

# *Challenges and opportunities for scaling-up investment in CSA*

Report 10: Climate-Smart Agriculture in Sub-Saharan Africa Project

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# Executive summary

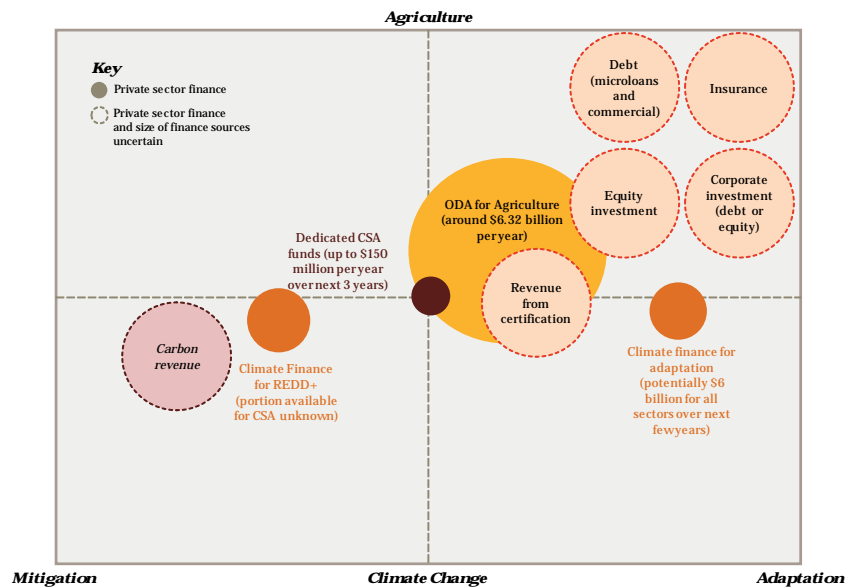
Within the space of 50 years, the population of Sub-Saharan Africa is expected to more than double from 770m in 2005 to 1.5–2bn by 2050.<sup>1</sup>

Such growth makes increasing agricultural productivity an imperative for long-term food security and requires significant investment in agriculture. The scale of investment needed in Sub-Saharan Africa has been estimated at \$<sup>2</sup> 21bn per annum to 2050;<sup>3</sup> however current levels of investment fall far short of this target. Meanwhile, within a similar timeframe, climate change is expected to have a significant adverse impact on agricultural productivity in Sub-Saharan Africa. Investment will therefore need to be in ‘climate-smart agriculture’ (CSA)<sup>4</sup> – practices that increase productivity (and food security) while helping farmers adapt to the impacts of climate change as well as contributing to the global effort to mitigate climate change by reducing emissions from land use.

This paper explores the opportunities and challenges of scaling up investment in CSA with specific reference to Sub-Saharan Africa. It takes into account the barriers to scaling up climate finance for CSA, the sources and availability of finance across public and private sectors, and relevant case studies that demonstrate how public and private finance can be used effectively to overcome these barriers and deliver finance to CSA at scale. The different sources of public and private finance considered in this report include:

- bilateral and multilateral official development assistance (ODA) for agriculture and wider donor ‘climate finance’ for climate change and agriculture (public sector)
- debt and equity instruments, insurance and certification in the private sector
- compliance and voluntary carbon markets.

Figure 1: Sources of finance for CSA



Potential sources of finance for CSA and their focus areas are shown in Figure 1 below. The position on the axes reflects the principal focus of current funding (i.e. agriculture - above the x axis; or climate change - below the x axis; or a combination - overlapping across the axis). Within climate change funding, the bottom right quadrant is adaptation focused finance and the bottom left quadrant is mitigation focused finance. The relative size of the circles seeks to give an indication of the quantum of funding available from each source, although this is difficult to estimate with precision. Private finance is primarily available for agriculture and the size of various sources of funding is highly uncertain (represented by dashed lines).

## Key messages

- The **finance gap** between what is needed for food security in Sub-Saharan Africa and what is available is already significant. If climate change is also factored in, the gap is even larger.

- The **amount of finance currently channelled to CSA is highly uncertain**. There is limited data on the amount of funding available and disbursed or invested in climate change projects in agriculture globally and in Sub-Saharan Africa, in both the public and private sectors.
- **Dedicated CSA funds are a fraction of overall funding** for climate action and agriculture. The majority of specific CSA funding is designated as climate finance, but these funds are relatively small compared with total climate finance and very small compared with total ODA for agriculture and rural development.
- **Private finance for agriculture generally does not consider climate change**. Large amounts of capital for agriculture can be generated in domestic and international markets. This finance is not typically ‘climate-smart’; however some is focused on adaptation as this can be critical to productivity.

<sup>1</sup> FAO 2009. *The special challenge for Sub-Saharan Africa*. [http://www.fao.org/fileadmin/templates/wsfs/docs/Issues\\_papers/HLEF2050\\_Africa.pdf](http://www.fao.org/fileadmin/templates/wsfs/docs/Issues_papers/HLEF2050_Africa.pdf)

<sup>2</sup> \$ refers to USD throughout the report.

<sup>3</sup> Schmidhuber et al 2009. *Capital requirements for agriculture in developing countries to 2050*. <ftp://ftp.fao.org/docrep/fao/012/ak974e/ak974e00.pdf> This does not take into account the estimated cost of adapting to climate change.

<sup>4</sup> For further detail on Climate Smart Agriculture Practices see PwC 2011. *Climate-smart agricultural practices: Nine factsheets*

- **Private finance** for agriculture in Sub-Saharan Africa, particularly at the smallholder or primary production level, is **constrained by the high risk-return profile** associated with it. Unlocking the scale of finance inherent in the private sector for CSA requires the presence or development of an appropriate investment and business case for financiers and lenders. Often, this may mean collaboration with the public sector players that can absorb or ‘buy out’ some of the risk, to make the risk-return profile more attractive for financiers and investors.
- **Finance for CSA could best be scaled up by:**
  - **Mainstreaming climate change into all public and private finance for agriculture.** The greatest impact from climate finance could be generated by using it to cover the additional cost of ‘climate-smarting’ agricultural activities which are already supported by ODA or private finance (e.g. technical assistance on specific CSA practices for smallholders).
  - **Ensuring that CSA is eligible for climate finance** for mitigation, adaptation and REDD+. Climate finance is a fast growing source of finance that could be used to support CSA. Ensuring that CSA activities are eligible to receive some of this funding will be an important part of scaling up finance in this area.
  - **Considering a specific funding window for CSA under the Green Climate Fund (GCF)** that recognises the cross-cutting benefits of CSA activities. In addition to ensuring that CSA activities are eligible to receive funding under both the adaptation and mitigation (including REDD+) funding

windows of the GCF, there is also scope for the GCF Board to consider the need for additional funding windows. As CSA activities are cross-cutting in their contribution to adaptation and mitigation a specific window for CSA should be considered. It will be important that CSA is also eligible for funding under the GCF private sector facility.

- **Integrating public and private finance** to deliver successful CSA activities and scale up delivery of finance. Integrating public and private finance will be key to delivering and further scaling up the total volume of finance. While the private sector has the ability to generate the scale of finance required for CSA, its risk appetite for investing in agriculture is low. To overcome these constraints and effectively create an environment for the adoption of CSA practices, innovative partnership models that combine public and private sources of finance could be effective in delivering results and scaling up finance for CSA.

## Approach and methodology

As disaggregated data on finance available for climate-smart agriculture is not available for either public or private finance, this report looks at climate finance and agriculture finance separately. It is still very difficult to obtain accurate figures on the portion of each of these sources spent on ‘climate-smart’ agriculture. Given these data limitations, some assumptions have been made in the calculation of the figures found in this report. The sources of data used in graphs and figures is referenced throughout the report and assumptions clearly explained. It is in this context that the figures included in the report should be used and interpreted.

The research and analysis conducted to develop this report were based on:

- **Literature review** of reports and publicly available datasets on climate finance and agriculture finance.
- **Interviews** with donors and private sector financiers and investors.

It should be noted that carbon markets have been treated as a separate section in this report though their intended goal is to direct private sector investment to climate change mitigation. Although carbon markets were initially conceived of as a market-based mechanism to leverage private finance, to date agricultural carbon markets have predominantly been supported by public finance. The reasons for this are outlined in Part 4.

## Report structure

This report, ‘Challenges and opportunities for scaling-up investment in CSA’, contains four parts.

**Part 1** describes the finance gap for CSA and constraints in measuring the amount of finance available across domestic and international public and private sources. Barriers to scaling up public, private, and carbon finance are identified, as well as the policy frameworks in place that influence the finance available for CSA in Sub-Saharan Africa.

**Part 2** describes the current landscape of ODA for agriculture and international climate finance including both multilateral and bilateral donors. We ask: how much finance is there, what is it being used for and how much of it is potentially available for climate-smart agriculture? Finally, this section profiles two specific multi-donor CSA funds.

**Part 3** looks at the quantum of private sector finance available for CSA in Sub-Saharan Africa, the different types of finance and their sources. We outline how debt, equity, risk mitigation instruments, and certification can play a role in scaling up investment in CSA. Finally, we map some key private sector CSA lenders and investors in Sub-Saharan Africa.

## Executive summary

**Part 4** provides information on the carbon markets as a source of finance for CSA and an analysis of Sub-Saharan Africa's agricultural mitigation potential. Further information on the carbon markets is provided in the PwC report: 'Agricultural carbon markets: Opportunities and challenges for Sub-Saharan Africa.'

Based on the mapping and analysis in Parts 2-4, key recommendations as to how finance for CSA can best be scaled up are presented in the **Conclusion**.

The need for CSA finance is clear. However, public and private finance should be combined in order to effectively scale up the level of CSA investment, whilst generating commercial and development returns. A number of models of public private partnerships (PPP) that may be used to do this are explored, including the creation of a specific CSA mechanism.

### Next steps

This report provides useful information on the status and level of coordination of finance for CSA. Further work is needed to gain a better understanding of the most effective models for public private partnerships that can maximise the finance available for CSA.

This could take the form of more detailed project specific case studies and analysis of different public private partnership models used. This would enable stakeholders to gain a better understanding of:

- the quantum of finance used for current projects,
- details of funding structures applied to current projects and roles of public and private sector investment in these,
- best practices within public-private funding models in agriculture,
- projections for increasing the proportion of agriculture lending or investment within banks / investors' portfolios given particular public-private funding models, and
- potential design options to maximise the impact of a specific CSA financing mechanism.

# Part one: The CSA finance gap and barriers to scaling up

## Introduction

Despite the range of potential funding sources that exist for CSA, little work has been done to determine their size, their applicability for various practices or specific constraints for scaling up the level of finance available. CSA practices can be financed through both domestic and international public and private sources and through the carbon markets. There are also opportunities to combine these sources of finance in order to overcome some of the barriers to scaling up finance for CSA<sup>5</sup> in Sub-Saharan Africa. However, a number of barriers as outlined in this section will need to be addressed.

Part 1 provides an overview of the current funding landscape for CSA globally and the need for more funding to meet global needs for increased agricultural production (productivity), ensure that agriculture is resilient to climate change (adaptation) and to enable agriculture to contribute to emissions reductions (mitigation). This section reviews the amount of funding needed for CSA in future, the policy frameworks in place to attract such funding, and the barriers to scaling-up finance for CSA in Sub-Saharan Africa.

## Key messages

- Key barriers for scaling up **public sector** investment include a lack of coordination between climate and agricultural finance and between mitigation and adaptation spending related to agriculture in some agencies. The complexity of CSA, and competition for funding allocation from many other important issues in development and climate change also limits finance available.

- For the **private sector**, key barriers reflect the general investment environment in agriculture in developing countries such as high risk to return ratios and the difficulty of lending to smallholders.
- Barriers to scaling up **carbon market** finance for agriculture are both technical and demand related.

## Finance gap

There are multiple pressures on the agriculture sector to increase productivity to meet the demands of a growing global population, while ensuring that it is done in a manner that makes agriculture resilient to the impacts of climate change. To achieve these goals, significant levels of investment will be required from both the public and private sectors. Estimated figures suggest that \$9.2tn by 2050 will be required;<sup>6</sup> this equates to \$210bn annually from 2005-2050<sup>7</sup>. This figure does not include the estimated costs of adaptation in the agricultural sector in developing countries, which is estimated at between \$2.5bn and \$7bn annually from 2010-2050.<sup>8</sup>

Agriculture in developing countries is financed from a range of public and private sources. It has been estimated by the Food and Agriculture Organization (FAO) that around 30% of future finance needed is likely to come from public sources (both domestic and official development assistance from donors<sup>9</sup>) with 70% coming from private sector investments (both domestic and international private sector).<sup>10</sup>

Within public sector donor finance both agricultural ODA and climate finance are contributing to agriculture. ODA for agriculture and rural development currently contributes around \$5bn annually. Climate finance delivered to

agricultural activities has so far not been measured or reported by bilateral donors, and the amount delivered through multilateral climate funds is very limited (\$156m approved). Although the scale of public finance for CSA is large, it is clear that it still falls far short of the required public sector contribution estimates of which average more than \$60bn per annum through to 2050.

Private sector financial flows into agriculture are also difficult to quantify given the limited and disparate data that exists, however they are thought to be disproportionately low relative to the economic significance of the sector, particularly in developing countries. There are however a range of barriers that limit the extent to which private sector capital is provided to the agriculture sector generally and will need to be overcome to effectively scale up finance for CSA.

## Barriers to scaling-up finance

Sub-Saharan Africa's smallholders face a number of constraints to increasing productivity and adopting CSA practices including lack of access to finance, technology, information, and markets. Scaling-up the level of finance for CSA is urgently needed to meet the scale of the challenge for agriculture in the region.

The limited level of funding available for climate-smart agriculture at the moment is reflective of a number of barriers that exist for public sector donors and private sector financiers to invest in agriculture and specifically climate-smart agriculture in the region.

<sup>5</sup> Ecoagriculture Policy Focus 2011. *Blending Climate and Agriculture finance to create climate-smart landscapes*. [http://www.ecoagriculture.org/documents/files/doc\\_395.pdf](http://www.ecoagriculture.org/documents/files/doc_395.pdf)

<sup>6</sup> Schmidhuber et al 2009. *Capital requirements for agriculture in developing countries to 2050*.

<sup>7</sup> Ibid

<sup>8</sup> FAO 2011. *Climate-Smart Agriculture. Policies, Practices and Financing for Food Security, Adaptation and Mitigation*. [http://www.fao.org/fileadmin/user\\_upload/newsroom/docs/the-hague-conference-fao-paper.pdf](http://www.fao.org/fileadmin/user_upload/newsroom/docs/the-hague-conference-fao-paper.pdf)

<sup>9</sup> Throughout the report the term 'donor' also includes development partners such as MDBs, not only country donors. It is acknowledged that donor funding is generally delivered as part of a development partnership between countries.

<sup>10</sup> Schmidhuber et al 2009. *Capital requirements for agriculture in developing countries to 2050*.



## Part one: The CSA finance gap and barriers to scale

### Barriers to scaling up public (donor) finance

**Lack of integration between climate finance and agriculture finance.** One of the biggest challenges to scaling up finance for CSA is that current funding systems and policies for agriculture development, food security, and climate change mitigation and adaptation are insufficiently integrated.<sup>11</sup> While some donors are improving the coordination between these different areas, many who were interviewed as part of this research saw this as an area for improvement and greater internal capacity building. Developing appropriate frameworks that better combine the two at the appropriate institutional levels (e.g. country level if this is where programming occurs with support from headquarters) can maximise the leverage potential of climate finance by better integrating it with larger agriculture and rural development programmes.

