

UGANDA CLIMATE CHANGE FACTSHEET



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BACKGROUND and DEFINITIONS

NIDOS members requested information sheets on the impact of climate change on a number of countries where NIDOS members work. This factsheet is one of these and, as with the others, covers the key climate impacts in the country, what the government there is trying to do in terms of climate adaptation measures and what other agencies including NGOs and NIDOS members are also doing. The following outlines briefly the current international approach to supporting Southern governments with Climate Adaptation programmes and the international context for climate change campaigns.



The United Nations Framework Convention on Climate Change (UNFCCC), which came into force in 1994, established the first intergovernmental framework aiming to tackle climate change. This treaty ensures that member states work collaboratively in order to develop initiatives that not only reduce negative impacts associated with climate change, but also build capacity to cope with effects of increasing temperatures. The *Kyoto Protocol*, enforced in 2005, enshrined this commitment in legislation and presented legally binding targets which imposed requirements for ratified member states to reduce green house gas (GHG) emissions. The commitment period for the Kyoto Protocol ends in 2012. <http://unfccc.int/2860.php>

National Adaptation Programmes of Action (NAPA) <http://www.napa-pana.org>

In order to help developing nations plan for tackling the effects of climate change, the UN established NAPAs. NAPAs build the capacity of developing nations to identify priority actions required for effective adaptation to climate change. The aim of NAPAs is to decrease developing nation's climate change adaptation costs and climate change vulnerability more generally.

Next steps – Copenhagen At a UN Conference of Parties in Bali 2007, ratified member states made the crucial decision to begin new negotiations aiming to establish tougher targets on reducing GHG emissions and ensure that ratified member states fulfil obligations. Negotiations were reviewed in Poznan, Poland, in 2008 and will conclude in **Copenhagen, Denmark, on December 7th – 18th 2009** and should strengthen global ambitions and commitments to cut GHG emissions and also include mechanisms enabling developing countries to have low carbon development that does not undermine efforts to tackle poverty. Many NGOs are currently campaigning to ensure that Government commitments represent more than just fine words, but instead represent firm action.

CLIMATE CHANGE IN UGANDA

EXTRACT FROM:

THE UGANDA GOVERNMENT'S NATIONAL ADAPTATION PROGRAMME OF ACTION

http://preventionweb.net/files/8578_uga01.pdf

(See also http://www.aiaccproject.org/working_papers/Working%20Papers/AIACC_WP48_Leary_etal.pdf)

1.5 Impact of climate change on Uganda's development

1.5.1 Health sector

(See <http://www.who.int/globalchange/publications/climchange.pdf>)

Human capital is an important asset to families and nations. In many African societies, the size of a family is viewed as an indicator of wealth. This thinking can be extrapolated to nations. Densely populated countries provide large markets for goods and services. Indeed, the high population of China is an asset to the country, with many western companies investing there to produce for the big market. However, undeveloped human capital has very little economic value. In modern societies, large amounts of resources are invested in development of human capital because it can generate significant wealth. A country such as Japan has developed because of its highly developed and skilled human capital.

The high population and growth rate of Uganda is not matched with growth in health services and wealth. Similarly, the high population puts additional stress on the natural resources and weak health infrastructure. Climate change imposes additional burden on the health services (human stress and capital) with consequences of loss of human lives, particularly the most vulnerable age groups, the young and the elderly. Over the last few decades, Uganda has experienced an increase in the frequency and intensity of extreme weather events seriously affecting the health sector. Heavy rainfall that leads to flash floods (See http://www.tyndall.ac.uk/publications/working_papers/wp63.pdf) and floods has resulted in the outbreak of water-borne diseases such as diarrhoea and cholera, while prolonged dry spells have resulted in outbreaks of respiratory diseases. Climate change may lead to reduction in food production with serious consequences of malnutrition, particularly in children. This will lead to impaired child development and decreased adult activity. This will in turn lead to severe reduction in economic productivity and hence negative impact on the country's social and economic development.

1.5.2 Water resources

(See http://www.unesco.org/water/wwap/wwdr/wwdr2/case_studies/uganda/index.shtml)

Although Uganda has abundant water resources, its distribution is uneven. The semi-arid areas of the country experience water stress. Prolonged and severe droughts lead to low water levels in rivers, underground aquifers and reservoirs, affecting the hydrology, biodiversity and water supply.

The severe drought of 2004/05 contributed to the reduction of the Lake and Nile River level with serious impacts on power generation leading to power rationing in the domestic and commercial sectors, and thus resulting in the interruption of economic activities and a decline in manufacturing outputs. The cattle corridor, a fragile ecosystem, is dependent on rainwater for human consumption and production. The rural poor depend on streams and swamps. These sources will dry up during severe droughts resulting in the diversion of resources to emergency operations.

