



**Summary Paper**  
**VC 5: Environmental and Sustainability Issues**  
**October 13<sup>th</sup> 2010**

## **Introduction**

Five countries took part in the video conference (VC) on October 13<sup>th</sup> 2010; Kenya, Madagascar, Mozambique, Uganda and Zambia, along with a representative from COMESA. The first section of this short summary paper will introduce the context of the VC and the main issues presented in the issue paper produced by the expert on the subject. The second section will consider the current situations and challenges of each country as discussed during the offline national discussions and in the country National Position Papers. Section three will consider the future directions to be considered in regard to increasing regional trade. Finally, section five will conclude.

## **Context**

Much of the recent literature projects that 'agricultural production ... is severely compromised by climate variability and change. The area suitable for agriculture, the length of growing seasons and yield potential, particularly along the margins of semi arid and arid areas, are expected to decrease.'<sup>1</sup> The potential impacts on international trade, markets and investments are even less clear to project. There are fundamental links between agriculture, poverty reduction and dependence of the agricultural sector on climate. There needs to be far greater understanding of how agricultural policies and climate change are connected. Climate change alters the feasibility of different types of agricultural crops, as well as the level of production. Mostly, it increases the level of risk for agricultural production, thus affecting more smallholders who have already low risk management skills and means, and high value agriculture that is financially more risky by definition. The Comprehensive Assessment of Water Management in Agriculture concluded that there is sufficient land and water for population needs until 2050 but wise decisions need to be made about the allocation and management of water<sup>2</sup>.

Adaptation could take forms including new crops and new varieties, farming technologies and investments in water security via market mechanisms although markets are not considered to lead to efficient adaptation in many cases. Insurance mechanisms through markets or public private partnerships are likely to become more important. For small scale farmers to adapt to the impacts of climate change there will need to be increased access to knowledge and information. In regard to non-aid policies, carbon levies - a "'polluter pays' principle"<sup>3</sup> has been put forward as well as the increasingly popular carbon credits which would enable developing countries to use or sell some of their excess

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<sup>1</sup> IPCC 2007 – 'Summary of Policymakers. Working Group II Climate Change 2007: Climate Change Impacts, Adaptation and Vulnerability'. IPCC, Geneva

<sup>2</sup> VC 5 Issue paper – NRI (2010)

<sup>3</sup> Ludi et al 2007 – 'Climate change and agriculture: Agricultural trade, markets and investment Draft'. ODI, UK



ecological space. Carbon labeling is also being explored as a possible mechanism for the reduction of greenhouse gas emission by private actors. Including low income countries into these mechanisms may offer important opportunities for reductions due to favorable climatic conditions and current use of low energy intensive production techniques<sup>4</sup>. Geographical location is often used, but a poor proxy for, overall emission. Favorable production conditions may offset the disadvantage posed by the distance transported.

Another concern in the area of environment and sustainability issues is that of changing consumer preferences, such as 'food miles' – the environmental costs of transporting agricultural products from developing countries to those in the North. Although this is often a consumer perception issue more than anything else as air-freight of fresh fruits and vegetables accounted for less than 0.1% of total UK carbon emission in 2006.<sup>5</sup> As well as being a limited indicator of environmental impact, 'food miles' does not take into account social and economic benefits associated with trade in food for developing countries. The realities of air freighting and annual CO<sub>2</sub> emissions show that Sub Saharan Africa (SSA) countries have extensive reserves of ecological space compared to the countries that they export to. Linked to this is the increasingly urgent issue of competition for water (in particular in urbanizing areas) and concepts such as 'virtual water'<sup>6</sup>; the water used for producing export commodities can be significant and contribute to changes in regional water systems.

