WEEKLY MENINGITIS VIGILANCE FOR AFRICA

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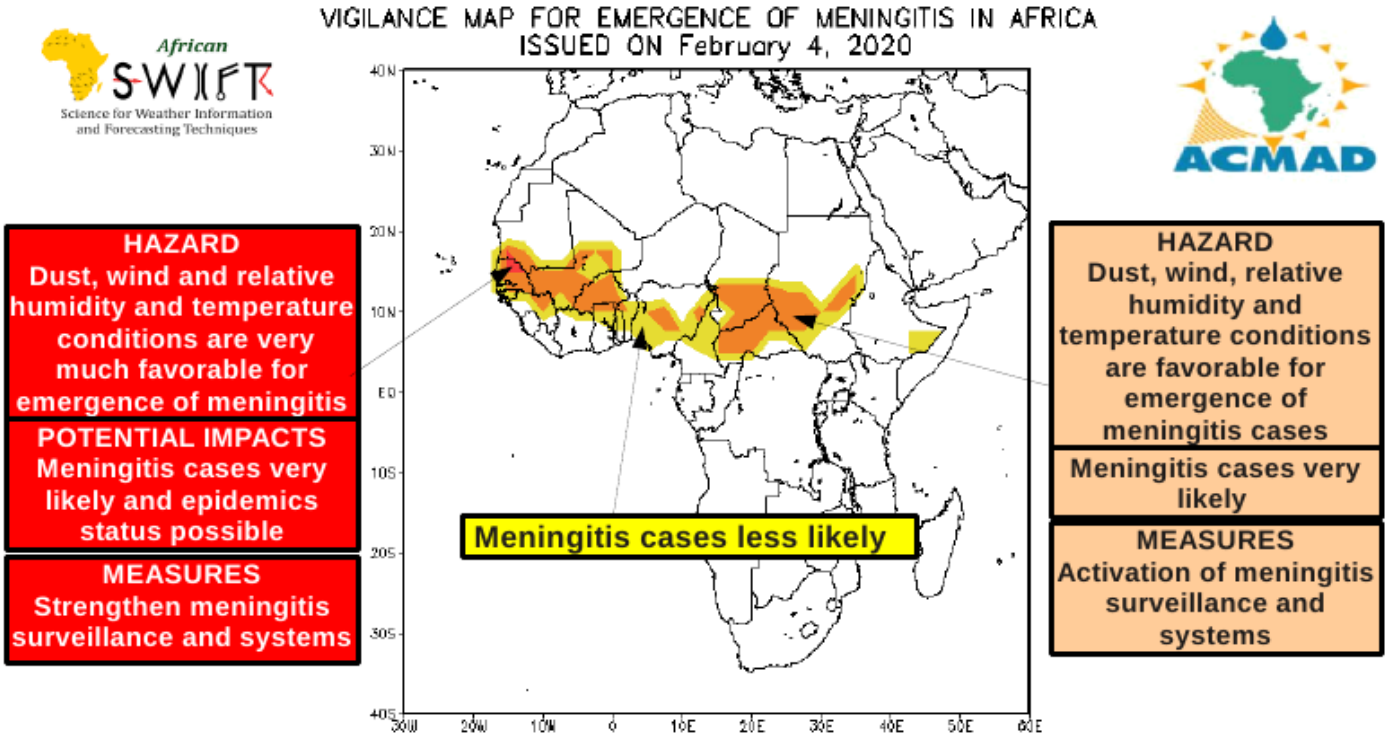
1 Vigilance

- High vigilance is needed for meningitis cases over northeastern Senegal and southern Mauritania.

- Meningitis cases are very likely over southeastern Senegal, central and southern Mali, Burkina Faso, northern Guinea, Ivory coast, Ghana, Togo and Benin, central Nigeria, southern Chad, CAR, 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 shows the mean relative humidity (RH) at 1000 hPa estimated from NCEP reanalysis during 24 - 31 January 2020 period. It indicates that very dry atmospheric conditions with RH below 20 %) prevailed over the Sahel, central and northern Nigeria, northern Cameroon, Benin, Togo, Ghana, Ivory Coast, and southern Chad. Moistening atmospheric conditions (RH between 20 and 40 %) were observed over southern Nigeria, central Benin, Togo, Ivory Coast, and Ghana, central Cameroon, Algeria, northern Guinea, CAR, northern Chad, much part of Sudan and South Sudan. Very wet atmospheric conditions (relative humidity above 60 %) was observed over southern Ivory Coast, Liberia, Sierra Leona, southwestern Ghana, south equatorial countries, Ethiopia, northern Somalia, part of South Africa, Madagascar, Mozambique, Botswana, northern Morocco, Algeria, Tunisia, Libya, and Egypt .

