

MENINGITIS VIGILANCE FOR AFRICA

Bulletin No. 011

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Valid until April 9, 2019

SUMMARY

- From 10th to 11th weeks, meningitis cases increased over Central African Republic, Nigeria, Chad, Ghana, Guinea and Mali. A decrease of the occurrence of meningitis was observed over Cameroon and Niger.
- High vigilance is needed for meningitis cases over eastern Niger, central Chad, and Central Sudan.
- Moderate vigilance is required over eastern Mali, southern and central Niger, northern Burkina Faso, Nigeria and Cameroon, and southern Chad.
- Low to no vigilance is needed over the remaining parts of the meningitis belt.



FIGURE 1 – African Meningitis Belt.



11th to 17th March 2019

SITUATION EPIDEMIOLOGIQUE DE LA SEMAINE 11 / EPIDEMIOLOGICAL SITUATION OF WEEK 11

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	14	0	0.0	1	0	100.0
Burkina Faso ^T	114	6	5.3	2	0	100.0
Burundi ^T	0	0	0.0	0	0	100.0
Cameroun ^P	12	1	8.3	0	0	67.9
Centrafrique ^P	20	2	10.0	1	0	60.0
Côte d'Ivoire ^P	-	-	-	-	-	-
Ethiopia ^T	-	-	-	-	-	-
Ghana ^P	44	0	0.0	2	1	100.0
Guinea ^P	14	0	0.0	0	0	100.0
Guinée Bissau	-	-	-	-	-	-
Gambia ^T	0	0	0.0	0	0	80.5
Kenya	-	-	-	-	-	-
Mali ^T	15	0	0.0	0	0	100.0
Mauritania ^P	-	-	-	-	-	-
Niger ^T	30	3	10.0	0	0	100.0
Nigeria ^P	129	1	0.8	0	1	100.0
RD Congo ^{P**}	-	-	-	-	-	-
Senegal ^P	9	0	0.0	0	0	100.0
South Sudan ^P	-	-	-	-	-	-
Sudan ^T	1	0	0.0	0	0	100.0
Tanzania	-	-	-	-	-	-
Tchad ^T	75	6	8.0	3	1	100.0
Togo ^P	48	3	6.2	0	1	97.7
Uganda ^P	-	-	-	-	-	-
Total	525	22	4.2	9	4	45.9

^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 11th week of the year, 2019. Data source : <https://www.who.int/emergencies/diseases/meningitis/meningitis-bulletin-11-2019.pdf?ua=1>

(Semaines notifiées / Reported weeks 01- 11)

Table 2: SYNTHÈSE DE LA SITUATION EPIDEMIOLOGIQUE / 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	129	19	14.7	3	0	01-11	100.0	100.0
Burkina Faso^T	933	55	5.9	6	0	01-11	100.0	100.0
Burundi^T	16	0	0.0	0	0	01-11	100.0	100.0
Cameroun^P	195	13	6.7	7	0	01-11	94.2	92.7
Centrafrique^P	151	16	10.6	4	0	01-11	88.6	85.6
Côte d'Ivoire ^P	70	1	1.4	0	0	01-10	100.0	100.0
Ethiopia ^T	-	-	-	-	-	-	-	-
Ghana^P	490	13	2.7	12	4	01-11	100.0	100.0
Guinea^P	76	3	3.9	0	0	01-11	100.0	98.8
Guinée Bissau	-	-	-	-	-	-	-	-
Gambia^P	11	1	9.1	2	0	01-11	100.0	96.5
Kenya	36	1	2.8	0	0	01-10	100.0	100.0
Mali^T	129	0	0.0	0	0	01-11	100.0	99.9
Mauritania ^P	-	-	-	-	-	-	-	-
Niger^T	217	17	7.8	0	0	01-11	100.0	100.0
Nigeria^P	588	40	6.8	2	2	01-11	100.0	100.0
RD Congo ^{P**}	1448	107	7.4	-	-	01-10	15.7	91.4
Senegal^P	110	0	0.0	0	0	01-11	100.0	100.0
South Sudan ^P	16	2	12.5	1	0	01-10	100.0	100.0
Sudan^T	5	0	0.0	0	0	01-11	100.0	100.0
Tanzania	11	6	54.5	0	0	01-10	100.0	100.0
Tchad^T	437	37	8.5	7	1	01-11	100.0	100.0
Togo^P	244	8	3.3	0	2	01-11	97.7	96.0
Uganda ^P	-	-	-	-	-	-	-	-
Total	5 312	339	6.4	44	9	01-11	64.8	99.0

