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MENINGITIS VIGILANCE FOR AFRICA

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SUMMARY

- Meningitis cases persisted over Burkina Faso, Nigeria, Ghana, Mali, Togo, Central African Republic, Niger, Chad, Guinea, Cameroun, and Benin during the 6th week of this year.
- High vigilance is needed for meningitis cases over Central Mali, southern Mauritania, northern Burkina Faso, Niger, Chad, northern Nigeria, northern Cameroon, western Central African Republic and central Sudan.
- Moderate vigilance is required over northern Sudan, southern Mali, eastern Senegal, southern Burkina Faso, northern Guinea, Benin, Togo and Ghana, central Nigeria and Cameroon.
- Low to no vigilance is needed over the remaining parts of the meningitis belt.



FIGURE 1 – African Meningitis Belt.

SITUATION EPIDEMIOLOGIQUE DE LA SEMAINE 06 / EPIDEMIOLOGICAL SITUATION OF WEEK 06

Table 1: Situation épidémiologique / Epidemiological Situation

Pays	Cas	Décès	Létalité (%)	District en Alerte	District en Epidémie	Complétude (%)
Country	Cases	Deaths	CFR (%)	District in Alert	District in Epidemic	Completeness (%)
Benin ^P	15	1	6.7	1	0	100.0
Burkina Faso ^T	102	7	6.9	3	0	100.0
Burundi ^T	-	-	-	-	-	-
Cameroun ^P	15	2	13.3	1	0	92.6
Centrafrique ^P	3	1	33.3	0	0	34.3
Côte d'Ivoire ^P	7	0	0.0	0	0	100.0
Ethiopia ^T	-	-	-	-	-	-
Ghana ^P	44	1	2.3	4	0	100.0
Guinea ^P	7	0	0.0	0	0	100.0
Guinée Bissau	-	-	-	-	-	-
Gambia ^T	2	0	0.0	0	0	100.0
Kenya	2	0	0.0	0	0	100.0
Mali ^T	23	0	0.0	0	0	100.0
Mauritania ^P	-	-	-	-	-	-
Niger ^T	-	-	-	-	-	-
Nigeria ^P	21	1	4.8	0	0	100.0
RD Congo ^{**}	148	16	10.8	-	-	13.0
Senegal ^P	-	-	-	-	-	-
South Sudan ^P	-	-	-	-	-	-
Sudan ^T	0	0	0.0	0	0	100.0
Tanzania	-	-	-	-	-	-
Tchad ^T	36	3	8.3	1	0	100.0
Togo ^P	13	0	0.0	0	0	93.2
Uganda ^P	-	-	-	-	-	-
Total	438	32	7.3	10	0	52.8

^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 6th week of the year, 2019. Data source : <https://www.who.int/emergencies/diseases/meningitis/meningitis-bulletin-6-2019.pdf?ua=1>

(Semaines notifiées / Reported weeks 01-06)

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	59	10	16.9	1	0	01-06	100.0	100.0
Burkina Faso^T	396	22	5.6	5	0	01-06	100.0	100.0
Burundi ^T	-	-	-	-	-	-	-	-
Cameroun^P	107	4	3.7	4	0	01-06	92.6	95.6
Centrafrique^P	21	1	4.8	0	0	01-06	60.0	82.5
Côte d'Ivoire^P	39	1	2.6	0	0	01-06	100.0	100.0
Ethiopia ^T	-	-	-	-	-	-	-	-
Ghana^P	298	9	3.0	8	4	01-06	100.0	100.0
Guinée^P	24	2	8.3	0	0	01-06	100.0	100.0
Guinée Bissau	-	-	-	-	-	-	-	-
Gambia^T	7	1	14.3	1	0	01-06	100.0	100.0
Kenya^T	22	0	0.0	0	0	01-06	100.0	100.0
Mali^T	71	0	0.0	0	0	01-06	100.0	99.8
Mauritania ^P	-	-	-	-	-	-	-	-
Niger ^T	70	4	5.7	0	0	01-05	100.0	100.0
Nigeria^P	173	8	4.6	0	0	01-06	100.0	100.0
RD Congo^{***}	877	68	7.8	-	-	01-06	15.9	90.7
Senegal	-	-	-	-	-	-	-	-
South Sudan ^P	-	-	-	-	-	-	-	-
Sudan^T	2	0	0.0	0	0	01-06	100.0	100.0
Tanzania	3	3	100	0	0	01-03	100.0	100.0
Tchad^T	130	9	6.9	1	0	01-06	100.0	100.0
Togo^P	72	2	2.8	0	0	01-06	93.2	100.0
Uganda ^P	-	-	-	-	-	-	-	-
Total	2 371	144	6.1	20	4	01-06	59.8	99.2