**Separation of adaptation and mitigation funding.** CSA practices can provide both adaptation and mitigation benefits. However, climate finance for adaptation and mitigation has so far been treated separately within the United Nations Framework Convention on Climate Change (UNFCCC) framework. A similar pattern applies at the donor level and multi-lateral climate fund level, where programming efforts for adaptation and mitigation are often separated in organisations and/or specific funds, reducing the ability to maximise co-benefits.<sup>12</sup> This reduces the scope for CSA projects to receive climate finance when their objectives and benefits are holistic and span both adaptation and mitigation.

**Competing budgets and priorities within both climate change and development budgets.** The inclusion of agriculture in international climate change negotiations is a new development<sup>13</sup> and it has received a relatively small amount of climate

finance to date. It competes with a range of other sectors for climate finance and ODA (including in the land-use area, REDD+) and because many of the benefits of CSA are related to adaptation they are inherently difficult to measure. For CSA to increase its access to both these sources of finance, results from CSA activities need to be measured and communicated in a way that demonstrates effectiveness of public finance to achieve a range of objectives. An elevated political profile of CSA at the international level would help to increase the political imperative to fund CSA. Recent steps forward in this direction were the high level 'Climate Smart Agriculture – Africa: A Call to Action' event at COP17 in Durban, and the formation of the CSA Partnership.<sup>14</sup>

**Recent emergence of the issue and a lack of clarity on what it means on the ground.** CSA is a recent term, which seeks to combine agriculture and climate change issues in a variety of ways. The combination of a range of disciplines and the lack of clarity of what 'climate-smart agriculture' means for programming, national policy and multilateral agency portfolios, has meant that generating traction and donor support for this issue has been difficult. In donor agencies where climate change is being mainstreamed there are significant challenges in reconciling the short timeframe of programmes (3-5 years) and the need to demonstrate results within that timeframe, with the longer timescale over which climate change impacts will be felt.

**Lack of 'investment ready' projects that are scalable and can demonstrate results in multiple areas:** Many donors have demonstrated their interest in scaling up funding in this area and are talking about 'climate-smarting' their entire ODA for agriculture, however one issue has been that there are a lack of 'investment-ready' projects that can achieve results against multiple

objectives and at scale. It seems that in the absence of projects that are able to measure and demonstrate results in the areas of development and climate change, donor finance is likely to go to other sectors or projects that are able to do this more easily.

### Barriers to scaling up private finance

#### **Risks associated with agriculture projects in developing countries.**

Whether real or perceived, there are a range of risks that may prevent capital providers, particularly those in the private sector, from investing in CSA in developing countries. These include the risks associated with agriculture, investing in undeveloped rural markets in developing countries, and potential political and regulatory constraints in doing business in these regions, including land tenure issues.

**Agriculture is perceived to be a low-margin business.**<sup>15</sup> Despite growing recognition of the need for land-use methodologies and eligibility under climate finance schemes, CSA practices still have difficulty in attracting private sector funding. A range of issues such as lack of access to technology, inadequate infrastructure, and unstructured markets can have a negative impact on basic productivity at the small-holder level, which can directly affect returns to investors. In addition, CSA practices include transitions to more sustainable land-use, which can delay returns to investors.<sup>16</sup>

**Insufficient aggregation at smallholder level.**<sup>17</sup> Sub-Saharan Africa's 33m smallholder farmers account for 80% of all farming in the region. Financing individual smallholders for any activities (climate change mitigation, adaptation or general agriculture activities) has high transaction costs, and aggregation may be required to create more efficient lending channels (i.e. bank financing of

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> Agriculture was included as an agenda item for SBSTA discussions at COP17 in Durban, 2011.

<sup>14</sup> A partnership between FAO, WB, IFAD, WFP, UNEP, GM, CCAFS. <http://www.climatesmartagriculture.org/en/>

<sup>15</sup> Oxfam Research Report 2009. *The Missing Middle in Agriculture Finance – Relieving the capital constraint on smallholder groups and other agriculture SMEs.* [http://www.ruralfinance.org/fileadmin/templates/rflc/documents/1265970373820\\_research\\_agricultural\\_finance.pdf](http://www.ruralfinance.org/fileadmin/templates/rflc/documents/1265970373820_research_agricultural_finance.pdf)

<sup>16</sup> FAO 2011. *Climate Change Mitigation Finance for Smallholder Agriculture.* <http://www.fao.org/docrep/015/i2485e/i2485e00.pdf>

<sup>17</sup> CGIAR 2011. *Mechanisms for agricultural climate change mitigation incentives for smallholder farmers.*



producer groups instead of individual farmers).

**Pre-requisites for smallholders to attract private funding.** The requirements for smallholder farmers to attract funding from the private sector are greater than those for public funding sources. Lack of land tenure, collateral, financial literacy, track-records, basic financial services, aggregation, infrastructure, and market and product information are barriers for smallholders in obtaining necessary financing to apply CSA practices.<sup>18</sup> These constraints influence the level of funding the private sector is willing to provide.

## Barriers to scaling up carbon market finance<sup>19</sup>

**Weak demand overall in voluntary and compliance carbon markets.** Carbon markets generally have experienced a downturn in demand and cover prices as a result of current economic conditions in many developed countries, and the lack of certainty of the form of a future international agreement on climate change. Weakness and uncertainty in all carbon markets limits the ability to source finance for CSA activities from carbon markets, increasing transaction costs and risks for developers and reducing potential returns from agricultural carbon projects.

**Limited eligibility of CSA activities in compliance and voluntary carbon markets.** There are a limited number of methodologies that can be used to quantify emissions reductions from a CSA practices. Under compliance markets, agricultural soil carbon management in croplands and grassland, avoided deforestation and degradation are ineligible to generate emissions reductions under the Clean Development Mechanism (CDM), and afforestation and reforestation are ineligible under the European Union's Emissions Trading Scheme (EU ETS), which is the largest market for certified

emissions reductions (CER). There are a wider range of methodologies appropriate for CSA in the voluntary carbon markets, but this is very small compared with compliance carbon markets (less than 1% of total global carbon markets) and the volume of emissions reductions generated to date is small.

**Technical burden and high transaction costs are borne by project developers.** Methodologies that do exist to generate emissions reductions from CSA activities are technically demanding, creating a need for project developers to rely on external consultants. This, as well as the high non-permanence risk buffers and the need for aggregation of emissions reductions above the farmer level, means that transaction costs for these types of projects are high. This high cost of developing 'market ready' CSA projects limits the ability to scale up carbon market finance for CSA.

## Policy frameworks influencing climate finance in Sub-Saharan Africa

Given that the UNFCCC negotiations have only recently included agriculture on the Subsidiary Body for Scientific and Technological Advice (SBSTA) work programme, regional policies and frameworks in Africa hold more promise for supporting CSA finance than international ones. Country level strategies and policy frameworks are increasingly being used to direct agriculture and climate change investments in developing countries and therefore play an important role in communicating the need for finance for CSA and identifying key priorities for this finance.

More specifically, the Africa Union Commission (AU) and NEPAD's Comprehensive Africa Agriculture Development Program (CAADP) has developed an Agriculture Climate Change Adaptation-Mitigation

Framework at a regional level to scale-up CSA programs and activities in Africa. As part of this process, the development of a CSA Investment Platform has been recommended to provide technical and financial assistance to Africa's Regional Economic Committees and countries to plan, implement, and monitor CSA activities.<sup>20</sup> To date, of the 42 African countries engaged on the CAADP agenda, 21 have developed National Agricultural Investment Plans.<sup>21</sup>

The joint COMESA-EAC-SADC programme on climate change adaptation and mitigation in the Eastern and Southern Africa Region has been developed to implement these policy frameworks. The objectives of this programme include implementing climate change policies and mainstreaming climate change into national planning, enhancing the adoption of conservation agriculture and supporting member states to access climate finance.<sup>22</sup> A number of donors have committed funds to this program (Norway, EU, DFID) which will target 1.2m farmers in the region to take up CSA practices.

## Conclusion

The need for CSA finance is immediate and far greater than the current levels of finance flowing to both agriculture and climate change. The barriers for scaling up public, private and carbon market finance highlighted in this section underscore the practical reasons for this finance gap. At small scales, donors, governments, private financiers, and NGOs are working to overcome these barriers to implement CSA with some demonstrated results. To date however, this scale of activity has not overcome the finance gap. The rest of this report aims to provide further clarity on the size of different sources of finance for CSA, and suggests a range of public private partnerships that could be used to scale up finance in this area.

<sup>18</sup> Ibid.

<sup>19</sup> For further information see: PwC 2011. *Agricultural carbon markets: Opportunities and challenges for Sub-Saharan Africa*.

<sup>20</sup> PwC 2011. *Review of CSA institutions and policies in Kenya and Malawi: Climate-Smart Agriculture in Sub-Saharan Africa project*.

<sup>21</sup> NEPAD 2012. *Report on the programmatic activities of the Nepad Agency for the period: July to December 2011*. [http://www.nepad.org/system/files/Final%20ACTIVITY%20REPORT%20-%20NEPAD%20Agency%20July%20-%20December%202011%20to%2018th%20AU%20Summit%20processes%20-%202012%20January%202012%20\(2\).pdf](http://www.nepad.org/system/files/Final%20ACTIVITY%20REPORT%20-%20NEPAD%20Agency%20July%20-%20December%202011%20to%2018th%20AU%20Summit%20processes%20-%202012%20January%202012%20(2).pdf)

<sup>22</sup> COMESA, SADC, ESA 2011. *Programme on climate change adaptation and mitigation in the Eastern and Southern Africa (COMESA-EAC-SADC) Region*.

# Part two: Public sector finance

## Introduction

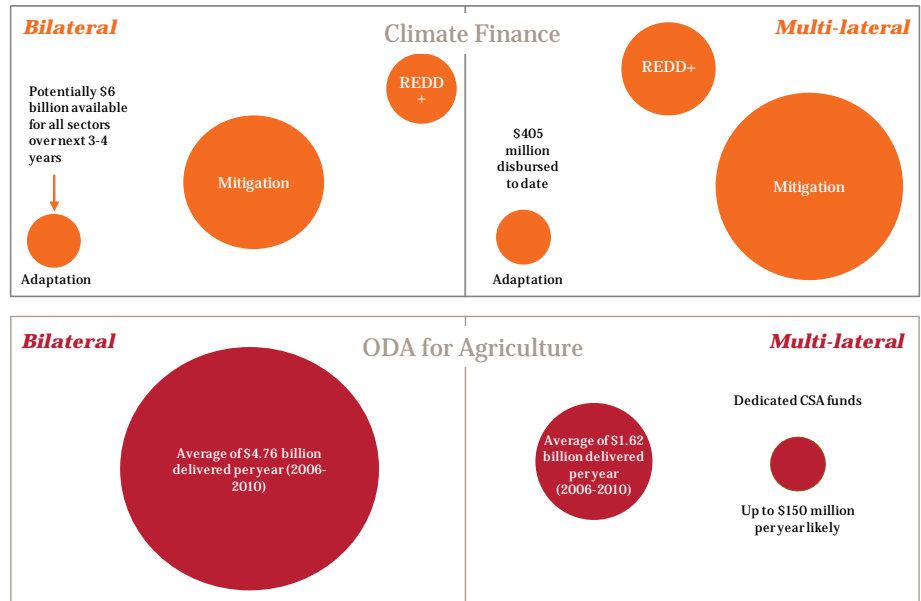
Public sector finance for climate-smart agriculture in developing countries may come from both agriculture and climate change budgets. The source of public sector finance may be domestic government budgets or international donor finance including climate finance and broader ODA contributions. For agriculture spending, domestic government spending is likely to be significantly larger than foreign direct investment and ODA combined, although data on domestic spending is scarce.<sup>23</sup> For climate change spending, data on domestic finance for climate change is extremely limited.<sup>24</sup> For most developing countries international climate finance is likely to provide a significant source of finance for climate related activities.

Part 2 of this report will focus on mapping international donor finance available for CSA. This focus has been chosen for two reasons: Firstly, due to the fact that there is increasing international interest in the inclusion of agriculture in a future climate change regime and in ensuring that international climate finance is available for adaptation and mitigation in the agriculture sector; and secondly, because there is extremely limited data available on domestic public sector spending on climate change and agriculture, making it difficult to undertake high level mapping and analysis for more than one country.

## Key messages

- The majority of **specific CSA funding is designated as climate finance but these funds are relatively small** compared with total climate finance, and very small compared with total ODA for agriculture and rural development. (Dedicated CSA funds ≈ \$150m per year, adaptation finance disbursed to date = \$405m, average annual ODA for agriculture (2006-2010) = \$6.3bn).

Figure 2: Public finance potentially available for CSA (climate finance and agriculture finance)



Source: PwC based on data from OECD Stats CRS, Climate Funds Update, WRI 2011 and interviews<sup>25</sup>

- In **Sub-Saharan Africa average annual ODA for agriculture was \$0.7bn** (2006-2010). A total of **\$379m in climate finance** has been **disbursed in the region** to date, with only **\$132m** of that for **adaptation**.
- **Climate change is being mainstreamed into agricultural ODA by many donors.** How this is occurring and at what level e.g. headquarters or country offices, depends on the institutional structure of the donors and the modality of support used:
  - A number of donors are providing additional grant financing to agriculture projects to cover additional costs of making them ‘climate-smart’ (e.g. USAID, IFAD).
  - Others require consideration of climate change in project and programme design (e.g. USAID, DFID and Norway).
  - Additionally, some donors are making specific efforts to increase support to CSA activities (Norway).
  - Some donors are driven by country priorities and strategies (e.g. WB IDA) and therefore climate change is integrated into programmes they support by recipient countries, reflecting their priorities. However, results against climate change objectives are rarely measured for agriculture funding.
- **Limited number of scalable CSA projects.** There is donor interest in scaling up funding for agriculture projects that are ‘climate-smart’, particularly those that support adaptation goals. However, the availability of ‘investment ready’ projects and programmes that could be implemented successfully at scale is very limited. Communicating results of CSA projects against multiple objectives has also been a challenge for donors.

<sup>23</sup> Lowder and Carisma 2011: Financial resource flows to agriculture: a review of data on government spending, official development assistance and foreign direct investment. ESA Working paper No. 11-19. FAO. <http://www.fao.org/docrep/015/an108e/an108e00.pdf>

<sup>24</sup> Bird et al 2011: Climate public expenditure and institutional review: A methodology to review climate policy, institutions and expenditure. ODI and CDDE Discussion paper. <http://www.odi.org.uk/resources/docs/7523.pdf>

<sup>25</sup> OECD Statistics and Climate Funds Update accessed March 2012 and WRI 2011. Fast Start Finance tracker. [http://pdf.wri.org/climate\\_finance\\_pledges\\_2011-11-18.pdf](http://pdf.wri.org/climate_finance_pledges_2011-11-18.pdf). Note: Agriculture ODA figures includes all multi-laterals included in OECD Stats CRS.

- Opportunity to scale up finance by mainstreaming climate change into agricultural ODA.** Some donors and multilateral programmes are starting to mainstream climate change into agriculture, however this is in its early stages. Given the much larger amount of agriculture finance compared with climate finance, climate finance could be used to cover the additional costs associated with making existing or developing agriculture programmes ‘climate-smart’.

## Agriculture Finance

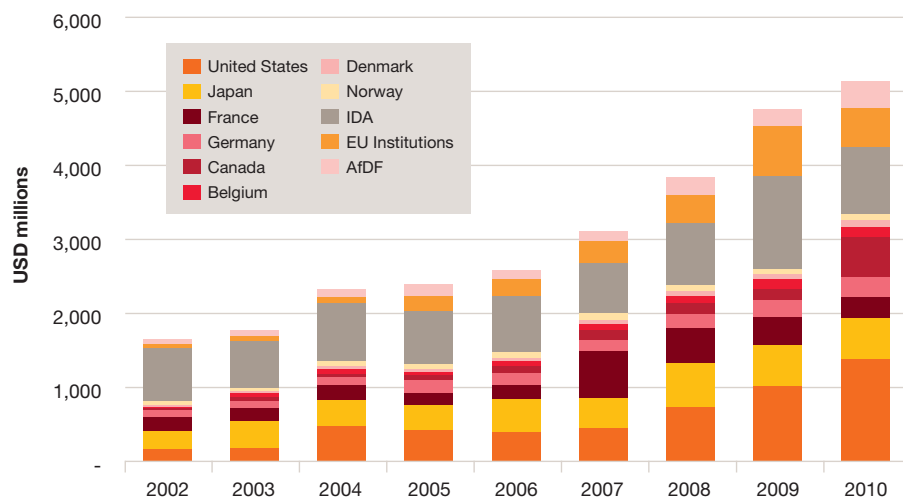
### How much is there?