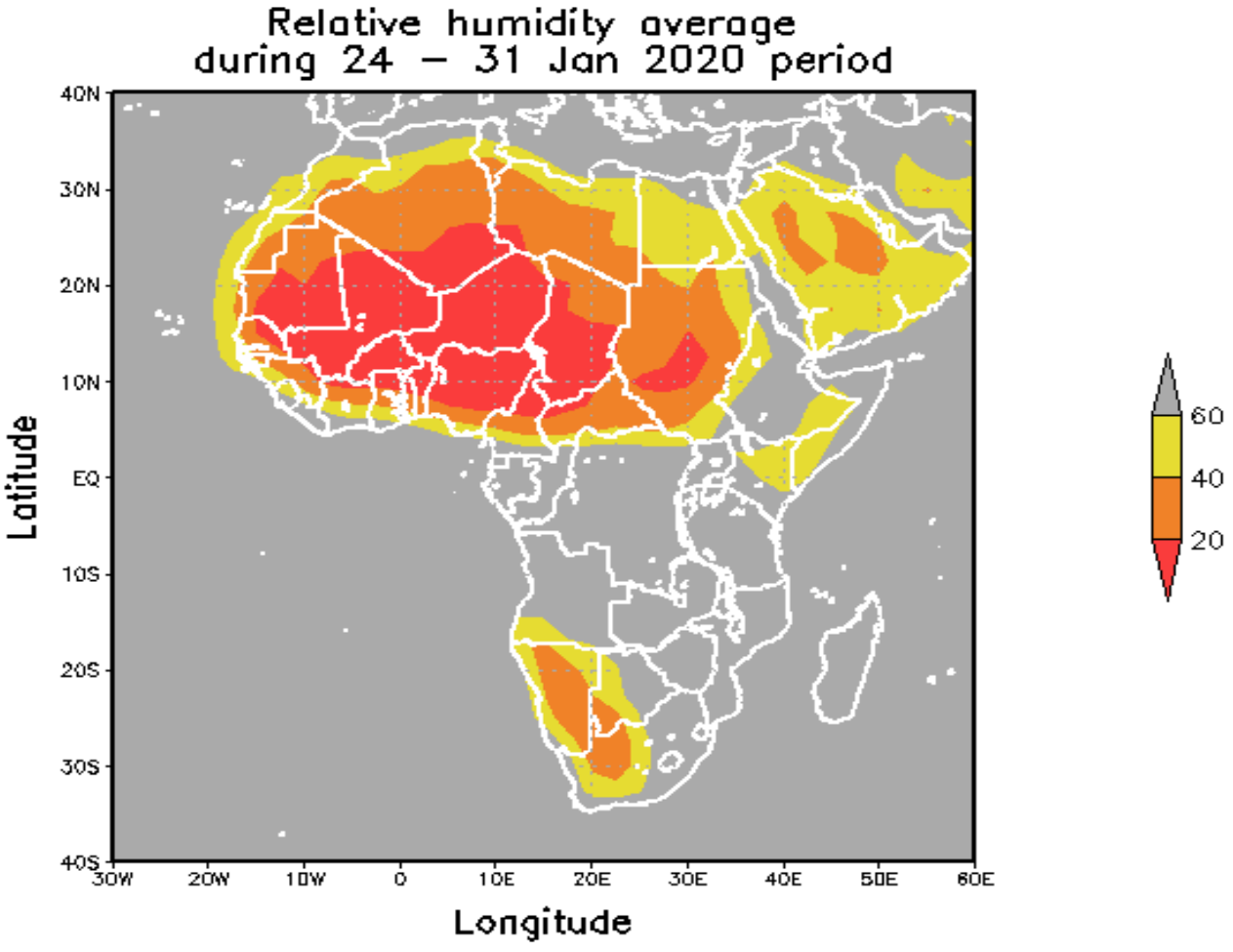


FIGURE 1 – Mean relative humidity (%) for the period 24 - 31 January 2020 estimated from NCEP reanalysis at 1000 hPa.

