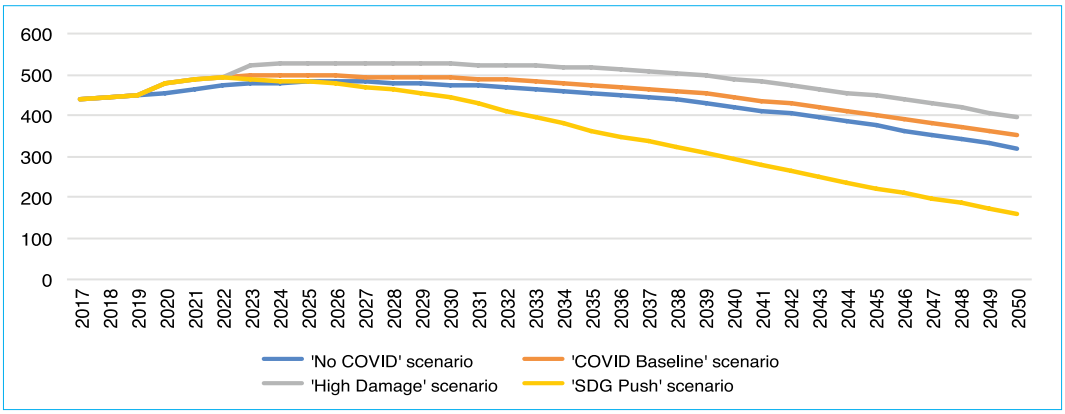
The fourth scenario is the SDG Push. Even as efforts to reach the goals have intensified around the world, there is potential for a more ambitious pursuit. The *Beyond Recovery* initiatives of the UNDP exemplify the potential for building a new social contract, uprooting inequalities, re-balancing nature, climate, and the economy and, accelerating as well as, scaling digital disruption and innovation. This scenario allows the incorporation of these initiatives.

Using the capabilities of IFs model and the four scenarios, this part of this analysis focuses on estimating the impact of the Covid-19 pandemic on poverty, education, climate change and access to electricity. Gender equality is an important cross-cutting theme across these issues. All these goal issues are relevant for the People and Prosperity dimensions of the SDGs. At a broader level, the analysis shows that the Covid-19 pandemic has put additional strain on the attainment of the SDGs by setting back development progress, increasing poverty and food insecurity, affecting the quality of education, and reducing access to health care. While the pandemic has not eliminated the gains made between 2015 and 2030, it has substantially reduced the possibility of their attainment by 2030.

7.3 Covid-19 impacts on the 'End Poverty' Goal (SDG 1)

Poverty rates continues to remain high in Africa and the pandemic threatens to reduce the prospects of achieving SDG 1 on eliminating poverty by 2030. Figure 7.1 shows that the pandemic pushed 23.6 million people into extreme poverty in 2021 compared to a hypothetical world without Covid. By 2030, the pandemic is projected to leave 492 million people in extreme poverty and 350 million people by 2050. However, an *SDG Push* would accelerate poverty reduction and in the medium term, those living below US$ 1.90 per day would decline from 489 million people in 2021 to 442.4 million in 2030, and eventually 159.7 million by 2050.

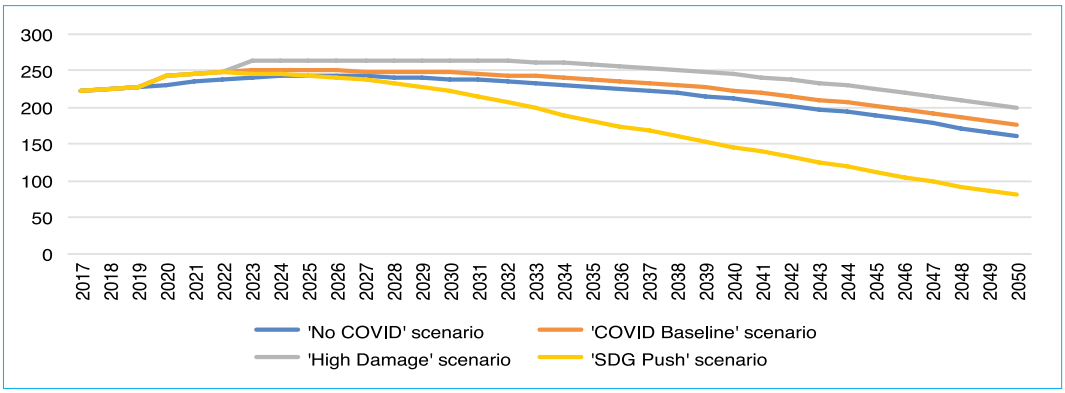
Figure 7.1: Poverty <US$ 1.90 per day in Africa, million



Source: IFs model.

The impact of the Covid-19 pandemic is gendered and affects men and women differently. shows that under the *Covid Baseline* scenario, the pandemic pushed 11.8 million women into extreme poverty in 2021 compared to a world with no Covid.

Figure 7.2: Female poverty headcount in Africa, million



Source: IFs model.

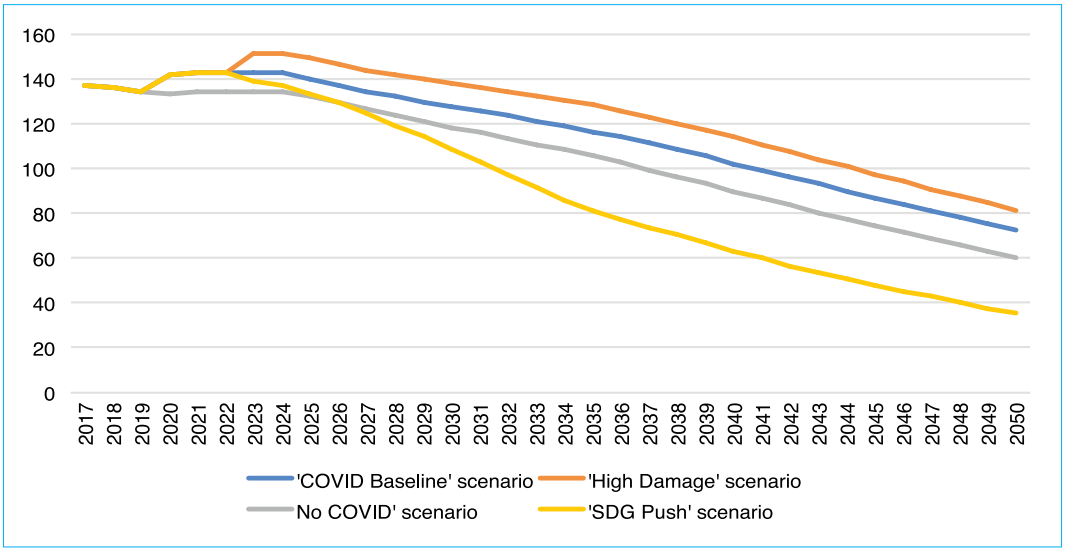
In 2021, the Covid-19 pandemic worsened poverty in Africa, and the proportion of the population that lived on less than US$ 1.90 per day increased by 3 percentage points relative to a *No COVID* scenario. In the medium term, 30.5 percent of the population in SSA will remain poor under the *COVID Baseline* scenario by 2030, while an *SDG Push* is likely to reduce this to 26.6 percent. In the long term, an *SDG Push* would reduce the share of the population living in extreme poverty to 6.3 percent by 2050, a magnitude that is three times lower compared to the *High Damage* scenario and 2 times lower than the *COVID Baseline* scenario.

Eastern Africa

In the East African region, poverty remains a key development challenge, with the Covid-19 pandemic pushing 9 million people into extreme poverty in 2021 and projected to increase this to around 9.3 million by 2030 (Figure 7.3). The path of the Covid-19 pandemic projects that the number of poor people will increase from 141.8 million in 2020 to 143.1 million in 2021 and 127.7

million by 2030. In the medium-term, an *SDG Push* is likely to reduce the number of poor people by 29.5 million in 2030 and by 46 million people by 2050 compared to a *High Damage* scenario.

Figure 7.3: Poverty <US$ 1.90 per day in Eastern Africa, million

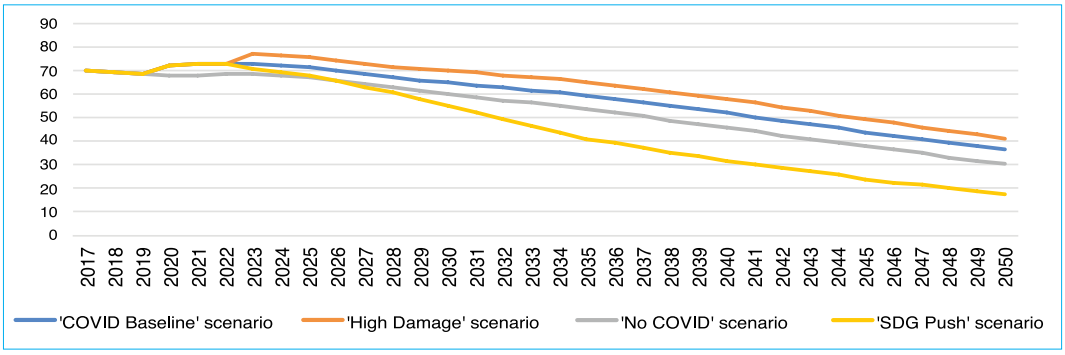


Source: IFs model

As a percentage of the population, the analysis shows that in 2021, the pandemic increased poverty by 2.2 percentage points. A *High Damage* scenario would result to 27.4 percent of the population in the region living on less that US$ 1.90 in 2030 while this would have been 23.6 percent in the absence of Covid.

With respect to gender, the Covid-19 pandemic is projected to further push 4.5 million women into extreme poverty in 2021, further derailing countries' efforts in addressing poverty and empowering women (Figure 7.4). In the medium term, female poverty headcount is projected at 64.8 million in 2030 under the *COVID Baseline* scenario and 69.9 million under the *High Damage* scenario. However, with appropriate policies, an *SDG Push* scenario would lower the number of women in extreme poverty, from 72.7 million in 2021 to 55 million in 2030 and 17.6 million in 2050. In sharp contrast, a *High Damage* scenario would leave 41.2 million women in extreme poverty by 2050.

Figure 7.4: Female poverty headcount in Eastern Africa, million

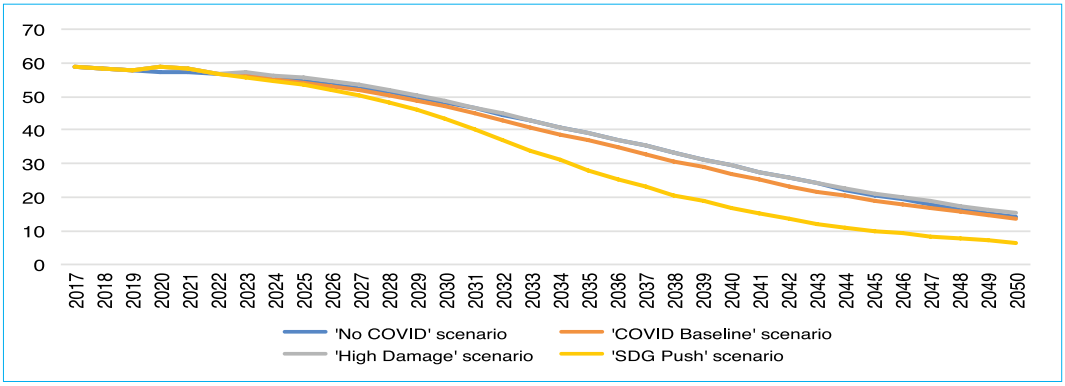


Source: IFs model.

Central Africa

In Central Africa, the percentage of the population living in extreme poverty was estimated at around 58 percent in 2021 across the four scenarios. By 2030, it is projected that an *SDG Push* would reduce poverty to 43.2 percent of the population and 6.4 percent by 2050. In contrast, the *COVID Baseline* scenario that represents the status quo would only result to 46.95 percent of the population living in extreme poverty in 2030 and 13.48 percent by 2050 (Figure 7.5).

Figure 7.5: Poverty <US$ 1.90 per day in Central Africa (percent of population)

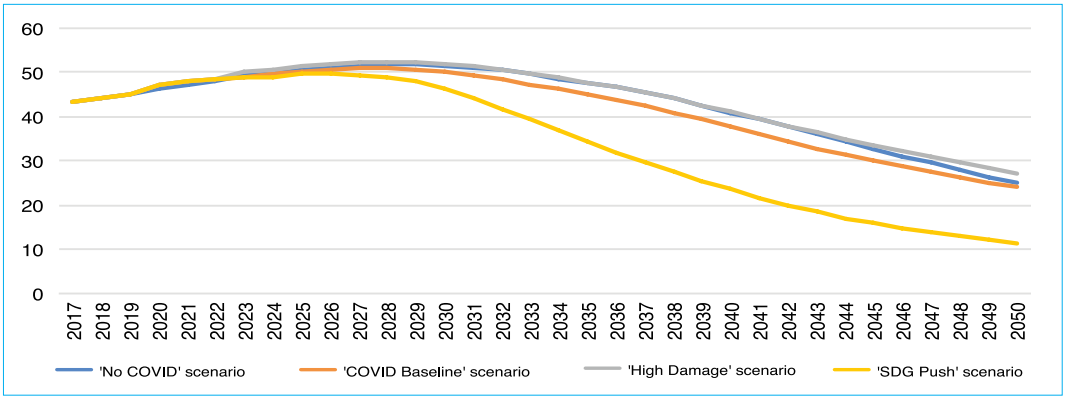


Source: IFs model.

The Covid-19 pandemic pushed 1.7 million people into extreme poverty in 2021 in Central Africa. The number of people living on less than US$ 1.90 per day is expected to increase in the medium term from around 91.1 million in 2021 to 102.3 million by 2030 in all scenarios except the *SDG Push*.

In Central Africa, the pandemic is projected to further push 0.9 million women into extreme poverty in 2021, further derailing countries' efforts in addressing poverty and empowering women (Figure 7.6). In the medium term, female poverty headcount is projected at 50.2 million in 2030 under the *COVID Baseline* scenario and 52.0 million under the *High Damage* scenario. However, with appropriate policies, an *SDG Push* would lower the number of women in extreme poverty, from 48.1 million in 2021 to 46.2 million in 2030 and 11.3 million in 2050.

Figure 7.6: Female poverty headcount in Central Africa, million

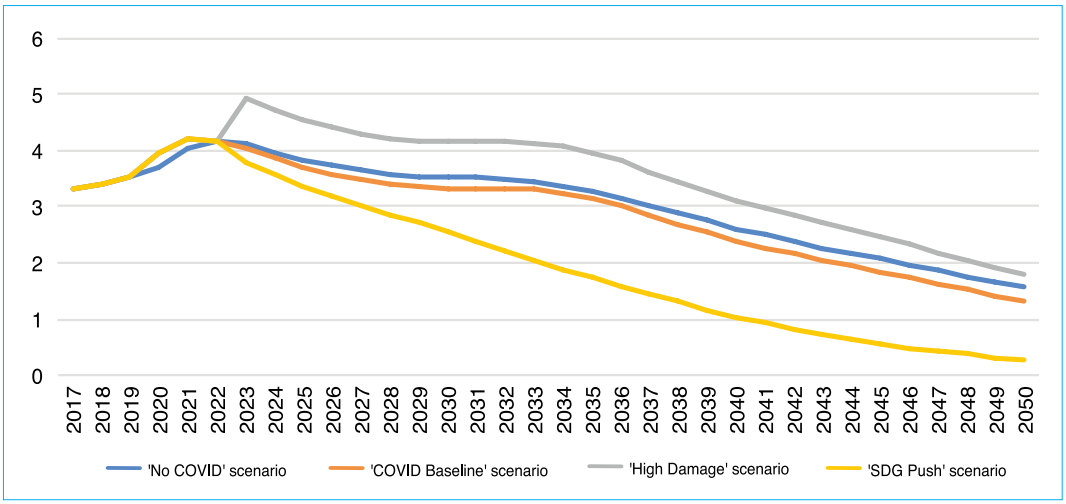


Source: IFs model.

North Africa

Extreme poverty is relatively much lower in North Africa than in other regions in Africa, with 4 percent of the population in 2021 living with less than US$ 1.90 per day (Figure 7.7). Also, the rate of poverty reduction is much slower regardless of the scenario. The ambitious policies of the *SDG Push* could reduce extreme poverty to less than 0.5 percent of the population by 2050.

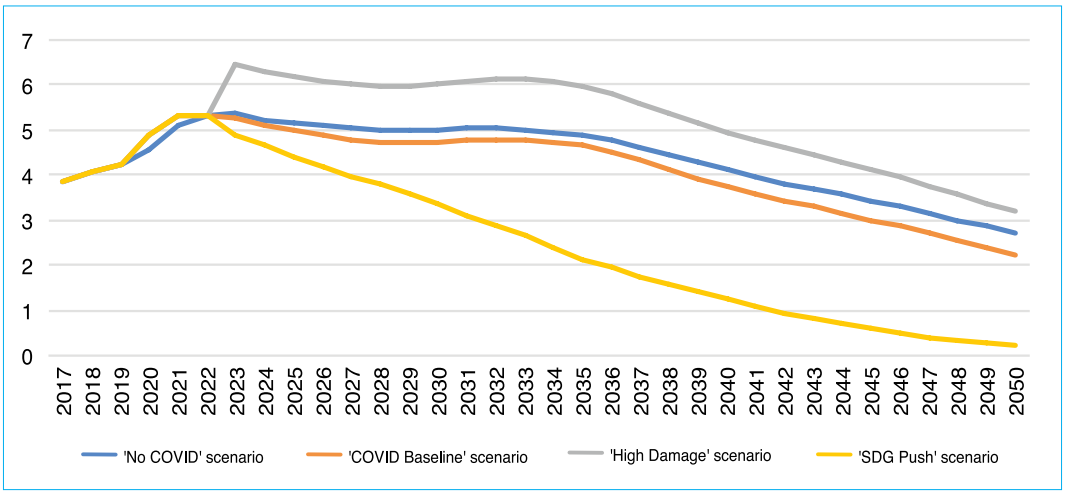
Figure 7.7: Poverty <US$ 1.90 per day in North Africa (percent of population)



Source: IFs model.

The pandemic also disproportionately affected men and women in North Africa. As depicted in Figure 7.8, the number of women pushed into extreme poverty in 2021 increased by 0.2 million. By 2030, the effect of the pandemic on women's poverty would have disappeared in the COVID scenario leaving 4.7 million women in extreme poverty compared to 5.0 million in the *No COVID* scenario.

Figure 7.8: Female Poverty Headcount in North Africa, million

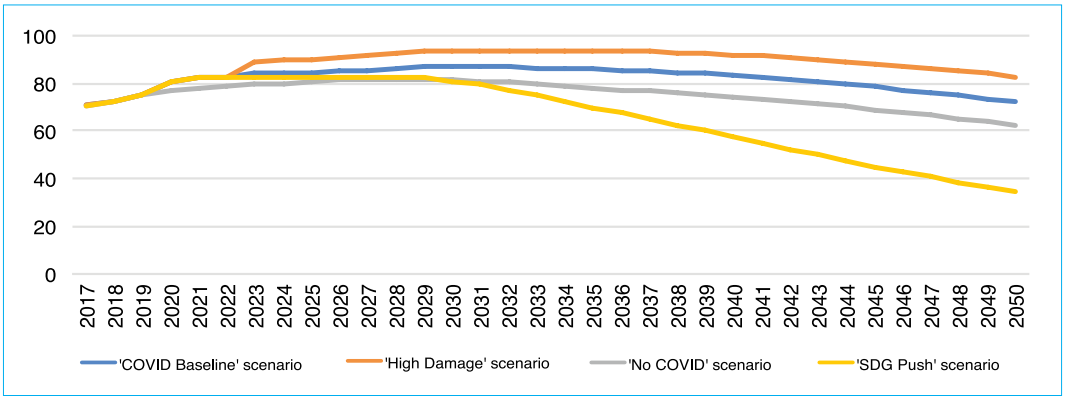


Source: IFs model.

Southern Africa

Figure 7.9 shows that in Southern Africa, the Covid-19 pandemic pushed 4.24 million people into extreme poverty in 2021, up from 3.34 million people in 2020. In the medium term, the number of poor people is projected to increase to 87.4 million by 2030 under the *COVID Baseline* scenario, which is significantly higher than 81.4 million people under the *No COVID* scenario.

Figure 7.9: Poverty <US$ 1.90 per day in Southern Africa, million

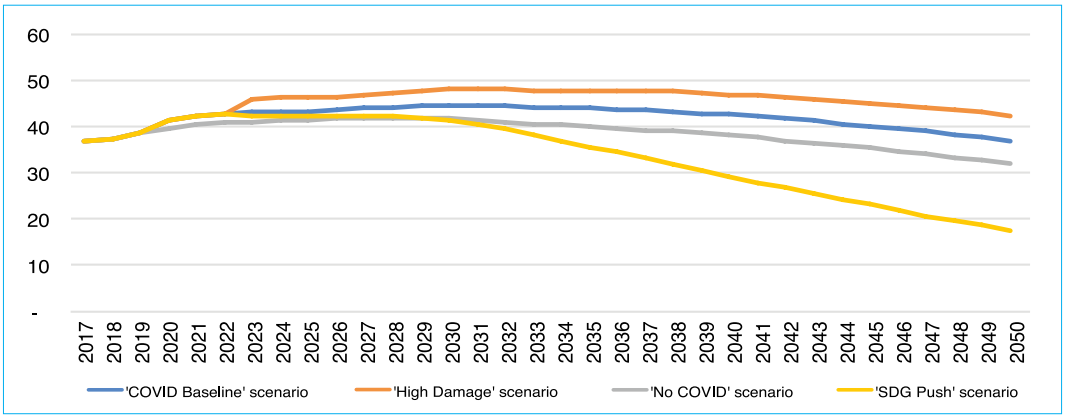


Source: IFs model.

In 2021, the Covid-19 pandemic led to a 2.3 percentage point increase in the proportion of people living in extreme poverty in Southern Africa, to 43.8 percent of the population compared to a world with no Covid. In the medium term, an *SDG Push* would lower the share of the poor to 35.6 percent in 2030 and 10.7 percent by 2050. This is in contrast with the *COVID Baseline* scenario that would leave 38.4 percent of the population poor by 2030 and 22.2 percent by 2050.

