UNDP Africa Investment Insights Report

Third Edition: Climate Opportunities

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The **Sustainable Finance Hub (SFH)** brings together UNDP's financial expertise to harness public and private capital for the Sustainable Development Goals (SDGs) – supporting governments, investors and businesses in reaching climate, social impact and sustainability targets. Its work drives systemic change towards a sustainable financial architecture that benefits people and the planet. Find out more about its integrated services that ensure all finance is sustainable at sdgfinance.undp.org or follow at @UNDP_SDGFinance.

The UNDP **Africa Sustainable Finance Hub (ASFH)** harnesses the potential of sustainable finance solutions for countries, governments and the private sector to realise Africa's development objectives.

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Foreword

Sometimes it's helpful to take a step back and view places we've always called home from a distance. Spending time outside the continent has convinced me that as Africans, we do not invest enough in our stories. For too long, we've allowed tropes to shape perceptions about Africa and its suitability as an investment destination. To some, the continent is one giant country. A flood in one part is assumed to affect all of Africa. A coup in one part must mean a coup across the entire continent. Similarly, we tend to write Africa and Africans out of the knowledge economy. Perhaps because there isn't enough information coming out of Africa about its markets, innovations, or science. Combined, these factors result in investors thinking of Africa as a high-risk place for their money. I would too. But, like them, I would be wrong!

Africa offers a wealth of opportunities for investors and enterprises. The private sector accounts for 80% of total production, two-thirds of investment, and three-quarters of credit; it also employs 90% of the working-age population. African nations are playing an increasingly significant role in the global economy. Some of the fastest-growing economies in the world are found on the continent. Add to that a young and rapidly growing population, household incomes and consumption projected to rise, and rapidly increasing digital finance and mobile money ecosystems, and Africa is primed for investment.

For example, Nigeria's booming tech industry, often referred to as the "Silicon Savannah," is attracting significant global venture capital. Kigali's transformation into a smart city showcases how technology can drive urban development and improve quality of life. Kenya's renewable energy sector is leading the way in sustainable development, with impressive strides in geothermal and wind energy production.

The challenge for investors, especially those used to more established markets and perceiving Africa as high risk, is access to reliable market intelligence that can help identify viable investments and guide their decisions. This is where the SDG Investor Map, a market intelligence tool produced by the United Nations Development Programme (UNDP) and partners, fills a critical niche. SDG Investor Maps help guide private investors in identifying investment opportunities and viable business models that have significant potential to advance the Sustainable Development Goals (SDGs) and Africa's Agenda 2063.

This report represents UNDP's effort to accelerate both private and public financing for the SDGs. Now in its third edition, it curates market intelligence from 16 African SDG Investor Maps. The report provides information on regional trends and insights into investment opportunities across the continent. From infrastructure to food and beverages, from the populous nations of Nigeria and Kenya to the region's Small Island Developing States (SIDS) and emerging markets such as Sierra Leone, the report presents 207 investment opportunities with significant financial and SDG impact potential in 11 sectors, 24 sub-sectors, and 42 industries across the continent. Through the insights gleaned in this report, UNDP is casting a bright light on increasingly dynamic investment markets that will deliver impact across all dimensions: financial, social, and environmental.

This year, the report places special emphasis on climate investment opportunities and ways for the private sector to support the implementation of African countries' Nationally Determined Contributions (NDCs). The climate crisis is disrupting national economies, impacting lives, and affecting communities across Africa. UNDP, under the Climate Promise programme, supports African governments to raise their ambitions on climate targets and update their NDCs for submission in 2025.

Perceptions of Africa as a high-risk investment destination are often based on outdated stereotypes and a lack of reliable information. This report helps dismantle these misconceptions by providing concrete data and compelling examples of success. Africa is not a monolithic entity but a diverse continent brimming with potential. By investing in Africa, you are not only tapping into a rapidly growing market but also contributing to sustainable development and global progress.

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Executive Summary

SDG Investor Maps are a market intelligence tool produced by the United Nations Development Programme (UNDP) in partnership with governments to help private investors identify investment opportunities and business models with potential to advance the Sustainable Development Goals (SDGs). Their aim is to provide funds, financiers and corporations with actionable data and insights that enable them to use their capital for good while making a financial profit.

UNDP's Africa Sustainable Finance Hub (ASFH) has completed 16 SDG Investor Maps across 15 sub-Saharan African countries, including a dedicated SDG Investor Map for Zanzibar. These SDG Investor Maps have driven a shift in development financing by providing investors with access to vibrant and innovative market intelligence, along with insights into business models and investment prospects in Africa's emerging markets. In addition to providing data that enables investors to explore opportunities for generating development and financial impact, SDG Investor Maps help organizations to direct activities and capital to where they can have the most impact on the SDGs. This information is complemented by the SDG Impact Standards, which enable them, to operate more sustainably and track their contributions to the SDGs.

The **UNDP Africa Investment Insights Report** provides valuable insights into selected African markets, drawing from SDG Investor Maps in sub-Saharan Africa. In its second edition, the annual publication offered SDG investment data and trends from 10 African countries. In this current third edition, the dataset has expanded to include SDG investment opportunities from six additional SDG Investor Maps – offering greater country coverage to capture the diversity of African economies. It emphasizes climate-related investment opportunities and avenues for the private sector to support African countries' Nationally Determined Contributions (NDCs) under the Paris Agreement, drawing on UNDP's climate expertise and its global Climate Promise 2025.

The UNDP Africa Investment Insights Report offers the following key messages on SDG-focused **investment opportunities across Africa**:

- 16 African SDG Investor Maps identified **207 investment opportunities** with **significant financial** and **SDG impact potential in 11 sectors, 24 sub-sectors and 42 industries** across diverse income contexts in Eastern, Southern and Western Africa, including least-developed countries and Small Island Developing States (SIDS).
- **Food and Beverage, Infrastructure, Health Care, Renewable Resources and Alternative Energy,** and **Education** are the most prominent sectors for the investment opportunities.
- The indicative return of the investment opportunities is concentrated around **Internal Rates of Return (IRR) and Return on Investments (ROI) of 15-20 percent**. The majority of investment opportunities have a **market size below $50 million**; the next more prominent group of opportunities is in the $100 million–$1 billion range. Most opportunities require a **medium-term investment timeframe of 5-10 years** to accumulate positive cash flows. In addition, most investment opportunities necessitate **investments of between $1 million and $10 million** to realize their business models.
- **The SDGs addressed by these investment opportunities include: SDG 2 – Zero Hunger; SDG 9 – Industry, Innovation and Infrastructure;** and **SDG 8 – Decent Work and Economic Growth**. The SDG indicator with the most potential for impact through these opportunities is 2.1.1 Prevalence of undernourishment. Most investment opportunities "contribute to solutions", which means they generate new positive outcomes for stakeholders who would otherwise be underserved.
- While **commercial financing** is the single most suitable financing model for these investment opportunities, most require **risk-sharing arrangements and public financing support** to be successful. Blended and concessional finance approaches show notable potential for delivering impactful business models.

Diving into **climate** investment opportunities in the 15 African countries, the UNDP Africa Investment Insights Report highlights the following:

- Climate is a critical opportunity for the private sector: **130 of the 207 investment opportunities identified have the potential to contribute to climate action and support NDCs**. Most climate opportunities are **adaptation interventions**, followed by mitigation and dual benefits.
- The most prominent target sectors for climate investment opportunities are **Food and Beverage**, **Infrastructure**, and **Renewable Resources and Alternative Energy**.
- The highest numbers of climate investment opportunities are found in **Kenya, Mauritius and Nigeria**. **SIDS** have the largest proportion of climate investment opportunities of any country classification.
- Most climate-related investment opportunities have market values of between $100 million and $1 billion. **The potential compound annual growth rate (CAGR) of revenues tends to be higher for investment opportunities** related to climate change mitigation than for adaptation – a strong signal of the private sector's potential for addressing the root causes of climate change.
- Most climate-related investment opportunities have indicative return profiles of between 15 percent and 20 percent for both IRR and ROI. **Opportunities related to adaptation and dual benefits tend to generate higher return profiles** than those aimed at mitigation. This may be due to the fact that adaptation interventions tend to have more established business models, and could indicate an opportunity to tackle both mitigation and adaptation through a single intervention.
- The majority of climate-related investment opportunities take between 5 and 10 years to generate a return. **Mitigation opportunities tend to have longer investment timeframes than adaptation opportunities.**
- Most climate-related investment opportunities require **investments of between $1 million and $10 million** to realize their business models. Most climate-related opportunities in the Food and Beverage sector require small to medium ticket sizes.
- Climate-related investment opportunities directly and indirectly impact a variety of SDGs, highlighting the cross-cutting nature of climate action. The SDGs most addressed by climate-related investment opportunities are **SDG 2 – Zero Hunger; SDG 7 – Affordable and Clean Energy**; and **SDG 1 – No Poverty**. Climate-focused SDGs including SDG 13 – Climate Action often appear as secondary SDG impacts, signaling the indirect relationships between private-sector interventions and climate action.
- The most prominent impact category for mitigation and dual benefit investment opportunities is "contribute to solutions", showing the potential for impact when investments go beyond a single focus on managing climate risk. In addition, most **climate investment opportunities target rural areas**, further highlighting these interventions' potential for impact on people and the planet.
- While **most climate investment opportunities rely on public support to be successful**, (e.g. through blended and concessional financing), **dual benefit opportunities have the highest degree of readiness for commercial viability**. By region, **Eastern and Southern Africa** offer the most climate-related investment opportunities with commercial viability at market standard conditions.

Using examples from Eswatini, Ghana and Sierra Leone, the report demonstrates how investment opportunities can be business solutions that support countries' NDCs. It also showcases enterprises from Kenya, Nigeria and Tanzania, which are delivering on climate investment opportunities by measuring and managing their impact.

Complementing the detailed the Africa SDG Investor Maps, which are publicly accessible on the SDG Investor Platform, the report showcases opportunities for private-sector partners to utilize existing data and conduct their own due diligence towards realizing impactful SDG and climate investments.

