

# Assessing the structural capacity requirements that would allow developing countries to participate in evolving carbon markets

## CASE STUDY: UGANDA



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## CASE STUDIES: EXECUTIVE SUMMARY

In most cases, **low income developing countries are still developing the capacity to participate in the existing CDM at even a minimal level.** This is particularly true in Africa where the uptake of CDM projects has been very low (only 2.5% of total CDM projects are coming from Africa) and extremely fragmented.

The report has selected two low income countries in Sub Saharan Africa (SSA), **Ghana and Uganda**, for the in-depth capacity analysis explored in the case studies. The analysis recognises that **even countries at similar levels of development may have different obstacles and capacity needs.**

These case studies address the current capacity and capacity needed for carbon market participation within each country and recommendations for how these gaps can be filled by looking at the following four areas:

- 1) **Institutional capacity:** Are the right entities in place and empowered to act? Are the appropriate institutional frameworks in place?
- 2) **Policy level capacity:** How can cross-governmental policy measures be utilised to support carbon market participation?
- 3) **Capacity for data management (MRV and technical):** How will the country accumulate and manage the data necessary for greater carbon market participation?
- 4) **Financial Capacity:** Is there adequate opportunity and capacity in the market to attract public/private sector capital to support the development of the carbon market?

In many ways the existing capacity and capacity needed in these two countries is similar. Both countries have had low levels of carbon market participation despite having strong representation in international negotiations. **Both countries have had support from development partners who have funded various capacity building efforts.** Both countries have a shortage of the financial and technical resources necessary to fully embrace the carbon market opportunities within the country.

However, **there are also important differences** between these countries with regard to the specific obstacles that they have faced, the nuances of institutional capacity at a national level and the recommendations for actions that can be taken to facilitate greater carbon market participation in the next 3-5 years. These differences, explored in detail in each of the case studies, are **primarily around internal fragmentation on climate change initiatives at a governmental level, the roles of the DNA and private sector engagement.**

Throughout the case studies evidence gained from interviews<sup>1</sup> and the authors' in-country experience is referenced. To ensure that this portrayal is accurate and reflective of the layers of local complexity and

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<sup>1</sup> See Appendix 7 for full list of interviewees

detail, the report has been 'ground tested' with the interviewees and a third party peer review panel. However, **the reader should note that these case studies provide a snapshot that is relevant in early 2010** and as the market evolves and the political arena at both a local and international level shifts, so too will the capacity analysis and the recommendations.

**Additional financial, technical and human capacity is needed at all levels in both countries to ensure that they are well positioned to develop their carbon market potential.** Whilst a unified national vision that systematically addresses all relevant climate issues would be helpful to safeguard sustainable development and to prepare these countries to participate in large scale mechanisms, it is not essential to have this level of cross governmental coordination for them to begin participating in project-based (including Programme of Activities) CDM.

Therefore, **initial capacity building efforts in both countries should focus on actions that can be taken to increase participation in the current CDM, particularly through the Programme of Activities (PoA),** because a high level of government intervention is not necessary for participation in these mechanisms.

A parallel capacity building stream focused on **building the institutional and private sector capacity necessary for the data management requirements of the more advanced mechanisms is also explored in these case studies.**

**Although the specifics of existing capacity and capacity gaps varies between the two countries, both countries need to scale up the involvement of the private sector, increase the technical capacity for project development and data management and increase access to carbon finance if they are to increase their carbon market participation. Recommendations for how this can be done are summarised below:**

- A private sector/civil society engagement strategy that incentivises local project developers and financial institutions to develop the technical/human capacity necessary to implement projects is an important precondition to carbon market participation.
- Development partners and multilateral institutions may choose to support technical skills training programmes that demonstrate how to prepare Project Design Documents (PDDs) and how to conduct the sector or sub-sector baseline studies necessary for standardised approaches.
- NGOs and Civil Society organisations can be trained and funded to act as managing entities for PoAs.
- Community outreach programmes can be formed to educate communities about PoA opportunities.
- Host country governments and development partners may wish to work with local financial institutions to encourage them to take on carbon finance projects. Local financial institutions have expressed an interest in participating in government/development partner backed credit export guarantee programs as a mechanism for mitigating risk and encouraging participation.

- If these countries are to fully participate in an evolving carbon market then they must migrate away from individual knowledge/power bases and move towards the formation of robust systems and systemic processes around national decision making, data aggregation/MRV and private sector/civil society engagement strategies. Host country governments can assist this process by committing to transparency and coordination of efforts whenever possible.

