



*Empowered Lives,
Resilient Nations.*

CLIMATE FINANCE READINESS AND THE PRIVATE SECTOR





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DISCLAIMER

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A light gray outline map of the African continent is centered in the background of the page. The map shows the borders of all African countries.

Climate Finance Readiness and the Private Sector

Enhancing Readiness for Climate Finance

EXPERIENCES FROM EASTERN AND SOUTHERN AFRICA

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List of Abbreviations and Acronyms

DM	Clean Development Mechanism
CDP	Carbon Disclosure Project
COP	Conference of the Parties
CSOs	Civil society organizations
CSP	Concentrated solar power
DFIs	Development Finance Institutions
ECAs	Export Credit Agencies
FiTs	Feed-in Tariffs
GCF	Green Climate Fund
GHGs	Greenhouse gases
IEA	International Energy Agency
IFC	International Finance Corporation
IPPs	Independent power producers
JSE	Johannesburg Stock Exchange
MDBs	Multilateral Development Banks
MDGs	Millennium Development Goals
NDBs	National Development Banks
NGOs	Non-governmental organisations
PPA	Power Purchase Agreement
PPPs	Public-private partnerships
R&D	Research and development
RE	Renewable energy
SWHs	Solar water heaters
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WBCSD	World Business Council for Sustainable Development

1. The Importance of the Private Sector

When evaluating the readiness of a country in planning for, accessing, delivering and evaluating climate finance, the focus is very much on the country's government, its policies, the institutional environment and the skills available locally. These considerations are crucial, as without visionary public leadership, strategies addressing climate change would fall by the wayside among day-to-day ministerial duties. However, regardless of how mature a country's state of readiness is, the public sector needs to build private sector engagement into its climate change strategy. The private sector has important resources, both financial and technical, that are critical to tackling climate change challenges. Additionally, governments accessing climate funds can generate co-financing opportunities for the private sector that will attract multiples of the original concessionary amount. It is important to recognize that the public and private sector, working together on climate finance, can be incentivized to generate opportunities that are mutually compatible, while addressing a critical public good.

It is estimated that US\$19 trillion is likely to have been invested in energy by 2020 (IEA, 2013). However, the International Energy Agency (IEA) predicts that an additional US\$5 trillion needs to be invested in clean energy *before* 2020 in order to limit warming to 2°C. Governments can clearly not achieve this level of investment on their own, nor should they be expected to. The private sector holds far more financial resources than recession-embattled governments. Furthermore, estimates produced by the Climate Policy Initiative (Climate Policy Initiative, 2013) on climate finance found that 62 per cent of the total 2012 global investment flows were provided by the private sector. Therefore, the question is not whether the private sector should play a pivotal role in climate finance, as it clearly already does, but rather, how could this role be improved and increased, particularly in Africa?

The view that the private sector should and could provide the vast majority of climate finance is not shared by all parties within the developing world. Within the context of the Green Climate Fund (GCF), developing countries have insisted that new and additional funds for climate finance should come from developed country governments. This does not seem feasible - estimates from the IEA (based on the current levels of investment flows in the energy sector) indicate that approximately 80 per cent of global investments in 2020 will come from the private sector (half from households and the other half from business) (IEA, 2009). Divergent views on the role of the private sector are problematic for the policy mechanisms and government support required to catalyse private climate finance in Africa. Without a clear vision of the role that the private sector could play in climate finance, it will be difficult to ready a country for investments flows of this kind. If African governments are waiting for public funds from developed countries to finance their climate resilience efforts and are not creating an environment conducive to the private sector, they could be missing out on an opportunity to attract private investment. The emphasis should rather be on using public funds provided

by developed country governments to mobilize private sector investment. Multilateral Development Banks (MDBs), in close collaboration with the United Nations, can play a multiplier role in leveraging significant additional green investment. Moreover the magnitude of these flows (and the leverage ratio) will be higher given a better private investment environment (UNAGF, 2010). Therefore, in order to maximize total investment, policy mechanisms to incentivize private sector investment should be mobilized.

Additionally, the private sector plays a key role in the development and transfer of climate change technology. Because of the technical capacity, specialist knowledge, experience and skills that large companies, small businesses, and informal enterprises have across industry, transport, agriculture, forestry and land-use, construction, waste and wastewater, and energy supply, they are often better placed to assess challenges and to find creative business solutions than governments attempting "top-down" solutions to systemic issues. Businesses can also be more agile and experimental than government. While many businesses are responding to climate change, the nature, scale and pace of responses are variable. (See, for example, company disclosures for the Carbon Disclosure Project's (CDP) JSE 100 sample (Incite and NBI, 2013) "event-place": "South Africa"; "URL": "https://www.cdp.net/CDPResults/CDP-South-Africa-Climate-Change-Report-2013.pdf"; "language": "English"; "author": [{"family": "Incite", "given": ""}, {"family": "NBI", "given": ""}]; "issued": {"date-parts": [{"2013", "11"}]; "accessed": {"date-parts": [{"2013", "11"}]}; "schema": "https://github.com/citation-style-language/schema/raw/master/csl-citation.json"} and further examples discussed later in the report.) Networks of private organisations, such as the World Business Council for Sustainable Development (WBCSD), also play an important role in identifying and disseminating sustainable development challenges and ways in which to address them. For instance, the WBCSD's research into the "real" value of water to businesses could drive investment in water adaptation projects (WBCSD, 2013). It is therefore important for government to allow "bottom-up" approaches to emerge from the private sector and for this engagement to drive their policy responses.