The pandemic also disproportionately affected men and women in the region and as depicted in the number of women pushed into extreme poverty in 2021 increased by 2.2 million. By 2030, it is projected that the pandemic will push a total of 44.8 million women into poverty while a *High Damage* scenario would leave 48.1 million women in extreme poverty. However, an *SDG Push* would significantly contribute to reducing gendered poverty, leaving 41.5 million women in poverty by 2030 and 17.5 million by 2050.

Figure 7.10: Female poverty headcount in Southern Africa, million

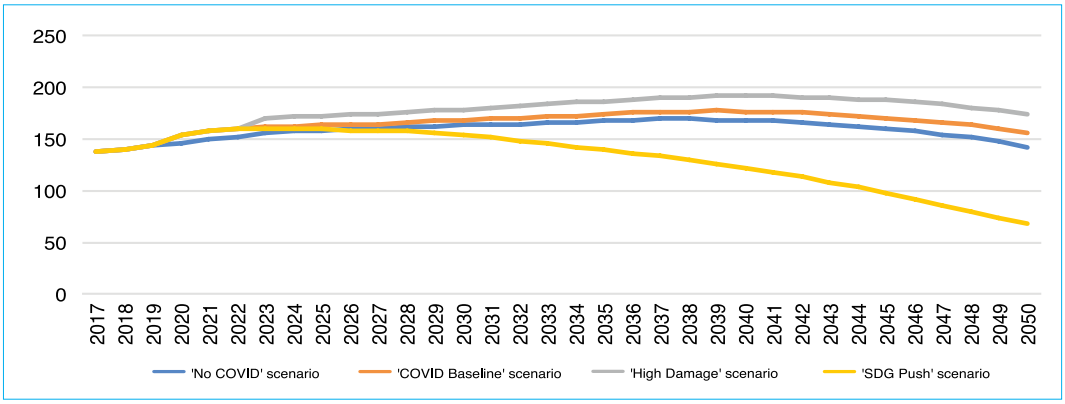


Source: IFs model.

West Africa

By 2030, the number of people living in extreme poverty in West Africa is projected to increase by 16.7 million under the *No COVID* scenario and 24 million under the *High Damage* scenario (Figure 7.11) compared to 2020 figures. Covid will have pushed 8.2 million people into poverty in West Africa in 2021. The pandemic will change the trajectory of poverty in the region and the percentage of the population below the extreme poverty threshold will increase from 36.6 percent in 2020 under the *No COVID* scenario to 38.6 percent under the *COVID Baseline* scenario. The reduction in the percentage of the poor is considerably slower, estimated at around 31 percent in 2030. The *SDG Push* scenario is projected to reduce poverty by 8 percent by 2050. The *SDG Push* scenario proposes targeted interventions in *inclusive green growth*, including integrated policy choices in *governance, social protection, green economy, and digitalization*. It represents an ambitious but realistic effort that can mitigate the setback due to the pandemic and put countries back on a faster track towards achieving the 2030 Agenda.

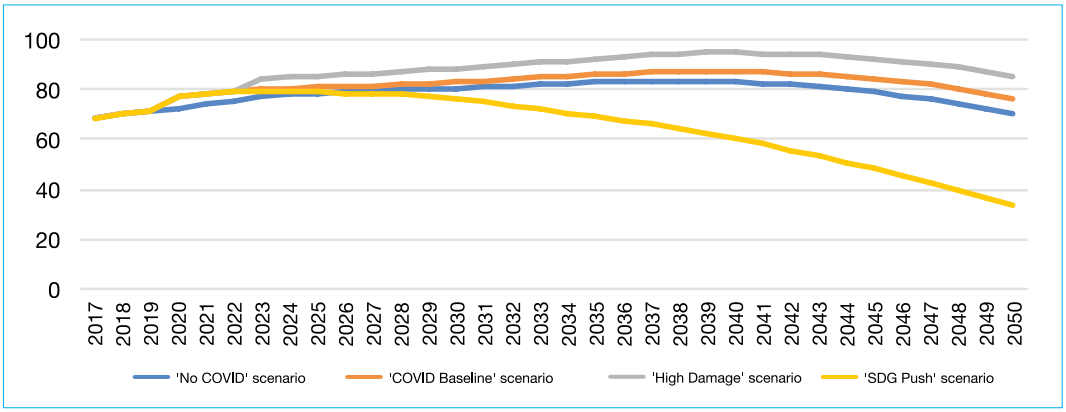
Figure 7.11: Poverty <US$ 1.90 per day in West Africa, million



Source: IFs model.

The pandemic has also affected men and women differently and as depicted in, the number of women pushed into extreme poverty in 2021 increased by 4.09 million. By 2030, around 83 million women will still be poor, among them around 2.7 million due to the pandemic and 7.7 million in the High Damage scenario Figure 7.12.

Figure 7.12: Female Poverty Headcount in West Africa, million



Source: IFs model.

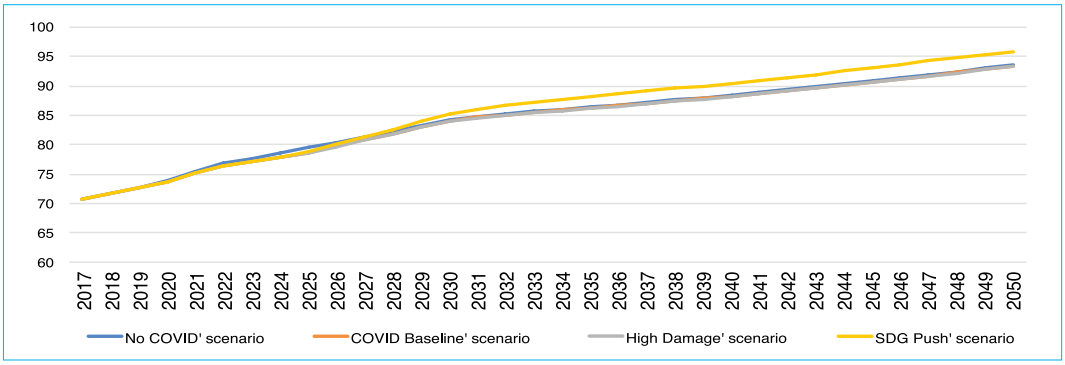
7.4 Covid-19 impact on the Education Goal (SDG 4)

SDG 4 focuses on *"ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all"*. The IFs model analyses this goal using primary education and secondary education completion rates. The immediate effects of the Covid-19 pandemic on education in some countries included school closures due to the inability to set up long distance education systems. Lack of access to electricity, internet connection, computers or tablets, have been among the obstacles for alternative learning system amid school closures. In countries such as Côte d'Ivoire, the Gambia, Guinea-Bissau, Lesotho, Mauritania, and Sudan, fewer than 10 percent of the poorest households have access to electricity (European Commission, 2020). Some African countries have used national televisions to broadcast lessons and encourage the continuity of educating school going children. Even in high-income countries, inequalities in access to learning increased for those already socially and educationally disadvantaged, who were unable to effectively participate via virtual means.

There exist limited data on the child-year losses of schooling at the country level. Available estimates by the Azevedo et al. (2020) show that approximately 1.6 million students were away from school during the pandemic. The analysis also shows that school closure of more than five months, while considering the quality of education, reduces the years of life-time schooling by 0.6, reducing the global average from 7.9 to 7.3. Other effects could include increasing global share of students acquiring minimum proficiency from 40 to 50 percent, increasing school dropouts by 7 million students, especially for girls and marginalized groups. This would lead to a global lifetime loss of US$ 10 trillion in earnings, which is an equivalent of one tenth of a year of GDP.

In addition to the complications resulting from unavailability of country-specific estimates of COVID's impact on enrolments, the IFs system is not structured to introduce exogenously such values in the pandemic years and then project educational recovery or lack thereof in subsequent years. Thus, none of the scenarios include educational impacts from the Covid-19 pandemic as scenario assumptions. Instead, the IFs structure assists in exploring the immediate and longer-term consequences for educational outcomes in the face of the estimated GDP and mortality impacts of the pandemic years.

Figure 7.13: Primary education gross completion rate in Africa (%)



Source: IFs model.

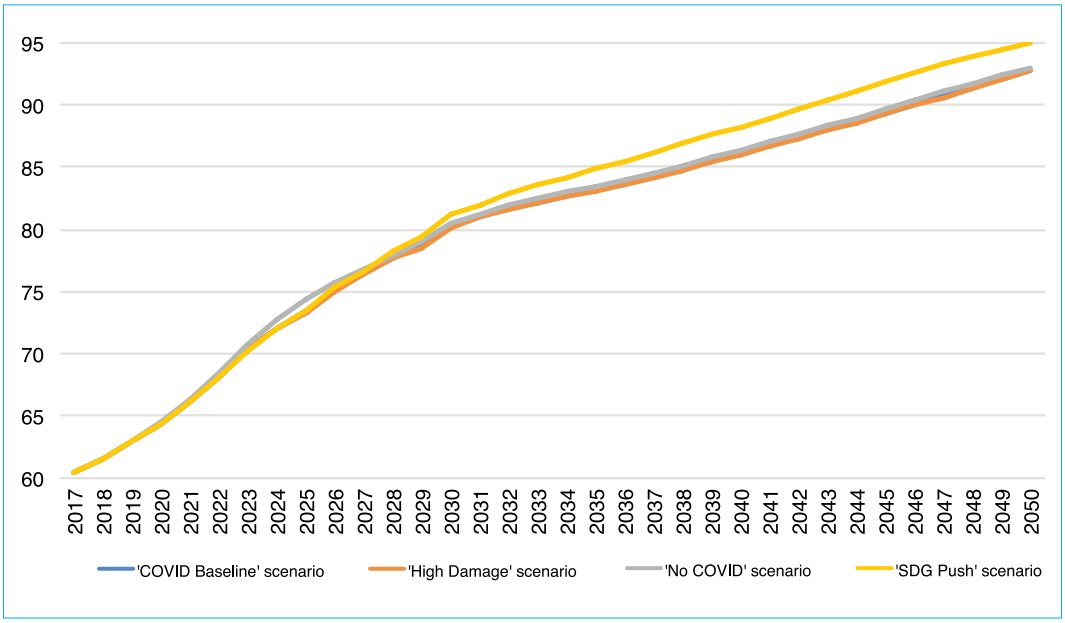
Primary education completion rates in Africa have registered a positive trend over the last decade (Figure 7.13). In the *No COVID* scenario, completion rates would have marginally increased from 75.3 percent in 2021 to 84.2 percent in 2030, before reaching 93.5 percent by 2050. The *COVID*

baseline scenario however shows that the pandemic did not significantly affect completion rates. With deliberate efforts to boost primary level education outcomes through an *SDG Push*, completion rates could increase from 75.1 percent in 2021 to 85.2 percent in 2030 and 95.8 percent by 2050. An important issue is to ensure that completion rates is narrowed across gender, as girls' enrolment rates have typically lagged those of boys across many African countries (UNDESA, 2022).

Eastern Africa

Primary school gross completion rate in the region was also not affected by the pandemic despite multiple government restrictions and school closure. In 2021, completion rates were 66 percent across all the four scenarios and an *SDG Push* would see completion rates reach 81 percent in 2030 and 100 percent by 2050, compared to the *COVID Baseline* scenario (Figure 7.14). There is however significant variation among countries, with Kenya might reach the target of 100 percent by 2024 under an *SDG Push* scenario, Uganda will only attain 73 percent by 2024 and 96 percent by 2050. To accelerate primary completion rates, countries should focus on legal aspects that make primary education free and compulsory, address household barriers to education and improve schooling infrastructure such as teacher training, curriculum change and the provision of free textbooks and learning materials (Sarwar et al. 2021).

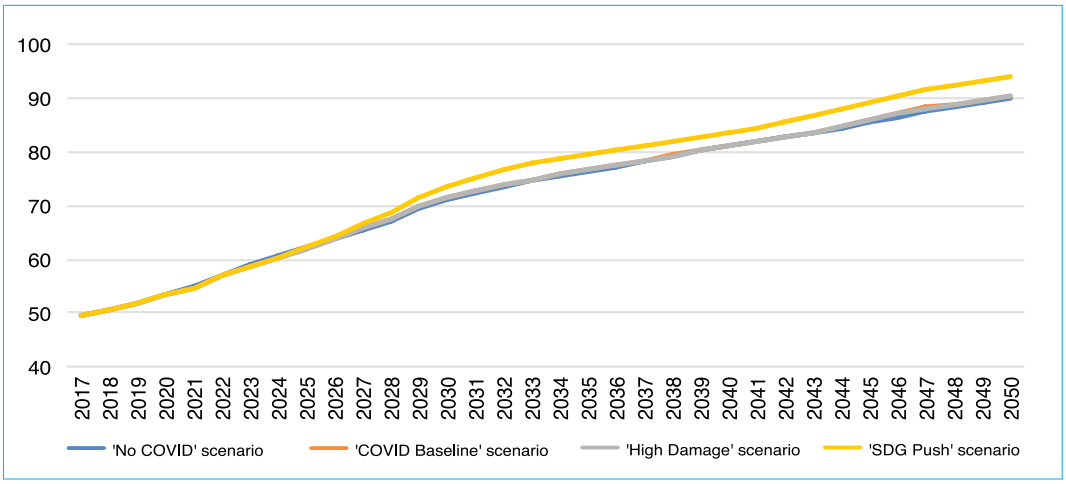
Figure 7.14: Primary education gross completion rate in Eastern Africa (%)



Source: IFs model.

> The analysis also shows that school closure of more than five months, while considering the quality of education, reduces the years of life-time schooling by 0.6, reducing the global average from 7.9 to 7.3.

Figure 7.15: Primary education completion rate in Central Africa (%)

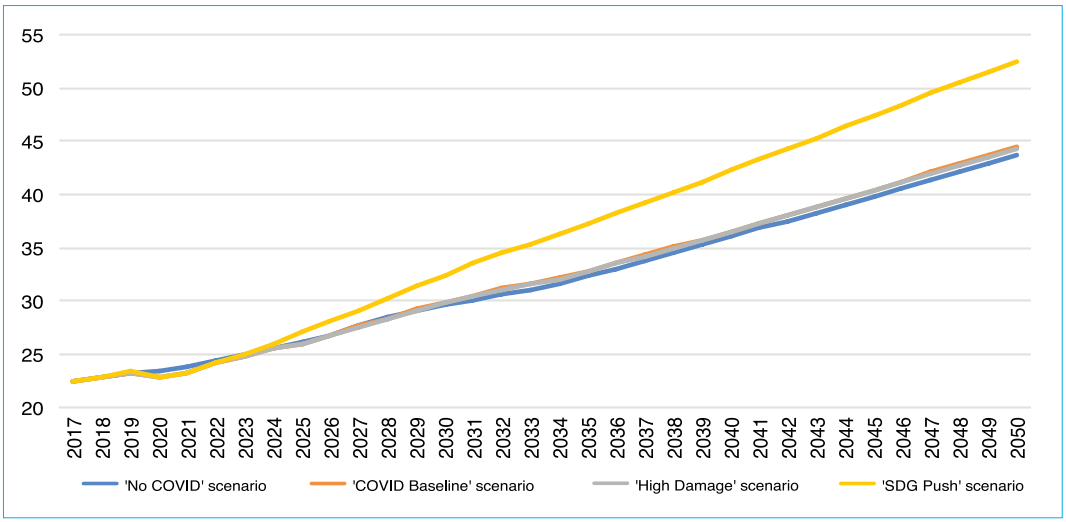


Source: IFs model.

Central Africa

In Central Africa, achieving the SDG 4 targets is much more challenging, with primary education completion rates estimated at 73 percent in 2030 and 93 percent in 2050 under the *SDG Push* scenario (Figure 7.15). For secondary education, the completion rate is projected at 32 percent in 2030 and 52 percent in 2050 under the *SDG Push* scenario (Figure 7.16).

Figure 7.16: Secondary education completion rate in Central Africa (%)

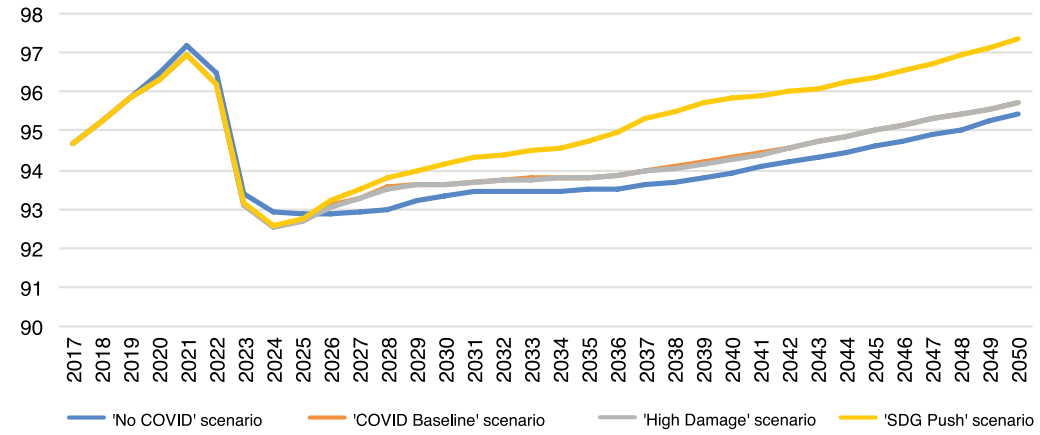


Source: IFs model.

North Africa

In North Africa, the short-term impact of the pandemic on primary school completion rates seems negligible irrespective of the scenario. However, by 2030, a sustained effort seems necessary to reverse the trend and cross the last line to achieve a 100 percent completion rate (Figure 7.17).

Figure 7.17: Primary education completion rate in North Africa (%)

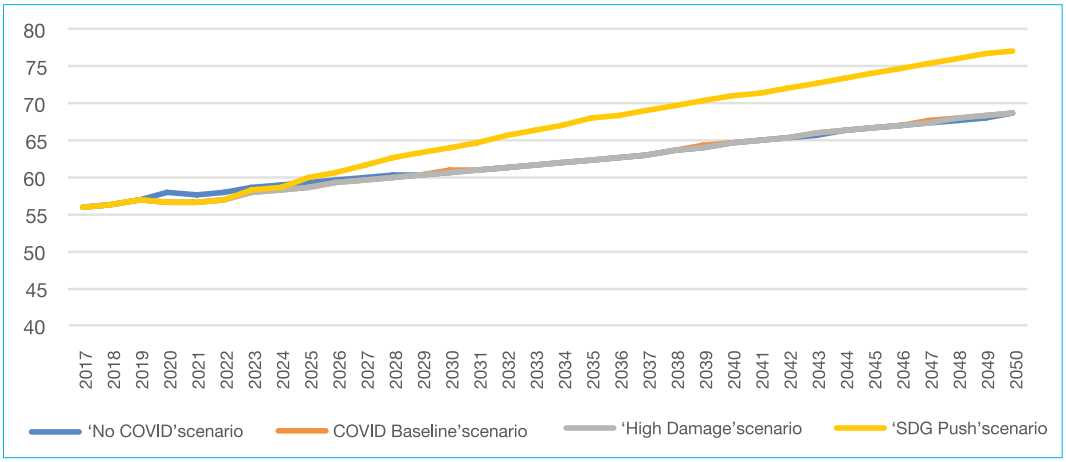


Source: IFs model.

While secondary school level completion rates in North Africa are higher than other African regions, they remain far below the targets set for 2030. Barely 60 percent of the population will have completed secondary education irrespective of the scenario by 2030 (Figure 7.18). With proactive educational policies that underpin the *SDG Push,* nearly 77 percent of the population will complete secondary education by 2050.

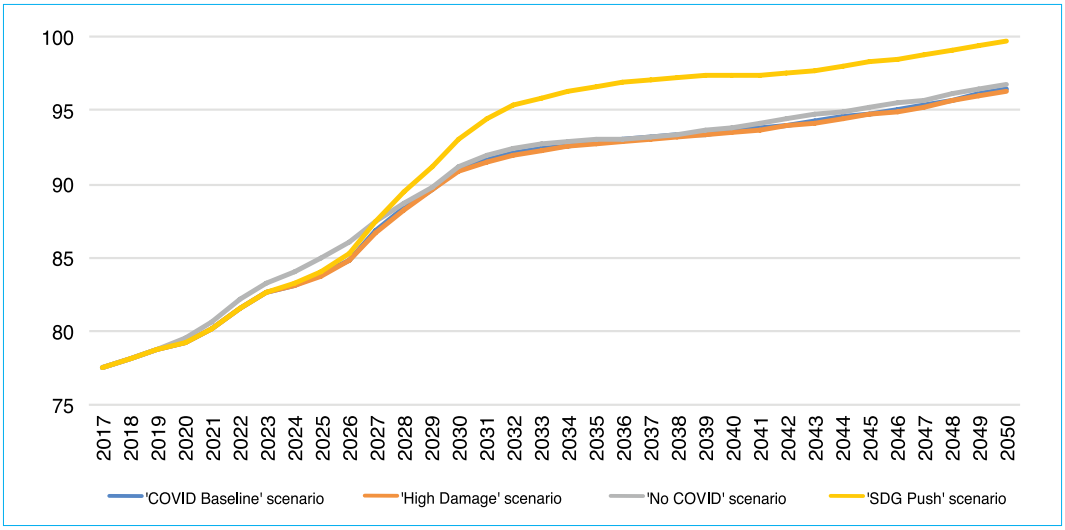
> With proactive educational policies that underpin the SDG Push, nearly 77 % of the population will complete secondary education by 2050.

Figure 7.18: Secondary education completion rate in North Africa (%)



Source: IFs model.

Figure 7.19: Primary education gross completion rate in Southern Africa (%)

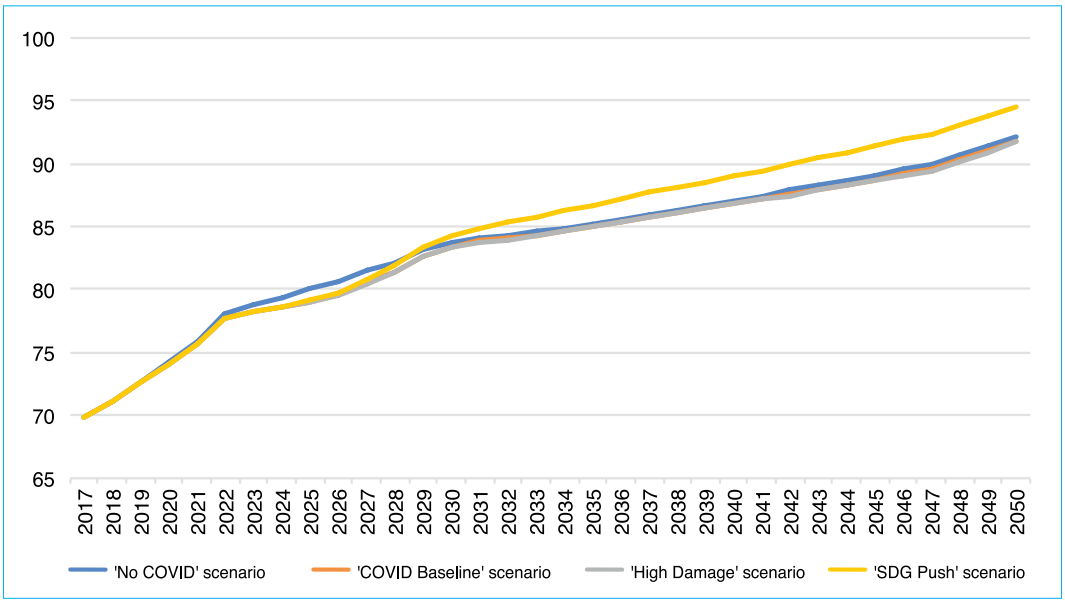


Source: IFs model.

