ADVANCING MULTI-ACTOR PARTNERSHIPS FOR CLIMATE CHANGE SOLUTIONS IN SUB-SAHARAN AFRICA

SYNTHESIS REPORT

MARCH 2018

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ABOUT THIS REPORT

The Flemish Department of Foreign Affairs, Division Global Challenges, (hereinafter referred to as 'Department of Foreign Affairs' or 'Flemish Government') has formulated an ambitious vision for its future development policy focused on combining poverty and climate change agendas and putting a key focus on innovation, multi-actor partnerships and systems thinking. It has also identified support of social entrepreneurship as an effective strategy for international development and believes that the scale of impact of social entrepreneurs can be greatly enhanced through strong partnerships with corporate actors as well as research centers and non-profit and non-governmental entities.

To this end, i-propeller and Ashoka were commissioned by the Department of Foreign Affairs to assess (1) the feasibility of scaling climate change related social innovations in Sub-Saharan Africa and (2) the extent to which the Flemish private sector and other relevant actors can be leveraged in doing so.

This document presents a summary of the main findings of the feasibility study that was conducted between September 2017 and January 2018. It aims at providing the Department of Foreign Affairs with a sufficiently robust knowledge base to assess **if and how the Department of Foreign Affairs can play a role in supporting multi-actor partnerships for climate change related social innovation in Africa** and suggests an **actionable 3-year roadmap and timeline for such activities**.[1]

[1] Please refer to the 3-year roadmap developed by i-propeller and Ashoka.

EXECUTIVE SUMMARY

In the face of climate change, building resilient, active and sustainable communities and finding innovative pathways to improve natural resource management is vital in paving the way for sustainable and inclusive development. This is particularly true for the African continent where the main sectors responsible for the largest part of the greenhouse gas (GHG) emissions are land use-change and forestry, followed by energy and agriculture. Despite the growing commitment of international donors, the African Union and various African national governments to climate change, adaptation efforts are still underfunded. Engaging the private sector in solving climate change related challenges is also proving challenging.

In this context, an important opportunity resides in fostering and strengthening the social entrepreneurship sector, which sits at the crossroads of civil society and the private sector. This sector is growing in Africa. Moreover, there exist a good number of social innovations addressing climate change challenges that have strong potential for impact.

The present analysis indicates that interventions implemented by social entrepreneurs effectively address challenges where traditional actors, such as governments, large NGO's and development agencies often struggle. And this in different sectors, such as agriculture, land use, waste management, water and energy.

When it comes to engaging Flemish actors in support of social entrepreneurship, the market-based (or 'business friendly') interventions developed by social entrepreneurs are stronger candidates for collaboration, vis-à-vis traditional corporate actors and applied research institutes. Additionally, the strong impact potential of social enterprises and their inclusive models that are typically premised on empowering local communities nicely complement the mission and ambitions of Flemish non-profits and NGO's currently active in Africa. As a result, fostering collaboration between social entrepreneurs and other Flanders-based actors is particularly promising.

This study has found strong indications that the needs and challenges of social entrepreneurs to scale up their work aligns (or can align) with actors in Flanders. The latter's contributions can be manifold in terms of e.g. resources, expertise and knowledge, and general (business) capabilities.

At the same time, it is important to acknowledge there exists an action gap for Flemish actors to engage Africa-based social entrepreneurs. This gap resides, on the one hand, in external conditions, such as the risks associated with doing business in Africa or the scale at which especially corporate actors operate, and, on the other hand, in internal factors, like an apparent unfamiliarity with social entrepreneurship in Africa as well as co-creative approaches. Creating more and better connections to bridge the gap between Flemish and African actors is therefore required.

The Department of Foreign Affairs, in collaboration with other public authorities or expert organizations, can act as facilitator and go-between. Indeed, the various actors that participated in this study expressed interest to embark upon and push forward multi-actor collaboration in Africa. They also positively welcomed the initiative from the Department of Foreign Affairs and look forward for it to play an active role.

I. OBJECTIVES AND APPROACH OF THE FEASIBILITY STUDY

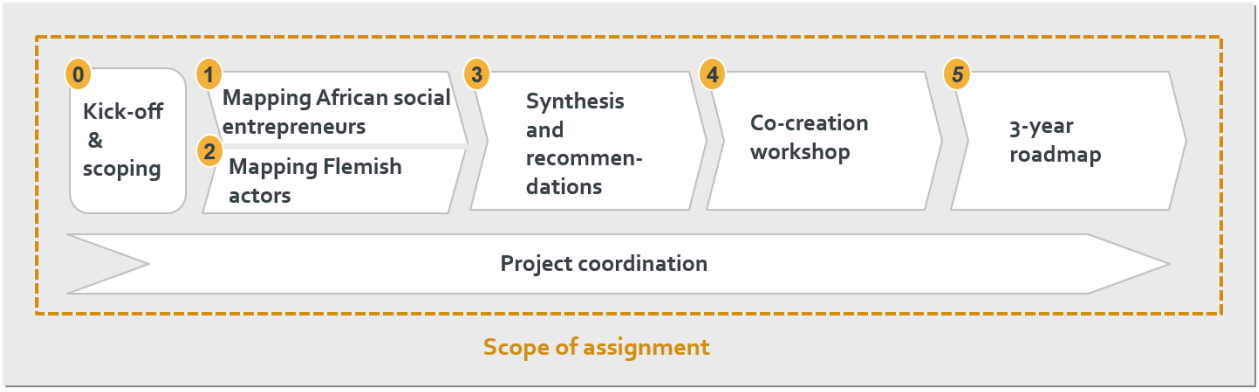
1. Objectives

The feasibility study is centered on five objectives. More specifically:

1. Identifying the most promising solutions led by social entrepreneurs on climate change in Sub-Saharan Africa with the potential to be implemented (in Sub-Saharan Africa);
2. Assessing the key needs of social entrepreneurs in order to scale up their impact;
3. Analyze the potential of leveraging Flemish actors (enterprises, NGO's, NPO's and research centers) in this endeavor;
4. Initiating a co-creation journey between a group of social entrepreneurs, Flemish actors and the Flemish Government; and
5. Designing a 3-year strategic roadmap and action plan for multi-actor partnerships on climate change in Africa.

2. Approach

We designed an approach consisting of five phases supported by project coordination efforts.



More specifically:

- Phase 0: Establishing the scope and precise focus of the study in collaboration with the Department of Foreign Affairs (performed by i-propeller and Ashoka);
- Phase 1: Mapping the challenges related to climate change in Sub-Saharan Africa and identify the high-potential initiatives led by social entrepreneurs working on climate change adaptation (performed by Ashoka, Kinomé);
- Phase 2: Mapping relevant Flemish corporate and other actors in priority sectors related to climate change to gain a better understanding of the situation and point-of-view 'on-the-ground' in Flanders (performed by i-propeller);
- Phase 3: Synthesizing the mapping exercises to identify areas of mutual interest for social entrepreneurs and Flemish actors (performed by i-propeller, Ashoka and Kinomé);
- Phase 4: Organizing a co-creation workshop with representatives of social entrepreneurs and Flemish actors in order to validate and further enrich the learnings from the mapping exercises (performed by i-propeller and Ashoka);
- Phase 5: Designing a 3-year roadmap for multi-actor partnerships on climate change in Africa (performed by i-propeller and Ashoka).

For a more detailed overview of the approach, please refer to the Annex.

II. CLIMATE CHANGE CHALLENGES IN SUB-SAHARAN AFRICA

What are the key challenges that should to be addressed? What could / should the Department of Foreign Affairs focus on to foster multi-actor partnerships?

We compiled an overview of the challenges related to climate change in Sub-Saharan Africa. This allowed us to evaluate in more precise terms the trends underpinning and the obstacles hindering the adoption of social innovations related to climate change. The overview also helped identify priority sectors, as well as challenges and opportunities that can be addressed and leveraged through a multi-actor approach.

1. Global overview

According to recent studies, climate change in Sub-Saharan Africa can be measured based on changes in temperature, changes in precipitation, and extreme climatic events (e.g. heat waves and floods).[2] Over the past century, the average precipitation and temperatures patterns have changed in the regions where scientific data is being collected. The continental temperatures are estimated to have increased by 0,5 °C to 0,8 °C while annual precipitations have increased in the south and decreased in the northern part of Africa. The studies on the frequency of extreme climatic events are, for now, less conclusive but report interesting local input such as:

- *"an increase in the number of extreme rainfall days over West Africa and the Sahel during May and July and more intense and more frequent occurrences of extreme rainfall over the Guinea Highlands and Cameroun Mountains (…)"*

- *"Extreme* precipitation changes over *eastern Africa such as droughts and heavy rainfall have been experienced more frequently during the last 30 to 60 years"*[3] .

The African continent only accounts for 4% of global annual GHG emissions but is extremely vulnerable and exposed to the effects of climate change in the near future[4]. In this context, focusing on adaptation, to develop resiliency of African communities, is of paramount importance while continuing to invest in mitigation[5] in order to allow for sustainable development.

Economic cost of climate change:

The present and future economic cost of climate change is a difficult indicator to compute due to the lack of studies on the subjects and due to the difficulties to predict the economic evolution of Sub-Saharan Africa. Nonetheless, scenarios forecast that a 1,5 °C increase in temperature by 2040 can have an economic cost of 1,7% of the GDP, a 2 °C increase by 2060 can cost 3,4% of the GDP and a 4,1 °C increase by 2100 can cost up to 10% of the GDP. All of these predictions are based on a 'business as usual' economic forecast scenario in Africa.[6]

[2] Please refer to the annexes.
[3] I. Niang, 2014.
[4] Madzwamuse, 2010; IPCC, 2014; Barnard et al., 2016.
[5] Please refer to the annexes to understand the difference between climate adaptation and mitigation.
[6] PACJA, R.Clements, 2009.

