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MENINGITIS VIGILANCE FOR AFRICA

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SUMMARY

- There is persistence of meningitis cases over Burkina Faso, Nigeria, Ghana, Mali, Togo, Central African Republic, Niger, and Benin.
- High vigilance is needed for meningitis cases over southeastern Mali, southern Mauritania, Burkina Faso, Niger, Chad, northern Nigeria, northern Cameroon, Togo, Ghana and Benin, western Central African Republic and central Sudan.
- Moderate vigilance is required over central Sudan, northern Chad and Niger.
- Low to no vigilance is needed over the remaining parts of the meningitis belt.



FIGURE 1 – African Meningitis Belt.

I. SITUATION EPIDEMIOLOGIQUE DE LA SEMAINE 05 / EPIDEMIOLOGICAL SITUATION OF WEEK 05

Table 1 : Situation épidémiologique / Epidemiological Situation

Pays Country	Cas Cases	Décès Deaths	Létalité (%) CFR (%)	Districte en Alerte District in Alert	Districte en Epidémie District in Epidemic	Complétude (%) Completeness (%)
Benin ^P	17	2	11.8	0	0	100.0
Burkina Faso ^T	100	4	4.0	2	0	100.0
Burundi ^T	-	-	-	-	-	-
Cameroun ^P	-	-	-	-	-	-
Centrafrique ^P	1	0	0.0	0	0	42.9
Côte d'Ivoire ^P	8	0	0.0	0	0	100.0
Ethiopia ^T	-	-	-	-	-	-
Ghana ^P	45	2	4.4	4	1	100.0
Guinea ^P	-	-	-	-	-	-
Guinée Bissau	-	-	-	-	-	-
Gambia ^T	-	-	-	-	-	-
Kenya	-	-	-	-	-	-
Mali ^T	13	0	0.0	0	0	100.0
Mauritania ^P	-	-	-	-	-	-
Niger ^T	14	1	7.1	0	0	100.0
Nigeria ^P	22	0	0.0	0	0	100.0
RD Congo ^{P***}	-	-	-	-	-	-
Senegal ^P	-	-	-	-	-	-
South Sudan ^P	-	-	-	-	-	-
Sudan ^T	0	0	0.0	0	0	100.0
Tanzania	-	-	-	-	-	-
Tchad ^T	29	2	6.9	1	0	100.0
Togo ^P	11	2	18.2	0	0	93.2
Uganda ^P	-	-	-	-	-	-
Total	260	13	5.0	7	1	38.2

^P Pays partiellement vacciné avec le MenAfriVac / Country partially vaccinated with MenAfriVac
^T Pays entièrement vacciné avec le MenAfriVac / Country entirely vaccinated with MenAfriVac
^{***} La vaste majorité du territoire de la République démocratique du Congo se situe en dehors de la ceinture africaine de la méningite. Par conséquent, les seuils d'alerte et d'épidémie ne sont pas applicables / The majority of the Democratic Republic of the Congo territory is situated outside the African meningitis belt. Thus the alert and epidemic thresholds are not applicable

FIGURE 2 – Inventory of meningitis occurrence in Africa during the 5th week of January 2019. Data source : <https://www.who.int/emergencies/diseases/meningitis/meningitis-bulletin-5-2019.pdf?ua=1>

II. SYNTHÈSE DE LA SITUATION ÉPIDÉMIOLOGIQUE / SUMMARY OF THE EPIDEMIOLOGICAL SITUATION

(Semaines notifiées / Reported weeks 01-05)

Table 2: SYNTHÈSE DE LA SITUATION ÉPIDÉMIOLOGIQUE/Summary of the Epidemiological situation

