



Workshop Objectives & Challenges of Climate Change in Sub-Saharan Africa

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**Sensitization Workshop for
Early Career Researchers in Climate Change**

Postgraduate School Board Room, University of Ibadan, Nigeria

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What is Climate Change and Why Climate Change Research?

Weather

Conditions of atmosphere at a particular time and place:
What we experience day-to-day

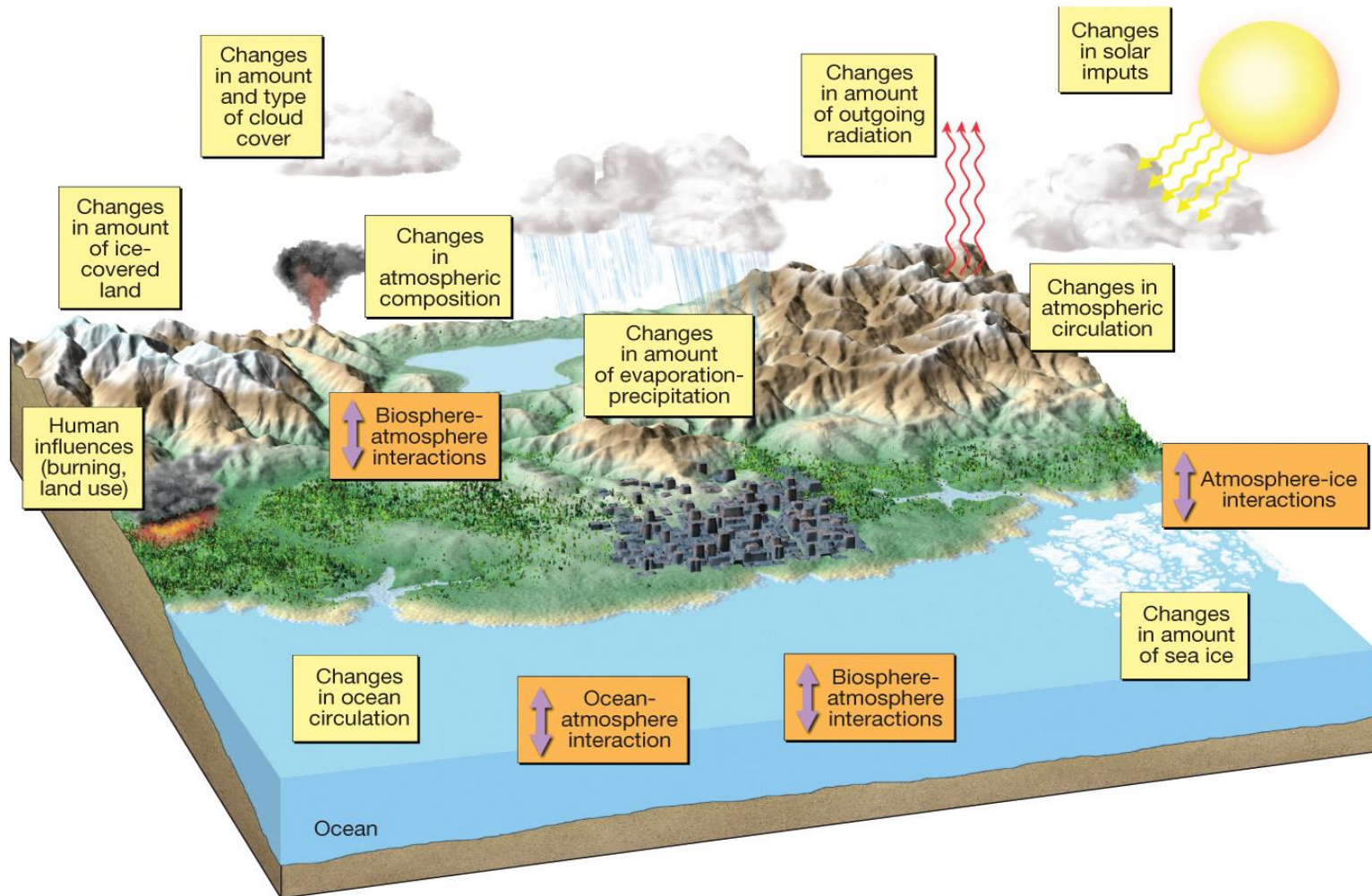
Climate

Long-term average of weather at a given point and time of year

Climate Change

- We expect the weather to change a lot from day to day, and the climate to remain relatively constant.
- If the climate does not remain constant, it is referred to as Climate Change (CC).
- *CC is complex, with many variables, and unknowns*
- Researchers need to analyze data against the baseline