Southern Africa

In the Southern Africa region, primary level completion rate slightly increased from 79 percent in 2020 to 80 percent in 2021, irrespective of the scenario under analysis (Figure 7.19). In the medium term, an *SDG Push* would lead to 13.75 percentage point increase in completion rates by 2030, with the rate reaching 93 percent by 2030 and 99.7 percent by 2050. Most countries in the region are projected to attain the target of 100 percent by 2050.

Figure 7.20: Primary education completion rate in West Africa (%)

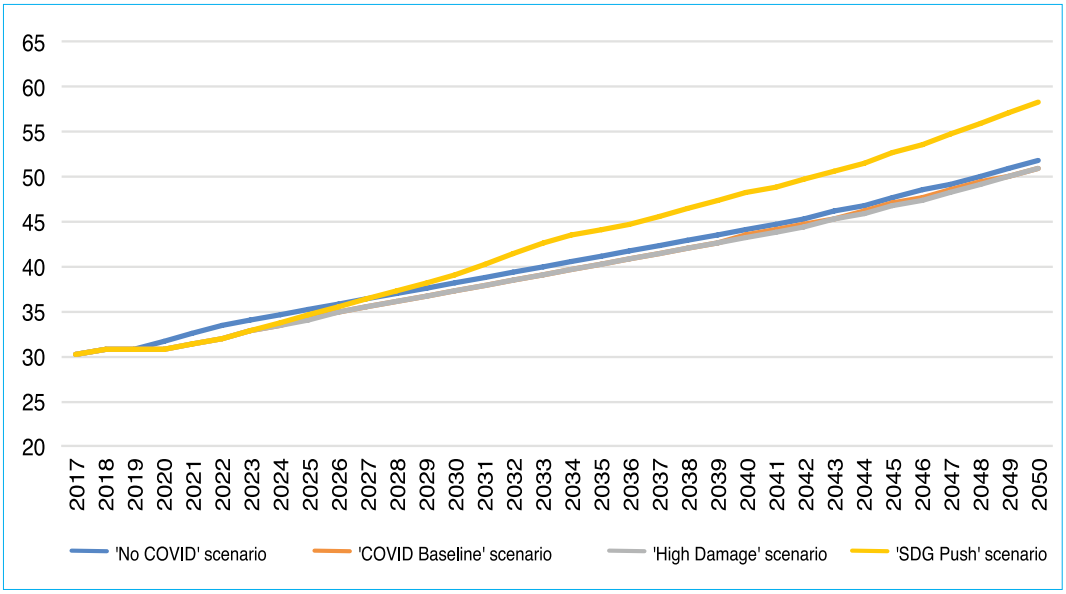


Source: IFs model.

West Africa

In West Africa, the pandemic did not have much effect on primary and secondary education completion rates SDG 4 targets seemed already out of reach during the pre-Covid-19 period and they will only slightly improve even in an *SDG Push* scenario that encompasses more targeted education policies. Nearly 83 percent of the adult will have completed their primary cycle in 2030, while in 2050 the completion rate will be 94 percent under the *SDG Push* scenario (Figure 7.20). The targets at the secondary level are even further out of reach, with completion rates estimated at 39 percent by 2030 and 58 percent by 2050 (Figure 7.21).

Figure 7.21: Secondary education completion rate in West Africa (%)



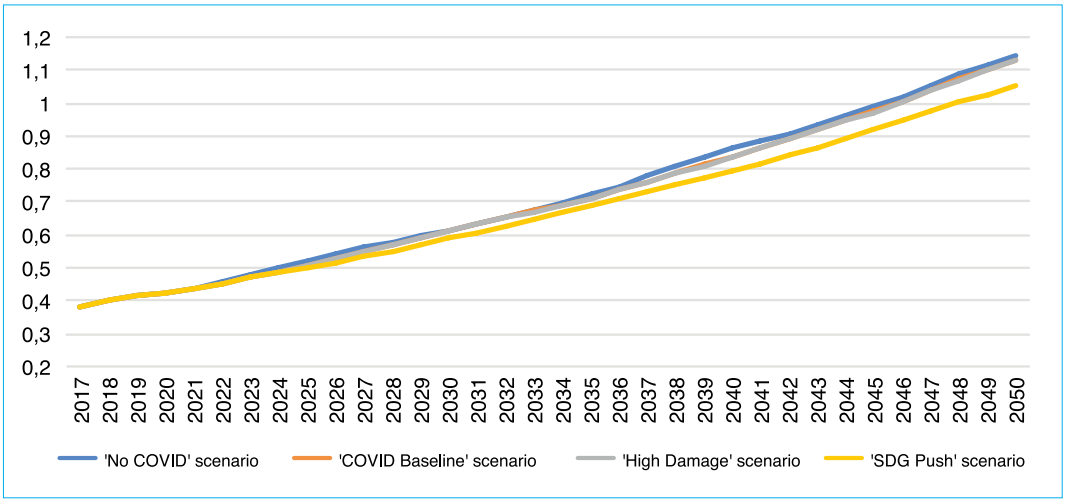
Source: IFs model.

Overall, the global push to universal completion of equitable and high-quality primary and secondary education was not on track prior to the pandemic. By 2050, most of countries will have attained universal primary education. Although they are unlikely to reach the target of achieving a 90 percent completion rate for upper secondary education. If no offsetting actions are taken, the Covid-19 pandemic can substantially set back the progress attained to date and increase missed education-years by hundreds of millions. An *SDG Push* can not only offset the impacts of Covid-19 pandemic, but it may help millions of additional African children obtain upper-secondary education every year by 2030 and 40 million by 2050. This opportunity should not be lost.

7.5 Covid 19 impact on the Climate Action Goal (SDG 13)

The impact of the pandemic on carbon emission in African region remained negligible, with carbon emissions in 2021 estimated to decrease from 0.440 billion tons in the 'No COVID' scenario to 0.434 billion tons across all the other scenarios (Figure 7.22).

Figure 7.22: Carbon emissions in Africa (billion tons)

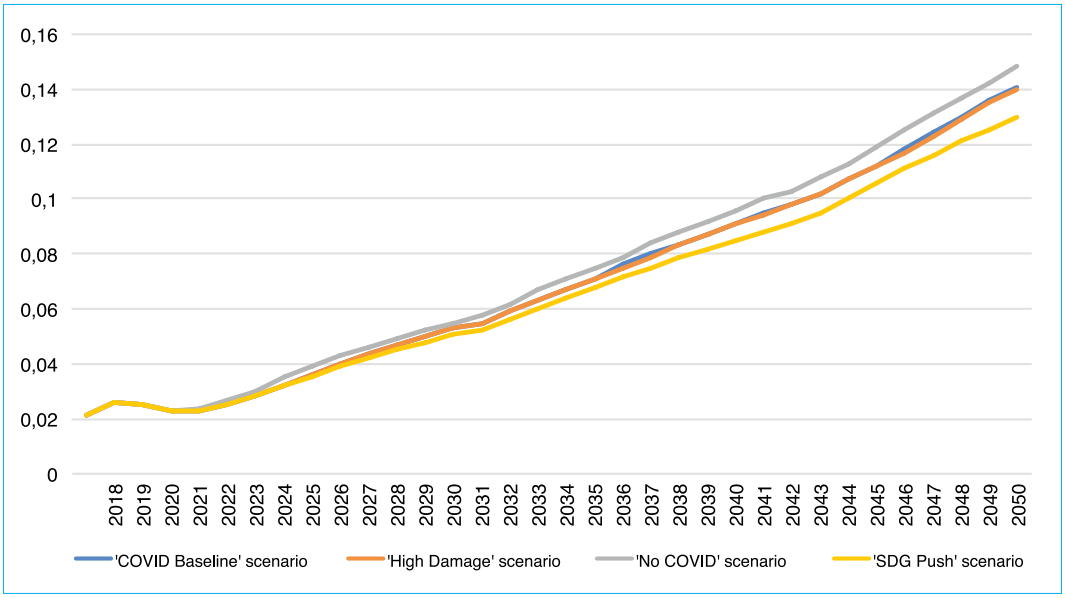


Source: IFs model.

Eastern Africa

The impact of the pandemic on carbon emission in the East African region remained negligible, with carbon emissions in 2021 estimated to be 0.023 billion tons across all the four scenarios (Figure 7.23). With the resumption of economic activities and industrial production, carbon emission under the *COVID Baseline* scenario is projected to increase to 0.053 billion tons in 2030 and 0.141 billion tons in 2050 while with climate-smart policies, an *SDG Push* would lower carbon emissions to 0.052 billion tons in 2030 and 0.13 billion tons by 2050.

Figure 7.23: Carbon emissions in Eastern Africa (billion tons)

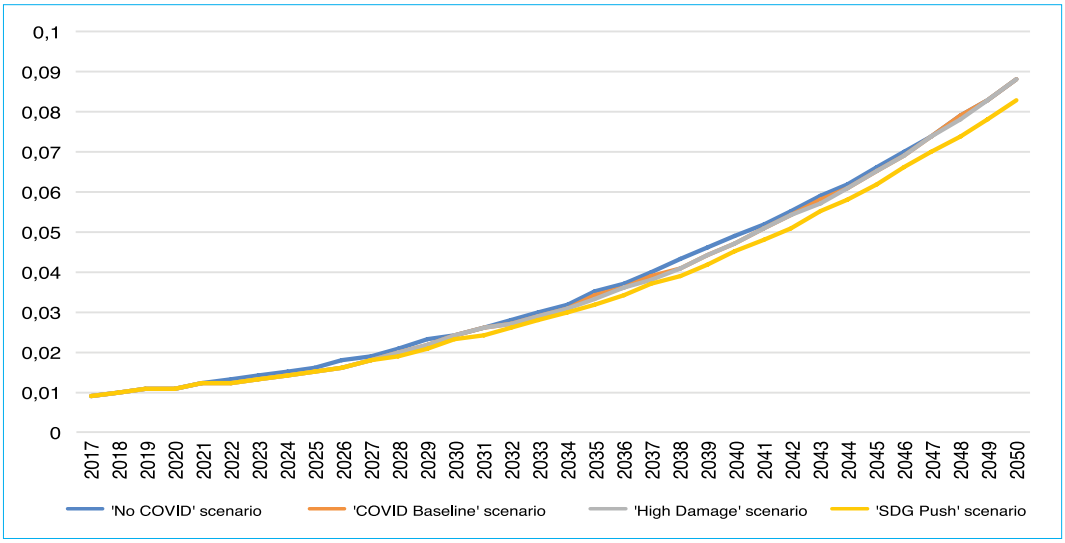


Source: IFs model.

Central Africa

In Central Africa, carbon emission has not been affected during the peak of the Covid-19 pandemic in 2021 (Figure 7.24). In the medium term, and with the recovery of economies, carbon emission under the *COVID Baseline* scenario is projected to increase to 0.024 billion tons by 2030 and 0.088 billion tons by 2050.

Figure 7.24: Carbon emissions in Central Africa (billion tons)

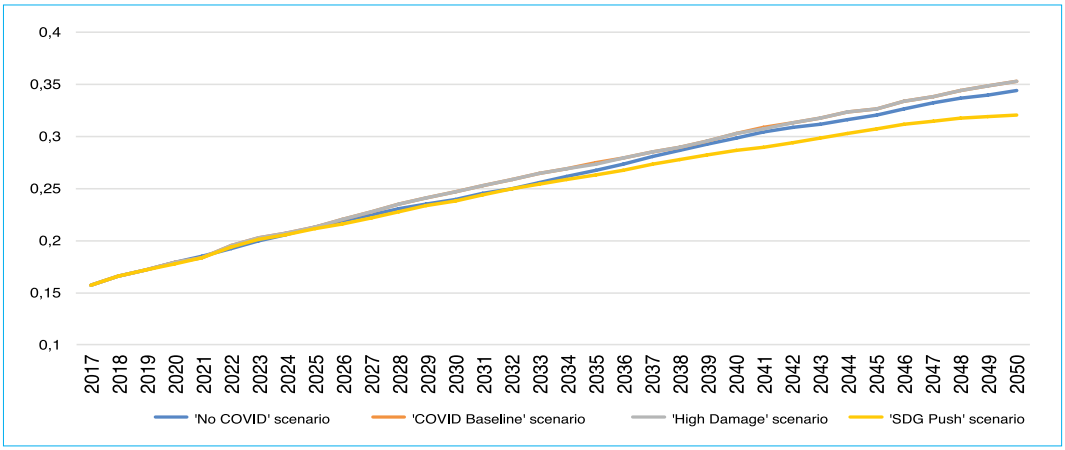


Source: IFs model.

North Africa

North Africa has the highest level of carbon emission among Africa's sub-region. However, the impact of the pandemic on carbon emission in North Africa remained negligible, with carbon emissions in 2021 estimated at 0.185 billion tons in the *No Covid* scenario compared the 0.183 billion tons across all the other scenarios (Figure 7.25).

Figure 7.25: Carbon emissions in North Africa (billion tons)

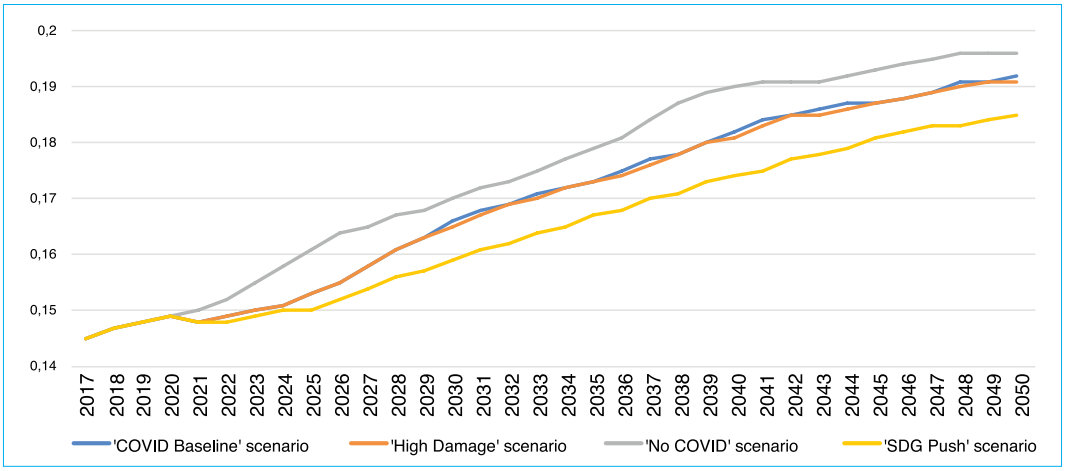


Source: IFs model.

Southern Africa

Carbon emission during the peak of the Covid-19 pandemic slightly declined from 0.149 billion tons in 2020 to 0.148 billion tons in 2021, consistent with reduced economic activity and industrial production in most countries (Figure 7.26). In the medium term, and with the resumption and reopening of economies, carbon emission under the *COVID Baseline* scenario is projected to increase to 0.166 billion tons by 2030 and 0.192 billion tons by 2050. In sharp contrast, adopting climate-smart policies through an *SDG Push* would see carbon emissions decline by 0.006 billion tons in both 2030 and 2050 relative to a *High Damage* scenario.

Figure 7.26: Carbon emissions in Southern Africa (billion tons)

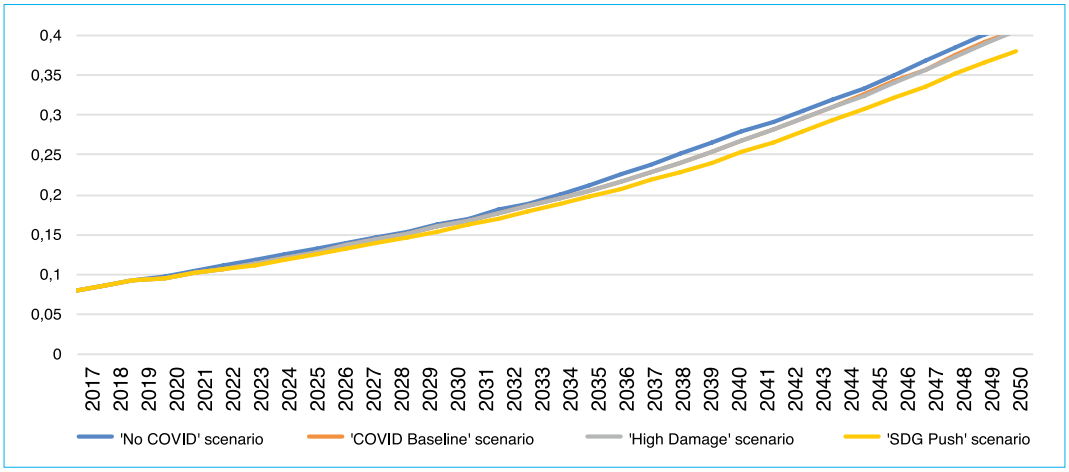


Source: IFs model.

West Africa

The impact of the pandemic on carbon emission in West Africa remained negligible, with carbon emissions in 2021 estimated to be 0.073 billion tons across all the four scenarios (Figure 7.27).

Figure 7.27: Carbon emissions in West Africa (billion tons)



Source: IFs model.

7.6 Covid-19 impact on Access affordable and clean Energy (SDG 7)

At the regional level, electrification in Africa has been on a positive trajectory and is projected to increase from 54 percent in 2021 to 60 percent in 2030 and 79.8 percent by 2050 under the *COVID Baseline* scenario (Figure 7.28). However, an *SDG Push* that targets the provision of electricity would see access increase to 76.5 percent by 2030 and 92.1 percent by 2050. However, rural electrification lags behind that of urban areas where in 2021, only 36.7 percent of the population had access (Figure 7.29). An *SDG Push* that targets rural electrification would see the percentage of rural people with access to electricity increase to 66.3 percent by 2030 and 91.3 percent by 2050.

Figure 7.28: Total population with access to electricity in Africa, (%)

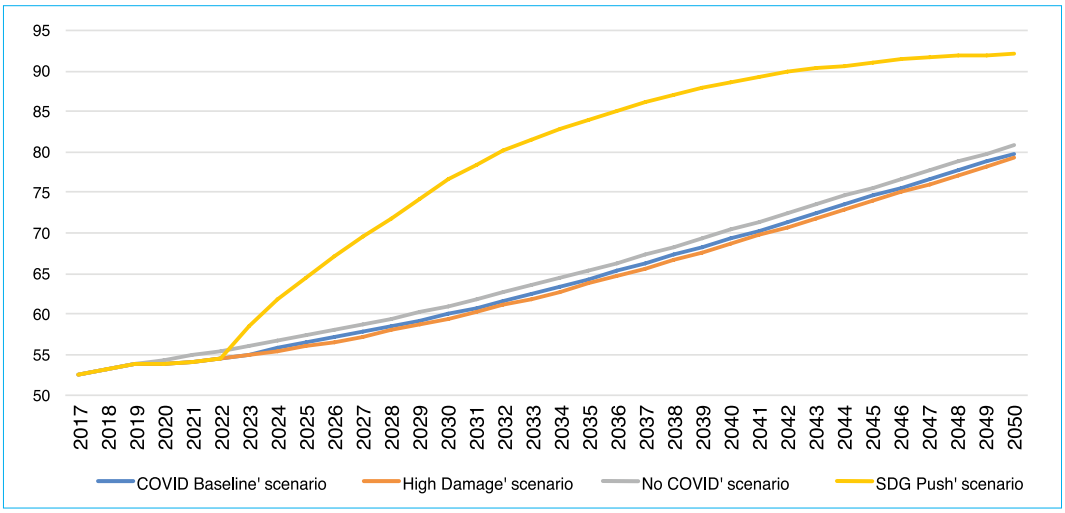
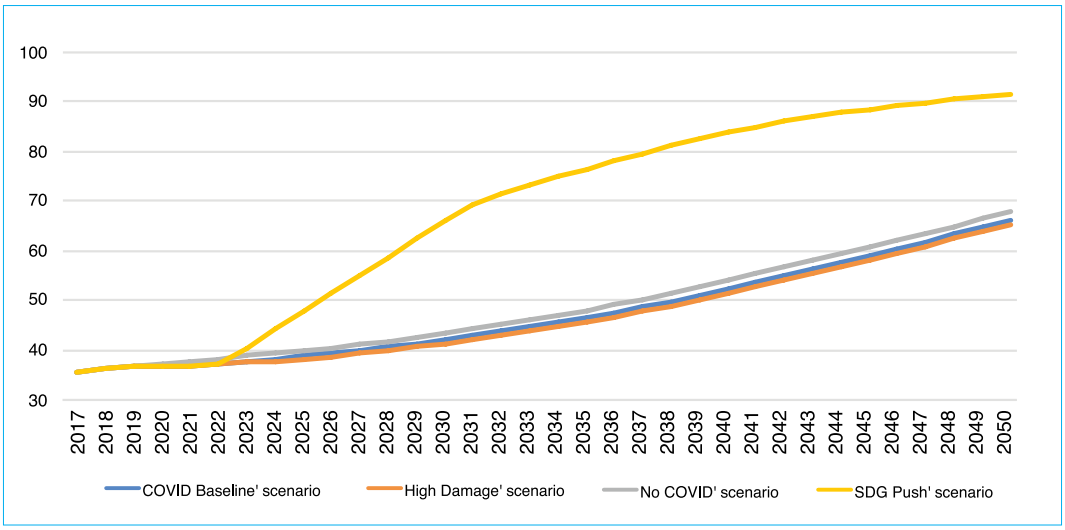


Figure 7.29: Total Population with access to electricity in rural Africa, (%)

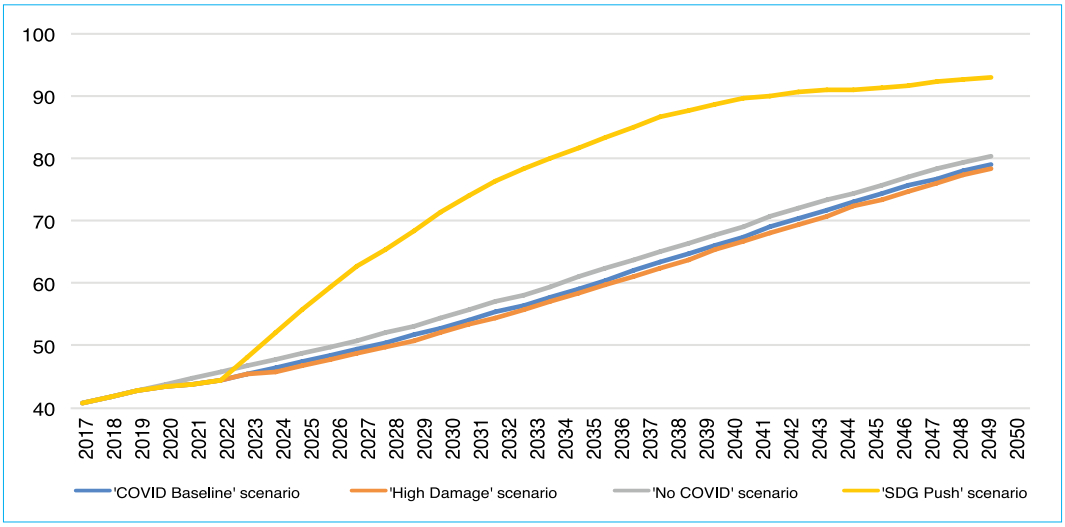


Source: IFs model.

