

Making agribusiness climate smart

How developing a climate change response strategy can reduce business risks and improve the bottom line.

The changing climate

The global climate is already changing. Temperatures have risen by an average of approximately 0.7 degree centigrade since 1900¹, and there has been an increase in the frequency and intensity of heavy rainfall events². Changes in seasonal rainfall patterns disrupt business operations and impact crop yields³. The effect of this is being felt by a range of businesses including agribusinesses, where impacts both on farm and through smallholder supply chains can be significant. With climate models predicting further warming (by as much as 2-5 degrees centigrade by 2050)⁴, increased irregularity in seasons and a general drying of conditions in the region, these types of physical impacts are set to get worse.

Climate change present two main challenges to business:

Adaptation: Businesses need to identify and implement strategies to respond to and take advantage of the consequences of climate change.

Mitigation: Businesses need to reduce emissions of greenhouse gases (GHGs) to tackle the causes of climate change and prevent further global warming.



Developing a climate change strategy is an important task for all businesses, particularly in the agriculture sector.

Climate change related impacts have the potential to destroy value or to create it if managed carefully. However, considering the full range of climate change impacts and formulating a strategic response can be complex; prioritising adaptation versus mitigation actions and identifying win-win opportunities are not straightforward tasks.

This document provides an introduction to the key issues agribusinesses should consider in the context of climate change. It also outlines the Climate Change Strategy Development Framework (CCSDF) - a user-friendly tool to support decision-making - and it summarises the initial outcomes from adoption of the CCSDF by agribusinesses in Malawi and Zambia.

It is based on work carried out in Malawi and Zambia by a team from PricewaterhouseCoopers, supported by the Business Innovation Facility.

It will be useful for business and practitioners in agriculture and other sectors trying to understand climate change risks and opportunities.

This document was created by Jack Steege, Kieron Blakemore, Dan Hamza-Goodacre, Kristy Graham and Jenny McCraight of PricewaterhouseCoopers who were part of the team that ran the workshops, worked with individual companies and created the CCSDF tool.

¹ IPCC.2007

² IPCC.2007

³ Maddison et al. 2007. *The impact of climate change on Africa agriculture*. WB Development Research Group, Policy research working paper 4306

⁴ Nelson et al .2009. *Climate change: impacts on agriculture and costs of adaptation*. IFPRI Food Policy Report

The Climate Change Strategy Development Framework (CCSDF)

In order to overcome these challenges and help small and medium sized enterprises (SMEs) to integrate consideration of climate change into their business strategies so that they can become more resilient to change, we have developed the Climate Change Strategy Development Framework (CCSDF), a user friendly excel based decision support tool. The CCSDF was taken to a range of agri-businesses in Malawi and Zambia through workshops and consultations. The CCSDF, and responses from businesses using it, are detailed in this document.

Workshops and consultations

In collaboration with the Business Innovation Facility teams in Malawi and Zambia, PwC held workshops and one-to-one consultations with businesses supported by the Facility in both countries. These events, which involved approximately 35 participants, aimed to help agri-businesses in Malawi and Zambia understand what climate change could mean for their business and to help them respond in a way that maximises the opportunities and minimises the risks. The team provided an overview of climate impacts, business responses and sources of support, and supported them in developing high level climate change strategies using the CCSDF. An outline of the approach is shown in Figure 1 below.

Figure 1. Approach to the project



Feedback obtained from the workshops and consultations showed that 74% of participants felt that the events confirmed or improved their understanding of the potential adaptation and mitigation measures available for their business. The vast majority of participants (85%) also thought that the events provided them with practical advice and tools with which to develop their own climate change strategy. A significant proportion of participants (88%) found the CCSDF a useful tool and 59% of participants thought that they would not have been able to develop their own climate change strategy without the input and tools from the events. Only 22% of workshop participants felt they already understood the risks from climate change, whereas 64% had an improved understanding of how climate change risks could impact their business after participation.

