



PRESS RELEASE

Africa's Acute Vulnerability to Climate Change Underlined in New Report

Nairobi, 5 November 2006 –Assisting developing countries to adapt to the impacts of global warming, especially those in Africa must be a key focus of the latest round of climate change talks which open tomorrow in Nairobi.

A new report on impacts, vulnerability and adaptation in Africa, released by the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) and based on data from bodies including the UN Environment Programme (UNEP) and the World Meteorological Organization (WMO) indicates that the continent's vulnerability to climate change is even more acute than had previously been supposed.

It is estimated, for example, that 30 per cent of Africa's coastal infrastructure could be inundated including coastal settlements in the Gulf of Guinea, Senegal, the Gambia and Egypt.

Between 25 per cent and over 40 per cent of species' habitats in Africa could be lost by 2085.

Cereal crop yields will decline by up to five per cent by the 2080s with subsistence crops—like sorghum in Sudan, Ethiopia, Eritrea and Zambia; maize in Ghana, millet in Sudan and groundnuts in the Gambia—also suffering climate-linked falls.

Meanwhile part of Africa's current and future adaptation needs must include improvements in climate and weather monitoring capabilities and better links between climate research and policy-making.

Other needs include mainstreaming climate change considerations into development and sectoral plans and programmes, education and awareness-raising for governments, institutions and individuals as well as better forecasting and early warning systems, says the report.

Achim Steiner, United Nations Under-Secretary General and Executive Director of the UN Environment Programme (UNEP), said: "Climate change is underway and the international community must respond by offering well targeted assistance to those countries in the front-line which are facing increasing impacts such as extreme droughts and floods and threats to infrastructure from phenomena like rising sea levels"

"Part of the action, part of the adaptation response and part of this responsibility to Africa, must include significant improvements in Africa's climate and weather monitoring capabilities. Then countries on the Continent can better tailor their response in areas from agriculture to health care

and international donors can better understand Africa's needs now, and in the future," said Mr Steiner.

Michel Jarraud, Secretary-General of the World Meteorological Organisation (WMO) said: "Africa is the largest of all tropical landmasses and, at 30 million square km, is about a fifth of the world's total land area. Yet the climate observing system in Africa is in a far worse and deteriorating state than that of any other Continent".

Latest estimates indicate that about 25 per cent out of the Global Climate Observing System surface stations in east and southern Africa are not working and most of the remaining stations are functioning in a less than desirable manner. Around a fifth of the 10 upper air network stations are in a similar state.

"Meanwhile there are also major impacts in highly elevated areas like Mount Kenya and Mount Kilimanjaro whose glaciers, ice caps and run off are important for water supplies. Overall it is estimated that Africa needs 200 automatic weather stations, a major effort to rescue historical data and improved training and capacity building on climate and weather reporting," he said.

With a view to the climate change conference in Nairobi, Yvo de Boer, Executive Secretary of the UNFCCC, said: "Activating the adaptation agenda is critical. It is time to move from establishing the principles to real action on the ground. It will also be important to do further work to better understand how adaptation relates to efforts aimed at poverty eradication, particularly in the context of the achievement of the Millennium Development Goals."

Fighting climate change must be a two-tier attack. Adaptation is important-- but it is also critical that greenhouse gas emissions are cut by an eventual 80 per cent in order to stabilize the atmosphere for current and future generations.

The new report has been prepared with the help of a team led by Dr. Baglis Osman Elasha, Senior Researcher in the Climate Change Unit of the Higher Council for Environment and Natural Resources in the Sudanese Ministry of the Environment.

"We are already seeing climate related changes in my country. The Gum Arabic belt, an economically important crop, has shifted southwards below latitude 14 degrees north and the rains which used to occur from mid June to the end of August now start in mid July until the end of September with important ramifications for agriculture and livelihoods," she said.

The report was designed to inform participants at the African regional workshop on adaptation, which was held from September 21 to 23, 2006 in Accra, Ghana.