Official development assistance flows for agriculture are increasing after having declined through the late 1980s and 1990s. Bilateral aid flows dominate the sector (total of \$23.8bn compared with \$8.1bn of multilateral flows between 2006-2010<sup>26</sup>); however, there are a number of multilateral donors (World Bank through International Development Association, European Commission and African Development Fund) who are significant contributors of concessional loans and a small amount of grant finance to the sector (see Figure 3).<sup>27</sup>

Figure 3 also demonstrates trends in bilateral ODA flows for agriculture over the last 10 years at a global level showing steady increases in funding to the sector since 2002, with a particular increase between 2009 and 2010, likely in response to the food price spike in 2009 when donors’ attention was focused on agriculture and food security issues.<sup>29</sup>

By far the largest donor to agriculture globally and in Sub-Saharan Africa is the USA, disbursing \$4.07bn (2006-

**Figure 3: Bilateral and multilateral ODA for agriculture and rural development**



Source: Adapted from OECD Stats CRS<sup>28</sup>

2010)<sup>30</sup> in ODA to the sector. The majority of this is through the ‘Feed the Future’ program which is a \$3.5bn program over three years focused on agriculture and food security. It is implemented in 20 focal countries where bilateral programming is directed by implementation plans developed with the recipient country. The program also contributes to a number of regional and global initiatives as well as research and innovation.<sup>31</sup>

Sub-Saharan Africa is an important region for many of the major agriculture donors because of the large number of LDCs in the region. The large, poor, rural population in many countries in the region, and the role of agriculture as an important driver of economic development in many economies also mean the region is a focus of many donors. Figure 4 highlights the major donors in Sub-Saharan Africa and demonstrates the importance of emerging donors such as the Gates Foundation in this region.<sup>32</sup>

<sup>26</sup> OECD Statistics 2012: CRS Database. <http://stats.oecd.org/Index.aspx?DatasetCode=CRSNEW>. Note: There are challenges with using this data to accurately track ODA flows for agriculture as many donors have different procedures for reporting on programs with multiple objectives, so these are often not captured in the reported data.

<sup>27</sup> OECD Statistics: CRS Database and IFAD Annual report. Available at: <http://www.ifad.org/pub/ar/2010/e/index.htm>. Note: IFAD data for 2002-2005 not available.

<sup>28</sup> Accessed March 2012

<sup>29</sup> Global Donor Platform 2011. Aid to agriculture, rural development and food security

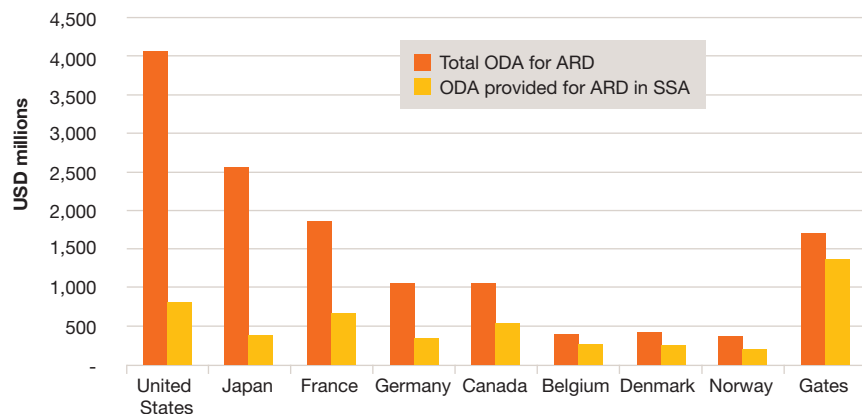
<sup>30</sup> In 2009 USD.

<sup>31</sup> US Government Feed the Future Initiative. [www.feedthefuture.gov](http://www.feedthefuture.gov)

<sup>32</sup> Data on Gates foundation spending on ARD in Sub-Saharan Africa is based on estimation from the proportion of total program funding directed towards Sub-Saharan Africa.

## Part two: Public sector finance

**Figure 4: Bilateral aid for Agriculture and Rural Development globally and in Sub-Saharan Africa (2006-2010)**



Source: Adapted from OECD Stats CRS<sup>33</sup>

### **The Bill & Melinda Gates Foundation<sup>34</sup>**

The goal of the agricultural development program of the Bill and Melinda Gates Foundation is to reduce hunger and poverty for millions of poor farm families in Sub-Saharan Africa and South Asia. As a result of the important role of the agriculture sector in development in the poorest countries the, Agricultural Development Initiative has become a focus area for their work. The Gates Foundation is now the second largest donor to agriculture in Sub-Saharan Africa (behind WB IDA).

Their Agricultural Development Strategy includes programmes in three areas.

1. Research and Development – to develop more productive and nutritious versions of staple crops that are able to thrive in different soil types and are resistant to disease, pests and environmental stresses.
2. Agricultural Policies – supporting data collection, research and policy analysis related to agricultural development, including evaluation of Gates' work.
3. Access and Market Systems – practical implementation of new and appropriate tools and farming practices adopted by small farmers and supporting efforts to link them to markets.

Although a specific programmatic initiative does not exist within the Agricultural Development program addressing climate change issues, many of the projects funded in all three programmes have direct benefits for adaptation to climate change.

### **What is it used for?**

Donors surveyed as part of this research were unable to provide a break-down of agriculture funding by activity due to data challenges, however generally supported a range of different activities including agricultural policy and administration, supporting access to improved inputs, training and extension programs, building institutional capacity (at both local and regional levels), research and development and agricultural infrastructure investment (e.g. small-scale irrigation infrastructure, and knowledge management systems).

Most bilateral donors reported direct project grants as the most common modality of support in all of these areas. The majority of general agricultural support from multilateral donors, such as IDA and IFAD, is in the form of concessional loans to governments who may then channel support to the farm or producer group level.

<sup>33</sup> Accessed February 2012

<sup>34</sup> Gates Foundation 2011. *Agricultural Development Strategy*. <http://www.gatesfoundation.org/agriculturaldevelopment/Documents/agricultural-development-strategy-overview.pdf>



## How much agriculture funding is 'climate-smart'?

Climate change is considered in a number of different ways by donors in their agricultural spending, although it is not the main focus of these funds. This means that in most cases the contribution of agriculture projects or programmes to climate change adaptation and/or mitigation is not directly measured and so data is generally not available on how much money is currently going towards agricultural activities that are 'climate-smart'.

Although getting aggregated figures on donor spending on 'climate-smart' agricultural practices<sup>35</sup> from agriculture spending is impossible, donors are increasingly building in climate change considerations to project design (e.g. DFID, Norway, USAID), or are providing agricultural sector projects with additional climate finance to ensure that the project builds resilience to climate change in the communities it works (e.g. USAID in Ethiopia and IFAD).

Where climate change mainstreaming occurs depends on the institutional structure of donor agencies. For example USAID country level missions have responsibility for programming agricultural and climate finance and therefore it is at this level that the two are integrated. In the case of DFID, country offices are responsible for doing a formal climate and environmental appraisal for programming that they are responsible for. This is done with support and input from headquarters.

Other donors consulted in this research appear not to be mainstreaming climate change considerations throughout their whole investment portfolio; however, many of the programmes supported have

climate change benefits. For example the Gates Foundation includes environmental considerations in the project development and approval phase, which includes some climate change considerations where appropriate. As a result of the country-led nature of the World Bank's IDA lending program, climate change is not mainstreamed into all loans; however, it is included when this is a recipient country priority.

Many of the programs that are supported by IDA loans are responding to climate change impacts and are designed to increase resilience to the impacts of climate change.

## Potential size of CSA funding from agriculture ODA

The total size of donor finance for agriculture (multilateral, bilateral and Gates Foundation) between 2006 and 2010 was around \$34bn.<sup>36</sup> Based on recent increases of finance delivered in this area, we could assume that approximately \$36bn might be available for agriculture and rural development activities for 2011-2015.

How much of this will be allocated to climate-smart activities is unknown, and is not measured by any of the donors consulted as part of this research. A growing trend, however, is for climate change to be 'mainstreamed' into donor strategies for agriculture and rural development. This is still in early stages, and for most donors climate change is not used as a screen for

### **IFAD's Adaptation for Smallholder Agriculture Programme (ASAP)**

IFAD has recently developed the Adaptation for Smallholder Agriculture Programme to channel climate and environmental finance to smallholder farmers through IFAD-supported programmes. The intention is that this grant finance will cover the additional cost of ensuring IFAD supported programmes (funded either through grants or loans) are 'climate-smart'. This fund is being used as a key mechanism to implement and mainstream the IFAD Climate Change Strategy (2010).

projects. Mainstreaming strategies are usually focused on providing guidance for project developers to enable them to consider the impacts of climate change in the design of their project and ensure that the project outcomes are resilient to predicted climate change impacts. It is unclear how effective this will be, but given the size of development funding programmed for agriculture compared to dedicated climate finance for agriculture, a clear opportunity exists to 'climate-smart' conventional agriculture funding to enable scaling up of CSA.

<sup>35</sup> CSA is defined as the following practices: agronomy, nutrient management, tillage and residue management, pasture and grazing land management, watershed restoration, water management, livestock management, integrated food and energy systems which have climate change adaptation and/or mitigation benefits.

<sup>36</sup> Data on multilateral and bilateral donors from OECD Stats CRS. Gates Foundation data from interview.

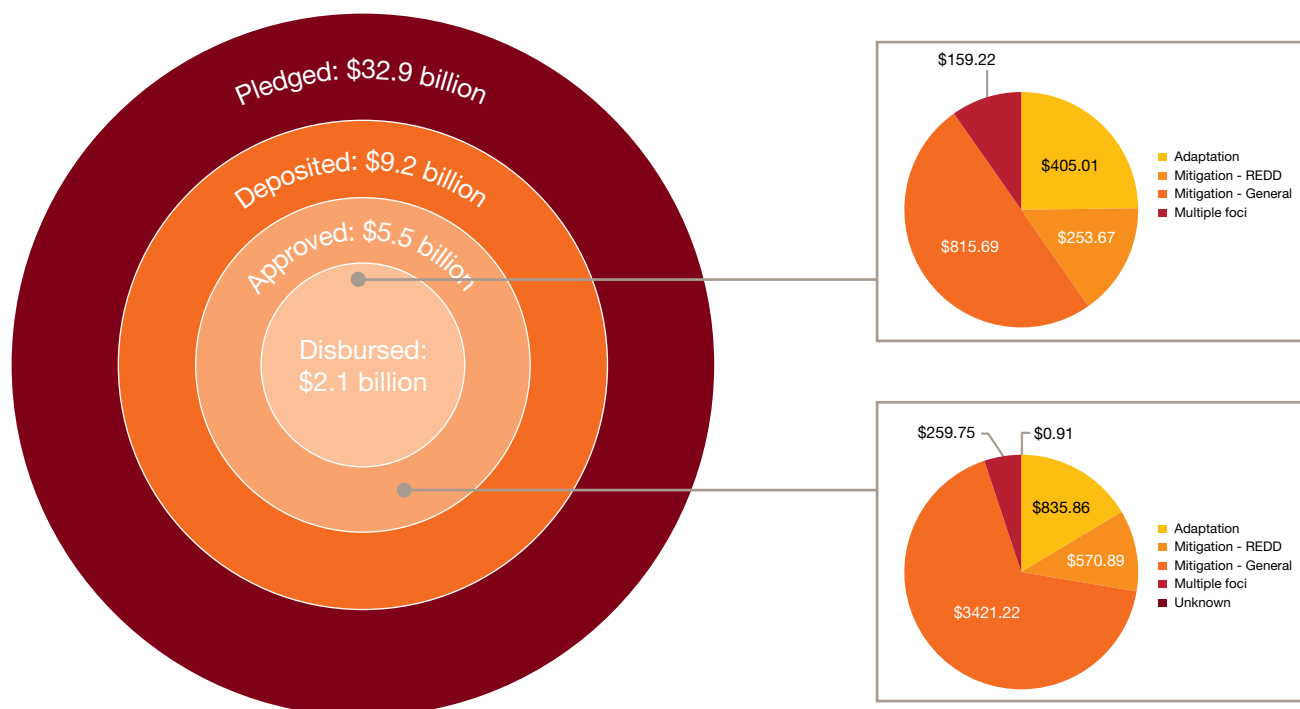
## Part two: Public sector finance

### Climate Finance

#### How much is there?

Donor countries have pledged \$32.9bn to dedicated climate funds for climate change mitigation (including REDD+) and adaptation up to January 2012.<sup>37</sup> Despite these commitments, only \$2.1bn has been disbursed up to this date.<sup>38</sup>

Figure 5: Available climate finance (public)



Source: Adapted from Climate Funds Update<sup>39</sup>

#### What is it used for?

At the international level, most climate finance has been approved and disbursed for mitigation activities, with 65% of disbursed climate finance going towards REDD+ and general mitigation. Adaptation has received much less funding, with only 25% of climate finance being spent on adaptation activities (see Figure 5). The trend towards greater funding for mitigation and REDD+ compared with adaptation is likely to continue as demonstrated by Figure 6, with just 16% of approved climate finance going towards adaptation.

For the majority of donors, agricultural activities are currently funded from adaptation climate finance.

A total of \$1.16bn in climate finance has been approved for Sub-Saharan Africa, with \$379m disbursed to date.<sup>40</sup> Figure 6 demonstrates the split between different focal areas with the majority of climate finance disbursed in the region being for general mitigation or REDD+ activities. A total of \$132m has been disbursed through the major climate funds for adaptation.

<sup>37</sup> ODI and Heinrich Boell Foundation 2012. Climate Funds Update. <http://www.climatefundsupdate.org>

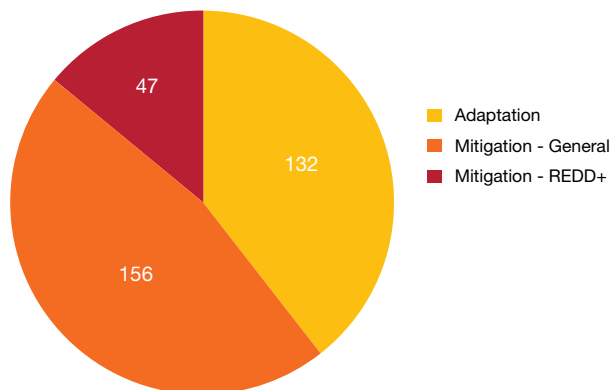
<sup>38</sup> Up to January 2012.

<sup>39</sup> Current as at January 2012.