SECTION 1

TAKING STOCK OF AFRICAN SDG INVESTMENT OPPORTUNITIES

1.1 Introduction

SDG Investor Maps are a market intelligence tool produced by the United Nations Development Programme (UNDP) and its partners to assist private investors in identifying investment opportunities and business models with significant potential to advance the Sustainable Development Goals (SDGs). Pioneered by UNDP's Sustainable Finance Hub (SFH), SDG Investor Maps aim to equip financiers and businesses with actionable data and insights to deploy their capital for good while generating financial returns. In this way, UNDP supports the financing of national development priorities by directing private resources to areas with potential for the greatest impact on people and the planet.

Based on the SDG Investor Map, the UNDP Africa Investment Insights Report provides an overview of private-sector opportunities with potential for economic, social and environmental impact across Africa. In its second edition, the report utilized market intelligence from 10 economies – Eswatini, Ghana, Kenya, Mauritius, Namibia, Nigeria, Rwanda, South Africa, Tanzania and Uganda – offering SDG investment data and trends, describing financing opportunities and making the case for public support of impactful investments.

This third edition provides economic, social and environmental insights from SDG Investor Maps in 16 sub-Saharan African countries (the 10 included previously plus six additional SDG Investor Maps from Gabon, Lesotho, Malawi, Seychelles, Sierra Leone and Zanzibar). All findings are available publicly on the UNDP SDG Investor Platform. This edition – delivered in partnership with UNDP's Climate Promise – focuses on climate-related investment opportunities for the private sector, which can support countries' Nationally Determined Contributions (NDCs) under the Paris Agreement. The information serves as a starting point for engaging private-sector actors in financing national climate objectives.

Insights in this report are based on the 207 Investment Opportunity Areas (IOAs) identified in SDG Investor Maps, including data on business models that show significant financial and SDG impact potential. This market intelligence covers four low-income countries, eight lower-middle-income countries, four upper-middle-income countries and one high-income country. These include six countries classified as least-developed countries. The report includes an analysis across sub-Saharan Africa as well as regional findings from Eastern, Southern and Western Africa.

This first section of the report presents updated findings on investment opportunities across all SDGs and highlights important developments since the last edition. The second section focuses on IOAs with potential for climate change mitigation, adaptation, or both (dual benefits) towards the objectives of the Paris Agreement.

1.2 SDG investment data and trends

Based on the 16 SDG Investor Maps, the regional distribution of IOAs is: 45 percent in Eastern Africa; 22 percent in Southern Africa; and 21 percent in Western Africa. Using a tailored version of the Sustainable Accounting Standards Board (SASB) Sustainable Industry Classification System (SICS)[1], these investment opportunities are situated within 11 sectors, 24 sub-sectors and 42 industries. The most prominent sectors are: Food and Beverage (29 percent), Infrastructure (23 percent), Health Care (11 percent), Renewable Resources and Alternative Energy (11 percent), Education (9 percent), Services (6 percent) and Consumer Goods (3 percent). The most prominent industries in which these IOAs are found (according to the SASB SICS classification) are: Agricultural Products (18 percent), Solar Technology and Project Developers (9 percent) and Waste Management (6 percent).

[1] UNDP, 2023. SDG Investor Platform – Sectors. https://sdginvestorplatform.undp.org/sectors.

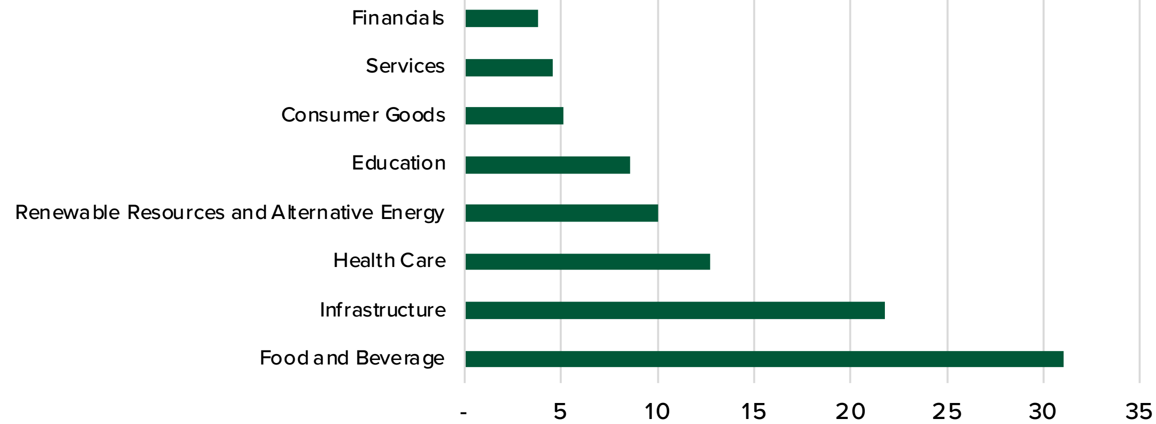

Chart 1: Most prominent target sectors (percent of IOAs)

Market size: The SDG Investor Maps indicate the market size of each IOA using metrics such as US dollar value or Compound Annual Growth Rate (CAGR).[2] Of those IOAs identifying a market size in US dollars, 38 percent have a market size below $50 million; 31 percent have a market size between $100 million and 1$ billion; and 20 percent have a market size above $1 billion. For IOAs in which market size is identified using CAGR, 31 percent have CAGR ranges of below 5 percent; 26 percent have CAGR of 5-10 percent; 17 percent have CAGR between 10-15 percent; and 11 percent of IOAs have a CAGR above 25 percent.

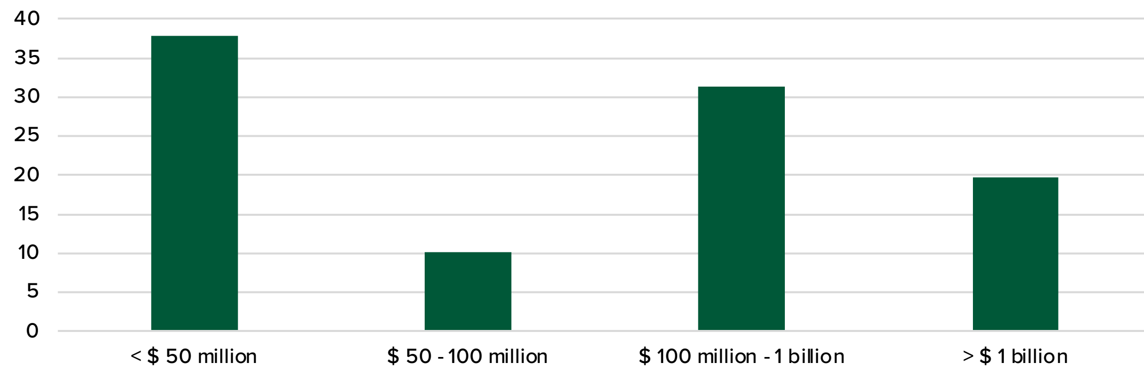

Chart 2: Market size – US$ value distribution (percent of IOAs)

Indicative return profiles: 25 percent of IOAs are estimated to have an Internal Rate of Return (IRR)[3] between 15 percent and 20 percent, or a Return on Investment (ROI)[4] between 15 percent and 20 percent; and 26 percent of IOAs have an IRR between 20 percent and 25 percent. For IOAs indicating Gross Profit Margins (GPM),[5] 50 percent expect above 25 percent GPM while 18 percent expect between 5 percent and 10 percent GPM.

[2] CAGR describes the historical or expected annual growth of revenues (or market size) during a particular period.
[3] IRR describes the annual rate of growth of an investment.
[4] ROI measures the return from an investment over its lifetime.
[5] GPM describes an investment's or company's net sales minus the Cost of Goods Sold.

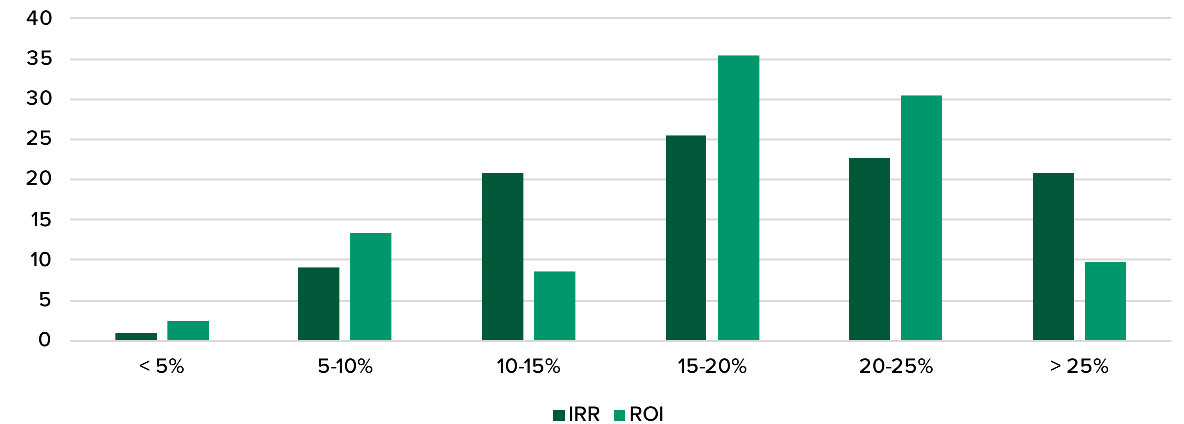

Chart 3: IRR and ROI range distribution (percent of IOAs)

Investment timeframes: Nearly half of all IOAs (46 percent) require between 5 and 10 years to generate accumulated positive cash flows; 34 percent expect a short-term investment timeframe of less than 5 years; and the remaining 20 percent of IOAs indicate a long-term timeframe of over 10 years.