A high number of participants, including non-business representatives, specified that they would be using the CCSDF in some way to help develop their own strategy. Many of these participants work with smallholder farmers in Sub-Saharan Africa, through their supply chains and/or customer base. These smallholders are particularly at risk from climate change impacts. The implementation of appropriate climate change strategies that take smallholder needs into consideration can improve their livelihoods by increasing productivity and resilience to climate impacts.

The demand for Climate Smart Agriculture (CSA) related support

In 2011 PwC, with support from the Rockefeller Foundation, delivered two multi-stakeholder workshops on climate-smart agriculture in Sub-Saharan Africa (Nairobi & Lilongwe)⁵. These events highlighted significant demand from the private sector for further information and support on the topic of CSA; including information on the impacts of climate change and sources of finance for climate-smart agriculture projects.

This work was one of the drivers for the development of this project and the workshop outcomes were used as a starting point for development of tools and resources. shops and one-to-one consultations with the Business Innovation Facility.

Climate change impacts: why agribusinesses should care

The effects of climate change are already being felt by the agri-business community; either directly, for example through changing growing conditions, or indirectly, for example as a result of the changing policy environment or supply chain trends. As the climate continues to change, all sectors of the economy will encounter new threats and opportunities. Agriculture, a sector upon which Malawi and Zambia significantly depend, is likely to be the most impacted by climate change, especially where large smallholder populations with limited coping capacity exist.

⁵ <http://www.ukmediacentre.pwc.com/News-Releases/New-research-examines-how-to-put-climate-finance-to-work-for-70m-smallholders-in-Sub-Saharan-Africa-116e.aspx>

The physical impacts of climate change

The physical impacts of climate change will have repercussions for day to day business activities:

- Market conditions can change, for example reduced crop yields can impact market prices, while demand may increase for climate resilient products.
- Climate change can impact process and operations, for example through damage to products, stock and raw materials stored in areas susceptible to severe weather events.
- Businesses premises and logistical operations may also be impacted, for example extreme weather events such as flooding may impact processing plants, or make transport routes impassable.
- Climate change can also impact people, for example a greater frequency of heat waves may reduce worker productivity, while smallholder customers may have reduced purchasing power as their own yields suffer.
- Financial impacts could include increased cost of insurance or new sources of climate finance, for example through carbon markets.

All of this can impact a business's bottom line. Developing a comprehensive climate change strategy not only ensures businesses are positioned to respond to the increased risks of climate change, but also to take advantage of the opportunities as they arise. Businesses that sideline the issue of climate change risk their profitability, reputation and competitive advantage.

Climate-smart agribusiness project: the approach

1. Research & engagement

The project team reviewed existing good practice guidance for developing adaptation and mitigation strategies from a range of sources⁶. PwC and local Business Innovation Facility offices also began engaging with agri-businesses in Malawi and Zambia to gain an insight into the needs of these businesses and to understand the level of interest for workshops and one-to-one consultations.

Case Study: How are businesses responding to climate change – Sun International

Sun International operations include resorts, luxury hotel products, and casinos, across 27 destinations in Africa and South America. They are already seeking to respond to the climate change agenda and one of their key sustainability strategies is to promote socioeconomic development in the communities in which the group operates. Since 2004, Sun International Zambia Ltd has actively worked with smallholder farmers within their supply chains to introduce a set of climate smart interventions.

Sun Hotels, in partnership with Agribusiness in Sustainable Natural African Plant Products (ASNAPP), established a local produce sourcing programme, mainly for fruit and vegetables, from 400 small scale farmers in Livingstone. The farmers are organized into a network of satellite community farmer groups located near Sun International owned hotels. The produce purchased includes vegetables, fruits and meats and is of sufficient quality to use in 5* hotels. The Hotel and ASNAPP with the assistance of Rutgers University and USAID Hort CRSP have established a seedling propagation facility near Livingstone, which provides member farmers with seedlings. The programme has grown into a half billion Kwacha (approximately US\$100,000) per month since inception. Farmers last year earned \$1,008,000 between them (\$2,500 on average) from their produce.