Eastern Africa

The share of population with access to electricity in Eastern Africa region continued to increase over time, from 43 percent in 2020 to 44 percent in 2021, with little variation across the different scenarios (Figure 7.30).

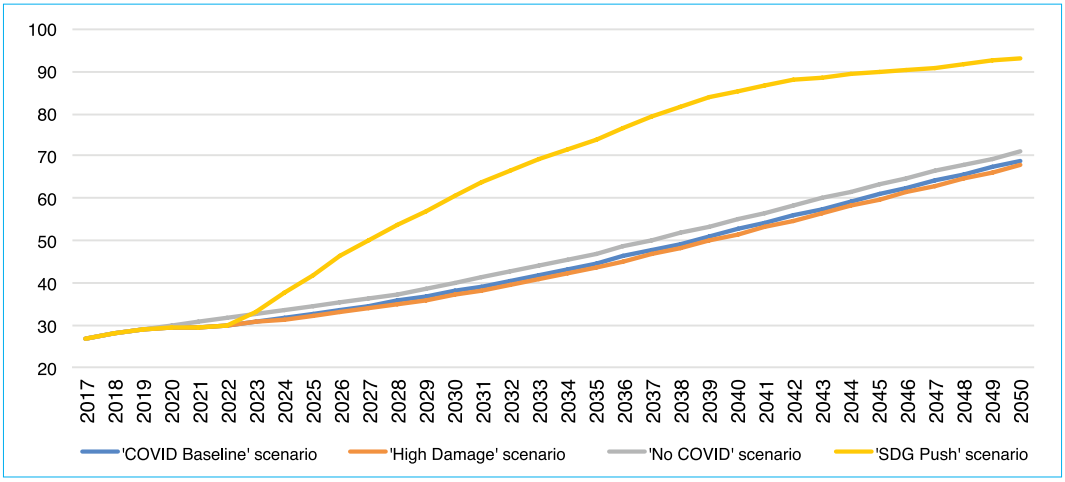
Figure 7.30: Total Population with access to electricity in Eastern Africa, (%)



Source: IFs model.

There is a significant difference in access to electricity between urban and rural areas. In 2021, only 30 percent of the rural population had access to electricity, compared to 80 percent of the urban population. To close this electricity gap, an *SDG Push* would double the share of the population with access to electricity in rural areas from 30 percent registered in 2021 to 60 percent by 2030 and 93.3 percent by 2050 (Figure 7.31).

Figure 7.31: Rural Population with access to electricity in Eastern Africa (%)

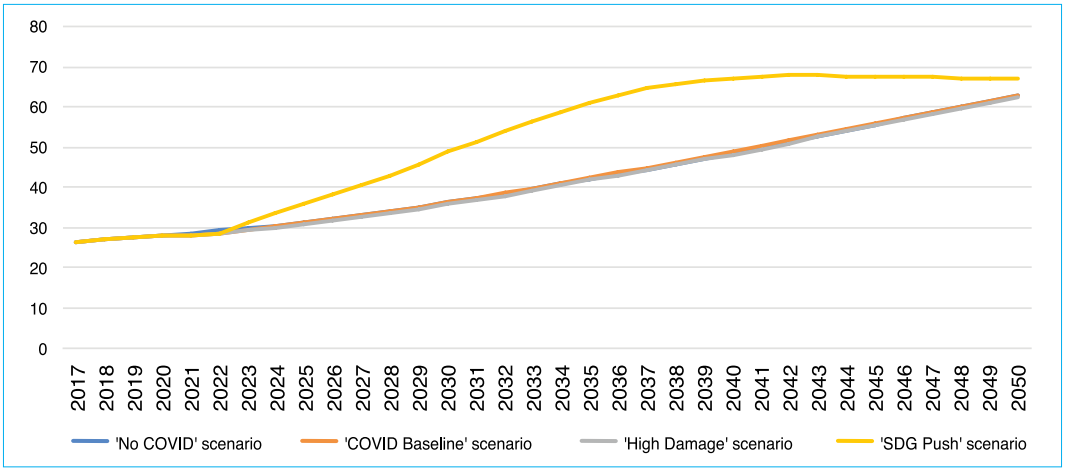


Source: IFs model.

Central Africa

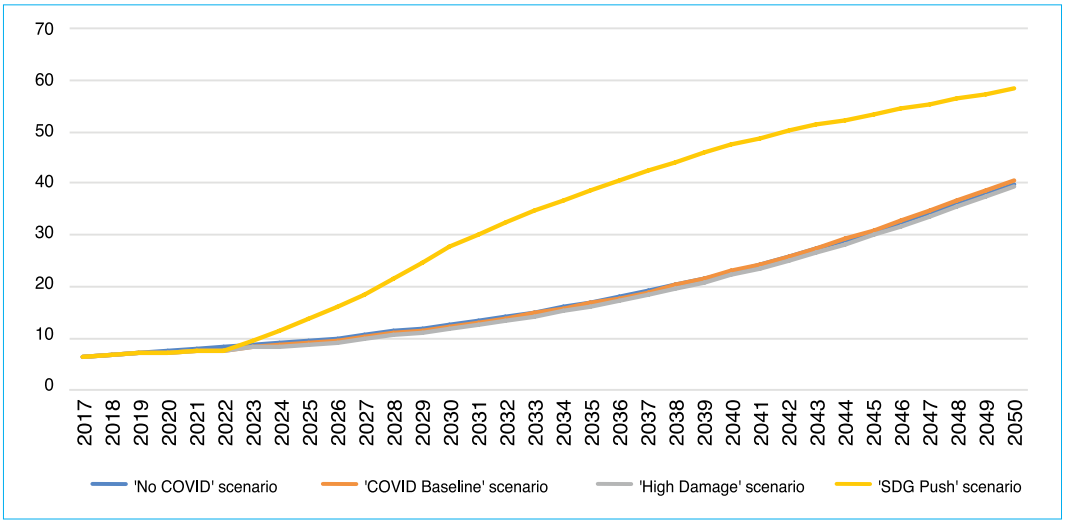
Central Africa has the lowest percentage of population with electricity among the African sub-regions, estimated at around 28.7 percent in 2021 irrespective of the scenario (Figure 7.32). The variation between urban and rural access to electricity is also the largest across the continent, with rural areas in 2021 having a 7.8 percent access compared to 53 percent in urban areas (Figure 7.33). The region requires proactive policies that can boost the provision of electricity, and an *SDG Push* would allow 48.7 percent of the population access to electricity by 2030, compared to 36.2 percent under the *COVID Baseline* and 35.7 percent under the *High Damage* scenario. In the long term, an *SDG Push* would increase electricity access to 66.8 percent of the population by 2050, compared to 62.3 percent under the *High Damage* scenario.

Figure 7.32: Total population with access to electricity in Central Africa (%)



Source: IFs model.

Figure 7.33: Rural population with access to electricity in Central Africa (%)

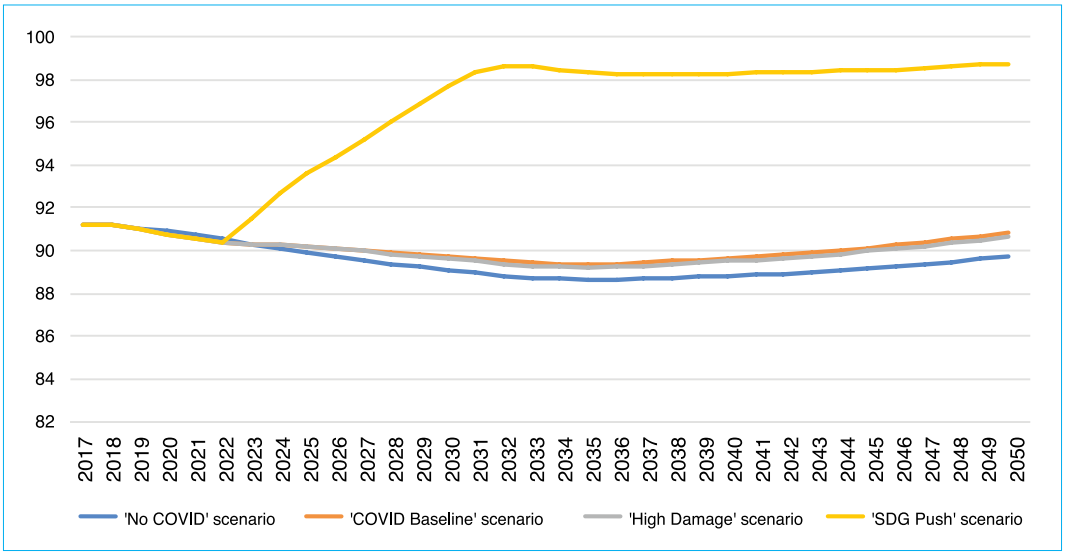


Source: IFs model.

North Africa

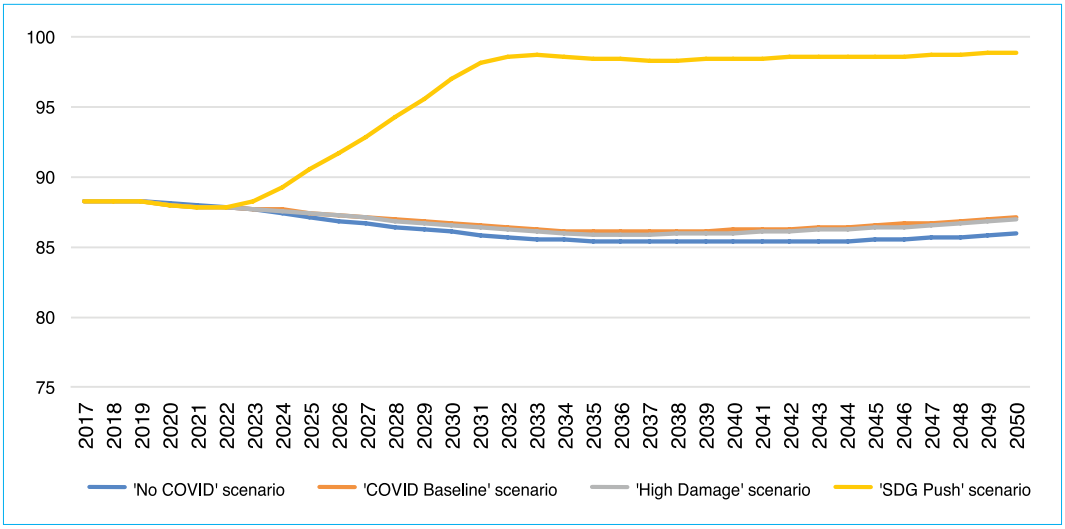
North Africa has the highest access to electricity on the continent, estimated at 90.7 percent in 2021 (Figure 7.34), although the proportion of the rural population is slightly lower (88 percent). The pandemic led to a slight decrease of 0.2 percent in the access to electricity between the *No COVID* and the *COVID Baseline* scenarios in 2021. The SDG target to increase access to electricity could be reached by 2030 with concerted effort underpinned by the *SDG Push* (98.7 percent). The main policy efforts should target addressing the rural-urban divide (Figure 7.35).

Figure 7.34: Total population with access to electricity in North Africa (%)



Source: IFs model.

Figure 7.35: Rural population with access to electricity in North Africa (%)

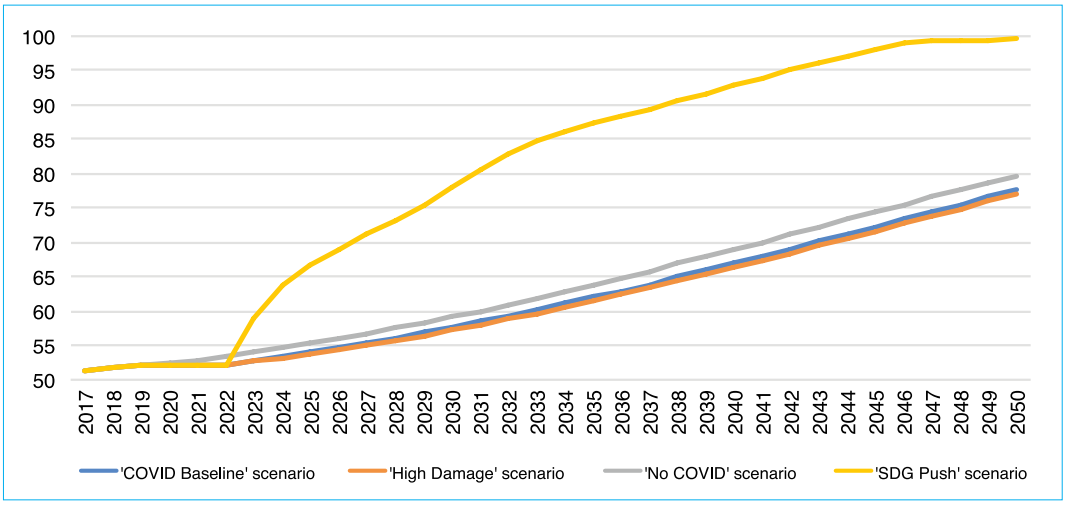


Source: IFs model.

Southern Africa

Access to electricity in Southern Africa remains a challenge, and only 52 percent of the population in 2020 and 2021 had access to electricity (Figure 7.36). Reversing this trend necessitates an *SDG Push*, which is projected to increase electricity access to 78 percent of the population by 2030 and 99.5 percent of the population by 2050. Without concerted efforts, the *COVID Baseline* scenario would only leave 57.7 percent of the population with access to electricity by 2030 and 77.7 percent by 2050.

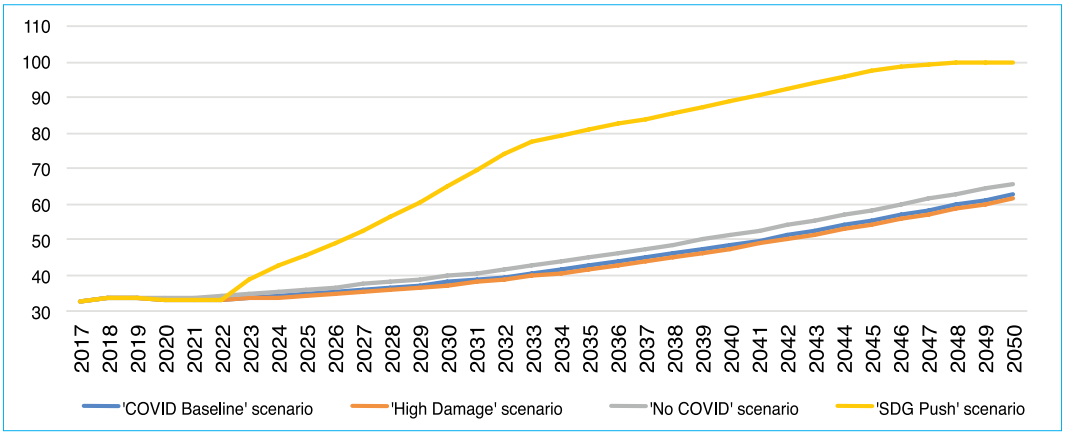
Figure 7.36: Total Population with access to electricity in Southern Africa (%)



Source: IFs model.

There are significant disparities in accessing electricity between rural and urban populations. In 2021, around 33 percent of the rural population had electricity access compared to 75 percent of the urban population. To improve rural electrification an *SDG Push* could double electricity access for rural dwellers by 2030 and reach a target of 99.6 percent of the rural population by 2050 (Figure 7.37).

Figure 7.37: Rural Population with access to electricity in Southern Africa (%)

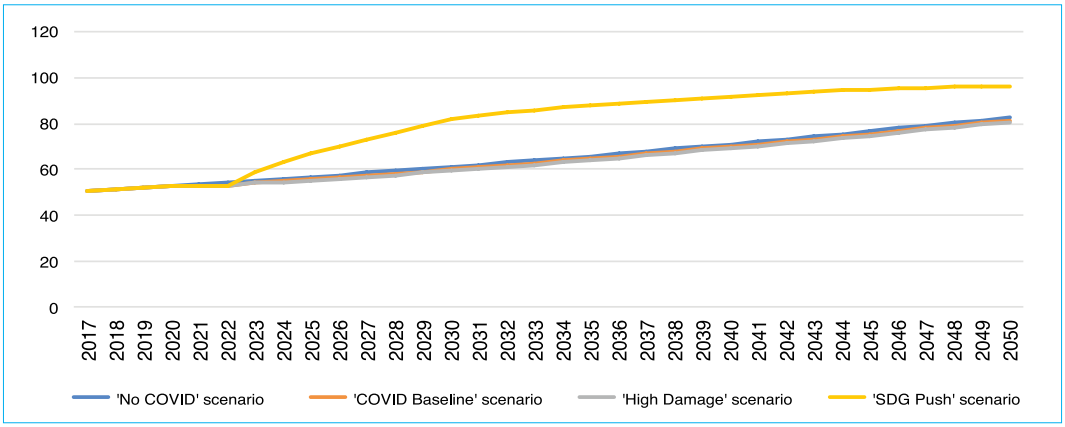


Source: IFs model.

West Africa

In 2021, only 53 percent of the population had access to electricity in West Africa (Figure 7.38). The pandemic had a slight effect on this trend. Access to electricity could increase substantially with efforts such as the *SDG Push,* which are projected to increase electricity access to 81 percent of the population by 2030 and 96 percent of the population by 2050. In the absence of targeted policies to improve the provision of electricity, the *COVID Baseline* scenario would only leave 59.9 percent of the population with access to electricity by 2030 and 81.2 percent by 2050.

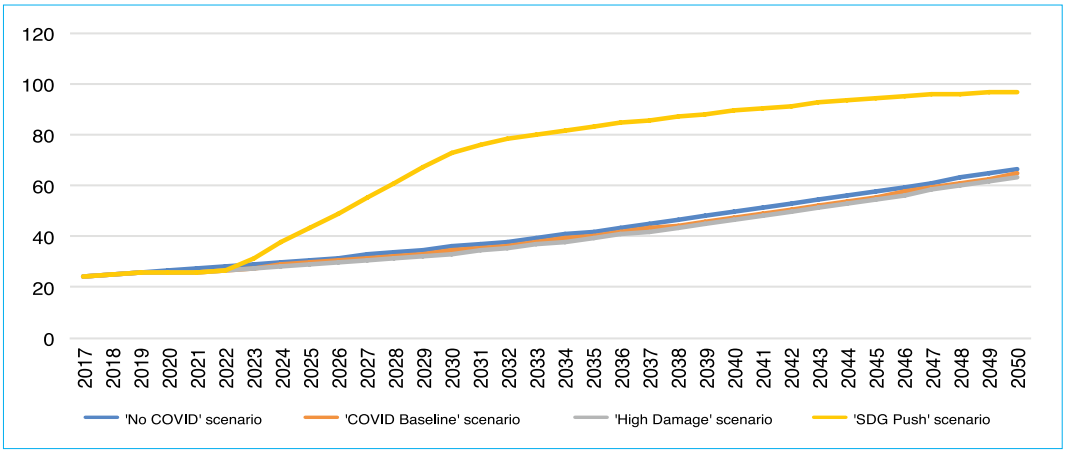
Figure 7.38: Total population with access to electricity in West Africa (%)



Source: IFs model.

Disparities in accessing electricity between rural and urban populations in West Africa are very significant. Only 27.6 percent of the rural population had electricity access in 2021 compared to 83 percent of the urban population. The effect of the pandemic on access to electricity in 2021 has been slightly higher for the rural population (-1.36 percent) than for the urban population (-1.05 percent). An *SDG Push* seems essential to improving rural electrification, which could expand electricity access to 73 percent of rural dwellers by 2030 and 97 percent by 2050 (Figure 7. 39).

Figure 7.39: Rural population with access to electricity in West Africa (%)



Source: IFs model

7.7 SDG Push scenario and achievement by African countries

The Covid-19 pandemic has impacted several dimensions of people's well-being, including poverty and inequality, education, climate change, energy, as well as maternal and child health. The analysis shows the potential that is inherent in bold and transformative choices that can put African countries back on course towards achieving the vision of the 2030 Agenda.

The table 7.1 shows results for a number of SDG indicators, including health and malnutrition, beyond those presented primarily in this section. The effect of an *SDG Push* on poverty would be more effective by 2050 rather than by 2030. *Only ten countries would reach the SDG 1 target of having 'less than 3 percent of the population living on less than US$ 1.90 a day' by 2030 while thirty-three would by 2050.*

Fifteen countries would achieve the target of reducing malnutrition with an *SDG Push* by 2030 compared to five countries under the *COVID Baseline* scenario. The *SDG Push* would be more pronounced by 2050 with 42 countries compared to 19 countries under the *COVID Baseline* scenario.