Pays	Cas	Décès	Létalité (%)	District en Alerte	District en Epidémie	Semaines notifiées	En districts (%)	En semaines(%)
Country	Cases	Deaths	CFR (%)	District in Alert	District in Epidemic	Reported weeks	In districts (%)	In weeks(%)
Benin^P	44	9	20.5	0	0	01-05	100.0	100.0
Burkina Faso^T	294	15	5.1	4	0	01-05	100.0	100.0
Burundi ^T	-	-	-	-	-	-	-	-
Cameroun ^P	78	2	2.6	3	0	01-04	89.5	97.1
Centrafrique^P	18	0	0.0	0	0	01-05	60.0	87.6
Côte d'Ivoire^P	32	1	3.1	0	0	01-05	100.0	100.0
Ethiopia ^T	-	-	-	-	-	-	-	-
Ghana^P	254	8	3.1	7	4	01-05	100.0	100.0
Guinea ^P	12	0	0.0	0	0	01-04	100.0	100.0
Guinée Bissau	-	-	-	-	-	-	-	-
Gambia ^T	1	0	0.0	0	0	01-02	100.0	100.0
Kenya	-	-	-	-	-	-	-	-
Mali^T	48	0	0.0	0	0	01-05	100.0	99.7
Mauritania ^P	-	-	-	-	-	-	-	-
Niger^T	70	4	5.7	0	0	01-05	100.0	100.0
Nigeria^P	147	7	4.8	0	0	01-05	100.0	100.0
RD Congo ^{***}	-	-	-	-	-	-	-	-
Senegal	-	-	-	-	-	-	-	-
South Sudan ^P	-	-	-	-	-	-	-	-
Sudan^T	2	0	0.0	0	0	01-05	100.0	100.0
Tanzania	3	3	100	0	0	01-03	100.0	100.0
Tchad^T	94	6	6.4	1	0	01-05	100.0	100.0
Togo^P	59	2	3.4	0	0	01-05	93.2	100.0
Uganda ^P	-	-	-	-	-	-	-	-
Total	1 156	57	4.9	15	4	01-05	50.9	99.7

^P = Pays partiellement vacciné avec le MenAfriVac / Country partially vaccinated with MenAfriVac
^T = Pays entièrement vacciné avec le MenAfriVac / Country entirely vaccinated with MenAfriVac
^{***} La vaste majorité du territoire de la République démocratique du Congo se situe en dehors de la ceinture africaine de la méningite. Par conséquent, les seuls

FIGURE 3 – Inventory of meningitis occurrence in Africa during the first five weeks of year 2019. Data source : <https://www.who.int/emergencies/diseases/meningitis/meningitis-bulletin-5-2019.pdf?ua=1>

During the week from 9 to 16 February 2019 (Figure 4), very dry atmospheric conditions (relative humidity below 20 %) were observed over Chad, Niger, Mali, Burkina Faso, northern Nigeria, Benin, Togo, Ghana, northern Cameroon, and central Sudan. Relative humidity between 20 and 40 % prevailed over parts of Sudan, central and eastern Senegal, northern Guinea, and a small band over the Gulf of Guinea countries. Wet (relative humidity above 40 %) atmospheric conditions were recorded over the coast.

The surface dust concentration observed on 16th February 2019 at 00 :00 UTC is shown in Figure 5. The figure reveals that low dust concentration ($50 \mu\text{g m}^{-3}$) was observed over the Gulf of Guinea countries, except over the extreme northern parts of Benin, Guinea, Nigeria, and northern Cameroon. Moderate dust concentration (between 50 and $150 \mu\text{g m}^{-3}$) were located over southern Nigeria, Benin, Togo, northern Ghana, Burkina Faso, southern Mali, southern Senegal, southern Sudan and Chad, central Niger, northern Cameroon, and Central Africa. The dust concentration between 150 and $300 \mu\text{g m}^{-3}$ were observed mainly over Sahara desert, with higher concentration over Mauritania, northern Mali, southern Algeria, central Chad, Sudan, central Egypt, Sudan, and Niger.

