Discussion Paper

How to Get Stuff Done: Developing Green Deals in Sudan

About This Discussion Paper

This discussion paper has been developed by Savo Project Developers (Savo) as an output from an assignment with SYSTEMIQ funded by the Foreign, Commonwealth & Development Office (FCDO) of the United Kingdom. Its purpose is to summarise lessons from an explorative green investment pipeline exercise and to provide recommendations on how to unlock investment in support of Sudan's climate adaptation and mitigation ambitions.

Insights and recommendations are based on Savo’s experience, expert interviews and desktop research. The views expressed in this paper are those of Savo and are not endorsed by the UK Government or SYSTEMIQ, who accept no representation or warranty as to the accuracy of completeness of the contents.

Savo is a specialised project development and investment company focused on building a portfolio of sustainable businesses across Africa.

We would like to gratefully acknowledge the contributions of all opportunity sponsors and the insights provided during the expert consultation.

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Executive Summary

Sudan presents a unique, challenging, and compelling opportunity for global investors looking to deploy capital into green opportunities. Despite a volatile political history that continues to this day with the 2021 coup, international sentiment is warming to Sudan; and with the removal of US sanctions in 2019, the door is now technically open for foreign investment. Despite recent inflationary conditions, as a market, Sudan has the potential to put its real economy on a sustainable growth path with a focus on resilient and more productive agriculture, domestic consumption and trade and export. For example, Sudan has almost as much arable land as Ukraine (~290,000 km^2 vs ~340,000 km^2); yet uses just 1% of the fertiliser per hectare that Egypt deploys. With the right investment, policy environment and private sector development, Sudan could be one of the top agricultural producers in the world. A final strength for Sudan is the private sector. Despite decades of devastating economic and political convulsions, there remains a robust and dynamic body of family businesses that have demonstrated resilience, have material revenues and balance sheets and are ready for growth. The largest company in Sudan has revenue of over US$ 1 billion per annum, with several companies generating over US$ 100 million in revenue per annum; yet most have limited or no access to conventional international finance. Sudan is a complicated environment to operate within, but for those with the risk appetite and perseverance, the impact could be huge.

With sustained issues of droughts, floods and desertification, Sudan is one of the most climate-vulnerable countries in the world. Recent projections indicate that Sudan is expected to have the highest annual rise in global temperature among peer countries; highlighting the need for green investment in Sudan as critical to combat the severe impacts of climate change. According to a World Bank study[1], for every dollar invested in more resilient infrastructure in low and middle-income countries, four dollars are gained in benefit. The right kind of investment is indeed an opportunity to stimulate wider economic growth.

We were able to identify US$ 1.4 billion in private sector green investment opportunities. Working with the UK Government, we were tasked to identify, build and package a pipeline of private sector green investment opportunities across Sudan. Deploying our tried and tested "top-down / bottom-up" approach, we identified US$ 1.4 billion in potential green investment opportunities. In total, we identified 70 opportunities with a median deal size of US$ 10 million and most opportunities occurring within the deal size range of <US$ 10 million (see Exhibit 2). Sector coverage was diverse, with major concentration in the agriculture, manufacturing and energy sectors (15%, 30% and 25% of pipeline value respectively), while mitigation, adaptation and significant mitigation & adaptation opportunities were split roughly 40/50/10. There were major gaps in the transport and infrastructure sectors, which interestingly correspond to a major gap in Sudan's Nationally Determined Contributions (NDCs), where there is almost no coverage of industry, transport and infrastructure.

We identified several macro-challenges while building the pipeline that may hamper investment. These included: Regulatory oversight, where under regulation, over regulation and unpredictable regulation create risk and increases costs, which ultimately needs to be managed; Capital controls & repatriation of profits, where, though technically permissible to exchange, access to hard currency is reported to be often severely delayed, limited or withheld; Access to finance, where capital is an issue across corporate maturity, from start-ups to companies operating at scale; Infrastructure availability, where access to quality infrastructure to enable value-added activities is a challenge; State capture, where certain sectors of the economy are in effect co-opted by the state or state-related enterprises and creates issues regarding concentration of buyer/seller power, political intervention risk and fear of market manipulation, and; Institutional capacity, where State actor counterparty credibility and creditworthiness is a major issue for larger scale infrastructure projects. Finding ways to overcome these barriers will be critical to enabling real and meaningful investment into, and impact for, Sudan.

Translating the long list of opportunities identified to viable impactful opportunities, we narrowed to a shortlist of 19 investment opportunities with total deal value of US$ 450 million. These opportunities fall in 5 broad sectors (finance & insurance; renewable energy; agriculture, forestry & aquaculture; manufacturing; and transportation & storage), with a median deal size of US$ 10 million and most opportunities occurring within the deal size range of <US$ 10 million (see Exhibit 2). Some of these shortlisted opportunities are included in the "Spotlight Opportunities" section. Several of the opportunities that weren't shortlisted, such as meat processing and fertiliser blending, were due to the lack of fit with the assignment's

green mandate. We believe that some of these will still be viable for the right kind of investors and could be encouraged to included impact pathways.

To realise these investment opportunities and support the long-term development of green investment into Sudan, we have four tangible recommendations for investors.

1) **Find ways to aggregate capital**; Several of the opportunities are just too small to be interesting to the DFIs and private funds. Invest into aggregator companies, like SURE.Co (see page 18 for more details), or set up a Sudan debt vehicle or fund to channel debt into smaller opportunities. Savo will be exploring how to support this.

2) **Deploy capital to mature the financial sector**; Access to capital in Sudan is lacking at all levels. Ensuring capital is available for early stage, growth and mature businesses is critical. Bringing in smaller size impact funds will help address this funding gap and allow businesses to grow from early stage to growth stage. Invest money into incubators, like Rhino Capital or Impact Hub Khartoum (see page 17 for more details). Or, if you are looking for a longer-term play, get involved in the Sudan Growth Fund, where we are seeking to establish a Dubai based vehicle to take equity positions in Sudan medium-sized entities. Focus will then be to mature the reporting and governance of the portfolio companies. Savo is working on this now. If interested, please get in touch.