Regarding *the prevalence of child malnutrition*, an *SDG Push* would result in twenty-four African countries reaching the target by 2050 compared to six countries under the *COVID Baseline* scenario. The impact will be visible in the long term, as only less than five countries would have attained the target by 2030.

With reference to *maternal mortality (SDG 3.1)*, *twenty-seven countries would achieve the target with an SDG Push* by 2050 compared to twenty-three under the *COVID Baseline* scenario. This is in comparison to only 9 countries by 2030. The results are much encouraging in the case of reducing neonatal mortality to at least as low as 12 per 1,000 live births, for which forty-seven countries would reach the target under the *SDG Push*, compared to forty under the COVID Baseline scenario by 2050, and nineteen countries under the SDG Push scenario in 2030.

Almost all African countries (54) would *reduce neonatal mortality to at least as low as 25 per 1,000 live births* target by 2050 with an *SDG Push.*

With an *SDG Push,* thirty-seven countries will reach *the primary education completion target by 2050, compared to twenty-eight under the COVID Baseline* scenario. This is higher than in 2030 where only seventeen countries would meet the target under the *SDG Push* and fifteen countries under the *COVID Baseline* scenario. Most countries on the continent will not attain the *secondary completion rate of 90 percent or more* by 2050, except eight countries in the event that they adopt an *SDG Push* approach.

Table 7.1: Number of countries achieving SDG targets by 2030 and 2050 under the 'COVID Baseline' and 'SDG Push' scenario

	2030		2050	
	COVID Baseline	SDG Push	COVID Baseline	SDG Push
Less than 3% of the population lives on less than US$ 1.90 a day	10	10	20	33
Less than 3% of the population suffers malnourishment	5	15	19	42
Less than 3% of children under 5 years suffers malnourishment	3	4	6	24

	2030		2050	
	COVID Baseline	SDG Push	COVID Baseline	SDG Push
Maternal mortality ratio is reduced to less 70 maternal deaths per 100,000 live births	9	9	23	27
Reduce neonatal mortality to at least as low as 12 per 1,000 live births	13	19	40	47
Reduce neonatal mortality to at least as low as 25 per 1,000 live births	45	46	53	54
Primary education completion rate of 97 percent or more	15	17	28	37
Secondary completion rate of 90 percent or more	1	1	2	8

7.8 Summary observations and policy recommendations

The analysis in the chapter shows differentiated impacts of the Covid-19 pandemic on selected targets of the SDGs. Prior to the Covid-19 pandemic, most African countries were not on a trajectory that would have enabled them to address poverty, hunger, inequality, or maternal and child mortality by 2030. Uncertainties regarding the persistence and scale of future waves of the pandemic as well as the damage done to the economies, as captured by the *Covid Baseline* and the *High Damage* scenarios have demonstrated different pathways that countries can undertake, with both medium- and long-term implications on economic recovery. Of great concern is that the number of people who live in extreme poverty will continue to be high, and SDG 1 on no poverty is unlikely to be met by 2030. This will have significant implications on hunger, inequality, malnutrition, and food insecurity. Even for the indicators that most countries are likely to perform well, such as primary school completion rates and access to electricity, there are either disparities among rural and urban areas, or significant gender divide.

The analysis shows that pursing an SDG Push is likely to contribute positively to addressing the medium- and long-term effects of the pandemic. African countries should design and implement inclusive and targeted economic policies to accelerate economic recovery and put countries back on track towards the 2030 Agenda. Failure to do this, as indicated by the Covid Baseline and High Damage scenario suggests significant losses in social-economic gains, and the potential to further plunge countries into economic crises.

The Covid pandemic has shown the urgency to build resilience economic system to reduce shock impacts on poverty. Governments and civil society will need to work together to advance social cohesion and gender equality while upholding human rights and the rule of law, especially in fragile and conflict-affected contexts where justice and security concerns may be more acute. This will be critical to address girls dropping from school as exposed by the pandemic. Building social capital including social infrastructure will lay the foundation for the future and close the education gap.

Digital disruption and innovation will be key in addressing the challenges faced by the education system across the continent. With schools closed and stark divides in access to online learning,

closing the internet access gap would halve the human development regression by getting children back to education – albeit remotely. The surge in tele-schooling, tele-working, tele-medicine, and digital payments being deployed during the Covid-19 crisis are just the tip of the iceberg. Investments in digital transformation have been simultaneously driving pandemic response and setting the path for acceleration beyond recovery.

Governments should keep investing in digital transformation of public services, the education system, the health sector, etc., through digital platforms while planning broader digital transformation strategies. Digital transformation should target designing solution that allow:

- Delivering critical governments services, including healthcare, remotely;
- Supporting data integration and insights for better decision-making;
- Establishing digital payment platforms and e-commerce systems, with a focus on women-run small and medium enterprises and closing the digital divide for women and for marginalized populations;
- Enhancing digital financing options, including for improved remittance flows.

Reducing poverty will require strong investment in diversifying and transforming African countries' economies. Governments will have to create fiscal space to invest in priority markets, strengthen engagement with the private sector, and develop inclusive, green economic recovery strategies, including in partnership with development partners.

Social protection, including cash transfers, universal health coverage and access to other basic services, will be central to uprooting the inequalities that permeated societies before the pandemic, and that are starkly visible today. Public-private solidarity and partnerships will be critical to build resilient social protection systems that can weather shocks, create strategies for informal sector workers, and design a new generation of resilient, green jobs that support youth-led entrepreneurship.

Temporary Basic Income and Universal Basic Income could be part of a renewed social contract as well as social protection measures and fiscal stimuli that reflect the care economy and are inclusive, reaching domestic and informal workers, people with disabilities and women migrants.

Rebalancing nature, climate, and the economy will be key to fight against the climate change. Designing and de-risking nature-based solutions will be critical to orient African countries quest for development in a sustainable pathway. Also, encouraging sustainable public-private partnerships such as in ecotourism and green transport systems, transforming agriculture from a carbon contributor to a carbon sink, and ensuring integrated thinking and action with the health sector to tackle air pollution that kills 7 million people each year are among the policies to tackle the effects of the Covid in Africa.

African countries' must translate the Nationally Determined Contributions and adaptation plans into urban planning, agriculture and land use climate solutions. Among the opportunities, African countries should explore green recovery grants to promote and protect nature-based jobs and livelihoods, including rural entrepreneurship; promote community-based and owned solutions and approaches, especially in indigenous communities, and accelerate a green energy transition as part of the Covid-19 response, including the political economy of fossil fuel subsidy reform.

Countries must collectively adopt a set of decisions and actions that, to the greatest extent, meet the needs of all. The threats of the Covid-19 pandemic require global response, based on unity and mutually beneficial bilateral and multilateral cooperation. It is time for selfishness and greed to be replaced by solidarity.

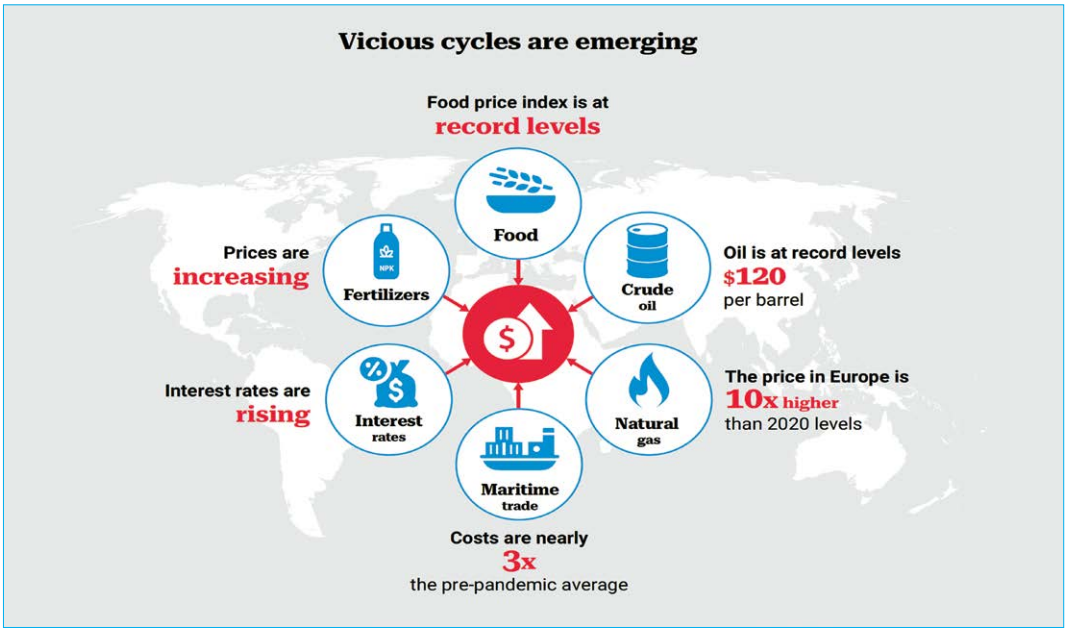
Chapter 8:

Impact of Ukraine-Russia war on sustainable development in selected African Countries

8.1 Impact of war across multiple sectors

The Covid-19 recovery was marked by a steady increase in prices on international markets, particularly of food and energy. This price increase has been compounded by a negative supply shock due to the ongoing war between Ukraine and Russia. Consequently, vicious cycles are emerging (Figure 8.1) and are threatening food security, economic stability and they could further, particularly, trigger social unrest.

Figure 8.1: Vicious cycles of rising prices



Source United Nations (https://news.un.org/pages/wp-content/uploads/2022/06/GCRG-figure1-new.png)

The war in Ukraine and the Covid-19 pandemic led to overall decrease in agricultural labour productivity, manufacturing output and employment, GDP growth, economy-wide productivity and, a marginal increase in household income for the bottom 40 percent of the population and

the wage-to-GDP ratio. However, these overall effects hide a large heterogeneity across countries. Finally, six out of 10 SDG indicators (SDG 2.3.1, 8.1.1, 8.2.1, 8.5.2, 9.2.1, and 9.2.2) show that at least 50 percent of the 16 African countries are negatively impacted by the combined effects of the war in Ukraine and the Covid-19 pandemic crisis alone.

8.2 The methodology

Four scenarios[27] (business as usual, Covid-19, Ukraine, and Ukraine+Covid-19) have been considered to analyze the impact of the Ukraine war using price changes over the period 2020-2024. To derive the impact of the war in Ukraine (referred to as Ukraine scenario) alone, the results (difference) from Covid-19 scenario are compared with results from Ukraine+Covid-19 scenario. The results for the period 2022-2024 are report with the report aggregating results ("All") from individual country analysis using a method that is described in annex 5.

Table 8.1: International prices of selected primary commodities, Change compared to BAU (%)

Commodities	Covid 19			Covid19+UKRAINE		
	2022	2023	2024	2022	2023	2024
Coal, Australia	74.8	33.3	30.1	264.2	151.8	133.1
Crude oil, Brent	22.9	5.9	4.6	66.0	49.9	27.9
Natural gas, Europe	156.3	79.1	66.4	591.7	386.6	315.3
Natural gas, U.S.	36.9	28.4	23.7	78.0	58.0	48.7
Liquefied natural gas, Japan	17.8	5.0	4.2	96.3	47.0	41.9
Barley	-16.9	-21.4	-22.4	16.1	2.5	-1.1
Maize	24.6	27.6	26.0	71.7	52.0	47.9
Rice, Thailand, 5%	-5.6	-3.7	-2.3	0.3	-2.6	-1.1
Wheat, U.S., HRW	18.9	14.6	13.7	114.1	77.8	70.3
DAP	73.2	25.7	8.2	159.8	123.5	75.8
Phosphate rock	33.1	9.2	-3.7	79.2	58.9	44.4
Potassium chloride	19.8	-0.7	-2.0	91.7	69.7	60.2
TSP	63.7	23.1	8.4	136.1	100.1	65.6
Urea, E. Europe	43.6	12.9	1.7	225.4	182.2	121.9
Copper	39.4	28.3	15.8	60.0	51.7	39.0
Iron ore	64.8	54.4	30.6	77.4	35.1	17.5
Nickel	15.5	8.4	6.8	82.1	40.3	31.3
Tin	58.0	47.4	37.2	109.0	74.9	47.0
Zinc	14.7	-2.6	-2.5	50.4	29.8	13.4
Gold	22.0	22.1	22.8	31.1	20.0	17.9
Silver	45.9	43.5	41.2	42.4	32.4	23.5
Platinum	4.2	1.8	-0.3	15.6	18.3	15.9

Source: Commodity markets Outlook, World Bank 2022

27 See Annex 5 for a detailed explanation of the Scenarios

8.3 Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

The Table 8.2 shows that in 2022 the war in Ukraine+Covid-19 shock had a negative 2.7 percent effect on labour productivity in the agricultural sector and at the same time led to an overall decline of 0.8 percent in agricultural labour productivity.[28] However, there is significant differences among countries. Egypt and DRC experienced a small decrease in agriculture labour productivity while Guinea, Mali and Tunisia experienced highest decrease in agriculture labour productivity. However, South Africa, Ghana and Mozambique observe a considerable increase in agriculture labour productivity under Ukraine+Covid-19 scenario. This could be due to the appreciation of the real exchange rate resulting from rising of price of primary commodities; in fact, for South Africa, for example[29], the appreciation of the real exchange rate is having a negative impact on manufacturing exports (including food processing). As a result, there is a decline in manufacturing and related activities such as agriculture. The decline in agricultural value-added leads to a decline in factor demand (labour, capital, and land). However, the decline in labour demand is more pronounced relative to the other factors, which may explain a potential increase in the ratio of agricultural value added to labour. For Ghana and Mozambique[30], the appreciation of the real exchange rate under Ukraine + Covid-19 leads to increased imports of inputs (chemicals, including fertilizers) that have a positive impact on agricultural activities. However, the resulting increase in agricultural value added favours the use of capital rather than labour. As a result, we observe an increase in the ratio of agricultural value added to labour. Under Ukraine alone scenario, only 5 out 16 countries present an increase in agricultural labour productivity. For 4 countries, (South Africa, Mozambique, Ghana, Niger) out of 5, the increase is very marginal and below 0.8 percent. Only Senegal presents 1.9 percent increase in agricultural labour productivity, which results from an adjustment of real exchange rate, as explained above

Table 8.2: Production per labour unit (2.3.1) - Agriculture Productivity, 2022

	BAU value,	Covid19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	3.7	-1.6	-0.9
South Africa	4.0	3.0	0.3
Egypt	3.0	-2.8	-1.1
Malawi	5.5	-4.9	-0.3
DRC	3.7	-0.8	-1.1
Guinea	1.7	-22.3	-1.3
Mozambique	1.7	4.6	0.2
Senegal	4.1	-6.8	1.9
Tunisia	5.0	-11.9	-1.5
Uganda	10.5	-3.8	-2.1
Ethiopia	2.0	-2.6	-0.8
Tanzania	3.0	-1.1	-0.4

28 We measure labour productivity by the ratio of value added to labour

29 The country can benefit from an increase in the price of commodities such as coal, gold or platinum

30 Ghana can benefit from an increase in price of cocoa, Gold and oil while Mozambique may benefit from an increase in price of coal, Gold.

	BAU value,	Covid19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Mali	4.0	-13.8	-0.5
Kenya	2.6	-1.2	-0.5
Ghana	3.3	6.3	0.7
Niger	5.0	-6.9	0.3
All	3.0	-2.7	-0.8

In the tables 8.3 and 8.4 we show that the negative effects of these shocks on labour productivity are declining over time. Specifically, in 2023 the observed decline in labour productivity is -1.2 percent under Ukraine+Covid-19 and -0.4 percent under Ukraine alone. As of 2024, the decline goes to zero, building on the 2023 recovery trajectory. Nigeria is expected to be one of the drivers of the recovery.

Table 8.3: Production per labour unit (2.3.1) - Agriculture Productivity, 2023

	BAU value	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	3.8	0.6	-0.8
South Africa	4.0	5.1	0.1
Egypt	3.1	-0.6	-0.1
Malawi	5.7	-4.6	0.2
DRC	3.7	0.3	-1.5
Guinea	1.8	-18.6	-0.1
Mozambique	1.7	6.0	1.4
Senegal	4.3	-2.7	3.6
Tunisia	5.2	-8.4	0.5
Uganda	10.5	-2.9	-1.5
Ethiopia	2.0	-2.7	-0.1
Tanzania	3.0	-1.0	-0.2
Mali	4.0	-13.1	0.0
Kenya	2.6	-0.4	-0.2
Ghana	3.4	4.6	0.2
Niger	5.0	-4.0	0.2
All	3.0	-1.2	-0.4

Table 8.4: Production per labour unit (2.3.1) - Agriculture Productivity, 2024

	BAU value	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	4.0	2.2	-0.7
South Africa	5.0	7.2	-0.1
Egypt	3.2	-0.2	-0.5

	BAU value	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Malawi	6.0	-4.4	0.1
DRC	3.6	1.4	-1.3
Guinea	0.0	-17.6	-0.4
Mozambique	1.7	8.7	2.4
Senegal	4.5	0.2	4.9
Tunisia	5.4	-7.6	-0.5
Uganda	10.6	-3.1	-1.3
Ethiopia	2.0	-3.4	-0.3
Tanzania	3.0	-0.6	-0.5
Mali	4.0	-12.9	-0.1
Kenya	2.6	0.0	-0.3
Ghana	3.4	3.8	-0.1
Niger	5.0	-1.4	0.2
All	3.0	-0.2	-0.3

Under the Ukraine+Covid-19 scenario, 7 out of 15 countries experienced a decrease in rural household income in 2022 (Table 8.5)[31]. For countries such as Tunisia, Senegal, Ethiopia, Mali, Niger and Tanzania, the decline in labour productivity in agriculture sector goes hand in hand with the decrease in rural income. However, the opposite trend is observed for Ghana, i.e., an increase in agricultural labour productivity while rural household income is declining. This might be due to changes in non-farm income of rural households and/or the decline in wages. The war in Ukraine has put pressure on wages in 12 of 16 the countries. As a result, we estimate an increase in nominal household income in most countries. However, for countries like Senegal, Tunisia, and Malawi, there is still a decline in rural household income. The highest negative impact of the war on rural household income is observed for Senegal

Table 8.5: Income of small-scale food producers (2.3.2) - Rural Household Income,2022

	BAU value (billions of US$),	Covid-19 + Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	180.7	0.7	3.4
South Africa[a]			
Egypt	139.35	9.5	5.9
Malawi	1.59	11.4	-0.2
DRC	0.02	7.5	3.6
Guinea	4.65	12.2	5.9
Mozambique	2.15	2.0	4.4
Senegal	6.85	-9.4	-6.8
Tunisia	7.28	-8.3	-0.7

31 This also includes income from non-agricultural activities (like, mining, services)

	BAU value (billions of US$),	Covid-19 + Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Uganda	0.01	0.9	2.3
Ethiopia	58.00	-3.8	2.2
Tanzania	24.50	-2.4	1.6
Mali	10.36	-4.5	1.0
Kenya	45.41	0.6	1.0
Ghana	5.37	-2.6	1.1
Niger	7.95	-1.0	0.0
All	494.22	2.2	3.3

* South Africa estimates missing because the SAM does not capture the different categories of households

Over 2023 and 2024 (Table 8.6 and 8.7), it is found that that there is limited change in number of countries negatively impacted by these shocks, although the magnitude of impact is likely to be higher. For example, under Ukraine+Covid-19 scenario in 2023, it is still observed that 7 out 15 countries will present a decrease in rural household income, while the number of countries adversely affected is 6 in 2024. Tunisia and Senegal are likely to present the highest negative impacts over the years.

Table 8.6: Income of small-scale food producers (2.3.2) - Rural Household Income,2023

	BAU value (billions of US$),	Covid-19 + Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	182.32	4.0	6.6
South Africa			
Egypt	133.94	23.2	11.7
Malawi	1.62	12.6	-0.1
DRC	0.03	8.2	6.3
Guinea	4.84	12.1	5.7
Mozambique	2.23	2.3	5.1
Senegal	7.33	-9.2	-9.5
Tunisia	7.41	-8.4	-0.7
Uganda	0.01	0.9	2.0
Ethiopia	62.49	-4.7	2.0
Tanzania	25.97	-2.9	1.3
Mali	10.88	-3.8	0.7
Kenya	47.62	0.6	0.8
Ghana	5.57	-2.5	1.4
Niger	8.49	-3.5	0.0
All	500.73	6.7	5.9

* South Africa estimates missing because the SAM does not capture the different categories of households

Table 8.7: Income of small-scale food producers (2.3.2) - Rural Household Income,2024

	BAU value (billions of US$),	Covid-19 + Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	184.68	7.6	10.9
South Africa			
Egypt	130.52	19.3	9.7
Malawi	1.66	10.4	-0.4
DRC	0.03	10.4	7.7
Guinea	5.02	15.1	8.9
Mozambique	2.33	3.9	6.6
Senegal	7.84	-8.0	-23.2
Tunisia	7.55	-9.1	-1.6
Uganda	0.01	0.9	1.8
Ethiopia	68.09	-5.0	2.4
Tanzania	27.46	-2.2	4.2
Mali	11.40	-2.5	0.7
Kenya	49.91	1.0	0.7
Ghana	5.83	-3.1	1.7
Niger	8.77	4.6	-0.4
All	511.11	6.9	6.8

* South Africa estimates missing because the SAM does not capture the different categories of households

8.4 Goal 8: Promote inclusive and sustainable economic growth, employment, and decent work for all

Overall, the war in Ukraine and the Covid-19 shock will negatively impact economic growth in Africa (Table 8. 23). in 2022. GDP growth declines for all the 16 countries. This impact on GDP is still negative when we only consider only the effect of the war in Ukraine. Overall GDP declines by 0.3 percent and it declines for 10 out of the 16 countries. GDP growth for Ethiopia, Nigeria, Mozambique and Ghana marginally increases under the war in Ukraine scenario. The countries appear to benefit from rising prices of the primary commodities they export (Crude oil for Nigeria, for example).In general, the decline in GDP growth during Ukraine+Covid-19 scenario is explained by the fact that countries under analysis depend on imports from Ukraine and Russia or on imported manufactured goods from international markets. However, we detect a strong heterogeneity among countries: countries like DRC (-0.3 percent), Nigeria (-2.2 percent), South Africa (-0.9 percent) and Kenya (-2. Percent) are relatively less affected and countries including Mali (-10 percent) Tunisia (-9.6 percent) and Senegal (-9.4 percent) are severely affected. The results suggest that GDP growth declines for all the countries that depend on Ukrainian and Russian imports for indicator 8.1.1 and 8.2.1 . Nigeria, despite being a crude oil exporting country, suffers from this shock in 2022. This is because the country's non-mining sectors (services, manufacture, agriculture) are negatively affected by the shocks.

