

South Sudan

**Integrated Disease Surveillance and
Response (IDSR)**

Annexes W26 2018 (Jun 25 – Jul 01)



**World Health
Organization**
South Sudan



Ministry of Health
Republic of South Sudan

Access and Utilisation

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Indicator-based surveillance

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Disease trends and maps

Malaria

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Acute Watery Diarrhoea (AWD)

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Bloody diarrhoea

Slide 10 **Trend in bloody diarrhoea cases over time**

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Measles

Slide 12 **Trend in measles cases over time**

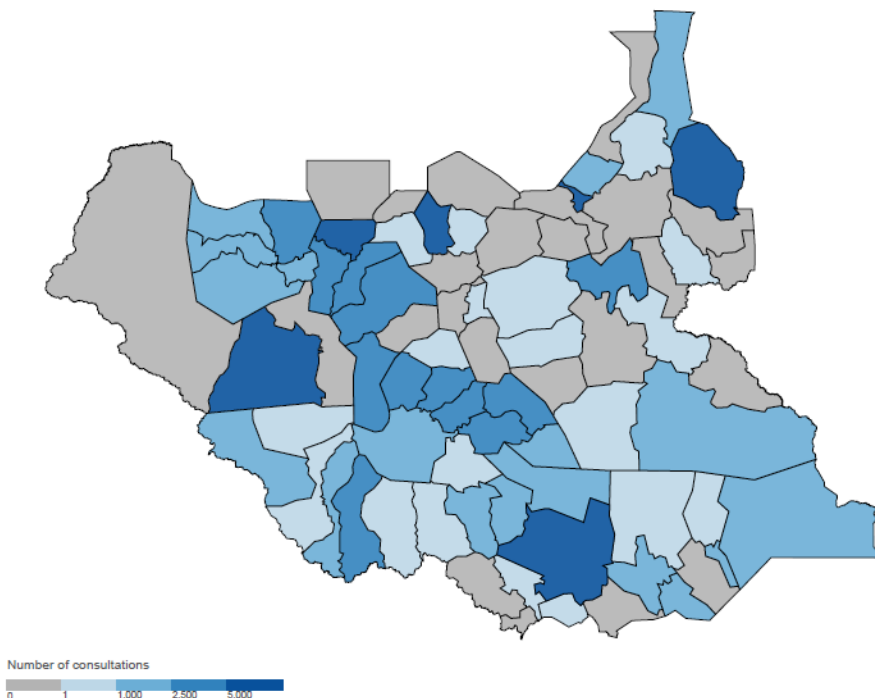
Slide 13 **Measles maps and alert management**

Sources of data

1. Weekly IDSR Reporting Form
2. Weekly EWARS Reporting Form

Access and Utilization | Map of consultations by county

Map 1 | Map of total consultations by county (W26 2018)

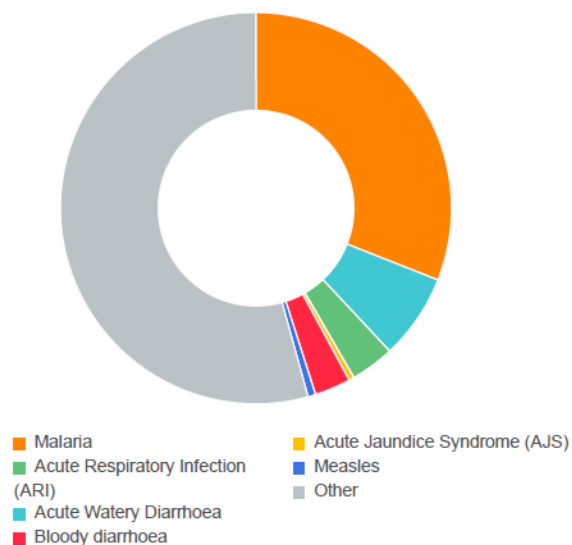


Hub	W26	2018
Aweil	11,159	309,131
Bentiu	9,957	385,492
Bor	6,447	262,090
Juba	15,121	285,711
Kwajok	21,877	601,543
Malakal	17,324	331,955
Rumbek	18,344	426,321
Torit	7,276	146,366
Wau	6,354	220,719
Yambio	13,784	304,852
South Sudan	127,643	3,274,180

The total consultation in the country since week 1 of 2018 is 3,274,180 by hub, Kwajok registered the highest number of consultations as indicated in the table above. The total number of consultations by county is indicated in the map above. See the key for more information.

Proportional mortality

Figure 1 | Proportional mortality (2018)

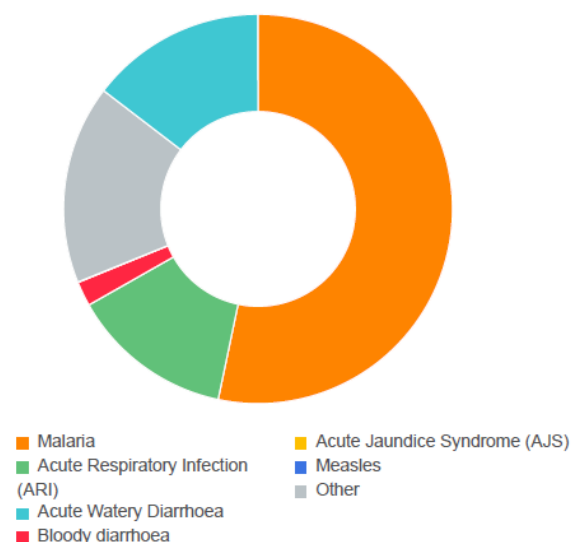


Syndrome	W26		2018	
	# deaths	% mortality	# deaths	% mortality
Malaria	12	85.7%	145	31.0%
ARI	0	0.0%	17	3.6%
AWD	1	7.1%	33	7.1%
Bloody diarrhoea	0	0.0%	14	3.0%
AJS	0	0.0%	2	0.4%
Measles	0	0.0%	3	0.6%
Other	1	7.1%	254	54.3%
Total deaths	14	100%	468	100%

Figure 1, above shows the proportional mortality for 2018, with malaria being the main cause of mortality accounting for 31% of the deaths since week 1 of 2018, followed by bloody diarrhoea, and acute watery diarrhoea.