3) **Take a "best practice forward" approach to investment**; To help the Government of Sudan develop effective regulation; support businesses to set the standard of what good looks like. Tie investment to international standard sustainable practices and support or incentivise businesses to get there. Invest into groups, who are looking to support sustainable agriculture through sustainability-linked crop financing.

4) **Once political stability is reached, explore ways to de-risk the Government as a stakeholder**; While our focus has been the private sector, the Government of Sudan is, and will always be, a critical player in creating the green economy. In Sudan, there are issues of government entity creditworthiness and unsustainable public financial models, which make public offtake agreements difficult to rely upon. Find ways to guarantee the Government to allow the private investment to come. Sudan already has a pipeline of ~700

MW of renewable energy projects that the Government of Sudan would like to support. To enable this, explore setting up solutions, like Africa GreenCo[2], where DFIs and institutional investors can create a government offtaker guarantee scheme to incentivise the private sector at scale.

There are no doubt other opportunities and actions that are critical, but for us at Savo, based on our experience to date, these are our recommendations on where to focus in order to unlock green investment into Sudan.

The Sudan Investment Opportunity

Sudan presents a unique, challenging and compelling opportunity for global investors looking to deploy capital into green opportunities. Despite a volatile political history that continues to this day following the 2021 coup, international sentiment is warming to Sudan, and, with the removal of US sanctions in 2020, the door is now technically open for foreign investment. Despite recent inflationary conditions, as a market, the long-term prospects for the real economy remain strong with an obvious growth story around agriculture, domestic consumption and eventually trade and export. Despite decades of devasting economic and political convulsions, there remains a robust and dynamic private sector ready for growth. Sudan's NDCs provides the groundwork for an ambitious climate resilience strategy to help combat the impacts of climate change. With sustained issues of suggest droughts, floods and desertification, Sudan is one of the most climate-vulnerable counties in the world. While the groundwork for the NDCs exists, for now, these are simply ideas on paper and developing avenues for private sector investment in the green economy will be critical to unlocking the ambitions of the NDCs and creating climate resilient jobs and economic growth.

Sudan has a volatile political history that continues to this day following the 2021 coup. Following the end of the 30-year regime of Omar Bashir in 2019, Sudan's military and a coalition of civilian opposition groups agreed to a three-year power-sharing agreement under the Civilian-Led Transitional Government (CLTG) that was to culminate with a popularly elected government in 2022 (extended to 2024). The transition ended abruptly on 25th October 2021, when the country's military, led by General Abdul Fattah al-Burhan, seized power and ousted the CLTG. Since the coup, there have been a series of civilian protests. On 5th December 2022, a Political Framework Agreement was signed between Sudanese stakeholders from the military component and the Forces for Freedom and Change to establish a new transitional period. Although only an initial step, the agreement intends to lay the groundwork towards a final accord and the formation of a new civilian government. **After the removal of Sudan from the US State Sponsors of Terrorism List in 2020[3] and a full resolution of Sudan's political deadlock, the door for FDI will fully re-open. However, this paper highlights a small set of innovative private sector led opportunities that should be supported in the short term.**

Despite inflationary conditions, as a market, the long-term prospects for the real economy remain strong with an obvious growth story around agriculture, domestic consumption and trade and export. Starting with Agriculture, Sudan is the 17th largest country in the world and has almost as much arable land as Ukraine (~290,000 km^2 vs ~340,000 km^2)[4]. Yet, Sudan uses just 1% of the fertiliser per hectare that Egypt deploys[5] and irrigates just 2% of arable land[6]. With the right investment, regulation and private sector development, Sudan could be one of the top agricultural producers in the world. From a domestic consumption perspective, today Sudan has a population of 45 million people with an annual population growth rate of 2.55% (within top 20 globally)[7]; in the coming decades, it will become one of the largest populations in Africa. Today Sudan's GDP per capita is less than half of Kenya's (US$ 800 vs US$ 2000)[8], suggesting severely underserved latent domestic demand. If this could be unlocked, through a more stable economic and trading regime, there is potential for the creation of huge market demand. Finally, though industrial output and trade is low today, Sudan is fundamentally well positioned to both manufacture and trade goods and services. Strategically positioned between the Arab world and the rest of Africa, Sudan has the potential to become a trading gateway from both a geographical and cultural perspective. **Supporting businesses within these spaces will unlock huge amounts of growth potential.**

Despite decades of devasting economic and political convulsions, there remains a robust and dynamic private sector. Private sector conglomerates, mainly family businesses, are the driving force of the Sudanese economy. Throughout the political transitions, they have remained strong and are eager to build green businesses and attract foreign direct investment. A complicated trading, capital and regulatory environment has led to the establishment of parallel offshore trading solutions for export-oriented businesses while domestic players have developed diversified sector portfolios to spread risk and manage uncertainty. With succession often transitioning within the family, many established business leaders are seeking to secure their legacies while the new generation are keen to innovate around sustainable business models. The largest company in Sudan has revenue of over US$ 1 billion per annum, with several companies generating over U$ 100 million in revenue per annum; yet most have limited or no access to conventional international finance. **These businesses have demonstrated resilience, have material revenues and balances sheets, offer potential for value additionality and are ready for growth.**

With sustained issues of droughts, floods and desertification, Sudan is one of the most climate-vulnerable counties in the world. Recent projections indicate that Sudan's economy is expected to worst affected by climate change out of all African countries, with a GDP impact between -22.4%, under a 1.5 °C pathway, and -32.4%, under current policies by 2050[9]. A recent World Bank study[10] finds that in low and middle-income countries, for every dollar invested in more resilient infrastructure, four dollars are gained in benefit. **The need for green investment in Sudan is therefore not only critical to combat the severe impacts of climate change, but also a huge opportunity for economic development.**

