# *Making climate finance work for smallholder farmers in Sub-Saharan Africa*

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# Introduction

Two of the greatest challenges facing humanity at the start of the 21st century are the increasing demands of a growing population and climate change. Agriculture is critical to both, perhaps nowhere more so than in Sub-Saharan Africa.

The population of Sub-Saharan Africa is projected to rise from 770 million in 2005 to 1.5-2 billion by 2050. 30% of this population is currently undernourished. Feeding an expanding population represents a serious challenge and will require significant increases in agriculture yields or expansion of agricultural land, or a combination of the two. Much of these improvements will have to come from productivity increases in smallholder farming systems. There are currently 33 million smallholdings of 2 hectares or less, representing 80% of all farms in the region.

At the same time the impacts of climate change are projected to threaten the resilience and productivity of African farming systems. Smallholder rain-fed systems will be the hardest hit.

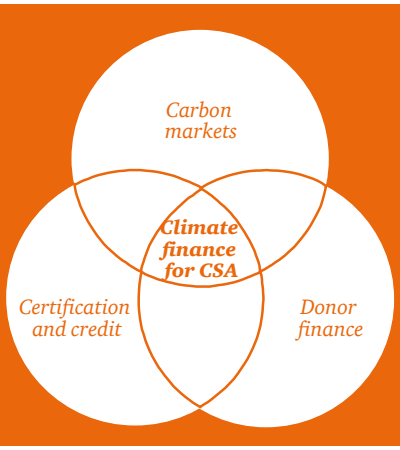
There is an urgent need to transform agricultural systems to improve productivity and reduce variability in crop yields in the face of these two challenges. Such transformations can be supported by the adoption of Climate-Smart Agriculture (CSA) practices, many of which also deliver both mitigation and adaptation benefits – the 'triple win'. However significant finance, both public and private, will be needed if CSA is to be scaled effectively.

What needs to be done to realise the CSA opportunity for smallholder farmers, and how can climate finance support activities on the ground? This brief assesses: the response being taken at international, regional and national levels to support CSA; different categories of climate finance for CSA; key messages from multi-stakeholder workshops held in Kenya and Malawi; and feedback from smallholder farmer consultations in Mchinji District, Malawi.

## Sources of finance for CSA

Climate finance to support the adoption and scaling of CSA can come from different sources including:

1. Carbon markets
2. Donor finance for mitigation and adaptation
3. Private sector finance for agricultural production through:
   - Premiums paid for CSA certified products
   - Credit for farms and smallholders for CSA production




# Key messages

- Despite the potential of 'triple-win' CSA, adoption of practices remains low and inconsistent, held back by a lack of knowledge extension service provision, inputs and institutional support.
- Climate finance presents an opportunity to support scaled up adoption of CSA practices. Sources include: carbon markets; donor finance for mitigation and adaptation; and private sector finance for agricultural production. Carbon market finance depends on robust accounting for agricultural mitigation benefits, eligibility of CSA practices in carbon markets and demand for CSA credits. All of these are currently lacking.
- Donor finance also depends on mitigation,adaptation and development results-based accounting frameworks for performance based support. Some countries are developing 'readiness' frameworks to enhance access to donor climate finance for CSA. These need to support CSA activities at scale.
- Franchise costs for MRV and financing CSA projects are currently high. Aggregation, technology and an innovative accounting framework can bring these costs down.
- Some retailers and manufacturers are supporting CSA by purchasing agricultural produce approved to standards for mitigation and adaptation. Progress depends on an appreciation of the role smallholders can play in greening supply chains and enhancing their resilience to climate change.
- Ultimately climate finance benefits must reach smallholders in cash or in kind (e.g. seeds, tools, training).

## The international response

Agriculture is critical to meeting international goals of adaptation and mitigation:

- Agriculture will be significantly impacted by climate change. Adapting to unavoidable impacts is critical to global food security, rural development and poverty alleviation.
- Agriculture contributes directly to 14% of global GHG emissions. In addition emissions from land use, land use change and forestry, partly driven by agricultural expansion, account for a further 17%. Agriculture is therefore critical to staying within 2 degrees of global warming.

Despite early recognition of agriculture in the UNFCCC process, agriculture has been overshadowed by other issues and negotiating text proposing an agricultural work program has yet to be adopted. Greater co-ordination of policy, institutional and funding arrangements is needed to support the integrated objectives of food security, climate change and poverty alleviation. Incorporating agriculture into a global agreement is a pre-requisite to overcoming these challenges. The international response has also limited the extent to which carbon markets can finance CSA (see below – Carbon markets: opportunities and challenges).