Proportional morbidity

Figure 2 | Proportional morbidity (2018)

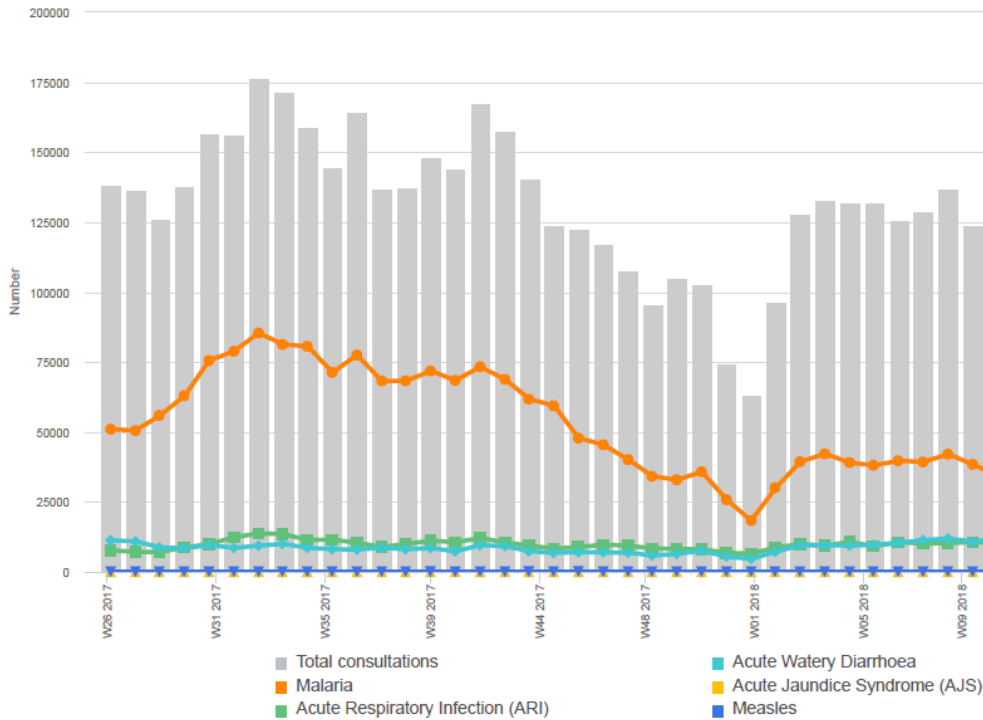


Syndrome	W26		2018	
	# cases	% morbidity	# cases	% morbidity
Malaria	48,875	61.3%	973,170	53.3%
ARI	7,975	10.0%	246,348	13.5%
AWD	8,289	10.4%	266,578	14.6%
Bloody diarrhoea	915	1.1%	37,636	2.1%
AJS	10	0.0%	166	0.0%
Measles	9	0.0%	426	0.0%
Other	13,664	17.1%	301,607	16.5%
Total cases	79,737	100%	1,825,931	100%

Figure 2, indicates the top causes of morbidity in the country, with malaria being the leading cause of morbidity 973,170 (53.3%) followed by ARI, AWD and ABD respectively since week 1 of 2018. refer to the figure above for more information.

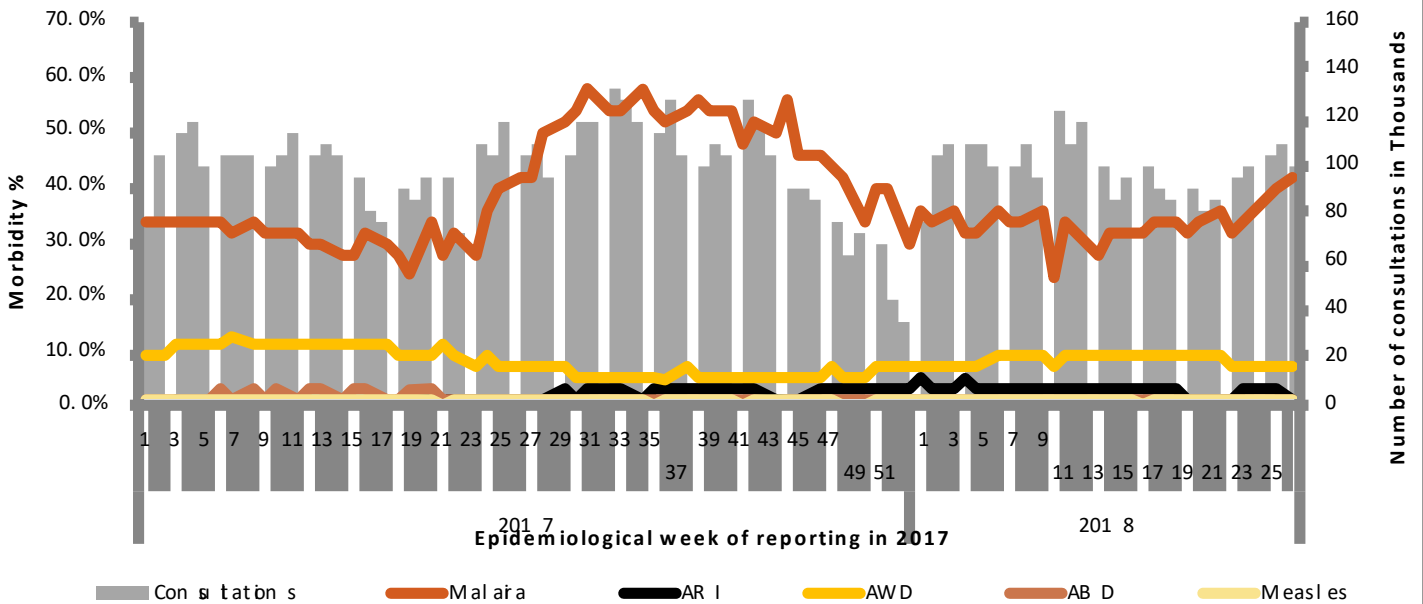
Trend in consultations and key diseases

Figure 3 | Trend in total consultations and key diseases (W26)