## 5.2 UGANDA

This case study will address the current capacity in Uganda and the capacity necessary to participate in an evolving carbon market by focusing on four fundamental areas:

- 1) **Institutional capacity:** Are the right entities in place and empowered to act? Are the appropriate institutional frameworks in place? Political leadership is included in this section.
- 2) **Policy level capacity:** How can cross governmental policy measures be utilised to support carbon market participation?
- 3) **Capacity for data management (MRV and technical capacity):** How will Uganda accumulate and manage the data necessary for greater carbon market participation? This section contains a subsection dedicated to Programmes of Activities (PoAs) due to the fact that there is interesting and relevant financing and project development capacity emerging in this area
- 4) **Financial capacity:** Is there adequate opportunity and capacity in the market to attract public/private sector capital to support the development of the carbon market?

Uganda, in contrast to Ghana, has been able to successfully register two projects. This is due to two primary factors:

- **Uganda has effectively engaged the private sector** (primarily via the World Bank's early efforts and now with the Uganda Carbon Bureau) **albeit on a very small scale**
- **The government has not acted as a bottleneck in project implementation.**

However, a great deal more capacity will be needed in order for Uganda to maximise its carbon market potential and develop the capacity necessary to participate in the new market mechanisms.

This case study concludes by making recommendations for actions that can be taken to increase Uganda's participation in the current CDM, particularly through the Programme of Activities (PoAs), greater use of standardised approaches in the CDM and, over time, participation in new market mechanisms.

### 5.2.1 General Country Overview

**Economic and political factors supporting carbon market participation:** Uganda is considered to have an open climate for foreign investment, providing attractive incentives for medium and long-term foreign investors. The Heritage Foundation's 2009 Index of Economic Freedom listed Uganda's economy as 75 out of 165 countries, and as the fifth freest economy of the 46 countries in Sub-Saharan Africa (this is based on factors such as the ease of doing business, openness to trade, property rights, and fiscal and monetary policy)<sup>2</sup>. **These factors are important as they represent the enabling environment necessary to attract private capital into the country (i.e. carbon finance).** The country is seen as relatively safe from political risk and corruption. This is relevant from a financial risk perspective and also because the political environment is not likely to be an obstacle to project completion.

Uganda signed the Framework Convention (UNFCCC) in 1992 and ratified it in 1993. It ratified the Kyoto Protocol in 2002, and **established the DNA in 2004**. Uganda submitted its first National Communication in 2002 and in 2004 it submitted its first National Adaptation Plan of Action (NAPA), which set out plans to increase awareness of climate change in local communities and invest in technology to enable better long-term weather forecasting.

Plans for the 2<sup>nd</sup> National Communication are underway but specifics around when this will be submitted are, as yet, unclear. Uganda is likely to sign the Copenhagen Accord but has not yet done so, nor has it submitted a Nationally Appropriate Mitigation Actions (NAMA) in response to the Accord. Uganda has had strong representation in the international carbon arena due to Philip Gwage's role as an active and engaged member of the Executive Board.

### 5.2.2 Roadmap to increased carbon market participation:

In order to move along the pathway towards increased carbon market participation, Uganda's capacity building efforts should focus on registering projects under the CDM, with a particular focus on the development of PoAs, and on the use of standardised approaches. In order to do this, it will be necessary to scale up the involvement of the private sector, increase the technical and human capacity for developing Project Design Documents (PDDs) and data management and increase the amount of carbon finance coming into the country.

This capacity needs to be developed at an emitter level and requires individual project implementation given that CDM credits (CERs) are generated on an individual project basis. With an increase in private sector capacity for PoAs and the sub-sector baselines that they entail, it is possible that the country could quickly develop the capacity for establishing the baselines necessary for participation in a reformed CDM (at least in some key sectors).

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<sup>2</sup> <http://www.heritage.org/index/Country/Uganda>

### 5.2.3 Overview of CDM projects and project pipeline

This section looks at the projects that have been registered with the Executive Board, those in the pipeline and the industries and sectors with the potential to develop carbon projects<sup>3</sup>.

In 2005 the World Bank supported three carbon finance projects, the National Forestry Authority's Nile Basin Reforestation Project, The West Nile Electrification project and the Kakira Co-generation project in an attempt to seed the Ugandan carbon market. **Two of these projects have been registered but the cost and time associated with them have served as disincentives in replicating the experience** (UCB, 2009)<sup>4</sup>.

