

CLIMATE CHANGE

The **TIME** to **ACT** is **NOW!**

October 2007



Background

Around the world, the climate is changing. Average global temperatures are rising - the 20th century was the warmest the world has seen in 1,000 years, and the 1980s and 1990s were the warmest decades on record. Most of the warming over the past 50 years is attributable to the increase in greenhouse gas emissions associated with human activities. The increase in green gas emissions is mainly attributed to highly industrialized countries although rudimentary activities like bush burning coupled with mass deforestation are key contributors. According to the Millennium Development Goals (MDG) report 2007 the emissions of carbon dioxide, the primary contributor to global climate change rose from 23 billion metric tons in 1990 to 29 billion metric tons in 2004. Human-induced climate change is a reality. Several countries including Uganda are beginning to experience the effects. Urgent drastic actions are required to reverse the situation.

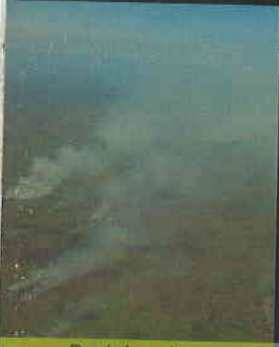
*Climate change
is the greatest
and widest-ranging
market failure
ever seen.*

Sir Nicholas Stern



Develop and Conserve

Main causes of climate change



Bush burning



Pollution from industries



Deforestation

Pollution and bush burning are among the common causes of climate change. The two release a lot of carbon dioxide as a green gas emission into the atmosphere which interferes with the climate.

Highly industrialized countries have made the biggest contribution to climate change, although they are in a better position to deal with the impacts.

The least developed countries (LDCs) like Uganda have had their share of contribution to climate change through activities like bush burning to prepare the ground for farmland. The smoke that is emitted into the atmosphere is mostly carbon dioxide.

Deforestation is another major cause of climate change. Green vegetation is important in sucking carbon dioxide from the air.

Evidence of climate change in Uganda

Floods

In 2007, floods have been common in Bwaise (an urban suburb in Kampala), in the districts of Soroti, Katakwi, Kumi, Lira, parts of West Nile, Bundibugyo, Kapchorwa and Sironko.

Droughts

Climate change manifests itself through increased frequency of droughts. Between 1991 and 2000, Uganda experienced seven droughts in a period of ten years (Phillip Gwage, 2006). The last years have also witnessed an increase in variability in rainfall patterns.

Lowering water levels

Increase in atmospheric temperatures warms up the ground, increasing the rate of evaporation of water from the ground streams. As such the water table keeps getting lower and water sources are drying up. People and livestock have to walk longer distances in search of water which is not even clean in most cases.

Hailstorms

Hailstorms is another evidence of extreme weather events as a result of climate change. An incidence in case happened in February 2007 in parts of western Uganda when property, livestock and crops were destroyed by the hailstorms.

Melting Glaciers

About 83% of the ice cap on Mt Kilimanjaro has melted. The loss due to melting of the ice caps cannot be measured. The glaciers of Rwenzoris Mountains supply clean water to over one million people in the Democratic Republic of Congo and Uganda.

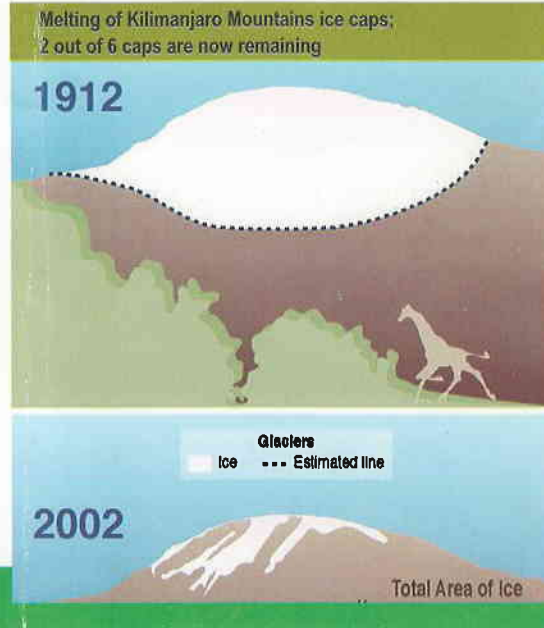
(Phillip Gwage, 2006)



Floods destroying homes and endangering life in Uganda.



Maize crop failure due to drought in Masaka - Uganda.



Some Implications of Climate change

Agriculture and Food security

Uganda's economy is largely dependent on agriculture. Agriculture alone contributes 34.0% of national Gross Domestic Products (GDP) (Uganda Bureau of Statistics, 2006). Currently, most of Uganda's agriculture is rainfed and thus more vulnerable to climatic variations. Animal husbandry is a considerable source of income. It represents 7.5% of the GDP and 17% of the agricultural GDP. However, water scarcity in the cattle corridor reduces productivity and triggers conflict among herders. With declining productivity, food scarcity and a significant reduction in revenue is anticipated.

