



MENINGITIS VIGILANCE FOR AFRICA

Bulletin No. 012

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SUMMARY

- Large occurrence of meningitis cases was observed in RD Congo (141 cases), Burkina Faso (137 cases), Nigeria (98 cases), Tchad (67 cases), Niger (57 cases), Togo (46 cases), Ghana (34 cases), Mali (21 cases), Benin (17 cases) and Guinea (16 cases) during the week from 18th and 24th March 2019. Low meningitis cases was prevailed over the remaining parts of the meningitis belt.
- High vigilance is needed for meningitis cases over eastern Niger, Chad, and Central Sudan.
- Moderate vigilance is required over southern Mauritania, central 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.

18th to 24th March 2019

I. SITUATION EPIDEMIOLOGIQUE DE LA SEMAINE 12 / EPIDEMIOLOGICAL SITUATION OF WEEK 12

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	17	0	0.0	2	0	100.0
Burkina Faso ^T	137	9	6.6	2	0	100.0
Burundi ^T	2	0	0.0	0	0	100.0
Cameroun ^P	22	2	9.1	0	0	90.5
Centrafrique ^P	6	0	0.0	1	0	54.3
Côte d'Ivoire ^P	3	0	0.0	0	0	100.0
Ethiopia ^T	-	-	-	-	-	-
Ghana ^P	34	0	0.0	5	1	100.0
Guinea ^P	16	0	0.0	0	0	100.0
Guinée Bissau	-	-	-	-	-	-
Gambia ^T	0	0	0.0	0	0	100.0
Kenya	-	-	-	-	-	-
Mali ^T	21	0	0.0	0	0	100.0
Mauritania ^P	0	0	0.0	0	0	100.0
Niger ^T	57	8	14.0	1	0	100.0
Nigeria ^P	98	7	7.1	1	1	100.0
RD Congo ^{**}	141	10	7.1	-	-	13.6
Senegal ^P	4	0	0.0	0	0	100.0
South Sudan ^P	1	0	0.0	0	0	100.0
Sudan ^T	2	0	0.0	0	0	100.0
Tanzania	1	0	0.0	0	0	100.0
Tchad ^T	67	5	7.5	2	1	97.6
Togo ^P	46	1	2.2	1	1	97.7
Uganda ^P	-	-	-	-	-	-
Total	675	42	6.2	15	4	58.0

^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 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-12-2019.pdf?ua=1>

(Semaines notifiées / Reported weeks 01-12)

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	146	19	13.0	4	0	01-12	100.0	100.0
Burkina Faso ^T	1 070	64	6.0	8	0	01-12	100.0	100.0
Burundi ^T	18	0	0.0	0	0	01-12	100.0	100.0
Cameroun ^P	232	13	5.6	7	0	01-12	95.8	95.7
Centrafrique ^P	185	26	14.1	6	0	01-12	88.6	87.6
Côte d'Ivoire ^P	73	1	1.4	0	0	01-12	100.0	100.0
Ethiopia ^T	-	-	-	-	-	-	-	-
Ghana ^P	522	13	2.5	14	4	01-12	100.0	100.0
Guinea ^P	92	3	3.3	0	0	01-12	100.0	98.9
Guinée Bissau	-	-	-	-	-	-	-	-
Gambia ^T	10	1	10.0	2	0	01-12	100.0	100.0
Kenya	36	1	2.8	0	0	01-10	100.0	100.0
Mali ^T	150	0	0.0	0	0	01-12	100.0	99.9
Mauritania ^P	0	0	0.0	0	0	01-12	100.0	100.0
Niger ^T	276	25	9.1	1	0	01-12	100.0	100.0
Nigeria ^P	703	47	6.7	3	2	01-12	100.0	100.0
RD Congo ^{**}	1 774	129	7.3	-	-	01-12	17.1	85.7
Senegal ^P	114	0	0.0	0	0	01-12	100.0	100.0
South Sudan ^P	19	2	10.5	1	0	01-12	100.0	100.0
Sudan ^T	7	0	0.0	0	0	01-12	100.0	100.0
Tanzania	12	6	50.0	0	0	01-12	100.0	100.0
Tchad ^T	504	42	8.3	7	1	01-12	100.0	99.8
Togo ^P	290	9	3.1	1	2	01-12	97.7	96.3
Uganda ^P	-	-	-	-	-	-	-	-
Total	6 233	401	6.4	54	9	01-12	66.2	99.1