### **Current national situations and challenges**

#### *Kenya*

Kenyan horticulture is poised to suffer extreme negative effects due to climate change, mainly due to limited natural resources (water, forest), inaccessibility and probably low affordability of advanced technologies necessary for coping. Furthermore, the new focus on food miles will affect the 6.5 million people who rely on the export of horticulture crops to Europe and America for their livelihoods. However, the National Position Paper (NPP) states that the potentially most catastrophic effect is the prevalence of emerging pests and diseases which limits crop production and affects its quality. The NPP estimates that the horticulture industry could lose in excess of \$1 billion annually due to food miles<sup>7</sup>.

#### *Madagascar*

Madagascar has recognised the problem posed by climate change and the NPP shows them to be putting in place various structures to deal with the effects. This includes through policy and national

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<sup>4</sup> Brenton et al 2008 – 'Carbon Labelling [sic] and Low Income Country Exports: An Issues Paper'

<sup>5</sup> MacGregor & Vorley 2006 – 'Fair Miles? The concept of "food miles" through a sustainable development lens'. IIED Sustainable Development Opinion, IIED Sustainable Development Opinion

<sup>6</sup> Virtual water is the total green and blue water used in the production of a crop or the process of a given product (SIWI, 2005) quoted in Orr et al 2006 – 'Virtual water: a case study of green beans and flowers exported to the UK from Africa', Fresh Insights Number 3

<sup>7</sup> National Position Paper Kenya – Page 3



programs, such as their signature to the Kyoto Protocol, and various national plans and programs and university courses and research institutes dedicated to climate change. The government has also clearly made this an area of focus, demonstrated by actions such as the seminar on climate change adaptation in August 2010.

The NPP states that there is clear evidence that climate change is taking place, through increased temperatures for example and change in rainfall patterns. However, it is felt that climate change will be considered and focused on as any business issue and dealt with through changes in investment planning, financial planning, process and operational managements, product positioning and branding and pricing strategies.

### *Mozambique*

Mozambique, whether linked to climate change or not which has not been statistically proven as yet, suffers from extreme weather conditions in the form of floods, droughts and storms including tropical cyclones. As well as action in extreme weather and natural disasters, Mozambique has set up organizations and programs to deal with climate change. This is being spearheaded on the public sector/ government side by the Ministry of Environment which has set up an inter-institutional group and established a national action plan for adaptation. Mozambique has also signed up to the Kyoto Protocol and United Nations Framework Convention on Climate Change (UNFCCC). As in many of the other countries, there are also university courses and research institutes devoted to the issue. The NPP points out the low level of regional coordination that exists although does mention the Netherlands Climate Assistance Program.

### *Uganda*

The NPP for Uganda admits that Uganda is generally considered to be unprepared for the risks posed by climate change. However, in response to this, the Government of Uganda has established a Climate Change Unit and a plan for national adaptation. A national focal point has also been established in the Department of Meteorology in the Ministry of Water and Environment and amendments have been made to the Poverty Eradication Action Plan due to perceived rising importance of climate change. There are also two strong horticulture courses and national universities which touch on issues related to climate change.

The Uganda NPP was the only one to mention the move towards carbon credit dealing and carbon sequestration projects as a possible means to provide financial assistance for biodiversity conservation. A specific example of the project in Mbale was discussed for its involvement of the UNDP, UNEP and networks of regional governments through the Territorial Approach to Climate Change<sup>8</sup>.

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<sup>8</sup> National Position Paper Uganda – Page 4



## *Zambia*

The challenges faced by Zambia as a result of climate change are large but not well described. While there is evidence that climate variability has a large impact on development in Zambia there is no concrete data on environmental and sustainability issues of horticulture production and marketing. There is also no national institution that addresses these issues, although in 2009, the Government of Zambia established the Climate Change Facilitation Unit and is a signatory to the UNFCCC. The University of Zambia also offers a course in natural resources management. Zambia has also had a great deal of input from UNDP in the form of encouragement to sign up to the Clean Development Mechanism to enter the international carbon market, allocation of grants to NGOs and community based organizations and awareness-raising activities. They also take part in the few regional climate change adaptation programs available to them, as listed in the NPP<sup>9</sup>, albeit mostly focused on drought and weather monitoring.