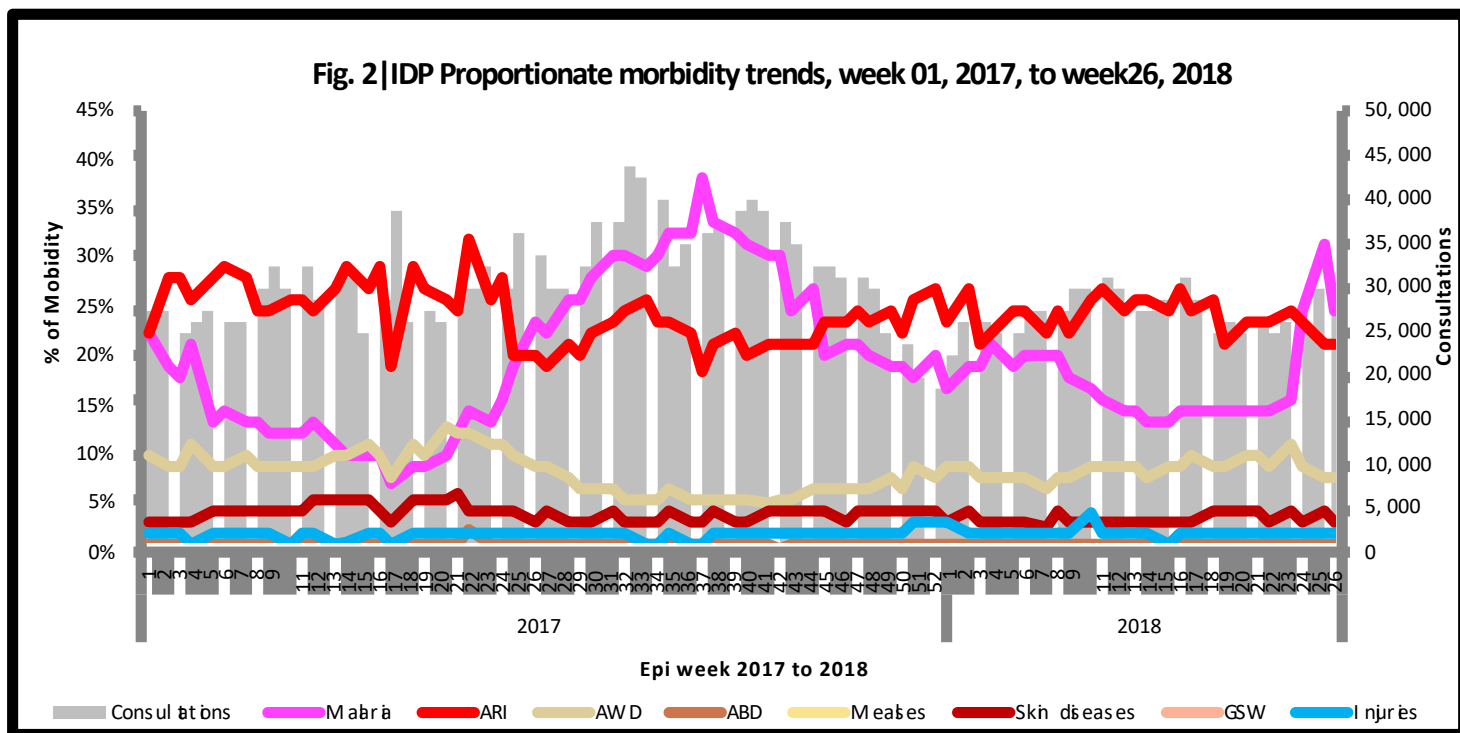
IDSR Proportionate morbidity trends - in relatively stable states

Fig. 1 | IDSR Proportionate morbidity trends, week 1, 2017 to 26, 2018



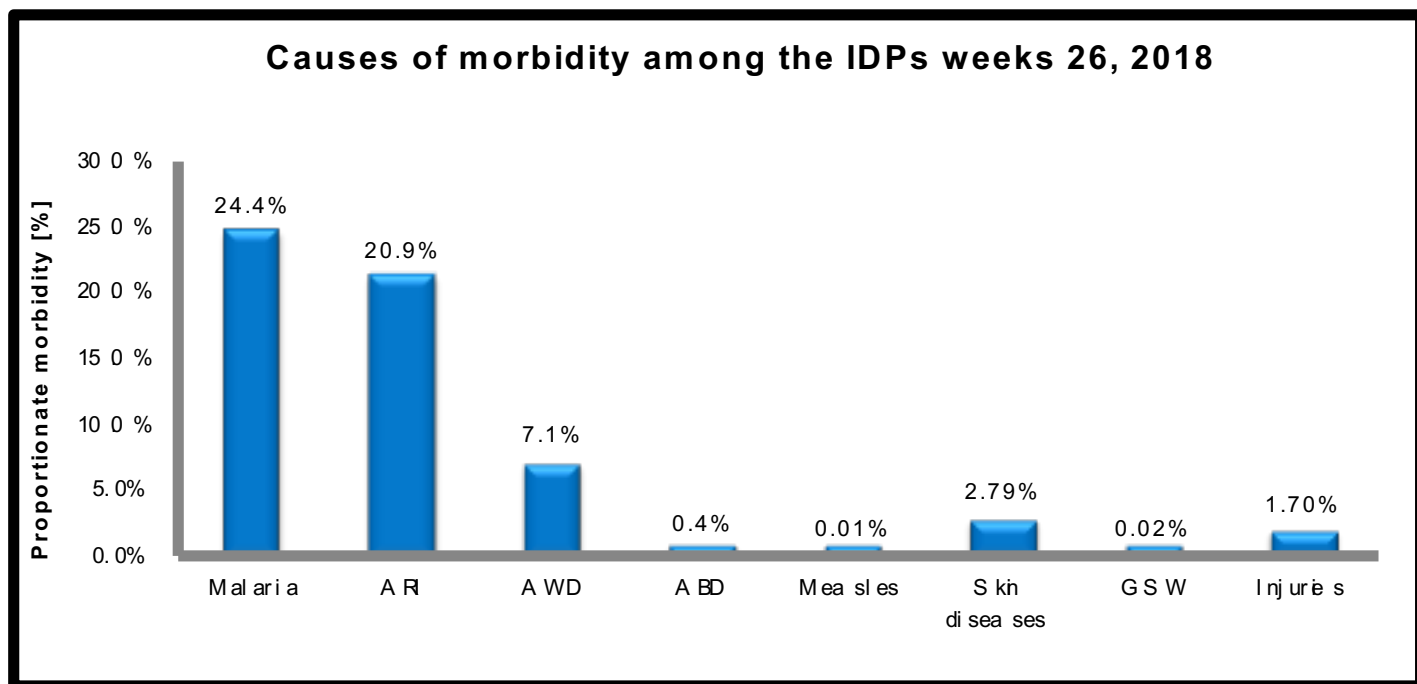
In the relatively stable states, malaria is the top cause of morbidity accounting for 42.5% of the consultations in week 26 (representing an increase from 39% in week 25).