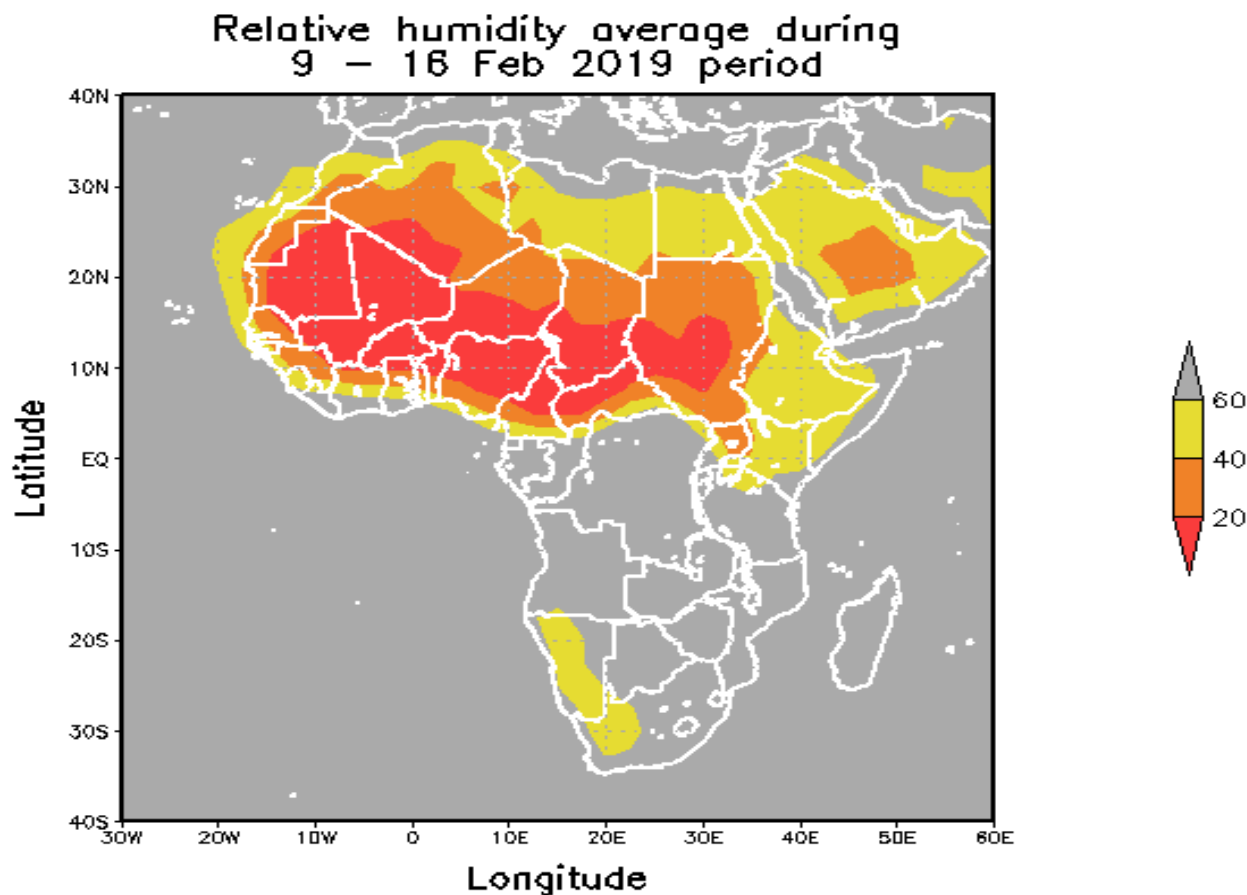


FIGURE 4 – Mean relative humidity (%) for the period from 9 - 16 February 2019.

