

WEEKLY MENINGITIS VIGILANCE FOR AFRICA

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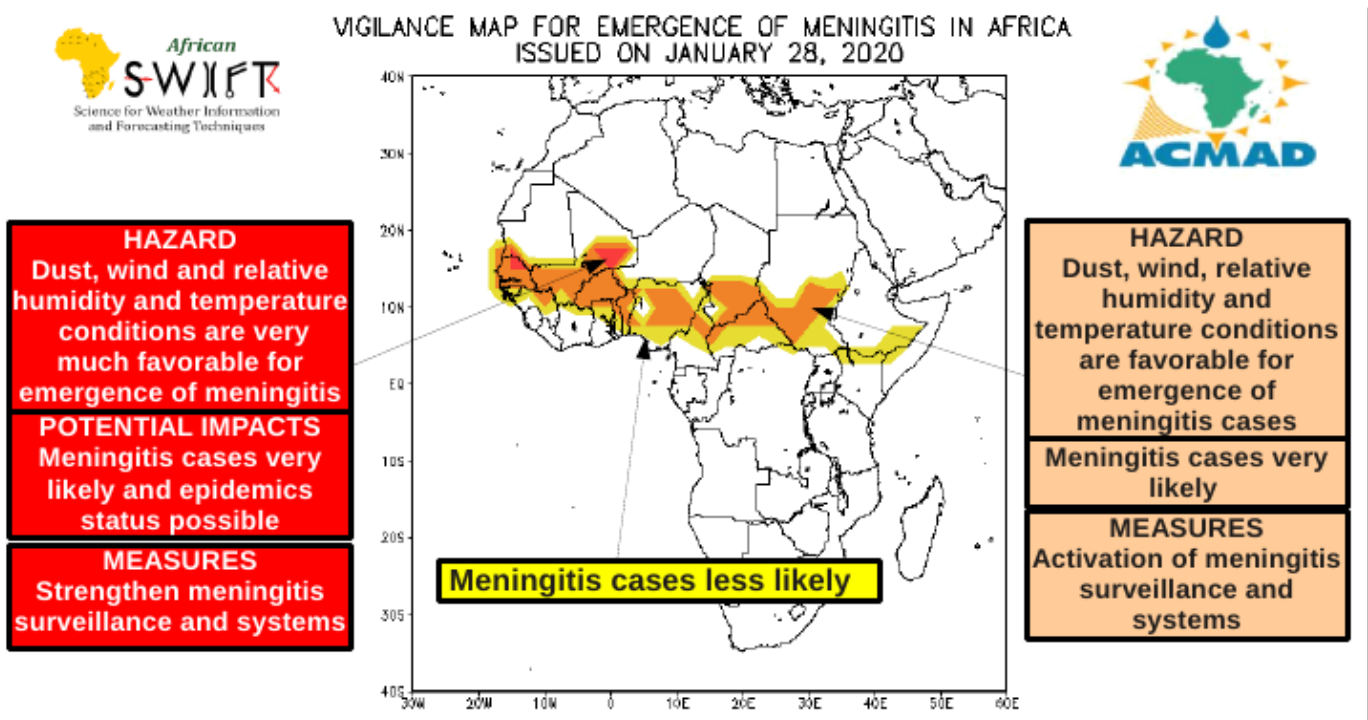
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1 Vigilance

- High vigilance is needed for meningitis cases over southwestern Mauritania, northeastern Senegal, and eastern Mali.
- Meningitis cases are very likely over southern Mali, Burkina Faso, northern Ghana, Togo and Benin, western Niger, central Nigeria, southern Chad, northern Cameroon, northern Central African Republic, and southern Sudan.
- Low to no vigilance is needed over the remaining parts of the meningitis belt.



2 Atmospheric conditions

2.1 Relative humidity

Figure 1 presents the mean relative humidity at 1000 hPa estimated from NCEP reanalysis during 17 - 24 January 2020 period. Atmospheric conditions became very dry (relative humidity below 20 %) over the Sahel, northern Nigeria and Cameroon, and southern Chad. Moist atmosphere (RH between 20 and 40 %) was observed over central Nigeria, Benin, Togo, Ivory Coast, and Ghana, central Cameroon, Algeria, northern Guinea, CAR, southern Mali, Chad, much part of Sudan, northern South Sudan. Very wet atmospheric conditions (relative humidity above 60 %) was observed over southern Ivory Coast, Liberia, Sierra Leona, southwestern Ghana, south equatorial countries, part of South Africa, Madagascar, Mozambique, Botswana, northern Morocco, Algeria, Tunisia, Libya, and Egypt.