^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-12-2019.pdf?ua=1>

Figure 4 shows the mean relative humidity estimated from NCEP reanalysis during the period from 30 March to 6 April 2019. Very dry atmospheric conditions (relative humidity below 20 %) prevailed over eastern Niger, central Chad, and Sudan. Relative humidity between 20 and 40 % occurred over northern and central Mali, Eastern and central Mauritania, northern Burkina Faso and Benin, Niger, central Nigeria, northern Cameroon, southern Chad, northern Central African Republic, South Sudan, northern Uganda and western Ethiopia. Wet (relative humidity above 40 %) atmospheric conditions were recorded over the Gulf of Guinea countries, Senegal, southern Mali, western Mauritania, and southern Burkina Faso, Tanzania, Burundi, Somalia and Rwanda.

Relative humidity average during 30 Mar – 6 Apr 2019 period

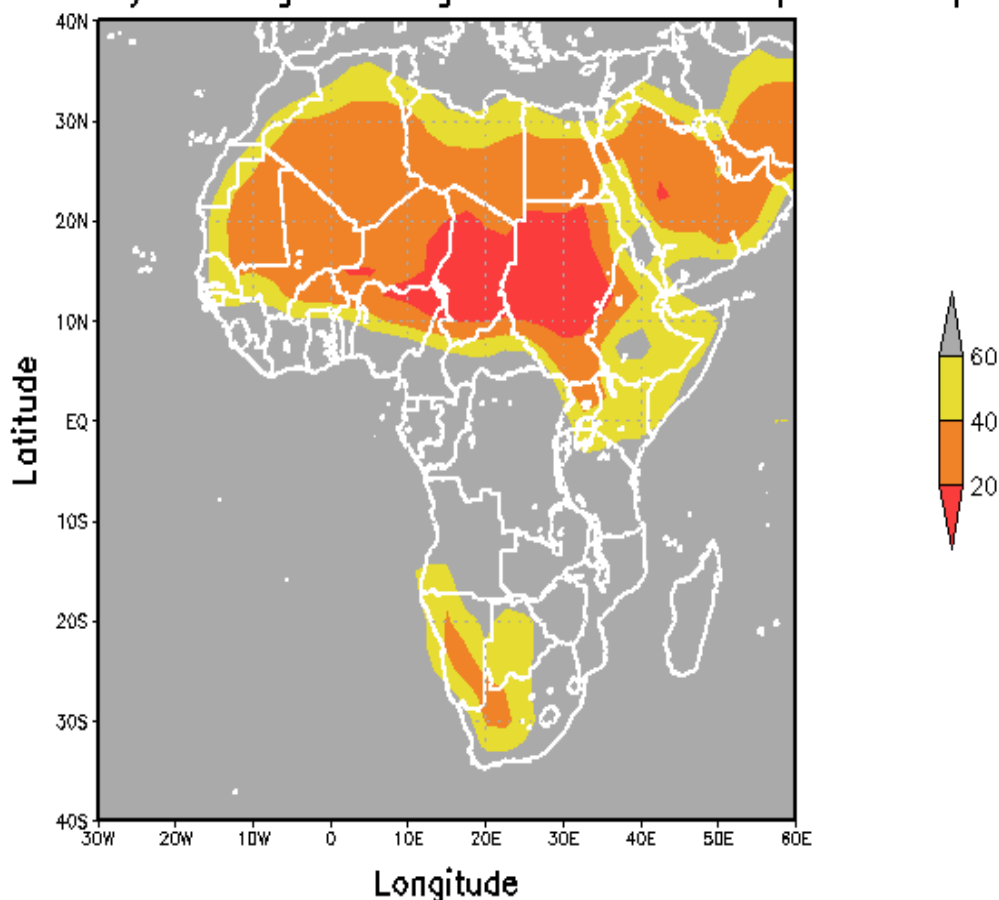


FIGURE 4 – Mean relative humidity (%) for the period from 30 March to 6 April 2019 estimated from NCEP reanalysis at 1000 hPa.