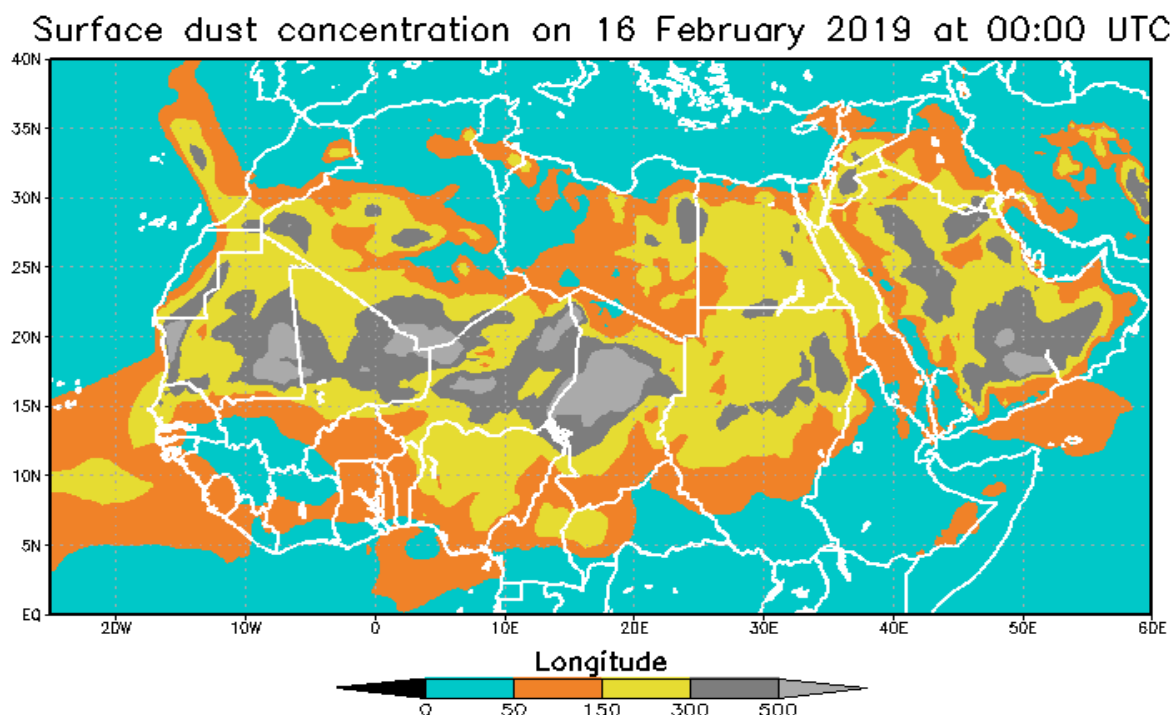


FIGURE 5 – Surface dust Concentration ($\mu\text{g m}^3$) estimated on February 16, 2019 at 00 :00 UTC from ECMWF reanalyses.

Figure 6 indicates that northerly winds were dominant over much of the meningitis belt. The highest values were observed over northern Senegal, Gambia, Guinea Bissau, Burkina Faso, Mauritania, southern Mali, Niger, Nigeria, Cameroon, Chad, northern Sudan and western Central African Republic, northern Ivory Coast, Ghana, Togo and Benin. The ITD

position remained close to the coast of the Gulf of Guinea countries.

