15TH SYMBOSIUM ON

ICT, ENVIRONMENT AND CLIMATE CHANGE

OUGADOUGOU BURKINA FASO
7TH TO 9TH MAY 2024

Derick; **khamali@ca.go.ke**

COMMUNICATION
AUTHORITY OF KENY

Conventions adopted

The 2015 Paris Climate Accord, adopted at the 2015 United Nations Climate Change Conference, constitutes an international treaty addressing climate change mitigation, adaptation, and financing.

Following the adoption of the Paris accord in 2015, the (ITU), developed the standard – *ITU L.1470 "GHG emissions trajectories for the ICT sector compatible with the UNFCCC Paris Agreement"* . (***United Nations Framework Convention on Climate Change***)

Actualizing the UNFCCC

Source of ICT Carbon Emission

Mitigation

Towards Green ICT

Green

OBJECTIVES

The Objectives of this Convention are:

i. Identify sources of Carbon Dioxide(Co_2) emissions in the ICT sector,

ii. Explore avenues through which ICTs can be used to mitigate Co_2 emissions,

iii. Establish targets for reductions of ICT Co_2 emissions,

iv. Assign responsibilities for Co_2 to the various stakeholders in the ICT sector.

HIGHLIGHTS – SOURCES OF ICT CARBON EMISSIONS

ICT sources of Carbon emissions stem from user devices, networks, and data centres, which emit carbon throughout their lifecycle, from production, use up to disposal. The growing trend in CO2 emission occasioned by:

a) Proliferation of ICT users
b) The trend in use of multiple devices by ICT users due to reduced prices,
c) Rising device processing and transmission power, compare 3G need more power than 2G M. Phones
d) A trend towards "always-on" usage modes
e) A tendency to store rather than delete older material

ICT Role on General Carbon emission

The framework recognizes ICT's potential in reducing the general carbon footprint through the adoption of:

a) ***e-business*** (e-working, e-learning, e-government and e-banking)

b) ***smart-phenomenon*** (smart cities, Smart buildings and Smart manufacturing) that use energy efficient technologies to control energy consumption.

c) Education, globalization, and financial development increase CO_2 emissions. While ICTs reduce CO_2 Emissions