Sudan's Nationally Determined Contributions (NDCs) capture an ambitious climate mitigation and resilience strategy. The NDCs signal its intention to implement low carbon development interventions across three sectors – energy, forestry, and waste – and adaptation measures across water, agriculture, coastal zone, and health. Sudan's NDCs are estimated to cost ~US$ 8 billion, with a tentative 15% contribution by the Government. While commendable in ambition, the Government of Sudan is unlikely to be able to provide US$ 1.2 billion in funding towards implementing the NDCs[11]. Further, the NDCs are lacking strategies for industry, transport infrastructure and the built environment more broadly, and until this high-level plan is turned into sound investment projects, the NDCs remain ideas. **Developing avenues for private sector investment in the green economy will be critical to unlocking the NDC goals and creating climate resilient jobs and economic growth.**

Developing A Green Investment Pipeline In Sudan

In total, US$ 1.4 billion in private sector green investment opportunities were identified. Working with the UK Government, Savo deployed a "top-down / bottom-up" approach to build the pipeline and generate the long list of opportunities. 70 opportunities were identified, with a median deal size of US$ 10 million and most opportunities occurring within the deal size range of <US$ 10 million (see Exhibit 2). Sector coverage was diverse, with major concentrations in the agriculture, manufacturing, and energy sectors (15%, 30% and 25% of pipeline value respectively), while mitigation, adaptation and significant mitigation & adaptation opportunities were split roughly 40/50/10.

Approach

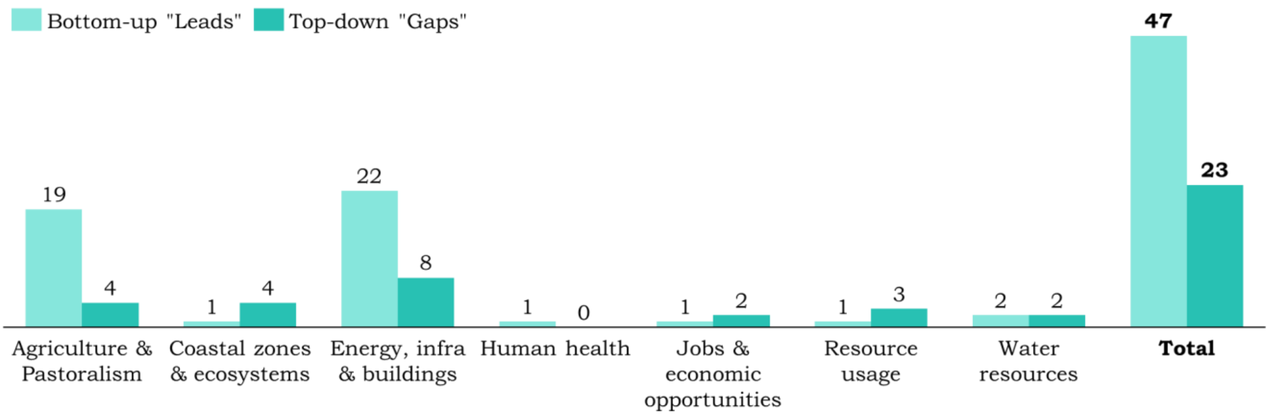
To develop the long list Savo deployed a "top-down" and "bottom-up" approach to identify investment opportunities. These were then assessed for mandate relevance via a "go/no-go" assessment and mapped against the key climate impact areas identified for Sudan: Agriculture & Pastoralism; Water Resources; Energy, Infra & Buildings; Coastal Zones & Ecosystems; Human Health; Jobs & Economic Opportunities, and; Resource Usage

The "top-down" approach entailed desktop research to identify the most critical sectors for green growth. Six lenses were applied covering: 1) Climate Impact; 2) Sustainable Business Models; 3) GDP & Trade Composition; 4) Investment Flows; 5) National Priorities; and 6) SDG Impact. In total, 34 subsectors were identified, with 28 assessed most attractive for further analysis to identify opportunity "Gaps" (top-down opportunities based on market conditions or needs without an identified sponsor or project). In total, 23 opportunities were identified through "top-down" analysis (see the list of top-down opportunities in the Appendix).

The "bottom-up" approach required extensive network development and stakeholder engagement in Sudan to unearth live opportunity "Leads" (bottom-up opportunities that have an existing sponsor or project). In total, 47 opportunities were identified through "bottom-up" stakeholder engagement.

Of the 70 opportunities identified, **~65% were opportunity "Leads" while the remaining ~35% were opportunity "Gaps".**

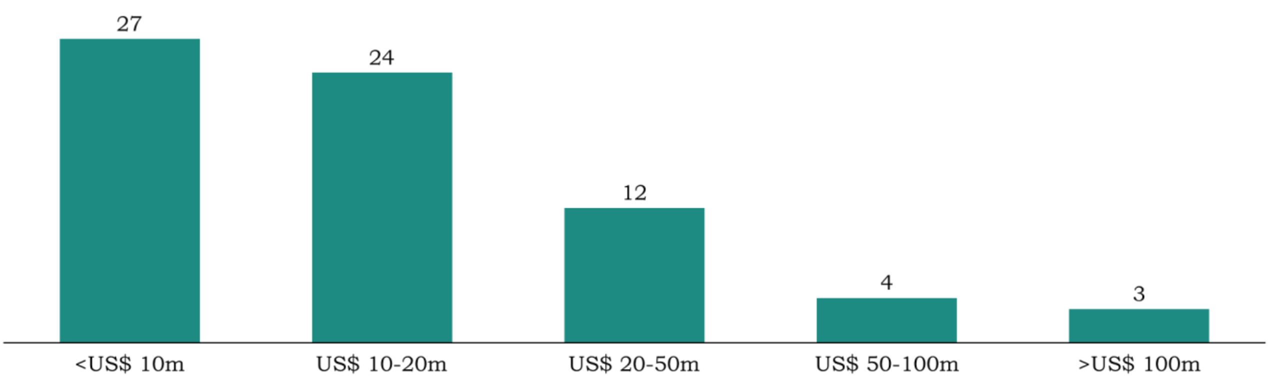
Exhibit 1:
Number of opportunity "Leads" vs "Gaps" identified by climate impact areas