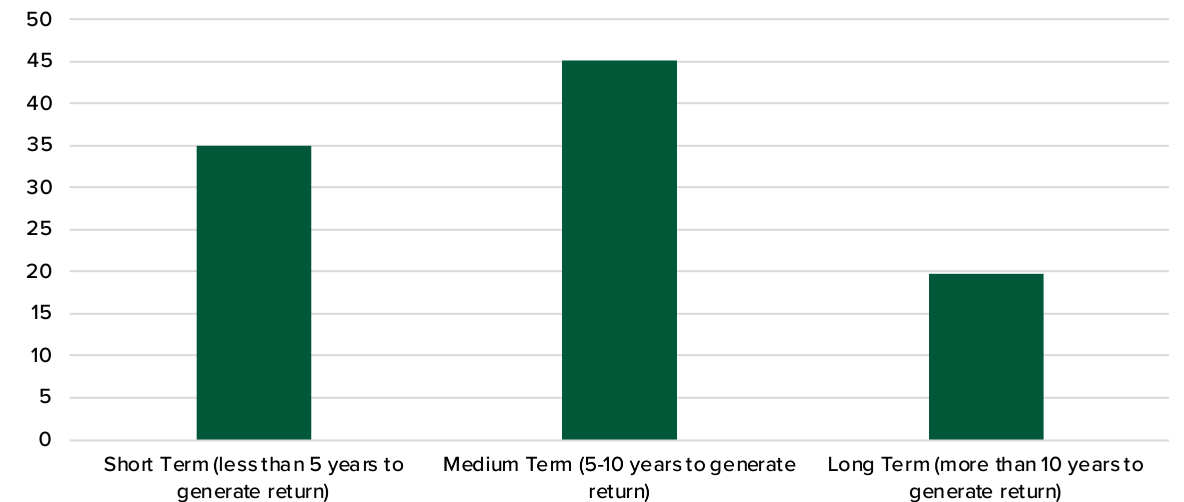

Chart 4: Investment timeframes (percent of IOAs)

Ticket size: Of all investment opportunities, 37 percent necessitate investment amounts of $1-10 million to realize the IOA's business model; 24 percent have a ticket size below $500,000; 18 percent have a ticket size above $10 million; and 21 percent have a ticket size between $500,000 and $1 million.

Ticket size ranges (percent of IOAs)

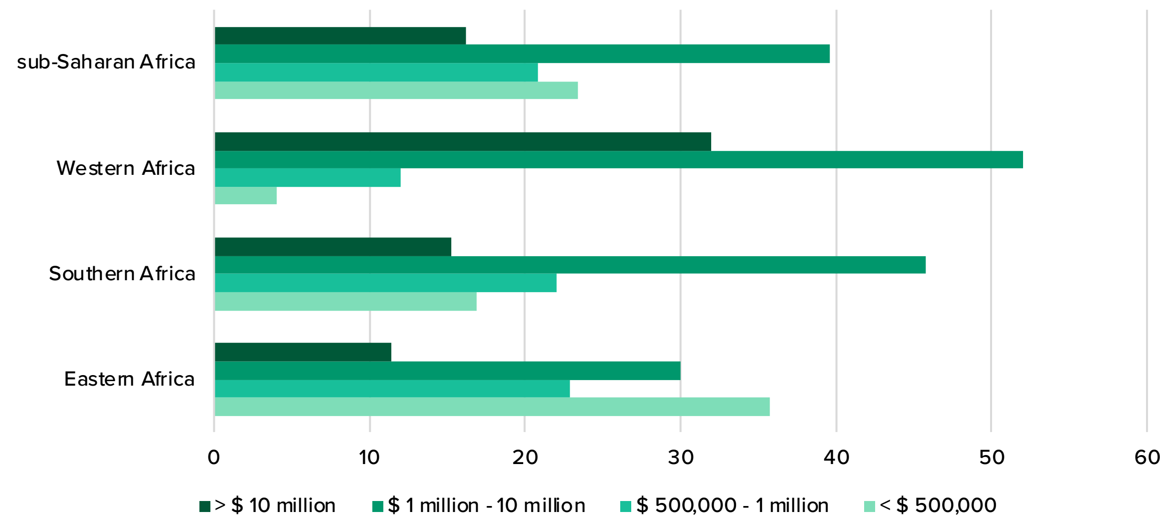

Chart 5: Ticket size ranges (percent of IOAs)

SDGs: The most commonly addressed SDG by these IOAs is SDG 2 – Zero Hunger (13 percent), followed by SDG 9 – Industry, Innovation and Infrastructure (12 percent), and SDG 8 – Decent Work and Economic Growth (11 percent). The most commonly addressed SDG indicators are: 2.1.1 Prevalence of Undernourishment (9 percent); 1.1.1 Proportion of the Population Living below the International Poverty Line (6 percent); and 1.4.1 Proportion of the Population Living in Households with Access to Basic Services (5 percent).

Primary SDGs addressed (percent of IOAs)

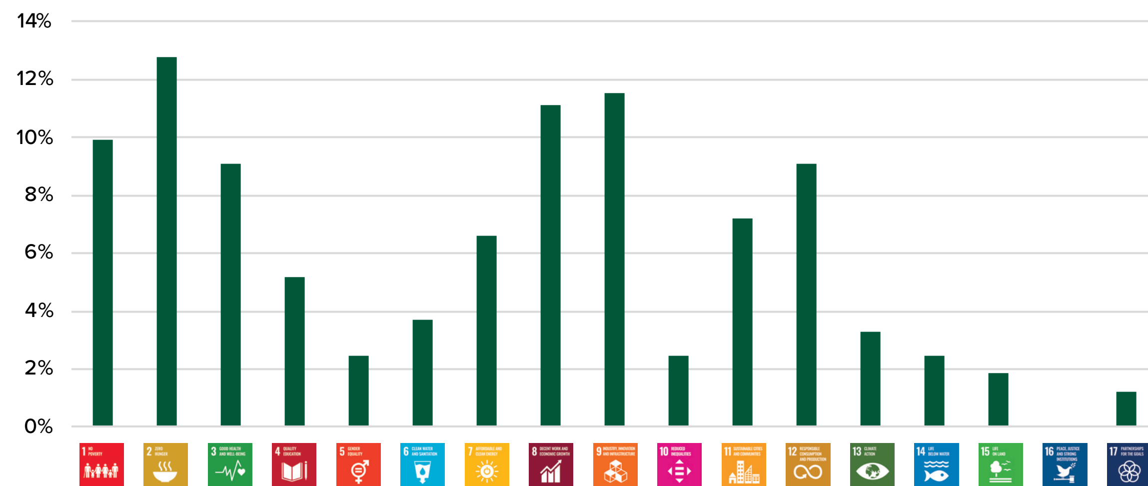

Chart 6: Primary addressed SDGs (percent of IOAs)

Impact classification: Utilizing the ABC Impact Norms developed by the Impact Management Project and incorporated by Impact Frontiers[6], 54 percent of IOAs "contribute to solutions", which means they generate a new positive outcome for a stakeholder who would otherwise be underserved. Forty percent of IOAs "benefit stakeholders" and are therefore maintaining or improving a positive outcome. The remaining 6 percent "act to avoid harm", which reduces or mitigates a negative outcome.

[6] Impact Frontiers, 2023. Norms – ABC of Enterprise Impact. https://impactfrontiers.org/norms/abc-of-enterprise-impact/.

Geographic focus: Urban areas are targeted by 37 percent of IOAs, followed by 33 percent targeting semi-urban areas and 29 percent targeting rural areas; these findings are in line with the continent's growing urbanization.

1.3 Financing SDG investment opportunities

Financing models: Looking at predicted financing options for the SDG investment opportunities across geographic areas, 44 percent of IOAs are appropriate for financing at ordinary market conditions through commercial instruments.

Another 37 percent of IOAs necessitate a blended financing model that includes risk-sharing arrangements, and 19 percent rely on a concessional financing model such as concessional infrastructure loans, with conditions that are more generous than standard market rates. In all, 57 percent of investment opportunities with SDG potential require a financing model that necessitates public support.

By sub-region, Western and Southern Africa have larger shares of commercial financing IOAs (50 percent and 42 percent of investment opportunities, respectively) than Eastern Africa. For IOAs with investment amounts smaller than $500,000, 47 percent are ready for commercial financing. Fifty-two percent of ticket sizes between $1-10 million and 42 percent of those above $10 million require blended financing models.

Financing models (percent of IOAs)

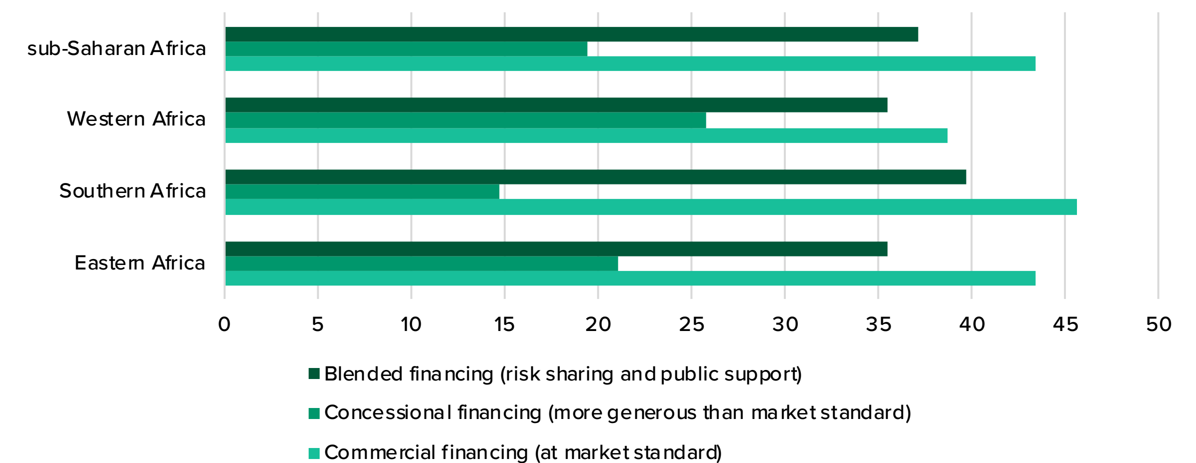

Chart 7: Financing models (percent of IOAs)

Market risks: Supply chain constraints constitute the greatest market risk for investment opportunities, affecting 31 percent of all IOAs. Capital intensity emerges as the second most prominent market risk at 20 percent, followed by regulatory challenges at 17 percent.

