

# MENINGITIS VIGILANCE FOR AFRICA

Bulletin No. 018

Issued on May 21, 2019

Valid until May 28, 2019

## SUMMARY

- Meningitis cases slightly decreased over West Africa between 17<sup>th</sup> and 18<sup>th</sup> weeks. However, a large occurrence of cases was reported over RD Congo. During the first eighteen weeks of 2019, 9459 meningitis cases with 588 deaths was reported over the African meningitis belt.
  
- Moderate vigilance is required for meningitis cases over southern Mauritania, northeastern Niger, central Sudan.
  
- Low to no vigilance is needed over the remaining parts of the meningitis belt.



FIGURE 1 – African Meningitis Belt.

29<sup>th</sup> April to 5<sup>th</sup> May 2019

I. SITUATION EPIDEMIOLOGIQUE DE LA SEMAINE 18 / EPIDEMIOLOGICAL SITUATION OF WEEK 18

**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 <sup>P</sup>	7	0	0.0	0	0	100.0
Burkina Faso <sup>T</sup>	43	7	16.3	0	0	100.0
Burundi <sup>T</sup>	11	0	0.0	0	0	100.0
Cameroun <sup>P</sup>	11	0	0.0	1	0	67.9
Centrafrique <sup>P</sup>	12	0	0.0	1	0	85.7
Côte d'Ivoire <sup>P</sup>	1	0	0.0	0	0	96.5
Ethiopia <sup>T</sup>	-	-	-	-	-	-
Ghana <sup>P</sup>	10	1	10.0	0	0	100.0
Guinée <sup>P</sup>	9	0	0.0	0	0	100.0
Guinée Bissau	-	-	-	-	-	-
Gambia <sup>T</sup>	0	0	0.0	0	0	100.0
Kenya	-	-	-	-	-	-
Mali <sup>T</sup>	9	0	0.0	0	0	100.0
Mauritania <sup>P</sup>	0	0	0.0	0	0	100.0
Niger <sup>T</sup>	28	1	3.6	0	0	100.0
Nigeria <sup>P</sup>	47	0	0.0	0	0	100.0
RD Congo <sup>P***</sup>	115	8	7.0	-	-	10.7
Senegal <sup>P</sup>	15	0	0.0	0	0	100.0
South Sudan <sup>P</sup>	-	-	-	-	-	-
Sudan <sup>T</sup>	1	0	0.0	0	0	100.0
Tanzania	0	0	0.0	0	0	100.0
Tchad <sup>T</sup>	9	0	0.0	1	0	100.0
Togo <sup>P</sup>	6	0	0.0	1	0	97.7
Uganda <sup>P</sup>	-	-	-	-	-	-
<b>Total</b>	<b>334</b>	<b>17</b>	<b>5.1</b>	<b>4</b>	<b>0</b>	<b>55.0</b>

<sup>P</sup> = Pays partiellement vacciné avec le MenAfriVac / Country partially vaccinated with MenAfriVac  
<sup>T</sup> = Pays entièrement vacciné avec le MenAfriVac / Country entirely vaccinated with MenAfriVac  
<sup>\*\*</sup> 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 18<sup>th</sup> week of the year, 2019. Data source : <https://www.who.int/emergencies/diseases/meningitis/meningitis-bulletin-18-2019.pdf?ua=1>

(Semaines notifiées / Reported weeks 01 - 18)