Pipeline

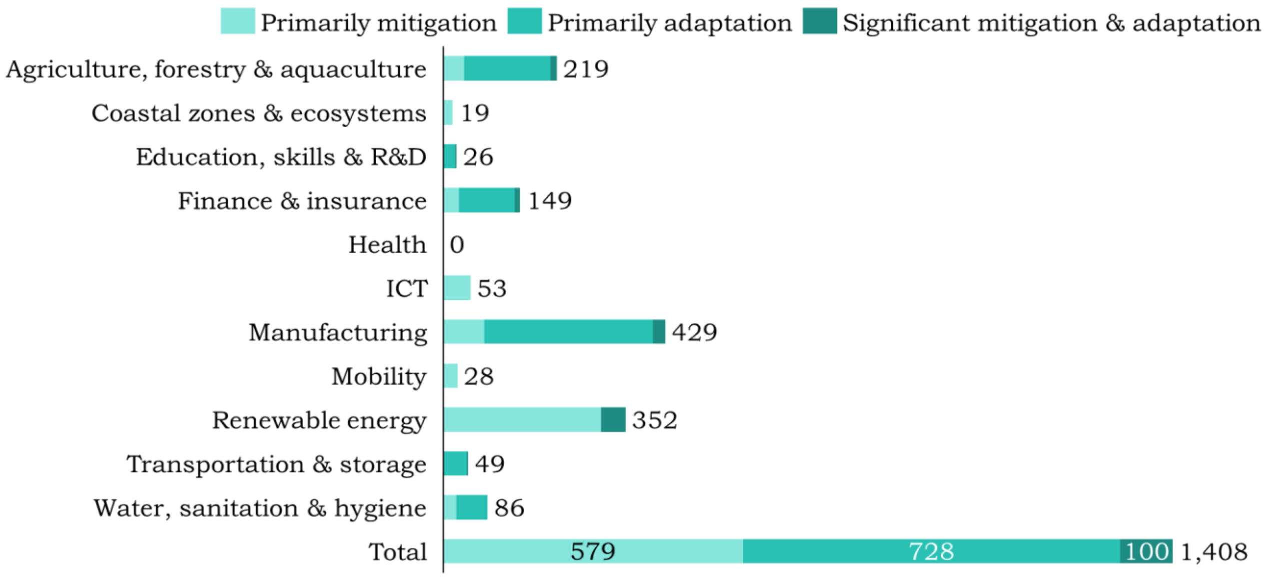
In total, US$ 1.4 billion in private sector green investment opportunities were identified. 70 opportunities were identified, with a median deal size of US$ 10 million and most opportunities occurring within the deal size range of <US$ 10 million (see Exhibit 2).

Exhibit 2:
Number of opportunities identified by deal size range



Sector coverage was diverse, with major concentrations in the agriculture, manufacturing, and energy sectors (15%, 30% and 25% of pipeline value respectively), while mitigation, adaptation and significant mitigation & adaptation opportunities were split roughly 40/50/10.

Exhibit 3:
Value of deals identified by sector by climate impact pathway ~ US$ million



Investment Challenges In Sudan

Beyond the general issues related to an unstable and unstable political situation, **6 macro-challenges were identified that may hamper investment.**

1) **Regulatory oversight:** Sudan presents a complex regulatory environment for three main reasons; under regulation, over regulation and unpredictable regulation. Under regulation is a prevalent issue across key enabling sectors, such as financial services, power, water and waste. Where a lack of regulation creates uncertainty around how to operate and what is or is not permissible. Over regulation also exists, where, for example, price-setting in the water sector hampers viable commercial investment. Unpredictable regulation causes further uncertainty, where, for example, sudden changes to tax treatment or licence requirements can distort entire sectors – making a viable business unviable overnight. Combined, these create risk; which ultimately increases cost and needs to be managed.
2) **Capital controls & profit repatriation:** A common issue cited by businesses operating in Sudan is access to foreign currency. While it is technically permissible to exchange currency; access to hard currency is reported to be often severely delayed, limited or withheld. Many companies get around this by developing offshore trading entities that conduct business in hard currency and

manage these needs. However, this only works for export orientated businesses, leaving many domestic focused enterprises (often smaller businesses) strapped for hard currency. It also hinders access to foreign lending.

3) **Access to finance:** Access to capital is an issue across corporate maturity; from start-ups to large mature companies. Earlier stage financing is generally a supply-side issue, where an underdeveloped formal venture capital market leaves limited sources outside of private networks; preventing access to finance for non-networked individuals, hindering mobility and growth. At a larger scale, access to finance is both a supply and a pricing issue. Local banks are undercapitalised (choking out supply), and, when available, lending rates are reported to be 30-40% per annum for Sudanese Pound and 14%+ for USD (often higher). Foreign finance is an obvious market, however a lack of receiving banks in Sudan and general reticence for the market has hindered the development of conventional finance to date.
4) **Infrastructure availability:** Access to quality infrastructure to enable value added activities is also a challenge. Only 52% of the population have access to power; and of those who do, often grid access is unreliable. Most corporates rely on diesel generators[12]. Water access varies, with severe regional inequity with non-Nile states relying on seasonal supply and piped water in Khartoum only covering about 60% of the population[13]. Beyond the human cost of poor infrastructure, the lack of reliable services is also a major hinderance for businesses.
5) **State capture:** Certain sectors of the economy are, in effect, co-opted by the state or state-related enterprises. This is notable in sugar, livestock and mining, but also elsewhere in the economy. In some sectors this has limited impact on the investment environment with the state acting like any other market participant, but in other sectors, and more generally, it creates issues around concentration of buyer/seller power, political intervention risk and fear of market manipulation.
6) **Institutional capacity:** State actor counterparty credibility and creditworthiness is a major issue for larger scale infra projects. This is particularly true in the water and power space; where the need for private sector investment to support power generation is hindered by an inability to contract with a creditworthy public offtaker.