**The two Ugandan registered projects are:** one in reforestation and one in hydro<sup>5</sup>. However the pipeline of projects at the validation stage is promising with relatively good diversification of methodologies. In the last two years, **eleven projects have reached the validation stage**. Five of these projects are part of the same small-scale forestry programme, three are cogeneration projects in the sugar industry, three are hydro power projects, two are biomass and two are landfill gas. An additional 17 projects are at the earlier Project Idea Note (PIN) stage. Forestry and hydro power investments dominate among these projects<sup>6</sup>, but there are also interesting opportunities emerging for PoAs, including a proposal for a revolving fund to enhance PoA capacity. In addition, there are opportunities that have yet to be fully scoped in the energy, agriculture, transport and industrial sectors<sup>7</sup>.

### 5.2.4 Capacity Analysis

#### i. Institutional Capacity

This section provides a brief overview of the most relevant players affecting the carbon market and how these entities affect current capacity as well as how they could contribute to the institutional capacity needed for Uganda's future carbon market participation<sup>8</sup>.

**Uganda currently has the necessary institutional capacity in place to participate in the CDM and develop PoAs. Efforts to scale up technical and human resources would increase participation but it is important to note that additional governmental capacity is not essential for increased CDM participation.** However, enhanced institutional capacity will be necessary if Uganda is to increase its

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<sup>3</sup> See Appendix 13 for project pipeline

<sup>4</sup> Although the CDM cycle is notoriously long and expensive, these particular projects had the additional issues of limited technical expertise for PDD preparation, difficulty in securing capital and a long lag time for EB approval.

<sup>5</sup> Forestry and hydro power investments dominate among the projects in Uganda.

<sup>6</sup> The Uganda Investment Authority has identified thirty sites suitable for mini-hydro power investment which could generate between 1 -20 MW each. The National Forestry Authority (NFA) has large areas set aside for industrial forest plantation in chunks of 500 to 15000 hectares on 49-99 year leases (ECON PÖYRY, 2009).

<sup>7</sup> Energy demand in Uganda is growing at the rate of over 2MW per month, and for Kenya the unmet demand in the next 5 years is expected to be 1000MW. This indicates a large suppressed demand for renewable energy. To address this demand, Uganda has an abundance of renewable energy resources such as hydropower, biomass, solar, geothermal and possibly wind. The potential of the renewable energy (RE) resources has not been fully assessed or harnessed.

<sup>8</sup> See Appendix 14 for Uganda's institutional map

carbon market participation to benefit from proposed reforms to the CDM (particularly greater use of standardised approaches) and new large-scale market mechanisms.

Uganda has an equally complex institutional framework to that of Ghana but historically appears to have had less cross-governmental competition for control over climate policy and carbon finance than Ghana has faced in the past. Although the private sector involvement in the carbon market is small, the DNA has worked well with these entities. **The absence of institutional bottlenecks at this level has helped facilitate project implementation.**

As in Ghana and many of the other countries in Sub Saharan Africa, roles and responsibilities for climate change action in Uganda are not well coordinated across government. This means that there is no coordinated national vision and approach towards climate change, which in turn means that government wide efforts to participate in carbon markets have been minimal. To date there have been no national efforts to perform the data collection necessary for the establishment of baselines. Nor has there been systemic use of policy tools to catalyse carbon market participation.

Efforts to establish a National Plan that addresses Uganda's low carbon growth path are starting to be discussed at a government level but this is not yet a priority on the national agenda. However, as the country moves towards the greater coordination necessary to participate in the large scale mechanisms, the process of aligning development goals, (both economic and environmental) with international MRV requirements will require a framework for data management. This process will require a shift from an individual knowledge-based approach to a more systematic and strategic process-oriented approach. **This will require a dedicated coordinating body at the institutional level, increased human/technical capacity to gather data, a central database for storing data, and strategies in place for coordinating international opportunities with cross governmental planning and a private sector/civil society strategy.**

***Capacity of the DNA and Supporting Institutions:*** The Econ Pöyry report (2009) states that the DNA seems to be functioning adequately and that it does not provide a barrier to the current CDM project development and approval process. Our research confirms this. However, **it is likely that additional human resource with specific technical skills will be necessary as Uganda develops further projects.** The DNA has not yet facilitated any efforts to move towards establishing sectoral or standardised baselines but there is willingness and experience in the private sector in establishing processes necessary for PoAs that can be drawn upon.

Since its establishment in 2004, the DNA has been organised under a single government department, the Ministry of Water and Environment (MWE), which undertakes all the activities of the DNA. The Honourable Maria Mutagamba is the Minister as well as the official DNA.