At the workshop, 33 African country parties exchanged information on observing climatic changes and assessing their impacts and countries' vulnerability to these changes. Countries also shared their experiences in planning and implementing concrete adaptation measures in the areas of agriculture and food security, water resources, health and coastal zones.

The Ghana workshop followed a first workshop in the series of regional workshops in Peru in April this year, which was held for the Latin American region. Workshops for Small Island Developing States and Asian countries will be organized next year. The results of these workshops will feed into the negotiations at COP 13 on what future action is necessary to advance adaptation in developing countries.

Key Findings from the Report

Sea Levels

Sea levels could rise by 15 to 95 cm by 2100, according to some estimates. The number of people at risk in Africa from coastal flooding will rise from one million in 1990 to 70 million by 2080.

An estimated 30 per cent of Africa's coastal infrastructure could be at risk including coastal settlements in the Gulf of Guinea, Senegal, the Gambia, and Egypt.

Along the East-Southern African coast cities at risk include Cape Town, Maputo and Dar Es-Salaam.

A one metre rise in the Atlantic will lead to part of the economic capital of Lagos, Nigeria, disappearing. Alexandria in Egypt could also be severely impacted costing that country over \$30 billion a year in lost land, infrastructure and tourist revenues.

A sea level rise of 50 cm would inundate 2,000 square km of land in Tanzania costing around \$50 million.

Biodiversity and Ecosystems

Habitats and ecosystems in Africa are currently under threat from a variety of impacts and climate change is likely to be an additional stress.

One study, examining over 5,000 plant species in Africa, has concluded that around 80 to well over 90 per cent of species' suitable habitats will decrease in size or shift due to climate change.

By 2085, between 25 per cent and over 40 per cent of species' habitats could be lost altogether.

Shifts in rainfall patterns could affect the fynbos and karoo in southern Africa by altering the fire regime critical for their regeneration.

Mountain biodiversity could be affected in east Africa where there is little opportunity to move to higher elevations.

Wetland ecosystems such as the Okavanga Delta and the Sudd area could be impacted by decreased run off.

The coastal zones are also likely to be impacted by climate change with reduced fish productivity, coral bleaching, salt water intrusion, loss of beach facilities and tourism revenues.

Agriculture, Water Supplies and Land

Many of Africa's regions are coming to be recognised as having climates that are the most variable in the world on intra-seasonal and decadal timescales.

Just over 50 per cent of Africa's 812 million people have access to safe drinking water. Three quarters of the population utilize groundwater supplies to a greater or lesser extent.

Around half of Africa's cultivable land is arid and semi arid. About 65 per cent of the croplands and 30 per cent of pastureland is affected by degradation with resultant declines in crop yields and food insecurity.

Just under 15 per cent of degraded soils are as a result of vegetation removal including forests; 13 per cent from over-exploitation, almost half from overgrazing and around a quarter from agricultural activities.

Africa accounts for nearly 30 per cent of land degradation globally with 500 million hectares moderately to severely degraded.

Some recent calculations indicate that, between 1850 and the late 1990s, soils in Africa may have emitted 136 gigatonnes of carbon to the atmosphere—equal to half of the emissions linked with fossil fuel combustion—with one third of these soil emissions due to land degradation and soil erosion.

70 per cent of people in Africa and nearly 90 per cent of the poor primarily work in agriculture.

Agriculture accounts for 20 to 30 per cent of the GDP in sub-Saharan Africa and represents 55 per cent of total African exports.

Over 95 per cent of Africa's agriculture depends on rainfall. Models indicate that 80,000 square km of agricultural land in sub-Saharan Africa currently deemed constrained will improve as a result of climate change.

However, 600,000 square km currently classed as moderately constrained will become severely limited.

Experts estimate that cereal crop yields will decline by up to five per cent by the 2080s. There will be a general decline also in most subsistence crops such as sorghum in Sudan, Ethiopia, Eritrea and Zambia; maize in Ghana, millet in Sudan and groundnuts in the Gambia.

Africa has warmed by 0.7 degrees C during the 20th century with very high temperature records occurring towards the end of the century. 1995 and 1998 were the two warmest years.