From a green investment point of view key sectors are heavily impacted by these issues. In agriculture, capital controls prevent effective farmer and crop financing, while access to finance inhibits capital expenditure in things like irrigation and State capture crowds out players in key sectors such as livestock. In the water sector, price controls brought in through regulatory oversight hinder the ability of the private sector to make capital investments and receive reasonable returns. While in the power sector, all the factors are relevant, in particular a lack of regulation around how to develop private generation assets, a lack of distribution infrastructure to receive feed in power and low institutional capacity which limits the creditworthiness of government PPAs as bankable for private financiers.

Finding ways to overcome these barriers will be critical to enabling real and meaningful investment into Sudan.

Emerging High Potential Opportunities

From the 70 opportunities identified, 19 opportunities were shortlisted that had the most positive assessments; resulting in a ~US$ 450 million deal pipeline of high potential green investment opportunities. The shortlist is evenly spread across maturity and climate impact pathways and covers five core sectors: finance & insurance; renewable energy; agriculture, forestry & aquaculture; manufacturing; and transportation & storage.

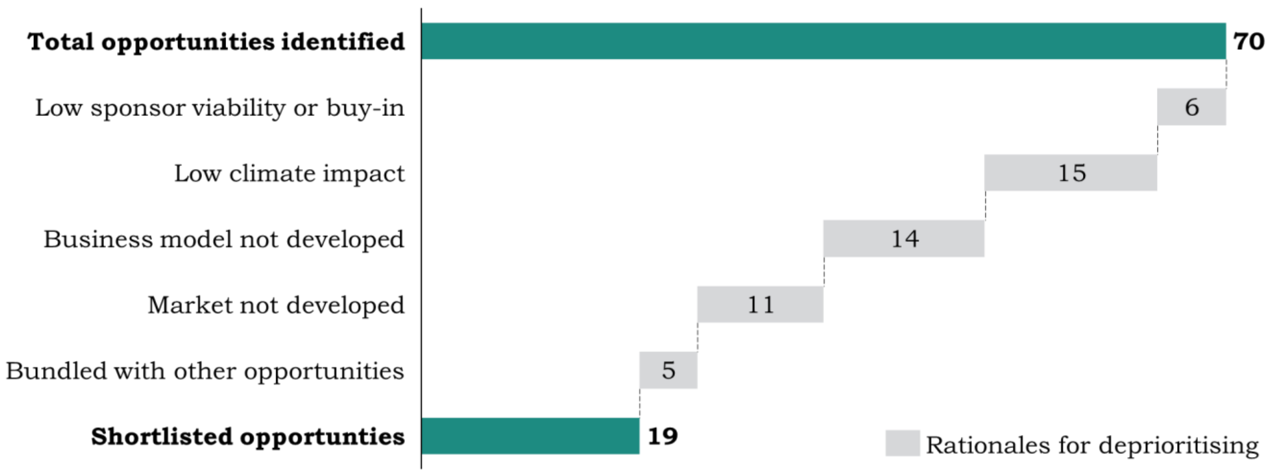
Opportunities were deprioritised primarily due to one of the following five reasons:

1) Low sponsor viability or buy-in – The sponsor of the opportunity was either assessed to not have the credibility or experience to execute the opportunity, or the sponsor decided to opt out of the assessment process;
2) Low climate impact – The opportunity itself would not have sufficiently clear or verifiable positive impact on climate mitigation or adaptation pathways, e.g., meat processing and fertiliser blending;
3) Business model not developed – The opportunity either had not developed the business model enough or the business model was assessed to be weak;

4) Market not developed – The opportunity was assessed to have a small market, weak supply or demand or the enablers and infrastructure required are not in place, e.g., green cell towers and electric motorbikes; or
5) Bundled with other opportunities – The opportunity was combined with other opportunities into one of the shortlisted opportunities, e.g., combining a rooftop solar project into a C&I financing facility opportunity.

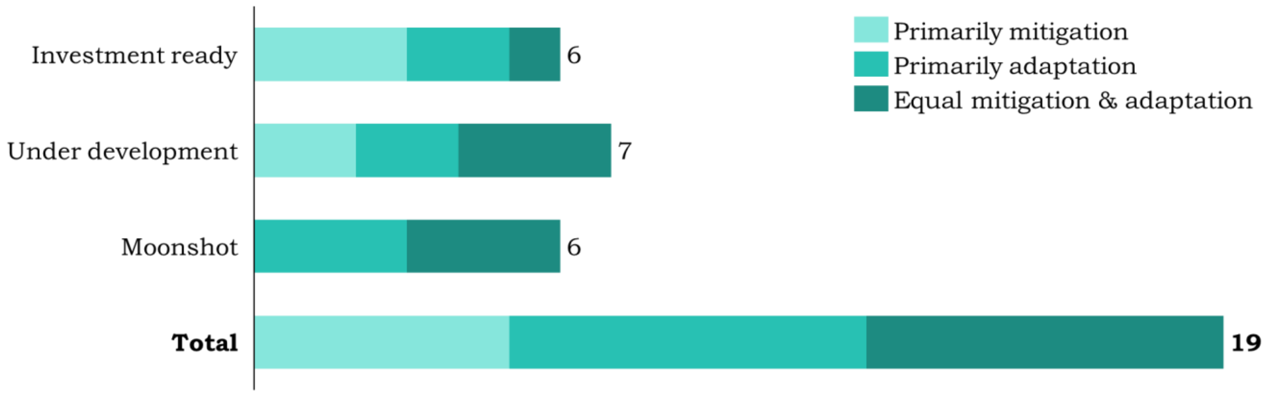
Most opportunities were deprioritised because they either have a low climate impact, the business model was not developed enough, or the Sudan market is currently not developed enough for the opportunity to be viable.