<sup>40</sup> Nakhooda et al 2011: Climate Finance in Sub-Saharan Africa. <http://www.odi.org.uk/resources/docs/7480.pdf>



**Figure 6: Focal area of climate finance disbursed in Sub-Saharan Africa (USD million)**

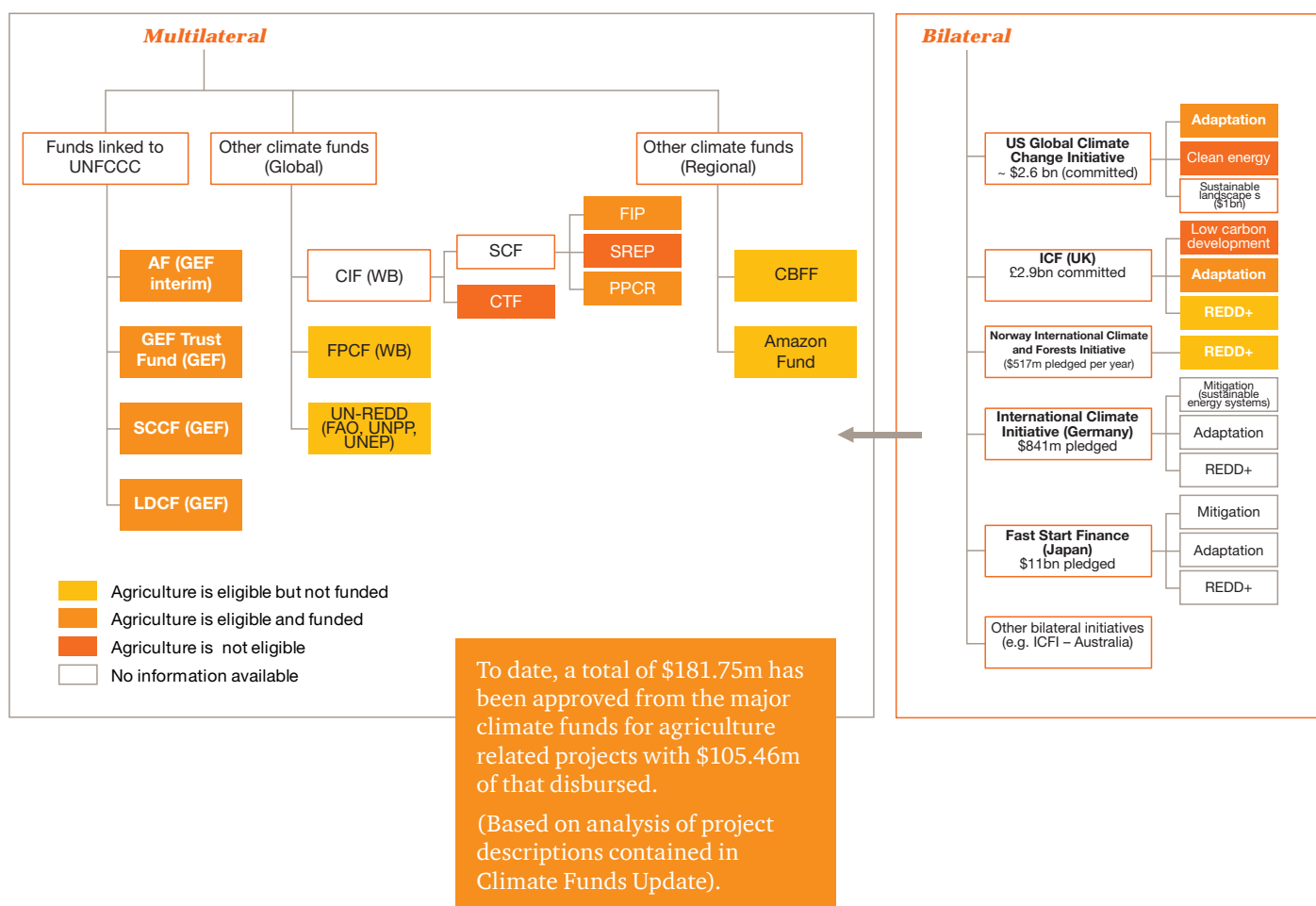


Source: Adapted from Climate Funds Update<sup>41</sup>

## How much climate finance is for agricultural activities?

Climate finance is delivered through a complex architecture of multilateral funds and programmes and bilateral mandates and results frameworks. This international climate finance architecture is demonstrated in Figure 7. This figure also highlights which climate funds have the potential to fund CSA activities and which have already funded CSA.<sup>42</sup> Annex A provides further detail on the size and governance structures of each of the multilateral funds.

**Figure 7: Climate finance architecture**



<sup>41</sup> Current as at January 2012

<sup>42</sup> Adapted from Climate Funds update and Streck et al: 2012. Towards policies for climate change mitigation: Incentives and benefits for smallholder farmers. CCAFS report no 7. [http://ccafs.cgiar.org/sites/default/files/assets/docs/ccafsreport7-smallholder\\_farm\\_finance.pdf](http://ccafs.cgiar.org/sites/default/files/assets/docs/ccafsreport7-smallholder_farm_finance.pdf)

## Part two: Public sector finance

The majority of climate finance for agricultural activities has come from adaptation related multi-donor funds (e.g. Adaptation Fund, Least Developed Countries Fund, Special Climate Change Fund)—a result of the focus of many of the mitigation funds on clean technology and the energy sector. This also reflects that agriculture is a priority sector for many developing countries and therefore a key sector for countries to enhance resilience and adaptive capacity.

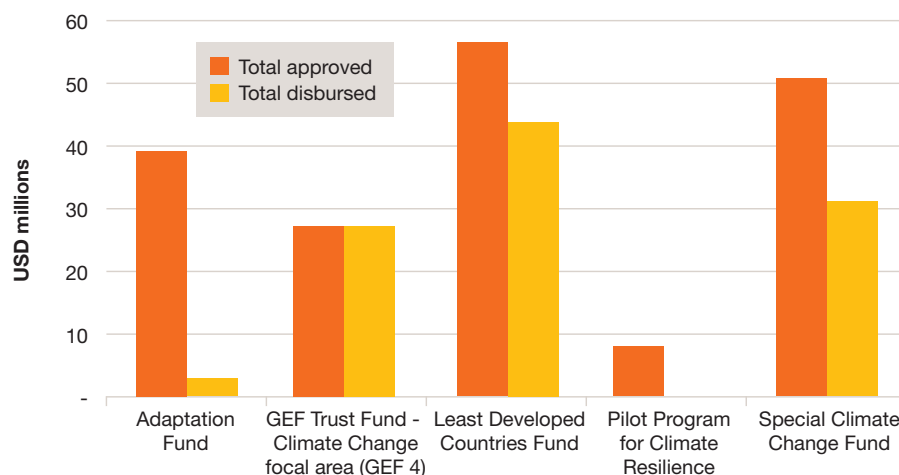
REDD+ funds (e.g. Amazon Fund, Congo Basin Forest Fund, NICFI) have the potential to provide funding to CSA if these activities can be demonstrated to reduce pressure on forests (e.g. agroforestry or farm woodlots to reduce demand for charcoal sourced from natural forests, or productivity improvements to prevent expansion of agricultural land). To date no specific REDD+ funds have provided funding for these types of CSA activities, although some donors are interested in incorporating these types of projects into their bilateral portfolios (e.g. Norway, DFID).

### USAID Pastoral Livelihoods Initiative – Ethiopia<sup>45</sup>

This program, implemented between 2009 and 2013 aims to strengthen the livelihoods of pastoralists and ex-pastoralists in three regions of Ethiopia. As weather patterns in these regions are changing and rainfall decreasing, the program assists in building greater resilience through early warning systems and better management of resources. It supports enhanced rangeland and water management through community mobilisation and support to customary institutions. It also strengthens livestock-based early warning and response systems through the establishment of community-based response funds and management systems.

This program clearly incorporates climate change into an agriculture and rural development program, and is funded by a combination of agriculture and climate change adaptation funding from USAID.

**Figure 8: Funding to agriculture from multilateral climate funds**



Source: Adapted from *Climate Funds Update*<sup>43</sup>

The World Bank BioCarbon Fund has been the most active mitigation fund for climate smart agriculture activities. Through Emissions Reductions Purchase Agreements it has funded 21 watershed restoration, afforestation and reforestation projects funded as well as the first specific agricultural carbon project in Sub-Saharan Africa (Kenya Agricultural Carbon Project). A total of \$90.4m has been committed to tranche 1 and 2 of the fund.<sup>44</sup>

### Bilateral

Funding for agricultural projects is usually categorised by donors as ‘adaptation’ funding, although some bilateral donors have also suggested that agricultural activities that reduce deforestation pressure

on forests could be funded by forestry (REDD+) funding (DFID and Norway).

Bilateral commitments and spending on climate change are harder to track and most government donors do not collect information disaggregated by sector (e.g. climate finance spent on agriculture). Pledges of climate finance funds from donors cover different time periods e.g. 2010-2012 for Japan, 2011-2015 for UK, and are therefore difficult to compare.

An additional difficulty for accurately estimating the size of climate finance that may be available for adaptation is that donor reports do not consistently disaggregate funds to be delivered through bilateral programmes or multilateral funds. This makes it difficult to ensure that funds are not double counted (e.g. in donor pledges and multilateral climate fund pledged amounts).

<sup>43</sup> Current as at January 2012. The data presented in this graph was derived by analysing projects funded (by name or short description included in *Climate Funds Update*) as either agriculture or non-agriculture projects. The amount approved and disbursed for agriculture projects was then summed. Detailed research was not undertaken into each project, therefore if projects contained agriculture related activities but these were not reflected in the title, the project may not be included in this figure. Therefore the values contained in this graph are likely to be an underestimate of the funding to agriculture from multilateral climate funds.

<sup>44</sup> World Bank 2012. Biocarbon fund. <http://wbcarbonfinance.org/Router.cfm?Page=BioCF&FID=9708&ItemID=9708>

<sup>45</sup> Interview and USAID Ethiopia. <http://ethiopia.usaid.gov/programs/feed-future-initiative/projects/pastoral-livelihoods-initiative---phase-ii-pli-ii>

For many donors there are also significant differences between amounts pledged and amounts committed and then disbursed. These differences reflect changing economic conditions in donor countries and the low absorptive capacity in many developing countries resulting in a limited volume of 'investment ready' projects.

Table 1 demonstrates the difficulty of accurately assessing the amount of climate finance that is available for adaptation, let alone how much of this might be available for agriculture, a breakdown that donors do not report on or have readily available. From these figures an indicative annual figure for bilaterally delivered adaptation finance in 2010 was somewhere in the realm of \$1.7bn.

## NAMA/NAPA/NAP funding

Nationally Appropriate Mitigation Actions (NAMA) submitted to the UNFCCC by developing countries may be proposed on the basis that they receive support (finance) from developed countries. This may be a potential source of climate finance for agriculture, however there is very limited coverage of agriculture by submitted NAMAs (only 2 out of 52 relate to the agriculture sector)<sup>56</sup> and they are still being developed so finance is not available for implementation.<sup>57</sup>

Forty seven countries have submitted National Adaptation Programmes of Action (NAPA) to the UNFCCC, with 86 priority actions covering the agriculture and livestock sector.<sup>58</sup> Funding to implement these is available for LDCs from the Least Developed Countries

**Table 1: Adaptation finance committed by major bilateral donors**

Country	Adaptation finance	Time period	Includes money channelled through multilaterals
UK	£31.92m (committed)	2010-2011	No
USA	\$448m <sup>48</sup> (committed)	2010	Yes (roughly 60% of funds channelled multilaterally)
Japan	\$738m <sup>49</sup> (committed)	2010-2011	Yes
Norway	\$64m and \$27m to adaptation and mitigation <sup>50</sup> (committed)	2010	No
Germany	€75.7m <sup>51</sup> (committed)	2010	Yes (37% of adaptation funds through multilaterals)
Sweden	€347m <sup>52</sup> (committed)	2010	Yes (€115 m through multilaterals)
Canada	CAD 45m <sup>53</sup> (committed)	2010	Yes (at least CAD 20m)
Australia	AUD 309m <sup>54</sup>	2010-2011	Yes (at least AUD 34m)
France	\$120m <sup>55</sup>	2010	Yes (but unclear how much for adaptation funds)

Fund (one of the Climate Investment Funds). This fund contains \$368.44m and has disbursed \$115m, \$43.8m of which has been for agriculture related activities.<sup>59</sup> Any additional financing provided to countries bilaterally for the implementation of activities identified in NAPAs is included in their adaptation pledges.

The Cancun Adaptation Framework established a process to enable LDC parties to formulate and implement National Adaptation Plans to identify medium and long-term adaptation needs and developing strategies and programmes to address these. Further guidance and modalities for developing and financing NAPs is included in the COP 17 decision on NAPs however recommendations for finance and support will be prepared by the

Subsidiary Body for Implementation in 2012.<sup>60</sup>

## Size of climate finance potentially available for CSA

A number of figures for how much money in total is available for adaptation from fast start finance pledges (through both bilateral and multilateral channels) have been made. This total is likely to be in the range of \$4.8bn – \$6.3bn<sup>61</sup> and although the fast start period for climate finance is from 2010-2012, it is likely that this funding will continue to be delivered beyond 2012. Not all of this will be allocated to agriculture and the amount likely to be spent on agriculture is unknown by most donors.

<sup>46</sup> Additional information in: WRI 2011. *Fast Start Finance tracker*. [http://pdf.wri.org/climate\\_finance\\_pledges\\_2011-11-18.pdf](http://pdf.wri.org/climate_finance_pledges_2011-11-18.pdf)

<sup>47</sup> To all sectors, not just agriculture

<sup>48</sup> WRI 2011. *Fast Start Finance tracker* [http://pdf.wri.org/climate\\_finance\\_pledges\\_2011-11-18.pdf](http://pdf.wri.org/climate_finance_pledges_2011-11-18.pdf)

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> Based on estimates of split between priorities over all of fast start period. WRI *Fast Start Finance tracker* [http://pdf.wri.org/climate\\_finance\\_pledges\\_2011-11-18.pdf](http://pdf.wri.org/climate_finance_pledges_2011-11-18.pdf)

<sup>56</sup> Only 2 NAMAs developed and submitted to the UNFCCC cover agriculture (Costa Rica and Indonesia)

<sup>57</sup> Roser et al 2011. *Annual status report on nationally appropriate mitigation actions (NAMAs)*. [http://www.ecofys.com/files/files/namas\\_annualstatusreport\\_2011.pdf](http://www.ecofys.com/files/files/namas_annualstatusreport_2011.pdf)

<sup>58</sup> UNFCCC 2011. *Index of NAPA projects by sector*.

<sup>59</sup> Based on data from Climate Funds Update March 2012.

<sup>60</sup> UNFCCC 2012. *National Adaptation Plans. Draft Decision on NAPs from COP17*

<sup>61</sup> Cipler et al 2011. *Adaptation finance, how can Durban deliver on past promises? IIED briefing*. <http://pubs.iied.org/17115IIED.html>

## Part two: Public sector finance

Many bilateral programmes respond to country or regional demand and therefore spending on climate-smart agriculture will depend on recipient country priorities.

Many donors are increasingly choosing to deliver climate finance bilaterally as they are scaling up delivery of climate finance over the next few years (e.g. USAID, DFID, Norway). Bilateral relationships allow donor countries to work closely with recipient countries to build capacity and deliver jointly owned results. A number of CSA projects have been already been funded from adaptation finance e.g. USAID Pastoral Livelihoods Initiative in Ethiopia.

It is likely that the amount of money available for adaptation through bilateral channels will increase significantly over the coming years. For example, the UK government has committed £1.45bn for adaptation between 2011 and 2015 although the proportion of this to be delivered bilaterally is still being decided.

Although it is impossible to tell exactly how much climate finance CSA will be eligible for, the scale of finance pledged and delivered for adaptation to date indicates that adaptation finance for **all sectors** may be around \$6bn over the next three to four years (from bilateral and multilateral programmes).

The scale of climate finance **potentially** available for agriculture is about 1/6th of the estimated ODA available for agriculture over the next five years. This suggests that a supportive role might be most appropriate (e.g. covering the additional cost of agriculture projects to be made 'climate-smart' as is proposed by IFAD's ASAP programme).

### Specific CSA funds

Some specific CSA funds are beginning to emerge as the increasing international policy dialogue on CSA is scaling up donor interest in providing specific support to this area. Another important factor in the establishment of

these specific CSA funds has been the country level need to address the impacts of climate change in their agricultural programmes and projects. Although it is still very early days for the emergence of specific funds on climate-smart agriculture, the two examples below provide some useful insights into how climate and/or agriculture finance can be channelled specifically to CSA.