Table 8.8: GDP per capita growth rate (8.1.1) - Gross Domestic Product 2022

	BAU value (billions of US$), at constant price of 2019	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	422.8	-2.2	0.5
South Africa	289.0	-0.9	-0.3
Egypt	326.3	-6.4	-0.9
Malawi	3.6	-8.8	-0.9
DRC	0.1	-0.3	1.0
Guinea	12.2	-7.9	-1.7
Mozambique	6.1	-4.9	0.7
Senegal	26.3	-9.4	-4.2
Tunisia	31.0	-9.6	-1.9
Uganda	0.02	-4.5	-0.3
Ethiopia	89.2	-6.7	0.5
Tanzania	60.5	-6.2	0.0
Mali	18.7	-10.0	-0.1
Kenya	105.5	-2.0	-0.6
Ghana	21.5	-3.8	0.2
Niger	13.5	-5.9	-0.4
All	1426	-3.9	-0.3

We show in the tables 8.9 and 8.10 that the negative effects of these shocks are declining over time. The overall effect on GDP moves from -3.9 percent in 2022 to -2.9 percent in 2023 and -1.4 percent in 2024 under Ukraine+Covid-19 shock. In other words, the results indicate that by 2023, most African economies will start recovering from these shocks as they will start getting back to the path set before the pandemic and war in Ukraine. Countries like Nigeria and DRC are expected to drive the recovery. In the same vein, the decrease in economywide productivity is projected to be lower (Tables 8.12 and 8.13) in 2023 and 2024 as the economies tend to close the gaps compared to the Baseline trajectory.

Table 8.9: GDP per capita growth rate (8.1.1) - Gross Domestic Product 2023

	BAU value (billions US$), at constant price of 2019	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	433.2	1.1	3.3
South Africa	292.5	-1.1	-0.6
Egypt	340.1	-6.4	-0.9
Malawi	3.8	-8.9	-0.8

	BAU value (billions US$), at constant price of 2019	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
DRC	0.1	5.0	4.5
Guinea	13.2	-2.6	2.7
Mozambique	6.3	0.0	5.4
Senegal	27.8	-8.3	-5.8
Tunisia	31.6	-9.2	-2.1
Uganda	0.02	-3.7	-0.2
Ethiopia	96.1	-7.9	1.3
Tanzania	64.0	-5.8	0.5
Mali	19.5	-9.2	0.0
Kenya	109.4	-1.3	-0.4
Ghana	22.9	-4.1	1.2
Niger	14.3	-4.4	-0.3
All	1475	-2.9	0.6

Table 8.10: GDP per capita growth rate (8.1.1) - Gross Domestic Product 2024

	BAU value (billions US$), at constant price of 2019	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	444.3	5.3	7.1
South Africa	295.8	-0.9	-0.4
Egypt	354.7	-5.6	-0.8
Malawi	4.0	-8.8	-0.7
DRC	0.1	9.7	8.2
Guinea	14.2	0.1	4.5
Mozambique	6.5	3.9	7.9
Senegal	29.5	-6.7	-7.3
Tunisia	32.3	-9.3	-2.8
Uganda	0.02	-3.4	-0.2
Ethiopia	103.5	-8.7	1.7
Tanzania	68.0	-5.4	1.4
Mali	20.4	-8.6	-0.3
Kenya	113.4	-0.7	-0.5
Ghana	24.5	-5.2	1.5
Niger	15.1	0.1	-0.3
All	1526	-1.4	1.8

Table 8.11: GDP growth rate per employed person (8.2.1) - Economywide Productivity 2022

	BAU value	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	3.2	-2.6	-1.4
South Africa	2	-1.9	-0.8
Egypt	3.5	-4.5	-0.4
Malawi	4.3	-8.2	-0.7
DRC	3.1	-7.2	-0.9
Guinea	1.7	-12.0	-3.0
Mozambique	2.5	-6.5	-0.4
Senegal	3.7	-3.2	-0.9
Tunisia	2.5	-3.7	-0.8
Uganda	4.6	-2.9	0.1
Ethiopia	4	-5.9	-0.1
Tanzania	4	-4.6	-0.2
Mali	3	-5.8	0.2
Kenya	2.9	-1.1	-0.3
Ghana	3.4	-4.1	0.0
Niger	4	-4.2	0.0
All	3	-3.5	-0.8

Table 8.12: GDP growth rate per employed person (8.2.1) - Economywide Productivity 2023

	BAU value	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	3.2	-2.4	-1.5
South Africa	2	-1.4	-0.3
Egypt	3.6	-5.0	-0.4
Malawi	4.4	-8.1	-0.6
DRC	3.1	-5.2	-0.4
Guinea	1.8	-7.3	0.3
Mozambique	2.5	-2.1	3.7
Senegal	3.7	-1.9	-1.5
Tunisia	2.5	-3.6	-1.5
Uganda	4.6	-2.4	0.1
Ethiopia	4	-6.1	0.4

	BAU value	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Tanzania	4	-3.8	0.4
Mali	3	-5.1	0.1
Kenya	2.9	-0.7	-0.2
Ghana	3.6	-4.2	1.1
Niger	4	-0.7	0.0
All	3	-3.2	-0.5

Table 8.13: GDP growth rate per employed person (8.2.1) - Economywide Productivity 2024

	BAU value	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	3.2	-0.5	-0.4
South Africa	2	-1.2	-0.1
Egypt	3.8	-4.6	-0.4
Malawi	4.5	-7.8	-0.4
DRC	3.2	-2.3	0.9
Guinea	1.8	-5.0	1.9
Mozambique	2.5	1.0	5.7
Senegal	3.8	-0.7	-1.9
Tunisia	2.6	-3.3	-1.5
Uganda	4.6	-2.2	0.1
Ethiopia	4	-6.6	0.8
Tanzania	4	-3.4	0.4
Mali	3	-4.5	-0.1
Kenya	2.9	-0.3	-0.2
Ghana	3.7	-5.2	1.4
Niger	4	-0.5	0.0
All	3	-2.4	-0.1

The analysis also looks at the impact of the two shocks on unemployment rate (indicator 8.5.2). Overall, we observe that in 2022 (Table 8.14) unemployment rate has increased in 10 out of 16 countries under Ukraine+Covid-19 shock. The war in Ukraine alone has relatively lesser negative effect on employment compared to the combined effect of Covid-19 and the war in Ukraine. However, we observe a strong heterogeneity across countries. For some countries, unemployment declined under the Covid-19+Ukraine scenario and under the war in Ukraine only scenario (Nigeria, South Africa, DRC, Guinea, Mozambique and Ghana). These countries are probably benefiting from rising prices of primary commodities they export.

Table 8.14: Unemployment rate (8.5.2) – Unemployment rate[32], change (%) compared to BAU, 2022

	Covid-19+Ukraine	Ukraine
Nigeria	-1.2	-5.4
South Africa	-2.6	-1.3
Egypt[35]	178.2	45.4
Malawi	21.5	6.6
DRC	-24.1	-7.1
Guinea	-38.5	-13.0
Mozambique	-39.9	-26.3
Senegal	25.2	13.7
Tunisia	52.5	10.5
Uganda	39.7	9.2
Ethiopia	9.5	-8.0
Tanzania	12.7	-1.3
Mali	74.8	5.7
Kenya	6.8	2.9
Ghana	-14.9	-8.4
Niger	24.2	4.4
All	1.6	-2.2

In the tables 8.15 and 8.16, we show that unemployment rate will be declining over 2023 and 2024 in most African economies as they will start recovering from these shocks. Countries like Nigeria, South Africa, DRC, Guinea, Mozambique, and Ghana are expected to drive this dynamic.[33]

Table 8.15: Unemployment rate (8.5.2) – Unemployment rate, change (%) compared to BAU, 2023

	Covid-19+Ukraine	Ukraine
Nigeria	-9.2	-12.6
South Africa	-0.8	0.9
Egypt	203.8	85.6
Malawi	27.8	7.6
DRC	-36.1	-17.5
Guinea	-48.8	-24.8
Mozambique	-46.1	-35.5
Senegal	27.9	18.8
Tunisia	51.0	6.0

32 We computed the unemployment rate as follow: unemployed population/(total active population). Active population includes unemployed individuals and employed population.

33 Egypt experiences a large change in unemployment rate for the following reasons: structurally, the country is experiencing a decline in total labor force before pandemic i.e over the period 2017-2019 as presented in World Development Indicators and therefore, it presents lower unemployment; this dynamic is taken into count under all scenarios that we run. With the low unemployment, a reccurence of huge negative shock as it is the case in the current situation for Egypt, it is possible that the unemployment rate considerably jumps.

	Covid-19+Ukraine	Ukraine
Uganda	35.7	6.9
Ethiopia	27.4	-13.9
Tanzania	17.4	-2.2
Mali	82.3	3.4
Kenya	4.3	1.6
Ghana	-5.9	-7.1
Niger	69.6	4.7
All	-1.3	-4.5

Table 8.16: Unemployment rate (8.5.2) – Unemployment rate, change (%) compared to BAU, 2024

	Covid-19+Ukraine,	Ukraine
Nigeria	-15.1	-19.5
South Africa	-0.7	0.8
Egypt	206.3	75.3
Malawi	30.3	7.0
DRC	-42.3	-25.6
Guinea	-58.6	-29.4
Mozambique	-57.0	-41.7
Senegal	27.5	24.5
Tunisia	57.7	13.2
Uganda	35.6	6.4
Ethiopia	37.7	-16.4
Tanzania	20.8	-10.6
Mali	92.6	5.0
Kenya	2.7	2.0
Ghana	-2.0	-4.7
Niger	-7.8	4.4
All	-4.3	-7.7

8.5 Goal 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation

The war in Ukraine negatively affected the manufacturing sector in Africa, due to increasing input costs. The value added of the manufacturing sector and its share of employment decreased by 6.9 percent and 8.4 percent, respectively under Ukraine+Covid-19 scenario in 2022. When considering Ukraine crisis alone, a lower negative effect is observed for the performance of manufacturing sector compared to the combined effect of Covid-19 and the Ukraine crisis (Table 8.17 and 8.20). There is also significant variation among countries. All countries, except Senegal, Kenya and Tunisia, experience a decline in indicator 9.2.1 under the Ukraine+Covid-19

scenario. South Africa, Nigeria and Ethiopia, which also depend heavily on imports from Russia and Ukraine, experienced deteriorating impacts on the two indicators in 2022 .

Table 8.17: Manufacturing value added as a proportion of GDP and per capita (9.2.1) - Value Added in manufacturing, 2022

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	9.6	-1.3	-0.4
South Africa	12.2	-17.2	-2.5
Egypt	18.1	-5.0	0.5
Malawi	11.3	-3.3	-0.4
DRC	16.7	-8.2	-0.5
Guinea	9.2	-4.9	1.2
Mozambique	6.7	-0.1	-1.6
Senegal	15.7	2.1	0.5
Tunisia	13.8	3.9	-2.5
Uganda	16.3	-2.3	0.1
Ethiopia	7.3	-17.2	-0.9
Tanzania	6.0	-7.1	-0.2
Mali	15.1	-3.9	-0.5
Kenya	7.5	6.3	0.3
Ghana	10.1	-22.4	-1.2
Niger	7.0	-3.4	0.4
All	11.8	-6.9	-0.8

The tables 8.18 and 8.19 show that the negative effects of these shocks on the manufacturing sectors are persistent in 2023 and 2024, with the overall largest negative effects (-9.3 percent) observed in 2024. Ghana, Ethiopia, DRC, Guinea, and South Africa are expected to experience most of these negative effects

Table 8.18: Manufacturing value added as a proportion of GDP and per capita (9.2.1) - Value Added in manufacturing, 2023

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	9.5	-5.4	-4.0
South Africa	12.2	-17.4	-3.6
Egypt	18.2	-8.2	-1.5
Malawi	11.5	-3.1	-0.8
DRC	16.4	-9.8	-1.3
Guinea	8.8	-12.4	-6.2
Mozambique	6.8	5.4	-0.1

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Senegal	15.8	0.0	-0.5
Tunisia	13.6	1.8	-5.4
Uganda	16.8	-1.8	0.0
Ethiopia	7.8	-22.8	-1.0
Tanzania	6.2	-9.0	-0.3
Mali	15.2	-4.7	-0.6
Kenya	7.5	6.3	0.6
Ghana	10.3	-25.1	-2.4
Niger	6.9	-2.1	0.6
All	11.9	-9.6	-2.9

Table 8.19: Manufacturing value added as a proportion of GDP and per capita (9.2.1) - Value Added in manufacturing, 2024

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	9.5	-5.3	-3.3
South Africa	12.1	-15.1	-3.0
Egypt	18.2	-7.4	-1.6
Malawi	11.7	-3.8	-1.3
DRC	16.1	-10.8	-2.1
Guinea	8.5	-9.2	-2.2
Mozambique	6.8	13.5	2.4
Senegal	15.9	-1.0	-1.8
Tunisia	13.3	3.8	-4.7
Uganda	17.3	-1.1	0.0
Ethiopia	8.4	-27.4	0.0
Tanzania	6.5	-12.4	-0.5
Mali	15.3	-6.3	0.1
Kenya	7.5	5.8	0.3
Ghana	10.5	-24.9	-1.8
Niger	7.3	-4.5	3.0
All	11.9	-9.3	-2.7

Overall, the war in Ukraine (alone) has had severe negative effects on the manufacturing sector, more so on indicators such as employment. Results suggest that at least 15 out of 16 countries recorded a decline in manufacturing sector proportion of employment under the Ukraine crisis scenario.

Table 8.20: Manufacturing employment as a proportion of total employment (9.2.2) - Employment in manufacturing 2022

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	6.5	-2.5	-1.8
South Africa	16.9	-13.7	-4.9
Egypt	9.8	-1.3	-0.9
Malawi	10.8	-3.6	-2.0
DRC	17.4	-3.2	-1.2
Guinea	9.6	-21.1	-2.3
Mozambique	7.3	-1.5	-2.0
Senegal	12.5	-3.8	-2.3
Tunisia	20.7	-10.1	-5.0
Uganda	16.1	0.3	-0.2
Ethiopia	4.1	-7.7	-2.3
Tanzania	3.4	-5.5	-0.9
Mali	11.5	-6.7	-1.4
Kenya	5.7	-3.3	-1.0
Ghana	9.1	-10.1	-3.6
Niger	2.4	-9.8	-0.6
All	10.3	-8.4	-3.4

Table 8.21: Manufacturing employment as a proportion of total employment (9.2.2) - Employment in manufacturing 2023

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	6.5	-5.0	-3.8
South Africa	16.9	-11.8	-4.5
Egypt	9.9	-2.1	-1.5
Malawi	11.1	-4.6	-2.3
DRC	17.4	-3.7	-2.5
Guinea	9.4	-19.1	-6.1
Mozambique	7.4	-2.3	-1.5
Senegal	12.6	-2.7	-2.2
Tunisia	20.7	-9.9	-6.8
Uganda	16.2	0.1	-0.3
Ethiopia	4.2	-7.9	-2.0
Tanzania	3.4	-5.7	-0.9
Mali	11.6	-5.9	-0.8
Kenya	5.7	-2.7	-1.0
Ghana	9.2	-9.6	-3.0
Niger	2.4	-4.8	-0.3
All	10.3	-8.3	-4.2

Table 8.22: Manufacturing employment as a proportion of total employment (9.2.2) - Employment in manufacturing 2024

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	6.5	-2.7	-3.0
South Africa	17.0	-9.7	-3.4
Egypt	10.1	-2.1	-1.2
Malawi	11.3	-5.3	-2.1
DRC	17.4	-2.9	-3.4
Guinea	9.4	-16.9	-2.2
Mozambique	7.4	-4.1	-1.1
Senegal	12.7	-2.2	-3.9
Tunisia	20.6	-7.5	-5.4
Uganda	16.3	-0.1	-0.3
Ethiopia	4.3	-7.3	-1.3
Tanzania	3.5	-5.0	-1.9
Mali	11.7	-5.3	-0.3
Kenya	5.7	-2.3	-1.0
Ghana	9.3	-8.9	-1.7
Niger	2.5	-1.8	0.6
All	10.4	-7.0	-3.7

8.6 Goal 10: Reduce inequality within and among countries

The war in Ukraine+Covid-19 has an overall limited impact on the household income of the bottom 40% in Africa (Table 8.23). In Nigeria, the decline in household income is due to a decrease in wages while changes in other components of income such as capital and transfers account for the decline in household income in Malawi and Mozambique. Overall, 10 out 15[34] countries would experience an increase in household income among the bottom 40 percent of the population. This is mainly motivated by changes in nominal wages as the ratio of wages to GDP increases for the Ukraine+Covid-19 scenario for most of the countries

Table 8.23: Growth rates (%) of household expenditure or income per capita among the bottom 40 percent of the population and the total population (10.1.1) – Household income Change bottom 40 2022

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	13.7	-2.6	-0.8
South Africa[a]	0.0	0.0	0.0
Egypt	23.5	7.2	4.7
Malawi	12.2	-4.4	3.8
DRC	18.7	-1.5	-0.2

34 South Africa is not included for this indicator because its SAM does not present the different categories of households.

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Guinea	23.5	1.8	0.4
Mozambique	10.6	-2.9	-1.2
Senegal	13.3	0.6	-1.4
Tunisia	17.7	0.7	0.5
Uganda	13.5	6.0	3.1
Ethiopia	18.6	3.1	1.2
Tanzania	16.3	0.6	0.4
Mali	21.7	0.7	0.4
Kenya	15.3	2.6	1.2
Ghana	12.2	-6.3	-1.8
Niger	18.4	1.0	0.0
All	17.6	1.5	1.3

* South Africa estimates missing because the SAM does not capture the different categories of households.

In Tables 8.24 and 8.25, we still observe limited overall negative effects of these shocks on the household income of the bottom 40%, over 2023 and 2024

Table 8.24: Growth rates (%) of household expenditure or income per capita among the bottom 40 percent of the population and the total population (10.1.1) – Household income Change bottom 40 2023

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	13.6	-2.5	-1.2
South Africa	0.0	0.0	0.0
Egypt	25.0	8.3	7.4
Malawi	12.6	-6.3	3.1
DRC	18.8	-2.2	-0.7
Guinea	23.6	1.9	0.5
Mozambique	10.7	-1.9	-0.8
Senegal	13.4	-0.9	-2.3
Tunisia	17.7	0.6	0.9
Uganda	13.8	5.2	2.7
Ethiopia	18.8	2.9	1.5
Tanzania	16.3	0.6	0.5
Mali	21.8	0.8	0.5
Kenya	15.3	2.0	1.1
Ghana	12.4	-5.3	-1.4
Niger	18.4	1.2	0.0
All	18.1	1.7	2.1

Table 8.25: Growth rates (%) of household expenditure or income per capita among the bottom 40 percent of the population and the total population (10.1.1) – Household income Change bottom 40 2024

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	13.4	-1.8	0.1
South Africaa			
Egypt	25.7	8.4	3.4
Malawi	12.9	-5.7	2.0
DRC	18.8	-2.5	-1.1
Guinea	23.6	2.5	0.9
Mozambique	10.9	-1.8	-0.6
Senegal	13.5	-1.6	-10.7
Tunisia	17.7	0.1	0.6
Uganda	14.0	4.8	2.5
Ethiopia	18.9	2.9	1.2
Tanzania	16.3	0.8	0.6
Mali	21.9	1.0	0.6
Kenya	15.4	1.7	1.0
Ghana	12.6	-4.3	-0.4
Niger	18.7	0.6	0.1
All	18.3	1.7	0.3

Wages as a share of GDP declined in three (Nigeria, Egypt and Uganda) out of the 16 countries in 2022 under Ukraine+Covid-19, as shown in Table 8.26. For Egypt, and Uganda, this is mainly driven by the increase in unemployment. For Nigeria , the decline in unemployment is not high enough to allow for an increase in wages. In Tables 8.27 and 8.28, most African economies are expected to experience limited effect of these shocks on wages as a share of GDP in 2023 and 2024.

Table 8.26: Labour share of GDP, comprising wages and social protection transfers (10.4.1) - Wage-to-GDP Ratio 2022

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	30.2	-0.1	1.0
South Africa	47.5	0.9	-0.1
Egypt	36.3	-5.1	0.3
Malawi	26.3	3.3	-1.0
DRC	33.5	11.1	2.3
Guinea	58.1	23.5	8.6
Mozambique	40.4	10.1	5.3
Senegal	27.6	2.9	1.2
Tunisia	40.4	0.7	1.1

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Uganda	24.3	-0.1	-0.4
Ethiopia	31.2	4.3	1.3
Tanzania	29.6	2.6	0.9
Mali	32.0	3.6	0.0
Kenya	35.7	1.6	0.9
Ghana	35.8	5.2	2.7
Niger	23.9	6.2	1.0
All	36.1	0.3	0.7

Table 8.27: Labour share of GDP, comprising wages and social protection transfers (10.4.1) - Wage-to-GDP Ratio 2023

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	29.9	1.8	2.6
South Africa	47.4	0.9	-0.4
Egypt	39.0	-9.2	-0.4
Malawi	26.8	-1.1	0.1
DRC	33.5	10.2	2.8
Guinea	57.0	17.9	4.0
Mozambique	40.0	7.0	2.9
Senegal	27.4	1.3	0.9
Tunisia	40.3	0.1	1.4
Uganda	24.9	-0.5	-0.3
Ethiopia	31.4	3.7	1.1
Tanzania	29.7	1.6	0.4
Mali	32.0	2.6	0.2
Kenya	35.7	1.1	0.6
Ghana	36.4	3.7	1.5
Niger	24.5	-0.4	0.8
All	36.5	-0.8	0.6

Table 8.28: Labour share of GDP, comprising wages and social protection transfers (10.4.1) - Wage-to-GDP Ratio 2024

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	29.6	1.7	3.6
South Africa	47.2	1.1	-0.2
Egypt	41.4	-11.1	-1.6

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Malawi	27.3	-5.8	0.6
DRC	33.5	9.4	2.9
Guinea	56.0	17.5	5.1
Mozambique	39.5	6.1	3.5
Senegal	27.2	0.2	1.1
Tunisia	40.2	-0.7	1.0
Uganda	25.3	-0.8	-0.2
Ethiopia	31.4	3.7	1.1
Tanzania	29.7	1.7	1.3
Mali	32.0	1.9	0.3
Kenya	35.7	0.8	0.5
Ghana	36.9	3.3	0.9
Niger	23.2	3.5	0.6
All	36.9	-1.8	0.3

8.7 Goal 17: Revitalize the global partnership for sustainable development

The ratio of merchandise trade to GDP experienced the biggest positive impacts under both Ukraine+Covid-19 and Ukraine scenarios in Mozambique, Niger, Nigeria, DRC and Ghana. This could be explained by an increase in payments from crude oil and gas exports. Senegal and Tunisia were the worst affected countries under the Ukraine+Covid-19 scenario as their merchandise exports decline the most as shown in Table 8.29, 8.30 and 8.31.