Climate change will exacerbate water scarcity problems, particularly in the semi-arid areas as well as pollution of water supplies, particularly in urban centres. The prolonged and severe drought of 1999/2000 caused severe water shortage leading to loss of animals, low production of milk, food insecurity, increased food prices and thus negatively affecting the economy. Therefore, effective utilization of weather and climate information in the management of water resources can yield substantial socio-economic benefits, particularly during drought periods and floods.

Floods and droughts have negative effect on water resources. A large proportion of the rural poor does not have pit latrines. Floods may pollute sources of drinking water and lead to outbreaks of water-borne diseases such as cholera, typhoid and dysentery. The poor are the most affected by outbreaks of such

diseases.

1.5.3 Agriculture

The increase in human population has increased the demand for food increasing pressure on natural ecosystems. Climate change puts additional pressure on the world food supply system. The system, which has yielded an increasing food per capita over the past four decades has shown signs of faltering over the past decade. Uganda's agriculture is subsistent, rain-fed and, therefore, vulnerable to climate variability and climate change. Although it is predicted that climate change will lead to increased rainfall in Uganda, its distribution during a season is critical to agricultural production. Erratic rain seasons have been observed in the past few years. Floods lead to waterlogged fields or washing away of crops. Poor people frequently settle in or close to wetlands and during floods such families are vulnerable because their source of livelihood is no longer accessible for agricultural production. Prolonged droughts can have serious impacts on agricultural production. Even long dry spells during the rainy season are sufficient to reduce agricultural production, thus seriously impacting on livelihoods of the rural communities. Poor agricultural production has direct negative effects on the:

- national economy; increases in food prices leading to an unstable macro economy and resulting into inflation, which discourages foreign investment;
- feeding, leading to frequent health breakdowns, thus affecting production; and
- incomes leading to poor health and decreased standard of living.

Poor seasons and occurrences of droughts, therefore, exacerbate poverty. Current temperatures and rainfall permit the cultivation of coffee in most parts of Uganda. However, an increase of 2 degrees Centigrade can have significant impact on coffee growing. Other crops like cassava and soya may be sensitive to temperature increases. Increase in temperatures may lead to emergence of new pests. There is, therefore, need to orient and widen the research focus to meet future challenges.

1.5.4 Wildlife, mountains and rivers

Global warming is causing retreating of glaciers, particularly in the tropics. In East Africa the ice caps on Mt. Kilimanjaro and Rwenzori Mountains are retreating. About 82% of the 1912 ice cap on Mt Kilimanjaro has already melted. By 1990, glaciers on the Rwenzori Mountains had receded to about 40% of their 1955 recorded cover. A recent study carried out by researchers from University College London and their Ugandan partners suggests that all the glaciers in the Rwenzori Mountains could disappear within the next two decades. The melting of the ice cap on tropical mountains has a negative effect on both the water catchments and eco-tourism, as well as on the overall economy. The melting of ice caps on Rwenzori Mountains has increased the erosive power of river Semliki. This erosive power and associated siltation downstream, compounded by the intensive cultivation along the river course, has enabled Semliki to disproportionately erode the Ugandan side and literally block its original course. The result is that the course of Semliki River has shifted almost one kilometre into Uganda. There is now an on-going dispute on the actual border between the Democratic Republic of the Congo and Uganda. This is a clear example that climate change is a potential source of regional conflict and war. In addition, the associated cultural loss due to melting of the ice cap is immeasurable.

The mountains provide vital water catchments for humans and wildlife; such changes could drastically affect wildlife species. The Mountain Gorilla, of which half of the world's population is found in Uganda, is also under threat from climate change. The Rwenzori mountains are a habitat for important endemic and restricted species that, among other factors, could be there as a result of the unique climate. Among the alpine and sub-alpine species are Giant Lobelia, Tree Senecio (plants), Rwenzori Leopard and Rwenzori Red Duiker (or Rwenzori Black-fronted Duiker (animals). The Rwenzori Red Duiker, *Cephalophus rubidus*, is a rare and unique duiker subspecies only found in these Mountains. It is not well studied but it inhabits alpine and sub-alpine zones at altitudes above 3000m, corresponding with colder climate. Unique species of chameleons are also found on the Mountains, including the three-horned chameleon, *Chamaeleon johnstoni*, whose range is reportedly shifting upward as a result of rising temperatures. The same kind of shift is reported for the Senecio tree species.

Wildlife-based tourism is a central source of foreign exchange for Uganda, and in 2004 tourism was recorded for the first time after so many years as the leading foreign exchange earner for the country, bringing in over US\$ 300 million. It accounted for about 64.1% of the service export receipts for the

country. Any losses due to climate change and other factors would therefore be negatively affecting the social and economic development of Uganda. Therefore the loss of the ice cap on the Rwenzori Mountains has serious social and economic consequences and indeed an impact on the social development of the country.