2. What is the “Private Sector”?

It is clear that the private sector has a major role to play in climate finance, but the “private sector” is not a homogenous entity that can be easily grouped together and incentivized into action. This section aims to categorize the key private sector actors, estimate their current involvement in climate finance, and then discuss what the possible incentives and/or risks they may encounter are in climate investment. It is heavily focused on clarifying the role private sector actors play in renewable energy (RE) investment, as the current research indicates that this is where the vast majority of investment is flowing. The lack of data on adaptation investment prevents little more than an anecdotal discussion of the private sector actors in this area of activity.

2.1 Project Developers

The largest class of investors within the private sector are project developers. These include energy utilities, independent power producers (IPPs), and project developers specialising in renewable energy. They represent investments estimated at US\$102 billion in 2012 – or 28 per cent of total climate finance flows (Climate Policy Initiative, 2013). The inclusion of energy utilities as private investors may be questionable, as utilities are often entirely or partially government-owned. For the most part, they act as private investors would, although governments may be shareholders and could direct action towards optimal emissions. This group of actors is also responsible for the largest share of global emissions and the continuing investment in emission-generating projects. The policy levers that governments are able to employ for climate finance are particularly important for this group of actors. However, even a utility that is entirely publicly owned is somewhat constrained by its balance sheet, particularly in light of the recent recession. The decision to invest in RE generation therefore needs to make financial sense, and policy incentives would need to apply equally to these public utilities as they would to those that are private.

2.2 Corporations

Corporate actors, which include manufacturers and corporate end-users, are the second largest class of private investors, with an estimated US\$66 billion of overall investment flows in 2012, or 19 per cent of the total global private sector climate finance (Climate Policy Initiative, 2013). This is a diverse group of investors, from those investing in climate technology products for manufacture (such as the electric car) to corporate users reducing their reliance on the power grid or their energy bills by investing in energy efficiency. This group of investors reacts to the policy incentives that either increase their risk (such as penalties for emissions)

or decrease their risk (by underwriting climate technology investments) and therefore prompt them to invest. This group is first and foremost incentivized by increasing profit or reducing costs. Even reputational risks and the subsequent investment in mitigating them are driven by the potential cost impact of the depreciation of a corporate brand. This group of actors could become significant investors in adaptation infrastructure if the true value of water (i.e. the business risk of droughts/floods) or extreme climate events were better quantified. However, there are significant research gaps on this group of investors and further engagement is recommended in order to understand their activities and incentives.

2.3 Households

Households are an increasingly important source of private climate finance. Households include family-level economic units, high net worth individuals and their intermediaries. They primarily contribute to climate finance as end users of climate mitigation products. Globally, these private sector actors have been significant investors, contributing almost 9 per cent of private sector climate finance or US\$33 billion in global climate finance flows (Climate Policy Initiative, 2013). They have mostly invested in small-scale solar Photovoltaic (PV) systems and solar water heaters (SWHs) with the aim of reducing energy and heating bills. Little is known about the scale of household adaptation financing, such as investments in rainwater harvesting or grey water recycling. In 2012, most of this investment (83 per cent) is estimated to have occurred in the developed world, with Germany making the largest relative contribution to climate finance from households at 38 per cent of total domestic climate investment flows, supported by concessional or low-cost loans from national development banks (Climate Policy Initiative, 2013). Reducing energy bills is clearly an incentive for household investment, but the upfront costs are often too large for a household to meet without some form of government support, hence the lower figures from developing countries. It is also worth noting that households bear the brunt of public incentive packages for RE investments, as they are the taxpayers likely to be paying higher taxes/energy fees for these policy mechanisms. This can make renewable energy investment a tricky political proposition, but there may be potential for reducing fuel subsidies and diverting these funds towards household renewable energy investment.

2.4 Financial institutions

Commercial financial institutions, venture capital, private equity and infrastructure funds together contributed around US\$22 billion, or approximately 6 per cent, of the total global private climate finance flows (Climate Policy Initiative, 2013). Commercial financial institutions, with their investment of US\$21 billion, dominate this group. As this group's primary function is as a financial intermediary, it can be assumed that they are motivated and incentivized in a similar manner to the corporate and individual actors that they represent. As mentioned above, more research on this group of investors is required, and this paper aims to supplement the current knowledge of this area with some anecdotal examples and interviews with industry stakeholders.

2.5 Institutional Investors

The final groups of private investors^{3/4} institutional investors^{3/4} supposedly play a negligible role in the developing country context. The data available indicate that they contributed only US\$0.4 billion of total private investment flows, with little or no investment in developing countries. This group of investors consists of insurance companies, pension funds and foundations and endowments. However, anecdotal evidence from project developers (West, A., personal communication, February 21, 2014) found that institutional investors are heavily involved in RE project development, but that their funds are channelled through various investment funds, thereby obscuring their actual level of financing. They manage an estimated US\$70 trillion in assets (Climate Policy Initiative, 2013). Further data are required to establish how much they have invested in climate change, as directing these assets towards climate finance could have a dramatic impact on the private investment landscape.

