



BRIEF ON METEOROLOGICAL AND HYDROLOGICAL SERVICES IN BURUNDI: GAPS AND CHALLENGES

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Presentation plan

- 1. Introduction**
- 2. Topographic Map of Burundi**
- 3. Location of Burundi in Africa**
- 4. Organizational Chart**
- 5. National Network for Meteorological observations.**
- 6. Mission and Basic Info of DEPARTMENT OF HYDROLOGY AND AGRO_METEOROLOGY**
- 7. TEMPERATURE AND RAINFALL EXTREMES**
- 8. Major meteorological disaster events**



Presentation plan cont..

9. Rainfall contribution to Economy

10. Main activities of Meteorological Services of Burundi

11. Gaps

12. Challenges



INTRODUCTION

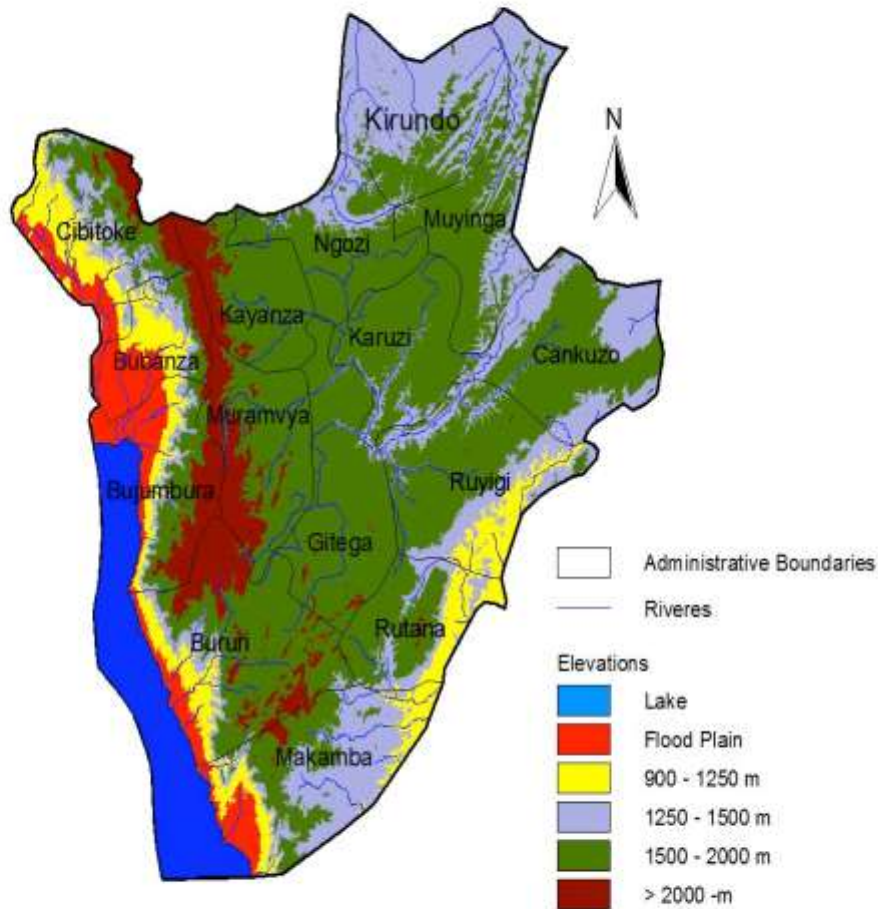
Location of Burundi in Africa

Burundi is a small landlocked country located south of the equator between 2.3° - 4.5° of latitude and 29° - 31° of longitude .

It is bordered by Tanzania to the East and South, Rwanda to the North and Democratic Republic of Congo to the West.



TOPOGRAPHIC MAP of BURUNDI



- A narrow belt of Low lands Plains in the W
- Steep slope terrains
- A range of High Ground Mountains (CONO-NILE Crest > 2000m)
- A relatively vast region Central Plateaux
- Depressions in the Eastern and Northern parts



LOCATION OF BURUNDI

Burundi occupies an area equal to 27,830 square kilometres in size, of which 25,650 square kilometres is land. The country has 974 kilometres of land border: 233 kilometres of which is shared with the Democratic Republic of the Congo, 290 kilometres with Rwanda and 451 kilometres with Tanzania. As a landlocked country, Burundi possesses no coastline



LOCATION OF BURUNDI cont...