In 2009, the emerging realisation that climate change was impacting the economic development of Uganda, led the Government of Uganda (GoU) to request assistance from the international donor community in order to prepare the country for taking on new challenges. In 2009, this resulted in the

establishment of a Climate Change Secretariat (CCS) also referred to as Climate Change Unit (CCU) (Hepworth, 2008, p. 36), financed by the Royal Danish Embassy. Under this new organisation, the Minister of Water and Environment (MWE) still heads the DNA, but the day to day operations are now attended to by the Climate Change Secretariat, which reports directly to the MWE.

The CCS's main responsibilities are to raise awareness on climate change at a policy level. The CCS includes half a dozen staff members and is supervised by a national steering committee headed by the Permanent Secretary of MWE. The new staffing, together with the provision of a \$1.5m budget that will cover operating costs for four years<sup>9</sup>, will increase the operational capacity of the DNA (ECON PÖYRY, 2009). **The CCU represents significant potential institutional capacity, but because it has been established relatively recently, its effectiveness is still unclear.**

Recommendation: **If the CCU were established as the main body responsible for climate change and carbon market coordination (as is likely to be the case), this entity could provide development partners with a platform through which to funnel support for enhanced institutional capacity.** It will be helpful to have a dedicated individual or body within government to safeguard sustainable development and to coordinate the cross-government climate change/carbon market strategies that lay the foundation for future adoption of both national and emitter level large scale mechanisms.

***The role of development partners on capacity building:*** Uganda has benefited from a number of CDM support programmes over the last decade. This has included support to project developers and institutional support to government institutions. There have been several projects supporting the establishment of the DNA, including the most recent one supported by the Royal Danish Embassy.

Currently nine bilateral and multilateral development agencies are funding climate change related support programmes that also include the CDM (ECON PÖYRY, 2009). Unless coordinated, this has the potential to create confusion, duplication and paralysis at an institutional level. At present this isn't a big capacity constraint in Uganda but it is one that will need to be managed as the country moves forward and advances the climate change agenda.

Below is a brief summary of the active development partners in Uganda and the initiatives that they support.

- **The Royal Danish Embassy** is the most active of the development partners in supporting Uganda's climate change initiatives. Their programme includes funding to establish the National Climate Change Secretariat within the Ministry of Water and Environment.
- **The World Bank**, together with **UNDP**, supports a Sustainable Land Management (SLM) project<sup>10</sup> which has strong linkages to climate change and has been supporting activities related to CDM.

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<sup>9</sup> The budget will be taken over by the GoU after four years.

<sup>10</sup> The objective of this project is to improve management of the drylands ecosystems and enhance their integrity through improved policy implementation, mainstreaming of environment into the district development planning processes, strategic capacity building, and



- **GTZ** is focused on promoting projects that are capable of earning carbon credits in order to encourage more project developers to enter the market. To facilitate this in Uganda, GTZ/CIM has funded a CDM energy specialist to sit within the Uganda Carbon Bureau as well as a flexible grant to be used to help facilitate carbon projects.
- **The Royal Belgian Embassy** has in principle agreed to co-finance a project to support CDM initiatives via the climate change secretariat (CCS) in the Ministry of Water and Environment (MWE) for the period 2009-2011. Recently produced terms of reference indicate a €2m budget for a 3 year project with the overall objective of enabling Uganda to benefit from the mechanisms for mitigation of climate change. The specific objective of the project is to strengthen technical capacity on CDM project formulation and create awareness of investment opportunities under the CDM among governmental institutions, project developers, and project financing institutions. The expected outcome of the project is active participation in implementation of CDM in Uganda by both public and private institutions.
- **UNEP and Royal Norwegian Embassy** are providing support to the forestry sector.

***The role of civil society/NGOs:*** Similarly to Ghana, many of the donor organisations operating in Uganda have begun developing climate related strategies and/or programming (climate change, mitigation/adaptation, carbon projects, energy, etc) and are competing for funding and implementation resources. On one hand this is a positive trend that will drive demand and innovation locally. On the other hand, this has the potential to further constrain already limited resources and create an additional level of confusion, unless a system is in place to coordinate and evaluate these efforts.

Below are examples of some of the NGOs that are active in Uganda. Whilst these examples are not directly related to carbon markets, these organisations have an environment and/or community focus that could be used for community outreach and PoA capacity building efforts.

- **Oxfam** have established a leadership role through a piece of research, publication and video ‘Turning Up the Heat: Climate Change and Poverty in Uganda’; a powerful advocacy tool for focusing political attention on climate changes issues.
- Local NGOs: **Environmental Alert, Uganda Coalition for Sustainable Development, UWASANET, Nature Uganda, National Association for Professional Environmentalists (NAPE)** and **Ecotrust** possess an impressive level of technical and political understanding of climate change in Uganda and responses to it.
- **JEEP** (Joint Energy and Environmental projects): JEEP provides trainings on building, installation and maintenance of appropriate renewable technologies to villages (i.e. energy saving stoves).