### Adaptation for Smallholder Agriculture Programme (ASAP) - IFAD

IFAD has recently developed the ASAP to channel earmarked climate and environmental finance to smallholder farmers through IFAD-supported programmes. The intention is that this grant finance will cover the additional cost of ensuring IFAD supported programmes (funded either through grants or loans) are 'climate-smart'. This fund is being used as a key mechanism to implement the IFAD Climate Change Strategy (2010). Country governments who are eligible to borrow through IFAD will be eligible to access this fund. The fund has five outcome areas which the fund aims to achieve. These include:

1. improved land management and climate resilient agricultural practices and technologies,
2. increased availability of water and efficiency of water use for smallholder agriculture production and processing,
3. increased human capacity on adaptation and weather-related disaster risk reduction at the local level,
4. rural infrastructure made climate-resilient, and
5. knowledge on climate-smart smallholder agriculture documented and disseminated.

There are two to four developed countries interested in supporting the fund which is likely to be operational by April 2012. \$30m has been committed to this fund already with further funding likely. The size of the fund could be up to around \$300m over three years.

### Alliance for a Green Revolution in Africa (AGRA)

AGRA is supported by the Rockefeller Foundation, Gates Foundation and the UK government, and aims to improve the productivity and incomes of smallholder farmers in Africa. All of their programs are designed to benefit smallholders and to transform farming into a sustainable, viable commercial activity. Their main programs include:

1. Seeds program – which supports breeding of improved seeds and distribution of these to farmers.
2. Soil health program – improves farm productivity by increasing farmers' access to locally appropriate soil nutrients and integrated soil and water management.
3. Market access program – enhances market access for smallholders.
4. Policy and partnerships program – ensures that national, regional and global policies and finance provide support to smallholder farmers.
5. Initiative on Innovative Finance – works with financial institutions in Africa to increase access to low-interest loans for smallholder farmers and agribusinesses.

In 2009 this program approved \$51.7m in grants under all of these programs.<sup>62</sup> Of these programs the seeds program and soil health program both finance climate-smart agriculture activities.

<sup>62</sup> AGRA Annual report 2010. <http://www.agra-alliance.org>.



# Part three: Private sector finance

## Introduction

Part 3 explores the different **types and sources of private finance available to support the adoption of CSA practices in Sub-Saharan Africa**. There is very limited data available on private finance specifically for CSA, and this section also looks at private finance and financial instruments for agriculture more generally.

Private finance can **play a role in CSA for both smallholders and other value chain actors** (e.g. commercial farmers with outgrower schemes; agribusinesses).

The types of private finance available for these stakeholders include **debt and equity, financial services such as insurance, and premiums generated through compliance** with sustainable agriculture standards.

As given that increases in productivity and resilience to the affects of climate change among smallholder farmers is a major component of CSA, mitigation finance has generally been geared towards energy projects, and carbon finance for mitigation is covered in Part 4, this **section will primarily focus on private sector sources of finance for climate adaptation** at the smallholder and primary production levels.

It is important to note that data on private finance for climate smart agriculture is particularly scarce, and so this section of the report focuses on private finance and financial instruments for agriculture more generally.

The primary production end of the agricultural value chain has traditionally been perceived as a high-risk, low-return venture for capital providers. Both the volatile nature of agriculture broadly, and the constraints of operating in rural markets in developing countries can make it difficult for capital providers to see a clear business opportunity for making an investment. However, increasing recognition of the need to build capacity

across the agricultural value chain in developing countries has led to the emergence of a number of innovative financing schemes and partnerships that can overcome investment barriers and address these issues.

## Key messages

- **Amount of finance.** It is difficult to determine precise figures for private investment in agriculture in Sub-Saharan Africa given a lack of comprehensive data on the sector and region. However, various sources suggest that domestic sources of private finance will be key to significantly developing the sector.
- **Barriers.** The challenges and barriers to financing climate related adaptation for agriculture are by and large the same as those faced by capital providers when investing in smallholder agriculture more broadly (i.e. without a direct climate change focus). More specifically, whether investment is being made within the context of 'smallholder agriculture', 'sustainable agriculture' or 'climate-smart agriculture', capital providers still face challenges inherent at the primary production level including fragmented value chains, insufficient capacity and resources among farmers and agribusinesses, inadequate physical infrastructure, and the prospects of high risk and low returns. A specific barrier to financing CSA is the time-lag between investments and returns in terms of enhanced productivity and income.
- **SME investment.** The 'missing middle' is a large potential growth area for private finance in agriculture. Small and medium sized enterprises in agriculture range from producers to input suppliers to processors and marketers. However, while they have greater capacity than smallholders to access microfinance, these SMEs may not have the collateral required to attract conventional investors and financiers, and are thus caught in a 'SME financing gap'.<sup>63</sup> Furthermore, discussions during research conducted on scaling-up CSA finance and developing a fund disbursement mechanism for CSA, highlighted the need to focus not only on smallholders but on other parts of the agriculture value chain more broadly (e.g. agribusinesses). Doing so, would aid the development of a larger system in which smallholders can be more productive through stronger connections with input providers and markets in which to sell their produce.<sup>64</sup>
- **Capacity-building.** Regardless of the type of finance (i.e. equity, debt), to incentivise further investment and financing in earlier parts of the value chain (i.e. primary production), significant capacity building is required to raise confidence among investors and financiers that smallholders, farmers with outgrower models, and agribusinesses can absorb and effectively use the capital provided. This may require funding and resources from philanthropic organisations and the public sector (e.g. public guarantees on loans; grant funding for technical assistance).<sup>65</sup>
- **Sector focus.** Private capital has traditionally been channelled towards export-oriented parts of the agriculture value chain or to the extractives industry in Sub-Saharan Africa; however, an increasing focus on food security, livelihoods, and an interest in both financial and development returns, has generated greater interest from private sector players such as social investors who seek to generate financial and development returns through lending and investment in agribusinesses, commercial farmers, and smallholder groups.

<sup>63</sup> IFC 2011. *Scaling Up Access to Finance for Agricultural SMEs. Policy Review and Recommendations*. [http://www.ruralfinance.org/fileadmin/templates/rflc/documents/G20\\_Agrifinance\\_Report\\_\(FINAL\\_ONLINE\)\\_1.pdf](http://www.ruralfinance.org/fileadmin/templates/rflc/documents/G20_Agrifinance_Report_(FINAL_ONLINE)_1.pdf)

<sup>64</sup> Further information provided in: PwC 2012. *Fund Disbursement Mechanism: Options assessment report*.

<sup>65</sup> To be discussed further in Part 5.

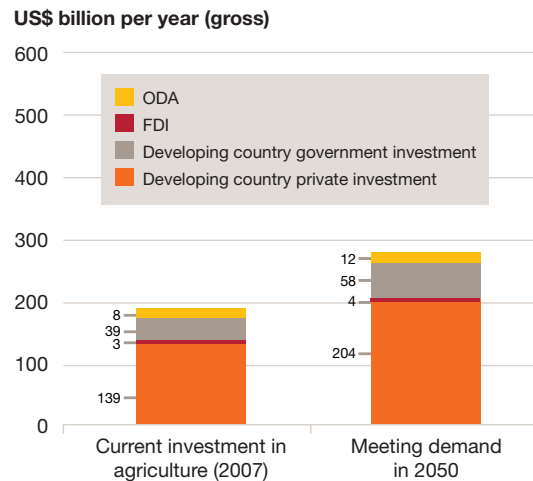
## Part three: Private sector finance

- Innovative financing models.** Given the high risks associated with investing in or lending to smallholders or agribusinesses, various financiers, investors, and project development companies have applied innovative financing arrangements and business models among multiple actors in the value chain. Through these multi-party financing arrangements such as those with banks, farmers, and agribusinesses, different capital providers have been able to spread their risk and develop substitutes for collateral.<sup>66</sup>
- Certification.** There are a limited number of certification schemes that can be applied to CSA (e.g. 4C scheme, Rainforest Alliance). However, various sustainable agriculture schemes and standards have the potential to generate premiums for smallholders who comply with relevant climate-smart and sustainable agriculture practices.

### Overall agriculture investment

Total private sector financial flows for agriculture in Sub-Saharan Africa are difficult to determine given a lack of data for comprehensive analysis. However, global figures illustrate that private investment plays a large role in total investment made in developing country agriculture. In 2007, for instance, two-thirds (\$142bn) of the \$189bn invested in agriculture in developing countries was through private investment. Of this, FDI inflows into agriculture accounted for less than 1.5% at \$3bn.<sup>67</sup> FAO estimates for future public and private annual investment requirements to meet food demand by 2050 indicate that private investment will continue to account for over 70% of the \$279bn annual investment requirement, with domestic developing country private investment amounting to close to 98%.<sup>68</sup>

**Figure 9: Source of investment in developing country agriculture, including estimated requirements**

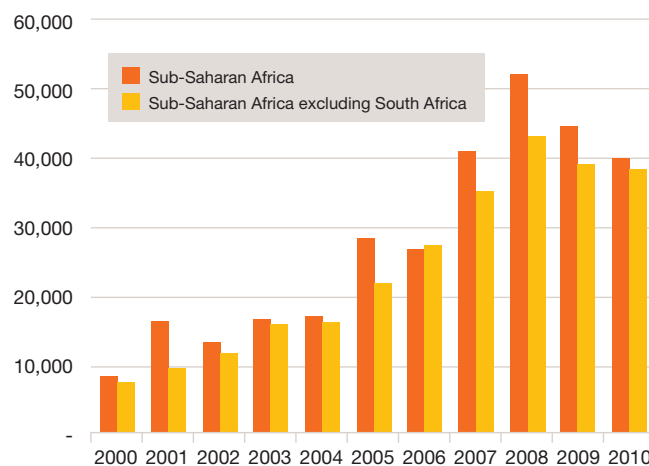


FAO estimates show that domestic private investment accounted for more than 65% of total public and private investment in developing country agriculture. Projections indicate that this proportion may increase, accounting for over 70% of annual investment requirements to meet food demand by 2050.

Source: FAO: "FAO in the 21st Century. Enhancing food security in a changing world. 2011.

Available FDI figures for Sub-Saharan Africa show that, despite falling in 2009 and 2010, inflows saw relatively steady growth of 20-35% between 2005 and 2008.<sup>69</sup> However, as shown above, and as various studies suggest, the proportion of FDI in agriculture is small. Furthermore, these inflows have been concentrated in certain regions (e.g. South Africa; mineral rich countries) and sectors (e.g. extractives), and private financial inflows that are channelled to agriculture, are typically directed to large-scale export oriented activities instead of small-scale production.<sup>70</sup>

**Figure 10: FDI Inflows to Sub-Saharan Africa from 2000 – 2010**



In Africa, most private agricultural finance is channelled to large-scale export oriented activities instead of small-scale production.

Source: UNCTAD Database

<sup>66</sup> Ibid.

<sup>67</sup> FAO 2011. FAO in the 21st Century. Enhancing food security in a changing world. <http://www.fao.org/docrep/015/i2307e/i2307e.pdf>

<sup>68</sup> Ibid.

<sup>69</sup> UNCTAD Stats: <http://unctadstat.unctad.org/TableView/tableView.aspx?ReportId=89>

<sup>70</sup> SEI 2011. Will Private Finance Support Climate Change Adaptation in Developing Countries? Historical Investment Patterns as a Window of Future Private Climate Finance. <http://www.sei-international.org/mediamanager/documents/Publications/SEI-WorkingPaper-Atteridge-WillPrivateFinanceSupportClimateChangeAdaptationInDevelopingCountries-2011.pdf>

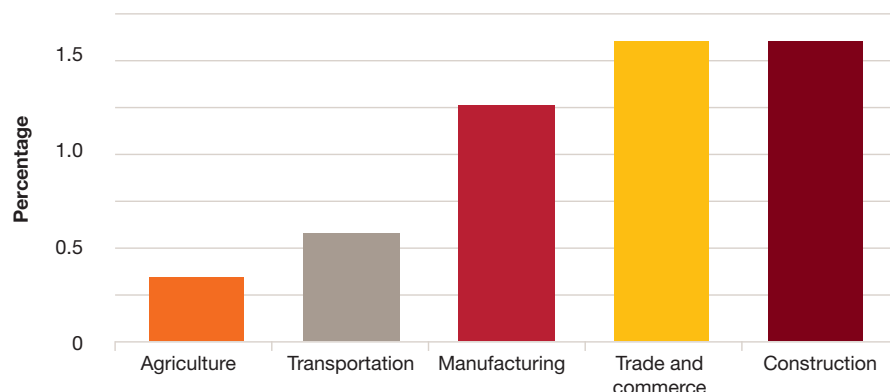


When low levels of FDI in agriculture are taken in consideration with the low levels of public expenditure in agriculture in Sub-Saharan Africa (as discussed in Part 2), it supports the fact that domestic private investment has a large role to play in supporting agricultural development. Projections by Schmidhuber et al. (2009) signify that annual agriculture investment needs for Sub-Saharan Africa are approximately \$21bn annually to 2050. Of this, investment in crop production, which most directly affects smallholders, amounts to one-third or \$7bn of total annual investment requirements. Given that over 70% of the current investment is private, private finance and investment will need to play a large role in meeting these future agriculture investment requirements.<sup>71</sup>

A break-down between the sources of private finance for agriculture in Sub-Saharan Africa is unavailable. However, as presented in Figure 11 the FAO has found that traditional bank lending for agriculture is less than 10% in many African countries.<sup>72</sup> In addition, it has been estimated that less than 25% of total bank lending in East and South Africa goes to smallholders<sup>73</sup> despite figures which suggest that Sub-Saharan Africa's 33m smallholders account for 80% of all farms the region and produce up to 90% of Africa's agricultural output.<sup>74</sup>

A combination of bank lending and different types of private finance, outlined in the following sections, are important for the adoption of CSA practices among smallholders. In addition, to ensure that finance is effectively channelled to and benefits smallholders, fund disbursement mechanisms and benefit sharing mechanisms should enable the distribution of monetary and non-monetary benefits. Strong governance practices should be established within producer groups and in commercial

**Figure 11: Sectoral lending share relative to GDP share, 2005-2009**



Source: Making Finance Work for Africa (database), Partnership Secretariat, African Development Bank, Tunis, <http://www.mfw4a.org/>

farms that have outgrower schemes, and comprehensive due diligence should be undertaken when investing in agribusinesses, commercial farms, or producer groups. Addressing these different issues contributes to a more robust system to which a greater amount of private finance can be invested.<sup>75</sup>

## Types of private finance

Private finance for climate adaptation can be seen in the form of debt, equity, financial services such as insurance, and revenue earned through certification. Table 2 provides further information of each of these.

**Table 2: Private sector financial instruments for agriculture**

Finance Instrument	Description	Use by recipient
Debt	<ul style="list-style-type: none"> <li>• Microcredit</li> <li>• Short-term credit (loans with maturity of &lt; 1 year)</li> <li>• Working capital</li> <li>• Long-term credit (loans with maturity of &gt; 1 year)</li> </ul>	<ul style="list-style-type: none"> <li>• Inputs (i.e. seeds, fertilizer)</li> <li>• Production</li> <li>• Tools / technology</li> <li>• Equipment upgrade / purchase</li> <li>• Insurance premiums</li> <li>• Certification</li> <li>• Technical assistance / extension services</li> </ul>
Equity	<ul style="list-style-type: none"> <li>• Ownership in commercial farms</li> <li>• Ownership in agribusinesses</li> </ul>	<ul style="list-style-type: none"> <li>• Project financing</li> <li>• Management capacity</li> <li>• Organizational capacity</li> <li>• Scaling up operations</li> <li>• Infrastructure</li> <li>• Certification</li> </ul>
Risk mitigation instruments <sup>76</sup>	<ul style="list-style-type: none"> <li>• Microinsurance</li> <li>• Traditional insurance</li> <li>• Deposit services</li> </ul>	<ul style="list-style-type: none"> <li>• Weather insurance (e.g. drought, floods)</li> <li>• Crop insurance (e.g. pests)</li> <li>• Livestock insurance</li> <li>• Savings</li> </ul>

<sup>71</sup> FAO 2011. Identifying opportunities for climate-smart agriculture investments in Africa. <http://www.fao.org/docrep/015/an112e/an112e00.pdf>

<sup>72</sup> Ibid.

