



Environmental and Sustainability Issues



**Eastern and Southern African Video
Conference on High Value Horticulture**

October 13th, 2010

Present Status of environmental impact and sustainability measurements for horticulture

- **Intense and frequent climatic disasters in Mozambique: floods, droughts, storms, including tropical cyclone**
 - Impact on populations and agricultural/horticultural production
- **Droughts in Mozambique, since 1980:**
 - 2002: 43 districts affected in the South and Centre
 - 1999: 1 million people affected
 - 1997: 8.000 people affected in Inhambanne
 - 1994-1995: 1.5 millions people affected in the North and South. Shortages of drinking water and outbreak of cholera
 - 1991-1993: 1.32 millions people affected. Shortage of drinking water
 - 1983-1984: Most part of the country affected, cholera
 - 1981-1983: 2.46 millions people affected in the South and Centre
 - 1980: 60.000 people affected in the South and Centre

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- Tropical ciclones, Mozambican costline:

Year	People Affected	Death
1984	350.000	109
1998	90.000	100
1994	900.000	52
1996	200.000	11
1997	80.000	87
2000	650.000	700 deaths in floods partly caused by the ciclones
2000	650.000	
2000	11.000	

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- Floods in Mozambique, since 1980:

Year	Description
2001	Rio Zambeze, 115 deaths, 500.000 people affected
2000	Rio Limpopo, Maputo, Umbeluzi, Incomati, Buzi e Save. 640 deaths 2 millions people affected. Worst floods in the last 150 years
1999	Sofala e Inhambane. National road closed for 2 weeks. 100 deaths and 300.000 people affected.
1997	Buzi, Púngue e Zambézia. 78 deaths. 300.000 people affected
1996	All the Southern rivers. 200.000 people affected
1985	9 rivers in the Southern provinces. Worst floods in 50 years after 4 years of droughts. 500.000 people affected
1981	Rio Limpopo, 500.000 people affected

Present Status of environmental impact and sustainability measurements for horticulture

- **Floods, droughts, and ciclones impact on horticultural production:**
 - Land unavailable after a climate disaster
 - Access to main road may be cut
 - Decrease in land quality/productivity
 - Water shortages (for the population, and for production)
 - Reduce the investment capacity of the population
- Lack of data on the impact of climatic shocks on production
- But studies exist: e.g. WB Study (2006): Regression Analyses:
 - Rainfalls and Climatic Shocks both have a negative impact on smallholder maize production
 - Droughts of 2001-2002 have had a negative impact on rural crop income

Present Status of environmental impact and sustainability measurements for horticulture

National Organization apparatus:

- MICOA – Ministry of Environment:

Organization of an inter-institutional Group: “NAPA TEAM” – National action plan for adapting to climate change: 4 actions to reduce the impact of climate change:

- Strengthening of preventive alert
 - Strengthening the capacity of agrarian producers to answer to climate change
 - Decreasing of the impacts of climate change on the cost area
 - Management of water resources
- United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol

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National programs to enhance adaptation to climate change

- MINAG- PRO-HORTA: Recovery Program for the Horticulture Production:
Installation of: Greenhouses, a wholesale market place, cold rooms
- Programme of Urban Horticulture:
 - Horticultural production during the whole year
 - Packing house subsidised by the Government and cooperation partners in collaboration with the association of producers
- University/Research Institute: UEM and IIAM

Present management of climate change impact on horticulture

Measures taken at the national level:

- Strategic Plan for the Environment for 2005-2015: land degradation (erosion, loss of fertility, soils salinization), pollution (air and water), etc
- The Government has adopted and implemented policies, strategies and development programs that includes considerations on climate change:
 - Plan of management for natural disaster (Plano Director de Gestão de Calamidades Naturais)
 - National action plan for adapting to climate change (Plano de Acção Nacional para Adaptação às Mudanças Climáticas)

Present management of climate change impact on horticulture

- **AdHoc Committee: Horticulture Task Force:**
 - Public Sector(MINAG, MIC, IPEX, INNOQ)
 - Private Sector
 - ONGs and Cooperation partners(FAO, USAID, EU, UNIDO, ITC, TECHONOSERVE, SNV)
 - University (UEM)
- **Financial support to Horticulture:**
 - GOVERNO/MINAG-AGRA
 - USAID (Revolving Fund)
 - Netherlands Climate Assistance Program - NCAP (Revision, preparation, formulation and implementation of policies)
 - UNDP (Support fund for the reduction of desaster)

On going strategy at regional level

- Low level of regional coordination focusing on issues of climate change s impact on horticulture
- At the international level, MICOA works in collaboration with the Netherlands Climate Assistance Program – NCAP; which is also involved in: Bangladesh, Bhutan, Bolivia, Colombia, Ghana, Guatemala, Mali, Mongolia, Senegal, Suriname, Tanzania, Vietnam, Yemen

**Thank You for
your attention;**

Obrigado