Table 8.29: Macroeconomic Dashboard (Indicator 17.13.1) - Ratio of Merchandise trade to GDP,2022

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	26.8	19.0	21.4
South Africa	46.6	8.2	1.9
Egypt	29.3	-6.9	-0.3
Malawi	47.6	-8.3	-3.0
DRC	66.5	27.0	12.5
Guinea	105.7	9.9	6.5
Mozambique	56.1	21.9	17.5
Senegal	44.3	-17.5	-14.1
Tunisia	80.3	-9.9	-4.0
Uganda	21.7	-1.3	0.9
Ethiopia	18.8	2.8	5.0
Tanzania	25.7	2.1	2.8

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Mali	47.0	-0.5	0.1
Kenya	26.0	-3.5	-1.2
Ghana	59.6	23.6	12.6
Niger	28.4	0.4	0.0
All	33.9	5.4	5.7

Table 8.30: Macroeconomic Dashboard (Indicator 17.13.1) - Ratio of Merchandise trade to GDP,2023

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	26.9	22.8	29.3
South Africa	46.2	5.9	-0.3
Egypt	29.0	-6.3	0.0
Malawi	47.6	-8.8	-3.2
DRC	68.6	31.8	19.1
Guinea	105.6	10.2	7.5
Mozambique	55.3	17.3	15.6
Senegal	43.6	-16.3	-16.4
Tunisia	79.4	-8.7	-3.9
Uganda	21.5	-1.3	0.7
Ethiopia	18.3	-1.6	2.9
Tanzania	25.8	0.7	2.6
Mali	47.0	-2.3	-2.3
Kenya	25.8	-3.3	-1.5
Ghana	59.4	16.7	8.6
Niger	29.0	-2.6	-2.0
All	33.6	5.4	6.8

Table 8.31: Macroeconomic Dashboard (Indicator 17.13.1) - Ratio of Merchandise trade to GDP,2024

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Nigeria	11.6	25.6	28.2
South Africa	22.3	6.0	-0.6
Egypt	18.1	-5.7	-1.8
Malawi	25.4	-6.4	-2.4
DRC	29.4	43.2	27.7

	BAU value (%)	Covid-19+Ukraine, change (%) compared to BAU	Ukraine, change (%) compared to BAU
Guinea	53.9	22.9	12.6
Mozambique	30.1	16.3	13.5
Senegal	25.8	-15.5	-16.8
Tunisia	46.3	-11.2	-4.5
Uganda	12.7	-2.3	0.2
Ethiopia	14.1	0.3	3.6
Tanzania	13.4	1.3	6.5
Mali	22.0	-0.3	-3.1
Kenya	18.4	-4.2	-1.4
Ghana	28.7	16.8	5.3
Niger	17.3	3.4	-4.0
All	17.9	4.8	4.8

Table 8,11 shows that countries in the North Africa and Southern Africa regions were severely affected by the crisis under the Ukraine (alone) scenario. At least six indicators for all the countries in these two regions are negatively affected, with the worst affected being Malawi and Tunisia.

In North Africa and Southern Africa regions are severely affected by the crisis in Ukraine (alone) in 2022 (Table 8.32). At least six indicators out of 10 are negatively affected in North Africa, with the worst affected being Tunisia. In the Southern Africa, the worst affected country is Malawi. For Malawi and Tunisia, nine and eight SDG indicators out of 10 are negatively affected, respectively.

In West Africa, Senegal is the most affected by the Ukraine war (alone). For Senegal, seven out 10 SDG indicators are negatively affected. Senegal significantly depends on imports of wheat and manufactured goods. The least affected are Guinea and Ghana. Guinea which exports gold and bauxite, and Ghana which exports gas, benefit from rising prices of primary commodities. Nigeria, Mali have 50% of indicators that are negatively affected. Nigeria exports crude oil and heavily depends on manufactured goods, including refined oil. As a result, the positive effects of higher prices for primary commodities exported do not fully offset the negative effect of importing expensive manufactured goods.

In East Africa the worst affected is Kenya, with six indicators negatively affected. This shows the vulnerability of countries to external shocks, as most of them depend heavily on wheat and oil imports, whose prices fluctuated sharply on world markets due to these two crises. For Uganda and Malawi, the impact on indicators seems to be driven mainly by heavy reliance on imported manufactured goods.

Only Ghana has 30 percent of indicators negatively affected by the war, while Guinea, Tanzania and Ethiopia have 40 percent, South Africa 55 percent and Egypt 60 percent of indicators negatively affected.

Table 8.32: Ukraine war (alone) impact on SDG indicators, changes (%) compared to BAU 2022

		2022									
		Agriculture Productivity SDG 2.3.1	Rural household income SDG 2.3.2	Gross Domestic Product SDG 8.1.1	Economywide Productivity SDG 8.2.1	Unemployment SDG 8.5.2	Value Added in manufacturing SDG 9.2.1	Employment in manufacturing SDG 9.2.2	Income Change bottom 40 SDG 10.1.1	Wage-to-GDP Ratio SDG 10.4.1	Ratio Merchandise trade to GDP SDG 17.13.1
West	Nigeria	-0.9	3.4	0.5	-1.4	-5.4	-0.4	-1.8	-0.8	1.0	21.4
	Senegal	1.9	-6.8	-4.2	-0.9	13.7	0.5	-2.3	-1.4	1.2	-14.1
	Mali	-0.5	1.0	-0.1	0.2	5.7	-0.5	-1.4	0.4	0.0	0.1
	Niger	0.3	0.0	-0.4	0.0	4.4	0.4	-0.6	0.0	1.0	0.0
	Guinea	-1.3	5.9	-1.7	-3.0	-13.0	1.2	-2.3	0.4	8.6	6.5
	Ghana	0.7	1.1	0.2	0.0	-8.4	-1.2	-3.6	-1.8	2.7	12.6
East	Kenya	-0.5	1.0	-0.6	-0.3	2.9	0.3	-1.0	1.2	0.9	-1.2
	Tanzania	-0.4	1.6	0.0	-0.2	-1.3	-0.2	-0.9	0.4	0.9	2.8
	Uganda	-2.1	2.3	-0.3	0.1	9.2	0.1	-0.2	3.1	-0.4	0.9
	Ethiopia	-0.8	2.2	0.5	-0.1	-8.0	-0.9	-2.3	1.2	1.3	5.0
Central	DRC	-1.1	3.6	1.0	-0.9	-7.1	-0.5	-1.2	-0.2	2.3	12.5
North	Egypt	-1.1	5.9	-0.9	-0.4	45.4	0.5	-0.9	4.7	0.3	-0.3
	Tunisia	-1.5	-0.7	-1.9	-0.8	10.5	-2.5	-5.0	0.5	1.1	-4.0
Southern	Mozambique	0.2	4.4	0.7	-0.4	-26.3	-1.6	-2.0	-1.2	5.3	17.5
	South Africa	0.3		-0.3	-0.8	-1.3	-2.5	-4.9	0.0	-0.1	1.9
	Malawi	-0.3	-0.2	-0.9	-0.7	6.6	-0.4	-2.0	3.8	-1.0	-3.0

Note: *Red means indicator is adversely affected by the shock*

Over 2023 and 2024, we still observe that North Africa and Southern Africa are the most affected regions, even when the magnitudes of impacts are declining in most countries (Tables 8.33 and 8.34).

Table 8.33: Ukraine war (alone) impact on SDG indicators, changes (%) compared to BAU 2023

2023		Agriculture Productivity	Rural household income	Gross Domestic Product	Economywide Productivity	Unemployment	Value Added in manufacturing	Employment in manufacturing	Income Change bottom 40%	Wage-to-GDP Ratio	Ratio Merchandise trade to GDP
		SDG 2.3.1	SDG 2.3.2	SDG 8.1.1	SDG 8.2.1	SDG 8.5.2	SDG 9.2.1	SDG 9.2.2	SDG 10.1.1	SDG 10.4.1	SDG 17.13.1
Western	Nigeria	-0.8	6.6	3.3	-1.5	-12.6	-4.0	-3.8	-1.2	2.6	29.3
	Senegal	3.6	-9.5	-5.8	-1.5	18.8	-0.5	-2.2	-2.3	0.9	-16.4
	Mali	0.0	0.7	0.0	0.1	3.4	-0.6	-0.8	0.5	0.2	-2.3
	Niger	0.2	0.0	-0.3	0.0	4.7	0.6	-0.3	0.0	0.8	-2.0
	Guinea	-0.1	5.7	2.7	0.3	-24.8	-6.2	-6.1	0.5	4.0	7.5
	Ghana	0.2	1.4	1.2	1.1	-7.1	-2.4	-3.0	-1.4	1.5	8.6
Eastern	Kenya	-0.2	0.8	-0.4	-0.2	1.6	0.6	-1.0	1.1	0.6	-1.5
	Tanzania	-0.2	1.3	0.5	0.4	-2.2	-0.3	-0.9	0.5	0.4	2.6
	Uganda	-1.5	2.0	-0.2	0.1	6.9	0.0	-0.3	2.7	-0.3	0.7
	Ethiopia	-0.1	2.0	1.3	0.4	-13.9	-1.0	-2.0	1.5	1.1	2.9
Central	DRC	-1.5	6.3	4.5	-0.4	-17.5	-1.3	-2.5	-0.7	2.8	19.1
Northern	Egypt	-0.1	11.7	-0.9	-0.4	85.6	-1.5	-1.5	7.4	-0.4	0.0
	Tunisia	0.5	-0.7	-2.1	-1.5	6.0	-5.4	-6.8	0.9	1.4	-3.9
Southern	Mozambique	1.4	5.1	5.4	3.7	-35.5	-0.1	-1.5	-0.8	2.9	15.6
	South Africa	0.1		-0.6	-0.3	0.9	-3.6	-4.5	0.0	-0.4	-0.3
	Malawi	0.2	-0.1	-0.8	-0.6	7.6	-0.8	-2.3	3.1	0.1	-3.2

Table 8.34: Ukraine war (alone) impact on SDG indicators, changes (%) compared to BAU 2024

		2024									
		Agriculture Productivity SDG 2.3.1	Rural household income SDG 2.3.2	Gross Domestic Product SDG 8.1.1	Economywide Productivity SDG 8.2.1	Unemployment SDG 8.5.2	Value Added in manufacturing SDG 9.2.1	Employment in manufacturing SDG 9.2.2	Income Change bottom 40% SDG 10.1.1	Wage-to-GDP Ratio SDG 10.4.1	Ratio Merchandise trade to GDP SDG 17.13.1
Western	Nigeria	-0.7	10.9	7.1	-0.4	-19.5	-3.3	-3.0	0.1	3.6	28.2
	Senegal	4.9	-23.2	-7.3	-1.9	24.5	-1.8	-3.9	-10.7	1.1	-16.8
	Mali	-0.1	0.7	-0.3	-0.1	5.0	0.1	-0.3	0.6	0.3	-3.1
	Niger	0.2	-0.4	-0.3	0.0	4.4	3.0	0.6	0.1	0.6	-4.0
Eastern	Guinea	-0.4	8.9	4.5	1.9	-29.4	-2.2	-2.2	0.9	5.1	12.6
	Ghana	-0.1	1.7	1.5	1.4	-4.7	-1.8	-1.7	-0.4	0.9	5.3
	Kenya	-0.3	0.7	-0.5	-0.2	2.0	0.3	-1.0	1.0	0.5	-1.4
	Tanzania	-0.5	4.2	1.4	0.4	-10.6	-0.5	-1.9	0.6	1.3	6.5
	Uganda	-1.3	1.8	-0.2	0.1	6.4	0.0	-0.3	2.5	-0.2	0.2
	Ethiopia	-0.3	2.4	1.7	0.8	-16.4	0.0	-1.3	1.2	1.1	3.6
Central	DRC	-1.3	7.7	8.2	0.9	-25.6	-2.1	-3.4	-1.1	2.9	27.7
Northern	Egypt	-0.5	9.7	-0.8	-0.4	75.3	-1.6	-1.2	3.4	-1.6	-1.8
	Tunisia	-0.5	-1.6	-2.8	-1.5	13.2	-4.7	-5.4	0.6	1.0	-4.5
Southern	Mozambique	2.4	6.6	7.9	5.7	-41.7	2.4	-1.1	-0.6	3.5	13.5
	South Africa	-0.1		-0.4	-0.1	0.8	-3.0	-3.4	0.0	-0.2	-0.6
	Malawi	0.1	-0.4	-0.7	-0.4	7.0	-1.3	-2.1	2.0	0.6	-2.4

8.8 Summary observations and policy recommendations

The war in Ukraine and the Covid-19 pandemic will negatively affect agricultural productivity in Africa, with varying magnitudes across countries. This might reduce progress towards the achievement of SDG 2. The combined effect of the war in Ukraine and the Covid-19 pandemic have severely impacted on economic growth in the region as GDP growth and economywide productivity declined for all 16 countries while unemployment increased in 2022. Over 2023 and 2024, some countries will face persistent negative effects while other would start experiencing a recovery.

The manufacturing sector is likely to be negatively and significantly affected, first by the combined effect of the war in Ukraine and the Covid-19 crisis on manufacturing value added and the Ukraine war that reduces the proportion of employment in the sector in 2022. Over 2023 and 2024, these negative effects are likely to be persistent.

African countries dependent on imports from Ukraine and Russia show significant negative effects, delaying the achievement of Goal 8 and Goal 9. The effects of these shocks on growth rates of household income among the bottom 40 percent of the population and on the labour share of GDP is moderate.

In terms of policies, the findings of this chapter highlight some recommendations. First, it should be noted that in Africa, it is important to focus on the transformation of agriculture through the improvement of productivity. Higher agricultural productivity would reduce the countries' dependence on grain imports, thus ensuring food security. This could be achieved through climate-friendly investments in irrigation, mechanization, research and development and access to fertilizer and reduced transaction costs. Higher agricultural productivity would also allow poor and vulnerable households, which are generally mainly involved in agriculture, to improve their income levels. Second, the incipient manufacturing sector seems to be particularly affected by these external shocks mainly through energy costs. It is therefore crucial that decision-makers make significant investments to enable equitable and affordable access to energy to sustain this sector. Third, it is imperative that countries develop a social protection system that can help cushion poor and vulnerable households from the negative effects of external crises.

This rise in food and fuel insecurity is motivated by supply constraints that go beyond the current crisis. In terms of food insecurity, there was a crisis before this crisis. It is rooted in climate unpredictability, inadequate recovery of global and regional supply chains, and low productivity. Focusing on a structural transformation that is green, inclusive, and resilient will ensure that no one is left behind and Africa is well oriented for the next crisis.

In response to the shocks of Covid-19 and the war in Ukraine, international organizations, including UNDP, have a crucial role to play. They can support African countries in identifying the best pathways to increase income levels and agricultural yields through resilient agricultural practices. In addition, they can also support actions aiming to ensure equitable access to clean and affordable energy to accelerate the development of the manufacturing sector.

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Annexes

Annex 1: Alignment of Agenda 2030 Goal 4 with that of Agenda 2063 Goal 2 (Chapter 2)

Agenda 2030 for Sustainable Development - Goals	Corresponding Agenda 2063 goal
Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	**Goal 2:** Well Educated Citizens and Skills revolution underpinned by Science, Technology and Innovation
Agenda 2030 Targets	**Agenda 2063 Targets**
4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes	2. Enrolment rate for basic education is 100%
	4. Universal secondary school (including technical high schools) with enrolment rate of 100%
	3. Eliminate all barriers to quality education, health and social services for Women and Girls by 2020
4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and preprimary education so that they are ready for primary education	5. Reduce stunting in children to 10% and underweight to 5%.
	1. Enrolment rate for early childhood education is at least 300% of the 2013 rate
4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	5. At least 30% of secondary school leavers go into tertiary education with at least 40% being female. 6. At least 70% of secondary school students not entering the tertiary sector are provided with a range of options for further skills development. 3. At least 50% of youth who cannot go on to have tertiary education are provided with TVET
4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	2. Youth business startups including female youth in all business startups is at least 15% 4. Universal secondary school (including technical high schools) with enrolment rate of 100%
	3. At least 50% of youth who cannot go on to have tertiary education are provided with TVET
4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations	3. Eliminate all barriers to quality education, health and social services for Women and Girls by 2020
4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	2. Enrolment rate for basic education is 100%

4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	1. At least 60% of content in educational curriculum is on indigenous African culture, values and language targeting primary and secondary schools. 3. At least 20% of technical and vocational institutions have programmes on the creation /generation of cultural artefacts, skills development for the generation/ preservation of cultural assets and the creation and management of micro-cultural enterprises.
4.A Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all	
4.B By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries	6. At least 70% of secondary school students not entering the tertiary sector are provided with a range of options for further skills development
4.C By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states	3. Increase number of qualified teachers by at least 30% with focus on STEM

Annex 2: Alignment of Sustainable Development Goal 14 of the 2030 Agenda with Related Goal of Agenda 2063 (Chapter 4)

Source: adapted from 2017 Africa Sustainable Development Report

Targets of Sustainable Development Goal 14	Indicators of Goal 14	Targets of Goals 4, 6 And 7 of Agenda 2063*
14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	Indicator 14.1.1: Index of coastal eutrophication and floating plastic debris density	1.7.1.2 At least 17 percent of terrestrial and inland water and 10 percent of coastal and marine areas are preserved
14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Indicator 14.2.1: Proportion of national exclusive economic zones managed using ecosystem-based approaches	1.7.1.2 At least 17 percent of terrestrial and inland water and 10 percent of coastal and marine areas are preserved
14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels	Indicator 14.3.1: Average marine acidity (pH) measured at agreed suite of representative sampling stations	1.7.1.2 At least 17 percent of terrestrial and inland water and 10 percent of coastal and marine areas are preserve
14.4 By 2020, effectively regulate harvesting, end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	Indicator 14.4.1: Proportion of fish stocks within biologically sustainable levels	
14.5 By 2020, conserve at least 10 percent of coastal and marine areas, consistent with national and international law and based on the best available scientific information	Indicator 14.5.1: Coverage of protected areas in relation to marine areas	1.7.1.2 At least 17 percent of terrestrial and inland water and 10 percent of coastal and marine areas are preserved
14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation	Indicator 14.6.1: Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing	

14.7 By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism	Indicator 14.7.1: Sustainable fisheries as a percentage of GDP in small island developing States, least developed countries and all countries	1.4.4.2 Eco-friendly coastal tourism increased by 20 percent by 2020, with at least 10 percent of the public revenue from it going to finance development programmes of the communities 1.6.1.1 At least 50 percent increase in value addition in the fishery sector in real term is attained by 2023 1.6.1.3 Marine biotechnology contribution to GDP is increased in real terms by at least 50 percent from the 2013 level
14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries	Indicator 14.a.1: Proportion of total research budget allocated to research in the field of marine technology	1.6.1.1 At least 50 percent increase in value addition in the fishery sector in real term is attained by 2023
14.b Provide access for small-scale artisanal fishers to marine resources and markets	Indicator 14.b.1: Progress by countries in the degree of application of a legal/regulatory/ policy/institutional framework which recognizes and protects access rights for small-scale fisheries	
14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of "The future we want"	Indicator 14.c.1: Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nation Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources	

Annex 3: Alignment of SDG 15 with Agenda 2063 (Chapter 5)

SDG 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss		**Agenda 2063 Goal 7:** Environmentally sustainable and climate resilient economies and communities	
Target	Indicator	Target	Indicator (by 2023)
15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	15.1.1 Forest area as a proportion of total land area 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	Biodiversity, conservation and sustainable natural resource management in Africa	% of terrestrial and inland water areas preserved % of agricultural and placed under sustainable land management practice. % of coastal and marine areas preserved
15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	15.2.1 Progress towards sustainable forest management		% of terrestrial and inland water areas preserved
15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation neutral world	15.3.1 Proportion of land that is degraded over total land area		% of agricultural and placed under sustainable land management practice.
15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	15.4.1 Coverage by protected areas of important sites for mountain biodiversity 15.4.2 Mountain Green Cover Index		
15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	15.5.1 Red List Index		% of agricultural and placed under sustainable land management practice.
15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed	15.6.1 Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits		

15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products	15.7.1 Proportion of traded wildlife that was poached or illicitly trafficked		
15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	15.8.1 Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species		
15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	15.9.1 (a) Number of countries that have established national targets in accordance with or similar to Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020 in their national biodiversity strategy and action plans and the progress reported towards these targets; and (b) integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting		
15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems	15.a.1 (a) Official development assistance on conservation and sustainable use of biodiversity; and (b)revenue generated and finance mobilized from biodiversity-relevant economic instruments		
15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation	15.b.1 (a) Official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments		
15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities	15.c.1 Proportion of traded wildlife that was poached or illicitly trafficked		

Annex 4: Description of the International Futures (IFs) modelling and scenarios used

The scenarios used in this report (*No Covid, Covid, High Damage,* and *SDG Push)* were originally published in a series of reports co-authored by the UNDP and the Frederick S. Pardee Centre for International Futures (Abidoye et al., 2021; Hughes et al., 2021) then modified using updated data and additional interventions to better simulate the effect of the Covid-19 pandemic on long-term development globally and prospects for recovery. The Annex below is excerpted from Hughes, et al. (2021), with updates to interventions and parameterization values.