Despite the prominence of commercial financing models, the number of IOAs that require blended and concessional financing approaches – along with market risks and policy and regulatory bottlenecks – underscore the importance of establishing Integrated National Financing Frameworks (INFFs). INFFs offer a holistic view of countries' financing landscapes and solutions to potential barriers. As of 2024, INFFs are used in 34 sub-Saharan African countries as a framework for policies that drive financing towards sustainable development objectives, including private-sector investments.[7]

[7] In the Addis Ababa Action Agenda, United Nations Member States agreed that Integrated National Financing Frameworks (INFFs) are a critical tool to support national sustainable development plans. Through INFFs, countries develop strategies to mobilize and align financing for all dimensions of sustainability. For more information, see inff.org.

SECTION 2

CLIMATE AND NDC INVESTMENT OPPORTUNITIES IN AFRICA

2.1 Introduction

Climate change is affecting every country, and despite its low contribution to greenhouse gas emissions, Africa is the world's most vulnerable continent. Climate change is disrupting national economies and countless lives. SDG 13 – Climate Action calls for urgent action to combat climate change and its impacts. It is intrinsically linked to all the other 16 SDGs.

Tackling the climate crisis requires all countries to follow through with their commitments under the Paris Agreement to reduce emissions of greenhouse gases, which cause global warming, and adapt to its impacts. Through their NDCs, African governments define national climate pledges detailing what they will do to: ensure that the world's average temperature does not exceed the preindustrial level by more than 1.5 degrees; adapt to the impacts of climate change; and ensure sufficient financing to support these efforts. Although primarily designed to tackle climate change, NDCs offer tremendous investment opportunities in key sectors of the economy.

This section introduces the NDCs across Africa and offers an assessment of investment opportunities related to climate action across the 16 African SDG Investor Maps. It provides selected investment opportunities as business solutions to achieve NDCs and spotlights enterprises that offer climate investment opportunities, including a discussion of how they measure and manage their impact.

2.2 Nationally Determined Contributions

Since 2015, nearly all African countries have developed and updated their NDCs. These updates, submitted since 2021, expand the scope of NDCs, enhance their targets and corresponding actions, and integrate several cross-cutting issues. The African NDC pledges consider both mitigation and adaptation.[8] For mitigation, African NDCs prioritize energy, transport, agriculture, forestry and other areas related to land use. Adaptation measures include agriculture, water resources, resilient infrastructure, ecosystems and disaster risk reduction.[9]

African countries have made concrete progress towards their Paris Agreement pledges: African countries' pledges are more robust than the global average in explaining how targets will be achieved.[10] A 2023 survey by UNDP found that 79 percent of African countries have government coordination mechanisms for their NDCs, and many countries are taking steps to mainstream NDC priorities into policy and regulatory frameworks. For example, 52 percent have integrated NDC targets into their national climate change policies and strategies, while 36 percent have mainstreamed these targets into national climate change laws and decrees. In terms of implementation, 88 percent of respondent countries are implementing mitigation measures, and 79 percent are implementing adaptation measures. However, only 27 percent have measurement, reporting and verification (MRV) systems for tracking actions on NDC mitigation and adaptation.[11]

The majority of African NDCs include data on the costs of implementing these climate pledges,

[8] Climate mitigation entails actions to reduce or prevent greenhouse gas emissions, or to enhance carbon sinks that remove these gases from the atmosphere. Climate adaptation comprises actions that reduce vulnerability to current or expected impacts of climate change. See UNDP's Climate Dictionary for more detailed definitions related to climate change: https://www.undp.org/publications/climate-dictionary.

[9] For an overview of NDCs, visit ClimateWatch https://www.climatewatchdata.org.

[10] UNDP, 2022. In The Race Against Climate Change, There's Still Hope for Africa – Here Are 5 Reasons Why. https://climatepromise.undp.org/news-and-stories/race-against-climate-change-theres-still-hope-africa-here-are-5-reasons-why.

[11] UNDP, 2023. 2023 NDC Outlook Survey (unpublished).

including unconditional targets that can be achieved with internal resources, and conditional targets that are dependent on external financing. Overall, estimates indicate that $2.8 trillion is required to implement African NDCs between 2020 and 2030. Of this total, African governments have committed approximately 10 percent of domestic public resources, and annual climate finance flows in Africa stand at only $30 billion. This shows how critical it is to tap into external resources for achieving conditional NDC commitments. Yet current climate financing levels are not meeting the need: estimates suggest that current flows only amount to 12 percent of what is required on the continent.[12]

A UNDP survey from 2023 on NDC implementation found that across the continent, most financing used to implement NDC measures came from international public finance in the form of grants (75 percent of respondents), followed by domestic public finance (50 percent) and international public loans (44 percent). Only 30 percent of respondents indicated that they had received domestic private finance, and just 21 percent reported receiving international private finance for their NDCs.[13]

Given this limited private-sector participation, African governments have taken steps to enhance enterprises' and investors' contributions towards NDCs by establishing private-sector strategies and national frameworks that create an enabling environment. In Rwanda for example, the Government developed the comprehensive Private Sector Mobilization Plan for Climate Action to support private-sector contributions to NDC implementation. Uganda's Government set up the Private Sector Development Programme to lower the cost of doing business and promote the enforcement of industry standards related to NDCs for the in the energy sector. Namibia adopted a national Carbon Market Framework and related Carbon Registry System aligned with the country's updated NDC, which identified carbon markets as a strategy for mobilizing finance for both adaptation and mitigation.

2.3 Climate investment analysis

Out of the 207 SDG investment opportunities identified from the 16 African SDG Investor Maps, 130 IOAs have the potential to contribute positively to climate action – representing 63 percent of all investment opportunities identified across the SDGs. Most climate-relevant investment opportunities manage risks related to climate change and help adapt to a changing climate (adaptation, 47 percent). Another 36 percent tackle the root causes of climate change (mitigation), while 21 percent have dual benefits, which means they address both adaptation and mitigation.[14]

Climate-relevant IOAs (number of IOAs)

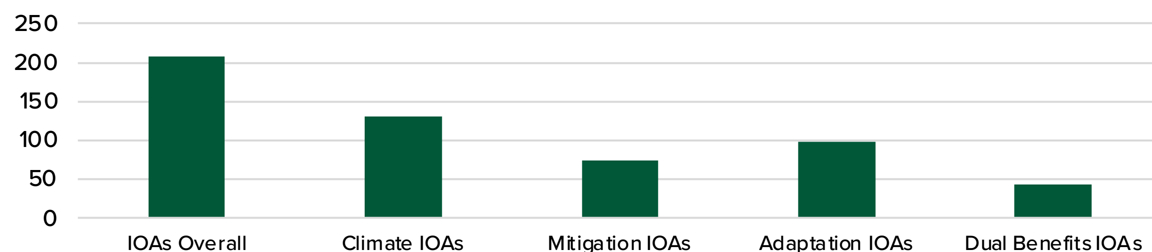

Chart 8: Climate-relevant IOAs (number of IOAs)

Of the 207 IOAs identified, 139 are captured as priorities within countries' NDCs. Of these, the overwhelming majority are classified as climate relevant, with only 25 IOAs lacking a direct link to climate action. Nearly all climate-action IOAs and their themes appear in the NDCs (only 13 climate-

[12] Climate Policy Initiative (CPI), 2022. Landscape of Climate Finance in Africa. https://www.climatepolicyinitiative.org/publication/landscape-of-climate-finance-in-africa/.
[13] UNDP, 2023. 2023 NDC Outlook Survey (unpublished).
[14] The sum of these categories is greater than 100 percent because 'dual benefits' IOAs are also counted under mitigation and adaptation.

relevant investment opportunities are not prioritized within national climate pledges). This signals strong alignment between the SDG investment opportunities and countries' ambitions for climate and broader sustainable development progress, and therefore a significant role for the private sector.

Across regions, Eastern Africa has the most climate-related investment opportunities (65 IOAs), followed by Southern Africa (35 IOAs) and Western Africa (30 IOAs). By climate category, Eastern Africa has the highest percentage of adaptation IOAs, with 80 percent of all climate-relevant investment opportunities. Southern Africa has the lowest proportion of dual benefits investment opportunities, representing 29 percent of all climate-relevant IOAs.

Most climate-relevant investment opportunities are available in lower-middle-income countries (63 IOAs, representing 48 percent of all climate IOAs), followed by upper-middle-income countries (30 IOAs, or 23 percent of all climate IOAs). In the one high-income country – Seychelles – 100 percent of IOAs are climate relevant. Among lower-middle-income countries, two thirds of IOAs are related to climate action.

At the country level, Kenya, Mauritius and Nigeria have the highest number of climate-related IOAs, with 13 IOAs in Kenya, 11 in Mauritius and 11 in Nigeria. Mauritius tops the list for mitigation investment opportunities (8 IOAs), and Kenya has the most adaptation investment opportunities (11 IOAs). Mauritius and Tanzania have the most dual benefit investment opportunities, with five IOAs each.

SIDS and regions with similar characteristics have the greatest proportion of climate-related investment opportunities. As already stated, all of Seychelles' IOAs have climate relevance and 75 percent of Zanzibar's IOAs address adaptation. This is in line with the unique climate challenges and opportunities in these economies.

Among investment sectors, Food and Beverage is by far the most prominent for climate-related investment opportunities, with 54 climate IOAs in the sector. One example is in the creation of feedstock from food waste in South Africa,[15] which can increase production capacities and industrial development in addition to supporting climate objectives. This is followed by the Infrastructure (33 IOAs) and Renewable Resources and Alternative Energy (22 IOAs) sectors. Within the Renewable Resources and Alternative Energy sector, all 22 climate-related investment opportunities are focused on the mitigation component, given the sector's potential to tackle the root causes of climate change. A strong focus on adaptation is found in the Food and Beverage (52 IOAs) and Infrastructure (26 IOAs) sectors. Dual benefit opportunities were seen within all 10 climate-related IOAs in the Services sector – most located in Eastern Africa. Such investment opportunities can address both climate change adaptation and mitigation, signaling the multiple benefits of tourism-related investments.