ROLE OF ICT IN CO2 REDUCTION

HIGHLIGHTS- ICT CARBON EMISSION MEASURES
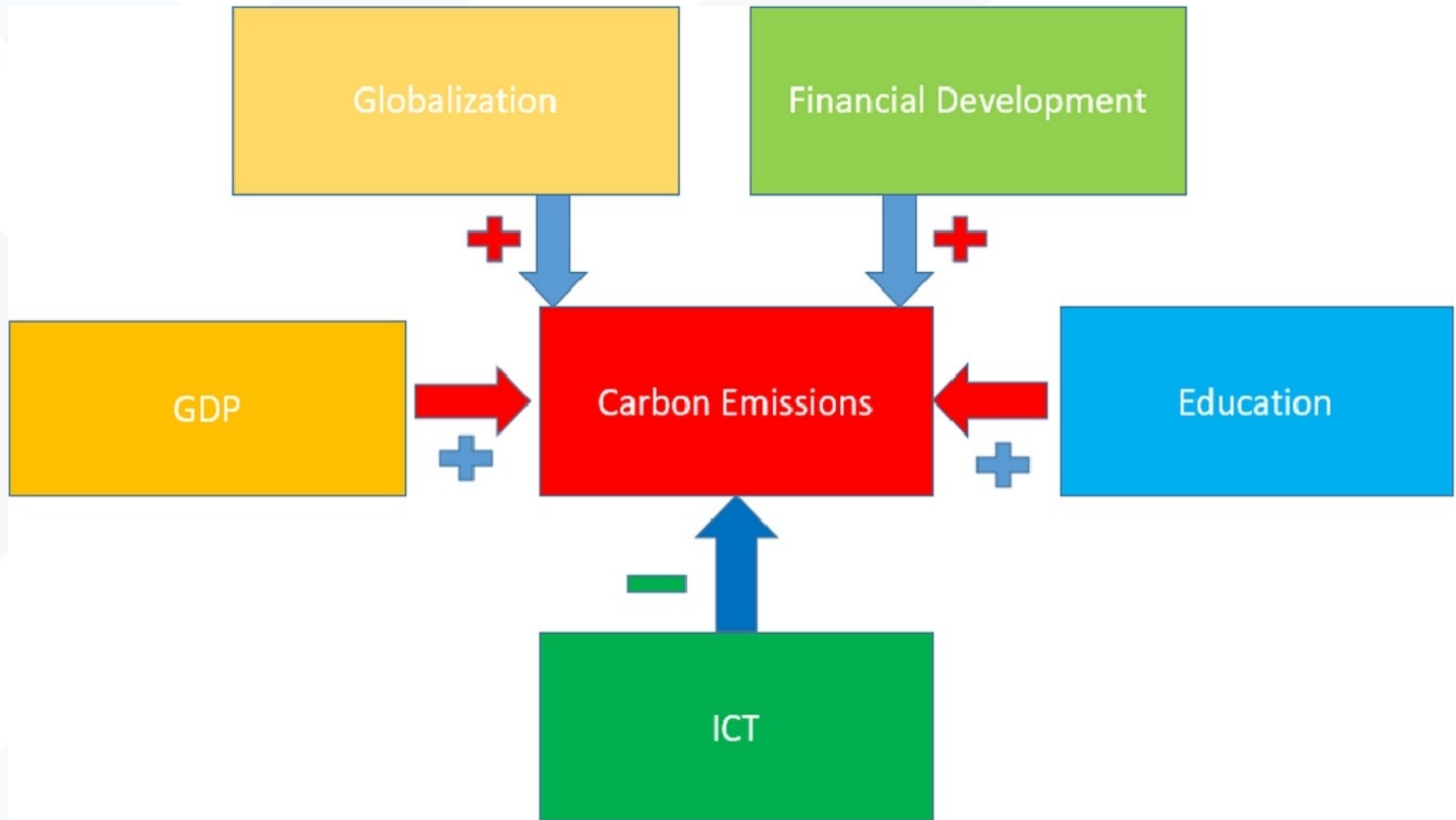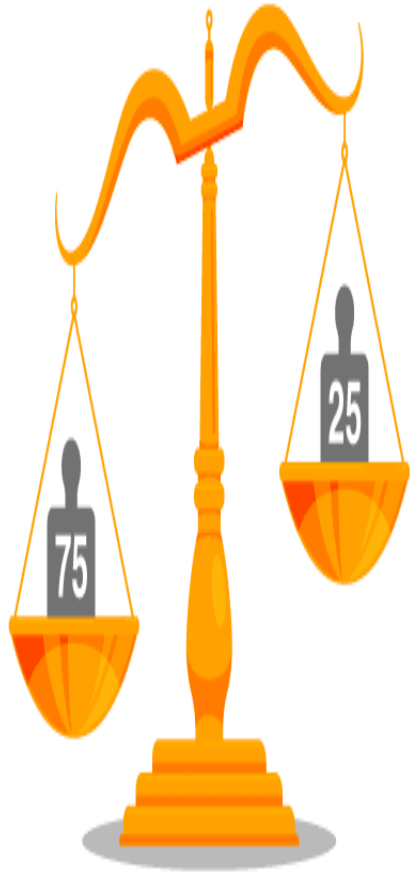