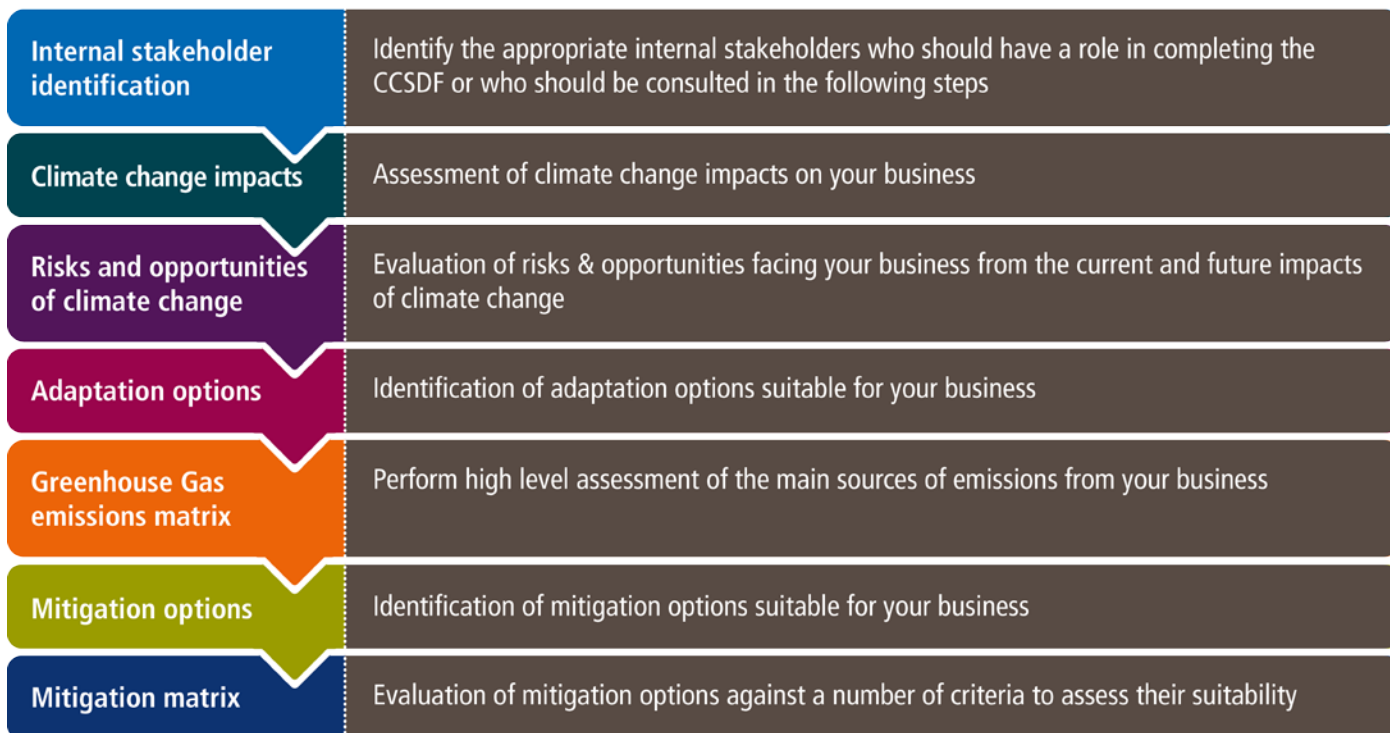
The local sourcing programme provides security of supply for Sun Hotels in the face of climate change risks and enhances their reputation and license to operate in the region. It is also considerably cheaper than importing produce from neighbouring countries or sourcing from Lusaka. One of the main challenges for Sun International is finding financial stakeholders or partners to help roll out these programs/projects on a larger scale.