2.2 Surface dust concentration

Figure 2 presents the mean surface dust concentrations prospected using ECMWF forecast during the period from 27 January - 3 February 2020. It shows that the very dusty atmospheric conditions were heterogeneously distributed over the northern part of the continent.The strengthening of Azores High pressure (Figure not shown) allowed high values of surface dust concentrations prevailed over eastern Senegal and Western Mauritania. Libya High pressure (Figure not shown) was expected to create favorable conditions of dust triggering over western and central Sahara. These dusts are advected southward up to Golf of Guinea coast.

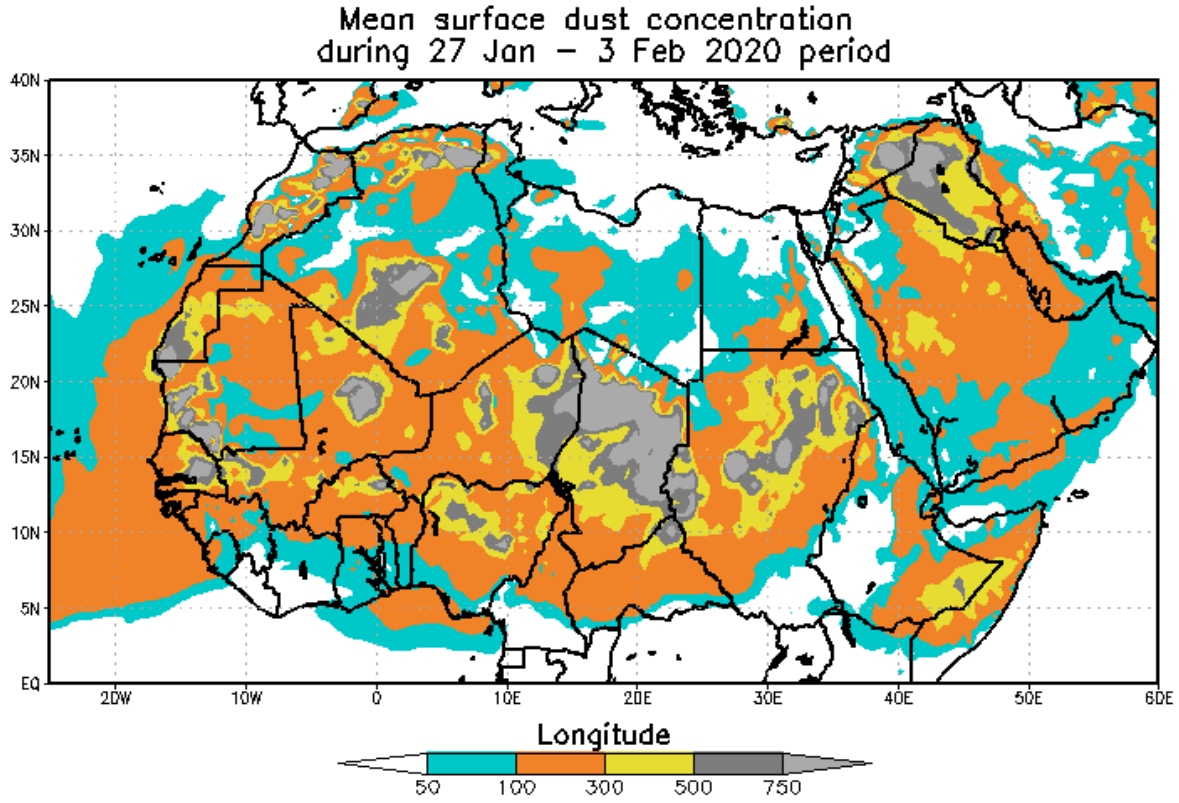


FIGURE 2 – Mean surface dust concentration (μg m^{-3}) forecasted during the week from 27 January to 3 February 2020 from ECMWF.