<sup>73</sup> CSIS 2012. Smallholder Agriculture: A Critical Factor in Poverty Reduction and Food Security in Africa. <http://csis.org/publication/smallholder-agriculture-critical-factor-poverty-reduction-and-food-security-africa>

<sup>74</sup> ASFG. What we want to Achieve. Our response: Investment. <http://www.asfg.org.uk/our-response/investment>

<sup>75</sup> For more information on a fund disbursement mechanism for CSA, see: PwC 2012. Fund Disbursement Mechanism: Options assessment report.

<sup>76</sup> CCAFS 2011. Financing mitigation in smallholder agricultural systems. Issues and Opportunities.: <http://www.dfid.gov.uk/R4D/Output/188382/Default.aspx>

## Part three: Private sector finance

### Certification

Certification can play a role in CSA as a source of finance through the premiums generated from compliance with climate change and sustainability standards. The closest organisation or networks which include both climate change and sustainable agriculture standards are the 4C Association and Rainforest Alliance.

The 4C scheme has a verification process for sustainability and transparency across the coffee value chain. Resources and training provided to smallholders enables them to earn premiums for the improved quality of coffee produced. The 4C scheme includes a climate change module, which it aims to

integrate into its '4C Verification' process. The Rainforest Alliance, a member of the 4C Association, also has a sustainable agriculture and climate change module and addresses mitigation through a carbon monitoring methodology for coffee farms. The methodology enables coffee farmers to "earn additional income by planting and growing trees on their farms and selling the carbon absorbed by those trees."

### Sources of private finance

There are a range of investors and financiers that can provide agricultural finance and which have varying risk

appetites. Given that primary agriculture is often considered a high-risk, low-return activity, different forms of finance may have to be combined for private finance to effectively be used for climate-smart adaptation among smallholders and agribusinesses.

As mentioned above, risk appetites vary with different sources of finance. Though the limited number of interviews and literature available did not allow for a comprehensive analysis of where exactly each source is placed in terms of seeking commercial or development returns, the diagram below presents a high-level indication of the returns they seek.

**Table 3: Sources of finance for agriculture finance**

Sources of finance	Type	Direct beneficiary	Investment barriers	Incentives for investment	Advantages of each source of finance
Microfinance institutions	Debt Insurance Savings facilities	Smallholder	<ul style="list-style-type: none"> <li>Credit risk</li> <li>Regulatory risk</li> <li>Limited experience in agriculture</li> <li>Limited / lack of financial literacy among smallholders</li> </ul>	<ul style="list-style-type: none"> <li>Development returns</li> <li>Financial returns</li> </ul>	<ul style="list-style-type: none"> <li>Collateral based on joint-liability or group lending</li> <li>Access to large rural networks</li> <li>Experience working with low-income populations</li> <li>Connections to traditional banks (for on-lending capital)</li> </ul>
Commercial banks	Debt Insurance	Smallholders Producer groups Agribusiness	<ul style="list-style-type: none"> <li>High transaction costs</li> <li>Lack of collateral among smallholders</li> <li>Lack of financial literacy among smallholders</li> <li>Lack expertise in agriculture, which can make perceived risk higher than actual risk</li> <li>Limited bank network in rural areas</li> </ul>	<ul style="list-style-type: none"> <li>Financial returns</li> <li>New customer segment</li> <li>Tax incentives<sup>79</sup></li> </ul>	<ul style="list-style-type: none"> <li>Experience in lending</li> <li>Diversity in financial instruments</li> </ul>
Private equity investors	Equity	Commercial farms Agribusiness	<ul style="list-style-type: none"> <li>Limited / lack of management and operational capacity among farmers</li> <li>Primary production considered high-risk venture</li> <li>Fragmented value chain</li> </ul>	<ul style="list-style-type: none"> <li>Diversification</li> <li>Financial returns</li> </ul>	<ul style="list-style-type: none"> <li>Investment experience</li> <li>Agriculture investment experience</li> <li>Commercial motivations help bring in streamlined processes</li> </ul>
Social investors	Equity Debt	Producer groups Agribusiness	<ul style="list-style-type: none"> <li>Primary production considered high-risk</li> <li>Insufficient capacity at smallholder or agribusiness level</li> <li>Fragmented value chains</li> </ul>	<ul style="list-style-type: none"> <li>Diversification</li> <li>Development returns</li> <li>Financial returns</li> </ul>	<ul style="list-style-type: none"> <li>Investment experience</li> <li>Accept financial returns lower than traditional investors</li> <li>Willingness to work with other stakeholders (i.e. non-profit or public organisations)</li> </ul>
Corporates	Debt	Smallholders Different value chain players	<ul style="list-style-type: none"> <li>Insufficient capacity</li> <li>Fragmented value chain</li> </ul>	<ul style="list-style-type: none"> <li>Security of supply</li> <li>Vertical integration</li> <li>Increased control over value chain</li> <li>Greater ability to uphold agriculture sustainability standards</li> </ul>	<ul style="list-style-type: none"> <li>Can leverage financial and technical resources and networks</li> <li>Can incentivise smallholders through forward contracts</li> </ul>

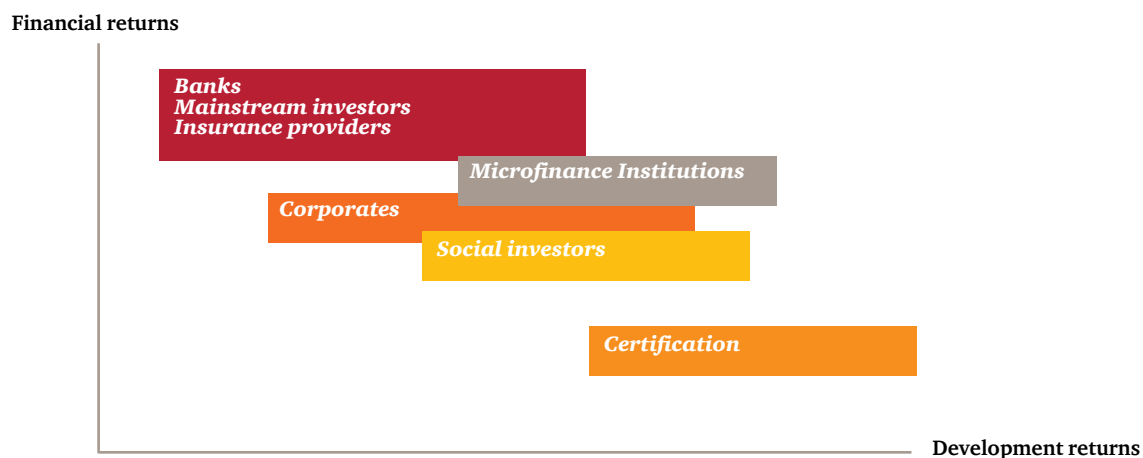
Source: PwC

<sup>77</sup> 4c Association 2012. *Work on Climate Change*. <http://www.4c-coffeeassociation.org/our-services/work-on-climate-change.html>

<sup>78</sup> Rainforest Alliance 2012. *Carbon Coffee*. <http://www.rainforest-alliance.org/climate/projects/carbon-coffee>

<sup>79</sup> FAO2004. *Twenty-third Regional Conference for Africa. Financing Agriculture and Rural Development in Africa: Issues, Constraints and Perspectives* <ftp://ftp.fao.org/infao/bodies/arc/23arc/roundtable.pdf>

**Figure 12: Incentives for capital providers**



## Social investment and innovative finance models

### Overcoming barriers and spreading risk

The primary reasons investors and financiers shy away from providing credit or making investments in agriculture – particularly, at the primary production level – are the high risks and low returns associated with what can be unpredictable activity, infrastructure challenges, and other barriers inherent in rural markets and with low-income producers.

In overcoming such constraints, new product and delivery channels are being explored and implemented to fill financing gaps, develop capacity, and spread risk among different actors. Models that focus on bringing together different parts of the agricultural value chain are important however, not only for creating different types of collateral or guarantees for the capital providers involved, or the development returns sometimes sought, but also for laying a foundation so that agribusinesses and smallholders are better equipped to absorb capital in the future.

*“Capacity building will enhance the financial literacy and management skills of farmers, farmer organizations, and agricultural SMEs in order to make them better financial clients.”*

*Source: IFC, 2011*

### **Example 1: Standard Chartered – Agrifinance Division<sup>80</sup>**

#### **The Challenge**

Standard Chartered's Agrifinance Division, set up in Johannesburg, serves the region's agricultural financing portfolio for both commercial farmers and smallholders. The bank has identified one of the biggest challenges for smallholders as their inability to access credit for critical inputs (i.e. seeds, fertiliser) due to a lack of fixed assets, which then forces smallholders to use old, lower quality seeds during the planting period. When these seeds are used in combination with inefficient fertilisation techniques and improper insecticide application, the result is often poor quality, lower yield crops.

#### **A solution**

To help overcome this issue, Standard Chartered has developed an Input Finance Model, which overcomes collateral barriers by using a farmer's crop as collateral instead of requiring fixed assets as collateral. In addition to financing, Standard Chartered also provides technical assistance and insurance, which helps mitigate climate risk. Standard Chartered has used this model to benefit smallholder farmers through various channels. For example:

- In Tanzania, finance is provided to 75 smallholders who operate under a cooperative structure, which works with the management of a local rice milling company. Through this structure, smallholders pool resources, access commercial farming skills, produce rice on a commercial scale, and have the benefit of commercial pricing due to aggregation.
- In Zambia, Standard Chartered provides trade credit to a trader that imports fertiliser. The Input Finance Model then enables smallholders to purchase necessary fertiliser for their maize crops.

#### **Innovation**

In working with different agribusinesses and agriculture companies that directly engage smallholders, Standard Chartered is able to help smallholders access better quality inputs and the know-how necessary to use the inputs efficiently. Aggregation of the smallholders also allows for greater returns from pooled resources, increased access to information, and greater bargaining power when selling their crops. Improved operational capacity can ultimately help financiers create a more sustainable customer base.

companies. One example is its grain inputs and marketing project. AgDevCo works with 750 farmers who are organized into groups of 12-15, and can each obtain credit from an MFI as a group. Credit is used for inputs that AgDevCo procures and distributes. The company provides information on how to use the inputs.

#### **Funding**

AgDevCo as a fund is capitalised by private foundations, impact investors, donors, and governments. It then makes equity investments or provides long-term debt to portfolio companies.

There is an average investment length of five years before AgDevCo transfers its shareholding to local ownership or new commercial investors. Even when a new commercial investor invests in the company, AgDevCo remains involved for the extent of time necessary to effectively transfer knowledge to the new owners.

### **Example 2: AgDevCo<sup>81</sup>**

As a 'catalytic' capital provider, AgDevCo invests in start-up businesses in the form of social venture capital raised through private foundations, impact investors, and donors to ultimately generate \$5 of commercial capital for every \$1 it invests into a commercial farm or agribusiness. AgDevCo expects its initial \$47m in social venture capital to support more than 20 projects by 2014 with individual investments ranging in size from \$200,000 - \$3m. These projects are then expected to bring in commercial investments of \$235m.

AgDevCo works with commercial farm hubs, which are linked to structured smallholder groups in order to ensure that smallholders receive benefits (i.e. affordable access to irrigation, lower post-harvest losses, and higher farm gate prices). When the capacity of a commercial farm is enhanced through improved infrastructure (e.g. infrastructure, grid electricity, and storage facilities), on-site storage, and processing facilities, smallholder farmers benefit from arrangements with the commercial hub including revolving credit facilities and less expensive agri-inputs.<sup>82</sup>

AgDevCo also invests in agribusiness

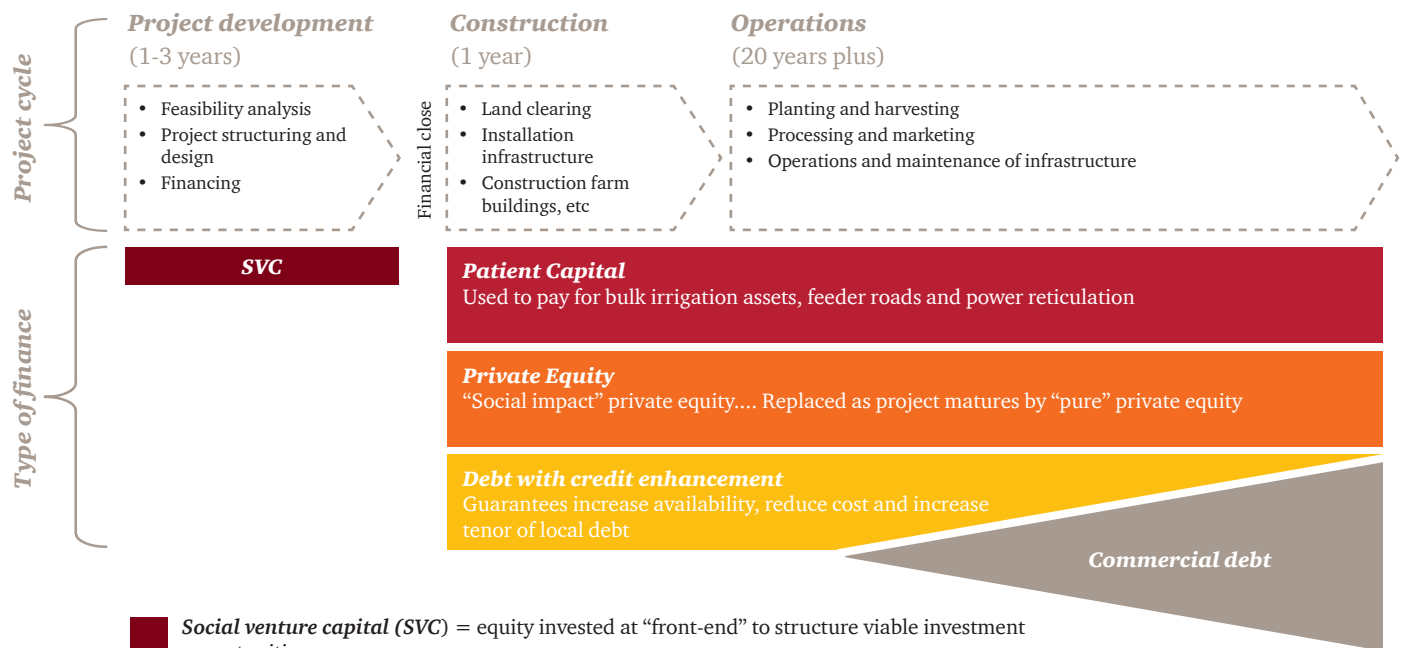
<sup>80</sup> Standard Chartered. Agrifinance. [http://www.standardchartered.com/sustainability-review-09/en/our\\_contributions/access\\_to\\_financial\\_services/agrifinance.html](http://www.standardchartered.com/sustainability-review-09/en/our_contributions/access_to_financial_services/agrifinance.html)

<sup>81</sup> AgDevCo. 12 January 2012. Phone Interview.