GHG emission in Sub-Saharan Africa:

Sub-Saharan Africa is a region particularly vulnerable to the effects of climate change due to the nature of its climate, facing water scarcity and rising regional temperatures. Africa is and will be affected by climate change sooner than other regions, yet historically the population has only played a minor role in the emission of GHG throughout history. In the 1900 to 2012 period, the region was responsible for 1,8% of the global total GHG emission (0.6% if South Africa is excluded). In 2014, the total GHG emissions for the Sub-Saharan region was of 2078.53 $MtCO_2e$. in comparison, China and the United States were respectively responsible for the emission of 11.600,63 and 6.319,02 $MtCO_2e$ in 2014. The sector responsible for the largest part of the GHG emissions in Africa in 2014 is land-use change and forestry with an estimated emission of 1.408,76 $MtCO_2e$. The second largest sector is energy with an estimated overall emission of 1.087,48 $MtCO_2e$, followed by agriculture 705,32 $MtCO_2e$, waste 168,27 $MtCO_2e$, industrial processes 117,46 $MtCO_2e$ and bunker fuels 26,54 $MtCO_2e$[7].

2. Main challenges and gaps per sector[8]

We mapped the challenges related to fighting climate change in Sub-Saharan Africa per sector and per actor, and of the high-potential initiatives led by social entrepreneurs working on climate change adaptation. The findings are presented below.

Agriculture: African economies and nutrition needs of communities are heavily dependent on rain fed agriculture.

Key challenges:

- Adapt to the effects of climate change in order to secure sufficient agricultural production (quantity) and sanitary standards (quality) to ensure food security;
- Ensure the establishment of sustainable agriculture for future generations as mechanization and access to chemical inputs increase.

Identified gaps:

Adaptation:

- Lack of:
  - coordinated disaster risk reduction policies to limit the damages of extreme weather events
  - communication and adapted business models to scale up agroecology techniques
  - coordinated response to pest and invasive species proliferation
- Weak focus on small-scale agriculture of public national policies
- Low access to accurate weather forecasting systems for yield improvement
- Low awareness and availability of improved seeds and crops

Mitigation:

- Need to limit livestock and improve livestock management
- Lack of communication and adapted business models to scale up agroecology techniques in order to reduce chemical inputs and restore soil carbon storage capacity

Energy: 620 million people do not have access to electricity in Africa.

Key challenges:

- Make reliable and sustainable energy available to all through increased clean energy production and larger distribution;
- Reduce poverty which often limits the access to energy, in particular clean energy.

[7] CAIT, 2014.
[8] For a detailed overview of the challenges and gaps per sector, please refer to the full Kinomé report in the annexes.

Identified gaps:

Adaptation:

- Lack of financing and monitoring improved cook stoves development

Mitigation:

- Lack of:
  - coordinated actions to limit fossil fuel exportation and use
  - efficient business models to ensure affordability and buy-in of clean energy solutions
  - financing and monitoring improved cook stoves development
- Need to scale up energy-generating waste reuse techniques (metanization, pyrolysis[9])

Waste management: The total number of individuals living in Africa's urban areas is expected to rise from 400 million in 2010 to 1,26 billion in 2050.

Key challenges:

- Provide wider access to waste treatment facilities;
- Reduce GHG emissions related to waste management in Sub-Saharan Africa notably through recycling to reduce the need for raw materials;
- Reduce and limit the impact of waste on ecosystems so as not to worsen natural resource management issues (pollution of water, land, etc.).

Identified gaps:

Adaptation:

- Lack of affordable technical options for food transportation and storage systems improvement

Mitigation:

- Lack of:
  - coordinated solutions towards improved waste management system and facilities
  - financing to implement and improve disposal infrastructures
  - financing to develop projects to use landfill gases for energy production
  - communication and awareness to develop the recycling of agricultural waste
  - adapted legal framework to improve methods of e-waste disposal and treatment
- Need to scale up energy-generating waste reuse techniques (metanization, pyrolysis)

Water: Over 300 million people face water scarcity conditions across the African continent.

Key challenges:

- Low and decreasing availability of fresh water and changes in water cycles leading to an increasing water stress;
- Need for adaptation and prevention of risks related to the effects of climate change on oceans and water bodies (acidification, sea level rise, biodiversity loss, etc.)

Identified gaps:

Adaptation:

- Lack of:
  - communication and financing to raise awareness on sustainable fishery practices

[9] Pyrolysis: thermal decomposition of materials at elevated temperatures in an inert atmosphere such as a vacuum gas.

    - coordinated disaster risk reduction strategies and infrastructures to face extreme weather events
- Need for coordinated adaptation strategies to cope with sea level rise at all scales
- Improvement of groundwater management to reduce the risks of groundwater exhaustion/salinization

Mitigation:

- Need for water treatment strategy and facilities (urban and rural)

Land use: Africa is losing more than 4 million hectares of forest every year which is twice as much as the world average deforestation rate.

Key challenges:

- Reducing greenhouse gas emissions due to land use, land-use change and forestry (LULUCF) by addressing the problems of deforestation, forest degradation and desertification;
- Experimenting and scaling up climate smart agriculture to cope with rising birth rates in Africa.

Identified gaps:

Adaptation:

- Lack of:
    - coordinated strategy and policies to secure land tenure rights and clarify ownership
    - operational monitoring to scale up of afforestation initiatives (GMV[10])
- Need to improve monitoring and measurement tools to track the impact of forests and forestry projects
- Need for financing and communication to scale up agroforestry techniques

Mitigation:

- Lack of:
    - prevention measures to land and forest degradation for infrastructure construction
    - education and financing to limit the occurrence of uncontrolled forest fires
- Need for:
    - traceability standards, communication and financing to combat illegal mining
    - prevention strategies to limit illegal woodcutting for domestic and commercial use
    - reinforced forest protection measures to ensure law and regulation enforcement
- Reinforce coordination between stakeholders of the reforestation and landscape restoration sector

3. Main actors and corresponding challenges[11]

a. Overview of the finance climate landscape

Monitoring the flows of climate finance is a challenge, as there does not exist any clear international definition of what constitutes climate finance (Climate finance usually refers to financing channeled by national, regional and international entities for climate change mitigation and adaptation projects and programs. According to an estimate by the Climate Policy Initiative, total investments in Climate Change adaptation and mitigation initiatives in 2015 amounted to USD 437 billion and USD 383 billion in 2016. The record in 2015 was driven by a surge in renewable investments, particularly in China, the USA and Japan. The subsequent decrease in 2016 was due to a combination of falling technology costs and lower deployment in some countries. According to this estimate, Sub-Saharan Africa received an average 3% of the global climate finance flow in 2015/2016, amounting to USD 12 billion.

Globally, public institutions climate finance providers represented 40% of total investment flow in 2015, falling to 34% in 2016 due to an increased commitment of private finance. Private finance commitments amounted to an

[10] Grande Muraille Verte (GMV).
[11] Please refer to the annexes for the full report and further details.

average USD 270 billion/year during 2015 and 2016. Nonetheless, climate finance in Sub-Saharan Africa remains largely based on public institutions providers, driven by multilateral and bilateral funds.

The Paris Agreement stressed the importance of funding adaptation initiatives over mitigation initiatives, but public-sector spending on mitigation still amounts to USD 111 billion (2015/2016 average) while adaptation investments only represent approximately USD 35 billion. The main sector for mitigation investments has, so far, been in the clean energy production sector (74% of total mitigation investments). Most adaptation commitments are channeled to water and waste-water management systems (51% of total commitments) in the 2015/2016 period. Growing attention should be given to diversifying the sectors of investments, and, for instance, better considering "energy efficiency" and "efficient transportation" for mitigation and "food production" and "health" for adaptation.

African governments argued that USD 67 billion per year will be required to compensate Africa alone for climate change impact. Within the framework of climate negotiations, African countries requested that polluting nations pay for climate change technology transfer, give support for increasing African countries' capability to address adaptation to climate change and offer support to both South-North and South-South cooperative mechanisms.

b. Overview of the main challenges faced by public authorities (governments, national and international cooperation agencies)[12]

The development of adaptation and mitigation strategies is dominated by African state actors supported by international public organizations. Civil society organizations and local communities have played a limited role so far in the formulation of national climate change response strategies with some notable exceptions in participatory approaches adopted in Uganda and Ghana.

Challenge 1: Institutional weaknesses

Weaker institutions in Africa tend to have less coherent policy frameworks, limited coordination mechanisms, limited human and financial capacities as well as lesser transparency.

Challenge 2: Lack of a coherent policy framework for climate change adaptation and mitigation

Most African countries lack a coherent policy framework for climate change adaptation and mitigation, particularly countries which have not embarked on a comprehensive planning process for adapting to climate change, often articulated in National Adaptation Plans of Action (NAPA) and/or National Climate Change Response Strategies (NCCRS)[13].

Challenge 3: Inequalities and gender

Inequalities and gender are not sufficiently addressed in mitigation and adaptation responses even if vulnerable populations are and will be more exposed to climate change effects.

Challenge 4: National response strategies to climate change suffer from weak coordination between institutions

Institutions in charge of implementing national climate change mitigation or adaptation strategies may have overlapping mandates and face dysfunctional arrangements for inter-agency integration. Moreover, this lack of coordination is exacerbated by ongoing jostling for climate change funding in an environment where most African government agencies are facing budget constraints.

Challenge 5: National policy frameworks rarely support adaptation at micro-level

When objectives for local action are formulated, the implementation strategy to ensure results is not sufficiently robust or not deployed with the adequate capacity. There are also power struggles and a lack of cooperation between democratically elected structures and traditional leadership structures[14].

[12] Please refer to the full Kinomé report in annexes for a more detailed overview.
[13] Madzwamuse, 2010: 61
[14] Madzwamuse, 2010: 81.