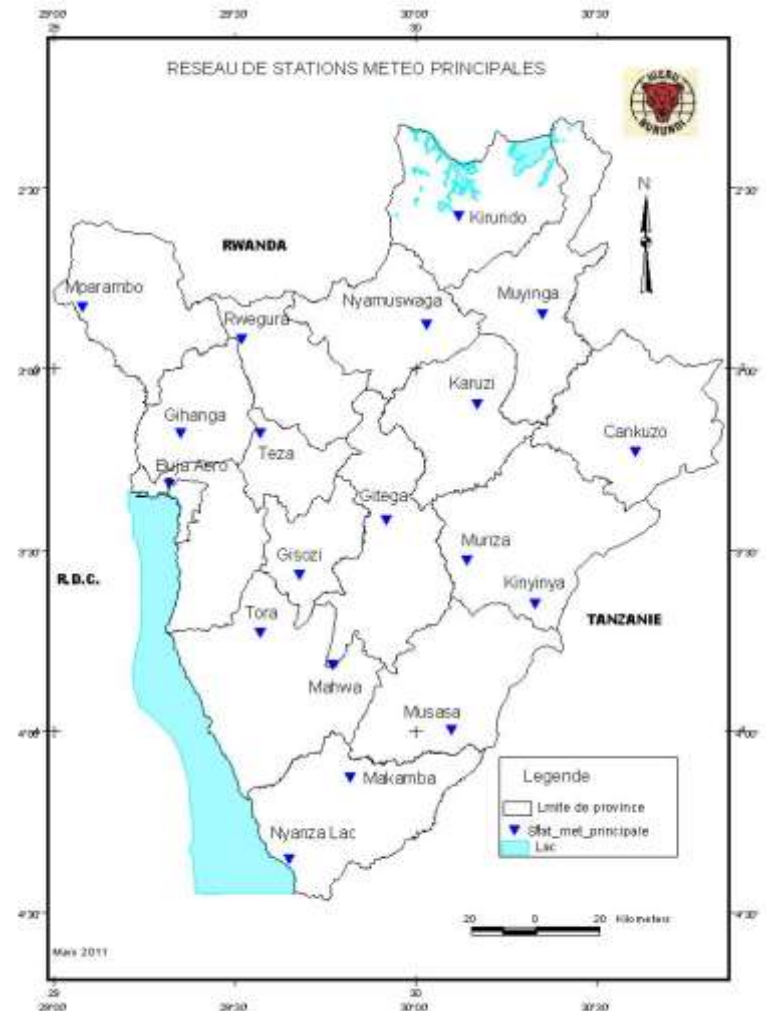
- . It straddles the crest of the [Congo-Nile Divide](#) which separates the basins of the [Congo](#) and [Nile](#) rivers. The farthest headwaters of the Nile, the [Ruvyironza River](#), has its source in Burundi.

The lowest point in the country is at [Lake Tanganyika](#), at 772 metres (2,533 ft), with the highest point being on [Mount Heha](#), at 2,684 metres (8,806 ft).



National Network for meteorological Observations

- Network
- ✓ 2 Synoptic stations 24h/24(Bujumbura and Muyinga)
- ✓ 19 main climatological stations
- ✓ 125 rainfall sites
- ✓ 5 automatic weather stations (AWS)
- ✓ A good number of rainfall sites operated by PROSANUT; a project of the Ministry of Environment, Agriculture and Livestock





TEMPERATURE AND RAINFALL EXTREMES

The highest maximum temperatures occurs in SEPTEMBER- OCTOBER and in FEBRUARY- MARCH, lowest minimum temperature occurs during drier season ,from June to September. Rainfall extremes occur over highground and can reach the value of 480mm in a season, specially during El Nino years.



Major meteorological disaster events

Disasters related to Meteorological phenomena are of 5 types : floods, drought, hailstones, strong winds and landslides. Burundi low lands are sometimes affected by floods when we have heavy rains over neighboring high grounds, this can also happen along rivers.

If this happens we experience lost of lives and properties.



Major meteorological disasters cont.

- Droughts affect regions in the north of the country especially during La Nina years and whenever the rainy season fails resulting in famine affecting people and livestock. Hailstones have destructive effect and can cause famine to a village inhabitants. Strong winds can also destroy buildings and plantation but the impact is sometimes less than the other parameters.



Main Activities of Meteorological and hydrological Services in Burundi

- Collect weather/climate and hydrological data from meteorological and hydrological station network on daily basis
- ✓ Rainfall
- ✓ temperature,
- ✓ Wind
- ✓ evaporation
- ✓ Cloud Cover
- ✓ river/lake water levels etc
- SAEASONAL RAINFALL FCST
- DATA BANK ?AGE?ENT
- WEATHER/CLIMATE FORECASTING
- HYDROLOGICAL MODELLING



GAPS

- The meteorological infrastructure has major draw backs that include:
- Inadequate number of Human resources in meteorological and hydrological services
- Inadequate observational monitoring equipment;
- Lack of upper-air observational network
- Inadequate telecommunication networks and systems for data exchange;



GAPS cont'd.

- inadequate data processing and forecasting systems;
- inadequate information dissemination facilities;
- Migration from Traditional Alphanumeric Codes (TAC) to Table Driven Code Forms (TDCF)
- Low capacity in human resources for data management



challenges

- Monitoring, detection, attribution and prediction of climate change;
- Forecasting meteorological hazardous conditions and meteorological-related hazards in support of disaster risk reduction and climate change adaptation;
- Capacity to disseminate services and applications of weather and climate information;
- limited ICT capability;
- inadequate Power supply;
- Security and safety of meteorological equipment in the field; and
- Inadequate Funding support from the government and partners
- Keeping pace with the rapidly changing technology with limited resources;



THANK YOU!!!!