Climate IOAs across sectors (number of IOAs)

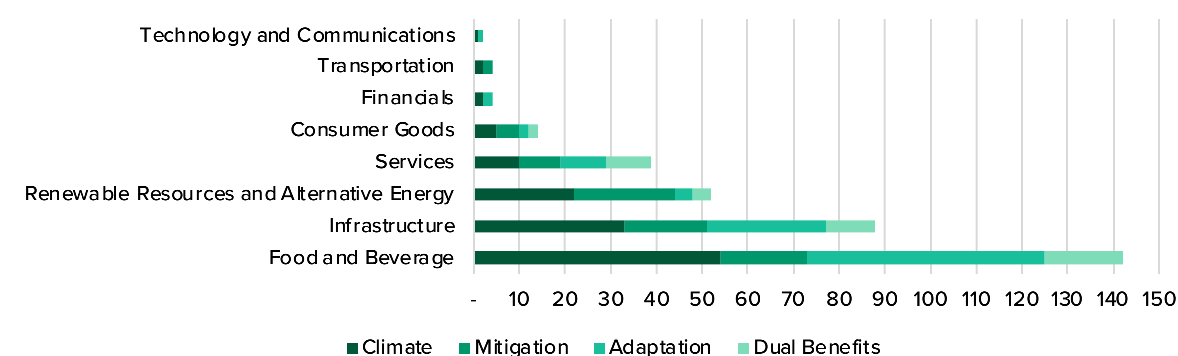

Chart 9: Climate IOAs across sectors (number of IOAs)

[15] UNDP, 2021. South Africa SDG Investor Map, Feedstock from Food Waste. https://sdginvestorplatform.undp.org/market-intelligence/feedstock-food-waste.

At the industry level, the significance of agricultural activities for climate action remains prominent: the Agricultural Products industry offers 26 percent of all most climate-related IOAs, 34 percent of all adaptation IOAs and 28 percent of all dual benefits IOAs. Solar Technology and Project Developers tops the mitigation category, with 24 percent of mitigation IOAs situated within this industry.

Of climate-related IOAs identifying a market size in US dollar value, as established by the SDG Investor Maps, 37 percent have a market value of between $100 million and $1 billion (45 percent of these focus on mitigation, 41 percent on adaptation and 57 percent on dual benefits). Of all climate-related IOAs, 36 percent have a market size below $50 million. This is also the most common market size bracket for climate-related IOAs, and for mitigation and adaptation IOAs in Eastern Africa.

For climate-related IOAs identifying market size using CAGR, 35 percent have CAGR ranges below 5 percent for climate overall, while 33 percent focus on adaptation. In the CAGR range of 5-10 percent, 44 percent focus on mitigation and 50 percent confer dual benefits. This shows that the potential annual growth of revenues across African markets tends to be higher for mitigation IOAs than for adaptation investment opportunities, and sends a strong signal about the potential for the private sector to address root causes of climate change.

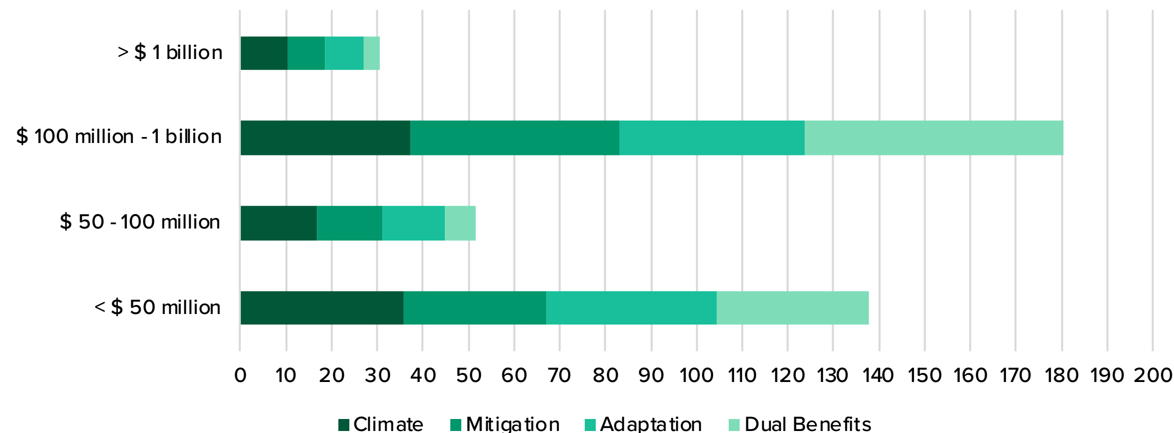

Chart 10: Market size – US$ value distribution across climate IOAs (percent of IOAs)

Across return metrics and climate categories, climate-related IOAs exhibit significant indicative return profiles in line with investment opportunities identified in African SDG Investor Maps overall: 26 percent of climate-related investment opportunities have IRRs between 15 percent and 20 percent while 42 percent have ROIs in that range. For GPM, 46 percent of climate-related IOAs have an indicative return range above 25 percent.

While mitigation, adaptation and dual benefits IOAs have similar ROI and GPM, 28 percent of investment opportunities focused on adaptation and 32 percent of those focused on dual benefits indicate an IRR with a top target range of between 20 percent and 25 percent. In Eastern Africa, the most prominent IRR category is above 25 percent (this IRR category accounts for 13 percent of climate-related IOAs across the region).

In tendency, this indicates that adaptation and dual benefits IOAs can generate higher return profiles than mitigation IOAs, especially when measured through IRRs. This may be due to more established business models for adaptation interventions, and could indicate an opportunity for investors to tackle both climate mitigation and adaptation through a single intervention.

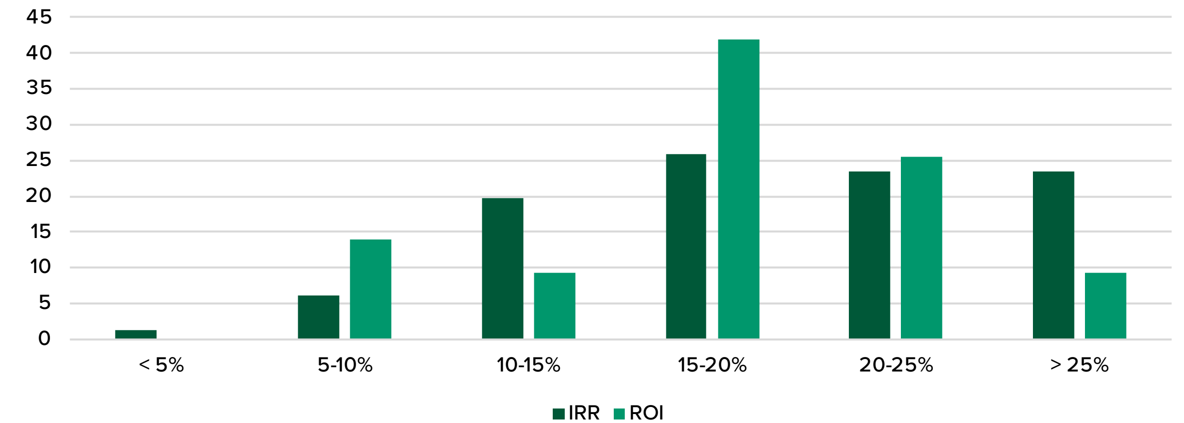

Chart 11: IRR and ROI range distribution across climate IOAs (percent of IOAs)

Among all climate-related investment opportunities, 49 percent will take 5-10 years to generate returns. This is the same medium-term investment timeframe observed for IOAs overall. The most prominent target sector for climate-related IOAs requiring a medium-term investment timeframe is Food and Beverage, accounting for: 18 percent of climate-related IOAs overall; 21 percent of those focused on adaptation; and 15 percent of dual benefits IOAs. For climate change mitigation, the most prominent sector for medium term investment timeframe opportunities is Renewable Resources and Alternative Energy (21 percent of IOAs).

Among climate-focused investment opportunities, mitigation IOAs (especially in the Infrastructure sector) have longer investment timeframes overall (52 percent medium term and 25 percent long term), while adaptation IOAs (especially in the Food and Beverage sector) have relatively shorter investment timeframes (45 percent medium term and 40 percent short term).

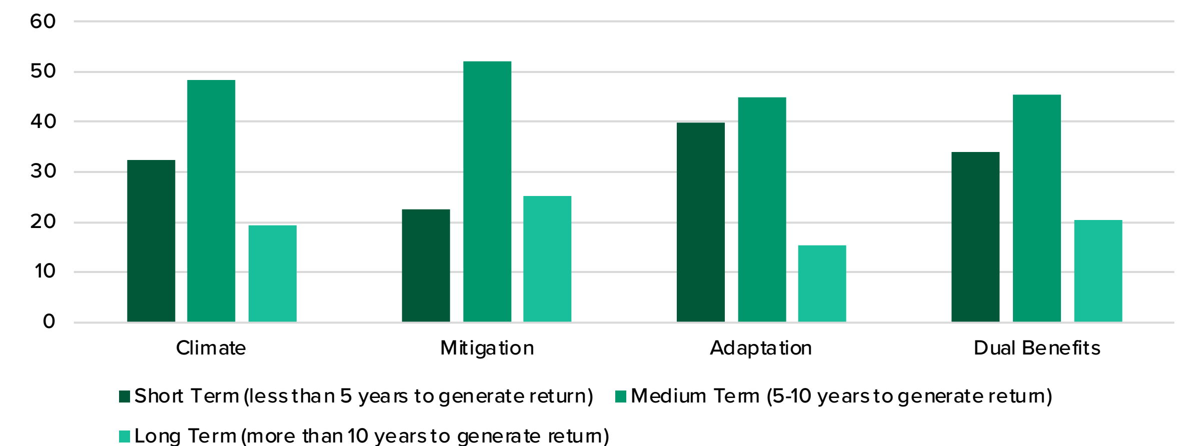

Chart 12: Investment timeframes for climate IOAs (percent of IOAs)

Looking at climate-related investment opportunities' ticket sizes, 37 percent of IOAs require an investment of between $1 million and $10 million to realize their business models. Another 31 percent of climate-related IOAs require an investment of $500,000. This is in line with the findings for IOAs overall. In terms of sectors, most climate-related IOAs in the Food and Beverage sector require small to medium ticket

sizes, while climate-related investment opportunities in Infrastructure and Renewable Resources, and Alternative Energy necessitate medium to large ticket sizes.