⁶ UKCIP, the Climate Change Knowledge Network (CCKN), the United Nations Environment Programme, The World Business Council for Sustainable Development (WBCSD), the World Bank, The Department for Environment, Food and Rural Affairs (Defra), the Intergovernmental Panel on Climate Change (IPCC), the World Resources Institute (WRI), the United States Agency for International Development (USAID) and the GHG protocol

2. Creating the climate change development framework

The objective of this tool is to support SMEs to become more resilient to climate change and to help them reduce emissions. The CCSDf has been developed for use in conjunction with workshops and consultations; these sessions provide businesses with an overview of the climate change impacts, risks and opportunities that could be relevant to their business which allows them to make informed decisions when using the CCSDf. The framework is a user friendly excel based tool which is supported by a straightforward guidance document. The framework guides the user through an 8 step process. Step 1 asks the business to identify key stakeholders required in formulation of the strategy. Steps 2-3 ask users to consider climate change impacts and associated risks and opportunities. Steps 4-8 allow users to identify and prioritise adaptation and mitigation responses. The output of the framework is an auto populated high level strategy document which will address the mitigation and adaptation aspects of climate change. The 8 steps of the CCSDf are illustrated in figure 2 below.

Figure 2. Steps in the CCSDf



3. Workshops in Malawi and Zambia

Regional workshops were held in Blantyre, Malawi and Lusaka, Zambia. The workshops provided local agribusinesses with an overview of climate change impacts and provided case study examples of climate change strategies being adopted by both global and local businesses. The workshops also provided an opportunity to familiarise participants with use of the CCSDf; and to provide an overview of different sources of finance and support available for the implementation of their strategies.

Feedback from participants indicated that information about sources of finance had been extremely valuable. A brief overview of information that was provided during the workshop on the potential sources of finance to support implementation of mitigation and adaptation responses by businesses is included below:

- **Donor finance:** As of December 2011, Sub-Saharan Africa had received USD 379 million of donor 'fast start' climate finance for adaptation. To date opportunities for the private sector to access this finance directly has been limited, but donors are increasingly considering private sector eligibility for donor finance, and even designing private sector specific programmes of support e.g. African Enterprise Challenge Fund (Agribusiness funding window)⁷.
- **Carbon Markets:** Recent unfavourable market conditions and the complexity of the project development process present challenges for businesses trying to obtain finance for mitigation activities from carbon markets. However, a mid-term opportunity may arise for businesses in Malawi and Zambia due to changes to the EU Emission Trading System rules which will only allow credits

⁷ http://www.aecfafrica.org/index.php?option=com_content&view=article&id=15&Itemid=31

originating from CDM projects registered post 2012, which are located in LDCs. In the short term voluntary carbon market opportunities remain.

- **Private sector:** Agribusinesses have traditionally obtained finance from the private sector, African focused investment funds have increased in recent years; such as the African Agricultural Fund which was launched last year and aims to provide USD 25 million of investment in agribusiness SMEs.

There are four broad steps a business can take to access climate finance. Firstly they can use the Climate Change Strategy Development Framework (CCSDF) to understand the risks and opportunities climate change represents to their business. Secondly they should prioritise a set of responses. They should then evaluate these responses against the priorities and requirements of the different sources of climate finance. Finally, they should be proactive in engaging with potential funders (public and private sector) and sharing innovative ideas as to the role their business can play in responding to the climate change challenge.

4. One-to-one consultations

In addition to the workshops, one-to-one consultations were held with three businesses in both countries. The consultations provided an opportunity for businesses to start applying the CCSDF, and start considering the applicability of different sources of climate finance, in the context of their own business.