## The regional response

In the absence of a clear international policy framework for agriculture and climate change, some progress has been achieved place through continental policy forums, the strengthening of institutions and project activity including:

- NEPAD's Comprehensive Africa Agriculture Development Program (CAADP), provides a framework for African countries to integrate climate change into agricultural development priorities.
- The African Ministerial Conference on CSA held in September 2011, concluded with the adoption of the Johannesburg Communiqué. This recognised the need for CSA to be put high on the international political agenda, and calls for COP17 to establish an agricultural 'Programme of Work' under the Subsidiary Body for Scientific & Technical Advice (SBSTA) covering adaptation and mitigation. It also promotes an Investment Platform for African CSA, calls for 'scaled-up, new and additional, predictable and adequate financial support' to developing countries, and encourages countries to leverage public-private partnerships.
- The UNEP CASCADe programme is assisting project developers and national climate institutions in making carbon projects from forests and farmlands a reality in rural Africa. CASCADe has provided technical assistance to more than 25 projects, strengthened national CDM regulatory frameworks by addressing the legal, communication and technical needs of Designated National Authorities, and enhanced project developers' capacity in the 7 francophone target countries with regards to forest carbon and bioenergy markets.
- Africa is establishing the infrastructure to respond to carbon market opportunities. In March 2011, the Africa Carbon Exchange opened in Nairobi. The exchange aims to provide holders of carbon credits with information and access to global carbon markets.

## The national response

Countries across Africa are preparing national climate change adaptation and mitigation plans, and incorporating these into their national development plans. For most African countries CSA can play an integral role in both but national action plans to achieve CSA 'readiness' will need to be developed. Core components of these readiness plans include: data collection mechanisms, policy development and identification of 'early actions', institutional frameworks, financial mechanisms and the development of a peformance-based accounting framework. Early actions can generate country specific data, knowledge and experience, which in turn can inform long term national strategies. Funding and resources need to be made available for the development and implementation of these action plans.

At the national level the UN and other development partners are providing training for climate change negotiators as well as support for climate change policy development, including climate-smart agriculture. For example, in Malawi, the UNDP is working with the Ministry of Economic Planning and Development on adaptation and mitigation policy development, and is helping to coordinate across government and with wider stakeholders.

# *Stakeholder workshops: realising CSA opportunities*

Multi-stakeholder workshops were held in Nairobi, Kenya on the 28th October 2011 and in Lilongwe, Malawi on the 2nd November 2011. The workshops brought together over 100 experts and practitioners from the climate, agriculture and development communities and included representatives from: host country governments, donor governments, multilateral institutions, research institutions, NGOs, and the private sector. Each workshop was structured to achieve three aims:

1. Discuss CSA policy, finance and research at country, regional and international levels.
2. Share bottom up learning from CSA project implementers.
3. Identify barriers and opportunities.

## CSA accounting methodologies, MRV and research

- ***Baselines:*** Establishing project specific emissions baseline for CSA carbon projects is technically demanding, costly and resource intensive. This burden could be shifted from the project developer through development of regional benchmark metrics.
- ***Data collection:*** Mobile data technologies combined with user friendly monitoring applications technologies can significantly reduce the time, cost and potential for human error in field data collection.
- Adaptation benefit accounting: In some instances there will be tradeoffs between adaptation and mitigation objectives. Therefore accounting frameworks for adaptation are needed if CSA is to benefit from the broadest scope of climate finance.

## Fund disbursal and benefit sharing mechanisms

- ***Selling point:*** The main focus for CSA should be on immediate monetary and non monetary benefits as opposed to carbon credits. Fund disbursal mechanisms (FDMs) should be structured to encourage productivity benefits for smallholder farmers. The transactional costs should be minimised.
- ***Governance:*** This needs to be considered at the institutional and farmer level. The decision making, targeting and performance criteria for accessing funds should be clear. This needs strong institutional structures at the local level and political will to drive the process.
- ***Build on existing infrastructure:*** FDMs should consider using existing payment/benefit sharing institutions such as farmer organizations and agricultural/rural development interventions.

## Policies and institutions

- ***Clarify the CSA policy and institutional landscape:*** The complex web of policies and institutions relating to CSA needs to be better coordinated and communicated.
- ***Institutions are more than just public bodies:*** Local institutions such as farmer groups and private extension services are critical to CSA, as well as specific institutions for climate science, policy and finance.
- ***Build capacity:*** Skills and knowledge about CSA need to be increased at all institutional levels (central and local government, communities and the private sector).