**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 <sup>P</sup>	190	20	10.5	4	0	01-18	100.0	100.0
Burkina Faso <sup>T</sup>	1 583	112	7.1	10	0	01-18	100.0	100.0
Burundi <sup>T</sup>	72	1	1.4	1	0	01-18	100.0	100.0
Cameroun <sup>P</sup>	332	14	4.2	8	0	01-18	95.8	93.0
Centrafrique <sup>P</sup>	258	30	11.6	7	0	01-18	91.4	93.2
Côte d'Ivoire <sup>P</sup>	92	1	1.1	0	0	01-18	100.0	99.8
Ethiopia <sup>T</sup>	-	-	-	-	-	-	-	-
Ghana <sup>P</sup>	648	19	2.9	16	4	01-18	100.0	100.0
Guinée	159	5	3.1	0	0	01-18	100.0	100.0
Guinée Bissau	-	-	-	-	-	-	-	-
Gambia <sup>T</sup>	14	1	7.1	3	0	01-18	100.0	100.0
Kenya	55	2	3.6	0	0	01-14	100.0	100.0
Mali <sup>T</sup>	233	2	0.9	0	0	01-18	100.0	99.9
Mauritania <sup>P</sup>	0	0	0.0	0	0	01-18	100.0	100.0
Niger <sup>T</sup>	584	55	9.4	3	0	01-18	100.0	100.0
Nigeria <sup>P</sup>	1 186	61	5.1	5	2	01-18	100.0	100.0
RD Congo <sup>P***</sup>	2 723	190	7.0	-	-	01-18	17.7	82.9
Senegal	167	0	0.0	0	0	01-18	100.0	100.0
South Sudan <sup>P</sup>	51	10	19.6	3	0	01-17	100.0	100.0
Sudan <sup>T</sup>	10	0	0.0	0	0	01-18	100.0	100.0
Tanzania	12	6	50.0	0	0	01-18	100.0	100.0
Tchad <sup>T</sup>	657	49	7.5	9	1	01-18	100.0	99.8
Togo <sup>P</sup>	433	10	2.3	2	2	01-18	97.7	97.5
Uganda <sup>P</sup>	-	-	-	-	-	-	-	-
<b>Total</b>	<b>9 459</b>	<b>588</b>	<b>6.2</b>	<b>71</b>	<b>9</b>	<b>01-18</b>	<b>66.3</b>	<b>98.9</b>

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FIGURE 3 – Inventory of meningitis occurrence in Africa during the first eighteen weeks of year 2019. Data source : <https://www.who.int/emergencies/diseases/meningitis/meningitis-bulletin-18-2019.pdf?ua=1>

Figure 4 shows the mean relative humidity estimated from NCEP reanalysis during 10 – 17 May 2019 period. It indicates that very dry atmospheric conditions (relative humidity below 20 %) remained over the Sahara region, particularly over eastern Mauritania, central and northern Mali, southern and central Algeria, northern Niger, northern Chad, northern Sudan, southern Libya, and southern Egypt. A continuous moistening (relative humidity between 20 and 40 %) prevailed over western and central Mauritania, eastern Senegal, central Mali, northern Burkina Faso, central Niger, central Chad, and central Sudan. Wet (relative humidity above 40 %) atmospheric conditions prevailed over the Gulf of Guinea countries, Tanzania, Burundi, Somalia, Kenya, Ethiopia, Uganda and Rwanda.