2.6 Civil Society

Another group of actors that gets little attention from an investment perspective, but has a role to play in influencing investment trends is non-governmental and not-for-profit organizations (NPOs). This group includes non-governmental organizations (NGOs), civil society organizations (CSOs), faith-based institutions, community groups, labour unions, professional associations, academics, researchers, journalists and popular or prominent personalities in civil society, such as musicians or artists. They play a crucial role in providing information and mobilizing communities, and act as a reference point for citizens. Local communities able to associate weather events with climate change could demand more from relevant public and private organizations in addressing related concerns. Popular trends or civil groundswell on issues such as water wastage, recycling, fuel efficiency, organic and locally produced food, and so on, can drive purchasing trends, thereby creating private sector incentives for investment. The appetite for public spending on tax incentives and subsidies to attract private sector investment is also heightened if the risks of not doing so are communicated by knowledgeable and ethical sources. Incorporating these actors in climate financing strategies should definitely be considered.

The categories of investors discussed above obviously have significant overlaps and the estimates provided only scratch the surface in terms of who is providing climate finance. Further research in this area is clearly needed, as it will help establish the appropriate policy responses to incentivize the various actors to invest. Most importantly, further research is required on the African context to understand which private sector actors are involved in climate finance, what their incentives are for doing so, and what impediments to further investment exist.

3. An Enabling Environment for Private Sector Investment

The perception of risk is a critical component in understanding what drives private investment in climate change. The reduction in technological risk has increased the economic feasibility of green infrastructure projects, most notably in RE. At the same time, investing in green infrastructure can be seen as a means of reducing the risk of other investments. For instance, if a factory is concerned about the reliability of its electricity supply, it may build its own solar power plant for emergencies or move off the power grid entirely. Climate change adaptation projects perform a similar function as they lessen the risk of climate change damage. For instance, investing in water management systems decreases the effects of increased instances of drought and/or floods.

The key risks that are relevant for private investors are discussed in the section below and relate to three areas:

- Technological risk
- Commercial and market risk
- Political and policy risk

Addressing these risks through policy and other mechanisms is key for unlocking private investment flows.

3.1 Technological Risk

Technological risk is something that is assessed as part of a project feasibility study. While a policy framework can guide investments in research into, and development of, new climate technology, it cannot, in and of itself, contribute directly towards addressing technological risk. It can be assumed that African countries primarily purchase new climate technology from elsewhere; however, government support may be required in assisting firms to adapt or introduce foreign technologies to local conditions. African governments can also finance pilot projects using new technologies that help build a business case for other investors.

3.2 Commercial and Market Risk

African governments have an important role to play in addressing commercial and market risk. The financing of an investment is contingent on a reasonable level of certainty on returns from the investment. In the case of renewable energy contracts, when a government commits to or underwrites a Power Purchase Agreement (PPA), this provides the investor with security on the quantity and price of the power that the project will sell to an off-taker, thereby reducing the commercial risk of the venture. For instance, the South Africa's RE Independent Power Producer Procurement Programme (RE IPPPP) involves PPAs that are signed with the public energy utility, Eskom, and underwritten by the South African National Treasury - providing investors with a high degree of comfort about the security of their investments (West, A., personal communication, February 21, 2014). The transparency of the process, along with its clear structure, has resulted in increased private sector participation and lower tariff prices with each successive round of competitive bidding. Round 3 of the competitive bidding process was concluded in November 2013 with 75 per cent of the bids submitted by international developers. The programme was substantially oversubscribed and the prices for solar and wind fell by 46 per cent and 27 per cent respectively between the second and third rounds (Ernst & Young Global, 2014). This is an important item to highlight: even in a high-risk environment, investors may still decide to invest, but will only do so if the returns are considered substantial enough to match the risk. Therefore, the lower the perceived risk, the lower the cost of the resultant tariffs (particularly in the case of RE), and the more likely it is that climate-related investment is close to parity with other investments.

Governments can also play a key role in mitigating commercial risk by directly investing in climate finance. They may bridge a financing gap, or provide concessional loans or grants to increase the feasibility of the investment. Public sector finance typically works hand in hand with private sector finance and provides a catalyst to private sector investment. These investments come from government budgets (13 per cent), bilateral and MDBs (86 per cent), and international climate funds (under 1 per cent) (Climate Policy Initiative, 2013). Multilateral and national development banks (NDBs) are very important sources of finance for climate-related investment in developing countries as their involvement often mobilizes financing from other sources. African governments should therefore be looking to attract funding from MDBs, not only for that financing alone, but also for the private sector financing that could accompany it. African governments should anticipate that the private sector (local or foreign) might look to invest once the MDB is committed and provides incentives to do so. The UN has estimated that on average, finance from an MDB would leverage three times that amount from the private sector (UNAGF, 2010). The example of the Kopere Solar Park in Kenya (Box 1) illustrates the point that MDB funding, along with a suitable policy environment, can unlock private climate finance flows. One could not have happened without the other.

Box 1. Kenya's Feed-In Tariff and the Kopere Solar Park

Traditionally reliant on hydropower to fuel its energy mix, Kenya has faced pressing energy security constraints due to severe droughts and unreliable rainfall since the 1990s. To meet its need for energy security, Kenya reformed its energy sector to attract Independent Power Producers to supplement national generation capacity. Using three policy tools—Feed-in Tariffs, 0 per cent import duties on renewable energy technology and VAT exemption—Kenya created an environment that incentivized private sector participation and generated US\$1.3 billion in private renewable energy investment (Njeru, 2014).