Exhibit 4:
Number of opportunities deprioritised by rationale



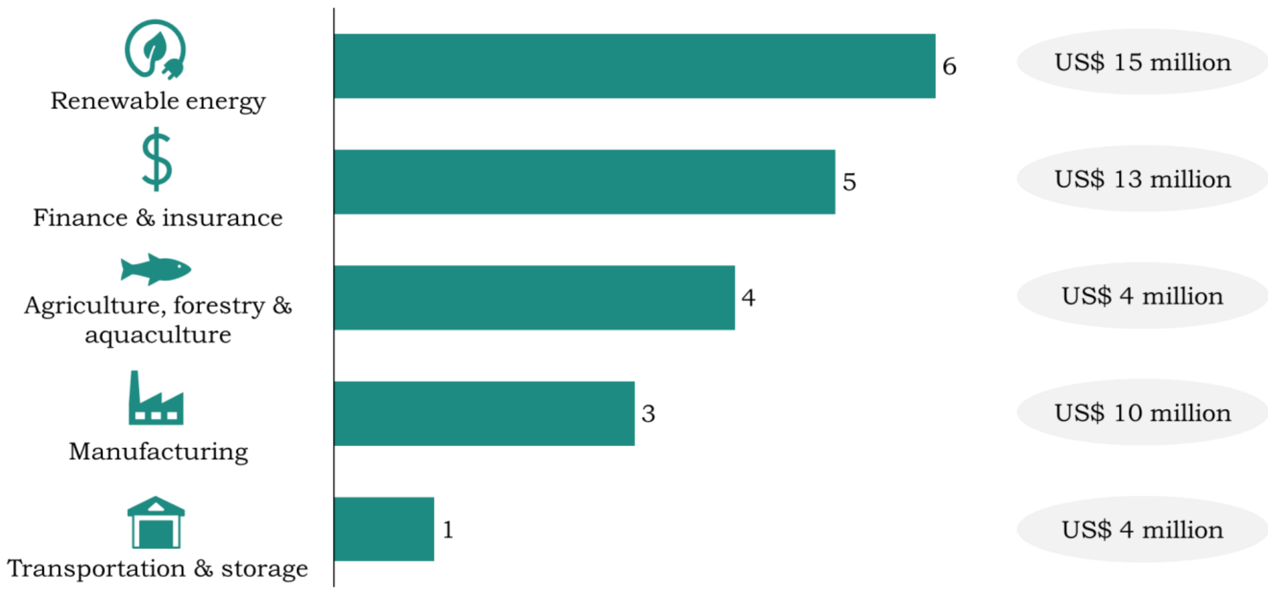
The shortlist of opportunities was mapped by maturity, either being; investment ready (capable of raising investment now); under development (normally needing some form of further technical or commercial validation), or; moonshot (a high impact idea but lacking a sponsor). The opportunities were evenly spread across maturity, with a relatively uniform split between climate mitigation and adaptation pathways.

Exhibit 5:
Number of shortlisted opportunities by maturity and climate impact pathway



Of the **~US$ 450 million pipeline of high potential green investment opportunities**, there was a median deal size of US$ 10 million and most opportunities occurred within the deal size range of <US$ 10 million (see Exhibit 2). The shortlist covers five key sectors of Sudan's economy: Renewable energy; Finance & insurance; Agriculture, forestry & aquaculture; Manufacturing; and Transportation & storage. No opportunities were shortlisted that cover: Coastal zones & ecosystems; Education, skills & R&D; Health; ICT; Mobility; or Water, sanitation & hygiene.

Exhibit 6:
Number of opportunities shortlisted per sector **Avg. deal size***



*Median of total deal pipeline value for each sector

Although coastal zone & ecosystem opportunities, such as mangrove restoration and REDD+ opportunities were assessed to have high impact, their business models and the Sudanese market were assessed to be underdeveloped.

Education, skills, and R&D opportunities, such as agricultural research centres, were also assessed to have underdeveloped business models for concessional finance, relying primarily on donor funding.

ICT opportunities, such as green cell towers, were assessed to have underdeveloped markets. E.g., the total addressable market for transitioning all cell towers from diesel generators to solar PV systems is estimated at only ~22 MW, thus providing limited gains from transitioning what is a complex market from a logistics and maintenance standpoint.

Mobility opportunities, such as electric vehicles, have high impact potential but low market readiness. Where issues around regulation, high cost and unreliable energy supply and lack of support infrastructure, such as charging points, are key barriers.

Water, sanitation & hygiene opportunities, such as non-revenue water management, were assessed to be unviable in the current climate due to dependency on public sector partners, who typically own and operate the utilities.

Spotlight Opportunities

Finance & insurance opportunities

With the private sector propping up Sudan's economy, but lacking liquidity, there is a significant opportunity for players in the finance & insurance sector to close this gap and support green opportunities by offering financial products on terms that reflect the needs of the businesses.

Spotlight: IHK Climate Innovation Fund

Key information

Sector: Finance & insurance.

Deal size: US$ 5 million.

Maturity: Under development.

Climate impact pathway(s): Mitigation & adaptation.

Opportunity

Vision: To become a leading impact fund in Sudan; investing US$ 50-200 thousand in seed capital into early-stage change agents, entrepreneurs, and thought leaders engaged in climate-aligned businesses.

Sponsor: Impact Hub Khartoum (IHK), is a branch of a global tree that nurtures the entrepreneurial ecosystem. Since 2017, they have been working at the crossroads between innovation and society where they build and empower a community to create impact through a shared space, curated interventions, and connections to the wider ecosystem.

Deal pipeline: IHK has a network of over 1 thousand companies in Sudan.

Market: High demand for early-stage, flexible capital from large ecosystem of entrepreneurs and start-ups in Sudan.