IDP Proportionate Morbidity trends – in displaced Population



Among the IDPs, ARI and Malaria accounted for 20.9% and 24.4% of the consultations in week 26. The other significant causes of morbidity in the IDPs includes AWD, Skin diseases, and Injuries.

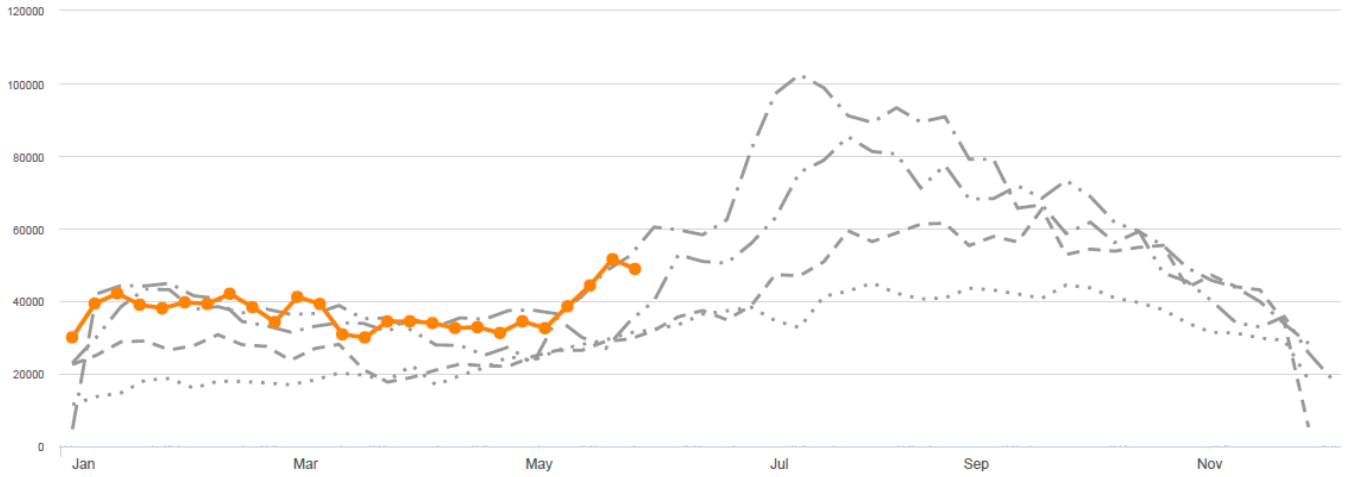
IDP Proportionate Morbidity trends – in displaced Population



The top causes of morbidity in the IDPs in 2018 include ARI, Malaria, AWD, Skin diseases, Injuries and ABD.

Malaria | Trends over time

Figure 4a | Trend in number of cases over time (South Sudan)

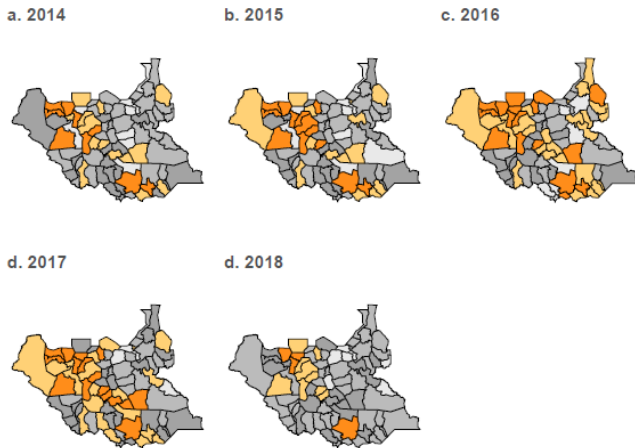


<p>Graph legend</p> <ul style="list-style-type: none"> — 2018 - - - 2017 - - - 2016 - - - 2015 2014 	<p>Key malaria indicators (2018)</p> <div style="display: flex; justify-content: space-around; font-size: 24px; font-weight: bold;"> 973,170 145 78 </div> <div style="display: flex; justify-content: space-around; font-size: 12px;"> Cases Deaths Alerts </div>	<p>Figure 4b % morbidity</p>	<p>Figure 4c Age breakdown</p>
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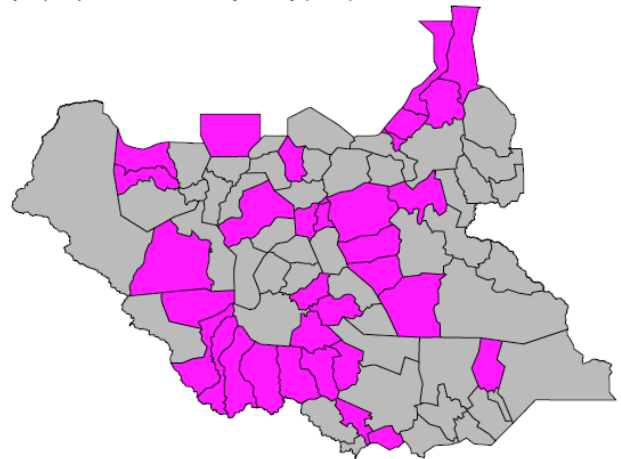
Malaria is the top course of Morbidity in the country, a total of 973,170 cases with 145 deaths registered since week 1 of 2018. malaria trend for week 26 of 2018 is above 2014, 2015, and 2016 as shown in the figure 4a, above.