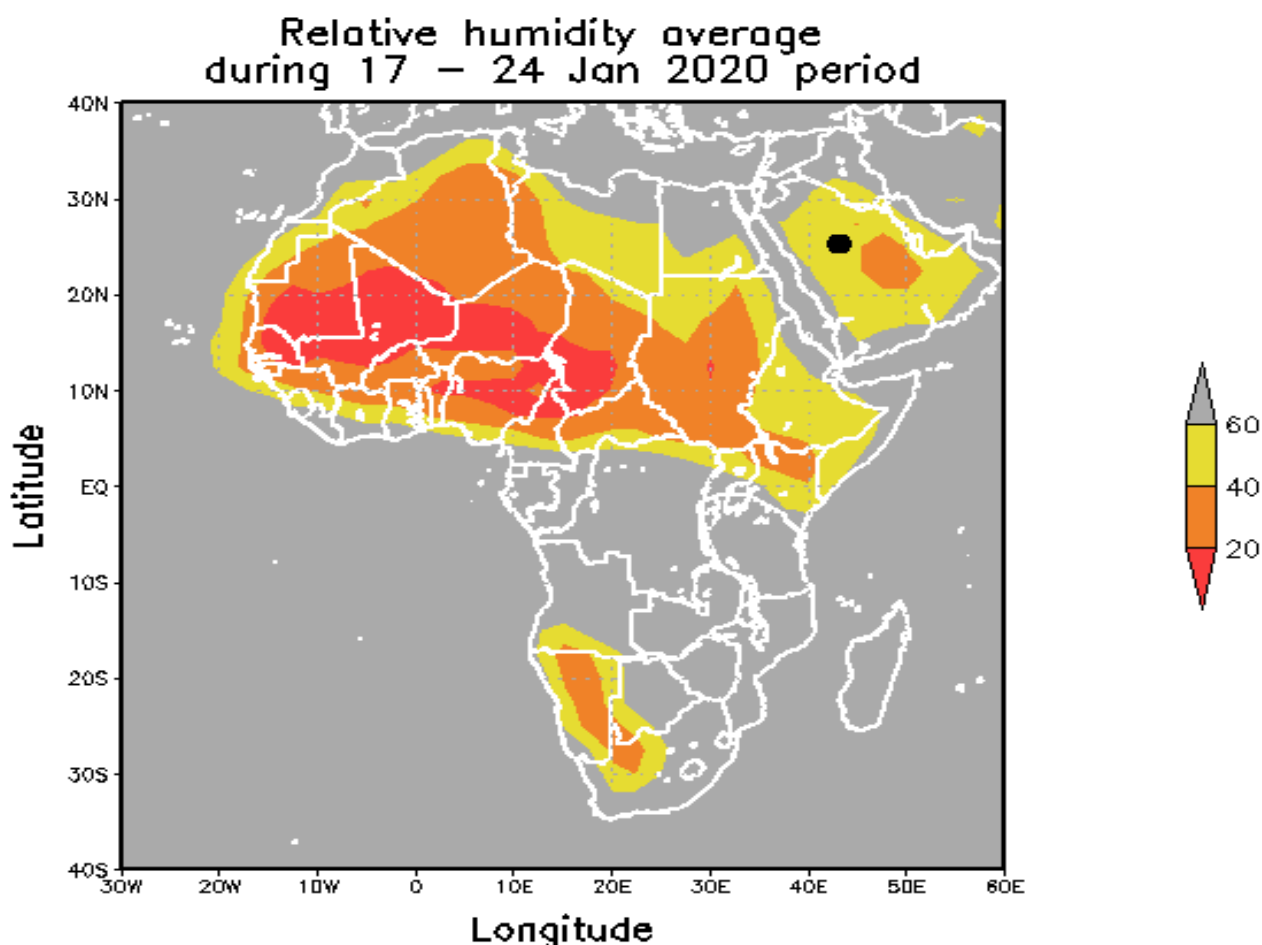


FIGURE 1 – Mean relative humidity (%) for the period 17-14 January 2020 estimated from NCEP reanalysis at 1000 hPa.