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^{***} 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 3 – Inventory of meningitis occurrence in Africa during the first six weeks of year 2019. Data source : <https://www.who.int/emergencies/diseases/meningitis/meningitis-bulletin-6-2019.pdf?ua=1>

During the week from 16 to 23 February 2019 (Figure 4), very dry atmospheric conditions (relative humidity below 20 %) were observed over Chad, Niger, northern and central Mali, Burkina Faso, northern Nigeria, Benin, Togo, Ghana, Cameroon and Central African Republic, and central Sudan. Relative humidity between 20 and 40 % prevailed over northern Sudan, South Sudan, central and eastern Senegal, southern Mali, northern Chad, Niger, western Kenya, northern Uganda, and a small band over the Gulf of Guinea countries. Wet (relative humidity above 40 %) atmospheric conditions were found over the coast.

The surface dust concentration observed on 23th February 2019 at 00 :00 UTC is shown in Figure 5. The figure reveals that low dust concentration (below 50 $\mu\text{g m}^{-3}$) was observed over parts of Central and East Africa. Moderate dust concentration (between 50 and 150 $\mu\text{g m}^{-3}$) were located over the Gulf of Guinea coasts. The surface dust concentration between 150 and 300 $\mu\text{g m}^{-3}$ were observed over the meningitis belt, with higher concentration (above 300 $\mu\text{g m}^{-3}$) over Mauritania-Senegal border, northern Senegal, northern Mali, southern Algeria, central Chad, central Sudan and Niger, northern Ghana, Togo and Benin, and western Nigeria.