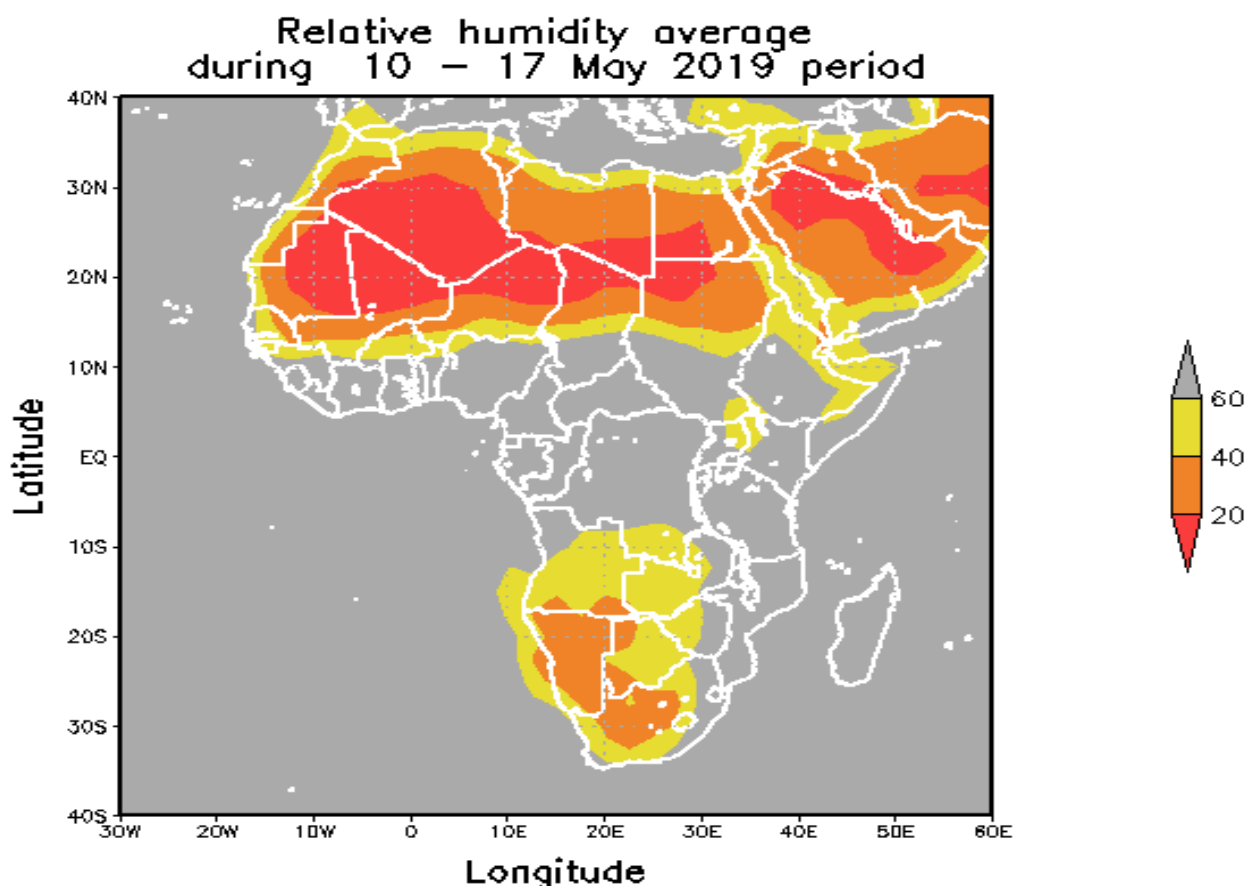


FIGURE 4 – Mean relative humidity (%) for the period 10 – 17 May 2019 estimated from NCEP reanalysis at 1000 hPa.

Figure 5 shows an example of surface dust concentrations estimated on 18<sup>th</sup> May 2019 at 00 :00 UTC. Highest values of surface dust concentrations observed over the meningitis belt were inhomogeneous during this night. Dusty atmospheric conditions prevailed over northern Senegal, western and northern, central Algeria, northern Libya, southern Egypt, Mauritania, central Mali, eastern Niger, northern Chad, and northern Sudan. Moderate or low surface dust concentrations prevailed over the remaining part of the meningitis.