^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 3 – Inventory of meningitis occurrence in Africa during the first eleven weeks of year 2019. Data source : <https://www.who.int/emergencies/diseases/meningitis/meningitis-bulletin-10-2019.pdf?ua=1>

Figure 4 shows the mean relative humidity estimated from NCEP reanalysis during the period from 23 to 30 March 2019. It indicates that very dry atmospheric conditions (relative humidity below 20 %) was observed over eastern Niger, central Chad, and Sudan. Relative humidity between 20 and 40 % prevailed over northern Mali and Mauritania, northern Burkina Faso, Niger, central Nigeria, northern Cameroon, southern Chad and South Sudan. Wet (relative humidity above 40 %) atmospheric conditions were recorded over the Gulf of Guinea countries, Senegal, southern Mali, Mauritania, and Burkina Faso, Ethiopia, Tanzania, Uganda and Burundi.

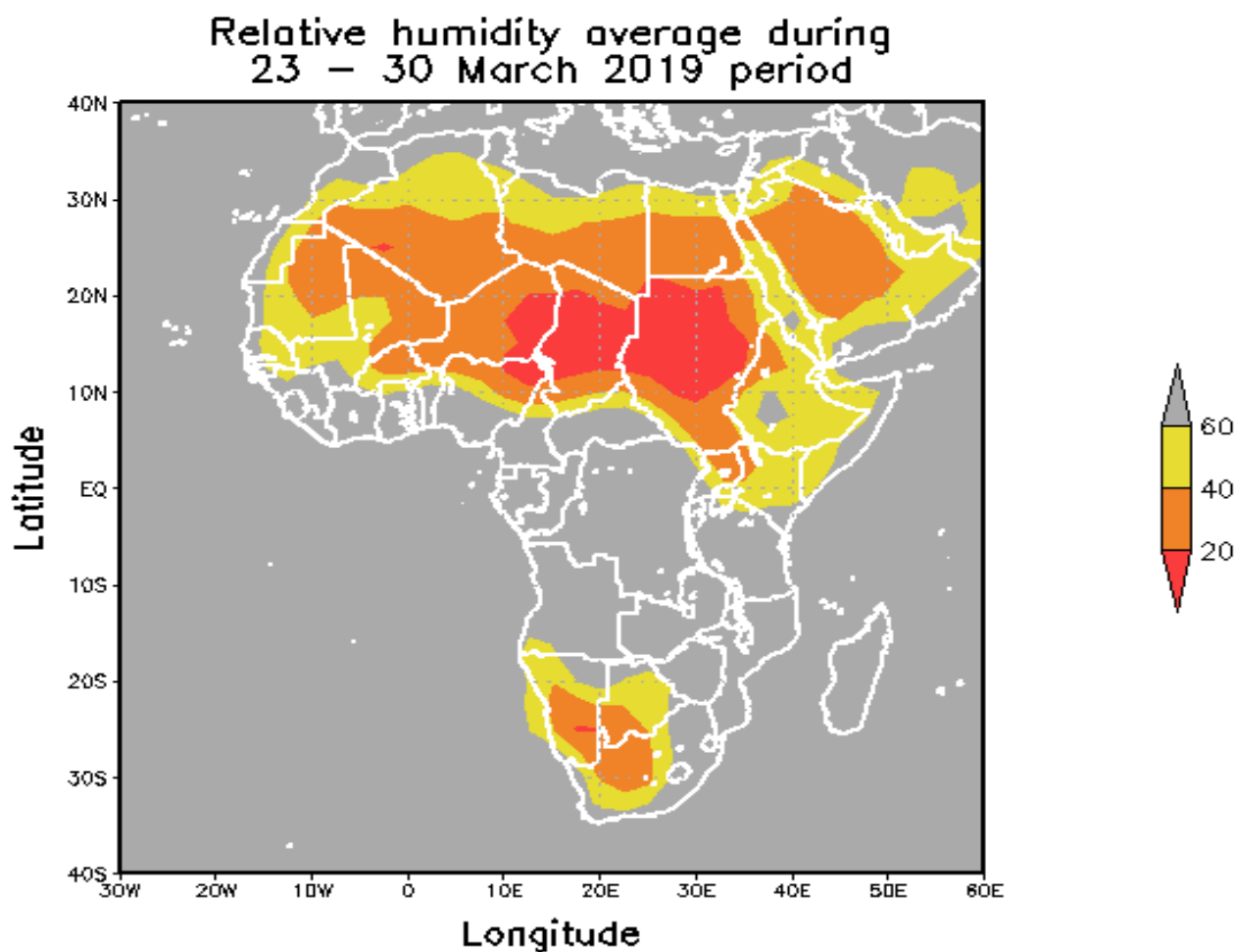


FIGURE 4 – Mean relative humidity (%) for the period from 23 to 30 March 2019 estimated from NCEP reanalysis at 1000 hPa.