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

Figure 6 presents the mean meridional wind speed during the week from 30 March to 6 April 2019. It shows that the south part of the Gulf of Guinea is under the influence of the monsoon flow and the ITD continued its northward migration with a daily variability. Its maximum position was over northern Burkina Faso and southern Niger. The Harmattan flow favoring the increase of meningitis cases prevailed over Mali, Mauritania, central Guinea, Niger, northern Burkina Faso, Nigeria, and Cameroon, Chad, and Sudan.

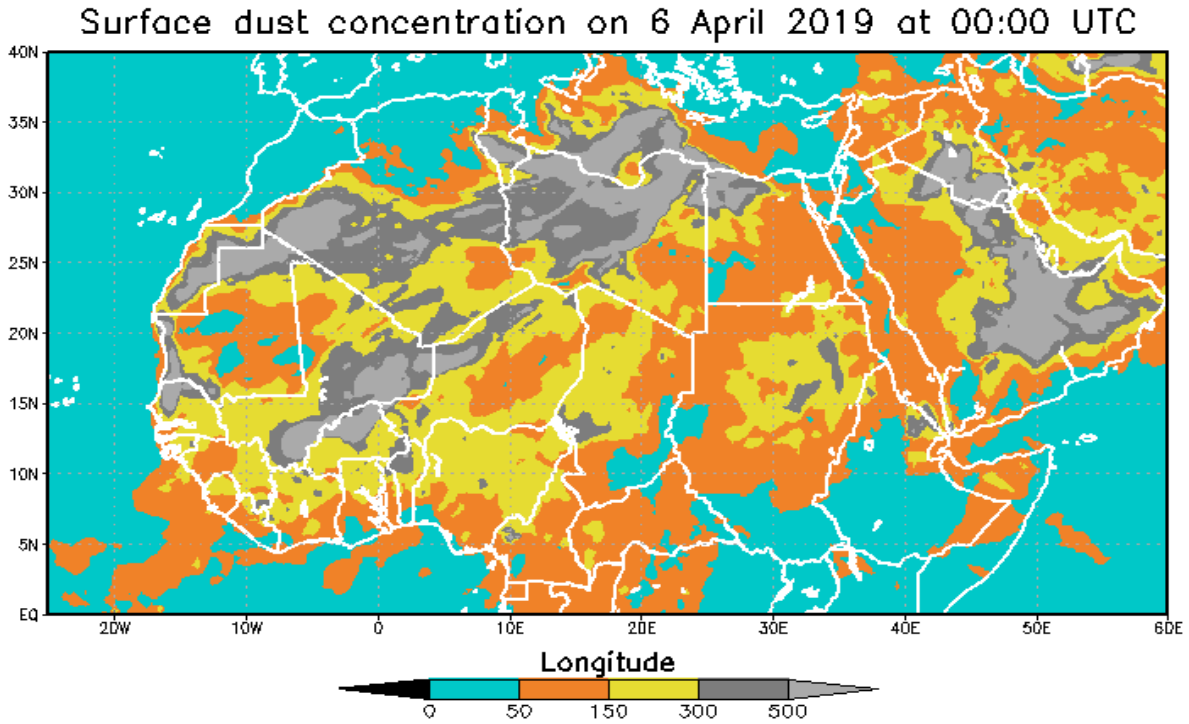


FIGURE 5 – Surface dust concentration ($\mu\text{g m}^3$) estimated on April 6, 2019 at 00 :00 UTC from Goddard Earth Observing Model (GEOS) data.