Initiated in March 2008, Kenya's Feed-in Tariff (FiT) policy, a component of its Climate Action Plan, provides a framework for the purchase of power from IPPs for a 20-year period by the Kenyan electricity utility. The feasibility assessment for the tariff took into account the high irradiation levels in Kenya, the predictability of a solar plant and the falling prices for solar technology. The market demand for electricity is growing in Kenya, and the estimated tariffs from solar are far below the average consumer price. All of these indicators pointed to a viable business case for the investors with the return commensurate with the risks involved. However, the limited local investment capacity and the high-risk profile surrounding renewable energy IPPs in Africa meant that the developers struggled to find sufficient commercial financing. In order to address this financing gap, developers sourced additional funding from bilateral and multilateral donors for their renewable energy projects.

For example, the funding for the Kopere Solar Park in Kenya came from the first round of the Scaling-Up Renewable Energy Program in Low Income Countries (SREP), a programme run by the Climate Investment Fund (CIF). Kenya is one of the six pilot countries to receive funding from SREP, which aims to encourage private sector investment in renewable energy by providing concessional funding. Local private project developers in Kenya were granted a concessional loan of US\$11.6 million. A key factor in the granting of this loan was Kenya's conducive policy environment, which provided the necessary policy and market stability to ensure investment security.

Export Credit Agencies (ECAs) also play an important role in addressing country-specific commercial risk. ECA contracts are typically granted to corporations, but can be provided on behalf of governments. When a private investor is unable to gain risk coverage, a government request on their behalf may unlock it. This is certainly the case with the World Bank's risk mitigation instruments. Public indirect investment in private sector projects, as either passive or active shareholder, can reduce the commercial risk and financing requirements of the project. Additionally, it ensures that the project is in alignment with the political priorities of the country, thereby lowering the political risk.

Another feature that could increase the viability of renewable energy projects is allowing individual power producers to access the national grid in order to sell back excess power to the electricity utility. The technicalities of this are difficult, and the feasibility of individual households being able to do so in Africa is still in its infancy, but the possibility exists to grant access to large industrial producers on this basis. Investors who are intending to develop their own power plants as part of a larger development often find that their power requirements are not sufficient for the power plant's optimal size (Niemann, E., personal communication, February 13, 2014). If they could sell off their excess power, they could increase their investment in the renewable energy source and improve the efficiency of the power produced.

Government revenue-support policies can assist in addressing the commercial risk of a climate finance project. The most popular policies include Feed-in Tariffs, tax credits and reducing fossil fuel subsidies. These policies increase the viability of the revenue from green technology when it is not in parity with emission generating alternatives. Perhaps most important for African governments is the reform of fossil fuel subsidies. This is a politically contentious issue that deserves far more attention. While fossil fuel subsidies are in place (estimated to be US\$500 billion per year globally) (IEA, 2009), RE will continue to struggle to be economically viable. Reforming these subsidies could increase the revenue available to government for important infrastructure projects, while improving the business case for other forms of energy. The vital issue in these reforms is illustrating to the electorate that the fuel subsidies are being used for equally important (if not more important) activities that will benefit the populace directly. Perhaps these subsidies could be better used to support household investment in solar PV or solar powered water heaters.

The awarding and processing of concessions for climate-related projects continue to be a commercial and political risk for private investors. The commercial risk arises from the lengthy processes that investors have to go through. It has been reported that, in some African countries, an investor has to go through 20 to 30 government departments in order to get a concession processed, which takes an extraordinary amount of time and expense (Niemann, E., personal communication, February 13, 2014). The awarding of a concession may also be subject to political interference and corruption challenges. Many international investors are subject to codes of conduct that forbid them from engaging in any form of corrupt practice and therefore will either disengage from the process or downscale their involvement in order to minimize their risk. A process that is transparent and clearly structured can greatly assist the attractiveness of climate investments in Africa.

3.4 Political and Policy Risk

Policy risk in the form of regulatory risk may also be an impediment for investors. Regulation can take many forms, including standards, bans, licences, zoning laws, and property and access rights. Regulation may encourage climate finance. For instance, energy efficiency standards for new buildings create an incentive for investment. However, some regulations may unintentionally discriminate against smaller players who do not have the resources to comply with the legislation due to the consequent increase in transaction costs - dissuading investment from these actors. Regulations are also prone to capture by self-interested groups, and it is not uncommon for incumbent power producers to influence government in moulding regulation that disadvantages the competition (Glemarec, 2011). Regulations that do not promote fair and competitive access to the market, increase transaction costs, or are subject to frequent change will be seen as a risk for investors and should be reviewed by policymakers.

Political risk is also an important and difficult risk that African governments need to address. In this area, MDBs can play a key role as the "honest broker" between the government and private investors. They can provide the investor and government with some confidence about the contractual arrangement due to their involvement and their vested interest, thereby providing private investors with de facto political risk cover. Private investors are sometimes able to insure themselves privately against political risk, and many investors would not invest in Africa without this insurance, even though it adds a premium to the cost of the investment (Niemann, E., personal communication, February 13, 2014). Policy and regulatory risk is difficult to address for both developed and developing countries. Public-Private Partnerships (PPPs) can help with some of

these issues. The sharing of resources, risks, and rewards between private and public investors provides some security against shifts in the political and policy landscape, as well as in assisting with the commercial viability of a project. Government policies in pricing carbon and supporting carbon exchange markets can also play a key role in addressing private sector risk and raising finance for carbon offsetting projects. However, the current level of activity on international carbon markets has fallen short of early ambitions and targets, resulting in anticipated financial flows from carbon offset markets to private investors being less than expected.