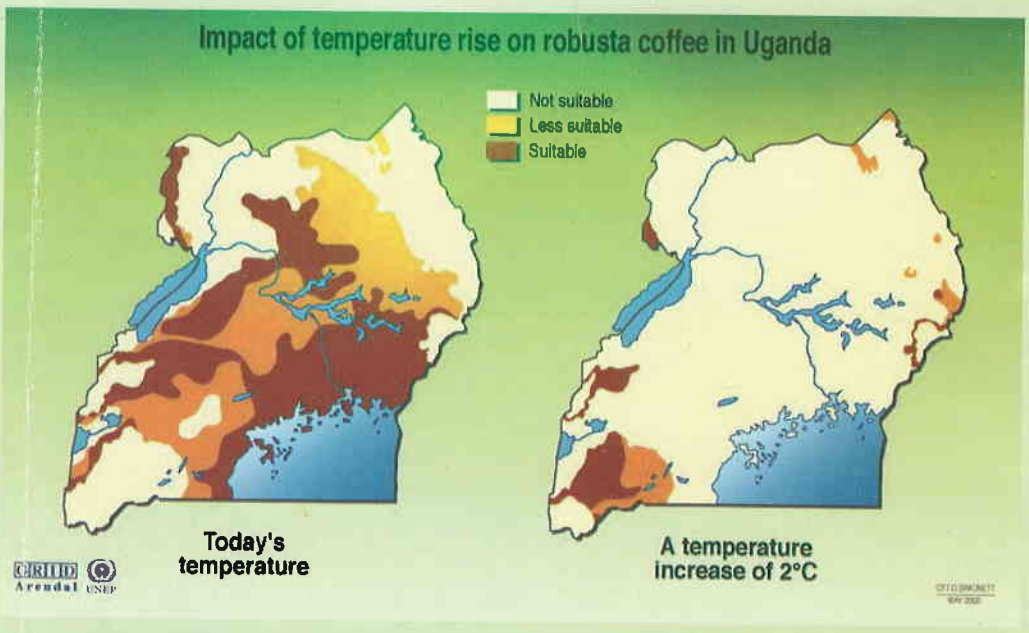
Droughts lower the productive capacity of the country; this increases food prices leading to an unstable macro economy; resulting into inflation, which discourages foreign investment. Low incomes lead to poor health and decreased standard of living.

Health

Climate change increases the incidences of waterborne diseases such as cholera, diahorrea, dysentery and malaria. Statistics from the Ministry of Health indicate that malaria is the leading cause of child morbidity. Approximately 70,000 to 100,000 children in Uganda die every year from malaria. Estimates from the Ministry of Health indicate that the average expenditure on malaria-related treatments are as high as US \$300 million annually and are likely to increase as malaria epidemics emerge in areas where the disease was not known before (UNESCO, Assessing the impacts of climate change in Uganda).

Economic

Heavy rains causes flooding which results in loss of property, lives, income generating opportunities and destruction of infrastructure such as roads, bridges





and houses. This increases prices of commodities and transport costs and government spending to alleviate the effects of the associated disasters.

Social

Some of the social implications of climate change include environmental refugees leading the breakdown of social networks, conflicts as grazing and watering points become scarce among pastoralist communities

and livelihood insecurity.

Environmental refugees are those people who have been forced to leave their traditional habitat, temporarily or permanently because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected their quality of life (Hinnawi 1985:4).

The impacts during the El Nino of 1997-98 in Uganda included the following:

- An estimated 525 people died and over 11,000 were hospitalized and treated for cholera triggered by the El Nino induced floods and land slides;
- An estimated 1,000 people were reported to have died in flood related accidents;
- About 150,000 people were displaced from their homes;
- Damage to trunk and rural infrastructure was estimated at US 400 million;
- In Kapchorwa district about 300 hectares of wheat were destroyed;
- Tea estates were flooded making tea picking difficult;
- Coffee exports dropped by 60% between October and November (disrupted transport system);
- Infiltration of water resources and flooding of some pumping stations (submerging of pumping stations)

Call for Action - ADAPT OR DIE

It is important that the international community, national governments and individuals urgently devise strategies to adapt to the negative impacts of climate change. It is also critical that the states responsible for the high pollution reduce their emissions significantly.

Adaptation involves taking action to minimize the negative impacts of climate change and taking advantage of new opportunities that may arise.

Increasing our capacity to adapt reduces our vulnerability to the effects of climate change. However, we must start planning and initiating our adaptive responses now. By doing so, we may help to lessen some of the environmental, economic and social costs of climate change.