***Private Sector:*** There are few private sector entities operating in the Ugandan carbon market. **The Uganda Carbon Bureau** features most prominently amongst them because it has worked closely with the DNA and development partners and has provided much of the operational capacity for Uganda’s

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demonstration initiatives for improved land and resource use in the cattle corridor, with a view to improving ecosystem health, and enhancing the sustainable livelihoods of Uganda’s dryland communities (<http://undp.or.ug/projects/22>)

participation in the carbon markets to date. Bill Farmer, the Founder and Director of UCB, attends most major international carbon conferences and meetings, which allows him to transfer a great deal of knowledge from the international community to the Ugandan government and private sector. He has also been effective at raising Uganda's profile amongst development partners and international investors. The UCB describes itself as a 'fair trade' company that plays a bridging role between the public and private sector, able to work across both at a national and international level. The UCB is currently the only full-service carbon finance company in Uganda however, despite its influence, it is still a very small organisation with only a few full time members of staff.

**Concentration Risk:** It should be noted, that there is an inherent concentration risk if all national carbon market participation is going through one very small organisation as is currently the case with the UCB.

Recommendation: In order to diversify and grow the private sector, **it is recommended that private sector capacity is developed via other organisations and that the technical capacity is increased within UCB itself.** There are recommendations for how this can be done throughout the paper.

## ii. Policy/Legal Capacity:

**Research indicates that Uganda has not yet fully explored using policy tools to affect climate change or carbon market participation in a coordinated way.** A national target is in place that pledges to increase the use of modern renewable energy from the current 4% to 61% of total energy consumption by the year 2017. Policy tools could be used to meet this target and/or incentivise other similar mitigation opportunities. Feed-in-tariffs, subsidisation of relevant technologies and/or a tax on fossil fuel consumption to encourage the development of renewable energy and encourage energy efficiency measures would all be appropriate policy tools to consider in Uganda.

Other policy tools include public information and awareness campaigns. These are a common pre-cursor to the use of other types of policy tools. Climate Sense (Box 7) is an interesting example of a combined climate change public awareness campaign and environmental education programme. It is disseminated to all 18,000 schools in Uganda, to all District Government Offices and will be inserted into both national newspapers with a total circulation of 80,000. The effect of such a campaign has the potential to significantly raise awareness about climate change and carbon market mechanisms and change behaviour over time.

### **Box 7 – Capacity in Education sector – *Climate Sense***

*Climate Sense* is a national publication which aims to inform the Ugandan public about the impact of climate change globally and locally. It will provide information on what climate change is and climate change adaptation. *Climate Sense* will also provide readers with an explanation of the carbon markets; showcasing Ugandan projects that are already generating carbon credits and earning income for communities, small manufacturers and businesses.

*Climate Sense* has been developed with the Ugandan Carbon Bureau with JEEP (Joint Energy and Environmental Projects) and Roots and Shoots Uganda (part of the Jane Goodall Institute). It is still sourcing finance to launch this initiative.

### iii. Capacity for data management (MRV and Technical):

**Current Capacity:** Whilst Uganda has pockets of technical and data management capacity across government and in the private sector to date this has been fairly minimal and poorly coordinated. The major constraint in developing projects under the CDM is a general lack or limited number of professionals with technical skills, the knowledge of what technologies/methodologies apply to various projects and the technical knowledge needed to carry projects through the entire CDM project cycle including bundling projects under the PoA.

Developing PDDs is expensive and requires specialist expertise that is not yet readily available. This is similarly true for PoA projects and the data collections systems required to establish sector and sub sector baselines. **As more projects are identified in Uganda, there will be an acute need for more human resource with technical skills at every stage in the process.**

There are government ministries that have experience with climate modelling and data collection and management, specifically the Department of Meteorology and the National Forestry Authority, but as yet there is no centralised institutional body responsible for collecting and housing data and ensuring that it is accurate, verifiable and consistently updated. As Uganda's participation in the carbon market grows and climate change efforts at a national level become more coordinated, it will be necessary to develop a technical capacity framework and technical transfer strategy to ensure that Uganda is able to apply the best skills and most appropriate technology for its adaptation and mitigation opportunities. This strategy could sit within the current CCU and be supported by existing development partners as stated earlier in the paper.

The technical capacity that is present for data collection and management in the private sector is concentrated in the UCB, with other civil society groups slowly beginning to emerge as climate change awareness increases. The UCB also has some technical capacity for PoAs which has already resulted in increased carbon market participation.