Figure 5 gives an example of surface dust concentrations estimated on 30th March 2019 at 00 :00 UTC. It indicates that high surface dust concentrations are observed over the West Africa during this night. Highest values of surface dust concentrations prevailed over northern Senegal and southern Mauritania, Central Algeria and Mali, Libya, Egypt northern Niger, southern Sudan, and central Nigeria. Moderate surface dust concentrations are observed over the remaining part of the meningitis.

Figure 6 shows the mean meridional wind speed during the week from 23 to 30 March 2019. It indicates that the south part of the Gulf of Guinea is under the influence of the monsoon flow and the ITD continued its northward migration and attended the south-eastern Senegal, central Mali, northern Burkina Faso, Niamey, and central Nigeria. The Harmattan flow, favoring to increase the meningitis cases was observed over northern eastern part of Mali, Niger, northern Burkina Faso, Nigeria, and Cameroon, Chad, and Sudan.

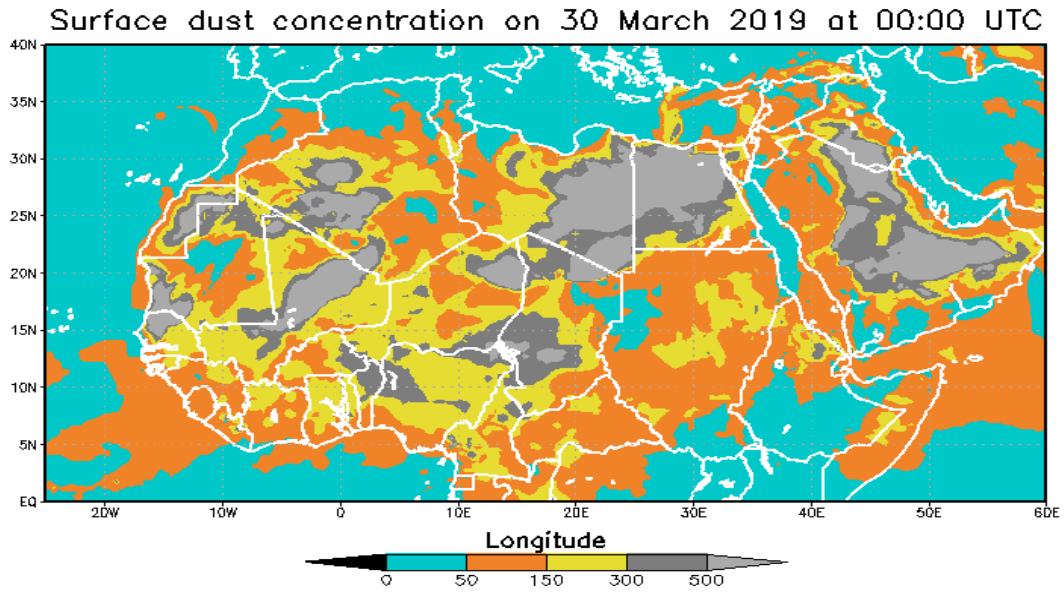


FIGURE 5 – Surface dust concentration ($\mu\text{g m}^3$) estimated on March 30, 2019 at 00 :00 UTC from Goddard Earth Observing Model (GEOS) data.