<sup>82</sup> AgDevCo Business Plan 2010-2014. Pg. 15-16. [http://www.agdevco.com/sysimages/agdevco\\_business\\_plan\\_%25202010.doc\\_rpt15.pdf](http://www.agdevco.com/sysimages/agdevco_business_plan_%25202010.doc_rpt15.pdf)



Figure 13: AgDevCo's project finance structure



**SVC** Social venture capital (SVC) = equity invested at "front-end" to structure viable investment opportunities

**PC** Patient capital (PC) = long-term, low-coupon capital invested at financial close and used to part fund infrastructure costs (esp. Irrigation) of greenfield agriculture investments. Increase returns on commercial farming in early years.

**PE** Private equity (PE) = invested on commercial terms at financial close. Likely to appeal to "social impact" investors willing to take higher risk. New investment/refinancing during operations can attract fully commercial equity.

**CE** Debt with credit enhancement (CE) = affordable credit guarantees provided by government/international agencies to reduce cost and increase tenor of senior debt from local financial institutions. Refinancable with commercial debt in later years (commercial debt available for expansion phase)

© AgDevCo

Source: [http://www.agdevco.com/sysimages/agdevco\\_business\\_plan\\_%25202010.doc\\_rpt15.pdf](http://www.agdevco.com/sysimages/agdevco_business_plan_%25202010.doc_rpt15.pdf)

<sup>26</sup> OECD Statistics 2012: CRS Database. <http://stats.oecd.org/Index.aspx?DatasetCode=CRSNEW>. Note: There are challenges with using this data to accurately track ODA flows for agriculture as many donors have different procedures for reporting on programs with multiple objectives, so these are often not captured in the reported data.

<sup>27</sup> OECD Statistics: CRS Database and IFAD Annual report. Available at: <http://www.ifad.org/pub/ar/2010/e/index.htm>. Note: IFAD data for 2002-2005 not available.

<sup>28</sup> Accessed March 2012

<sup>29</sup> Global Donor Platform 2011. Aid to agriculture, rural development and food security

<sup>30</sup> In 2009 USD.

<sup>31</sup> US Government Feed the Future Initiative. [www.feedthefuture.gov](http://www.feedthefuture.gov)

<sup>32</sup> Data on Gates foundation spending on ARD in Sub-Saharan Africa is based on estimation from the proportion of total program funding directed towards Sub-Saharan Africa.

## Part three: Private sector finance

### Mapping private finance in Sub-Saharan Africa

The table below outlines the different players involved in agriculture finance in agriculture in Sub-Saharan Africa. Though this list may not be exhaustive, it reflects the financial instruments being used by various players, the customers they are targeting, and whether any of their activity is related to climate change.

**Table 4: Key players in agriculture finance in Sub-Saharan Africa**

Name	Type of institution	Type of capital / resource	Geographic Focus in Africa	Capital recipient	Purpose of capital	Small-holder benefit (Y/N)	Climate change focus (Y/N)
Access Bank <sup>83</sup>	Bank	Debt	Nigeria	Agricultural input dealers	Seeds, fertiliser	Y	Not explicit but facilitates access to high quality seeds and fertilisers
Actis Africa Agribusiness Fund <sup>84</sup>	Private equity firm	Equity	Multiple countries	Agribusiness; forestry	Management capacity; operational capacity; expansion	n/a	Y
African Agricultural Capital Fund <sup>85</sup>	Investment fund	Equity	Sub-Saharan Africa	Agribusiness	Management capacity; operational capacity; expansion	Y	N
AgDevCo <sup>86</sup>	Project development company	Equity	East Africa	Commercial farm; agribusiness	Project management; capacity	Y	N
Banque Populaire du Rwanda <sup>87</sup>	Bank	Debt; mobile banking	Rwanda	Agriculture cooperatives	Working capital	Y	N
Earth Capital Partners <sup>88</sup>	Private equity firm	Equity	n/a	n/a	Agriculture and forestry	n/a	Y
EmVest Asset Management <sup>89</sup>	Investment company	Equity	Mozambique, Swaziland, South Africa, Zimbabwe, Zambia	Private and corporate primary producers	Promotes vertical integration	n/a	n/a
Equity Bank <sup>90</sup>	Bank	Debt	Kenya	Agribusiness; smallholders	Working capital	Y	N
J.P. Morgan <sup>91</sup>	Bank – Social Finance	Equity / Debt	Multiple countries	Specific to agriculture – AACF	Investment in agribusinesses	Y	N
Lion's Head Capital <sup>92</sup>	Investment company	Equity	Tanzania	Commercial farm	Management capacity; operational set-up	Y	N
Opportunity International <sup>93</sup>	Microfinance Institution	Debt – microloans; Savings accounts; crop insurance	Uganda, Ghana, Malawi, Mozambique, Rwanda	Smallholders	Working capital; market linkages	Y	Not explicit but facilitates access to effective fertilisers, drought-resistant seeds; network of agricultural loan officers provide TA
Rainforest Alliance <sup>94</sup>	Certification; farm management assistance	Climate module / sustainable agriculture farm management	n/a	Farms	Improved farm management; promoting sustainable livelihoods	Y	Y
Root Capital <sup>95</sup>	Social investment fund	Debt	East Africa; West Africa	Producer groups	Working capital; fixed assets	Y	Y (e.g. sustainable agroforestry, clean technology for agriculture)
Standard Bank <sup>96</sup>	Bank	Value chain finance; Weather index insurance	Ghana, Mozambique, Tanzania, Uganda	Commercial farmers; smallholders; corporate farming operations	Market linkages; capacity	Y	N
Standard Chartered <sup>97</sup>	Bank	Debt	13 countries	Agribusiness; producer groups	Purchasing inputs	Y	N

83 <http://www.accessbankplc.com/Pages/News.aspx?id=GJ9vY8d1NPLNQqDRNcbAjw%3D%3D>

84 <http://www.engineeringnews.co.za/article/100m-actis-africa-agribusiness-fund-launched-2006-04-20>

85 <http://www.usaid.gov/press/releases/2011/pr110927.html>

86 <http://www.agdevco.com/>

87 <http://www.bpr.rw/spip.php?rubrique5>

88 <http://www.earthcp.com/>

89 [http://www.emvest.com/about\\_us.aspx](http://www.emvest.com/about_us.aspx)

90 CDC. Equity Bank, Kenya. Inclusive financial services that transform livelihoods and expand opportunities. <http://www.cdgroup.com/equity-bank-kenya.aspx>

91 J.P. Morgan. Growth Capital for East African Agribusiness. <http://www.jporglobal.com/en-hk-sg/global-presence/growth-capital-east-african-agribusiness>

92 <http://www.lhgp.com/101113-LHGP-Overview.pdf>

93 <http://opportunity.org.uk/explore/microfinance/insurance/>

94 <http://www.rainforest-alliance.org/agriculture>

95 <http://www.rootcapital.org/>

96 Zipping Finance and Farming Africa conference report. [http://www.mfw4a.org/fileadmin/zippingfinance/pdf/Zipping%20Finance&Farming\\_BC%20-%20Standard%20Bank\\_SUB-SAHARAN AFRICA.pdf](http://www.mfw4a.org/fileadmin/zippingfinance/pdf/Zipping%20Finance&Farming_BC%20-%20Standard%20Bank_SUB-SAHARAN AFRICA.pdf)

97 [http://www.standardchartered.com/sustainability-review-09/en/our\\_contributions/access\\_to\\_financial\\_services/agrifinance.html](http://www.standardchartered.com/sustainability-review-09/en/our_contributions/access_to_financial_services/agrifinance.html)



# Part four: Carbon markets<sup>98</sup>

## Introduction

There is a significant opportunity for CSA in Sub-Saharan Africa to contribute to global climate change mitigation efforts. 316bn tonnes of CO<sub>2</sub>e is stored in top soils and 43% of total CO<sub>2</sub> emissions from the region originate from land clearing for agricultural use. Carbon markets have the potential to inject much needed capital into CSA, as well as enabling routes to market, developing skills, and encouraging innovation. The carbon markets consist of compliance and voluntary schemes. Part 4 aims to put forth a high-level analysis of the estimated significance for CSA through the carbon markets.

## Key messages

- **Private or public finance?** Initially conceived of as a market-based mechanism that leverages private finance, agricultural carbon markets are currently predominantly supported through public sources of finance for various reasons. High project development and transactions costs associated with projects eligible for carbon credits discourage private sector investment. This has led to donor support for project set-up, monitoring and reporting, and strengthening the organisation of producer groups, in order to ensure that projects proceed. Limited demand for credits in the voluntary market has also led some donors to purchase emissions reductions (e.g. through the World Bank's BioCarbon Fund).
- **Several barriers.** Carbon markets for CSA are also held back by lack of carbon methodologies for agriculture and insufficient aggregation at the smallholder level.
- **Low portion of carbon finance in Africa.** Africa accounts for only 2.6% of the current projects in the CDM pipeline.

**Table 5: Sub-Saharan Africa's estimated economic mitigation potential annually to 2030 through agriculture**

Based on carbon price of \$20/tCO <sub>2</sub> e (MtCO <sub>2</sub> e/yr)						
	Cropland management	Grazing land management	Restoration of organic soils	Restoration of degraded land	Other practices	Total
East Africa	28	27	25	13	15	109
Central Africa	13	12	11	6	7	49
South Africa	6	5	5	3	3	22
West Africa	16	15	14	7	8	60
<b>Total</b>	<b>69</b> (26%)	<b>65</b> (25%)	<b>61</b> (23%)	<b>33</b> (12%)	<b>37</b> (14%)	<b>265</b> (100%)

Source: IFPRI: *Global Carbon Markets: Are There Opportunities for Sub-Saharan Africa?*

## Estimated mitigation potential

Analysis indicates<sup>99</sup> that for a carbon price of \$20/tCO<sub>2</sub>e, Sub-Saharan Africa has the potential to earn annual revenue up to \$5.3bn until 2030, contributing emissions reductions up to 265 MtCO<sub>2</sub>e annually through agriculture. Current prices in the carbon markets are much lower than \$20/tCO<sub>2</sub>e<sup>100</sup>, so, at least in the short term the carbon revenue potential for agriculture is likely to be considerably less than these figures suggest.

FAO estimates suggest that mitigation finance could provide incentives to leverage up to \$150bn worth of CSA investments in developing countries.<sup>101</sup> However, overall agricultural carbon markets are nascent, held back by a number of barriers including ineligibility and unattractiveness of CSA credits, technical complexity and lack of availability of carbon methodologies, and high transaction costs relating to monitoring, reporting and verification of agricultural carbon when compared to current market prices.<sup>102</sup> In addition, at an individual smallholder level the mitigation potential is low with estimates varying between 0.69 – 8.51 tCO<sub>2</sub> / year / hectare.<sup>103</sup> Therefore, in order for smallholders to access carbon

revenue, aggregation, which generates lower transaction costs and the ability to more effectively measure emissions reductions, is required.

Carbon market finance in Africa more broadly has also been limited, with just 168 projects in the current CDM pipeline (2.6% of the total) located in Africa, of which only 99 are in Sub-Saharan African countries (excluding South Africa)<sup>104</sup>. A comprehensive exploration of the barriers and potential for carbon market finance for CSA in Sub-Saharan Africa is covered in the report **Agricultural carbon markets: opportunities and challenges for Sub-Saharan Africa**, also produced as part of the Climate-Smart Agriculture in Africa project.

<sup>98</sup> For further information on the agricultural carbon markets, refer to: PwC 2011. *Agricultural carbon markets: Opportunities and challenges for Sub-Saharan Africa*.

<sup>99</sup> IFPRI 2008. *Global Carbon Markets: Are There Opportunities for Sub-Saharan Africa?* <http://www.ifpri.org/publication/global-carbon-markets>

<sup>100</sup> The average price per tCO<sub>2</sub>e in the voluntary carbon market during 2010 was around \$6. Bloomberg New Energy Finance, *Ecosystem Marketplace, 2011. Back to the Future: State of the Voluntary Carbon Markets 2011. The DEC12 CER price as at 15 April 2012 was around \$5.1/tCO<sub>2</sub>e*.

<sup>101</sup> FAO 2011. 'Climate-Smart' Agriculture: Policies, practices and financing for food security, adaptation and mitigation.

<sup>102</sup> PwC 2011. *Agricultural carbon markets: Opportunities and challenges for Sub-Saharan Africa*.

<sup>103</sup> Smith et al. 2007. *Agriculture. In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*.

<sup>104</sup> PwC 2011. *Agricultural carbon markets: Opportunities and challenges for Sub-Saharan Africa*.

### **Case Study: Kenya Agricultural Carbon Project (KACP)<sup>105</sup>**

#### **Background**

The Kenya Agricultural Carbon Project is being implemented in Kenya to support 60,000 smallholders across a 116,000 hectare project area. The project works with subsistence smallholders, primarily growing maize, to help them adapt to climate change, increase food supply through the application of CSA practices, access markets and information, form farmer organisations, earn carbon revenue, and increase on-farm tree cover.

The project is being implemented by the Swedish Cooperative Centre Vi-Agroforestry, whose primary role is to mobilise farmers into self help groups / associations and to provide extension support in the adoption of CSA practices. Other stakeholders range from research institutions and government ministries to financial service providers and carbon investors. The main focus of the KACP is integrated soil fertility management through a range of CSA practices. The project is supported by the World Bank BioCarbon Fund.

#### **Programme results: food security, improved livelihoods and measured carbon reductions**

In the baseline scenario smallholder farmers primarily grow maize using local seed varieties and without access to either inorganic or organic fertilisers. Crop residues are typically burnt as fuel or used as livestock feed, further depleting the nutritional quality of the soils. Such practices generate average yields of 225 kg per hectare per year. At an average land holding of 0.75 hectares, this is equivalent to 4.8 months of a typical household's subsistence maize requirements. However, the average additional yield benefits above baseline per smallholder achieved through implementation of three CSA packages range from 956 to 2,081 kg maize, providing 20 to 45 months of additional food security.

#### **Critical Success Factors**

- Availability of grant funding - to cover ongoing operating costs as well as the costs associated with carbon project development.
- Quality extension service delivery - has been provided to make farmers technically self sufficient by year 10 with ongoing trainings self provided within the farmer group.
- Farmer organisation – is achieved by mobilisation of farmers into SHGs of between 15-30 members. Farmers are encouraged to share learning through learning methods such as 'study circles' and farmer field schools.
- Technical support from consultants - has been required for the development of a soil carbon methodology, feasibility assessment, baseline quantification, monitoring plan development, project design document preparation



<sup>105</sup> Adapted from: PwC 2011. CSA project value analysis.

# Conclusions

## Key messages

**There is an immediate opportunity to mainstream climate change into all public and private finance for agriculture.** The mapping and analysis in Parts 2, 3 and 4 demonstrates that finance for agriculture (ODA and private finance) is much greater than climate finance for agricultural activities. The most immediate opportunity for scaling up funding for CSA is therefore to ensure that climate change is mainstreamed into all agricultural activities. This is beginning to happen in the bilateral programmes of donors and could be supported by climate finance, using some of the models of public private partnerships detailed below.

**To enable access to a growing amount of climate finance, CSA should be eligible for mitigation, adaptation and REDD+ funding.** Climate finance is a fast growing source of finance that could be used to support CSA, with increasing amounts being pledged by donors and a global commitment to deliver \$100bn a year by 2020. Ensuring that CSA activities are eligible to receive some of this funding will be an important part of scaling up finance in this area. It is unclear how developed countries will choose to deliver this climate finance (GCF), however the Green Climate Fund is likely to be used to channel a significant proportion.

**A specific funding window for CSA under the GCF that recognises the cross-cutting benefits of CSA activities should be considered.** To scale up finance for CSA, it is vital to ensure that CSA activities are eligible to receive funding under both the adaptation and mitigation (including REDD+) funding windows of the GCF. There is also scope for the GCF Board to consider the need for additional funding windows<sup>106</sup> and given that CSA activities are cross-cutting in their contribution to adaptation and mitigation a specific window for CSA should be considered. As private finance and private sector involvement is particularly important for agriculture, it will be important that CSA is also eligible for funding under the GCF private sector facility.

