

**National Report of the Burkina Faso
12th WMO/UNEP Ozone Research Managers Meeting
Geneva, 24-26 April 2024**

1. OBSERVATIONAL ACTIVITIES

1.1 Column measurements of ozone and other gases/variables relevant to ozone loss.

Burkina Faso does not perform any column measurement of ozone. However, the country does daily Observation of ozone concentration in the stratosphere, using the EUMETCast and Satellite Channel 8 (Meteosat 8).

Recently, the country had received an approval from the Vienna Convention for implementation of research activities and systematic observations relevant to the Vienna Convention in Burkina Faso. This project seeks to acquire, through the Vienna Convention Trust Fund, a ground-based ozone column measuring instrument, which will be transferred to the National Meteorological Agency of Burkina Faso (NAMA-BF) [<https://www.meteoburkina.bf/>].

1.2 Profile measurements of ozone and other gases/variables relevant to ozone loss

Ozone layer is observed by Satellite on METEOSAT Channel 8 (Meteosat 8), CO₂ profile on Channel 11, and Water Vapour on channel 5 of METSOSAT.

1.3 UV measurements

Due to lack of instrument of measurement, No UV measurement was done.

1.4 Calibration activities

Calibration concerns only basic sensors (for the measurement of temperature, humidity, Rain, Wind speed and Direction, Pressure). Eight (8) maintenances (4 preventive and 4 curative maintenances) are carried out yearly by the National Meteorological Agency to ensure good quality of the data.

2. RESULTS FROM OBSERVATIONS AND ANALYSIS

No UV observation is carried; Therefore, no data and no result concerning UV radiation

3. THEORY, MODELLING, AND OTHER OZONE RELATED RESEARCH

(e.g., 3-D CTM modelling, data assimilation, use of satellite data, UV effect studies)

The National Meteorological Agency has procured a High-Performance computing System to perform weather and climate modelling, hydrological forecasting as well as pollution and aerosols dispersion forecasting. Currently, WRF and ICON models are being run in a daily basis. However, only weather data are concerned (Temperature, rain, humidity, pressure, wind). Due to lack of pollution and ozone monitoring system, there is no data collection to validate the model.

A dust model has also been implemented with the support of the Simulation Center of Barcelona and provides daily forecasting on dust dispersion.

The National Meteorological Agency benefited from the support of Spain meteorological agency (AEMET) for the installation of an IMDS sensor (measuring PM_x concentration) which measures PM₁₀ particles, temperature, humidity, wind speed and direction at the Ouagadougou station.

4. DISSEMINATION OF RESULTS

4.1 Data reporting

(e.g., submission of data to the WOUDC and other data centres)

No Data reporting yet

4.2 Information to the public

(e.g., UV forecasts)

Public receive information about:

- Traditional weather forecast which includes temperature (mean, minimum and maximum), rainfall (only during rainy season), humidity, potential evapotranspiration and wind.
- Agro-climatic information for agriculture
- Dust suspension provided through visibility estimate and dust model outputs.
- Fumes from vehicles
- Early warnings on dust
- Bio-meteorological information related to health (meningitis-related and malaria related meteorological parameters)

4.3 Relevant scientific papers

No scientific Paper yet

5. PROJECTS, COLLABORATION, TWINNING AND CAPACITY BUILDING

(e.g., national projects, international projects, other collaboration (nationally, internationally))

All projects and collaboration concern:

- Agro meteorological sector
- Climate change
- Health sector
- Twinning with the Barcelona supercomputer Center for Dust forecasting
- Twinning with Spain meteorological agency (AEMET) for PM_x concentration measuring
- Twinning with Meteo-France for weather and climate forecasting

6. IMPLEMENTATION OF THE RECOMMENDATIONS OF THE 11th OZONE RESEARCH MANAGERS MEETING

7. FUTURE PLANS

With the support of the WMO and the Ozone Secretariat, we are looking for the deployment of a ground-based ozone column measurement instrument Dobson instrument, such, for Ozone and UV measurement, and Air quality monitoring equipment.

8. NEEDS AND RECOMMENDATIONS

Need more cooperation and training to implement Ozone monitoring in Burkina Faso.

Need equipment and training for measurement and ozone forecasting, and UV.

Need equipment for pollution monitoring

Partnership with an advanced Air quality monitoring institutes/center.