

## CLIMATE CHANGE IN UGANDA

Climate change is a change in global or regional climate patterns over time.

OR

A long-term change in atmospheric conditions due to human and natural factors.

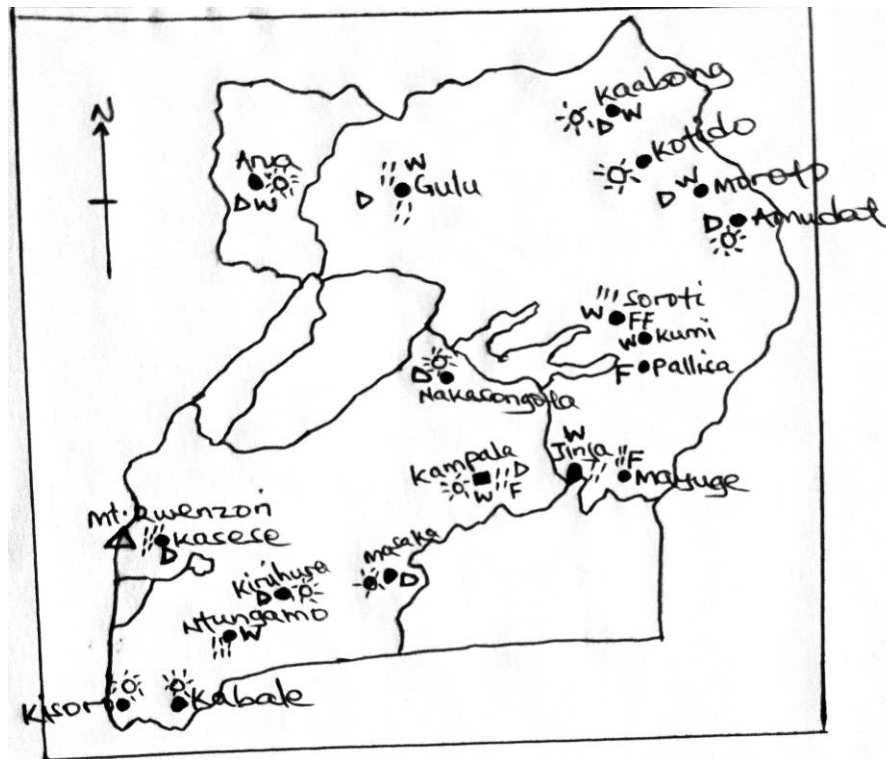
OR

A shift/change in global temperatures and precipitation/rain over time.

### The indicators of climate change

- Prolonged drought e.g in Kotido, Nakasongola, Kyotera etc.
- flooding e.g in Butaleja, Kampala, Soroti, Kasese etc
- Melting of snow/ice/glaciers on Mt.Rwenzori.
- Unreliable and little rainfall received in Kaabong, Amudat, Nakasongola etc
- Changing seasons of rainfall in Kampala, Wakiso, Masaka etc.
- Increasing temperatures in originally cool areas like Kabale, Kisoro etc.
- Drying of grass and stunted tree growth in formerly wet areas like Bushenyi, Luweero, Mbarara etc.
- Prolonged heat waves e.g in Kampala, Jinja, Masaka, Wakiso etc.
- Rising of water levels in lakes such as Victoria, Kyoga, Albert etc.
- Stormy winds and hailstones in Kamuli, Kampala, Buyende, Kotido etc

## A SKETCH MAP OF UGANDA SHOWING AREAS THAT EXPERIENCE CLIMATE CHANGE



KEY

- Δ melting glaciers
- /// Excessive rains
- ☀ Increasing temperatures
- FF Excessive floods
- DD prolonged drought
- W stormy winds/Hailstones

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## CAUSES OF CLIMATE CHANGE IN UGANDA

- ❖ Increased use of fossil fuels such as oil and natural gas to generate electricity, to run cars and other forms of transport e.g in Kampala, Arua, Tororo, Jinja, Masaka etc.
- ❖ Excessive lumbering where forests which lead to rainfall formation are cleared e.g in Mayuge, Mpigi, Wakiso, Masaka etc.
- ❖ Industrialisation where industries emit greenhouse gases like carbondioxide and other pollutants which affects the ozone layer e.g in Kampala, Mukono, Jinja, etc.
- ❖ Borehole drilling leading to a reduction in the water table making it difficult for plants to tap water e.g in Masaka, Nakasongola, Luweero hence reduced transpiration.
- ❖ Mining/Quarrying e.g the use of open cast method leading to clearing of vegetation cover in Tororo, Hima, Mubende, Kajjansi, Kasese, Masaka
- ❖ Construction of transport and communication networks such as roads that release carbondioxide into the atmosphere, clears away vegetation leading to heat waves, reduced rainfall and hot temperatures in Masaka, Kampala, Mbarara etc.
- ❖ Draining of wetlands/swamp destruction leading to a decline in the water table and distabilising the hydrological cycle e.g in Wakiso, Kabale, Mukono, Mpigi.
- ❖ Use of agro chemicals such as herbicides, pesticides which release greenhouse gases and eventually affect the ecosystem, ozone layer leading to increased temperatures e.g in Mukono, Kampala, Kasese etc.
- ❖ Agricultural practices that lead to destruction of vegetation e.g over grazing, arable farming leading to reduced rainfall in Nakasongola, Kiruhura, Kotido etc.
- ❖ Poor waste management/disposal especially in urban areas which produce methane and burning of wastes that produce carbondioxide leading to destruction of the ozone layer in Mbale, Jinja, Kampala etc.

