WEEKLY MENINGITIS VIGILANCE FOR AFRICA

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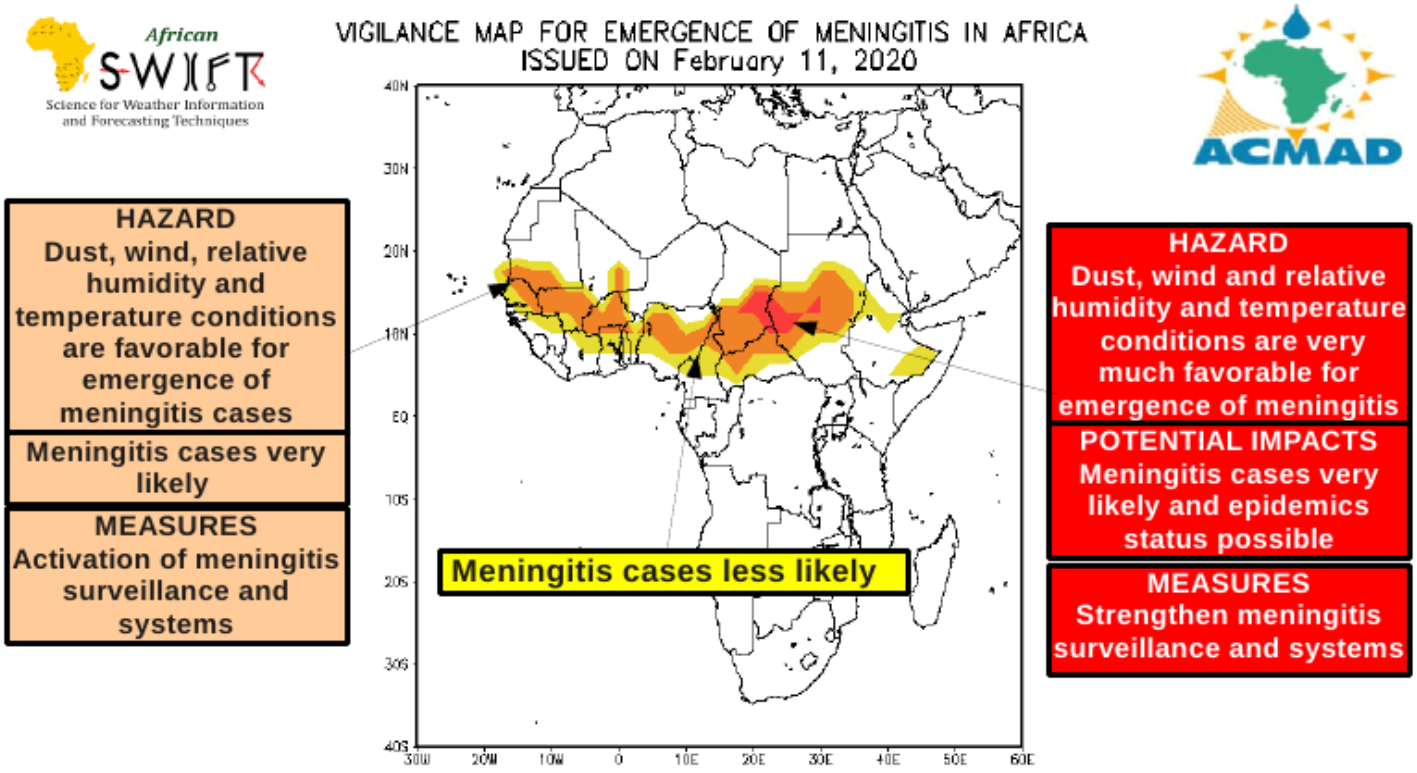
1 Vigilance

- High vigilance is needed for meningitis cases over southeastern Chad, northern CAR, and southern Sudan.