Transaction

Structure: US$ 5 million concessionary funding (grant, long-term equity, or mezzanine structures) into ring-fenced fund.

Use of funds: Management costs and deployment as capital on terms that reflect the needs of the businesses.

Renewable energy opportunities

Sudan's national electricity grid is unreliable and expensive and energy supply is exposed to climate shocks. With an increase in the frequency and intensity of droughts as a result of climate change, hydropower, which makes up more than 50% of the country's energy mix, is increasingly vulnerable. The national electricity grid is susceptible to outages, and, with subsidy cuts, it will be uncompetitively expensive (~US$ 0.22/kWh). With solar now cheaper than using diesel generators (~US$ 0.16/kWh vs ~US$ 0.30/kWh respectively), the Sudanese private sector is active in establishing captive off-grid solar plants. In addition, some private businesses are seeking to develop large-scale renewable energy projects in an effort to diversify Sudan's energy mix.

Spotlight: SURE.Co – Sudan Renewable Energy Company

Key information

Sector: Renewable energy.

Deal size: US$ 25 million with potential growth to US$ 50 million.

Maturity: Investment-ready.

Climate impact pathway(s): Mitigation.

Opportunity

Vision: To be the preeminent solar development company in Sudan; providing cost-effective equity and debt to commercial and industrial (C&I) solar players.

Impact: Potential ~ 1.6m tCO_2.

Sponsor: Savo, Africa-focussed project development and investment company.

Project pipeline: 5 MW captive Sudanese solar project under development and pipeline of 100 MW+ identified.

Market: Expanding captive solar market with high demand for cost effective foreign capital.

Transaction

Structure: US$ 20 million debt and US$ 10 million equity raised into facility based in Dubai Free Zone to provide funding to offshore SPVs/HoldCos of Sudanese companies.

Use of funds: Management costs and deployment as loans and equity investments for C&I solar projects.

Agriculture, forestry & aquaculture opportunities

With one-third of Sudan's population, or 15 million people, facing acute food insecurity and the economy increasingly dependent on agriculture because of declining oil reserves, several private players in Sudan are seeking to sustainably develop the country's natural resources with productive agriculture, forestry, and aquaculture models.

Spotlight: Regenerative Farming Facility

Key information

Sector: Finance & insurance.

Deal size: US$ 20 million.

Maturity: Under development.

Climate impact pathway(s): Adaptation.

Opportunity

Vision: A US$ 20 million financing and technical assistance (TA) facility that provides working capital and TA to aggregators and traders to support up to 1 million farmers transition to climate-smart practices.

Sponsor: Savo, certified B-Corp and Africa-focussed specialised project development and investment company along with confidential JV partners.

Deal pipeline: Under development.

Market: Speciality premium products, e.g., hibiscus, gum arabic, cotton.

Transaction

Structure: US$ 8.9 million grant and US$ 11 million interest free loan into SPV incorporated in Dubai Free Zone (TBD).

Use of funds: Feasibility study and Facility set-up and management costs, deploy technical assistance, and interest-free loans to aggregators and traders.

Spotlight: Saeed Aquaculture Project

Key information

Sector: Agriculture, forestry & aquaculture.

Deal size: EUR 4.4 million.

Maturity: Investment-ready.

Climate impact pathway(s): Adaptation.

Opportunity

Vision: To establish a leading fish farm on the East bank of the Blue Nile to produce 2,260 tons of superior quality tilapia and catfish per year.

Sponsor: Saeed Group Companies are involved in food production, plastics production, printing & packaging, agriculture, pharmaceuticals, natural resources & mining. Many of the companies that make up the Saeed Group are some of the longest running and most reputable manufacturing-based companies in the Sudan.

Business model: Build, own, and operate a sustainable tilapia and aquaculture farm for sale to domestic and export markets.

Market: Growing demand for high quality freshwater fish from retailers, hotels and restaurants, with opportunity for import substitution.

Transaction

Structure: EUR 4.4 million debt investment into offshore SPV.

Use of funds: Purchase inputs and equipment, and fund initial working capital requirements for feed and overheads.

Manufacturing opportunities

With high unemployment, competitive wages, and dependency on imports, there is significant opportunity for low & skilled value addition businesses for both export and domestic markets.

Spotlight: Samil Nutritional Ready-Made Food

Key information

Sector: Manufacturing.

Deal size: US$ 6 million.

Maturity: Investment-ready.

Climate impact pathway(s): Adaptation.

Opportunity

Vision: To increase the production capacity of Nutritional Plumpy Nut Bars to meet the nutritional needs of ~ 300 thousand additional children aged between 0-36 months in Sudan.

Sponsor: Samil Industries is a Joint Venture between Yagoub Group and Onyx Développement. Yagoub Group has been in business for over 50 years in Sudan with expertise in agricultural, civil, and industrial construction, trading, retail, industry, manufacturing, and services sectors. Onyx Développement is the holding company of Nutriset, a French manufacturer and trademark owner of Plumpy'nut, the peanut-based food for use in famine relief.

Business model: To franchise Plumpy Nut Bars for sale to humanitarian aid organisations.

Market: High demand for food and nutritional products given severe food shortage in Sudan and humanitarian aid efforts.

Transaction

Structure: US$ 6m debt raise through loan to Onyx Developpment in France.

Use of funds: US$ 3m for equipment purchase and US$ 3m for working capital primarily used to stock purchase.

Spotlight: Araak Bottle-to-rPET Recycling Plant

Key information

Sector: Manufacturing.

Deal size: US$ 14 million.

Maturity: Investment-ready.

Climate impact pathway(s): Adaptation.

Opportunity

Vision: To build and operate a recycling plant to convert plastic bottles to recycled polyethylene terephthalate (rPET) in an effort to support multinational beverage companies to meet their international sustainability targets.

Sponsor: Araak are the exclusive bottlers and distributors for a multinational beverage company in Sudan. The company runs and operates facilities to convert pre-form plastic to plastic bottles.