An average 25 per cent decrease in rainfall has occurred over the Sahel during the past 30 years. Precipitation has fallen by up to 2.4 per cent per decade in tropical rainforests regions of Africa since the mid-1970s. The rate of decline has been fastest in West Africa and north Congo.

Droughts have particularly affected the Sahel, the Horn of Africa and Southern Africa since the end of the 1960s.

“Also, consecutive dry years with widespread disruption are reducing the ability of the society to cope with droughts by providing less recovery and preparation time between events,” says the report.

Scientists forecast that by 2100 mean surface temperatures in Africa could increase by two to six degrees C.

Future Rainfall

Future rainfall patterns are not clear cut but it is likely that over the next 50 years there will be a decrease in rainfall of 10 to 25 per cent over northern parts of Africa in the months of June, July and August and a 10 to 60 per cent decline in March, April and May.

In contrast, western Africa may see an increase in rainfall of 10 to 35 per cent in the December, January and February period which is normally a dry time with an increase also during September, October and November of between seven and 28 per cent.

By 2025 approximately 480 million people in Africa could be living in water scarce or water stressed areas.

Within the Nile Basin, there is an expectation that temperatures will rise but there are currently disparities on rainfall patterns over both the Blue and White Niles. However, nine recent climate scenarios show decrease in Nile flows of between zero and around 40 per cent.

Overall experts expect extreme events including droughts and floods to increase.

Weather and Climate Monitoring Gaps

Even Africa's conventional weather forecasting stations, also important for climate modelling and adaptation strategies, are thin on the ground.

There are just over 1,150 World Weather Watch stations in Africa giving a density of one per 26,000 square km—eight times lower than the World Meteorological Organisation's minimum recommended level.

Meanwhile little of Africa's historical climate and weather data is being used to further refine climate forecasting and assist in better adaptation and coping strategies.

This is because much of the historical information remains paper-based and is inaccessible to scientists who need digital information to feed super computer models.

Other areas of concern include a lack of good monitoring of the El Nino Southern Oscillation as it relates to Africa; the onset of the Sahel precipitation and the interaction of Saharan dust with climate.

Up to one billion tonnes of dust is exported from the Sahel-Sahara region annually crossing north Africa and travelling as far as Europe, western Asia and the Americas.

The frequency of dust storms has increased in some parts of the Sahel from the wet 1950s-1960s to the dry periods of the 1970s-1980s.

Some efforts are being made to improve climate forecasting in Africa. For example an initiative backed by the Government of the United Kingdom and its Hadley Centre is bringing a personal computer-based model to local meteorological offices and research stations in southern Africa as well as the Indian sub-continent.

Notes to Editors

For the full report, please see:

http://unfccc.int/adaptation/adverse_effects_and_response_measures_art_48/items/3743.php

Details of the second meeting of the Parties to the Kyoto Protocol (COP/MOP 2), in conjunction with the twelfth session of the Conference of the Parties to the Climate Change Convention (COP 12), taking place in Nairobi from 6 to 17 November 2006, can be found at www.unfccc.int

UNEP climate change resources are at <http://www.unep.org/themes/climatechange/>

WMO climate change resources are at The Intergovernmental Panel on Climate Change:
www.ipcc.ch

The World Climate Programme: www.wmo.ch/web/wcp/wcp-home.html

The World Climate Research Programme: www.wmo.ch/web/wcrp/

For More Information Please Contact Nick Nuttall, UNEP Spokesperson, Office of the Executive Director, on Tel: +254 20 762 3084; Mobile: +254 733 632 755, E-mail: nick.nuttall@unep.org

Or John Hay, UNFCCC Secretariat Spokesperson, on Tel: 49 228 815 1404 cell phone: + 49 172 258 6944, E-mail: jhay@unfccc.int

Or Mark Oliver, Press Officer, Communications and Public Affairs Office, World Meteorological Organization. Tel: +41 (0)22 730 84 17, E-mail: moliver@wmo.int

Carine Richard-Van Maele, Chief, Communications and Public Affairs, WMO.

Tel: +41 (0)22 730 83 15. E-mail: cpa@wmo.int