Challenge 6: Lack of human and financial capacities

African state agencies face a lack of skilled human resources, especially in low-income countries. Increasingly, these already limited capacities are dedicated to meeting donors' requirements for engagements, reporting and procurement, rather than focusing on action and implementation.[15]

c. Challenges related to involvement of non-state actors[16]

Lack of coordination and low level of sharing of lessons learnt and expertise

There is a lack of coordination for local adaptation activities led by non-state actors, in particular in regard to the activities of international NGOs (insufficient coordination among NGO's and between government bodies and NGO's). This situation results in limited visibility on ongoing actions and efforts, yielding risk of confusion for policy-making processes and conflicting advice. Efficient and flexible coordination mechanisms are needed to bring all non-state actors and government bodies at the same table to better communicate and align their strategies. It will also foster better sharing of lessons learnt. At field level, climate change related initiatives also struggle to involve community-based organizations. Yet, this situation is evolving, with local organizations and most notably civil society coordination networks emerging in countries presenting all income levels and gaining political voice[17]. Civil society organizations' key role in micro-level adaptation responses is increasingly acknowledged by international organizations as they are critical to policy processes that aim to tackle climate change and protect the most vulnerable communities[18].

Civil society - Need for comprehensive information and higher participation

On the part of African civil society, there is an urgent need for comprehensive information on climate change impact. The importance of climate change awareness is enshrined in Article 6 of the UNFCCC[19], which calls upon its parties to develop educational and public awareness programs on climate change and its effects. Apart from being a critical principle of adaptation governance, access to information regarding climate change is also important for fair and equitable public participation in shaping and implementing local and national adaptation initiatives. Today, most African countries do not have coherent strategies for raising awareness on climate change issues or national response[20].

Focus on social entrepreneurs – deemed a priority but rather difficult to connect to

Among NGO's and NPO's, social entrepreneurs are viewed as critical actors to engage with. They are also increasingly seen as key partners by the donor community. At the same time, it appears hard to arrive at tangible connections. That is, social entrepreneurs and donors have difficulties to connect and establish a meaningful dialogue, due to a still evolving social enterprise ecosystem, an absence of data and consolidated knowledge. Insufficient resources are available to efficiently support African social entrepreneurs at all stages of development to measure and assure a good ROI for partners.

A number of African governments, the African Development Bank and the African Union have recognized social entrepreneurship and social innovation as great opportunities to achieve more inclusive growth. Increasingly, African governments are investing in setting up social incubation hubs and providing platforms for social entrepreneurs to ideate, refine, test and market their innovations. There has also been a rise in the number of social investment funds in Africa, including some with a focus on climate change.

The main advantages of investing in social entrepreneurship for development can be summarized as follows:

[15] Madzwamuse, 201and0: 79; Adenle et al, 2017.
[16] Please refer to the full Kinomé report in Annexes for a more detailed overview.
[17] Reid et al., 2012.
[18] Reid et al., 2012; AfDB, 2015.
[19] UN, 1992.
[20] Madzwamuse, 2010: 91, Adenle et al, 2017.

- Investing in local economy (local organizations, people, etc.) contributes to inclusiveness and generates direct employment while achieving larger social and environmental impact in general;
- Supporting innovative and sustainable solutions adapted to the African context and specific challenges;
- Empowering the African people and organizations to take ownership of their future and development;
- Building the necessary bridges between corporate and socially-oriented actors like social entrepreneurs, at the crossroad of business and social (inclusive growth);
- Maximizing impact by funding social business innovations with potential to scale up and transform an entire sector.

Research centers - Dependency on foreign-led research projects

Research centers - Dependency on foreign-led research projects

Due to capacity constraints, African research centers are forced to collaborate on disparate, foreign-led research which often responds to external interests and agendas. Although most universities and higher education centers in Africa have in-house technical expertise on climate change and solid research programs, these actors are lacking the resources to undertake policy-oriented research.

Moreover, there is a need for a stronger connection and coordination between decision-makers and the scientific community at large. This would help to bridge the current disjuncture between research areas and priorities in terms of addressing knowledge gaps to effectively draft adaptation policies and other responses.

Corporate actors (foundations and businesses) - A positive trend to unlock potential

As for philanthropy from foundations and businesses, it is difficult to access data for Sub-Saharan Africa regarding climate adaptation and mitigation. According to SDG Funders, Sub-Saharan Africa accounts for 2% of global philanthropic involvement of the private sector on SDGs, comprising climate related initiatives. The most important investments on SDG's have been directed towards health (USD 61 million) and peace and justice (USD 59 million). As exemplified below, SDGs that are directly connected to climate, such as 'Climate Action', 'Clean Energy', 'Life in Water' and 'Life on Land' are among the least funded goals (on top of the 'Partnership-building' SDG).

Mitigation (energy focus)

While it is clear that African industries and individual businesses will be heavily impacted by climate change in the years to come, it is less clear how private sector financing can be effectively mobilized and channeled towards adaptation projects in developing countries. The UN highlights that private sector investments are mostly directed towards energy production and have a significant impact on reducing deforestation which are key topics for climate change mitigation. For now, private investments mostly target mitigation rather than adaptation.

Since the 2014 Climate Summit hosted by the UN Secretary-General in New York, the finance and insurance sectors have largely increased their commitment towards addressing climate change with a particular focus on associated risks and the 'greening' of their investment portfolios. For instance, under the 'Power Africa' initiative, Standard Chartered and Barclays Africa Group committed a minimum of USD 2 billion and USD 500 million respectively to a pipeline of proposed clean power projects across Sub-Saharan Africa.

Globally, the private sector has been increasingly engaged in financing and investing in mitigation efforts, among others in the fields of energy production and grid development. Ambitious emission reduction targets have been set for the 300 companies that are part of the 'Sciences-Based Targets' (SBT) initiative, in partnership with the CDP, WRI, WWF and the UN Global Compact. Some of the companies involved in this initiative are from Sub-Saharan Africa, such as the South Africa Mediclinic, while numerous Western companies involved in the SBT initiative have activities on the African continent such as Coca-Cola Enterprises, Olam International, Nestlé, Kellogg, Mars, Veolia Environment, etc. These emission reduction targets are a step forward in advancing low-carbon economy to avoid the most dangerous effects from climate change and the initiative shows that the private sector is increasingly involved in global discussions on climate change.

The COP 22 in Morocco has been also the opportunity for corporate actors from 43 African countries to commit to fighting climate change and its detrimental impact. These actors signed the Marrakesh Declaration and thereby

agreed to mainstream climate considerations into business planning and their activities in line with the Paris Agreement.

Adaptation and other sectors than energy are much less being considered

The implication of the private sector during the recent international climate summits has been limited and perceived as insufficient regarding both adaptation efforts and other sectors than energy. For example, during the COP22, the two main topics discussed by corporate actors were health and energy, even though the main sectors in terms of GHG emissions for all Sub-Saharan Africa are land use and agriculture.

Also, very few corporate actors seem to be engaged in climate change adaptation initiatives in Africa more generally. Within that context, a limited number of Corporate Social Responsibility (CSR) focused companies have been increasingly concerned with sustainability of production. Olam International and Mars, for example, in the agricultural/food sector, have been taking ambitious steps towards both reducing their emissions and revising their production models to be more climate resilient. On a global scale, a group of ten companies across seven sectors recently committed to implement the recommendations of the Task Force on Climate-related Financial Disclosures within three years. The companies involved in this initiative are mostly USA- and Europe-based, but some have activities in Sub-Saharan Africa, such as Wipro or WPP.

INTERMEDIATE CONCLUSIONS:

1 - Between climate change adaptation and mitigation, rendering funds and efforts towards adaptation initiatives is a more impactful way to affect climate change in the African region.

2 - Multi-actor collaborations between social entrepreneurs and corporate actors can help overcome some challenges faced by governments and other traditional actors (large NGOs and development agencies) by enabling greater participation in climate change policies and leveraging the potential of contribution of the civil society (NGOs, NPOs and CBOs) and the private sector (not limited to multinational companies).

III. SOCIAL INNOVATIONS ADDRESSING CLIMATE CHANGE IN AFRICA

What social innovations related to climate change are being developed in Africa? How do the solutions address the challenges identified above and to what extent? What are the needs of local social entrepreneurs keen to scale up their impact?

1. Overview

a. Introduction

Ashoka started by identifying a list of social entrepreneurs (157) in seven climate change relevant sectors, entrepreneurs including Ashoka fellows (100) and changemakers [21] (57). All 157 social entrepreneurs identified implement impactful social innovations related to SDG 13 (*Take urgent action to combat climate change and its impacts*). These entrepreneurs counter climate change by (re)creating virtuous cycles between economic productivity, environment protection and preservation, and social well-being.

After agreeing to focus on four priority sectors assumed to be most relevant in terms of potential synergies with the Flemish actors, the list was then reduced to 40 entrepreneurs. A questionnaire sent to the 40 social entrepreneurs helped further analyze the impact, motivation and maturity of the enterprises. The new list was screened by Kinomé ranking innovations on climate change impact and fit with climate financing criteria. Finally, we interviewed and invited a group of fifteen social entrepreneurs to a co-creation workshop in Brussels on January 25-6.

b. High-level findings of mapping exercise regarding social entrepreneurs

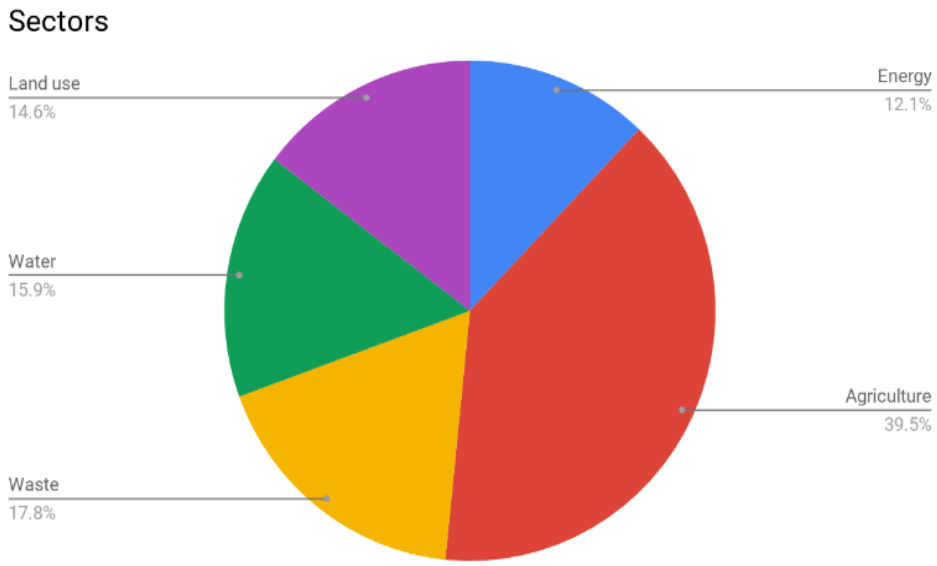
The social entrepreneurs supported by Ashoka in Africa create and run innovative social enterprises to empower people and communities. These social innovators are 'impact first,' meaning they focus on positive impact over financial return, and provide the local communities with the necessary incentives, skills and knowledge to fight the social, economic and environmental consequences of climate change.