Business model: Collection of plastic from waste collectors and retail outlets, sorting, processing, and sale of recycled pre-form rPET for plastic bottles.

Market: High domestic and international demand for rPET bottles from international beverage companies with ambitious sustainability targets.

Transaction

Structure: US$ 8m debt raise into entity in Dubai Free Zone.

Use of funds: Funds used to purchase recycling machinery and cover working capital requirements.

Spotlight: Saeed PicS Hermetic Food Storage Bags

Key information

Sector: Manufacturing.

Deal size: US$ 2 million.

Maturity: Under development.

Climate impact pathway(s): Adaptation.

Opportunity

Vision: To produce Purdue Improved Crop Storage (PICS) double liner hermetic storage bags to reduce post-harvest crop losses for agricultural value chains in Sudan.

Sponsor: Saeed Group Companies are involved in food production, plastics production, printing & packaging, agriculture, pharmaceuticals, natural resources & mining. Many of the companies that make up the Saeed Group are some of the longest running and most reputable manufacturing-based companies in the Sudan.

Business model: To manufacture, distribute, and sell PICS Hermetic Food Storage Bags to aid agencies.

Market: High demand from aid agencies operating widely across Sudan in response to food security crises and the ~30% of all crops harvested being lost due to insufficient of storage and long transport times.

Transaction

Structure: US$ 2m debt/equity raise into offshore entity.

Use of funds: Funds used to cover equipment, inputs, and facility capital requirements and working capital requirements.

Transportation & storage opportunities

The development of logistics infrastructure is critical for Sudan to become more competitive, facilitate international trade flows and support marginalised regions take part in the national economy. For Sudan to expand its role in the global economy, it needs to build fast reliable infrastructure and services to store and move its exports and imports in line with international safety standards.

Spotlight: Elbarbary Green Warehousing.

Key information

Sector: Transportation & storage.

Deal size: US$ 5.5 million.

Maturity: Under development.

Climate impact pathway(s): Mitigation & adaptation.

Opportunity

Vision: To build, own, and operate a sustainable warehouse that reduces post-harvest agricultural waste, optimises supply chains, and creates a demonstration case for sustainable building design.

Sponsor: Elbarbary is an experienced agro-commodities company with partners across Europe, Asia, and the Middle East.

Business model: To rent out fully serviced sustainable warehouse and cold storage space to tenants operating in the agricultural sector.

Market: High demand for high-quality storage facilities, with limited supply.

Transaction

Structure: US$ 2 million equity, US$ 0.5 million grant, US$ 3 million debt into entity in Dubai Free Zone.

Use of funds: Grant used to fund feasibility study, including commercial and technical design of warehouse facility, while equity and debt will fund warehouse development and construction.

Recommendations To Develop Green Deals In Sudan

To realise these investment opportunities and support the long-term development of green investment into Sudan, we have four tangible recommendations for investors.

1) **Find ways to aggregate capital**; Several of the opportunities are just too small to be interesting to the DFIs and private funds. Invest into aggregator companies, like SURE.Co (see page 18 for more details), or set up a Sudan debt vehicle or fund to channel debt into smaller opportunities. As Savo, we would be happy to help do this.

2) **Deploy capital to mature the financial sector**; Access to capital in Sudan is lacking at all levels. Ensuring capital is available for early stage, growth and mature businesses is critical. Bringing in smaller size impact funds will help address this funding gap and allow businesses to grow from early stage to growth stage. Invest money into incubators, like Rhino Capital or Impact Hub Khartoum (see page 17 for more details). Or, if you are looking for a longer-term play, get involved in the Sudan Growth Fund, where we are seeking to establish a Dubai based vehicle to take equity positions in Sudan medium-sized entities, then, overtime, mature the reporting and governance of the portfolio companies so the vehicle can be listed first in Dubai, before eventually become the standard in Sudan. Savo is working on this now. If interested, please get in touch.

3) **Take a "best practice forward" approach to sustainable investment**; To help the Government of Sudan develop effective regulation; support businesses to set the standard of what good looks like. Tie investment to international standard sustainable practices and support or incentivise businesses to get there. Invest into groups, who are looking to support sustainable agriculture through sustainability-linked crop financing.

4) **De-risk the Government as a stakeholder**; While our focus has been the private sector, the Government of Sudan is, and will always be, a critical player in creating the green economy. In Sudan, there are issues of government entity creditworthiness, which make public offtake agreements difficult to rely upon. Find ways to guarantee the Government to allow the private investment to come. Sudan already has a pipeline of ~700 MW of renewable energy projects that the Government of Sudan would like to support. To enable this, explore setting something up like Africa GreenCo, where DFIs and

institutional investors can create a government offtaker guarantee scheme to incentives the private sector at scale.

There are no doubt other opportunities and actions that are critical, but for us, based on our experience to date, these are our recommendations on where to focus to unlock green investment into Sudan.

Appendix

23 opportunities identified through "top-down" approach.

1. Bamboo Value Chain Development
2. Behaviour Change Outreach Programmes
3. Biogas Sewage & Livestock Waste Treatment
4. Catastrophe Bonds
5. Climate Smart Seed Programme
6. Cold Chain Logistics
7. Community Waste Micro Enterprises
8. Cotton Ginning & Fabric Mill
9. Crop Insurance
10. E-Buses for Urban Transport
11. E-Car Assembly
12. Electric Motorbikes
13. Financing Facility for Drip Irrigation
14. Financing Facility for Green Cell Towers
15. Financing Facility for Retrofitting C&I Buildings
16. Financing Facility for Solar Irrigation
17. Financing Facility for Sustainable Timber Outgrower Scheme
18. Green Cell Tower IPPs
19. Green Cement
20. Non-Revenue Water Management
21. PAYG HH Solar
22. REDD+ Carbon Projects
23. Sustainable Timber Plantation Certification Scheme

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