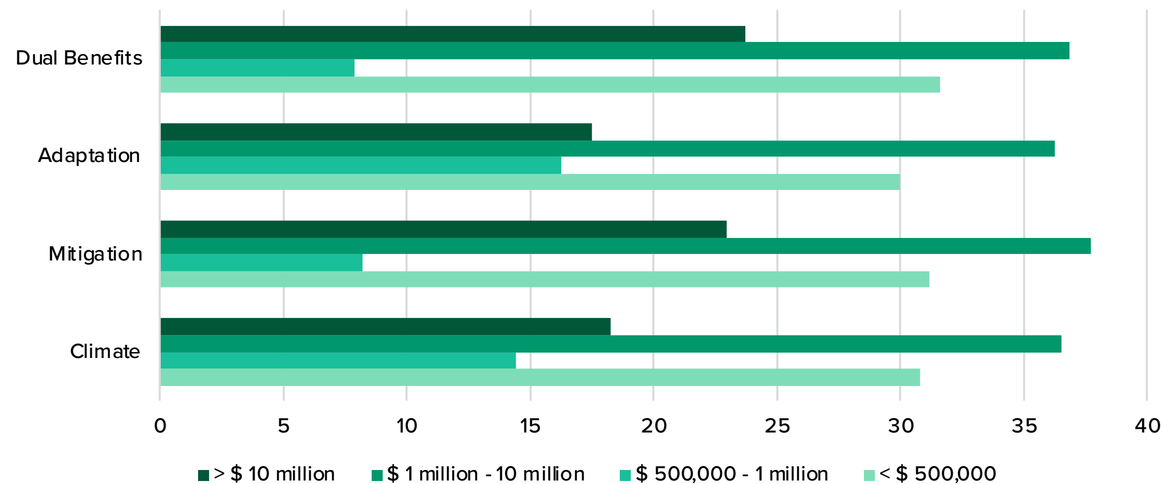

Chart 13: Ticket size ranges for climate IOAs (percent of IOAs)

Climate-related IOAs directly impact several SDGs. This shows the cross-cutting nature of climate action and related investment opportunities. SDG 2 – Zero Hunger is the most impacted SDG, accounting for 27 percent of climate-related IOAs (SDG 2 is also the most impacted SDG for investment opportunities overall). The second most impacted SDG is SDG 7 – Affordable and Clean Energy, accounting for 22 percent of IOAs. SDG 7 is also the most impacted SDG for mitigation IOAs, accounting for 37 percent of investment opportunities in that category.

In addition, many SDGs are impacted in an indirect manner: 31 climate-related IOAs show secondary impacts on SDG 13 – Climate Action, and 22 show secondary impacts on SDG 14 – Life Below Water. This signals the many indirect relationships between private-sector investments and climate action.

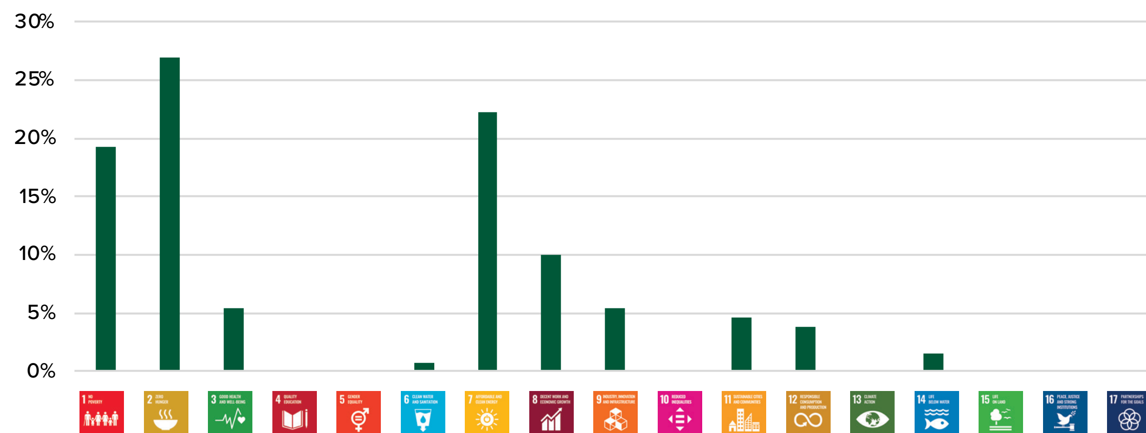

Chart 14: Primary SDGs addressed by climate IOAs (percent of IOAs)

With 58 percent classified as “contribute to solutions”, climate-related IOAs offer significant potential to generate new positive outcomes for stakeholders that would otherwise be underserved. Of these opportunities, 18 percent are in the Food and Beverage sector, 15 percent relate to Infrastructure and another 15 percent relate to the Renewable Resources and Alternative Energy sector. The “contribute to solutions” ABC Impact Norms classification is most commonly assigned to climate mitigation (66 percent) and dual benefits (63 percent) IOAs, showing that there is significant impact potential beyond managing climate risks in isolation.

Contrary to the finding that overall, IOAs in sub-Saharan Africa contribute most to impact in urban areas, 36 percent of climate-related investment opportunities target rural areas and 34 percent target semi-urban areas. Just 29 percent of these opportunities target urban areas.

For adaptation IOAs, 36 percent target semi-urban areas, along with 37 percent of dual benefits IOAs. This finding is particularly strong in Eastern Africa, where semi-urban areas are the target for 23 percent of adaptation IOAs and 26 percent of dual benefits IOAs.

Food and Beverages is the most prominent sector for climate-related IOAs targeting rural areas (19 percent) and semi-urban areas (17 percent). The Infrastructure sector accounts for 12 percent of climate-related investment opportunities in urban areas. For rural IOAs, the most prominent sector is Renewable Resources and Alternative Energy (with 16 percent of IOAs in that sector). Services is the most prominent sector for dual benefits IOAs (with 14 percent) targeting rural areas.

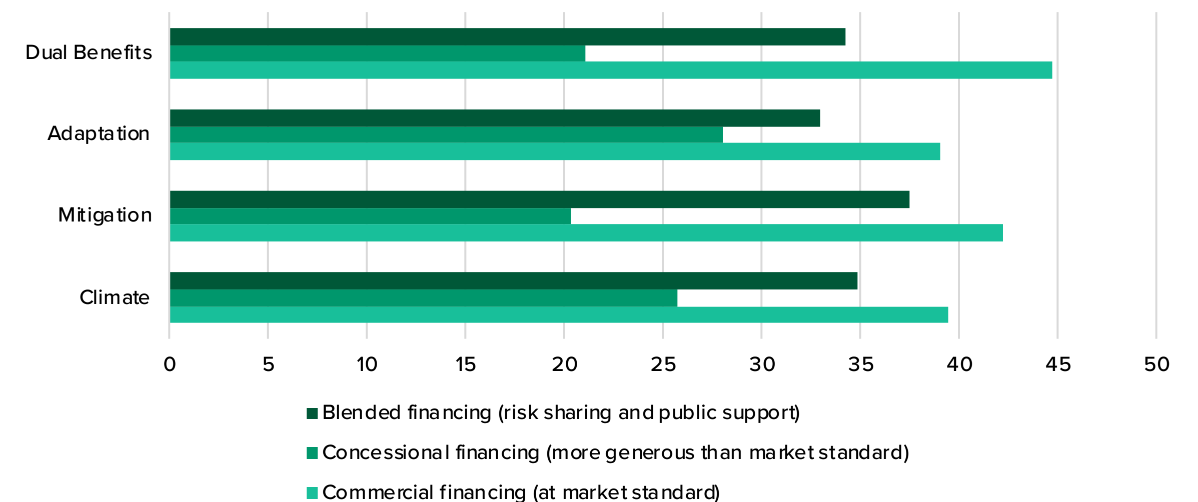

Chart 15: Financing models for climate IOAs (percent of IOAs)

When it comes to the financing models required to realize investment opportunities related to climate, 60 percent of IOAs need public support: 35 percent in the form of blended financing and 25 percent as concessional financing. While the most prominent instrument is commercial financing (40 percent of climate-related IOAs), most climate-related investment opportunities require financing that necessitates public support to be successful (just as for IOAs overall). Among climate-related opportunities, adaptation IOAs show the lowest degree of readiness for commercial financing, with 61 percent requiring blended or concessional financing. For mitigation IOAs, 58 percent require public support.

Dual benefit investment opportunities have the greatest degree of commercial viability, with 45 percent of investment opportunities financeable at market standard – higher than the overall average for IOAs (44 percent). This confirms the significant commercial potential of climate action for the private sector,

which extends to some regions: Eastern Africa and Southern Africa present climate-related investment opportunities at market standard conditions as the greatest share of the IOAs. In Western Africa, the majority of climate-related IOAs rely on concessional financing, while blended financing is the mechanism most required for mitigation IOAs.

The market risks climate-related IOAs face are comparable to SDG investment opportunities overall, namely: supply chain constraints (31 percent), capital intensity (22 percent) and regulatory challenges (15 percent). Limited investor interest is also a significant limitation for 14 percent of dual benefits and 12 percent of adaptation IOAs. In addition, business model challenges affect 14 percent of dual benefits IOAs. This indicates the complex nature of interventions targeting both climate change mitigation and adaptation.

2.4 Investment opportunities as business solutions to achieve NDCs

With such significant relevance to meeting climate targets, the IOAs identified in sub-Saharan Africa's 16 SDG Investor Maps can deliver business solutions to achieve countries' NDCs. These investment opportunities offer comprehensive data on business opportunities and potential impact, allowing investors to explore opportunities aligned with their objectives and undertake private-sector due diligence.

Three examples of business solutions derived from the IOAs are presented here, linked to NDC priorities, from Eswatini, Ghana and Sierra Leone. Visit the SDG Investor Platform for the full datasets on these IOAs and additional details, using the links provided below.

Eswatini
Integrated Waste Collection & Management Services

NDC priority measures: In Eswatini's revised NDC, submitted in October 2021, the country adopted its first economy-wide emissions-reduction target of 5 percent by 2030, or 14 percent with financial support. The NDC provides measures for mitigation and adaptation across sectors, which include: increasing the share of renewable energy (solar, wind, biomass and hydropower) to a 50 percent mix by 2030 relative to 2010; and landscape-restoration actions including planting 10 million trees. Its adaptation priorities target the health sector, employing the co-benefits from mitigation measures such as clean technologies in waste and wastewater management.