Policies specific to adaptation investments are less mature and are still evolving. However, policy can have a role to play in scaling up private sector investment, for instance, by rewarding existing initiatives through subsidies, purchasing privately produced products and supplying them to vulnerable communities, and providing information on climate risks and weather patterns (Terpstra and Ofstedahl, 2013). Multi-tier water pricing policies can also incentivize private investment in water management. By differentiating between water as a basic right (supplied for free or at an affordable level) versus water as a commodity (for agricultural and other industrial uses), and pricing them accordingly, water wastage could be significantly reduced. This type of policy would need to be carefully applied in order to ensure that subsistence farmers are not unduly affected, but if done appropriately, it could better reflect the current and expected scarcity of freshwater resources (GES, n.d.). There will always be areas that the private sector would be unwilling to invest in (such as water infrastructure and disaster management), but the government can outsource the supply of these public goods to the private sector or form partnerships, thereby fuelling low-risk investment in appropriate products and services.

In summary, there are a number of policy approaches that African governments could explore in order to increase the feasibility of private climate finance. Partnering with private investors in addressing identified risks could unlock some impediments to private investment. MDBs and ECAs play an important role in mitigating country-specific political and commercial risk, as illustrated by the Kopere Solar Park in Kenya (Box 1), but their funding alone will not be sufficient. Reforming fuel subsidies and creating a transparent and clear framework for the awarding of RE contracts or concessions would already provide an enormous boost to African private climate finance. PPPs could also be a viable approach for African utilities in order to reduce the commercial and political risk of RE investments. Finally, due to the adaptation challenges that dominate the African continent, policies addressing adaptation investment need to be further explored and researched.

4. Examples of Private Sector Climate Finance in Africa

To a limited extent, there are some examples of private sector investments in climate-related activities by African companies. Many of the publicized examples come from companies headquartered in South Africa, with operations that extend to other African countries. These investments tend to have simultaneous benefits for the business and for development goals aligned with national priorities or the Millennium Development Goals (MDGs). For example, the distribution of solar-powered lighting and hot water heaters, energy-efficient cookstoves and similar products aimed at households in developing countries have low-carbon benefits, in addition to alleviating energy poverty and household safety concerns. In terms of green product development aimed at individuals in developing countries, notable examples of active companies include MTN Group's mobile solar chargers in energy-poor communities (MTN Group, 2012a) and Unilever's less water-intensive hygiene products for cooking and washing that require no heat (Unilever, 2014). While critics of private sector solutions to public sector or public good challenges are right to interrogate the motives for, and outcomes of, these solutions, the solutions themselves should not be dismissed out of hand. Technological innovations emerging from the private sector have reframed societal problems as seen, for instance, in the impact that mobile phones have had on communications in Africa. The private sector, often driven by commercial interests, has been found guilty of "greenwashing" (e.g. spending more money on the advertising campaigns promoting their environmental efforts than was actually spent on the activities themselves), but this manipulation occurs when an investor is not incentivized by the returns from the investment itself. This is not "true" investment and therefore not the focus of this paper.

Climate resilient technologies range from the simple to the complex, each requiring different strategies to encourage uptake. Companies working within their operations and with supplier and distributor networks to create and support climate-smart solutions include Nestlé, which is working with cocoa and coffee growers to ensure more sustainable farming practices, and Coca Cola Enterprises, focusing on water use (Nestlé, 2012; The Coca-Cola Company, 2013). IBM's sustainable smart cities services focuses on the role of technology in addressing challenges related to urbanisation, such as energy use and transport (IBM East Africa, 2012).

A further example of a climate change intervention with multiple benefits can be found in climate-smart agriculture, which brings together a range of climate resilient and carbon sequestration technologies and practices for agriculture and forestry/land-use, mostly for vulnerable smallholder farmers (FAO, 2013). Climate-smart agriculture simultaneously addresses climate resilience, household livelihoods, and food

security challenges. However, this currently happens to the exclusion of commercial farmers and large retailers. It is possible that a broader value-chain approach would expand the impact of this smallholder-focused intervention to allow for knowledge transfer between large and small actors in the food value chain. This kind of systemic approach to sectors creates an environment for more effective learning and allows larger companies to use their efficiencies of scale, resources, infrastructure and networks to engage and transform their supply chains, which often include small and medium enterprises.

Table 1 captures selected examples of companies responding to climate-related risks and opportunities in Africa. The identified benefits for business and society are drawn from corporate communications and interviews with private investors. Examples have been drawn from consumer goods, information and communications technology, and the financial sector. The United Nations Framework Convention on Climate Change (UNFCCC) Private Sector Initiative has begun to promote, support and profile the activities of companies like these (UNFCCC, 2013). Further examples of company actions can be found on the UNFCCC website.