The main intervention patterns of the social entrepreneurs?? can be summarized as follows:

- Implement integrated social, economic and environmental solutions for local communities
- Empower communities to take ownership over natural resources
- Design innovative, sustainable and inclusive social business models for rural communities/informal sector
- Build climate resilient communities through climate change mitigation and/or adaptation
- Educate and train local communities around climate change

[21] Please refer to the annexes to understand the difference between fellow and changemaker. In a nutshell, changemakers are more 'early stage' than fellows.

Break-down of the 157 social entrepreneurs per sector:

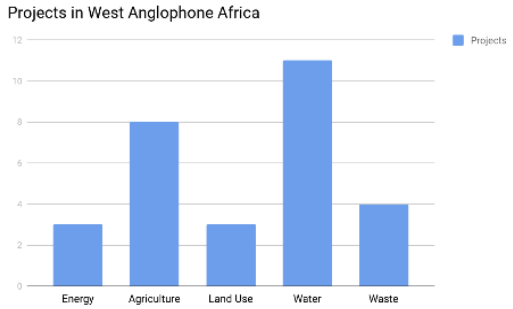


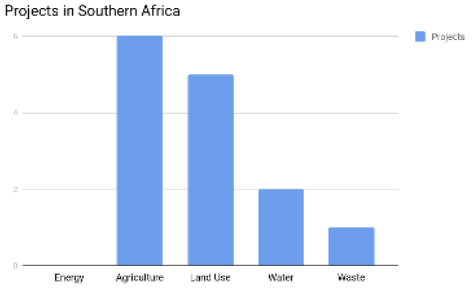
Agriculture: Ashoka, in collaboration with the Bill & Melinda Gates Foundation, supports many projects in agriculture on a 4-year 'Rural Innovation and Farming' program. Agriculture is the backbone of African productivity and touches upon an essential topic for Africa: feeding the continent.
Energy: The energy sector is less represented here, as most energy projects in Africa are large-scale private initiatives rather than locally driven solutions.
Waste: The waste sector is a large sector as it requires involving and educating the local communities, an approach that social entrepreneurs are very keen on. Most waste projects also impact energy and agriculture.
Land use: The land use projects mapped are linked to agriculture. A majority of projects relate to deforestation, which is an essential topic for climate change mitigation.
Water: Similarly, most water projects are linked to agriculture, with a particular focus on adapting to climate change.

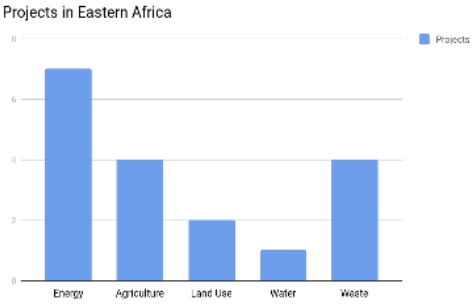
Break-down of the 157 social entrepreneurs by country:

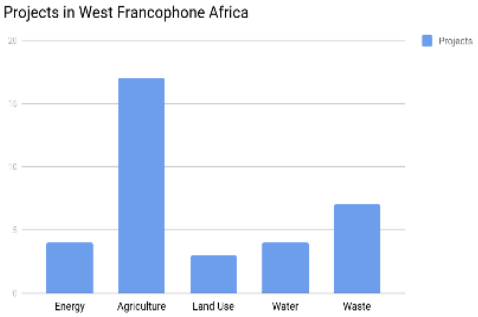
Given that the four regional Ashoka offices are in Dakar, Lagos, Nairobi and Johannesburg covering 20 countries in total, the mapping exercise primarily focused on these **four regions** of Sub-Saharan Africa:

- Anglophone West Africa - **24 project**s in Nigeria, Cameroon, Ghana and Liberia
- Francophone West Africa - **37 project**s in Senegal, Ivory Coast, Mali, Burkina Faso, Gambia, Togo, Benin, Niger and Cameroon
- Eastern Africa - **18 project**s in Kenya, Uganda, Tanzania, Rwanda
- Southern Africa - **17 project**s in Zimbabwe, South Africa, Botswana









c. Key trends identified

Common to all sectors:

- Compared to other focus areas, most innovations in climate change are market-based with business models supporting a social/environmental mission rather than pure non-profit models.
- All projects include the communities into the solution developed and have an educational component to their work
- A majority of projects use both mitigation and adaptation to tackle climate change. As the project operates at community level, there is significant potential to significantly contribute on adaptation

The impact of a small group of selected social entrepreneurs on beneficiaries (non-exhaustive):

- Energy: 1 million people reached with alternative energy solutions - aggregated impact data of 4 social entrepreneurs, namely Solar Sisters, COMACO, Village energy, Awamu Biomass.
- Land use/Deforestation: 4,2 million trees planted, 1,2 million indirect beneficiaries, 1,1 million hectares protected, 12 million agroforestry seedlings planted - aggregated data of Kinomé and COMACO.
- Water/Agriculture: 360.000 small-scale farmers empowered and better equipped - aggregated data of Ignitia, Komaza and Njawara Agricultural Training Centre.
- Waste: 100 tons of biofuel from waste – Safiorganics.

d. Key insights of a shortlist of 37 social entrepreneurs interviewed on climate change

From the point of view of social entrepreneurs, the field of climate change faces a number of challenges. More concretely:

- Insufficient incentives from public authorities to make local industries (agriculture and energy sectors especially) 'climate smart'
- Market failures: rural communities do not get access to climate smart technologies, products and techniques (flaws in distribution and innovative social business models)

- Insufficient focus on adaptation – entrepreneurs express worry about this as climate change has already started to affect a large rural population in Sub-Saharan Africa
- Too many investments are concentrated in one sector specifically – energy (wind and solar) – and insufficient investments are provided to the other sectors (forest and land use sector)
- Impact investment is not flexible enough (high ROI requested) and too little adapted to social enterprises
- Awareness of populations being at risk of climate change is still very low in these regions
- When they are not working on a profit or market-based solution, social entrepreneurs have a hard time engaging with the private sector. 30% of social entrepreneurs have developed partnerships with businesses (vs. foundations and public institutions) but all wish or plan to develop links with the private sector
- An absolute need for more and better financing. Climate change finance is considered complex and hard to access

e. Main needs for scaling up

Evidently, each project has different needs. However, there are similarities in the needs of social entrepreneurs, particularly when it comes to the scaling of their efforts:

- **Develop scalable business model and strategy to scale** - When a social entrepreneur wants to have an irreversible impact on a societal problem, s/he needs to think about scaling systemically, rather than simply replicating the organization elsewhere
- **Access to funding** - Funding in the climate change sector is channeled towards large scale projects and does typically not support local initiatives involving the communities
- **Diversification of revenue streams** - Even though most projects are market-based, serving the bottom of the pyramid means that one needs to come up with creative solutions to access scaling funds that would enable the entrepreneur to (also) serve that segment of the population
- **Access to a new network of potential partners/developing strategic partnerships with private sector** - Social entrepreneurs tend to have a hard time engaging the private sector when it comes to scale-up given the different worlds they operate in
- **Impact measurement (beyond CO2 offset - impact measurement of adaptation solution**) - Identifying the impact of adaptation on climate change remains a very difficult task, at all stages of growth of the social enterprise
- **HR management** - As social enterprises grow fast at the scaling stage, strong HR management is what enables the enterprise to ensure a stable growth.
- **Marketing and communications** – Entrepreneurs indicate they find identifying the right communications and marketing strategies to help expand to new markets, beneficiaries and potential funders/partners challenging in scale-up phase

2. Analysis per sector (strengths, weaknesses and needs)

In this section, we zoom in on the sector based scaling strengths, weaknesses and needs, as expressed by social entrepreneurs.

a. ENERGY

A majority of projects are small-scale and focused on solar. Many projects also use waste as an alternative source of energy and train communities to deliver green energy services or leverage local waste.

Strengths	• Alternative sources of energy: solar energy, organic waste • Building resilience: training local populations to use and sell renewable energy products • Innovative social business models to reach rural areas markets • Introducing new techniques, e.g. clean cookstoves • Job creation
Weaknesses	• Alternative sources of energy: wind energy (more projects can be found in other regions like Asia or Latin America) • Building resilience: Smart grids
Needs	• Affordability of the products developed • Transportation and logistics • Hybrid financing schemes • Capacity building in growing infrastructure

b. WASTE

The waste sector plays an important role in educating communities on climate change. A large portion of projects use waste as a source of energy.

Strengths	• Improved waste management system facilities in slums and peri-urban areas • Developing projects to use landfill gases for energy production • Developing the recycling of agricultural waste • Job creation and inclusion of the informal market
Weaknesses	• Improvement of food transportation and storage systems
Needs	• Higher environmental standards: issues with illegal dumping • Talent recruitment for rapid growth • Financing, hybrid business models and developing strategic partnerships • Impact measurement methodologies to evaluate impact on climate change (especially for adaptation)

c. AGRICULTURE AND LAND USE

All agricultural projects focus on small-scale farmers with the objective being food security/ improved nutrition, which is a key challenge for the African continent. Therefore, the climate change impact is more indirect. The land use sector is closely linked to agriculture. Most projects focus on natural resource management and reforestation.