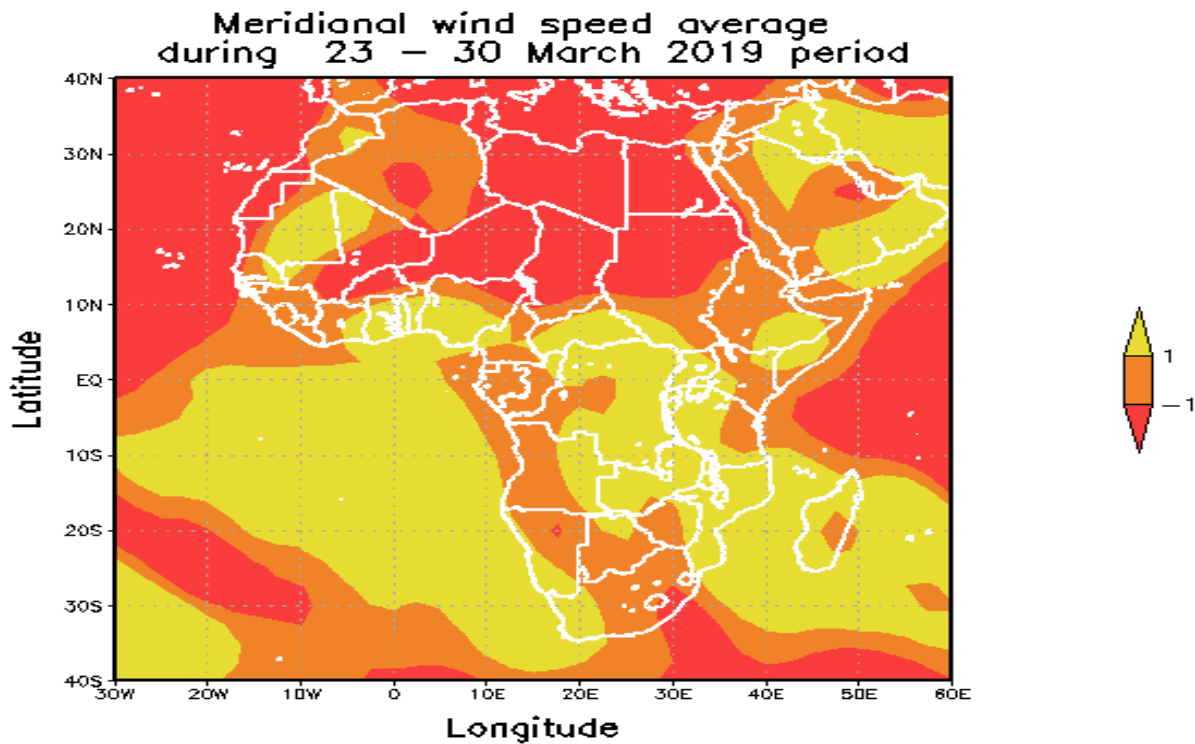


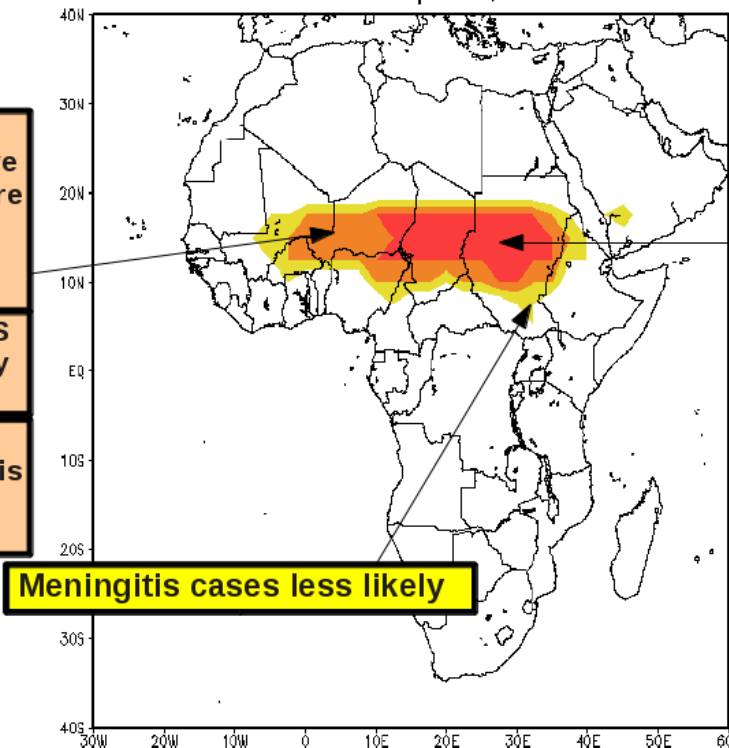
FIGURE 6 – Mean meridional wind speed (m s^{-1}) for the period from 23 to 30 March 2019 estimated from NCEP reanalysis at 1000 hPa.



VIGILANCE MAP FOR EMERGENCE OF MENINGITIS IN AFRICA
ISSUED ON April 2, 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