- Meningitis cases are very likely over eastern Senegal, southern Mauritania, central and southern Mali, Burkina Faso, northern Ivory coast, Ghana, Togo and Benin, central and northern Nigeria, southern Chad, northern Cameroon, CAR, and central 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 1 - 8 February 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, Senegal, Ghana, and Guinea, central Cameroon and CAR, Algeria, much parts of Sudan, northern Niger, Chad. Very wet atmospheric conditions (relative humidity above 60 %) was observed over southern Ivory Coast, Liberia, Sierra Leona, southwestern Ghana, south equatorial countries, Somalia, part of South Africa, Madagascar, Mozambique, Botswana, northern Morocco, Algeria, Tunisia, Libya, and Egypt .

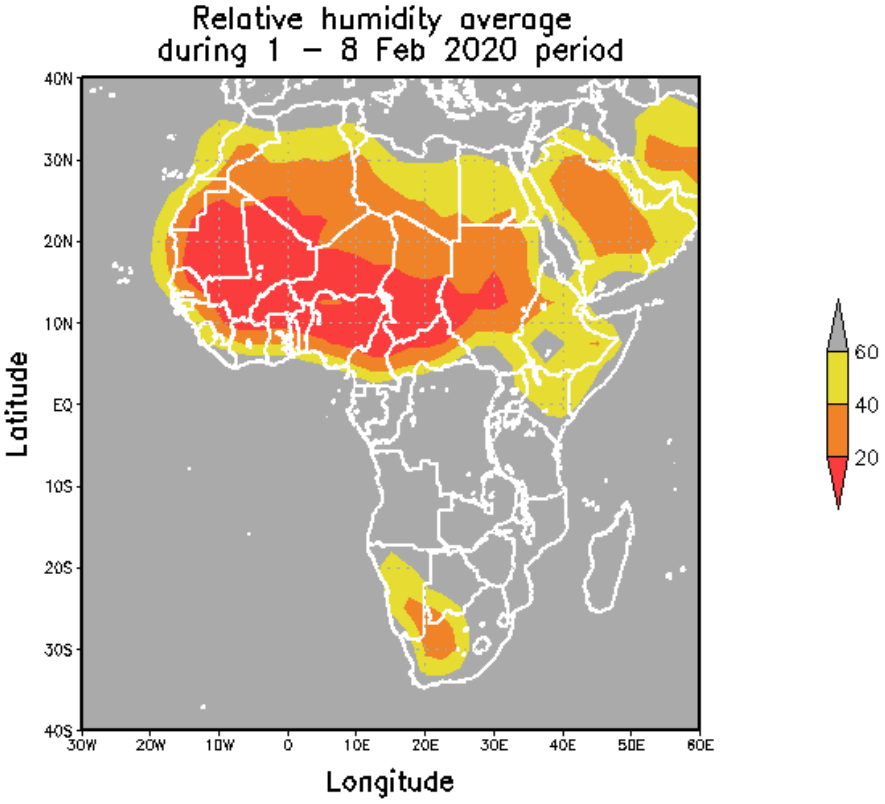


FIGURE 1 – Mean relative humidity (%) for the period 1 - 8 February 2020 estimated from NCEP reanalysis at 1000 hPa.

2.2 Surface dust concentration

Figure 2 presents the mean surface dust concentrations prospected using ECMWF forecast during 3 - 10 February 2020 period. It shows that the very dusty atmospheric conditions were heterogeneously distributed over the northern part of the continent. Azores High pressure position (Figure not shown) allowed the triggering of dust over western part of West Africa. High values of surface dust concentrations prevailed over eastern and central Senegal, Western Mauritania, and Morocco. 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.