**Public and private finance needs to be integrated to deliver successful CSA activities and scale up delivery of finance.** These key findings above identify what is required at a macro-level to scale up the volume of finance available for CSA activities. However, these alone will not guarantee that greater finance flows to CSA activities on the ground. Successful public private partnerships and the integration of public and private finance to overcome the barriers discussed in Part 1 will be essential to deliver greater volumes of finance and to demonstrate that CSA is a competitive investment compared to other sectors, for donors and the private sector.

The integration of public and private finance is particularly important in overcoming two major barriers to scaling up finance delivered for CSA. The first being the limited scale of public funding which is insufficient to meet the finance need; and the second, the risks associated with financing CSA, particularly at the smallholder level, for private sector capital providers.

## Models that integrate public and private finance

The following section aims to illustrate the ways in which public and private finance can be effectively combined to overcome barriers to scaling-up climate finance in Sub-Saharan Africa. In doing so, it outlines financial and non-financial instruments and models that demonstrate how public and private finance can play a role in creating incentives for the other and contribute to more efficient adoption of CSA practices.

It is important to note that given the more recent emergence of 'climate-smart agriculture' as part of the international agenda, not all of the models and instruments discussed below pertain specifically to CSA.

Rather, they may play a role in sustainable agriculture more broadly.

## Guarantees

Given that agriculture and primary production in particular, are perceived as high-risk, low-return activities, instruments that help spread risk among stakeholders offer capital providers a more attractive platform and business case in which to invest. As demonstrated by the case study on the African Agricultural Capital (AACF) on the following page, a public sector financed guarantee on a private sector loan to an investment fund can be used to make a bank more comfortable in lending to the fund, which in turn can leverage additional equity capital into those funds. Another example of a loan guarantee fund includes AGRA's Innovative Financing Initiative, through which low-interest loans are made available to smallholder associations, agribusinesses, and logistics companies across the small-scale agriculture value chain. Through \$17m in loan guarantees from AGRA and partners, the fund has leveraged \$160m in low-interest loans. These loans can then be used by smallholders or agricultural small and medium sized enterprises (SME) to purchase inputs and equipment.

### Combine private and public finance through...

- Guarantees
- Technical assistance / capacity building
- 'Climate-smarting' investments
- Public-private partnerships

<sup>106</sup> Draft decision -/CPI7. Green Climate Fund – report of the Transitional committee

<sup>107</sup> <http://www.agra-alliance.org/section/work/finance>



# Conclusions

## Technical assistance / capacity building

As discussed in Part 3, regardless of the type of finance (i.e. equity, debt), to incentivise further investment and financing in earlier parts of the value chain (i.e. primary production), significant capacity building is required to raise confidence among investors and financiers that smallholders, farmers with outgrower models, and agribusinesses can absorb and effectively use the capital provided. Funding from philanthropic organisations and the public sector can therein be used to provide resources, extension services, and training in CSA techniques, better business or operating practices, and financial literacy to these beneficiaries.

Public sector finance can also be used to build capacity among lenders and insurance providers through training on agriculture lending. Doing so would enable lenders to more practically assess risks associated with agriculture lending and develop and extend products that are better suited for agriculture.

## 'Climate-smarting' private investments using public sector finance

To maximise the value of limited public sector grant funding, grant funding could be provided to assist private sector investors to incorporate climate change into their investment strategies. Grant finance for 'climate-smarting' investments could be offered in different ways. For example:

- To act as insurance to cover any decreased return to investors as a result of farmers switching to CSA practices (e.g. for first three to five years after switching).
- Providing initial grant support for businesses to establish more climate-smart practices and systems.

## Public-private partnerships (PPP)

Many public sector donors are working with the private sector in a range of ways. Some donors explicitly include private sector involvement as a key funding objective (e.g. DFID), while

others see leverage of private sector funds as essential and pursue it on a project by project basis (USAID, Norway). There are various levels of PPPs but one of the most common models occurs when a donor works closely with private sector partners to identify barriers for private sector engagement in a particular activity, sector or region and then invests in creating an enabling environment that is conducive to private sector investment and activity.

More collaborative partnerships that have been effective are those in which public sector donors partner with private companies to implement specific programmes (e.g. Zambian National Farmers Union mechanised CSA programme, which is supported by Norway, involves a close partnership with John Deere) or in which companies develop new products or services in collaboration with donors in order to meet both of their objectives. By adopting a flexible approach to such arrangements and taking advantage of the strengths of private sector partners, many of these programs have been very successful.

## Examples of successful public-private funding

### African Agriculture Capital Fund (AACF)<sup>108</sup>

Use of guarantees and a technical assistance facility helped reduce risk among the different commercial and social investors.

In 2011, a consortium of commercial and social investors, and a public entity established the \$25m African Agricultural Capital Fund, which aims to invest in agriculture in East Africa. Investors include J.P. Morgan, the Bill & Melinda Gates Foundation, the Gatsby Charitable Foundation, the Rockefeller Foundation, and USAID. AACF has a 10 year fund term, which may be extended for up to two one-year periods subject to specified criteria. It will make equity and quasi-equity investments between \$250,000 and \$2m, with an expected average deal size of \$1m, resulting in approximately 20 investments in total.

The equity investors in the fund were the Gates Foundation, Gatsby Foundation, and the Rockefeller Foundation who collectively invested \$17m. J.P. Morgan provided AACF an \$8m commercial loan. Given the high-risk nature of the early-stage companies in which the fund plans to invest, USAID is supporting J.P. Morgan's loan through a 50% guarantee on the principal of the loan. In addition to the guarantee, USAID is providing a technical assistance package that will consist of business development services for portfolio companies.

This example shows how public funding from USAID was used to support the loan made by J.P. Morgan. In addition, USAID's technical assistance facility will also help build capacity among portfolio companies, which can help the agribusinesses more effectively use the equity capital invested by the fund to scale their operations.

Guarantees

<sup>108</sup> Rockefeller Foundation. Phone Interview. 04 January 2012.; J.P. Morgan. Phone Interview. 19 March 2012.

**Root Capital<sup>109</sup>**

Use of grants for technical assistance and capacity building ensures that producer groups have the capacity to absorb credit provided by Root Capital and implement sustainable and financially viable agricultural practices.

Founded in 2000, Root Capital is a non-profit social investment fund that provides finance, capacity building services, and market access for grassroots businesses in developing countries. The fund provides small-scale producers and producer groups with finance as short-term working capital loans and longer-term investment loans (e.g. for equipment). Grant funding enables Root Capital to provide technical assistance for training in sustainable agriculture practices and financial literacy, which also helps build borrowers' climate resilience. The majority of borrowers in Root Capital's portfolio for instance, practice sustainable agroforestry for crops such as coffee, cocoa, and cashews.

Root Capital raises capital for its fund from foundations, companies, high-net worth individuals, institutional investors, private wealth management companies, and government agencies. It then finances grassroots businesses and producer groups by securing future sales contracts with large international companies such as Starbucks, Marks & Spencer, and Whole Foods. This serves as a form of collateral for Root Capital loans to producers who produce and ship products to buyers. The buyer then pays Root Capital for the goods, which Root Capital channels to the producer group after the loan principal and interest is deducted.<sup>110</sup>

Root Capital has also recently launched an Innovation portfolio which it is using to pilot loans in new areas such as food production for domestic markets and clean and appropriate technology,<sup>111</sup> with the goal of scaling up new credit products that prove successful.

Root Capital's producer groups also benefit from financial education on financial planning, reporting and controls, accounting, managing external credit, and developing and managing internal credit. This enhances their credit worthiness, which makes the producer group as a whole a more attractive cooperative from which to purchase and creates a lower-risk lending opportunity. The financial education is funded through donor capital, which reflects the benefit of having a blended capital structure that supports commercial and development objectives.

**Adaptation for Smallholder Agriculture Programme (IFAD)**

IFAD's ASAP programme offers grants which complement other loans and grants provided to countries, and helps covers the additional cost of implementing 'climate-smart' programmes.

<sup>109</sup> Root Capital. Interview. 13 January 2012.

<sup>110</sup> [http://www.rootcapital.org/what\\_our\\_approach.php](http://www.rootcapital.org/what_our_approach.php)

<sup>111</sup> <http://microfinance.cgap.org/2012/04/16/scaling-climate-smart-agriculture-by-financing-small-and-growing-businesses/>

## **Africa Enterprise Challenge Fund (AECF)**

The Africa Enterprise Challenge Fund is a \$120m private sector fund hosted by AGRA. AECF encourages companies to compete for investment support for innovative business ideas. It is supported by a number of public sector donors including AUSAID, DANIDA, DFID, IFAD, The Netherlands, and Sida. AECF includes an agribusiness window which provides grant and loan funding for businesses seeking to develop and implement new business ideas to enhance smallholder production and livelihoods, develop new markets for agricultural products along the value chain, and increase financial services for people and businesses in rural areas.<sup>112</sup>

## **USAID and Swiss Re partnership**

USAID and Swiss Re are working together in a three year partnership to increase access to market-based insurance products for poor farmers. The partnership is built on the principle that insurance should be market driven and is an important risk management tool for farmers. This will increase farmer access to loans for technology investment and will also provide farmers with greater incentives to make such investments. Each of the partners has distinct roles within this partnership. Having only been announced in October 2011, implementation is still in its very early stages; however, the model will likely be piloted in Latin America before being rolled out more broadly.

The role of USAID within the partnership is to invest in an enabling environment in the regions where the program will be implemented. This involves:

- capacity building for farmers to help them to understand insurance and its role in risk management,
- combining insurance with other risk reduction measures that USAID is implementing,
- designing model insurance contracts to reflect farmers priorities, and
- capacity building of local insurance industry.

Swiss Re would provide technical advice on the design of different insurance instruments, and uses industry contacts and knowledge in return for access to a growing market. This involves:

- making connections with players in the local insurance industry,
- assisting with the capacity building of the local insurance industry,
- pricing different contracts, and
- offering reinsurance, including for much smaller sized contracts than normal.

## **Norway's private sector partnerships**

- The Southern Agricultural Growth Corridor of Tanzania, and the Beria Corridor in Mozambique, supported by Norway and other donors is an example of a different type of partnership with the private sector. In this project Norway has supported the design of the project and partnership model. Donors have agreed to provide capital to an independent Tanzania Catalytic fund that will make funding available in different forms to investors in the corridor, such as to fund last mile infrastructure, loans and matching grants. The knock on effects of private sector growth in this region include more open policy dialogues between the Government of Tanzania and businesses on how to improve the overall policy environment to make it more conducive to business growth.
- Norway's support of the Zambian Farmers Union mechanised CSA programme in Zambia involves a partnership with John Deere (international tractor company) to enable farmers to access a tractor and ripper necessary for adopting CSA practices at scale.
- Other programs involve the use of electronic payment systems using mobile phones, redeemable at agro-dealerships, for services provided by lead farmers. This helps crowd in private sector investment in the area.

<sup>112</sup> <http://www.aecfafrica.org/aaw/>



## Conclusion

A number of innovative public-private partnerships are being implemented by a range of public sector donors and private companies focusing on sustainable or climate-smart agriculture. Many of these are new and emerging and do not have a long record of implementation. It is therefore sensible for a number of different options to be piloted and scaled-up as the more successful models emerge and best practices can be drawn out.

The most successful mechanisms for public-private partnerships to successfully scale-up delivery of finance in this area are context and project specific. From the research and consultations, a general agreement emerged that public sector funding should be used to address investment barriers for the private sector and that the private sector could then play a role in providing the resources, networks, business expertise, and finance necessary to scale-up investment in CSA. Overall, this work has indicated that public finance can contribute to building capacity across the agriculture value chain and create an enabling environment that enables private financiers and investors to identify better investment opportunities.

Scaling up finance for CSA will require a combination of 'climate-smarting' agriculture investments, ensuring CSA is eligible for existing and emerging sources of climate finance, and successful delivery through public-private partnerships to demonstrate success. All these components are integral to the achieving the overall goal of scaling up finance to support scale up of CSA practices in Sub-Saharan Africa to meet the multiple objectives of improving productivity, enhancing the resilience of agriculture to the impacts of climate change and achieving mitigation co-benefits.



# Annex A: Summary of multilateral climate funds potentially relevant to Agriculture

	Description	Size (pledged) (\$)	Secretariat and trustee	Thematic focus	Regional focus	Agriculture eligible?	Agri-culture funded?
Adaptation Fund	Under KP. Financed by 2% levy on CERs issued under CDM.	273.87m	GEF (temp)	Adaptation	No	Yes	Yes
Amazon Fund	Invests in efforts to prevent, monitor and combat deforestation and promote sustainable use of forests in Brazilian Amazon.	1.03bn	BNDES	REDD+	Brazil	Yes if it reduces pressure on forests	No
Congo Basin Forest Fund	Initially funded by UK and Norway.	165m	AfDB	Mitigation	COMIFAC member countries	Yes if it reduces pressure on forests	No
FCPF readiness fund	Focused on preparing countries for REDD+	229.5m	World Bank	REDD+	Tropical Forest countries	Yes if it reduces pressure on forests but not a focus	No
FCPF carbon fund	Remunerating a small no. of countries for achieved emissions reductions from deforestation	204.3m	World Bank	REDD+	Tropical Forest countries	Yes if it reduces pressure on forests	No
Forest Investment Program	One of Strategic Climate Funds, aims to mobilise significantly increased funds for REDD+	599m	World Bank	REDD+	Tropical Forest countries	Yes if it reduces pressure on forests but not a focus	No
GEF Trust Fund (Climate Change)	Climate change is one of 6 focal areas supported by the GEF Trust Fund. Objective is to help developing countries and economies in transition to contribute to the overall objective of the UNFCCC.	1.03bn (2006-2010) 1.14bn (2010-2014)	GEF	Mitigation, Adaptation	No	Yes	Yes
Global Climate Change Alliance (EU)	Objective is to build an alliance on CC between EU and poor developing countries	226.12m	EuropeAid	Adaptation, REDD+, Mitigation	SIDS and LDCs	Yes	Yes
Indonesia Climate Change Trust Fund	Aims to link international finance sources to national investment strategies. Main mechanism provides grants to line ministries to support climate change related projects within the Government of Indonesia	22m	BAPPENAS (Indonesia National Development Planning Agency)	Mitigation, REDD+, Adaptation	Indonesia	Yes	Yes
Least Developed Countries Fund	Focused on preparation and implementation of NAPAs	414.95m	GEF	Adaptation	LDCs	Yes	Yes
Pilot Program for Climate Resilience	Focus on integrating consideration of climate resilience in national development planning	982 m	World Bank	Adaptation	SIDS and LDCs	Yes	Yes
Special Climate Change Fund	Objective is to implement long-term adaptation measures that increase the resilience of national development sectors to climate change impacts. Technology transfer and capacity building also important goal.	216.55m	GEF	Adaptation	No	Yes	Yes
UN-REDD	Supports the capacity of national governments to prepare and implement national REDD+ strategies with the involvement of all stakeholders	119.66m	UNDP	REDD+	Country programmes in 14 countries (Bolivia, Cambodia, DRC, Ecuador, Indonesia, Nigeria, Panama, PNG, Paraguay, the Philippines, Solomon Islands, Tanzania, Vietnam and Zambia)	Yes if contributed to reduced pressure on forests	No

Source: Climate Funds Update, GCCA. [http://www.gcca.eu/pages/41\\_2-GCCA-Beneficiaries.html](http://www.gcca.eu/pages/41_2-GCCA-Beneficiaries.html)



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## *Annex B: Interview List*

- USAID (HQ and Ethiopia office)
- DFID
- Norway
- Bill & Melinda Gates Foundation
- World Bank
- IFAD
- FAO
- J.P. Morgan
- AgDevCo
- Root Capital
- African Agricultural Capital Fund (AACF)
- Lion's Head Global Partners











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