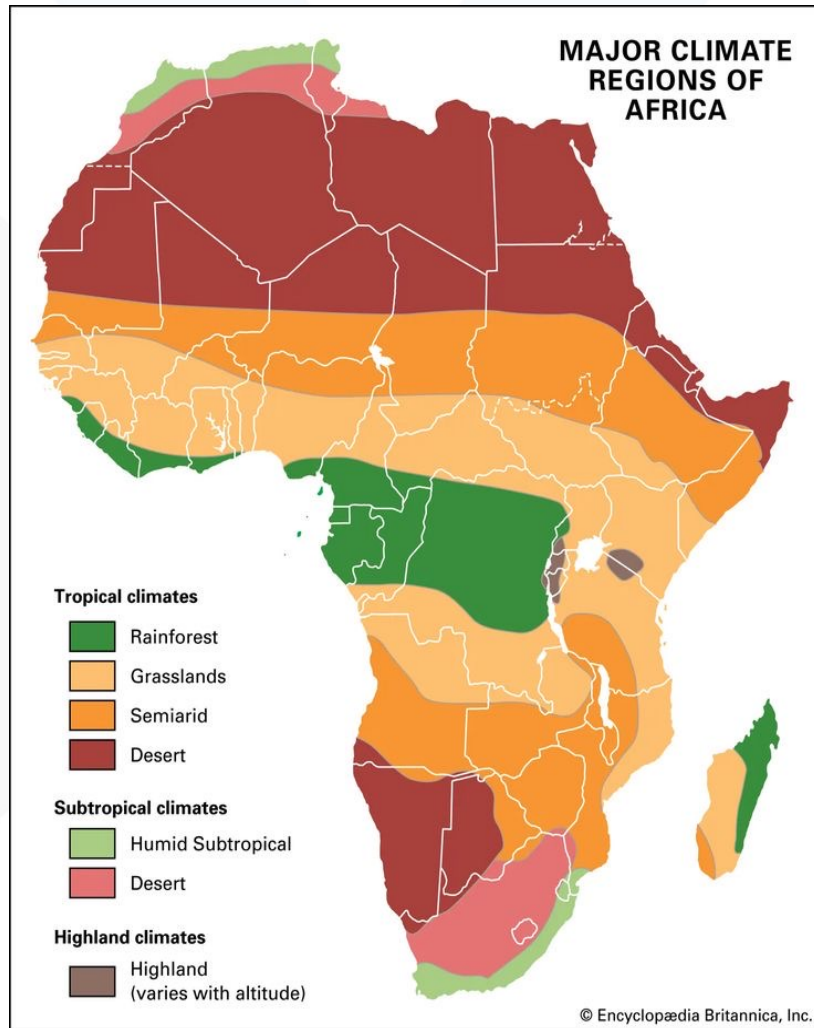The framework prescribes measures to reduce the ICT carbon footprint such as:

a) Employing Green Power;
b) Use of Smart Technology;
c) Circular economy techniques in the disposal of Obsolete and Damaged ICT equipment;
d) Use of Cloud Technology, Virtualization and Public Data Centers
e) Encouragement of ICT Infrastructure Sharing

HIGHLIGHTS- MONITORING AND REPORTING OF REDUCTION IN ICT CARBON EMISSIONS

The framework also presents metrics that ICT service providers can use to gauge their progress towards zero carbon emission

PRINCIPLES TO CONSIDER

MAJOR CLIMATE REGIONS OF AFRICA

Tropical climates
- Rainforest
- Grasslands
- Semiarid
- Desert

Subtropical climates
- Humid Subtropical
- Desert

Highland climates
- Highland (varies with altitude)

© Encyclopædia Britannica, Inc.

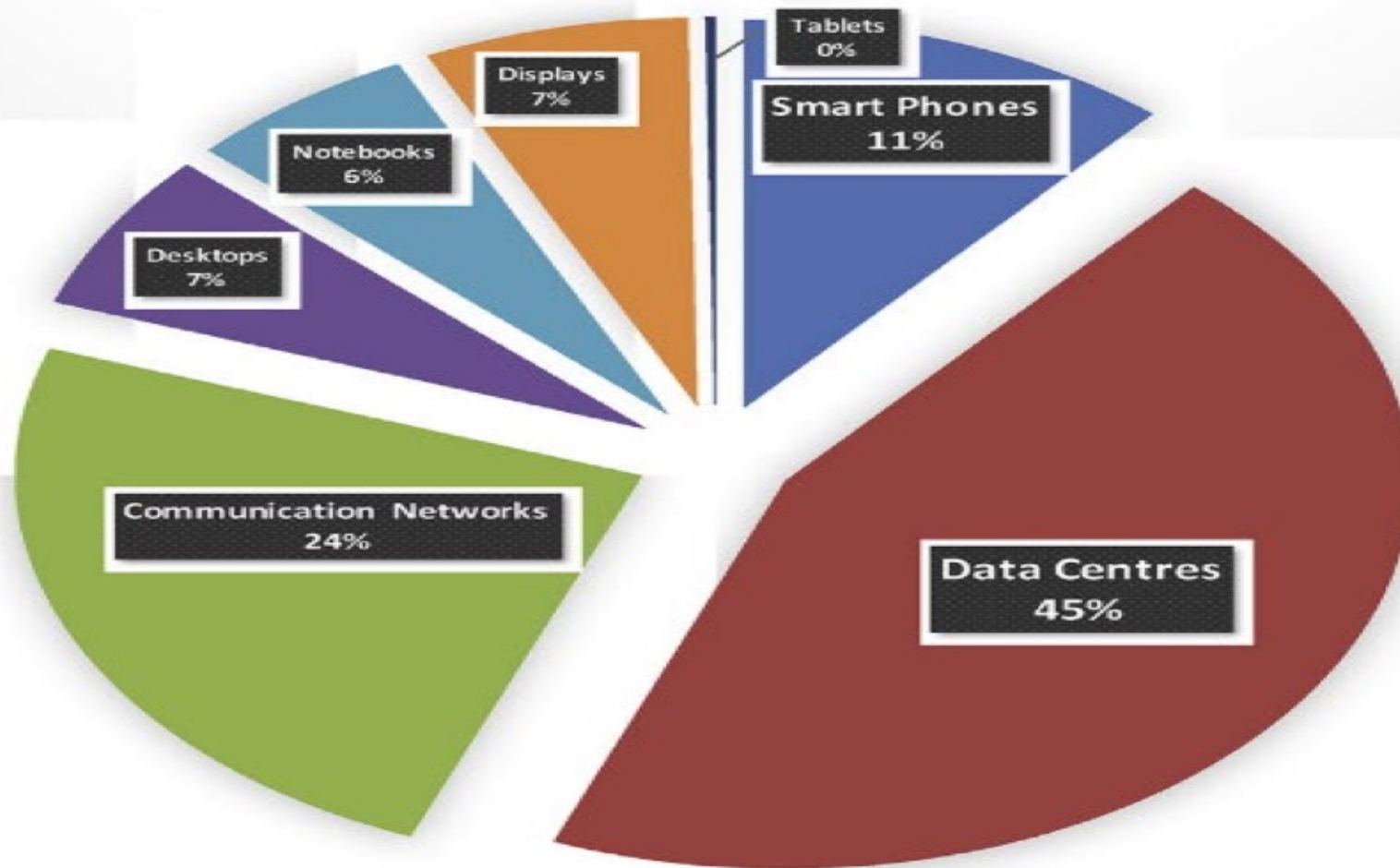The following are the Foundational Guidelines for Africa to Consider;

a. Innovation to reduce ICT Carbon emission

b. Industry Driven Effort for own targets

c. Technology Neutral in roll out measures

d. Progressive Attainment of targets

Classical Sources of ICT Carbon

Relative Contributions of ICT Categories – 2020

ICT Carbon Emission efforts

When new ICT projects, e.g., new transmission sites, new cable laying, new equipment type approval, among others will consider efforts made to reduce carbon emission in the process by the regulators

i. **Use of Green Power:** Design of ICT projects using green power integration e.g. solar and wind; to be considered new ICT projects.

ii. **Use of Smart Technology**; new ICT projects should embrace smart technology in power consumption. Smart lighting systems, smart ICT data centers, smart buildings & systems, smart ICT sites

iii. **Disposal of Obsolete and Damaged ICT equipment:** When new ICT projects emerge, a disposal plan with least impact on the environment by carbon emission should be included. This can include re-use, recycle and refurbishment.

ICT Carbon Emission efforts/2

We will consider efforts made to reduce carbon emission in the process by ……

iv. Use of Cloud Technology, Virtualization and Public Data Centers: Encourage use of cloud technology to store data for long and use of public data centers instead of acquisition by each institution. Encourage virtualization.

v. ICT Infrastructure Sharing: New ICT projects granted approval if constructed on a shared ICT infrastructure.

vi. Monitoring and Reporting of Reduction of Carbon Emissions: Service providers should report on their efforts to reduce their individual carbon footprint vide an embedded reporting template on defined periodic intervals to monitor progress.

CONCLUSION

"It is the fear of what tomorrow may bring that makes the Tortoise carry it's house along wherever it goes" *Let us all always work to reduce ICT Carbon emissions*