Malaria | Maps and Alert Management

Map 2 | Map of malaria cases by county (2018)



Map 3 | Map of malaria alerts by county (2018)

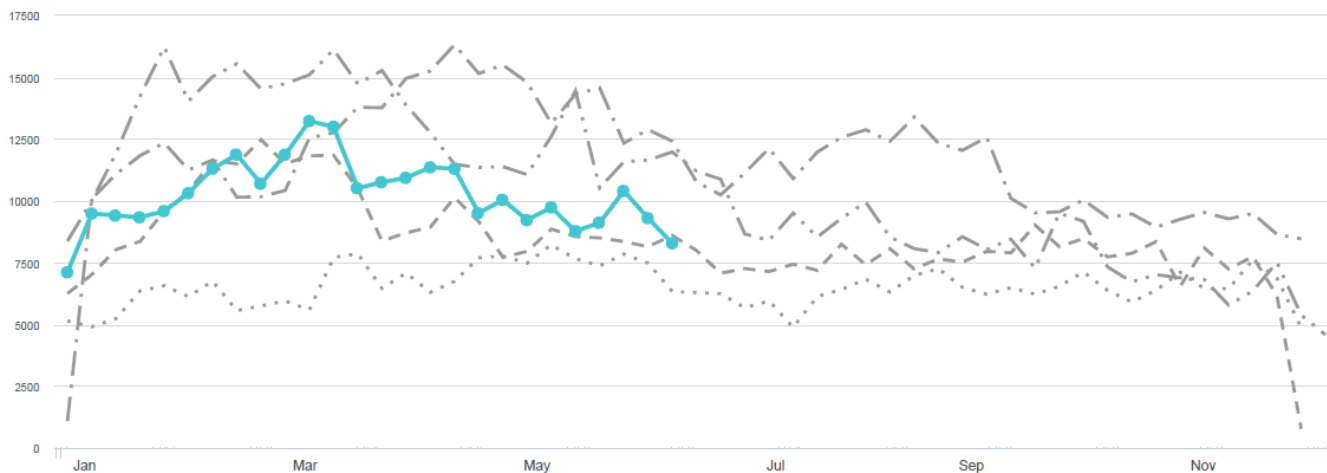


<p>Map legend</p> <p>Number of malaria cases</p> <p>Number of malaria alerts</p> <p>Alert threshold Twice the average number of cases over the past 3 weeks. Source: IDSR</p>	<p>Alerts</p> <div style="display: flex; justify-content: space-around; font-size: 24px; font-weight: bold;"> 78 42 </div> <p>Alerts Verified</p>	<p>Risk Assessment</p> <table border="1" style="margin: auto;"> <tr> <td style="background-color: #2e8b57; color: white; padding: 10px; text-align: center;">2 Low Risk</td> <td style="background-color: #ffd700; padding: 10px; text-align: center;">0 Moderate Risk</td> <td style="background-color: #ff8c00; padding: 10px; text-align: center;">1 High Risk</td> <td style="background-color: #ff0000; color: white; padding: 10px; text-align: center;">1 Very High Risk</td> </tr> </table>	2 Low Risk	0 Moderate Risk	1 High Risk	1 Very High Risk
2 Low Risk	0 Moderate Risk	1 High Risk	1 Very High Risk			

Since the beginning of the year, a total of 78 malaria alerts have been triggered, 42 of those were verified. The Maps above indicate the location reporting malaria alerts from 2014, 2015, 2016, 2017, and 2018.

Acute Watery Diarrhoea | Trends over time

Figure 5a | Trend in AWD cases over time (South Sudan)



Graph legend

- 2018
- - - 2017
- - - 2016
- - - 2015
- 2014

Key AWD indicators (2018)

266,578 **33** **87**
 Cases Deaths Alerts

Figure 5b | % morbidity

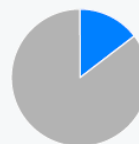


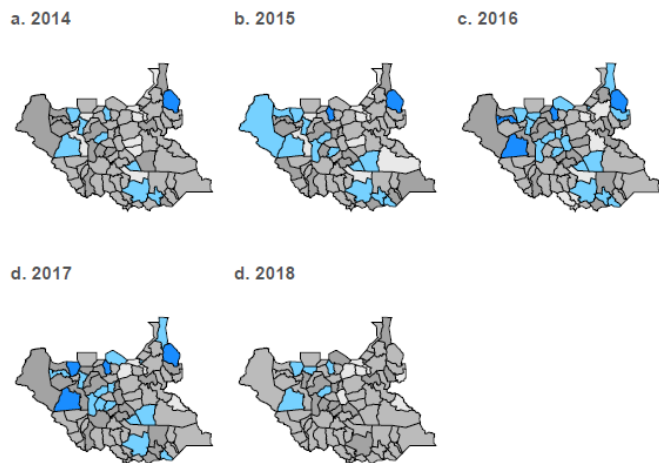
Figure 5c | Age breakdown



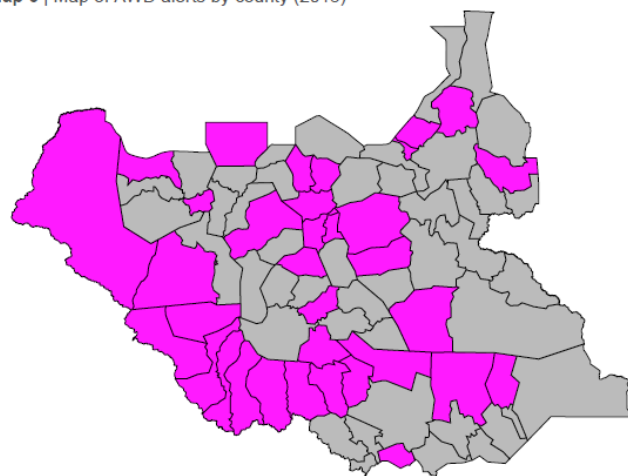
AWD is one of the top causes of morbidity in the country with 266,578 cases reported since week 1 of 2018 including 33 deaths. AWD trend for 2018 is below 2014, and above 2015, 2016 and 2017 as shown in figure 5a, above.