- ❖ Effect of dry winds e.g the north east trade winds which transport dry conditions to places like Kotido, Moroto etc.
- ❖ Pests such as locusts, caterpillars, army worms which eat away tree leaves that help in rainfall formation e.g in Amudat, Moroto, Kotido, Soroti etc.
- ❖ Wild fires brought about by lightning leading to burning of vegetation in Nakasongola, Luweero, Kanungu, Kabale etc.
- ❖ Bush burning especially by pastoralists in the savanna areas especially by pastoralists and hunters leading to destruction of vegetation and emission of greenhouse gases hence destroying the ozone layer in Kiruhura, Nakasongola etc
- ❖ Afforestation and re-afforestation leading to excessive rains in Mubende, Nakasongola, Kabale etc.
- ❖ Wild animals leading to destruction of vegetation through over grazing in Queen Elizabeth national park in Kasese, Kidepo national park in Kaabong etc.
- ❖ Volcanic eruptions that emit dangerous gases to the atmosphere destroying the ozone layer e.g Nyamulagira, Nyiragongongo etc.
- ❖ Global warming leading to melting of glaciers on mountain Rwenzori, melting of glaciers in polar regions resulting into excessive rains.

***NB. Points should be well explained and illustrated with place names/districts.***

### **EFFECTS OF CLIMATE CHANGE IN UGANDA**

- ✓ Drying up of water sources leading to water shortage e.g in Soroti, Moroto, Kotido, Mukono etc.
- ✓ Famine and malnutrition/food shortage due to crop failure and death of livestock e.g in Sembabule, Mubende.
- ✓ Frequent floods resulting into destruction of lives and property e.g in Buliisa, Ntoroko, Bududa.
- ✓ Displacement of people due to landslides, floods, drought in Bududa, Butaleja, Kotido etc.

- ✓ Increased loss of biodiversity which is a threat to wildlife e.g in Kasese, Masindi, Kabale.
- ✓ Soil erosion and land degradation e.g in Kabale, Kisoro, Mbale, Sironko.
- ✓ Increasing water levels such as on L. Victoria, Kyoga, Albert leading to submergence of landing sites and ports e.g Bukakata, Lambu, Gaba on L. Victoria.
- ✓ Conflict over pasture land and water sources for cattle in Kotido, Moroto, Sembabule.
- ✓ Unreliable/little rainfall received in Sembabule, Nakasongola, Mubende, Kyotera.
- ✓ Shrinking of ice caps/glaciers on mountain Rwenzori.
- ✓ Increased government expenditure to mitigate the effects of climate change e.g through tree planting in Nakasongola, Mubende, Kampala
- ✓ Conflict with neighbouring countries over reducing/lowering levels of water e.g on R. Nile with countries like Egypt and Sudan.
- ✓ Wild forest fires due to hot temperatures that make tree branches and leaves on the forest floor to become drier e.g in Kanungu, Mubende, Nakasongola.
- ✓ Spread of diseases like malaria, cholera, respiratory illness due to floods, dust storms that contaminate the water sources in Kasese, Bushenyi, Mbarara, Kampala, Wakiso
- ✓ Unemployment/poverty to farmers as a result of drought and floods leading to crop failure and death of animals in Nakasongola, Sembabule, Soroti, Kumi etc.
- ✓ Destruction of transport and communication networks like roads due to heavy rainfall, floods in Soroti, Kasese, Masaka, Mpigi, Kabale.
- ✓ Occurrence of prolonged drought and heat waves e.g in Kampala, Masaka, Jinja etc.
- ✓ Intense rains characterised by hailstones which destroy people's lives and property in Kasese, Bushenyi, Mbarara, Ntungamo etc.

***NB. Points should be explained and illustrated with place names/districts.***

Task. Suggest steps that can be taken to mitigate climate change in Uganda.