Strengths	• High numbers of techniques and products for climate smart agriculture adapted to different

	lands, crops, and foods with intensive research and development activities, communities based (capitalize on existing knowledge combining it with modern based science and technology plus research and tests) • Valuable partnerships with national and international public institutions • Addressing both adaptation and mitigation challenges (and the food security/nutrition challenge) • High synergies between social ventures (land use, adapted seeds, irrigation, compost, conservation, reforestation) • Building climate smart resilient communities with a systemic and bottom-up approach (effective approach to transform farmers and communities' mindset) • Job creation and vocational training for youth and women
Weaknesses	• Difficult to shift business model to a hybrid one in order to scale up and to market products, innovations and research • Each pilot in a new community requires considerable financial means (grants) and time to establish a climate resilient and smart community • Research requires considerable financial means and time • Mainly working with public institutions, while private sector is still insufficiently engaged
Needs	• Financing, hybrid business models and developing strategic partnerships • Marketing (cook stove, natural and fast compost, climate resilient seeds and nutritious food, etc.) in view to compete with imported products • Technology, equipment and materials adapted to new climate smart agriculture and land use techniques and transportation

d. WATER

The entrepreneurs in the water sector focus on irrigation and desertification. This is again linked to agriculture and Africa's biggest concern: food security and nutrition.

Strengths	• Improvement of groundwater management to reduce risks of exhaustion/salinization • Answer the need for water treatment strategy and facilities, both urban and rural
Weaknesses	• Disaster risk reduction strategies and building risk management infrastructure • Coordinated adaptation strategies to cope with sea level rise
Needs	• Strategic partnerships to scale and raise outreach • Financing and hybrid business model to produce go-to-market product • Talent recruitment and training

INTERMEDIATE CONCLUSIONS:

1 - There is a significant number of social innovations addressing climate change challenges in Africa that hold potential for impact through scalability, if they receive the right support.

2 - The solutions implemented by the social entrepreneurs effectively address many of the climate-change related challenges within the identified target sectors.

3 - A majority of social entrepreneurs use both adaptation and mitigation approaches to tackle climate change.

4 - Most of the solutions led by social entrepreneurs are market-based, or at least business friendly, allowing for higher potential of interest and collaboration with the private sector.

5- Several key needs of the social entrepreneurs to scale up could be addressed by better collaboration with the private sector.

IV. CLIMATE CHANGE AND FLEMISH ACTORS

1. Overview

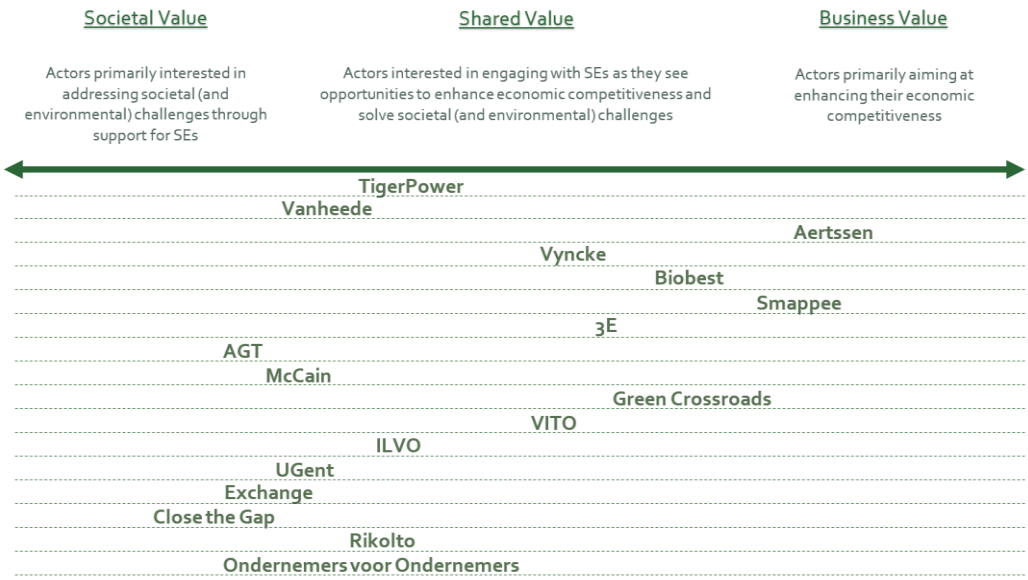
a. Introduction

We contacted approximately 140 Flemish actors, including private sector actors (enterprises, sector federations and cluster organizations), civil society organizations (NGO's and NPO's) and research centers based in Flanders. Of the 140 actors, we shortlisted 75 actors as prime contacts. They were engaged via 'stock-taking' interviews (37 in total) and/or in-depth interviews (17 in total).[22] In doing so, we considered four priority sectors: Agriculture - Energy - Waste - Water - Land Use. Here; we present the key findings of the mapping exercise.

b. High-level findings of the mapping exercise regarding Flemish actors

The mapping exercise has revealed that climate change is a material topic for many actors in Flanders. Public authorities at local and national levels are advocating action and policy change. But also the private sector and other types of organizations demonstrate responsibility and keen interest in what we can label the 'climate change opportunity'.

In order to think through and map the prevailing perspectives of Flemish actors, we use a spectrum ranging from 'societal value'[23] on the left, over 'shared value'[24] in the middle, to 'business value' at the right. Based on the outcome of the in-depth interviews, we have classified the Flemish actors along this spectrum. What becomes immediately clear is that Flemish actors express different motivations for engaging the 'climate change opportunity'. For some it primarily represents a business opportunity (situated on the right), for others the interest is situated more at the level of societal impact (situated on the left). Yet, there are also actors that strongly identify the potential of 'shared value' for their organizations (situated in the middle) through tackling climate change.



Corporate actors

[22] Please refer to the Annex for our mapping methodology and for contacts made within the mapping phase.
[23] We include both social and environmental in 'societal'.
[24] Shared value is a concept coined by Michael Porter and Mark Kramer and means the value created when companies recognize that there are opportunities for innovation and growth in treating social problems as business objectives. For more on this, see Creating Shared Value, Michael E. Porter, Mark R. Kramer, Jan-Feb 2011 Issue of HBR.

Multinational companies (MNCs) are generally perceived leaders on the climate change opportunity, i.e. Unilever is frequently cited as a company that is globally and locally known for its leadership in sustainability related initiatives. Some go as far as pushing business partners to pay attention and take up the issue.[25] But also locally-anchored small and medium-sized enterprises (SMEs) are actively engaging the climate change opportunity, whether it is for risk mitigation purposes, enhanced company reputation or a more general commitment 'to do the right thing'. It is also worth mentioning that the pressure from end-consumers still appears to be rather limited in Flanders[26].

At the level of individual companies, we found examples of organizations with an express desire to adapt operations to changing environmental conditions, incl. issues related to climate change (e.g., Aertssen)[27]. Similarly, we identified companies that put a premium on 'share value' (e.g. Vynke)[28]

A common theme in the interviews with companies was that the Flemish government is deemed a key player in shaping legislation and policy frameworks, capable of driving climate change innovation (e.g. Van Heede).[29]

With respect to regional sector federations in the priority sectors, they are acutely aware of the domestic challenges for their members in regard climate change.[30] As corollary, they also acknowledge the many challenges this entails for markets (from a sourcing, supplier and/or distribution point-of-view) in Africa.

Other actors: NGO's, NPO's and Research centers

The NGO's and NPO's that have been contacted within the feasibility study showed great willingness and openness to engage with both the project and the social dimension of the 'climate change opportunity'. NGO's and NPO's are particularly interested in exploring synergies with social entrepreneurs in Africa. They specifically cite their knowledge and expertise base, and their strongly developed (international) networks as potentially supportive of African social entrepreneurs. Finally, they recognize that social entrepreneurship is gaining both in credibility and momentum. Therefore, they consider social enterprises as particularly strong partners to advance their missions.[31]

Engaging with the government, often an important existing funder for these actors, was also underscored as an important consideration to engage with the project and the opportunity presented.

Flemish research centers expressed clear interest in leveraging their knowledge and resources to the 'climate change opportunity'; indicating they could bring specific research resources and learnings to partnerships. In addition, they pointed to specific technologies and applied research knowledge focused on climate change.[32] Such actors, however, sought close alignment between the partnerships and their research agenda and a certain promise for the socio-economic value for Flanders.

Potential complications

At the same time, our research unveiled a certain prioritization among Flemish actors in regards the climate change opportunity in Africa. First, Flemish actors appear to focus on the domestic market and/or internationally adjacent markets (i.e. neighboring countries). Second, they raise political instability and the widely differing policy contexts in the African region.

[25] For examples of this globally see for example the B-corp movement globally: http://www.bcorporation.net/community/find-a-b-corp. For a national example, see for example Colruyt group: https://theshift.be/nl/our-members/colruyt-group.
[26] Please refer to the annexes for the conversation with MVO Vlaanderen.
[27] Please refer to the annexes for in depth interview with Aertssen.
[28] Please refer to the annexes for in depth interview with Vyncke
[29] Please refer to the annexes for in depth interview with Van Heede
[30] *"FEVIA Vlaanderen maakt werk van haar klimaatengagement"*, https://www.fevia.be/nl/nieuws/fevia-vlaanderen-maakt-werk-van-haar-klimaatengagement.
[31] Please refer to the annexes for in depth interview with Rikolto.
[32] Please refer to the annexes for in depth interview with ILVO, VITO and University of Gent.