Acute Watery Diarrhoea | Maps and Alert Management

Map 4 | Map of AWD cases by county (2018)



Map 5 | Map of AWD alerts by county (2018)



Map legend



Alert threshold
 Twice the average number of cases over the past 3 weeks. Source: IDSR

87 **51**
 Alerts Verified

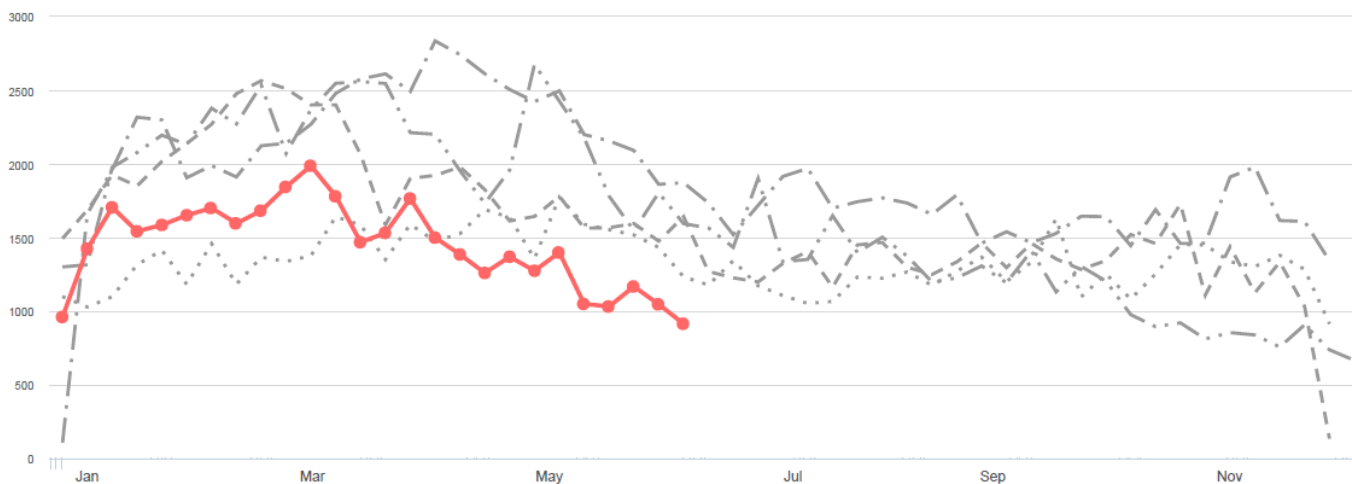
Risk Assessment



The number of AWD alerts triggered since week 1 of 2018 is 87, out of which 51 were verified. Maps above highlight the areas reporting AWD alerts from 2014 to 2018 .

Acute Bloody Diarrhoea | Trends over time

Figure 6a | Trend in bloody diarrhoea cases over time (South Sudan)

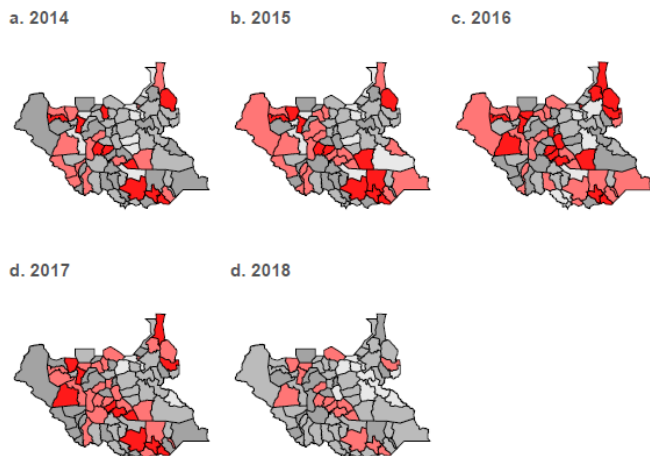


<p>Graph legend</p> <ul style="list-style-type: none"> —●— 2018 - - - - - 2017 - 2016 - - - - - 2015 - 2014 	<p>Key bloody diarrhoea indicators (2018)</p> <div style="display: flex; justify-content: space-around; font-size: 24px; font-weight: bold;"> 37,636 14 100 </div> <div style="display: flex; justify-content: space-around; font-size: 12px;"> Cases Deaths Alerts </div>	<p>Figure 6b % morbidity</p>	<p>Figure 6c Age breakdown</p>
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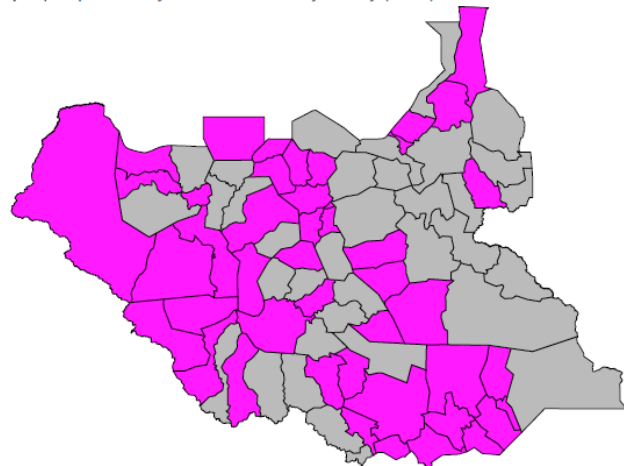
Since week 1 of 2018, a total of 37,636 cases of ABD have been reported country wide including 14 death. ABD trend for 2018 is below 2014, 2015, 2016, and 2017 respectively. Refer to figure 6a, above.