2.2 Surface dust concentration

Figure 2 shows the mean surface dust concentrations prospected using ECMWF forecast during the period from 20 - 27 January 2020. Highest values of surface dust concentrations prevailed over eastern Sahel. Very dusty atmospheric conditions were also observed over central Senegal, western Mauritania. High values of dust concentrations were also prospected over parts of Algeria, and part of Nigeria. Moderate or low surface dust concentrations remained over the rest of the remaining part of the meningitis belt.

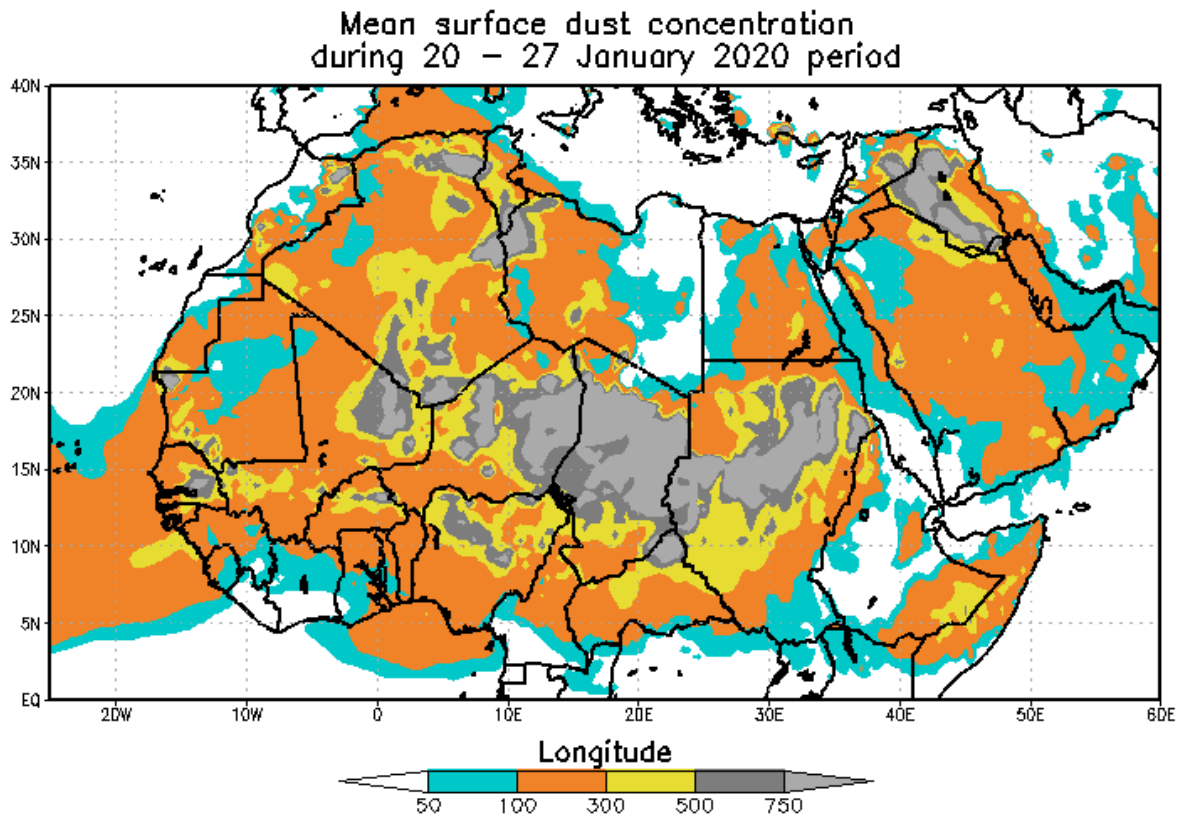


FIGURE 2 – Mean surface dust concentration ($\mu\text{g m}^{-3}$) forecasted during the week from 20 -27 January 2020 from ECMWF.