### **Future directions**

After the online session, the countries continue with offline discussions partly guided by the online discussions. For this VC, as well as post-VC papers on the offline discussions some countries produced log-frames with an indication of what future steps/activities are required while others provided recommendations.

### *National level*

Many countries called for a regional approach to the issue, as discussed in the next section. However, for this to be successful it is important that the national 'base' in regard to this issue is strongly established and representative of all stakeholders. Although such a base is lacking in many countries, positively many of the discussions also focused on this. Zambia, for instance, does not have a national institution mandated with creating and maintaining the national position on climate change. In the countries where there is a good foundation, discussion revolved around the importance of continued active and engaged participation in the regional level discussions. Madagascar for instance included the need to improve their visibility in their log frame for the way forward. This would enable them to be an active part of the regional and international networks that tackle this issue and increase their knowledge through exchange and distance learning. Given that this is relatively new area of concern and focus there is a need for countries to draw up policies that address climate change. Zambia brought up the crucial need for donor financing in the creation of National Adaptation Place of Action to climate change.

As always communication was brought up as an important point and Madagascar mentioned the need to formalize their attempted creation of a task force particularly to aid communication with the local communities and different stakeholders. Many of the countries brought up the possibility of tax

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<sup>9</sup> National Position Paper Zambia – Page 6



exemptions/ lower tax rates for agricultural equipment as well as measures such as appropriate credits for smallholders' investments. Public awareness was also mentioned, particularly by Uganda who aims to promote adoption of practices to improve access to water for production.

In Mozambique the opportunity was put forward to encourage students at the national university to begin research into the subject of climate change to better country-specific knowledge on the issue. Mozambique and Kenya also talked about the role of Public Private Partnerships on environmental issues in the horticultural sector which has provided important inputs into measures to combat climate change in the countries. An interesting point was raised by Uganda, where a lot of success has been seen in the use of organic agricultural practices as these have been seen to be 'climate smart'<sup>10</sup> and present opportunities for African produce to Europe. Local crops and varieties that are bred and selected within the local environment will be the ones most likely to withstand climate change. This means that great needs rely on increased technology within countries in vegetable breeding programs and fruit tree nurseries.

#### *Regional level*

As always there was a call across all the countries for the need to address the issue as a region in regard to productivity, competitiveness and technology up-take, utilization and transfer. Kenya discussed the importance of continued participation in carbon and water footprint standards in the region to develop a regional position, particularly for negotiation purposes. COMESA logically noted the importance of the role of regional stakeholders in responding to climate change; COMESA, the EAC, and SADC together. As with almost every issue in SSA it was acknowledged that there is a lack of data available at any level to better advocate and stronger lobby. There is an urgent need to harmonize the responses for the region as a whole.

#### **Conclusion**

The aim of the EU AAACP seminars is to bring together several different countries and allow them to share experiences, learn from and talk to each other. As with all of the other VCs, one of the main and prevailing messages is about the importance of a regional approach to the issues, and climate change/the environment is not different. Given the relatively recent development of climate change as an issue of national, and international, importance there appears to still be little in the way of concrete suggestions and discussions about the way forward at a regional level. However, there is acknowledgement that all countries have a role to play in the establishment of this regional platform. Perhaps given the early stages of national and regional understanding of the situation, an excellent opportunity exists to put the necessary regional structure for dealing with the issue in place before countries have a chance to put their national 'stamp' on policies which may cause countries to be pulling in different directions?

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<sup>10</sup> Zambia Post-VC Report – Page 3



## **Bibliography**

NRI (2010) – Working Paper to support an Interactive Seminar on Environment and Sustainability in the High Value Agriculture Sector in Africa

National Position Papers for Kenya, Madagascar, Mozambique, Uganda and Zambia

Post-VC reports for Kenya, Madagascar, Mozambique, Uganda and Zambia

## **Annex 1 – Participants in VC5**