**Recommendation: In order to increase the technical and project development capacity across the country, development partners may wish to 1) enlist the UCB's expertise to train other private and civil society entities with the data collection and management skills necessary to develop the PDDs for CDM projects and PoA's and/or 2) to support the UCB in growing its team to include additional technical experts to act fulltime on PoA efforts and activities.**

**Box 8 – An example of technical capacity building programme: Indicative Cooperation Programme**

This programme between the Belgian Technical Cooperation (BCT/CTB) and Uganda is planning to launch a two million Euro technical capacity building programme over three years which aims to:

- Enhance and strengthen technical capacity on CDM project formulation and understanding of CDM rules and procedures, both through classroom and hands-on training
- Develop a portfolio of new CDM projects which should be ready for implementation by the end of the programme
- Enable the development, registration and operationalisation of a number of CDM projects
- Raise awareness of financing entities/investors (public and private) on investment opportunities under the CDM
- Support the establishment of Coordinating Entities (public or private) for programmatic CDM (BTC/CTB, 2010)

A stated criterion of this programme is integration with other already existing capacity building programmes to avoid overlap. **This level of cooperation and flexibility will make a tangible difference in the programme's success as it will avoid duplication of efforts and build on existing capacity.**

**Makerere University** offers a source of significant climate change knowledge and technical capacity that has not yet been fully integrated into either the private sector or government led capacity building efforts. **Makerere** has a dedicated Centre for Renewable Energy & Energy Conservation (CREEC) that has recently won a bid for World Bank support for its Biomass Energy Initiative for Africa (BEIA). CREEC is conducting PoA stove testing work at its GTZ funded laboratory.

**The University could provide a natural feeder to government and private sector organisations looking to hire graduates with climate/environmental science backgrounds.** In addition, the University is attracting development partner support for PoA testing facilities and is using these facilities to educate students on technical methodologies and data gathering.

The African Carbon Asset Development (ACAD) facility, with its goal of catalysing the African carbon market (see Box 9), fills an important gap in the market and based on its early success, efforts to scale it up would be well received. UNEP and other development partners could (potentially) provide the necessary resources to grow the programme which, if linked to academic institutions like Makerere, could have a significant impact on capacity and the ability to act on carbon market opportunities.

Importantly the ACAD program identifies the need for local financial institutions to be trained on how to identify and invest in local carbon projects. To date local institutions have not been participating in carbon finance/project development largely because of a lack of carbon market specific skills within these institutions.

#### iv. Programme of Activities (PoAs):

*High CDM transaction costs, the relatively small scale of many clean technologies and lack of financing are three key reasons why developing countries have failed to fulfill their carbon-saving potential through the CDM to date.<sup>11</sup>*

This case study has a dedicated sub section for capacity related to PoAs because of the relatively high level of interest despite the additional complexity of project documentation compared to other CDM projects and because PoAs offer an opportunity to group many small projects together under on CDM project. This is appropriate for the small community projects that are abundant in Uganda's project pipeline. Whilst there are only 5 PoA projects, they span a number of methodologies and countries and financing is being sought via an innovative revolving fund proposal. However, the limited local capacity to develop PoAs and the lack of access to up-front financing for programme implementation still remains an obstacle for many stakeholders.

#### **Uganda's PoA Project Pipeline:**

Through the Uganda Carbon Bureau and other private sector players and with the potential support of several development partners, there is capacity to undertake PoAs across a number of sectors and methodologies.

There is currently **one programme of activities under review for registration**: the PoA 'Uganda Municipal Waste Compost Programme'<sup>12</sup>, supported by the World Bank. Assuming this programme of activities is successful in gaining registration, it will be implemented in several municipalities across the country. Each municipality will undertake improvements to its waste collection systems within the municipal area.

Other projects in the pipeline include:

- Wood fuel efficiency projects
- Mukwano Project: Establishing wood lots on sunflower farms. (Project Developer: UCB)
- Uganda Timber Growers association: timber production following the standards of the Sawlog Production Grant Scheme (Project Developer: UCB)
- Cook Stoves: There are a number of projects in Uganda that are developing and promoting the use of energy efficient stoves, one of which is:
  - Improved Cooking Stoves for East Africa (ICSEA) (Project Developer: UCB)
    - Abatement Potential: 182,000tCO<sub>2</sub>-equivalent
    - This project includes PoA activities from across five countries (Uganda, Kenya, Tanzania, Burundi and Rwanda)
- Hydro: SPEAR (Small-Hydro Programme for the East Africa Region) (Project Developer: UCB, South Pole Carbon Asset Management)

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<sup>11</sup> The UNEP PoA Support Facility

<sup>12</sup> <http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/HP4RCRTEE2TQTH1BO7QXKW3JB1M9KC/view.html>.