2.3 Temperature

Figure 3 shows the mean temperature at 1000 hPa during the period from 17 - 24 January 2020. It indicates that coldest atmosphere with temperature lower than 25 °C prevailed over Sahara and northern Africa. The warmest temperatures more than 30 °C prevailed over central part of East Africa and Southern Africa. An increase of the heating is observed over the Gulf of Guinea countries and central Africa. The warmest temperatures (more than 33 °C) prevailed over eastern Namibia, central South Africa, and southern Botswana.

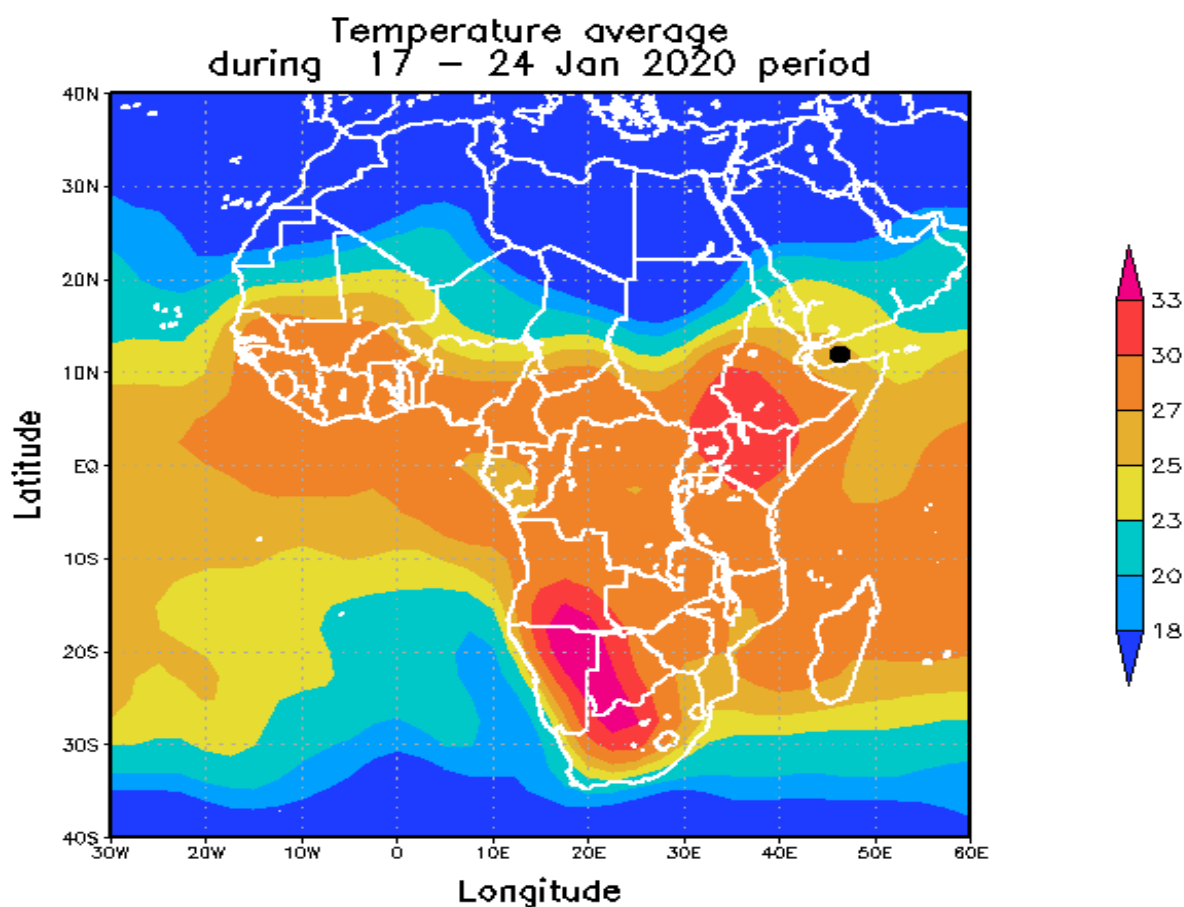


FIGURE 3 – Mean temperature (°C) for the period from 17 - 24 January 2020 estimated from NCEP reanalysis at 1000 hPa.