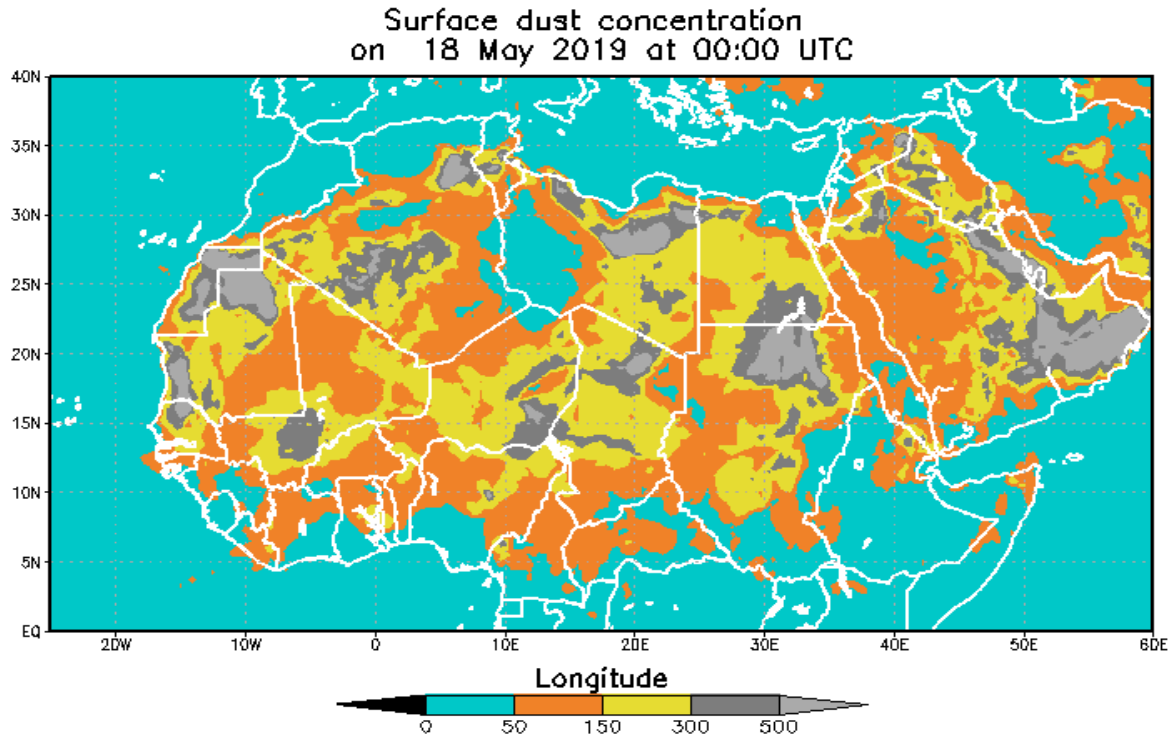


FIGURE 5 – Surface dust concentration ( $\mu\text{g m}^3$ ) estimated on May 18, 2019 at 00 :00 UTC from Goddard Earth Observing Model (GEOS) data.

Figure 6 shows the mean meridional wind speed during the week from 10 – 17 May 2019. It indicates that the ITD position was located on average central Senegal, southern Mauritania, northern Mali, northern Niger, northern Chad, and northern Sudan. This week was marked by the convective activities over the Sudano-Sahelian region. Harmattan flow favoring the increase of meningitis cases prevailed over northern Mali, northern Mauritania, northern Niger, central and northern northern Chad, and northern Sudan.