5. Feedback

During the workshops and one-to-one consultations, participants were asked to complete feedback questionnaires which included questions about the workshops, consultations and the CCSDF. The feedback on the CCSDF has been used to improve the tool before it is made publicly available and feedback on the workshops and consultations has been incorporated into the results section below and will be used to inform and improve future work in this area.

Results: outcomes and lessons learned

- Managing climate change is about improving risk resilience, and/or compliance with regulatory and/or supply chain requirements, reducing costs and increasing productivity and revenues. Developing an appropriate climate change mitigation or adaptation strategy can not only reduce external business risks it can also result in significant benefits to businesses such as increased competitiveness, increased access to finance, the ability to diversify products and services to meet market needs and ensuring security of supply. Climate change strategies can also help businesses respond to a changing business, regulatory (and biophysical) environment strategically and improve operational efficiencies resulting in cost savings.
- Businesses are already undertaking activities that have a positive climate change adaptation or mitigation benefit without realising it. To realise the full benefits from these activities, businesses need to harness and scale up existing solutions and ensure that activities are mainstreamed into day-to-day business operations.
- Climate finance is not a closed door to the private sector; there are a number of finance opportunities available through carbon markets, donor finance and private sector investment funds. Businesses need to be innovative and proactive in taking ideas to donors and investors.
- Non-business representatives are also interested in developing and improving their climate change strategies.
- Lack of finance is seen as the main barrier to action on climate change, however a lack of buy in from management or colleagues is also considered to be a key barrier which needs to be addressed through obtaining senior level approval of climate change strategies and ensuring that actions on climate change are communicated throughout the business.
- There is clearly demand for additional support in this area as 78% of participants felt that they need further support in developing a climate change strategy. The three most critical topics where further support is needed is in finding adaptation solutions for business, learning about sources of support and finance and implementing climate change strategies.

“I learnt that climate change can affect any organisation and that it’s possible to plan for eventualities related to Climate Change”

Commitments from businesses attending the workshop:

We asked workshop participants to outline key commitments that they would implement following the workshop. These commitments included the following:

- Work with smallholders to support adoption of CSA practices to enhance security of supply
- Explore opportunities for climate relevant products such as drought tolerant seed varieties
- Explore win-win renewable energy solutions, reducing dependence on unreliable electricity supply through the national grid, reducing operational costs, and looking for opportunities to secure carbon market finance through the Clean Development Mechanism (CDM).
- Hold meeting with all staff members to inform them of issues related to climate change and to generate response strategies
- Integrate CCSDf into wider operational risk assessment of the company.

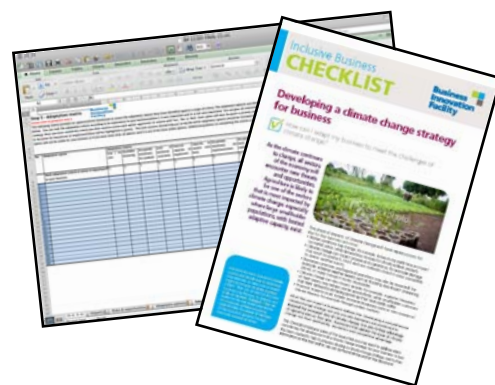
Further information

Additional resources: (with links)

The CCSDf tool and accompanying guidance note are available on the Practitioner Hub.

<http://businessinnovationfacility.org/forum/topics/climate-change-strategy-development-framework>

Also available is a Checklist: Developing a climate change strategy for business. <http://bit.ly/checklist-climate-strategy>



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PwC has the largest Sustainability and Climate Change (S&CC) practice of the Big Four and in 2011 won Consultancy of the Year at the Business Green Leaders Awards. With a global network of 700 people and a team of more than 100 specialists in the UK, it is a leading advisor on sustainability, climate change and green growth.

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Project resources are materials which have been produced during support from the Business Innovation Facility team to a specific inclusive business project. They include inputs provided as part of technical assistance and summaries of findings and outputs. They are adapted for wider use so that other practitioners can also make use of the material.