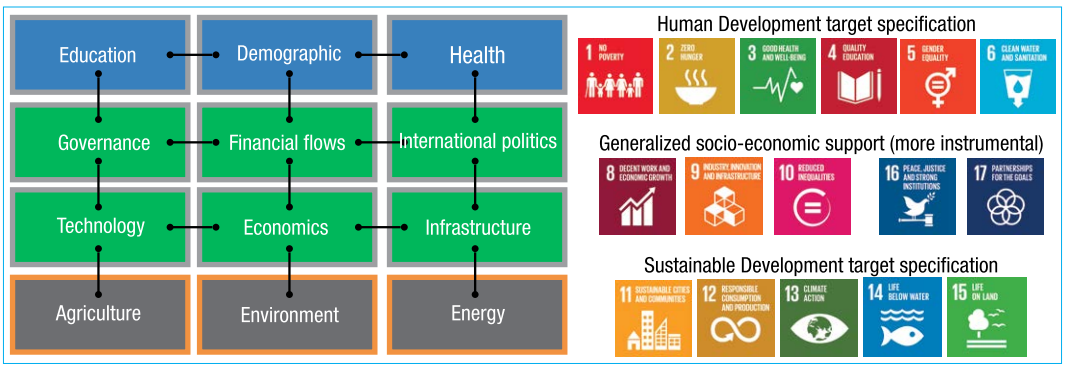
The methodological approach used in International Futures (IFs)

The International Futures (IFs) system is a long-term integrated assessment modeling platform used to explore the long-term impacts of Covid on prospects for reaching the SDGs and the potential for extensive efforts to overcome the pandemic's damage and accelerate progress toward the goals. Three aspects of the IFs structure facilitate such analysis of the SDGs, adding to the contributions of earlier work: its country-specific representation, its comprehensive system representation, and its treatment of fiscal and physical resource constraints (Hughes 2019).

Country specificity. Representing 186 countries and their interactions, the IFs structure enhances its utility in analysis of important immediate and longer-term secondary effects of scenario interventions. Results of this project provide information on global progress toward the goals, on progress across the World Bank country income categories, and by UN region. They further provide insight into the numbers of countries attaining goals in 2030 and 2050 and into the relationship of attainment failure to state fragility.

Comprehensive system representation with extensive causal linkage elaboration. The extensive framework of the SDGs calls for integrated model-based analysis across the issue domains of human development, socio-political change (including advance in the capabilities and outputs of government), and biophysical sustainability. Figure 1 shows how the models within IFs correspond to the SDGs. Causal connections within and across component models, including endogenous representation of many drivers of economic productivity, facilitate consideration of variables and dynamics linking and underlying the SDGs and of policy orientations. Representation of temporal dynamics annually over the long run facilitates understanding of lags in achieving change.

Figure 1. The models of the International Futures (IFs) system and related SDGs



Note: Blue indicates models in IFs primarily focused on human development; green represents socioeconomic development; black shows models especially important to sustainable development

Fiscal and physical resource competition accounting. Trade-offs often lie in competition for resources. Governments (or households) cannot spend the same money on education, health, infrastructure, subsidies for renewable energy, and the military. Social accounting matrices (SAMs) like that within IFs

represent fiscal accounting within and among governments, households, and firms. On the physical side, IFs maintains accounting for land uses, fossil fuel resources, and age-sex specific demographics underlying labour supply.

Most obviously, lower GDP levels during and after the pandemic generate lower income levels and reduce consumption and savings potential. Reduced consumption directly affects poverty and nutrition levels. Reduced savings can affect investment and capital formation across issue areas as diverse as education, water and sanitation, and the broader economy and its future growth. All of these accounting-constrained dynamics shape the impacts of Covid on progress toward the SDGs.

The majority of the studies on the impact of Covid-19 are relatively short-term in nature, looking at the immediate effect in 2020/2021. This study is one of the few model-based studies looking at the possible impact on the longer-term progress of the SDGs to 2050. Given that Covid is deeply impacting all aspects of livelihood and society, it is important to explore not just the apparent linkages between poverty and its proximate drivers of economic and population growth and distribution but also drill down into the deep drivers, including the development of human capital (education and health), the character and effectiveness of governance, and knowledge extension and diffusion (Hughes & Narayan, 2021).

Poverty calculations within International Futures (IFs)

Elimination of poverty is the first and most fundamental of the SDGs. Review of its treatment within IFs can illustrate the benefits of the system's country specificity, integrated system representation, and fiscal accounting.

Forecasts of poverty rates and numbers in alternative IFs scenarios are produced within a dynamically recursive general equilibrium economic model that utilizes a social accounting matrix (SAM) structure to represent financial flows within and among households, government, and firm agent categories. The economic model is bi-directionally hard-linked to a demographic model representing population by age and sex, and to a set of other models including education, health, governance, agriculture, and energy. The 186 countries of IFs are linked via trade, investment, migration, and remittance flows.

Poverty calculations in each annual time step most directly use the variables household consumption per capita at purchasing power parity per capita, a Gini coefficient, and an assumption of log-normal income distribution. The resultant poverty rates applied to population totals determine numbers in extreme poverty.

Gini can change in IFs with exogenous assumptions or in response to the relative population shares of and changing income shares of skilled and unskilled households (affected, for instance, by educational attainment within households). Household consumption levels are determined within the SAM and therefore are affected by household shares of value added (GDP in the aggregate) and its division between net savings and consumption, as well as by net flows to or from government. GDP growth can be driven exogenously or determined endogenously.

When endogenous (beyond the first few model years for which GDP data or good estimates are available), the production side uses a Cobb-Douglas production function, drawing labour from the demographic model and endogenously representing productivity change as a function of variables from other models in IFs including education, health, infrastructure, and governance quality. Assisting in the representation of short-term dynamics and the impacts of disruptions like the pandemic to economic equilibration, a capacity utilization variable augments the endogenous production calculation. For more detail on the poverty calculations and broader model see Hughes et al. (2009), Hughes (2019), and https://pardeewiki.du.edu/.

Within this UNDP/Pardee Centre project on Pursuing the SDGs in a World Reshaped by Covid, GDP growth in all scenarios is represented exogenously through 2021. In the *Covid* scenarios, the basis for those growth rates are values from the IMF's *World Economic Outlook* (April 2022). In the *High Damage* scenario, those same growth rates are modified by a reduction of 1.5 percentage points during the

pandemic years. In the *No Covid* scenario, the exogenous growth rate values through 2021 come from the IMF's *World Economic Outlook* prior to the pandemic. From 2022 through the forecast horizons, the endogenous calculations of IFs determine economic growth rates. The estimates of household income and consumption in all years are estimated endogenously using the SAM structure. The basic Gini calculation for all years and scenarios is endogenous, but in the *High Damage* scenario, an exogenous factor increases Gini by 5% in the years following the pandemic.

Parametric interventions in the scenarios

Scenarios in IFs represent the interaction of the highly integrated models with parametric interventions. Because of the structures of IFs outlined earlier (notably country-specificity, extensive representation of interacting systems in component models, and fiscal and resource accounting constraints), parametric interventions have complex relationships with model forecasts or projections (terms used interchangeably in this project), even for the variables most directly affected by the interventions. Most interventions involve multipliers on the underlying endogenous variable calculations within IFs, as opposed to overriding specifications of values for those variables. Thus, as the dynamics of the model unfold and the set of interventions within any scenario have their impacts, the underlying endogenous calculations will be affected; the impacts of the multipliers can be reduced or increased by the endogenous dynamics.

One important example of this relates to interventions directed at increasing governmental expenditures in targeted areas such as education and health. As indicated in textual body description, the SAM structure of IFs assures a relationship between governmental spending and revenues. Although the model realistically allows some deficit spending, it also tracks the accumulation of governmental debt across time and represents the necessity for governments to address fiscal deficit increases and debt growth via reduced spending (which occurs partially in issue areas targeted for growth as well as others) and increased revenues (which then affect finances of firms and households, including their savings, investment, and consumption). Flows of resources from abroad, including foreign aid and remittances, also affect the finances of governments and households. In short, the accounting system often means that the model "fights" specific intervention specifications, and that it especially constrains attempts, as in the *SDG Push* scenario, to increase spending in multiple arenas. Country specificity, such as initial government debt levels and fiscal balances, will also add to the complexity of scenario impact unfolding.

This example illustrates only one of the constraints that the model imposes on intervention efforts. Those also occur around land use, household food consumption patterns, energy production and consumption character, and much more. Even interventions in health can produce complex results because reductions or increases in some forms of mortality (not least Covid-induced) can be offset in part by changing mortality rates elsewhere (e.g., fewer deaths from heath disease among the elderly population, which is most severely impacted by Covid).

On the flip side of the coin, many interventions affect the dynamics of positive feedback loops rather than the negative loop constraints from accounting systems. For instance, improvements in education, health, and infrastructure can each or all contribute to acceleration of improvements in economic productivity, growth in economies and government revenues, improved prospects for further investment in the area(s) targeted, and therefore further acceleration of progress.

The scenario descriptions below, with their indications of magnitudes of change in specific parameters (mostly phased in over time starting in 2021), must therefore be understood as directional intentions of change and indications of priority levels, not as exactly reflecting the magnitude of direct results. The reports of this project on the progress of SDG-related variable change will indicate the resultant magnitudes of that progress, often quite different from the magnitude of the interventions. While the intervention magnitudes are individually scaled to be ambitious but potentially achievable (given historical experience of at least some high performing countries), the model helps us understand the potential effects of pursuing them in combination across the areas of intervention.

Description of scenarios and scenario interventions used in this report

No Covid: This scenario represents the path the world was on before the Covid pandemic. Patterns of development within each country in demographics, economics, and across all SDG variables reflect model structures and parametric specifications that generate not simple extrapolations of patterns prior to 2019, but the results of dynamic change building on historical patterns. This scenario uses GDP growth rates estimated and projected by the IMF prior to the outbreak of the pandemic.

Covid: The Covid scenario includes a set of changes to parameters in the IFs model on top of the *No Covid* scenario:

- GDP growth rates are imposed according to the most recent country-specific GDP growth projections made by the IMF (April 2022) to reflect the economic impact of Covid.
- Government reflects IMF Debt for years 2018-2022
- A total factor productivity shock adjustment parameter is set at 0.2 throughout the horizon to represent the 20% portion of pandemic-era GDP loss that has a long-term effect on productivity; the other 80% of GDP is assumed to represent shorter-term decline in capacity utilization the rebounds after 2021; the division is informed very generally by the experience of previous crises.
- The mortality rate from communicable disease is increased to account for Covid-19 deaths by country. Data on Covid-19 deaths from IHME were converted to a population-wide mortality rate. In IFs, this intervention is made in 2019 because mortality interventions in the model affect the population the year after they are introduced. Thus, these mortality interventions take effect in 2020.
- This increased mortality from communicable diseases is distributed by age group to reflect the demographic characteristics of Covid-19 mortality patterns:
    - The youngest cohorts (0-9 and 10-19) have the lowest mortality rate per infection, which increases by age group as follows:
        - Ages 20-29 at 0.003
        - Ages 30-39 and 40-49 at 0.005
        - Ages 50-59 at 0.013
        - Ages 60-69 at 0.04
        - Ages 70-79 at 0.125
        - Ages 80+ at 0.22

High Damage: This scenario represents a future in which the recovery trend is slower and the economic damage is greater than the estimates provided by the IMF. In this scenario:

- GDP growth rates are further reduced by 1.5 percentage points.
- 80% of the Covid-induced GDP shock will persist as a loss in productivity throughout the period, preventing a full recovery to the pre-Covid growth trajectory.
- Inequality (measured by a domestic Gini coefficient) is increased by 5% from the initial shock and throughout the model forecast horizon.
- Government debt as a portion of GDP is increased by 20% in the initial shock (2020), simulating the additional debt countries will take on.
- The increased mortality from communicable diseases remains the same as in the *Covid* scenario.

SDG Push: The *SDG Push* scenario includes a set of interventions to simulate the impact of a significant global effort to accelerate development toward the SDGs, allowing the exploration of how a strong and

comprehensive policy package can affect not just the road to pandemic recovery but to accelerated progress thereafter. Its interventions are organized into four categories: social protection, promoting a green economy, strengthening governance structures, and digital disruption. The SDG Push also includes an additional parameter to simulate the achievement of vaccine equity on economic productivity.

Social Protection

- Diets are improved as additional calories are allocated to those most in need.
- The number of improved modern cookstoves in use is increased by 500 million units over a 12-year period.
- A target is set to double the public health budget.
- Increase welfare transfers from governments to households for unskilled workers by 50% in a 13-year period for the whole world; and doubling government to household welfare transfers for unskilled workers in the WB low-income group over a 13-year period.
- Access to water and sanitation is improved:
    - The percent of the population with access to piped water increases by 50% over 30 years in low-income countries and doubles over 30 years for the rest of the world. The more substantial intervention outside of low-income countries is because the intervention works on closing the remaining gap with universal access, a process that becomes more demanding as it progresses.
    - The percent of the population with access to improved sanitation increases by 50% over 30 years in low-income countries and doubles over 30 years for the rest of the world.
- The ratio of female to male wages by country reaches 1 by 2050. (This intervention simulates all countries reaching wage parity over 30 years; the ratio left is alone if it already exceeds 1).

Governance

- Governance participation improves by 30% over a 13-year period, using the Polity project index.
- Government effectiveness (quality) improves by 30% over 13-year period, using the World Bank's governance effectiveness index.
- Government corruption reduces by 30% over 15-year period, using the Transparency International Corruption Perceptions Index.

Green economy

- Water demand globally is reduced by 30% over 32 years.
- Electricity transmission and distribution loss (as a percent of production) drops by 40% over 13 years.
- Urban air pollution (particulate matter in urban) is reduced by 30% over 35 years.
- Forested land area increases, simulating impact of reforestation in the world.
- A carbon tax is imposed as a gradual increase between 2023 and 2030 to US$ 25 in low income countries, US$ 50 in middle income countries, and US$ 75 in high income countries, per IMF carbon floor pricing.
- Energy demand per unit of GDP decreases by 1.4% annually, slowly falling to a rate of 1.3% by 2050, reducing the energy intensity of the economy.
- An increase in cleaner and more sustainable energy production sources is simulated by:

- Annual rate of energy production cost reduction for coal set to 0.002, reflecting recognition of the external costs of coal in its true total cost;
- Annual rate of energy production cost reduction for nuclear set at 0.0035, assuming new and safer nuclear technologies will continue to emerge;
- Annual rate of energy production cost reduction for other renewable energy set to 0.01 (continued encouragement of technological progress);

- Energy demand in OECD countries falls a further 10% over 68 years, relative to endogenous calculation.
- Energy demand in non-OECD countries falls a further 38% over 78 years, relative to endogenous calculation.
- Electricity access increases, tripling the upward push in the percentage of the world population with access to electricity over a 12-year period.
- Electricity access in low income-countries increases by 50% over a 12-year period.
- World agricultural production loss of crops, meat, ocean fish catch, and aquaculture is reduced by 30% over 30 years.
- World agricultural transportation and processing loss is reduced by 30% over 30 years.
- World agricultural food loss at the consumption stage is reduced by 30% over 30 years.
- High-income economies increase their agricultural yields by 20% over 15 years.
- Upper-middle-income economies increase their agricultural yields by 20% over 15 years.
- Lower-middle-income economies increase agricultural yields by 50% over 50 years.
- Low-income economies double agricultural yields over 50 years. This intervention results in yields that follow historical patterns. This, in combination with improved diets/calories intervention (incentive), results in yields that grow more rapidly.
- Countries currently catching more than 2 mmt of fish annually reduce their fish catch by 25% over 50 years.

Digital disruption/innovation

- Lower secondary graduation rates are tripled in a 12-year period starting in 2021.
- A 5% annual increase in lower secondary graduation is targeted, starting in 2021.
- The rate of science and engineering graduates in increased by 10 percentage points over a 13-year period.
- The lower secondary graduation rate is doubled over a 13-year period starting in 2021.
- A target is set to double the budgetary allocation to education.
- A target is set to double the budgetary allocation to research and development.
- A target is set to double the budgetary allocation to infrastructure.
- Private research and development spending as a percent of GDP is increased by 20% over 13-year period.
- Access to broadband grows 50% over 19 years.
- Access to mobile broadband grows 50% over 19 years.

Vaccine equity

- GDP is boosted in 2023 (between 0 and 0.86%, depending on the country) as a result of achieving vaccine equity, operationalized by vaccination rates exceeding 70%.

Annex 5: Description of the CGE model for the assessment of the Ukraine war impact (Chapter 8)

This analysis employs a country-specific recursive dynamic CGE model, which depicts a small Walrasian open economy[35]. On the supply side, the production system is nested in such a way that it allows producers to maximize profits and to demand for factors. At the first level, the output results from the combination, in fixed proportions, of value added and intermediate consumption (inputs). At the second, value added is obtained by combining efficient labour and capital (including land). Finally, efficient labour comes from combining different categories of labour. Producers make a trade-off between domestic and international markets following the price differences. On the international market, the elasticity of demand is finite, i.e. local producers should offer a lower price to gain market share.

On the demand side, consumer preferences are described by a linear expenditure system derived from the maximization of the Stone-Geary type utility function. This demand function shows an autonomous component and has a non-unitary income elasticity. Finally, consumers make a trade-off between local and imported products according to price differences. Prices balance demand and supply in each market.

The labour market is segmented according to the level of education. To account for the existence of excess labour supply in the African countries contexts, we assume the existence of a wage curve showing a negative relationship between the wage rate and the unemployment rate (Blanchflower and Oswald,1995).

The macro closure is savings-driven i.e investment adjusts to savings. This closure is classic because the standard CGE model is based on neoclassical theory - so in all markets, except the labour market, prices adjust to achieve equilibrium between supply and demand. Thus, in the market for physical capital, the rental rate of capital adjusts to balance supply and demand. In this case, we assume that investment decision is primarily driven by the private sector. We introduce an imperfect labour market to account for the unemployment that prevails in most African countries[36].

The current account balance of payments (foreign savings) is held constant and therefore the real exchange rate has to adjust to maintain that assumption. The government budget is balanced through changes in its savings and Government expenditure increases at exogenous rate [37].

The dynamic part of the model is based on the standard assumptions of capital accumulation and the evolution of exogenous variables. Capital accumulation assumes that the capital stock in a sector in each period is equivalent to the previous stock net of depreciation, plus investment in the sector. Investment in a sector depends on the capital return in the sector and the opportunity cost of the capital use[38].

35 It is an architype CGE model similar to the Poverty and Economic Partnership (PEP) and the International Food Policy Research Institute (IFPRI) models. The similarities come from the use of Constant Elasticity Substitution (transformation) /Cobb-Douglas and Leontief functions to describe the production system, the trade-off between domestic (local products) and international markets (imported commodities).

36 A similar approach can be found in Dissou and Sun (2013). The investment-driven model could also work, but better when investment is driven by the public sector.

37 Seelabourde and Traore (2017) for a discussion on the macro closure in CGE modeling

38 See PEP network platform for a description of recursive dynamic CGE model.

For the exogenous variables, we consider that the labour supply grows at the growth rate of the active population[39]; the incompressible consumption of households, and public expenses grow at the growth rate of the population. The foreign saving grows at GDP growth rate; the dividends grow at savings growth rate.

To account for the context, the parameters of the model (population growth rate, unemployment rate, etc.) are country-specific. In particular, the excess of labour – a characteristic of the labour market in Africa - is also featured in the model.

To build different scenarios, we use data from World Bank's commodities price forecasts[40]. This dataset includes observed and projected prices for two categories of goods: Energy commodities and non-Energy commodities. The first group includes goods such as Coal, Crude oil, and Natural gas. The second includes Agricultural products[41], Raw materials (timber), Fertilizers[42,] Metals and Minerals[43], and precious metals[44]. We first compare observed prices against projections (i.e., before the pandemic) to assess the robustness of the projections[45], on which we build the scenarios. Figure 8.2 presents the difference between average projected and observed prices over the period 2014-2018. For 76 percent of the analysed commodities, the absolute value of the difference[46] is less than 0.4, with average projected prices being slightly higher that observed prices. This result indicates that, in absence of observed prices, projected prices are a good proxy to estimate trends of international prices.

Difference between projected and observed prices before the pandemic

Data

The most recent SAM was used for each one of the 16 African countries (Demographic Republic of Congo, Egypt, Ethiopia, Kenya, Nigeria, Senegal, South Africa, Tunisia, Niger, Mali, Tanzania, Guinea, Malawi, Uganda, Mozambique and Ghana), available in the NEXUS SAMs database and in the African Growth and Development Policy Modeling Consortium (AGRODEP) databases[47]. We then updated the SAMs to represent the structure of the economy in 2019 using World Development Indicators database.

Additional Data

To calibrate the model, production, consumption, import and export elasticities were used, available in the Regional Strategic Analysis and Knowledge Support System (ReSAKSS) Toolbox (African Union and NEPAD, 2018). The initial value of unemployment rate in the wage curve function comes from World Development Indicators. As mentioned above, we assume that exogenous variables evolve at constant rates. For population growth rates (rural and urban), active population growth rate, we use World Development database.

39 This assumption may raise some concerns under Covid-19, as labour market participation was affected during the pandemic. However, in this report we focus on one transmission channel which is the induced changes in international prices.

40 https://www.worldbank.org/en/research/commodity-markets#1

41 Cocoa, Coffee, Tea, Coconut oil, Groundnut oil, Palm oil, Soybean meal, Soybean oil, Soybeans, Barley, Maize, Rice, Wheat, Bananas, Meat, Oranges, Shrimp, Sugar

42 DAP, Phosphate, Potassium, Urea

43 Aluminium, Copper, Iron ore, Lead, Nickel, Tin, Zinc

44 Gold, silver, platinum

45 We report for selected commodities to make the graphs readable.

46 |xprojected-xobserved|/ xobserved

47 https://dataverse.harvard.edu/dataverse/sam

On the results analysis

To communicate the price changes from the outlook data to a country's CGE model, we calculated the weighted export (import) price changes for nine commodity groups (Livestock, Fishery, Crops, Forestry, Food, Beverage, Tobacco, Mining, Manufacturing), which are captured in the country's CGE model. This requires a mapping between individual commodities and the groups mentioned above.

For export (import) prices, we first compute the shares of individual commodities in the total exports (imports) of groups. These shares are computed using data from Comtrade database, which provide the structure of external trade of each country. Second, we use those shares as weights to compute the weighted export (imports) for each commodity group.

This section presents the results for the 16 African countries analysed in this report. The structure of a country's economy and of its external trade is important, as it determines the extent to which the impact of Covid-19 and the Ukraine crisis are transmitted to the country's economy. Information on each country's top primary commodities is in the Appendix. The share of top primary commodities in total exports (imports) for each country are also resented in the appendix. The results highlight the impacts of Covid-19 and the war in Ukraine on selected SDG indicators (Goal 2, Goal 8, Goal 9, Goal 10 and Goal 17). We focus on these indicators because we are able to build their proxy from the CGE's outcome.

This report aggregates results ("All") from individual country analysis using a method that is described in Appendix. For each indicator, the percentage difference between the scenario that captures the combined effect of the Covid-19 and Ukraine crises scenarios and BAU scenario is presented for the year 2022. The impact of War in Ukraine only Is also shown.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