Natural/Human Causes of Climate Change

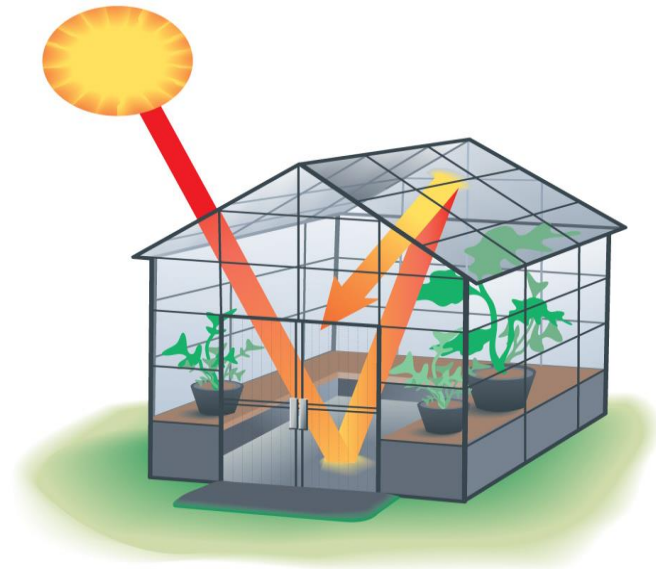


Global Warming and Greenhouse Effect

Global warming – increase in Earth's global temperatures

Greenhouse effect – keeps Earth's surface habitable

- Incoming heat energy is shorter wavelengths
- Longer wavelengths – some trapped, some escape, net warming effect



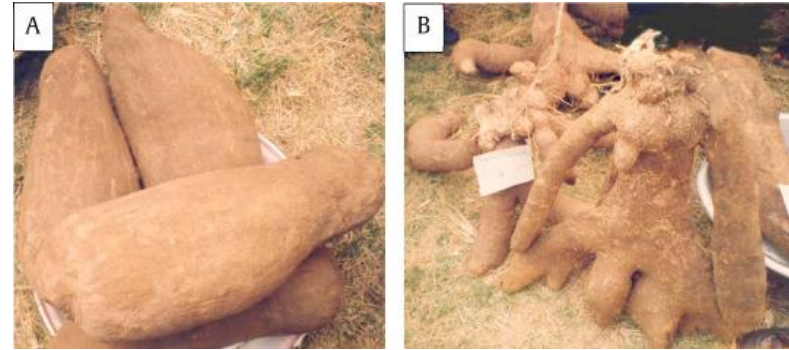
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Greenhouse Gases
Water Vapour
Carbon dioxide
Methane
Nitrous oxide,
Chlorofluorocarbons,
Tropospheric Ozone etc

The Sub-Saharan Africa Perspectives to Weather, Climate Change and Research – New Yam Festival

Igba Yi a san Wa o,
Asiko Yi a ye Wa o,
Ote Yi a ye Wa o,
Ase
E je Ka sise agbe,
Kebi ma pa wa, lehin wa
E be ijoba wa

**Africa is beautiful with different
people traditions and culture.
Over 3000 languages spoken.
There are many different
ethnicities.**



YAM: King of Crops; A measure of wealth.



Celebration of Yam

Global Perspectives on Climate Change



President: Trump's attempt to roll back environmental protection measures and commitments to fight climate change by removing the threat of climate change from his National Security Strategy.

Climate Change has been described as the defining global agenda of the 21st Century

Sir David King, UK Chief Scientific Advisor

"Climate Change is a far greater threat to the world than international terrorism"

Helen Bjornoy, Minister for Environment, Norway

"We need to join forces to communicate that a clean environment is something worth defending and fighting for, as an international community and as individuals. This much we owe to ourselves and to future generations"

Bill Clinton, Former US President

"I'm no longer skeptical...I no longer have doubts...I think climate change is the major challenge facing the earth"