- This project includes PoA activities from across five countries (Uganda, Kenya, Tanzania, Burundi and Rwanda)

Uganda's capacity with regards to PoAs is relevant for increased carbon market participation for the following reasons:

- It demonstrates the ability to scale efforts across large areas (both nationally and across borders into surrounding countries);
- It demonstrates that the technical/human resource capacity necessary to respond to the PoA registration process is in place locally;
- It offers opportunities to work within a 'baseline context' as the PoAs require the establishment of 'sub-sector' baselines;
- It begins the process of creating a 'carbon mindset' within rural and urban communities that will incentivise future mitigation actions.
- The capacity for PoAs sets the groundwork for the enhanced data management requirements necessary for standardised CDM methodologies and large-scale mechanisms.

**Fair Trade PoA Fund:** Although the UCB is responding to PoA opportunities, the Bureau's capacity is constrained due to financial and staffing shortages. Bill Farmer is currently putting together a £500,000 donor funded revolving 'fair trade' fund to encourage the implementation of PoAs across a number of methodologies. Under this facility, the UCB would work with local NGOs, communities, entrepreneurs and DPs to set up a variety of PoAs that act as nurturing umbrellas for sectors where suppressed demand can result in small community based energy supply. The fund would provide up front financing for local project developers who would in return repay this financing, as their portion of revenue from the credits is distributed.

Capital contributions could include grant contributions, soft equity/debt (i.e. long terms) and commercial capital all secured against the forward cash flow of the CERs. **The possibility of using a sovereign entity to provide an export credit guarantee would further reduce risk.** Given the 28 year timescale associated with crediting of PoAs, such a fund would be financially viable provided projects are resourced and bankable from the outset.

The UCB is currently in discussions with a number of banks, development partners, and development finance institutions about possible 1) seed funding and 2) grant financing to expand the team.

**Recommendation: Development partners may wish to commission a feasibility study to explore 1) the structuring of an export credit guarantee programme that support CDM projects/PoA programmes in developing countries and 2) opportunities to partner with micro finance institutions that wish to establish micro carbon vehicles to support community carbon projects (CDM and PoAs).**

Recommendation: **Supporting a revolving PoA facility may be of strategic interest to development partners, particularly as it has the potential to tangibly increase Uganda’s carbon market participation and is aligned with wider development goals such as community interests and the equitable distribution of proceeds. It may also provide an opportunity to pilot a model that, if successful, could be scaled up across Africa (and other developing countries)**<sup>13</sup>.

Recommendation: **There is also an opportunity to fund the establishment of a national baseline for specific methodologies through this facility.** For example, the establishment of a ‘sub sector’ baseline for stoves with a compendium of all the grid emissions factors, non-renewable biomass coefficients and stove usage figures for project developers to use. The data collected could be centrally held within the CCU, the UCB (or both) and built upon over time. This could help develop the capacity needed to move towards new market mechanisms. Such a baseline could also be used for other similar projects in the region (provided the methodology and sector operate in a comparable way). This sharing of data would leverage skills, knowledge and data collection efforts and in doing so reduce the data collection necessary for other projects.

#### **v. Financial Capacity**

A lack of financial resources has been one of Uganda’s primary constraints in responding to carbon market opportunities. Like many low income developing countries, Uganda has struggled to attract carbon finance and has also seen the sources and amount of its development aid affected by the financial crisis.

Financial capacity for carbon market related initiatives in Uganda has tended to come from development partners as grants or concessional finance. Funding is typically small in size, short in duration, uncoordinated and rarely tied to a long term strategy with regular impact assessments.

This creates a significant gap between the financing available versus the funding needed. At present, local financial institutions are not participating in the carbon market and many of the international financial institutions that were active in carbon transactions prior to 2008/09 have had their budgets restricted and/or internal mandates changed due to risk criteria being redefined as a result of market volatility including general market and carbon market uncertainty. Local financial institutions’ involvement will play an important role in the composition of capital needed if the CDM and PoAs are to take off in Uganda.

This financing gap has several effects 1) the amount of total capital entering the market has decreased and 2) the need for concessional finance (for capacity building) and commercial finance (project and carbon finance) has increased but the amount now available has been constrained and is coming more from governments and/or multinational agencies and less from commercial sources.

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<sup>13</sup> This paper seeks to maintain an objective perspective and does not intend to promote the interests of the UCB. However, the UCB is effectively the only private sector entity operating with impact in Uganda. The UCB Pilot PoA facility is a tangible and innovative model that could be replicated and/or scaled up.