2.3 Temperature

Figure 3 presents the mean temperature at 1000 hPa during the period from 24 - 31 January 2020. It indicates that coldest atmosphere with temperature lower than 25 ^{o}C prevailed over eastern Sahara and northern Africa. The warmest temperatures more than 30 ^{o}C prevailed over central part of East Africa, northern Guinea, northwestern Ivory Coast, and Southern Africa. An increase of the heating in observed over the Golf of Guinea countries and central Africa. The warmest temperatures (more than 33 ^{o}C) prevailed over eastern Namibia, central South Africa, and southern Botswana.

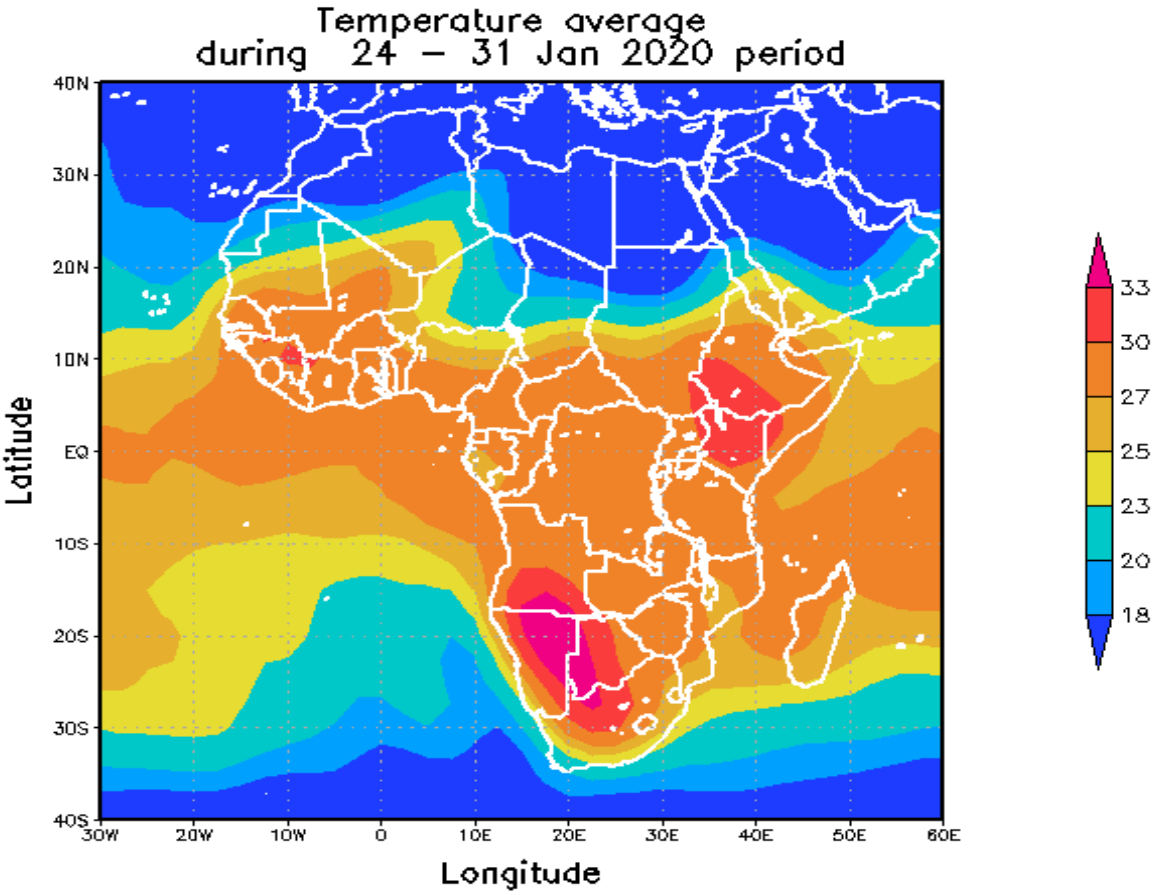


FIGURE 3 – Mean temperature (^{o}C) for the period from 24 - 31 January 2020 estimated from NCEP reanalysis at 1000 hPa.