Table 1. Summary of Company Responses to Climate Related Risks and Opportunities in Africa

COMPANY AND COUNTRY	DESCRIPTION OF PROJECT	EXAMPLES OF BENEFITS FOR THE BUSINESS	EXAMPLES OF BENEFITS FOR SOCIETY	RELATIONSHIPS WITH GOVERNMENT/OTHER PARTNERS
ADAPTATION INVESTMENTS				
SABMiller, North and South America and African countries, including South Africa and Tanzania (Water Futures Partnership, 2011; Water Futures Partnership, 2012.)	Water Futures: partnership to promote water stewardship in countries of operation, where the water-dependent value chain shares complex water supply risks with communities. The process began with footprinting, risk analysis and building a business case for action, and led to collective risk mitigation action.	<ul style="list-style-type: none"> • Developing clear business case for private sector sustainable water management • Better understanding and management of water risks to the business • More effective collective engagement with policymakers • Potential to positively influence local water sectors 	<ul style="list-style-type: none"> • More effective management of shared water risks for communities • Reduced impacts on local eco-systems • Improved water use • Shared water resources are protected • Government benefits from expertise and resources within the partnership • Accelerated policy implementation and improved water governance 	The initial partnership included SABMiller, WWF and GIZ. The project has led to extensive relationship building with government departments. The partnership has expanded to include other NGOs and companies. There is an emphasis on local ownership and multi-stakeholder buy-in.
Vodafone, Asia and African countries, including Kenya, Egypt, Tanzania and Zambia (Kirk and others, 2011)	Connected agriculture: applying information and communications technology to address food security challenges by making small-scale farming more resilient and sustainable through business solutions and philanthropic projects.	<ul style="list-style-type: none"> • New commercially viable opportunities • New partnerships and increased transactional capacity • Reputational and stakeholder engagement benefits 	<ul style="list-style-type: none"> • Increased food production • Improved livelihoods for farmers (especially small-scale farmers) • Increased access to markets • Increased commercial efficiencies • Funding for pilots that can be scaled up 	In different countries, Vodafone has developed connected agriculture projects using partnerships with enterprise customers, NGOs and government agencies.

4. EXAMPLES OF PRIVATE SECTOR CLIMATE FINANCE IN AFRICA

COMPANY AND COUNTRY	DESCRIPTION OF PROJECT	EXAMPLES OF BENEFITS FOR THE BUSINESS	EXAMPLES OF BENEFITS FOR SOCIETY	RELATIONSHIPS WITH GOVERNMENT/OTHER PARTNERS
De Beers, South Africa, Botswana and Namibia (Wickens, 2010)	Various projects to address water risk: water efficiencies, reduction of water wastage, R&D into water saving technology, water recycling, establishment of nature reserve and construction of rainfall storm water harvesting dam.	<ul style="list-style-type: none"> • Mitigation of operational risk of water shortages • Mitigation of reputational risk in context of current mining in the area. 	<ul style="list-style-type: none"> • Improved water security • Sustained ecological intensity and ecosystem services 	Engaged with government, NGOs, WWF, local communities and universities.
MITIGATION INVESTMENTS				
Standard Bank, Southern and Western Africa (Standard Bank, 2013)	Providing private finance for various projects throughout Southern and Western Africa and globally, including: CDM projects; RE investments; clean energy transactions. Programmes of activity under development range from clean cookstoves to biomass generation.	<ul style="list-style-type: none"> • New investment opportunities • Potential new product development • Opportunity to use local experience in Africa to ensure better success rate for investments • Recognition of success through international awards platforms 	<ul style="list-style-type: none"> • Funding for energy infrastructure development • Funding for sustainable products • Skills and resources from private sector applied to public challenges • Enables switch to more sustainable and cost-saving technologies for industry • Dissemination of more efficient and cost-saving technologies for households (e.g. lighting and cooking stoves) 	Where necessary, Standard Bank has partnered with development banks and engaged third parties for required expertise and local knowledge.
African Infrastructure Investment Managers, South Africa, Kenya and elsewhere in Africa (forthcoming) (West, A., personal communication, February 21, 2014)	Variety of investment funds focused on African infrastructure: invested in 2 wind farms and 1 solar park. Currently sourcing finance for renewable-only fund (Apollo).	<ul style="list-style-type: none"> • - Investor returns from renewable energy investment • - Continued new investment opportunities for renewable projects in Africa 	<ul style="list-style-type: none"> • - Financing of renewable, cleaner energy from entirely private sources without any subsidisation required from government 	Engaged with government, electricity utilities, commercial banks, foreign investors (50 per cent of funds from European DFIs) and project developers.

4. EXAMPLES OF PRIVATE SECTOR CLIMATE FINANCE IN AFRICA

COMPANY AND COUNTRY	DESCRIPTION OF PROJECT	EXAMPLES OF BENEFITS FOR THE BUSINESS	EXAMPLES OF BENEFITS FOR SOCIETY	RELATIONSHIPS WITH GOVERNMENT/OTHER PARTNERS
<p>Investec, South Africa and elsewhere in Africa (forthcoming) (Niemann, E., personal communication, February 13, 2014)</p>	<p>Financial services for various renewable power projects. Completed projects in SA: wind farm, co-generation plant, solar PV and CSP. Currently working on projects elsewhere in Africa.</p>	<ul style="list-style-type: none"> • - Investor returns from renewable energy investment • - Continued new investment opportunities for renewable projects in Africa • - Recognition due to renewable energy award for Bokpoort CSP project 	<ul style="list-style-type: none"> • - Funding for renewable energy infrastructure development • - Co-generation project reduces load on stressed power grid 	<p>Engaged with government, electricity utilities, commercial banks, and project developers.</p>

5. Conclusions

Private investment drivers in climate-related finance follow similar parameters to any other investment: does the return merit the risk? In similar fashion, the Ease of Doing Business Index devised by the World Bank ranks countries on a number of indicators, such as the enforcing of contracts and protection of investors. Table 2 provides the rankings of the case study countries, within a global and continental context, according to the Ease of Doing Business Index.