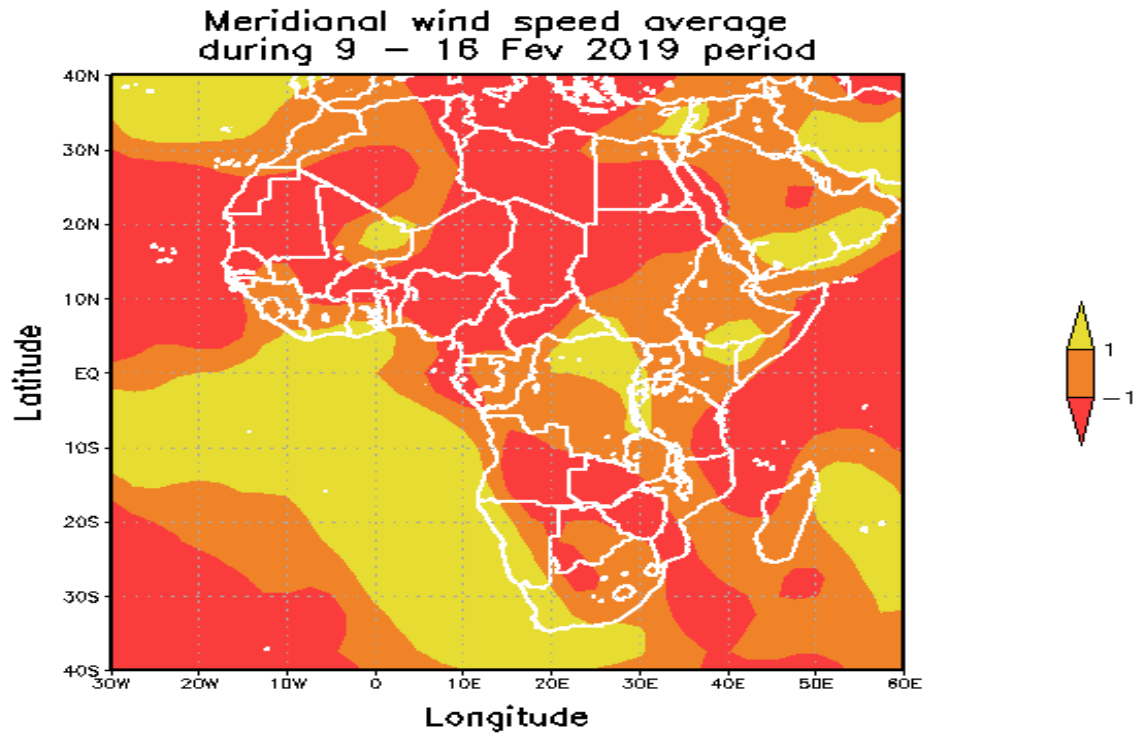
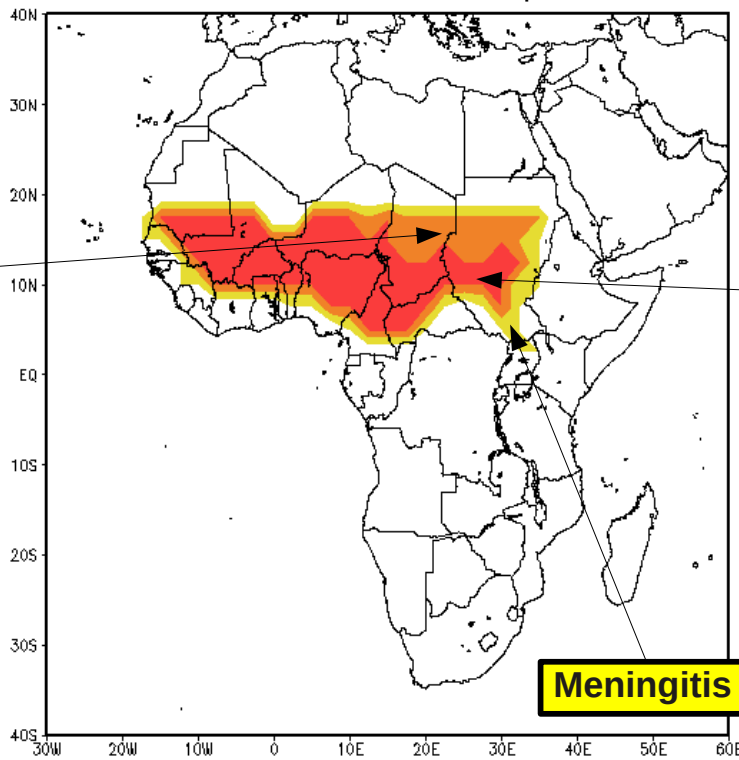


FIGURE 6 – Mean meridional wind speed (m s^{-1}) for the period from 9 to 16 February 2019.

VIGILANCE MAP FOR EMERGENCE OF MENINGITIS IN AFRICA
ISSUED ON FEBRUARY 19, 2019



HAZARD
Dust, wind and relative humidity conditions are favorable for emergence of meningitis cases

POTENTIAL IMPACTS
Meningitis cases very likely

MEASURES
Activation of meningitis surveillance and systems

HAZARD
Dust, wind and relative humidity conditions are very much favorable for emergence of meningitis cases

POTENTIAL IMPACTS
Meningitis cases very likely and epidemics status possible

MEASURES
Strengthen meningitis surveillance and systems

Meningitis cases less likely