Supportive Efforts at Global Level:

- Under the United Nations Framework Convention on Climate Change (UN FCCC) and the Kyoto Protocol, funds have been created that support preparation of National Adaptation Programmes of Action by Least Developed Countries and more generally the implementation of adaptation activities.
- Authoritative Research and studies to appreciate climate change and draw adaptable strategies is ongoing.
- Explorations for financing for climate change are being undertaken by different governments, corporations, and professional institutions.

The Annual Commonwealth Finance Ministers Meeting has focussed on Climate Change and Poverty Reduction to devise ways of addressing this issue and Commonwealth Civil Society Representatives have made their case at this meeting.

- The meteorology department in Uganda has endeavoured to undertake research and documentation across the country leading the National Adaptation Plan for Uganda
- In Uganda Environmental Alert has collaborated with various institutions including the department of meteorology to initiate technical and public dialogue on the issue.

However, it is important that global commitments in favour of financing climate change actions for Less Developed Countries countries should be fully effected

Desired National Level Actions

Governments have two roles to play in this process: first as adaptors themselves, and second, as catalysts to encourage and facilitate adaptation in other sectors of society.

- At national levels, governments should increase investment in Environment and Natural Resources (ENR) management and national policy strategies should aim at managing forest resources sustainably while improving energy efficiency.
- The Meteorology Department in Uganda and its associated critical function in assisting farmers adapt to diverse effects of climate change need

special attention. Agricultural growth should be based on scientific projections of weather conditions rather than mere guess work.

- Policy strategies for investment in environment and natural resources including carbon credits as an alternative to deforestation, payment for environmental services should be pursued.
- Governments, as custodians of public assets and providers of public services, must ensure that their own programs, resources, and systems are resilient enough to cope with changing climatic stresses. At the same time, they must provide leadership, support, and direction to assist other sectors of society to recognize their adaptation needs and to achieve their adaptation goals.
- Governments can promote adaptation in other ways, for instance, by engaging communities of interested people; by providing reliable and detailed information; by promoting research and development; by implementing regulations, codes, standards, and other policy instruments that encourage sound adaptation; and by setting an example through their own adaptation initiatives.
- Sustainable management of existing permanent forest estate on public and private land should be strengthened to curtail the accelerating destruction of forests. Aforestation should be scaled up.

At practice level:

Some of the good practices that should be promoted include:

Adaptation

Changes in practice

Government action

Crop Production

Irrigation
Crop diversification
Improved farming methods
Processing and storage facilities

- Develop capacity to tap water for irrigation
- Avail and apply weather and climate information
- Encourage water harvesting
- Sensitise people to optimize water usage
- Introduce drought resistant crops
- Remove cultural barriers
- Diversify crops grown in the locality
- Popularize mulching to conserve soil and water
- Improvement of management and agricultural practices
- training
- Engage in food processing
- Improve food storage technologies

- Develop irrigation infrastructure
- Construct water reservoirs
- Create incentives for water harvesting
- Re-enforce implementation of the Water Statute (1995)
- Promote development and production of drought resistant varieties
- Strengthen capacity of research institutions
- Strengthen extension services
- Create incentives for food processing industries
- Stimulate markets for agricultural products

Livestock

Reduction of animal population
Improve pastures and rangeland management
Reduce siting of river banks and lake shores
Water harvesting

- Sale of animals
- Introduce high yielding breed
- Diversification of economic activities for herdsmen
- Apply weather and climate information
- Create paddocks to reduce soil degradation
- Supplement animal food with crop residue during droughts
- Improve management of rangeland by planting shrubs and drought resistant pastures
- Reduce bush burning
- Apply weather and climate information
- Increase vegetation covers along river banks and lake shores
- Construct permanent houses

- Create market incentives
- Encourage diversification of economic activities.
- Promote research on rangeland management
- Re-enforce implementation of relevant policies and legislation.
- Re-enforce implementation of the Water Statute (1995)
- Enforcement of legislation on river banks, lake shores and wetlands (2000)
- Create incentives for poor people to build permanent iron-roofed houses

Forestry

Develop drought resistant species
Improve management of forests
Research into new pests and diseases
Preservation of indigenous species

- Plant drought resistant species
- Remove cultural barriers for new species
- Control outbreaks of wild forests
- Remove dead trees from forest reserves to reduce on outbreaks of wild forests
- Collect and preserve indigenous seedlings

- Encourage research into drought resistant species
- Promote sensitization and use of products of new species
- Re-enforce implementation of Forestry Statute and regulations
- Incentivise for private sector participation
- Promote research
- Support collection and preservation of indigenous species.

References:

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Photos:
New Vision
NAAPA