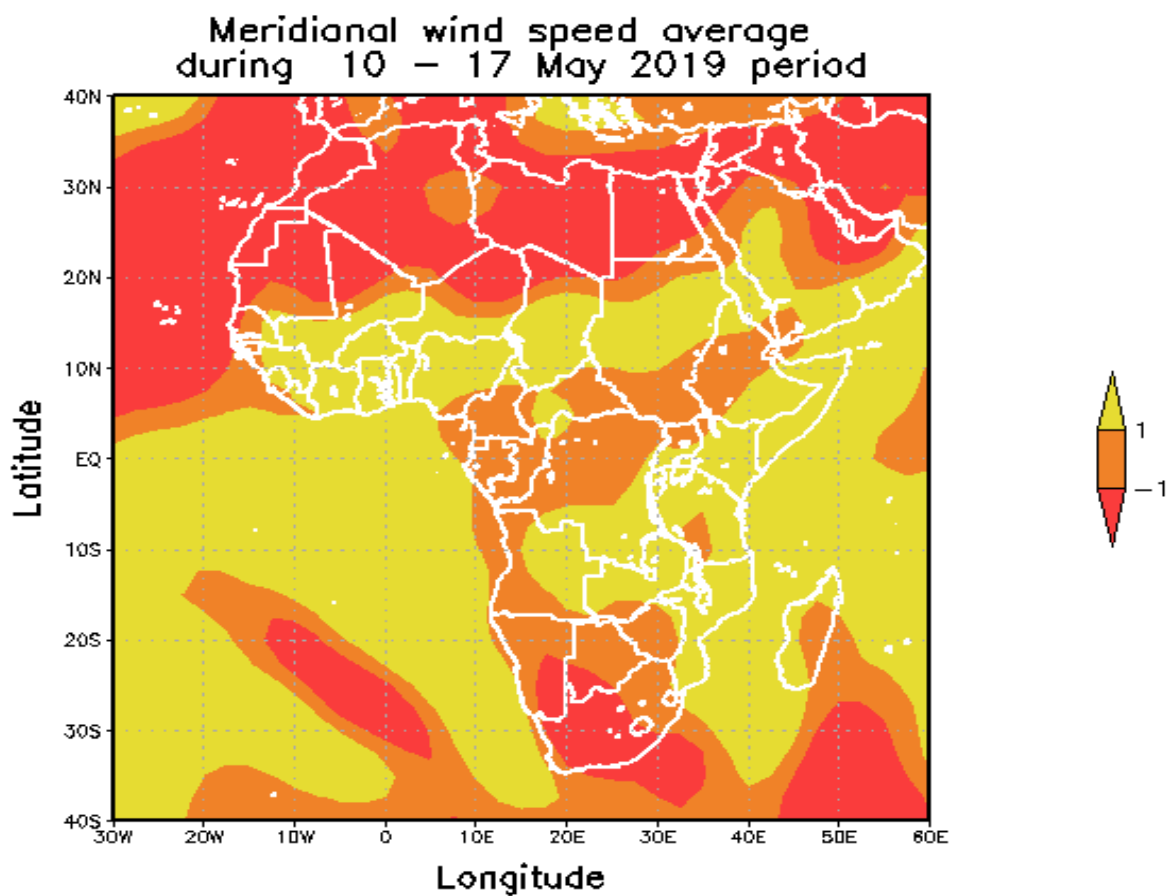


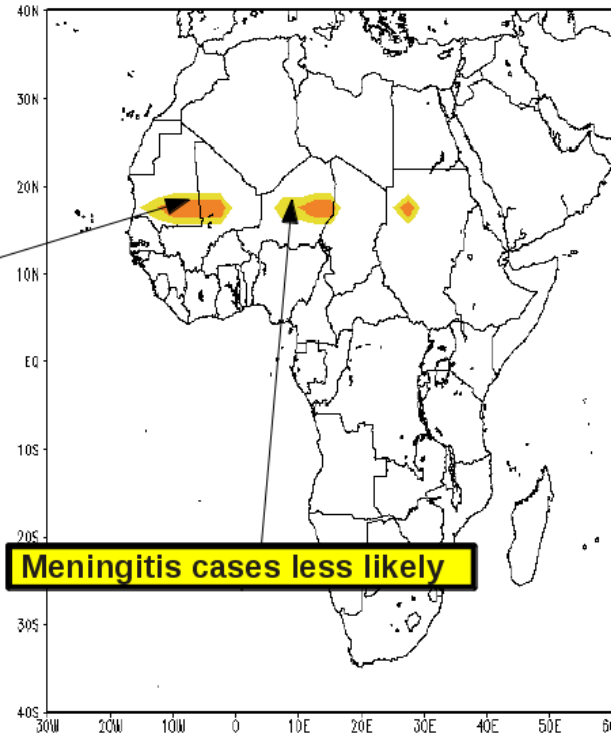
FIGURE 6 – Mean meridional wind speed ( $\text{m s}^{-1}$ ) for the period 10 – 17 May 2019 estimated from NCEP reanalysis at 1000 hPa.



VIGILANCE MAP FOR EMERGENCE OF MENINGITIS IN AFRICA  
ISSUED ON MAY 21, 2019



<b>HAZARD</b> Dust, wind and relative humidity conditions are favorable for emergence of meningitis cases
<b>POTENTIAL IMPACTS</b> Meningitis cases very likely
<b>MEASURES</b> Activation of meningitis surveillance and systems



<b>HAZARD</b> Dust, wind and relative humidity conditions are very much favorable for emergence of meningitis cases
<b>POTENTIAL IMPACTS</b> Meningitis cases very likely and epidemics status possible
<b>MEASURES</b> Strengthen meningitis surveillance and systems