Acute Bloody Diarrhoea | Maps and Alert Management

Map 6 | Map of bloody diarrhoea cases by county (2018)



Map 7 | Map of bloody diarrhoea alerts by county (2018)

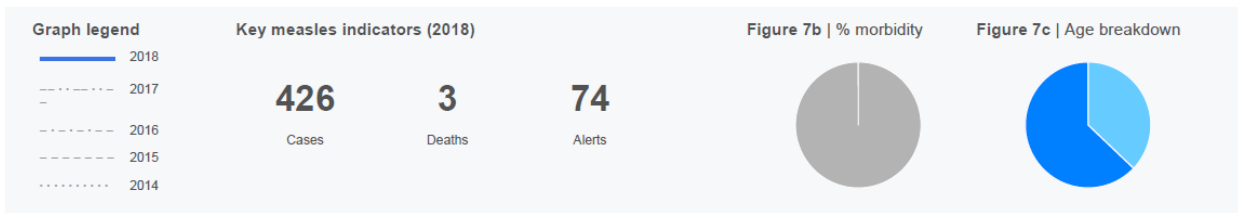
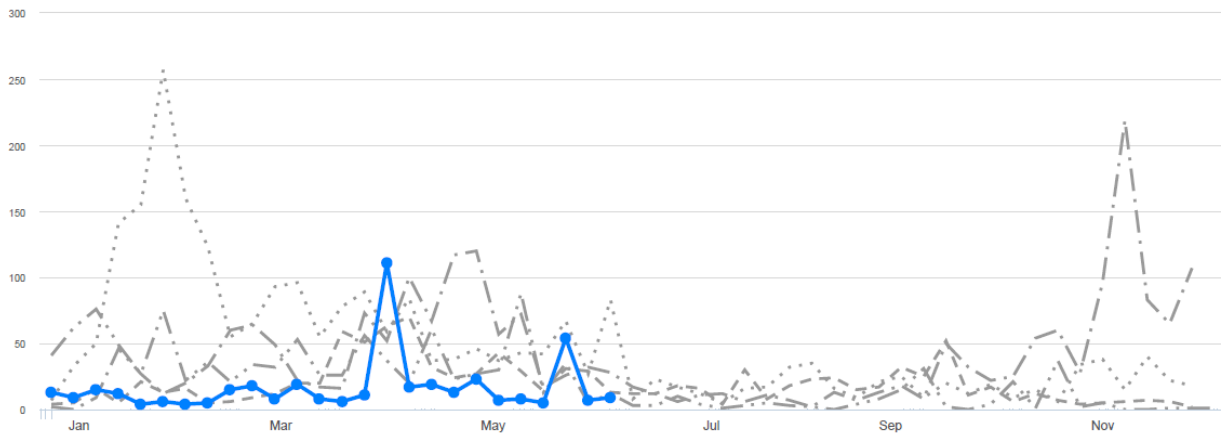


<p>Map legend</p> <p>Number of bloody diarrhoea cases</p> <p>Number of alerts</p> <p>Alert threshold Twice the average number of cases over the past 3 weeks. Source: IDSR</p>	<p>100</p> <p>Alerts</p>	<p>61</p> <p>Verified</p>	<p>Risk Assessment</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: green; color: white; font-weight: bold; font-size: 24px;">1</td> <td style="background-color: yellow; color: black; font-weight: bold; font-size: 24px;">0</td> <td style="background-color: orange; color: black; font-weight: bold; font-size: 24px;">0</td> <td style="background-color: red; color: white; font-weight: bold; font-size: 24px;">0</td> </tr> <tr> <td>Low Risk</td> <td>Moderate Risk</td> <td>High Risk</td> <td>Very High Risk</td> </tr> </table>	1	0	0	0	Low Risk	Moderate Risk	High Risk	Very High Risk
1	0	0	0								
Low Risk	Moderate Risk	High Risk	Very High Risk								

Total of 100 alerts were generated since week 1 of 2018, of which 61 were verified by the county surveillance team. Maps indicating areas triggering alerts since 2014 to 2018 are shown above.

Measles | Trends over time

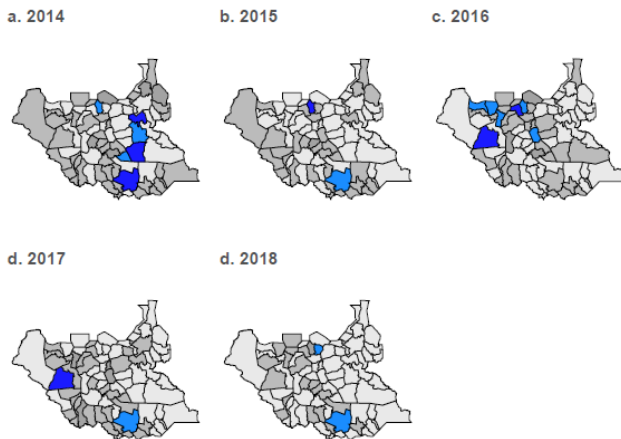
Figure 7a | Trend in number of cases over time (South Sudan)



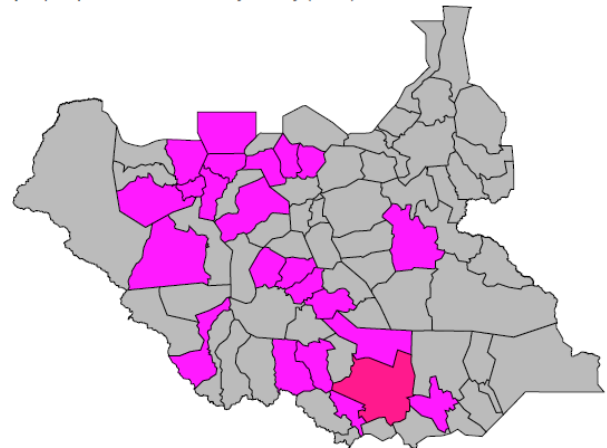
Since the beginning of 2018, at least 426 suspect measles cases including 3 death (CFR 0.73%) have been reported.