2. Analysis per sector (strengths, opportunities, weaknesses and threats)

To appreciate the extent to which Flemish actors may support address climate change together with African social entrepreneurs, a **SWOT analysis** was conducted for all selected sectors: Energy – Waste – Agriculture – Water – Land Use. We present the resulting insights below.

a. ENERGY

The Flemish energy sector is highly developed and has extensive innovation capacity. Apart from several interesting climate change related sector initiatives, the market consists of a wide range of home-grown companies in renewable energy (e.g., Vyncke, 3E) and competitive smaller players (e.g., TigerPower). Companies active in this space offer highly developed products and services on a medium to large scale.

Strengths	• Climate change opportunity widely perceived • Strongly developed (in depth and breadth) home-grown base of renewable energy companies and affiliated entities (e.g. R&D) • High-potential market with extensive innovation capacity • Openness towards multi-actor partnerships; even some experience with engaging with social entrepreneurs already • Sector initiatives addressing ecosystem challenges (e.g. AREA, M-Power)
Opportunities	• Government seen as a catalyst for action • Keen to partners with those familiar with the local context and being able to inject a social dimension to business opportunities (e.g. Vyncke) • (Renewable) energy has a direct impact on the local community and supporting entrepreneurship as a stepping stone to economic development in a more indirect manner • Partnership with social entrepreneurs seen as positive contributor to enhanced employee engagement in Flanders
Weaknesses	• Offer highly advanced products and services at a large scale (ie Aspiravi, 3E, Vyncke) • Mismatch between home-grown solutions and needs on-the-ground (ie Smappee)
Threats	• (Perceived)prevalence of corruption in Africa • Unfamiliar with African policy context (key in shaping energy market) • Need for reliable local partners with high level of dedication and professionalism • Cost of investments for infrastructure can be prohibitive • Lack of finance for mid-sized projects

b. WASTE

One of the strengths attributed to actors in the waste sector in general is the capacity to adjust to changing conditions in innovative ways. It is worth emphasizing that Flanders is considered a pioneer in waste management and corresponding legislative efforts. Waste prevention and the overall trend towards 'waste as resource' is creating a relatively new variety of opportunities.

Strengths	• Flexibility of Flemish actors to adapt and leverage changing sector conditions • Flanders as pioneer in waste management (legislation) • High innovation capacity of the Flemish waste sector and relevant expertise that has been built up for years (e.g. Vanheede)
Opportunities	• Willingness to share technology and knowhow with African social entrepreneurs

	• Prevention, reuse, recycling of waste creating wide variety of opportunities • Promising worldwide trends such as 'waste as resource' (i.e. reuse, recycling of waste)
Weaknesses	• Advanced technology of companies might be mismatch with that of African social entrepreneurs (e.g. Vanheede) • Organizational challenges related to combining daily operations with scaling African social entrepreneurs • Language and cultural barriers
Threats	• Perceived instability of target countries • Perceived difficulty to access (hard-to-reach) markets in Africa • Policy context being different from policy framework in African countries • Lack of strong incentives because of fast moving, high-potential market in Flanders (and adjacent countries)

c. AGRICULTURE

The Flemish agricultural sector is characterized by robust R&D capacity with a strong export orientation. Similar to the waste sector, awareness and an action-orientation regarding climate change are becoming more prominent in the Flemish agricultural sector.

Strengths	• Strong R&D and applied research capacity (e.g. ILVO) with an international orientation • Worldwide leaders in food (e.g. Greenyard, Barry Callebaut, etc.) with strong commitment to sustainability; also operating in Africa • Strong home-grown companies ('small multinationals') with focus on 'natural agriculture', (e.g. Biobest) and/or start-ups (e.g. BeeOdiversity) • Notable suppliers to farmers in Flanders, e.g. AgroLogic
Opportunities	• Awareness within agricultural community regarding climate change challenges (e.g. initiatives of Dept. of Agriculture and Fisheries, Boerenbond) • Agroecology movement (as part of alternative agriculture) is gaining in importance (e.g. #SaveTheFoodTure); but still minor vs. traditional agroindustry • Bio farming (and food) on the rise, e.g. BioForum, Kipster in Dutch Limburg
Weaknesses	• Size and scale of Flemish companies may not always be attuned to small scale farming in Africa • Technologically advanced disposition of Flemish actors may be mismatch with local needs in Africa
Threats	• Reluctance of foreign market entry in Africa, principally driven by perceived corruption and regime instability • Smallholder farming in Africa considered a difficult segment to operate in because of lack of scale • Power within agricultural value chain unevenly distributed

d. WATER

Companies in the water sector offer advanced technologies and innovations focused on climate adaptation, while universities and research centers have developed an extensive pool of knowledge on water related climate change innovations. Opportunities reside in combining research with entrepreneurial projects. There is an increasing demand for climate related projects in the market for which various innovative solutions have already been identified.[33]

Strengths	• Advanced technologies and innovations in the Flemish water sector focused on climate adaptation • Universities and research centers have developed an extensive pool of knowledge with business potential (VITO, Vlakwa, UGent, etc.) • Willingness of water sector federations in Flanders (i.e. Belgaqua & AquaFlanders) to activate network to support climate change initiatives domestically and internationally
Opportunities	• Opportunities lie in combining the research conducted by Flemish actors with entrepreneurial projects • Actors offer climate relevant applications, e.g. rainwater harvesting, drainage/sanitation, water power, etc. • Increase in demand for climate related projects from the market creates appetite to develop new climate relevant products and services
Weaknesses	• Smaller corporate actors in the water industry having limited resources and time (e.g. IFTech, AGT) • Few Flemish companies have subsidiaries in African region • Logistic management and the inability to exercise effective control on-site
Threats	• Perception that illegal practices and/or corruption may hinder projects • Perceived lack of professionalism of prospective partners and Flemish corporate actors looking for the perfect match (*all-or-nothing)* when it comes to concluding partnerships • High administrative burden associated with water project initiatives • Challenge to bridge the gap between research and actionable business projects (knowledge transfer)

e. LAND USE

The Flemish actors that were initially identified as potential partners for co-creation initiatives on climate change were unable to respond in the set timeframe or were more locally focused than the scope of this project.

[33] Please refer to annexes for in depth interview with AGT.

INTERMEDIATE CONCLUSIONS:

1 –Flemish corporate actors across different sectors are developing advanced technologies and innovations relevant to climate change adaptation and mitigation. Research actors demonstrate strong climate change related R&D and applied research capacity.

2 –Flemish corporate actors see concrete climate-related business opportunities in Africa. Similarly, research facilities express interest as it may support national and international research agendas.

3- Civil society actors (NGO's and NPO's) view climate change related collaboration with social entrepreneurs as a vehicle to deliver on their missions.

4 - Although familiarity with the concepts differs across actors, social entrepreneurship and inclusive business are increasingly on the radar of Flemish players.

5 – Flemish actors perceive Africa as a 'risky' market. There is also a certain reservation in partnering with 'unknown' individuals and organizations (c.q. social entrepreneurs).

V. MULTI-ACTOR COLLABORATION FOR CLIMATE CHANGE: OPPORTUNITIES & CHALLENGES

What is the potential of multi-actor partnerships between Flemish actors and social entrepreneurs in Africa to scale up current solutions addressing climate change? Where do these actors face difficulties to connect and collaborate?

The central question of the feasibility study is to find out how the Department of Foreign Affairs can advance multi-actor partnerships to scale-up climate related social innovations. The mapping of social entrepreneurs and Flemish actors validated the assumptions of the Department regarding both the potential of social innovations to address key challenges related to climate change and the interest and capacities of support on the side of the Flemish actors.

This section presents the opportunities to leverage and the challenges to overcome as perceived by the social entrepreneurs and the Flemish actors, along with a first set of conclusions to foster better collaboration between the social entrepreneurs and Flemish actors to advance climate change solutions in Sub-Saharan Africa.

1. Perceived opportunities

Our research has confirmed the need and interest from Africa's social entrepreneurs to collaborate with corporate and other non-state actors. This is in line with findings from the annual French Social Entrepreneurship Survey conducted by Ashoka and partners (focused globally), which evidenced that social entrepreneurs see collaborations with companies as one of the top two levers for growth, just after additional funding. Interestingly, social entrepreneurs value companies' intrinsic resources (e.g., production, distribution, influence) over investment.

Our research also confirmed that Flemish actors in the target sectors, and particularly corporate actors, can bring significant assets in the resolution of societal issues: these actors have knowledge, experience, operations, resources and infrastructure, which can scale products and solutions rapidly. But Flemish actors lack the insights, the innovation potential and the trusted connections to low-income/vulnerable populations that many social entrepreneurs have developed. Thus, an important opportunity resides in combining the two to explore and set up co-creative partnerships to unlock new markets, customers and scale impact.

During a consultative workshop, actors from both sides acknowledged that willingness among all different actors to push this co-creation further through multi-actor partnerships on climate change.

Our research allows us to identify the following opportunities:

a. Main perceived opportunities by social entrepreneurs

- Better leveraging the private sectors' assets and capabilities, such as:
  - Knowhow and expertise (strategy, business development and general management)
  - Infrastructure and operational capacity, e.g. capacity to produce, market, distribute, finance, etc.
  - Technology and R&D facilities
  - Convening and influence power within the full business ecosystem (employees, suppliers, business partners, distributors)
  - Investment capacity – grant money, investments
- Engaging with corporate actors to bring about 'systemic change'. A sizeable group of social entrepreneurs considers companies as critical partners in order to create systemic impact and transform entire sectors or industries.

What social entrepreneurs deemed specific opportunities in engaging corporate actors:

- Companies with climate smart technologies, products, equipment can help social entrepreneurs boost rural markets and distribution networks
- Agricultural input companies (such as fertilizers, seeds, etc.) and network organizations (such as cooperatives) can scale up innovations to thousands of rural farmers across Sub-Saharan Africa
- Marketing agencies can help the social entrepreneurs to market their products and services, expand their businesses, and impact new countries, consumers, and beneficiaries
- Research centers can offer support in documenting and consolidating data for advocacy purposes

The majority of social entrepreneurs are working on scaling up their models and taking products to new markets and countries or are planning to so. Around 90% of the social entrepreneurs selected during the study are already familiar with collaborating with research centers and 30% have experience in partnering with companies.