1.5.5 Forests

Forests play a very important role in the social and economic development of Uganda because of their products (timber, poles, medicine and firewood) and services (habitat for other diversity, moderating of micro climate, shade and enhancing productivity). Forests could also provide a sustainable source of power. Dry conditions and prolonged droughts create conducive conditions for spread of wild fires thus destroying forests with serious consequences. Increased population growth has also led to increased deforestation because of increased demand for food and fuel. Firewood provides 95% of Uganda's energy needs. Increased electricity tariffs lead to increased demand for fuel wood and charcoal, leading to increased soil erosion, damage to vital watershed, flooding and silting of rivers and lakes.

GOVERNMENT OF UGANDA INFORMATION

GOVERNMENT OF UGANDA: Ministries and Agencies involved in Climate Change

Ministry of Energy and Minerals

<http://www.energyandminerals.go.ug/demo/>

Ministry of Health

<http://www.health.go.ug/>

Ministry of Local Government

<http://www.molgo.go.ug/>

INTERNATIONAL ORGANISATIONS REPORTS ON CLIMATE CHANGE IN UGANDA

UNESCO World Water Assessment Programme

http://www.unesco.org/water/wwap/wwdr/wwdr2/case_studies/uganda/index.shtml

Oxfam GB: Turning up the heat: Climate Change and Poverty in Uganda

http://www.oxfam.org.uk/resources/policy/climate_change/downloads/ugandan_climate_change.pdf

UCL Department of Geography: Assessing the Impacts Of Climate Change and Variability on Water Resources in Uganda: Developing an Integrated Approach at the Sub-Regional Scale

<http://www.geog.ucl.ac.uk:8080/print-version/about-the-department/people/academics/richard-taylor/research/start-climate-hydrology-uganda>

Adaptation for Smallholders to Climate Change supports coffee and tea farmers in developing strategies to cope with the risks and impacts of climate change.

<http://www.adapcc.org/en/uganda.htm>

(See http://www.aiaccproject.org/working_papers/Working%20Papers/AIACC_WP48_Leary_etal.pdf)

All Africa.com

A story about climate change and the rise in conflict in the Karamoja region of Uganda

<http://allafrica.com/stories/200902240702.html>

International Institute for Sustainable Development

A report prepared for the UNED looking at how shortage of water and other commodities could impact on increasing conflict in Africa <http://www.iisd.org/publications/pub.aspx?pno=1093>

UGANDAN NGOS WORKING ON CLIMATE CHANGE

Climate Change Concern (CCC) (formerly Climate Change Legal Centre) is a Non Governmental Organization registered in Uganda since 2005. CCC's mission is to confront climate change, today's biggest global environment threat, through advocacy, research and the implementation of climate change projects. CCC's long term vision is to become the leading NGO on climate change issues in Africa.

<http://www.climatechangeconcern.com/>

CDI Climate and Development Initiatives is a national NGO established in 1996 in Uganda to influence policy issues on climate change, desertification, biodiversity loss and global pollution from an African perspective. CDI is a core member of INFORSE and is regional coordinator for INFORSE – East-Africa. INFORSE is the lead network on the energy component in the Global SUSWATCH project.

CDI also coordinates Climate Action Network – Uganda (CAN-Uganda).

Climate and Development Initiatives (CDI)

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Environmental Management for Livelihood Improvement

Our ecosystems have been put under severe pressure and our natural capital is becoming more depleted. Issues such as environmental governance, climate change, deforestation, unsustainable exploitation and depletion of biological resources, drought and desertification, hazardous chemicals and waste management are addressed in our programme of action.

<http://www.bwaisefacility.org/>

ADAPTATION

ADAPTATION TOOLS AND CASE STUDIES

Climate Change adaptation by design, A guide for sustainable communities

http://www.tcpa.org.uk/downloads/20070523_CCA_lowres.pdf

Climate Change adaptation

This dossier is intended to provide a summary of current thinking on climate adaptation issues with access to relevant and up to date resources and publications for researchers, practitioners, and policy formers. The guide is divided into four sections:

- An introduction to climate change adaptation
- Organisations working on climate adaptation issues
- Documents and publications related to seven themes in climate adaptation
- Adaptation resources organised by region of focus

<http://www.eldis.org/climate/index.htm>

Mainstreaming adaptation to climate change in the development process in Uganda

The aim of this report is to contribute to the identification of ways through which communities, especially vulnerable groups, may be enabled to adapt to climate change

<http://www.acts.or.ke/pubs/policybriefs/pubs/Ecopolicy%2015%20Uganda%20PDF%20version.pdf>

Community Based Adaptation to Climate Change in Malawi

<http://www.youtube.com/watch?v=R7ZFbh4yy0c>

Climate Change Adaptation in Uganda

http://www.youtube.com/watch?v=CS6QEr_j8bE&feature=related

NIDOS MEMBERS WORKING ON CLIMATE CHANGE IN UGANDA

Organisation

Mission Aviation Fellowship

Save the Children

IVS GB

Concern Worldwide

Books Abroad

Link Community Development

VSO

SCIAF

Signpost International

Tearfund

Mercy Corps

IIED

Christian Aid

British Red Cross

Orskov Foundation

IACD

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