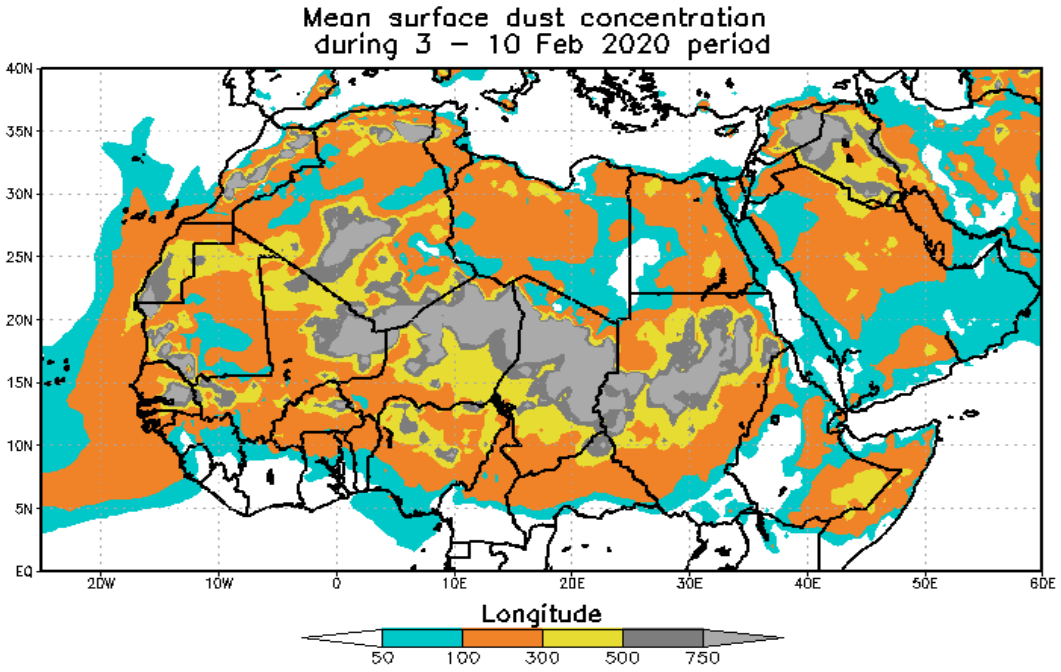


FIGURE 2 – Mean surface dust concentration (μg m^{-3}) forecasted from ECMWF during 3 - 10 February 2020 period .

2.3 Temperature

Figure 3 shows the mean temperature at 1000 hPa during 1 - 8 February 2020 period. It indicates that coldest atmosphere with temperature lower than 23 ^{o}C prevailed over eastern Sahel (Niger, northern Chad and Sudan) and northern Africa. The warmest temperatures more than 30 ^{o}C prevailed over central part of East Africa, CAR, southern Chad, South Sudan, southern Sudan, parts of South Africa, Namibia, southern Angola, and Botswana. The warmest temperatures (more than 33 ^{o}C) prevailed over eastern Namibia, central South Africa, and southern Botswana.