Conversely, social entrepreneurs also bring certain assets to bear (non-exhaustive):

- Social entrepreneurs working on climate change have developed market-based models adapted to rural areas that can help the private sector to distribute products and expand markets – corporate actors
- Many social entrepreneurs have an impact measurement system in place to collect data related to both economic and social impact (production, sales, revenue, employment, households' quality of life, etc.) – corporate actors (CSR), civil society organizations and research centers.
- Many social entrepreneurs have developed climate smart products, techniques, technologies and trainings through a R&D process ready for scale-up – corporate actors (Research &Development Dept.).
- Most of the social entrepreneurs provide vocational training and started to generate a critical mass of consumers, employees and distributors for climate smart products and technology to reach rural communities markets – corporate actors (Business Development & Human Resources Depts.).
- Products and services offered by the social entrepreneurs that did not succeed in developing a financially sustainable model yet may have great potential to evolve in hybrid business models with the right support – corporate actors and financial institutions.

b. Main perceived opportunities by Flemish actors

Corporate actors

Climate change as business opportunity and innovation accelerator

The business opportunity related to climate change is clearly felt among corporate actors. Some actors focus on risk mitigation because of the negative impact climate change may have on their business, for example, crop loss due to climate change in the agriculture and food sector is a pressing issue. Other actors see opportunities in developing new products and services that serve climate change needs. Interestingly, some of the Flemish actors recognized the innovation potential of the social entrepreneurs often adopting a new, open and creative approach. The possibility to co-create a new and commercially viable product or service, from which the social entrepreneur can benefit from, was also considered. As one actor puts it: "A commercially viable spin-off would be a game changer."

Africa as a new market, new business opportunity

The participating actors acknowledge Africa as a potential market. While some actors are seeking a low-threshold way to access new markets, other actors, already present in the region, are looking to consolidate or expand that position.

A specific opportunity that was highlighted during the co-creation workshop centered on knowledge of local markets - *"Flemish actors lack knowledge on where to act in terms of intervention (…), having the right contact on the ground is really what can make things happen."*

Employee engagement

There is a significant segment of the corporate actors that sees great value in future partnerships with social entrepreneurs for employee engagement and to increase intrinsic motivation within the company - "If we can help social entrepreneurs in developing an impactful solution while at the same time sufficiently involving our own employees in the process, that would be a successful project. Of course, it would be great if the solution would have commercial value too, but that is not our main driver."

NGO's, NPO's and Research centers

Positive impact in Africa

Civil society organizations and research centers are eager to contribute to the achievement of positive impact in the South. They consider collaboration with social entrepreneurs as an opportunity to further enhance their social or research missions.

Finance

The prospect of the Flemish Government supporting potential partnerships financially is seen as a key opportunity by research centers and Flemish NPO's and NGO's.

Network and collaboration

NGO's, NPO's and research centers express interest in climate change co-creation in order to establish and strengthen relationships with governmental, corporate and other actors. They look to such partnerships to develop more effective solutions and increase impact and might serve to roll-out programs and technology at a scale that these actors cannot reach acting alone.

Selected quotes from participants of the co-creation workshop in Brussels:

- *"I am convinced that social enterprises are very innovative in Africa with a very entrepreneurial mindset to create impact, especially given the lack of access to funding they have (frugal innovation). (..). I would like to open the eyes of Belgian companies on the business potential in Africa engaging social enterprises."*
- *"Another added value to partner with local social enterprises in Africa that I see relates to our CSR initiatives. Social enterprises are able to explore the market before starting business operations."*
- *"The Flemish actors have a large amount of possibilities in terms of engagement with social entrepreneurs, but we don't have the knowledge on where to act in terms of intervention. Having that knowledge and having the right contact on the ground is really what can make things happen."*
- *"Local presence and local credibility is important to access and understand the local market. The local distribution network is also really important. Whatever you do you will need someone on the ground to distribute or buy the product and tapping into existing networks is more efficient."*

2. Challenges related to multi-actor collaboration

Despite strong interest expressed in multi-actor partnerships in Africa, a range of challenges was identified. Combining the insights from our mapping exercise and the workshop, we list below the overall (non-target sector specific) barriers emerging.

a. Main perceived barriers by the social entrepreneurs to effectively engage corporate actors

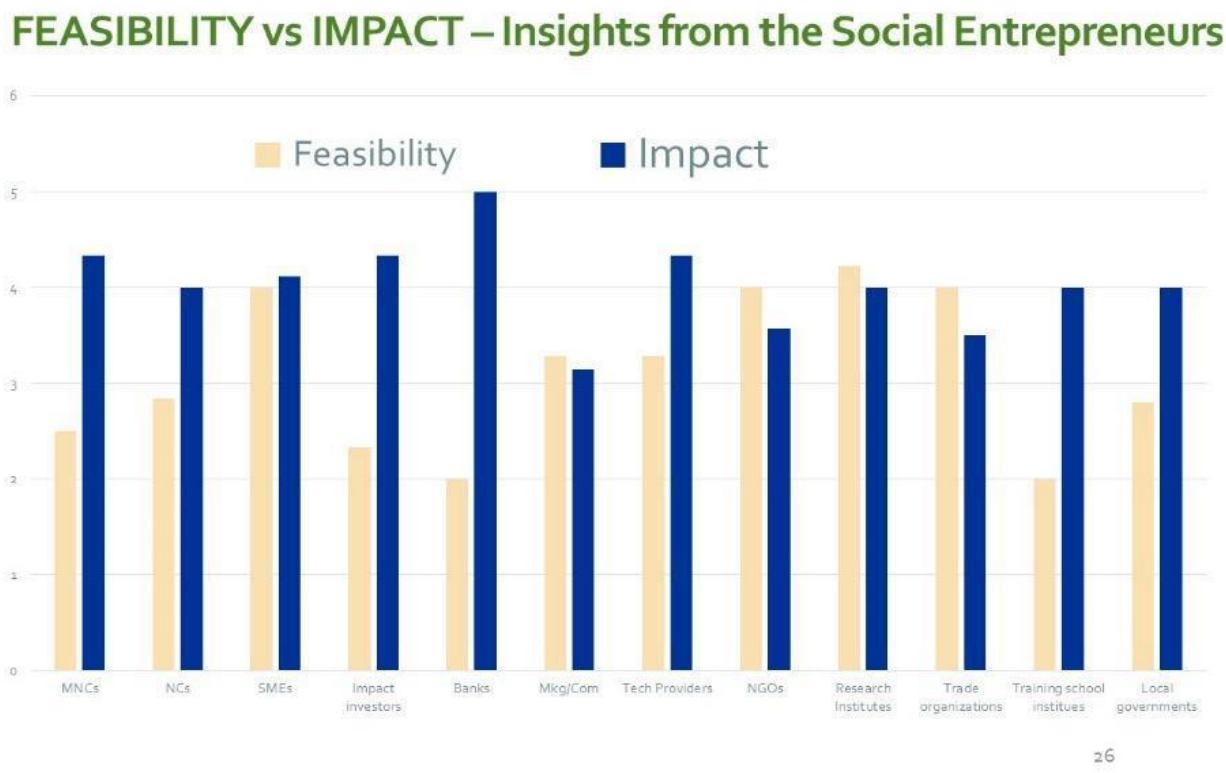
- Making contact with corporate actors is seen as challenging by most social entrepreneurs. Corporate executives and social entrepreneurs tend to have separate networks, contacts and few instances to meet. A social entrepreneur may be dismissed by corporate actors for multiple reasons, for example the social entrepreneur may be perceived as a risky start-up with low credibility in comparison with larger NGO's and NPO's that companies often work with.
- Finding the right person to engage within the company is difficult. There is typically no standard path to involve a company in this type of co-creation. Developing an impactful climate change project requires considerable interest in societal challenges, out-of-the-box thinking and strong commitment. Social

innovation requires courage, especially from the side of the corporate actor, and such human resources are a project's true capital.

- Matching social entrepreneurs to corporate sectors that are comparable in size can be challenging. For example, size differences between the corporate actor and the social entrepreneur could prevent the full leverage of each other's strengths ('David and Goliath'), e.g., flexibility and agility.
- Differences in organization, mission, culture and 'language' could hinder trust and collaboration.
- Differences in visions of the social entrepreneurs and corporate sectors may adversely impact project deliverables. Social and environmental projects are often not the highest priority for corporate actors, affecting the pace of engagement. This is challenging for a social enterprise working with short timelines.

During the co-creation workshop, social entrepreneurs ranked different types of organizations based on the feasibility of concluding a partnership and the potential impact generated by such collaboration.

Social entrepreneurs have relatively good connections with research centers* and NGO's or NPO's.



However, it seems to be more challenging to connect with (multi)national companies. This is rather unfortunate as the potential impact is considered relatively high, especially with reference to technology providers and financial institutions.

For technology providers, social entrepreneurs mentioned that the interesting ones are often not based in Africa which makes contact more difficult.

For financial Institutions, Social entrepreneurs also flag that they struggle to reach impact investors[34]. Since the objectives of social entrepreneurs and impact investors align so neatly, it stands to reason that the engagement

[34] Impact investments are investments designed to produce social outcomes while also generating financial returns. Foundations, funds, individuals and companies can all be impact investors. The impact inventors offer capital to address challenges in sectors, such as sustainable agriculture, renewable energy

between the two should be easy. However, the level of impact measurement & financial return requested by most impact investors can be prohibitive.