**Developed and Developing Countries
Share Great Global Challenge of Climate
Change**

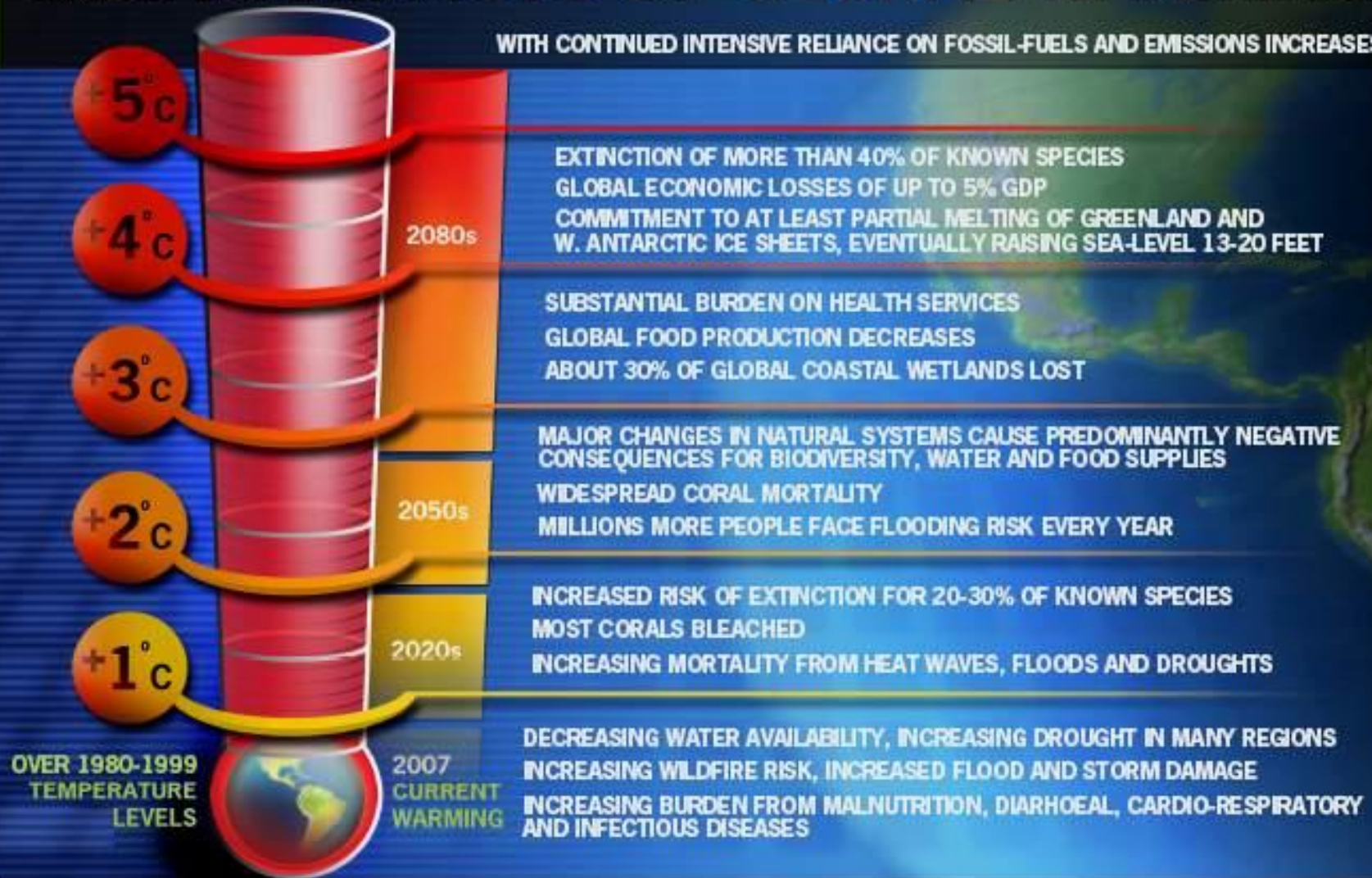
**Developed Countries Created Climate
Change Initially**


**Developing Countries Growing Rapidly,
Want Same Standard of Living**

**How to Resolve? Must Resolve, or Destroy
Environment, Civilization**

RISING IMPACTS OF GLOBAL WARMING

WITH CONTINUED INTENSIVE RELIANCE ON FOSSIL-FUELS AND EMISSIONS INCREASES



 www.net.org

Source: IPCC Fourth Assessment Report, Working Group II Summary for Policymakers. Timing of temperature increases based on IPCC scenarios that assume continued intensive reliance on fossil-fuels and emissions increases. Emissions reductions would reduce the amount and rate of warming.

Conversion of temperature increases—Celsius to Fahrenheit: 1°C = 1.8°F; 2°C = 3.6°F; 3°C = 5.4°F; 4°C = 7.2°F.

Produced by National Environmental Trust

Sources of Uncertainty

Data

- Missing data or errors in data

Models

- Uncertainty regarding predictability of the system
- Uncertainty introduced by simplifying relationships

Other

- Inappropriate spatial or temporal data
- Inappropriate assumptions
- Uncertainty about predictive ability of scenarios

Without effective responses, climate change will compromise:

Water quality and quantity: Contributing to a doubling of people living in water-stressed basins by 2050.

Food security: In some African countries, yields from rain-fed agriculture may halve by 2020.

Control of infectious disease: Increasing population at risk of malaria in Africa by 170 million by 2030, and at risk of dengue by 2 billion by 2080s.

Protection from disasters: Increasing exposure to coastal flooding by a factor of 10, and land area in extreme drought by a factor of 10-30.

Climate Change is a Global Threat

Climate Change Threatens:

Global Energy, Environment,
Economics, Civilization

In the Twenty-First Century:

Either We Fix Climate Change

Or

Climate Change Will Fix Us

The Job at Hand

- **To strengthen climate change knowledge generation through research, monitoring, detection and prediction**
- **Cross cutting issues- Capacity Building, Communication, Training and Public Awareness and Participation, Technology Transfer, Finance, Mainstreaming, Policy formulation**
- **To build climate change response capacity through institutional strengthening, resource mobilization and collaboration and stakeholder involvement.**
- **Identify Research gaps and future work**

References

Intergovernmental Panel on Climate Change (IPCC)
(www.ipcc.ch)

Patz, J.A., Engelberg, D. and Last, J., 2000. The effects of changing weather on public health. *Annual Review of Public Health*, 21: 271-307

[https://www.journalofethnicfoods.net/article/S2352-6181\(16\)30114-7/fulltext](https://www.journalofethnicfoods.net/article/S2352-6181(16)30114-7/fulltext)

*“Be The Change You
Would See in The
World”* - Mahatma Gandhi, (Former
Prime Minister of India)

**Take responsibility for your
own development.
The future of Climate Change
Research is bright.**



Thank You for Listening