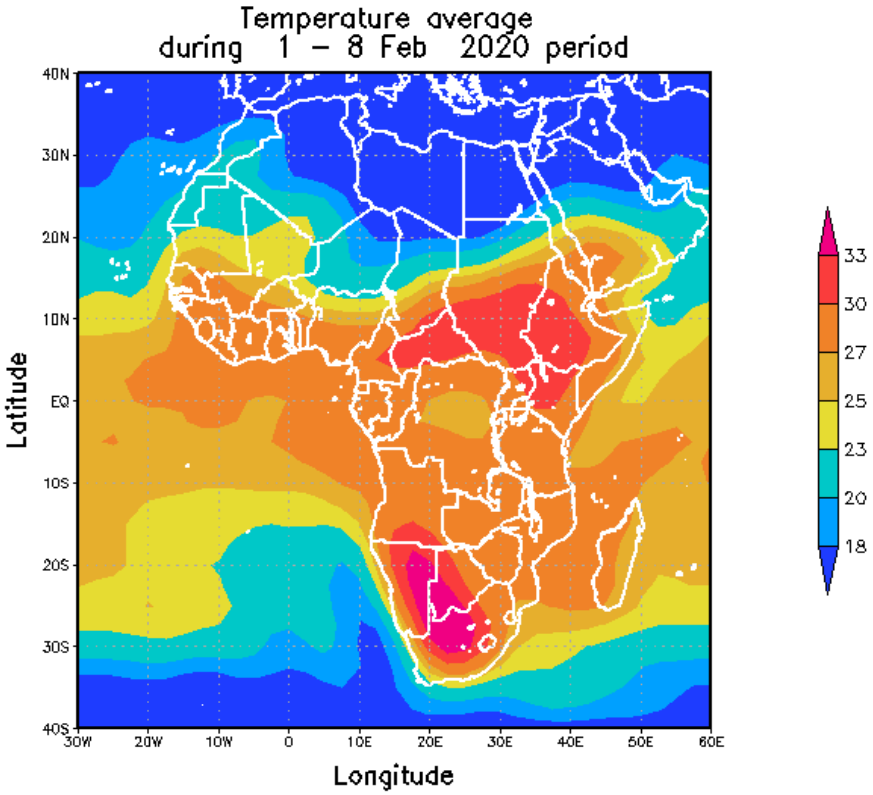


FIGURE 3 – Mean temperature (^{o}C) for the period from 1 - 8 February 2020 estimated from NCEP reanalysis at 1000 hPa.

2.4 Meridional wind speed

Figure 4 shows the mean meridional wind speed at 1000 hPa during 1 - 8 February 2020 period. It indicates that the ITD moved southward compare to his position during previous week. It was located on average over southern Ivory Coast, and Ghana, central Togo and Benin, southern Nigeria, central Cameroon and CAR. 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, Chad, central and northern Nigeria, northern Cameroon and CAR, and Sudan.

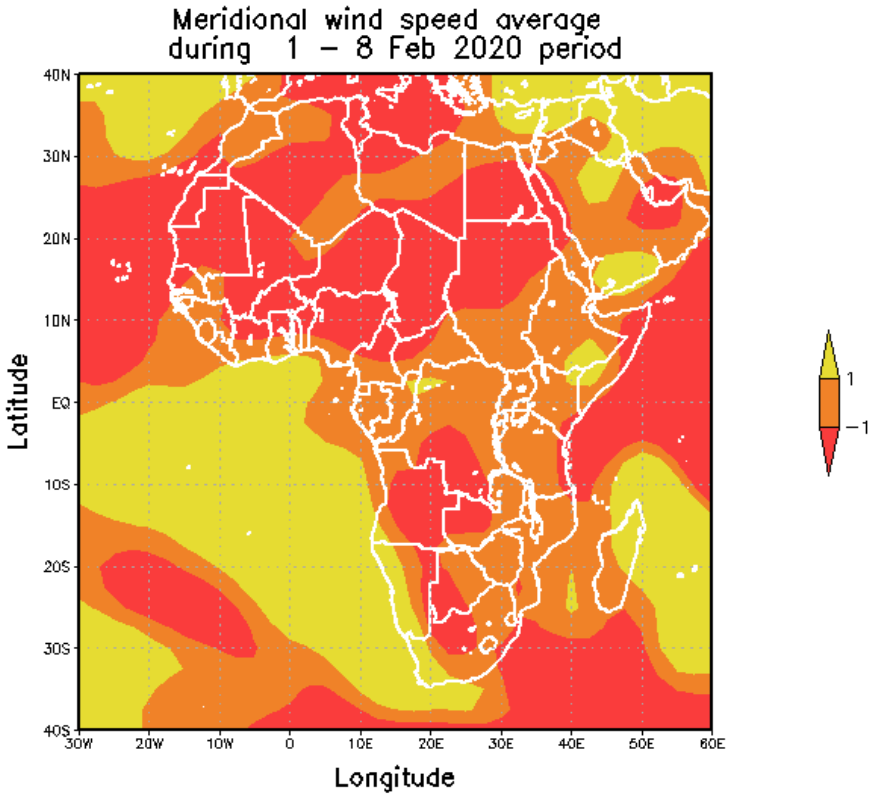


FIGURE 4 – Mean meridional wind speed (m s^{-1}) during 1 - 8 February 2020 period, estimated from NCEP reanalysis at 1000 hPa.