Recommendation: **Development partners could potentially increase financial capacity by developing programmes with local financial institutions to train them on how to conduct due diligence for project finance/carbon finance and micro finance programmes that support PoAs.**

**Box 9 - The African Carbon Asset Development (ACAD)**

The ACAD facility, funded by UNEP and Standard Bank, is expanding into Uganda and already works across a number of African countries. This programme has the specific goal of catalysing the African Carbon Market. The ACAD Approach offers three complementary support lines to stimulate the African carbon market:

- 1) Risk and transaction cost sharing
- 2) Technical assistance to project developers
- 3) **Targeted training and outreach for financial institutions.** ACAD is unique in working with local financial institutions to build out the skills necessary to assess and fund carbon projects within these organisations.

The UCB has applied for a \$100,000 grant from the ACAD facility to support the SPEAR programme and \$100,000 to support the Improved Cooking Stoves for East Africa (ICSEA) project. If these submissions are successful the funds will be used to develop the PDD, cover the cost of project validation, GHG auditing fees, methodology, gold standard certificate, the establishment of project coordination unit for CDM PoA and related training and capacity building for PoA roll-out.

**Public/Private Efforts to build private sector capacity:**

AFRICEF<sup>14</sup> (see Box 10) is a good example of a multilateral effort to support regional innovation and opportunities for private sector investment. Although this competition is focused on clean energy projects it is a model that could be used to promote innovation, encourage local project development and bring much needed finance to those projects in need of early stage seed finance. Programmes such as this where many stakeholders fund a pool of “prize,” capital are also effective ways to involve local financial institutions because they 1) mitigate financial risk via the consortium and 2) the deal flow they generate can be used as “learning by doing training” for project identification and due diligence.

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<sup>14</sup> see Appendix 15 for full project description



**Box 10: Africa Forum for Clean Energy Financing (AFRICEF)**

**AFRICEF will provide selected clean energy projects with free support and assistance on the preparation of bankable business plans and professional investor pitches before connecting them with investors and finance at an investors Forum to be held in Johannesburg, South Africa on July 21st 2010.**

AFRICEF is open to projects from any African country, and particularly targets projects from South Africa, Mozambique and Uganda. AFRICEF is being sponsored and co-organised by the CTI, CTI PFAN, USAID, Renewable Energy and Energy Efficiency Partnership (REEEP) and the International Center for Environmental Technology Transfer (ICETT) together with the Rural Electrification Agency (REA) of Uganda, the South African National Energy Research Institute (SANERI), and UCB.

## 5.2.5 Conclusions and recommendations

As stated throughout this paper, Uganda will need to focus capacity building efforts on registering projects under the current CDM, with a particular focus on the development of PoAs, and positioning itself to be able to benefit from proposed CDM reforms (particularly standardised approaches), if it is to substantially increase carbon market participation. In order to do this, it will be necessary to scale up the involvement of the private sector, increase the technical capacity for project development and data management and increase access to carbon finance. The following recommendations provide specific actions that can be taken to address these capacity gaps.

General Recommendation:

**Harmonisation and Alignment of Objectives:** An interlinked government and a commitment to coordination and transparency amongst the development partners operating in Uganda, would minimise the potential of overlapping initiatives to maximise the impact of their collective support.

Specific Recommendations:

- If the CCS is established as the main body responsible for climate change and carbon market coordination (as is likely to be the case), this entity could provide development partners with a platform through which to funnel support for enhanced institutional capacity.
- In order to increase the technical and project development capacity across the country, development partners may wish to 1) enlist the UCB's expertise to train other private and civil society entities with data collection and management skills necessary to develop the PDDs for CDM projects and PoA's and/or 2) support the UCB in growing its team to include additional technical experts to act fulltime on PoA efforts and activities.

- Development partners may wish to commission a feasibility study to explore 1) the structuring of an export credit guarantee programme that support CDM projects/PoA programmes in developing countries and 2) opportunities to partner with micro finance institutions that wish to establish micro carbon vehicles to support community carbon projects (CDM and PoAs).
- Development partners may wish to support UCB's PoA facility particularly as it has the potential to tangibly increase Uganda's carbon market participation and is aligned with wider development goals such as community interests and the equitable distribution of proceeds. It may also provide an opportunity to pilot a model that, if successful, could be scaled up across SSA (and other developing countries).
- Development partners may also wish to fund the establishment of a national baseline for specific methodologies utilised in the PoA facility and relevant to proposed reforms to the CDM, particularly greater use of standardised baselines and additionality testing.