***Research centers and social entrepreneurs:** Although it seems that social entrepreneurs find their way to the research centers rather easily and potential impact is high, it has been mentioned on both sides that it is difficult to find appropriate funding for research collaborations. While funding for technology-oriented research is available, it may be more challenging to find support for research on the potential of topics related to social innovation and social/inclusive business. The actors deciding on this type of support tend to be more conservative. One of the criteria used for such funding is also the direct benefit for the particular sector, which tends to be difficult to prove in unexplored topics.

b. Main perceived barriers by the Flemish actors to establish partnerships with social entrepreneurs in Africa

Corporate actors:

Business risk

The majority of corporate actors interviewed are willing to invest time and resources in a potential partnership. However, to commit themselves, they look for a partner that strategically fits their business model. This does not mean that Flemish corporate actors are not willing to innovate within the company's existing business model but that they believe that it is essential to have an initial strategic fit. On that precondition, the actors view partnering with a social entrepreneur as an opportunity to develop new business model to target new markets.

Risk sharing

A majority of corporate actors express concerns about being the sole partner of an African social entrepreneur. Entering into such partnerships together with other actors would allow the corporate actor to share risks. The corporate actors acknowledge that concluding partnerships with very different types of actors plays to their different strengths and allows the partnership to tap into additional contacts and resources.

The corporate actors consider the government as a key player to bring partners together, take on part of the financial risk and support partnerships, thus inspiring the confidence among all other actors.

Political instability and prevalence of corruption

Political instability and the perceived prevalence of corruption has been cited as a real barrier when it comes to doing business in the African region[35]. - "*It is not the technology or the knowledge or financing that is the problem, the challenge is to work in a professional, proper, legal manner in the African region.*"[36]

Legislative context

A few actors highlighted legislation as possible impediment to operating in Africa. They believe policy and legislative frameworks vary among different regions in Africa (as well as between Flanders and Africa[37]), and believe that lack of legislative frameworks or their lack of established contact with African policy makers could hinder them doing business[38]. The social entrepreneurs also expressed this concern. This is evidenced by this statement: "*there is a need to be close to the decision-makers in order to understand the environment and create solutions"*[39]

Professionalism and reliability

All corporate actors find it crucial to have local partners that are trustworthy and professional. The importance of strong relationships and solid communication was also raised during the workshop. Intermediaries can be considered

[35] Please refer to annexes for in-depth interview with AGT, University of Gent, Vyncke
[36] Please refer to annexes for in-depth interview with AGT.
[37] Please refer to annexes for in-depth interview with Green Crossroads, AGT
[38] Please refer to annexes for interviews with Green Crossroads, Van Heede, Smappee, 3E
[39] Please refer to annexes for minutes co-creation workshop (Vanheede).

important matchmakers and potential facilitators in future partnerships and can vet partners to reduce partnership risks.

Big vs. Small

Some corporate actors with large scale operations expressed concerns about the size of the social enterprises not being comparable to theirs. This was raised both by the energy related businesses (e.g., big biomass boiler installations or electricity grids) as well as by the agricultural sector (e.g., commercial farmers being the target stakeholder). With regard to the present barrier, it has been suggested by some of the actors to work together with either a consortium of social enterprises or with a (larger-size) intermediary in order to bridge the gap between players operating on a different scale.

NGO's, NPO's and Research centers

Same aim, different model

The civil society organizations and research centers interviewed flagged that co-creation and multi-actor partnerships with corporates or social entrepreneurs were not well known to their peers. Some NGO's and NPO's, for reasons of principle, are reluctant to work together with the private sector and to pursue impact in market-oriented manner as well.[40]

Some of these actors expressed that there was insufficient collaboration between civil society organizations themselves, even if they would have similar missions, possibly wasting time and opportunities to learn from each other[41].

Towards opportunities

In summary, the following insights are prevalent:

- Flemish corporate actors acknowledge that there are various business opportunities related to climate change and express interest to further explore such opportunities in Sub-Saharan Africa together with other partners.
- Corporate actors see climate change co-creation as an opportunity for employee engagement.
- Flemish corporate actors are convinced that sustainable partnerships can be concluded with social entrepreneurs that have a strategic fit with their existing business model.
- The value of trustworthy and professional partners on-site in Sub-Saharan Africa for Flemish corporate actors is not to be underestimated.
- All Flemish actors all believe that a multi-actor partnership creates most value as it allows the partners to divide potential risks among those involved and play to each actor's strengths
- All Flemish actors highlight the importance of a reliable policy and legislative framework and political stability in terms of hindering or stimulating innovation and co-creation partnerships.
- Civil society organizations and research centers are eager to address societal challenges through multi-actor partnerships to increase impact, scale technology and knowhow, secure funding and broaden their network.
- Civil society organizations and research centers are concerned about the existing gap with the private sector and invite the government to help with bringing both worlds closer.

[40] Please refer to comments from co-creation workshop by Trias and VITO
[41] Please refer to Annex for in-depth interview of Rikolto

Focus on local governments:

Both the social entrepreneurs and the Flemish actors mentioned that while collaborating and partnering with local African governments is challenging, the potential of impact with such collaboration is very high.
The main barriers that actors are confronted with include: conservative approach or lack of openness towards innovation; lack of policy or legislative framework that can unlock market potential; and low capacity to consider or lead multi-actor collaboration.

INTERMEDIATE CONCLUSIONS:

1- There is acknowledgement from both social entrepreneurs and Flemish actors that multi-actor collaboration is required to tackle complex societal problems like climate change.

2- Actors see a 'natural fit' between social entrepreneurs and corporations as the former tend to develop and extend business-friendly and/or market-based business models.

3- Awareness and understanding of 'the why' and 'the how' of multi-actor partnership varies across actors. Actors point to investment of time and resources being needed to find the right partnership model and to onboard actors unfamiliar with the concept of co-creation and its potential.

4- Flemish actors see an important role for the Department of Foreign Affairs (as well as other public authorities in Flanders or intermediaries) in (1) furthering collaboration between Flemish actors and social entrepreneurs in Africa on the topic of climate change in the wider African region, (2) financially supporting partnerships and (3) de-risking the policy and legislative context of collaboration.

3. Recommendations for the Department of Foreign Affairs

As part of the January 25-26 co-creation workshop in Brussels, we invited participants to enrich and validate draft findings and recommendations for the Flemish Government & its Department of Foreign Affairs[42].

Participants to the workshop felt that it is essential to enable the launch of **concrete pilot projects**. These pilot projects should allow for experimentation and trial-testing among various partners. In addition, they should also work towards relevant outcomes, i.e. demonstrate success. Indeed, it is the catalytic effect of success stories that will likely convince other organizations to embark upon their own partnership trajectories.

Taking a step back, participants identified **three levers** through which the Flemish government can support partnerships between Flemish actors and social entrepreneurs in Africa:

- **Raising awareness** on the opportunities that inclusive business, social innovation and multi-actor partnerships represent to address climate change challenges and advance towards the SDGs (in terms of social, environmental and economic value creation).
- Creating the right **framework, conditions** and **incentive structures** so that more Flemish actors are in a position to take action. This includes smart financial or strategic incentives and mapping of policies that may hinder organizations to enter new countries, test new models, innovate and help scale innovations with a strong societal component.
- Supporting the further development of social entrepreneurs with effective solutions addressing climate change with a focus on **readiness and capacity** to co-create with other actors. This includes creating the conditions for co-creation both towards social entrepreneurs and Flemish actors; providing the support, tools and awareness needed for these actors to work together effectively.

The below table presents a number of action opportunities for the Flemish government, which were articulated by participants at the co-creation workshop:

[42] While the workshop focused on recommendations for the Department of Foreign Affairs, some recommendations suggested by participants concern the Flemish Government more broadly.

Incentives and financial support	Readiness and capacity	Framework conditions	Awareness & understanding
Provide funding incentives for investors (co-financing, etc.) and corporate actors in general	Open call for proposal – selection procedure launched to choose candidates on a competitive basis	Invite social entrepreneurs and other relevant stakeholders to learn on the policy framework currently in place and have actors involved in policy drafting (join advocacy)	Organize workshops to strengthen relationships among different sectors and familiarize actors with social and inclusive business
Organize pilot funding programs to strategically seed feasibility and proof of concept studies	Facilitate the process of matching and concluding partnerships between different types of actors	Provide technical and financial support to raise policy awareness locally	Organize country specific relation events to work to raise awareness on the potential of multi-actor partnerships between social entrepreneurs and other relevant stakeholders
Provide funding to research centers and R&D departments interested in working on social entrepreneurship and innovation	Develop programs to connect social entrepreneurs with research centers specifically		Connect with other institutional actors and with Federal, European, … level to broaden reach
Offer tax reliefs when working on societal challenges through multi-actor partnerships	Facilitate the process of materializing the multi-actor partnership and developing the pilot project, e.g. co-creation labs		Document and publicly share learnings and best practices in order to inspire – mindset change
Offering subsidies to cover costs related to production, personal development, etc.	Provide equipment, materials and infrastructure (warehouses, land, etc.) while focusing on clustering production social entrepreneurs working on smaller scale separately		Involve FIT as interesting intermediary, e.g. trade missions engaging different types of actors
	Connect local social entrepreneurs with Belgian embassy offering local support and credibility		Provide database of Belgian actors (companies, NGO's & NPO's, social entrepreneurs, etc.) active in Africa

	Partner with other interesting actors with experience and expertise, e.g. suggestion for Ashoka to share database of entrepreneurs with NGO platforms		

After analyzing the main findings of the feasibility study and, more generally, the experience of i-propeller and Ashoka – taking into account the desired/possible scope of intervention of the Department of Foreign Affairs – a 3-year roadmap has been produced with a range of concrete activities and a timeline to implement in order to advance multi-actor collaborations for climate change in Sub-Saharan Africa.

VI. ANNEXES

a. Annex 1: Situation, challenges and key players and policies for climate change in Sub-Saharan Africa (full report)
b. Annex 2: Methodology of the feasibility study, step by step
c. Annex 3: Summary from co-creation workshop
d. Annex 4: In-depth interviews i-propeller
e. Annex 5: Glossary
f. Annex 6: Presentation of i-propeller and Ashoka