## *Listening to smallholder needs: experiences from Malawi*

PwC consulted with smallholder farmers participating in the Clinton Foundation's Anchor Farm Project in Mchinji district, Malawi. The consultation highlighted the climate change impacts that smallholders are facing but also showed how they have benefited from CSA practices.

"Reducing the level of tillage has saved me time and back ache."

"We are willing and ready to adopt new practices. But we need training and access to inputs."

"I can now produce a surplus crop to what my family need. We have food throughout the hunger months plus an additional source of income to what we had"

"Planting trees on the perimeter of my field shields my soils from strong winds in the dry months, and reduces surface run off and soil loss during heavy rains. Plus it gives me a source of firewood"

"Through study visits of smallholder farms that have already adopted CSA we can find local solutions for many of the problems linked to adoption of new farming practices."

"We want to know what practices we should adopt in this changing climate."

"Applying crop residues to my field have increased the moisture content of soils and improved crop germination. My yields have doubled."

"Rain-patterns are becoming increasingly unreliable. It used to be that we would hold off planting until the second rain cloud of the season, but now we are not so sure."

"The streams in the area no longer hold water all of the year."

Smallholder CSA consultation, Clinton Foundation Anchor Farm Project, Mchinji District, Malawi, October 2011

## *Financing CSA: lessons from Kenya*

Experiences from Kenya demonstrate how different sources of climate finance for CSA can be targeted:

1. ***Carbon markets:*** The Kenya Agricultural Carbon Project in Western Kenya has explored the potential for carbon credit generation from sustainable land management projects, and in particular, for carbon sequestration in soil. The project implemented by SCC Vi-Agroforestry aims to support 60,000 smallholder farmers in adoption of CSA practices to improve yields and increase resilience to climate change. The project has been supported by the World Bank BioCarbon Fund which has agreed to purchase 150,000 tCO2eq of emission reductions at a price of USD 4/tCO2eq up until 2016.
2. ***Donor finance:*** The Kenyan Ministry of Agriculture established a Climate Change Unit to mainstream adaptation and mitigation priorities into existing agricultural programs, projects and activities. The Ministry is exploring potential CSA NAMA activities including promotion of conservation agriculture, agroforestry and soil and water conservation practices.
3. ***Private sector finance:*** Sangana Commodities Ltd, working in partnership with the Baragwi Farmers Cooperative (BFC) and with support from GIZ, has developed a verifiable climate module under the 4C coffee association standard. BFC members have significantly improved their livelihoods through adoption of CSA practices under the project as a result of: increased yields, and improved crop quality. Premiums are earned through certification.

## *Carbon markets: opportunities and challenges*

Carbon markets have the potential to inject much needed financial capital in to CSA, as well as new routes to market, skills and innovation. But the opportunity for CSA in the carbon market is only nascent, held back by a number of barriers including the ineligibility and unattractiveness of CSA credits, the technical complexity and lack of availability of carbon methodologies, and high transaction costs relating to monitoring, reporting and verification (MRV) of agricultural carbon when compared to current market prices. If carbon markets are to fulfil their potential for supporting the scaling up of CSA activities then three changes are needed.

- First a wider range of CSA activities need to become eligible in both compliance and voluntary carbon markets.
- Second, more methodologies are needed that support 'triple-win' CSA practices.
- And third, the technical burden of carbon project development needs to be reduced. In the absence of strong demand for carbon credits underpinned by legally binding government commitments to reduce emissions, the potential carbon market opportunity for CSA will continue to be held back.

This briefing note has been produced as part of the Climate-Smart Agriculture in Sub-Saharan Africa Project, being led by PwC with support from the Rockefeller Foundation. The project aims to support smallholder farmers in accessing climate finance through development of: CSA accounting frameworks for mitigation and adaptation benefits; MRV and data management solutions; and fund disbursal mechanisms for CSA.

For further information please contact:
Celine Herweijer, PwC: +44 (0)20 7213 5703, celine.herweijer@uk.pwc.com
Dan Hamza-Goodacre, PwC: +44 (0) 78505 16271, dan.hamza-goodacre@uk.pwc.com
Simon Mutinda, PwC +254 (0) 722 865 995, simon.mutinda@ke.pwc.com
Cristina Rumbaitis Del Rio, Rockefeller Foundation
Massimiliano Zandomeneghi, +254 (0) 20 762 5724, zandomeneghi.massimiliano@unep.org

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