Table 2. Country Case Studies Ease of Doing Business Rankings (out of 189 countries)

COUNTRY	GLOBAL RANKING	SUB-SAHARAN AFRICAN RANKING
Zambia	111	9
Ethiopia	132	14
Kenya	136	15
Lesotho	128	12
Mozambique	127	11
Tanzania	131	13

Source: World Bank, 2014.

No such index currently exists to assess climate finance readiness for private investors, but if it did, many of the same items would be included on the index, along with climate-specific regulation and incentives. This is relevant for two reasons: 1) without a decent business environment, relevant policies and regulations will do little to attract private investment, so it is important to address both issues in conjunction; and 2) efficiency and enforcement are critical - the availability of climate finance has ministries trying to "out-regulate" each other in order to capture funding channels (Held, ROger and Nag,2013). Without clear coordination mechanisms in this cross-sectoral space, regulations could become overly onerous and unenforceable.

Understanding how well the incentive structure for private climate investment matches the domestic priorities in a country is essential in evaluating its "readiness". Key to this is acknowledging that most climate funding is funnelled towards projects that are not relevant to African climate challenges - mitigation measures are far more prevalent, while adaptation is the real priority in Africa (as discussed in the country case studies). This is also because private investors are increasingly keen to invest in mitigation measures, as it has become economically more feasible to do so. The private sector invests almost entirely in wind and solar RE projects. This is due to the lower technological and economic risks inherent in the more mature technologies. Political and policy risks are particularly important for investors due to the reliance of the renewable energy sector

on government support. Commercial risks are also especially relevant due to the long-term nature of the investments. Addressing these risks is the key role for African policymakers, notably in the area of adaptation investment.

The policies and approaches suggested for African governments below aim to mitigate the risks inherent in climate change investments, most notably the commercial and political risks. MDBs and ECAs provide some coverage for these risks, but African governments have an important role to play by:

- Providing a transparent and clear process for the awarding of contracts;
- Streamlining the processing of concessions;
- Committing to contracts that provide some form of revenue support (e.g. Feed-in Tariffs) or consistent returns over the long-term;
- Granting power producers access to the grid so they can sell off excess energy;
- Reforming/reducing fossil fuel subsidies;
- Partnering with private investors in order to assist with financing their needs incrementally and to reduce the political/policy risk;
- Providing clear guidance on the requirements for adaptation investment, and crafting policies to support them and measure their outcomes; and
- Most importantly, recognising the important role that the private sector has in climate finance, prioritising its involvement and partnering with private sector players to find mutually beneficial solutions.

There is little doubt as to the importance of the private sector in climate finance. The investments required to reduce emissions to target levels and to adapt to climate change cannot be met by public finance alone, and the private sector has important expertise and technical skills to contribute. Developing countries are currently reliant on public financing support from developed nations with some investment coming from domestic investors. This is not sustainable, nor are the finances from these sources sufficient to meet the investment gap in climate-related infrastructure. So the key challenge for African policymakers is how to attract international private climate-related investment. However, international investors are unlikely to be interested if local investors are struggling to see the business case. Therefore, a first (and absolutely critical) step for government is to engage with local businesses to understand where they could contribute. This requires an evaluation of who the relevant private sector actors are, about which there is little research currently in the African context. Subsequently, policies and other mechanisms can be put into place to incentivize their investment and attract them to the sector.

This all requires vision and leadership from African ministers, including a willingness to collaborate with a wide swathe of society. Public and private actors need to acknowledge that tackling climate change is one of the greatest challenges of our time, and significant progress will not be made unless there is a concerted and combined effort.