Business solution to support NDC achievement: Integrated waste collection and management services: This business solution comprises the construction, operation and maintenance of waste collection and sorting facilities, and the operation of controlled dumpsites by local municipalities through public-private partnerships. It includes recycling, composting and disposal of solid waste to prevent open-burn practices. Currently, 45 percent of Eswatini's waste is openly burnt, and the textile industry generates 402 tons of waste per month. Benchmark projects from Turkish waste collection enterprises and sorting facilities exhibit IRRs of between 10 percent and 15 percent, while South African waste reuse solutions indicate IRRs of between 20 percent and 25 percent. A study on waste management services in the Kwaluseni area (Manzini) reported a willingness-to-pay for waste management services averaging at E 47.71 (US$3) per month per household.

Risk profile: Waste collection and management systems have been established in urban areas, and expansion to rural areas may require support. At the community level, informal waste management practices are prevalent, and practices such as back-yard pits and open burning of household waste hinder the systematic collection and delivery of waste to processing facilities. In addition, the informal market of waste collectors may be disrupted and could be marginalized. Finally, Eswatini lacks clear policy guidelines for processing facility design, site selection and operations. Overlapping mandates of private entities and municipalities resulting from the country's weak regulatory framework prevent the effective delivery of waste management services and associated positive impacts.

Policy and incentives: Eswatini's National Development Plan aims to strengthen waste management programmes and develop a framework for addressing hazardous waste. It emphasizes the adoption of a circular economy to improve recycling and waste separation, as well as mechanisms for accessing funding. The Eswatini Environment Authority's primary mandate is to address the country's growing waste management problem using a holistic approach to waste management that focuses on waste prevention and minimization. The National Environment Fund aims to promote environmental sustainability, prioritizing chemical and waste management.

Expected impact: Integrated waste management services contribute to reducing the risk of diseases linked with unmanaged municipal waste, while reducing greenhouse gas emissions from open burning (45 percent of total generated waste). Integrated waste collection and management leads to food waste recycling, which reduces food waste, overloading of landfills and CO2 emissions, and produces nutrient-rich fertilizer or energy. These actions contribute to SDGs 3, 11 and 12, and boost the country's recycling industry, which can have additional economic and social impacts. For example, Tunisia earned $20 million and Senegal US$30 million from exports of scrap metal, aluminum and recovered plastics in 2007.

Full IOA data and supporting references can be found at: https://sdginvestorplatform.undp.org/market-intelligence/integrated-waste-collection-management-services.

Ghana
Irrigation Systems and Dams

NDC priority measures: Ghana submitted its revised NDC in November 2021. With greater ambition across sectors and the inclusion of new greenhouse gases, the country raised its target to cut emissions by 64 MtCO2e by 2030. Ghana commits to implementing unconditional actions that would result in 24.6 MtCO2e, and conditional actions that have the potential to reduce emissions by 39.4 MtCO2e by 2030. Its NDC focuses on building a resilient and low-carbon society through 19 policy actions in 10 priority areas. These actions aim to accelerate a sustainable energy transition, enhance early warning systems, promote responsible production and consumption, and foster social inclusion, including through water resource management and enhanced climate resilience of women and vulnerable people.

Business solution to support NDC achievement: Irrigation systems and dams: This business solution is focused on developing and distributing small-scale solar-powered irrigation solutions and other integrated systems involving dams. The estimated long-term value of Ghana's irrigation equipment market is US$230 million. Government plans included an expansion of irrigated land from 31,000 ha in 2014 to 100,000 ha by the end of 2020, which left a substantial untapped market for further development. Providing water for corchorus and onion production with pump-tank-hose technology in northern Ghana has a yielded an IRR of between 45 percent and 47 percent. Drip irrigation has been reported to increase vegetable farmers' net incomes by US$6,000 on a US$1,000-1,500 investment per acre.

Risk profile: Ghana has suffered from inadequate or expensive access to farm inputs and markets, making returns insufficient to maintain irrigation schemes. To date, Ghana's low agricultural productivity, slow growth rate and low utilization of irrigable areas have limited the uptake of irrigation. Such systems and

dams may increase the habitat loss of fish and wildlife, and put aquifers, river systems and downstream groundwater at risk due to increased water extraction for irrigation.

Policy and incentives: The Government plans to expand and rehabilitate existing irrigation infrastructure, and develop large-scale private and public irrigation schemes – including through a dedicated irrigation policy focused on decentralizing irrigation schemes and engaging farmers in planning. The Medium-Term National Development Policy Framework aimed to increase the amount of irrigated land to 100,000 ha by 2021. The One Village, One Dam Initiative aims to construct around 560 small earth dams and dugouts, with a focus on northern regions. The Ghana Commercial Agriculture Development Project auctions land for development to support participation in publicly funded irrigation schemes.

Expected impact: Irrigation systems and dams are expected to enhance agricultural productivity and reduce the impact of climate variability on food systems. They aim to improve food security and household nutrition nationwide, strengthen agricultural value chains, reduce agricultural vulnerabilities and reliance on rainwater, improve the livelihoods of impoverished populations, increase the incomes of farmers and agricultural growers, create new market opportunities and economies of scale, reduce price volatility and ultimately contribute to SDGs 2 and 6.

Full IOA data and supporting references can be found at: https://sdginvestorplatform.undp.org/market-intelligence/irrigation-systems-and-dams.

Sierra Leone
Solar Mini-grid Developers

NDC priority measures: In its updated NDC, submitted in July 2021, Sierra Leone defined a progressive path for cutting greenhouse gas emissions from 2005 levels: 5 percent by 2025; 10 percent by 2030; and 25 percent by 2050. Adaptation measures focus on enhancing adaptive capacities, strengthening resilience and reducing vulnerability in half by 2030 while mainstreaming climate considerations into sustainable development strategies. Mitigation priorities include the promotion of innovation and technology transfer for waste management, transport, agriculture, and energy, including solar, through the private sector.

Business solution to support NDC achievement: Solar mini-grid developers: Sierra Leone's business solution involves investing in the development of solar mini-grids for businesses, communities, hospitals and other facilities through the Distributed Energy Service Company (DESCO). The annual mini-grid market size in Sierra Leone is estimated at US$33 million based on an average mini-grid tariff of US$0.9 / kWh, and average household demand per day of 0.2kWh / day. The target market is 47 percent of the country's non-electrified population – 2.9 million people. The development phase of mini-grid projects is typically funded by equity, expecting a return between 25 percent and 35 percent. The construction phase typically requires a 15-20 percent return through construction finance, and the final operation phase normally necessitates a lower return totaling 10-15 percent using construction finance.

Risk profile: Mini-grids are infrastructure assets requiring up-front capital investment and generating steady returns over 10 to 20-year period. Infrastructure financing in the form of grants or subsidies is typically required to reduce capital costs. The consumer costs of electricity from a mini-grid can be higher than national grid costs because national grid tariffs are often not cost-reflective and highly subsidized. This means that poorer communities may be excluded from accessing the new source of energy, particularly women-headed households, which can exacerbate inequalities.

Policy and incentives: Through its National Energy Policy and National Energy Strategic Plan, Sierra Leone seeks to increase access to modern energy supplies in off-grid areas in order to reduce poverty.

These plans prioritize small-scale decentralized solar power supplies to meet the basic needs of lighting, refrigeration, media and information technology in rural areas. Besides offering fiscal incentives such as duty-free importation of PV equipment, solar mini-grid developers can take advantage of subsidies to lower tariffs, increase affordability increase access and support business viability. Subsidies include asset splits, connection subsidies treated as capital grants, results-based financing and subsidies given as a percentage of total project capital expenditure.

Expected impact: Solar mini-grids can provide high-quality uninterrupted renewable electricity to underserved communities, especially compared to traditional energy sources such as biomass and diesel. By offering an alternative to these unhealthy sources of power, solar mini-grids are helping Sierra Leone to meet its target of increasing the contribution of renewable energy (including solar and hydropower) to the country's total energy capacity from 20 percent to 65 percent, and to increase the electrification rate to 92 percent by 2030 (contributing to SDGs 1, 7 and 10).

Full IOA data and supporting references can be found at: https://sdginvestorplatform.undp.org/market-intelligence/solar-mini-grid-developers.

2.5 Enterprises delivering on investment opportunities

UNDP and its partners use SDG Investor Maps to spotlight and support enterprises that contribute to the SDGs while achieving commercial success. For example, through the Growth Stage Impact Ventures (GSIV) programme in Nigeria and Tanzania, enterprises that have developed at-scale products and services with the potential to contribute to sustainability are identified through third-party nominations. Furthermore, the UNDP Business Call to Action (BCtA) brings together companies committed to engage low-income people in their core business and advance the SDGs, guided by the BCtA Code of Conduct, including from Kenya.

The enterprises detailed below are on a journey of managing their impact across financial, social and environmental dimensions in a holistic manner. With support from UNDP, they are utilising impact management tools, such as the SDG Impact Standards, which are voluntary management standards designed to advance organizations' sustainability journeys. Comprising 12 implementation actions, the SDG Impact Standards provide a universal framework for embedding sustainability and the SDGs into decision-making across the organization, including management, disclosure and governance.

Kenya
ACRE Africa

Although smallholder farmers produce 80 percent of the food consumed in Asia and sub-Saharan Africa, they are extremely vulnerable. Poor weather and climate change can lead to crop losses that set farmers back for months, keeping them in a cycle of poverty. Because these farmers lack the funds to deal with the losses, they remain on the brink of destitution, even in years of good harvests.

Despite the demand for risk-mitigation services, the market for agricultural insurance targeting smallholders remains largely untapped. There are multiple challenges in this market: most farmers have never had insurance before and do not know how it works. And due to the high costs of implementation, traditional indemnity insurance requires higher premiums than smallholder farmers can afford.