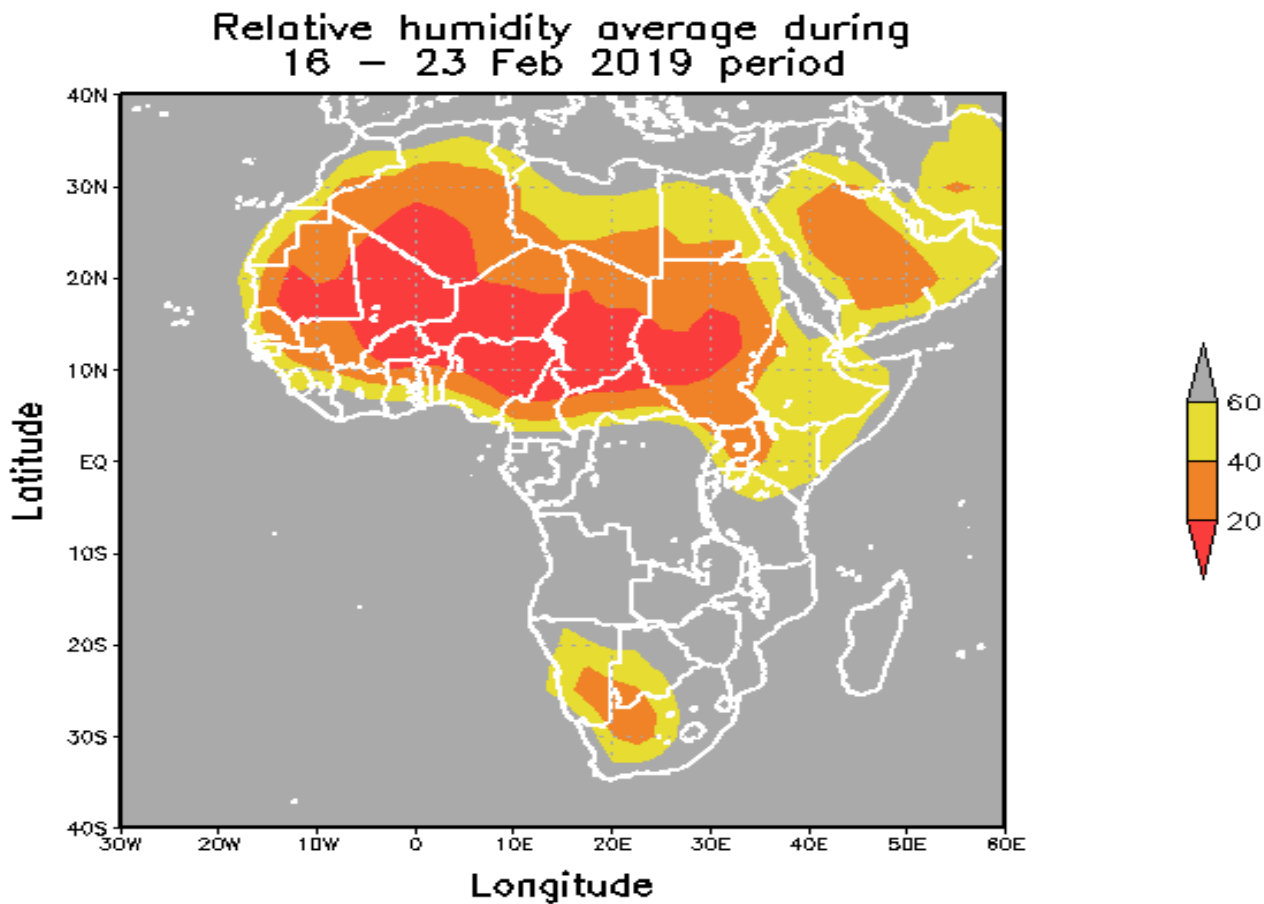


FIGURE 4 – Mean relative humidity (%) for the period from 16 - 23 February 2019.

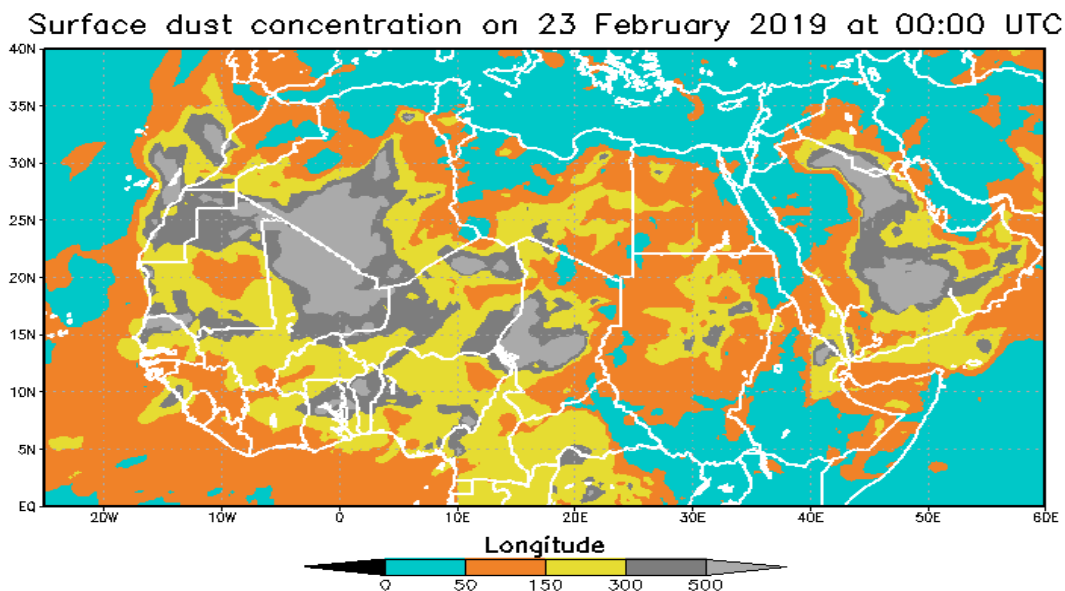


FIGURE 5 – Surface dust Concentration ($\mu\text{g m}^3$) estimated on February 23, 2019 at 00 :00 UTC from NASA-GEOS data.

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, northern Nigeria, Cameroon, Chad, northern Sudan and western Central African Republic. The ITD position moved further North compare to

the previous week.