References

- Carbon Disclosure Project and National Business Initiative (CDP and NBI) (2013). *The South African business response to climate change: Is it delivering the required performance?* Available from <https://www.cdp.net/CDPResults/CDP-South-Africa-Climate-Change-Report-2013.pdf>.
- Climate Policy Initiative (2013). *The Global Landscape of Climate Finance, 2013*. Available from <http://climatepolicyinitiative.org/wp-content/uploads/2013/10/The-Global-Landscape-of-Climate-Finance-2013.pdf>.
- De Beers. (2010, November 16). *De Beers Family of Companies Water Engagement*. Presented at the UN CEO Water Mandate Working Conference.
- Ernst & Young Global (2014). *Renewable Energy Country Attractiveness Index (RECAI)*. Issue 40, February. Ernst & Young Global. Available from [http://www.ey.com/Publication/vwLUAssets/RECAI_40_-_February_2014/\\$FILE/RECAI%2040_Feb%202014.pdf](http://www.ey.com/Publication/vwLUAssets/RECAI_40_-_February_2014/$FILE/RECAI%2040_Feb%202014.pdf).
- Food and Agriculture Organization of the United Nations (FAO) (2013). *Climate-smart Sourcebook*. Available from <http://www.fao.org/docrep/018/i3325e/i3325e.pdf>.
- Global Economic Symposium (GES) (n.d.). *Solution for Water Scarcity and Virtual Water Trade*. Global Economic Symposium. Available from http://www.global-economic-symposium.org/knowledgebase/the-global-environment/water-scarcity-and-virtual-water-trade/solutions/Adopt_multi-tier_pricing_to_encourage_the_efficient_use_of_water_while_guaranteeing_access_to_water_for_personal_and_environmental_purposes.
- Glemarec, Yannick (2011). *Catalyzing Climate Finance: A Guidebook on Policy and Financing Options to Support Green, Low-Emission and Climate-Resilient Development*. New York: UNDP. Available from http://www.greengrowthknowledge.org/sites/default/files/downloads/resource/catalyzing_climate_finance_UNDP.pdf.
- Held, D., C. Roger and E.-M. Nag, eds. (2013). *Climate Governance in the Developing World*. Cambridge, UK: Polity Press.
- IBM East Africa. (2012). *A vision of a smarter city: How Nairobi can lead the way into a prosperous and sustainable future*. IBM East Africa. Available from http://www-05.ibm.com/za/office/pdf/IBM_-_A_Vision_of_a_Smarter_City_-_Nairobi.pdf
- International Energy Agency (IEA) (2009). *World Energy Outlook 2009*. Paris. Available from <http://www.worldenergyoutlook.org/publications/weo-2009/>.
- IEA (2013). *Tracking Clean Energy Progress 2013*. Paris: International Energy Agency. Available from http://www.iea.org/publications/tcep_web.pdf.
- Incite and National Business Initiative (Incite and NBI) (2013). *The South African business response to climate change: Is it delivering the required performance?*. South Africa: CDP. Available from <https://www.cdp.net/CDPResults/CDP-South-Africa-Climate-Change-Report-2013.pdf>
- Kirk, M., J. Steele, C. Delbé and L. Crow (2011). *Connected Agriculture: The Role of Mobile in Driving Efficiency and Sustainability in the Food and Agriculture Value Chain*. Vodafone, Accenture & Oxfam. Available from http://www.vodafone.com/content/dam/vodafone/about/sustainability/2011/pdf/connected_agriculture.pdf.
- MTN Group (2012). *Affordable solar charging solution for handsets*. Available from http://mtn-investor.com/mtn_ar2011/sus_case3.php.

- Nestlé (2012). Nestlé and sustainable cocoa and coffee. Available from <http://www.nestle.com/csv/case-studies/AllCaseStudies/Nestlé-sustainable-cocoa-coffee> .
- Njeru, G. (2014). Kenya to generate over half of its electricity through solar power by 2016. *The Guardian*, 17 January. Available from <http://www.theguardian.com/environment/2014/jan/17/kenya-solar-power-plants>.
- Standard Bank (2013). How Do You Make the Private Sector Provide Climate Finance? Africa Carbon Forum 2013. Available from http://www.africacarbonforum.com/2013/docs/Presentations/D3/P5/P5_GeoffSinclair_StandardBank.pdf.
- Terpstra, P. and A. Ofstedahl (2013). 3 Ways Governments Can Involve the Private Sector in Climate Change Adaptation. World Resources Institute Blog, 18 December. Available from <http://www.wri.org/blog/3-ways-governments-can-involve-private-sector-climate-change-adaptation>.
- The Coca-Cola Company. (2013). *2013 Water Stewardship & Replenish Report*. The Coca-Cola Company. Retrieved from <http://www.coca-colacompany.com/2013-water-stewardship-replenish-report/>.
- United Nations Secretary-General's High-level Advisory Group (UNAGF). (2010). *Report of the Secretary-General's High-level Advisory Group on Climate Change Financing*. New York. Available from http://www.un.org/wcm/webdav/site/climatechange/shared/Documents/AGF_reports/AGF%20Report.pdf. UN (2010). *United Nations Framework Convention on Climate Change (UNFCCC) (2013). Private Sector Initiative Database of Actions on Adaptation*. Available from http://unfccc.int/adaptation/workstreams/nairobi_work_programme/items/6547.php.
- Unilever. (2014). Water Use by Consumers. Available from <http://www.unilever.com/sustainable-living/water/consumers/index.aspx>.
- Water Futures Partnership (2011). Water Futures: Addressing shared water challenges through collective action. Available from <http://www.sabmiller.com/docs/default-source/sustainability-documents/water-futures-report-2011>.
- Water Futures Partnership (2012). Water Futures: Beyond 2012. Available from <http://www.sabmiller.com/docs/default-source/investor-documents/reports/2012/sustainability/water-futures-report-beyond-2012.pdf?sfvrsn=4>.
- World Business Council For Sustainable Development (WBCSD.) (2013). Business guide to water valuation; an introduction to concepts and techniques. Available from <http://www.wbcsd.org/Pages/EDocument/EDocumentDetails.aspx?ID=15801&NoSearchContextKey=true>.
- Wickens, P. (2010). De Beers Family of Companies Water Engagement. Presentation to UN CEO Water Mandate Working Conference, Cape Town, 16 November. Available from <http://ceowatermandate.org/files/wc/Wickens.pdf>.
- World Bank (2014). Doing Business: Economy Rankings. Available from <http://www.doingbusiness.org/rankings>.



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