Agriculture and Climate Risk Enterprise (ACRE) Africa has stepped in to meet these challenges. ACRE Africa is not an insurance company, but a service provider working with local insurers and other stakeholders along the insurance value chain. To keep costs low for farmers, ACRE Africa's inclusive business model utilizes established distribution channels such as financial institutions, agro-dealers and mobile operators. ACRE Africa's typical customer is a rural farmer cultivating less than two acres of land that provides three quarters of the household income for an average of seven people.

ACRE Africa's insurance products are index-based, which means that payouts are determined by comparisons to historical regional rainfall patterns. Whereas classic indemnity-based insurance is based on crop damage reported after harvests, requiring a long claims process, index-based insurance triggers payouts automatically if rainfall is significantly greater or less than average. Premium payments and payouts are made electronically through farmers' mobile networks and there is no need for in-person claims inspections, which can be very costly in remote areas. During the planting season, rainfall is measured using automated solar-powered weather stations located close to farmers and the data is cross-checked with data from high-resolution satellites. If the rainfall is determined to be too little or too much, an automatic payout is sent using mobile money. The amount is based on the deviation from the rainfall index.

Since its establishment in 2014 through the Syngenta Foundation for Sustainable Agriculture (SFSA) and the Global Index Insurance Facility (GIIF), ACRE Africa's coverage of smallholder farmers has grown by an average of 519 percent. Funded by public support and impact investment, and with a current majority stake by ZEPRE, a COMESA reinsurance company, ACRE Africa aims to achieve its goal of covering 5 million farmers across Kenya, Nigeria, Rwanda, Tanzania and Zambia, and providing additional services in other African countries.

In tandem, ACRE Africa is developing new insurance products and distribution channels that will meet the needs of farmers in different geographic areas. This includes picture-based insurance, which has been piloted in Kenya and scaled up to Uganda through a hybrid index insurance product among banana farmers. This product incorporates the use of smartphones to take periodic images of crops from germination to harvest. The images are shared remotely using a mobile application and ACRE Africa uses artificial intelligence to analyze the images and trigger advisories to the farmers.

ACRE Africa is also piloting the use of blockchain technology to issue smart contracts to farmers – reducing the time it takes to settle claims for smallholder farmers. With blockchain technology, farmers can receive mid-season reviews, leading to earlier payouts, which enable them to re-invest in their farms.

To learn more about the IOA on microinsurance in Kenya, visit https://sdginvestorplatform.undp.org/market-intelligence/micro-insurance.

Nigeria
SOSAI Renewable Energies

Eighty-five million Nigerians – 43 percent of the population – have no access to grid electricity. In rural areas, the electrification rate is 26 percent, compared to 84 percent in urban area. The lack of access to electricity leads to significant post-harvest loss, escalating hunger and skyrocketing prices for inputs such as fertilizer. In Northern Nigeria, more than 70 percent of the population does not have access to electricity. The potential benefits of renewable energy for agriculture in the country have not yet been fully explored.

Founded in 2010 in Kaduna State, SOSAI Renewable Energies deploys efficient, reliable and affordable renewable energy to homes, businesses and farmers in Northern Nigeria's underserved communities. The company is dedicated to improving access to clean, affordable energy and providing clean water and better health outcomes.

SOSAI's product line includes solar home systems to power appliances such as a televisions and other home appliances. The company also provides community-based mini-grids for economic activities like agriculture help communities to expand their incomes. Other solar products include cook stoves, dryers, and irrigation systems.

To date, SOSAI's technologies have reached over 45,000 families across Nigeria, saving a total of 120,000 tons of CO_2 per year, providing incomes for more than 350 women, and reducing household energy expenditures by 40 percent. Sixty percent of the company's c-suite positions are held by women.

Over the next five years, SOSAI aims to install at least 20,000 more solar home systems in rural communities through the Women Energy Entrepreneurs programme. It also aims to install mini- and mesh grids in 64 communities in Northern Nigeria, and to power more than 100 rural businesses with the energy required for services such as drying, irrigation, hair dressing, milling, cold storage and mobile phone charging.

To finance its plans for growth, SOSAI is looking for $17.8 million in fresh capital. The company is also looking for partners to create synergies around fostering distribution capacity and facilitating entry into other markets. To date, SOSAI has raised approximately $2,7 million in grants and debt funding, infused more than $500,000 of its own equity into the business and initiated a special purpose vehicle (SPV) with Independent Energy, a partner from the Netherlands.

To learn more about the IOA on mini grids in Nigeria, visit: https://sdginvestorplatform.undp.org/market-intelligence/hybrid-mini-grids.

Tanzania
Kilimo Fresh Foods Africa

In Tanzania, where agriculture is the primary livelihood for 75 percent of the population, farmers face challenges including sub-optimal yields, unfair market returns and food losses. Nearly 50 percent of the food produced in Tanzania goes to waste before reaching the market – equivalent to US$4 billion every year – as a result of poor storage facilities, lack of access to markets and poor transport and handling.

Kilimo Fresh Foods Africa sources agricultural products from local farmers and delivers them to buyers in urban areas. The company aims to increase smallholder farmers' incomes and reduce food waste by leveraging mobile technology and managing cold-chain logistics. Recently, the company has expanded its services to informal produce vendors.

Street vendors in Dar es Salaam purchase fresh produce from the public market early in the morning and push their carts to various locations. Kilimo Fresh sources produce from smallholder farmers and delivers it directly to these street vendors, saving them time and money. The company is currently working with over 1,200 vendors, 38 percent of whom are women.

Kilimo Fresh empowers people at the bottom of the economic pyramid – both as customers and farmers. To date, it has enabled direct access for 1,000 smallholder farmers (40 percent of them women) to local markets across three regions in Tanzania. In the process, it provides a stable supply of fruits and vegetables to 1,200 street vendors, 38 percent of whom are women.

In addition to street vendors, Kilimo Fresh's primary target market includes hotels, restaurants, catering companies and schools. The entire market segment of hotels alone comprises more than 2,000 establishments, with an average annual consumption of US$50,000 in farm produce. It services more

than 2,500 retail stores and 15,000 informal fruit and vegetable vendors in Dar es Salaam alone. Currently supplying 1,200 of these vendors, Kilimo Fresh aims to supply the entire target market in the city. The company also plans to diversify its product range, which is expected to generate 500 additional jobs (55 percent of them for women). To finance its expansion, Kilimo is looking to raise US$1.5 million.

To learn more about the IOA on horticulture storage and transport infrastructure in Tanzania, visit: https://sdginvestorplatform.undp.org/market-intelligence/horticulture-storage-and-transport-infrastructure.

Some of the enterprise support provided by UNDP through GSIV, BCtA and other SDG investment brokering assistance has led to additional private capital flows towards national development objectives, as was the case in Nigeria.

2.6 Conclusion

African SDG Investor Maps IOAs indicate significant financial and SDG impact for investors. Climate investments in particular provide a prime opportunity for the private sector to contribute to critical sustainable development objectives across the continent. To date, there has been limited involvement of enterprises and investors in national climate agendas, leaving a gap in the market for investors seeking climate impact along with significant investment returns.

Thanks to private-sector opportunities provided by NDCs, several organizations are already making significant contributions towards national climate pledges and SDG targets, as highlighted by these enterprises' impact management and measurement. Given the diversity of Africa's private sector, investment opportunities apply across the entire spectrum of the continents' economies – from small-scale informal actors with sizable market potential such as market traders to large-scale infrastructure projects like public transportation.

With the public support required to unleash the private sector's full potential towards climate action across sub-Saharan Africa, government and development partners' leadership is essential. This can include innovative financing instruments and the establishment of high-integrity, credible, inclusive and fair carbon markets, which can unlock funding for a net-zero transition. For example, Ghana established an institutional framework for accessing results-based payments by reducing emissions from deforestation. Another example is restoration efforts that result in carbon removal through the aggregation of demand via the LEAF Coalition.

Insurance is a critical de-risking tool for SDG and climate investments. Insurers are both underwriters and asset managers of long-term capital. In both capacities, they can contribute towards reaching net-zero carbon emissions. As underwriters, insurers facilitate the flow of capital to mitigation projects by providing de-risking solutions to investors. For example, in East Africa's geothermal energy sector, where capital-intensive early-stage development drilling has a low probability and high risk profile, investors can use risk-transfer solutions to make the risk-return profile attractive.

Finally, while market conditions are favourable for numerous climate investment opportunities, potential investment opportunities may encounter policy and regulatory barriers obstructing private-sector participation. For example in Zanzibar, sustainable aquaculture production has the potential to cultivate high-value species such as espinosiam and cottoni seaweed, sea cucumber and mud crab.[16] Aquaculture can give a critical boost to the island's economy, supporting the livelihoods of coastal communities (particularly women, which comprise 80 percent of the workforce), where seaweed diseases are decreasing productivity.

[16] Revolutionary Government of Zanzibar and United Nations Development Programme (UNDP), 2024. Zanzibar SDG Investor Map. https://www.undp.org/tanzania/publications/zanzibar-sdg-investor-map.

While Zanzibar's regional Government has prioritized aquaculture production in its Blue Economy Policy, the necessary regulations have not yet been introduced for the production and trade of aquaculture products. Feasibility studies are needed to identify target markets and gaps in the production and export processes, and government intervention is necessary to provide specialized training. Enhancing the enabling environment for this business model would allow it to deliver on its emerging market potential: for example, Zanzibar has to date exported more than 12,600 tons of seaweed, accounting for more than 20 percent of all its cash-crop exports. Expanding aquaculture would also contribute to the ambitions of Zanzibar's INFF, which prioritizes local investor access to capital as part of its integrated approach to financing sustainable development priorities.

While many policy and regulatory barriers pertain to sectoral policies, some are related to financing policies, including the availability of fiscal incentives for SDG investments. INFFs are being used in more than 85 countries as a framework to establish financing policies needed to enable more financing flows towards IOAs in SDG priority areas.[17]

[17] In 2015, United Nations Member States introduced the concept of integrated national financing frameworks (INFFs) to support national sustainable development plans in the Addis Ababa Action Agenda. Through INFFs, countries develop national strategies to mobilize and align financing with all dimensions of sustainability. As of 2024, more than 85 countries are implementing INFFs with more than 50 countries taking forward reforms related to public or private financing policies.

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