2.4 Meridional wind speed

Figure 4 shows the mean meridional wind speed at 1000 hPa during the period from 24 - 31 January 2020. It indicates that the ITD position was located on average over northern Guinea, Ivory Coast, and Ghana, central Togo and Benin, southern Nigeria, central Cameroon and CAR. The ITD moved northward compare to his mean position during the previous week. The large band of southerly wind from southeastern Senegal to Libya is created the occurrence of an unusual through (Figure not shown). Southerly wind prevailed of central and Eastern Africa where precipitations are observed this period. Harmattan wind was observed over Mauritania, Senegal, Mali, Bissau Guinea, Burkina Faso, northern Ivory Coast, Ghana, Togo, and Benin, much parts of Niger, Chad, central and northern Nigeria, northern Cameroon and CAR, Sudan, and South Sudan.

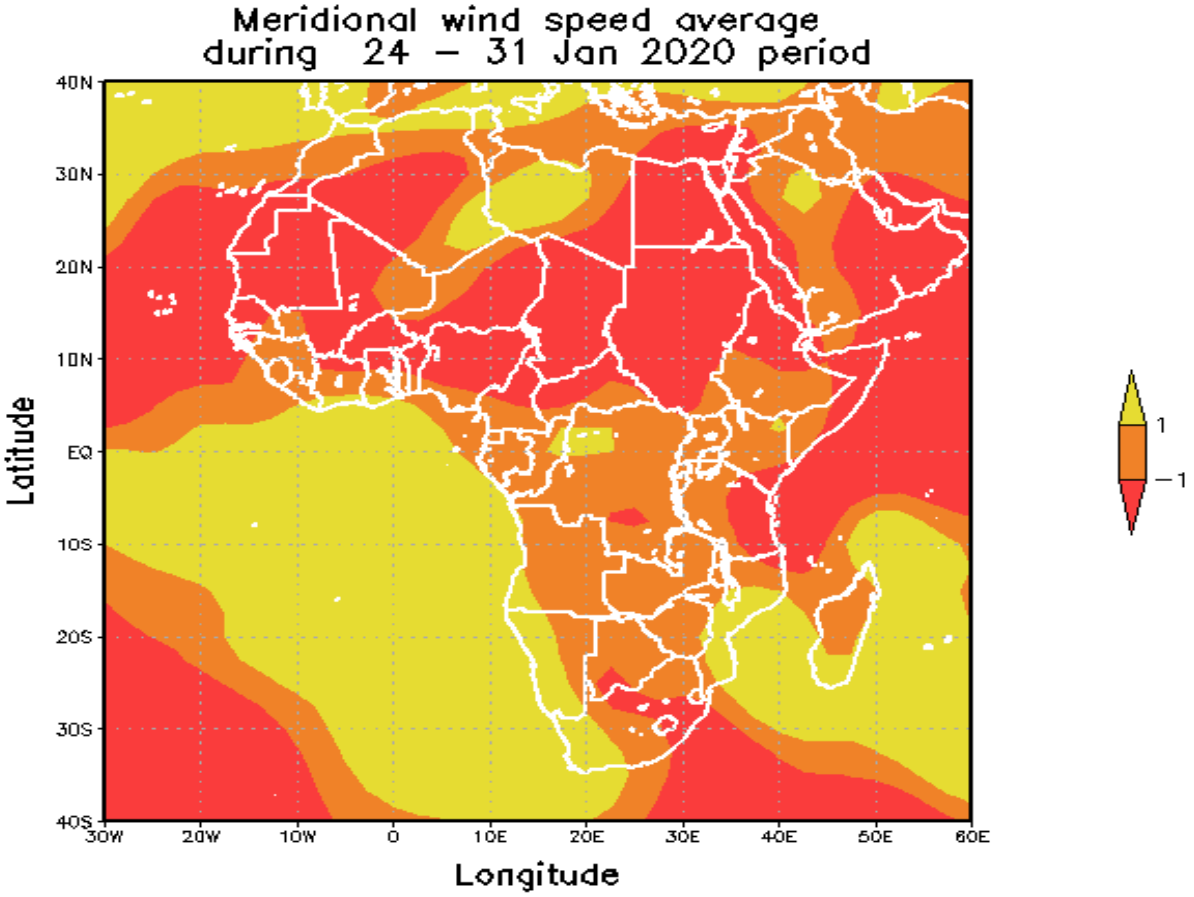


FIGURE 4 – Mean meridional wind speed (m s^{-1}) for the period from 24 - 31 January 2020 estimated from NCEP reanalysis at 1000 hPa.