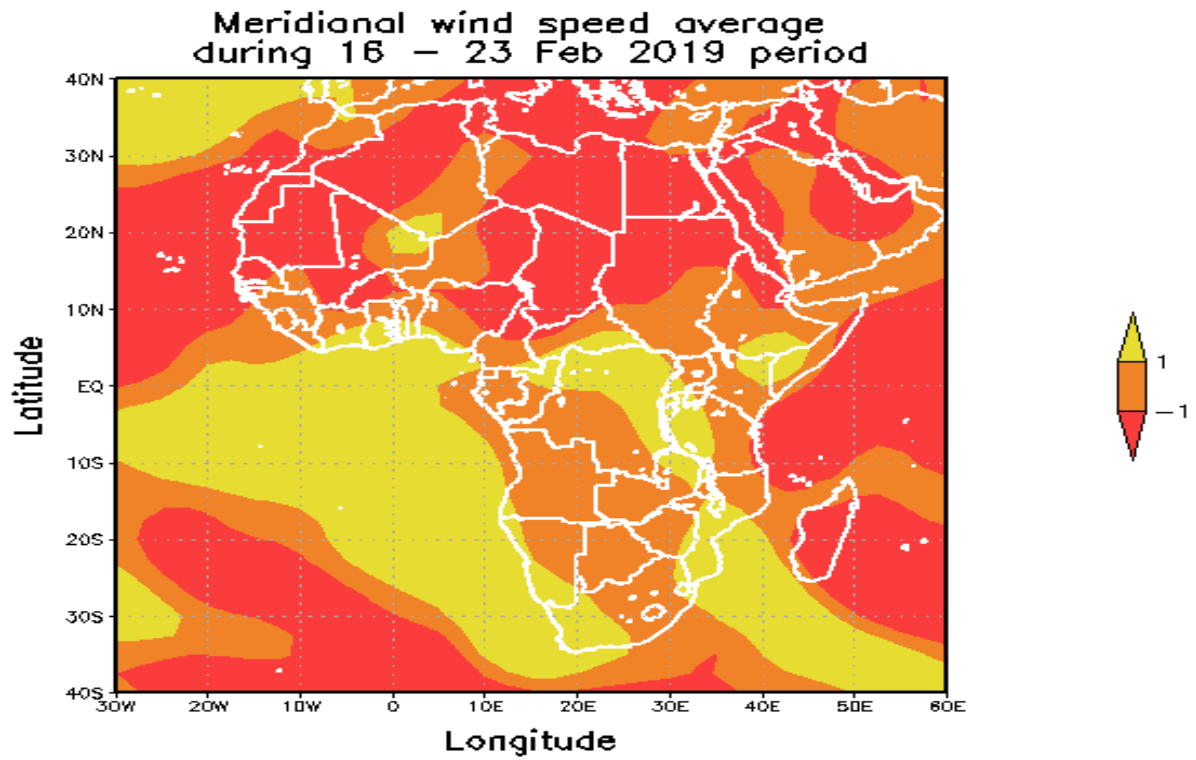
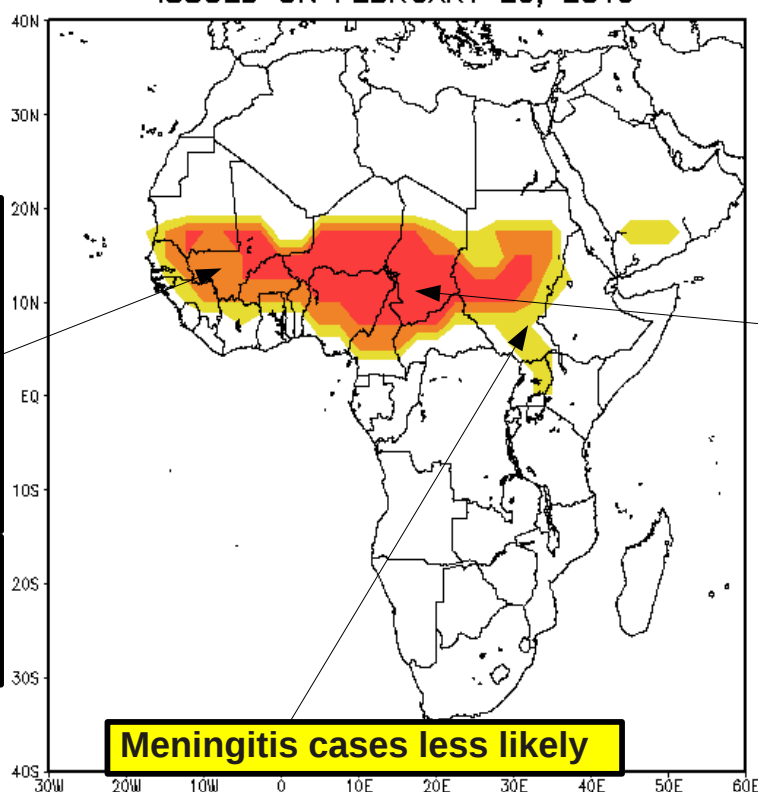


FIGURE 6 – Mean meridional wind speed (m s^{-1}) for the period from 16 to 23 February 2019.



VIGILANCE MAP FOR EMERGENCE OF MENINGITIS IN AFRICA
ISSUED ON FEBRUARY 26, 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