2.4 Meridional wind speed

Figure 4 shows the mean meridional wind speed at 1000 hPa during the period from 17 - 24 January 2020. It indicates that the ITD position was located on average over northern Liberia, central Ivory Coast, and southern Ghana. It moved southward compare to his mean position during the previous week. Southerly wind prevailed of central and Eastern Africa where precipitations are observed this period. Harmattan wind was observed over Mauritania, Senegal, Mali, Guinea, Burkina Faso, parts of Guinea, Bissau Guinea, northern Ivory Coast, Ghana, Togo, and Benin, Niger, Chad, Nigeria, northern Cameroon and CAR, Sudan, and South Sudan.

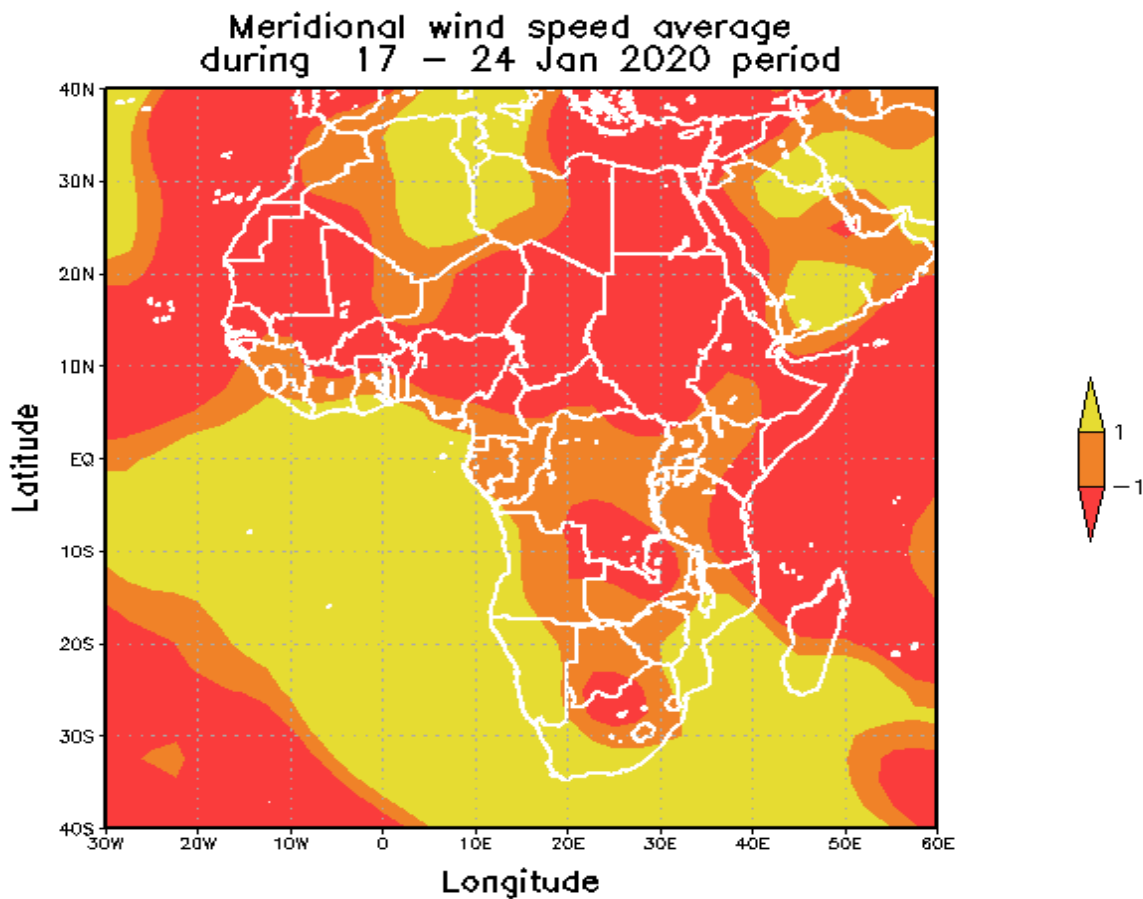


FIGURE 4 – Mean meridional wind speed (m s^{-1}) for the period from 17 - 24 January 2020 estimated from NCEP reanalysis at 1000 hPa.