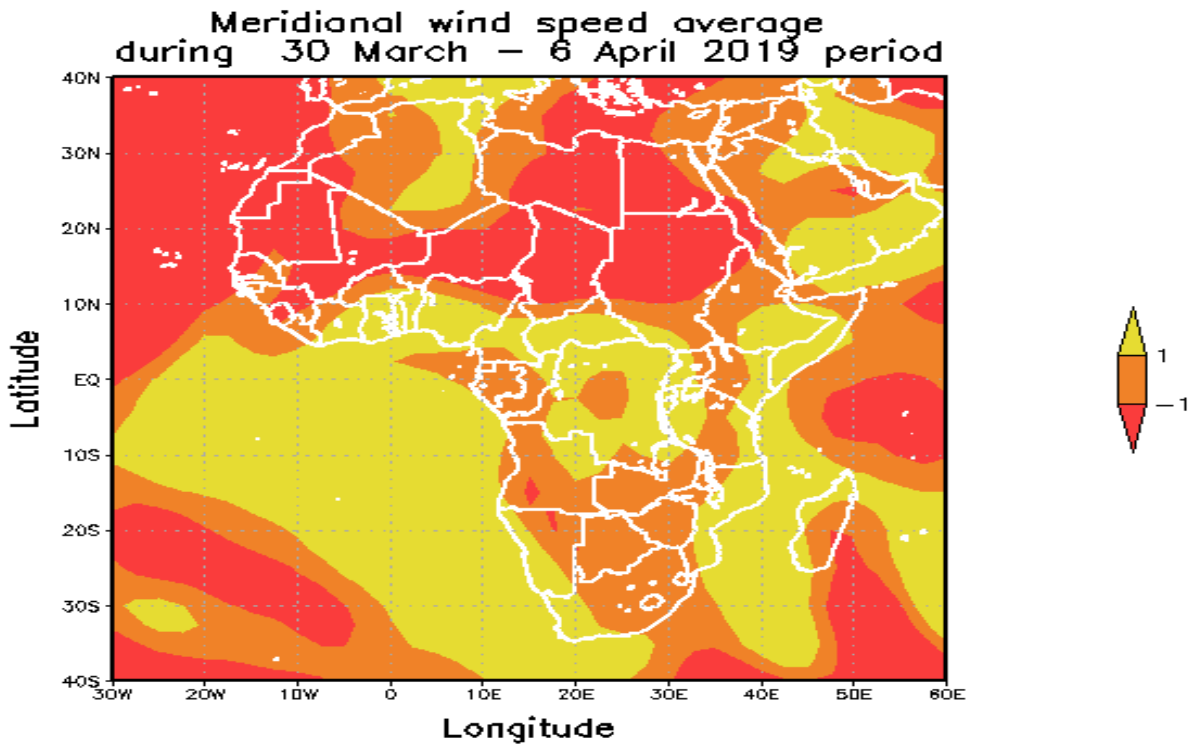


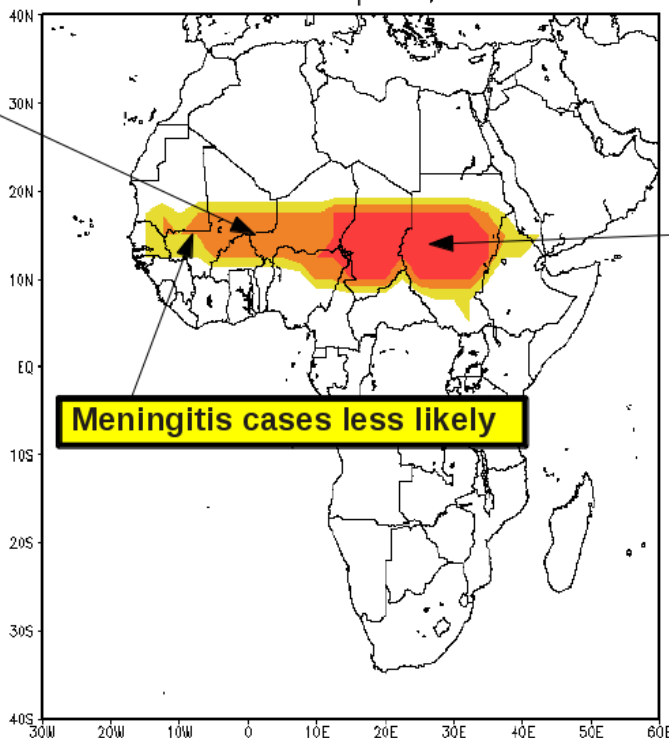
FIGURE 6 – Mean meridional wind speed (m s^{-1}) for the period from 30 March to 6 April 2019 estimated from NCEP reanalysis at 1000 hPa.



VIGILANCE MAP FOR EMERGENCE OF MENINGITIS IN AFRICA
ISSUED ON April 9, 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