Measles | Maps and Alert Management

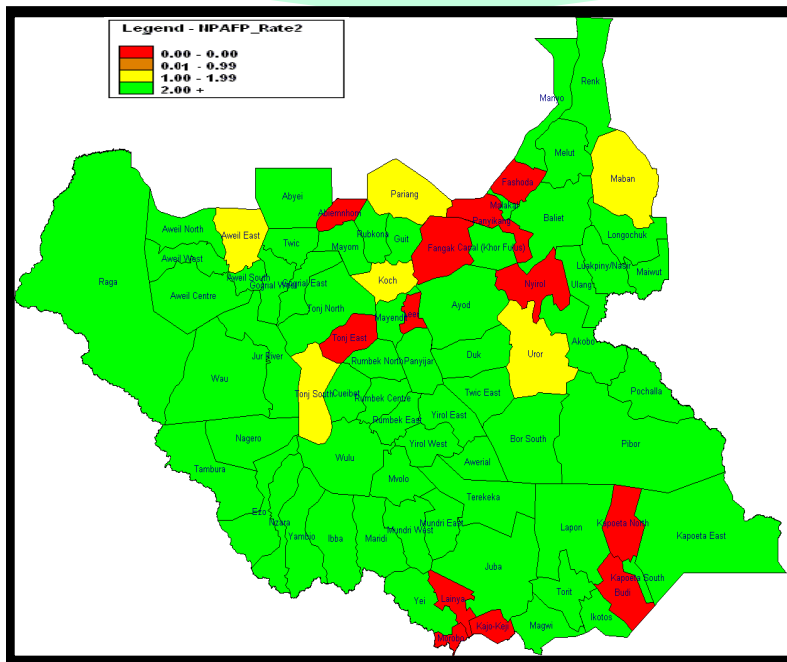
Map 7 | Map of measles cases by county (2018)



Map 8 | Map of measles alerts by county (2018)



Since week 1 of 2018, 74 alerts of measles were triggered and 53 of those have been verified at county level. Maps of areas raising alerts from 2014 to 2018 are shown above.



In week 26, 2018, thirty two (32) new AFP cases were reported from Lakes, Northern Bahr el Ghazal, Upper Nile, Eastern Equatoria, WES, CES, Unity, Jonglei, WBeG and Warrap hubs. This brings the cumulative total for 2018 to 214 AFP cases.

The annualized non-Polio AFP (NPAFP) rate (cases per 100,000 population children 0-14 years) in 2018 is 5.6 per 100,000 population of children 0-14 years (target ≥ 2 per 100,000 children 0-14 years).

Stool adequacy was 85% in 2018, a rate that is higher than the target of $\geq 80\%$.

Environmental surveillance ongoing since May 2017; with 23 samples testing positive for non-polio enterovirus (NPEV) in 2017 and Twenty four (24) NPEV positive sample in 2018.

Source: South Sudan Weekly AFP Bulletin

Mortality in the IDPs

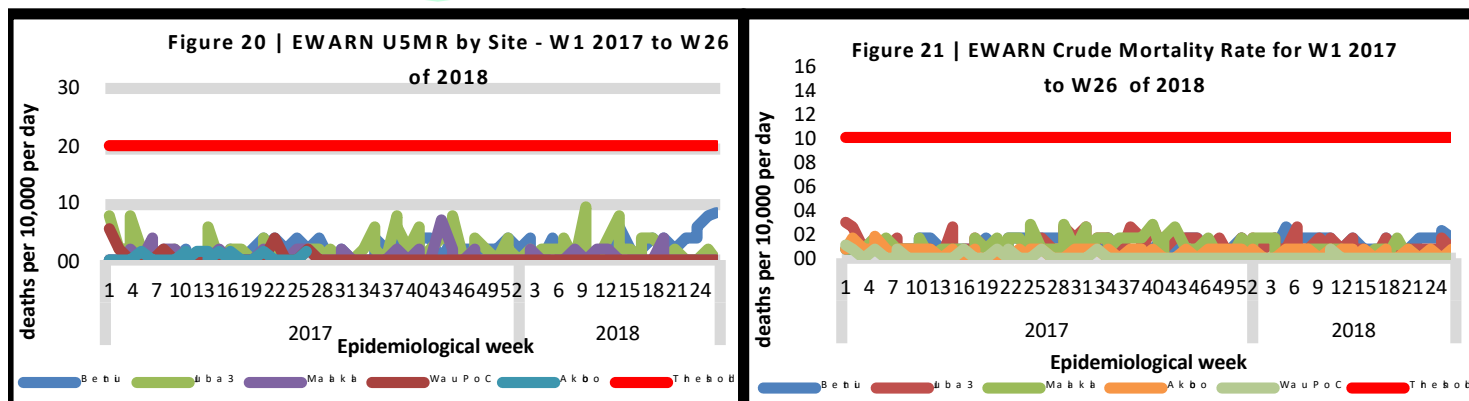
Table 6 | Proportional mortality by cause of death in IDPs W26 2018

Cause of Death by IDP site	Akobo		Bentiu		Total deaths
	<5yrs	≥ 5 yrs	<5yrs	≥ 5 yrs	
GSW			1		1
Infection				1	1
malaria	1		2		3
Renal failure			1		1
TB/HIV/AIDS			1		1
HIV/AIDS			2		2
Cardiopulmonary arrest			2		2
TB			1	1	2
Unkown			1		1
PTB			1		1
Anaemia				1	1
Chronic Liver Diseases			1		1
Total deaths	1	1	13	2	17

Among the IDPs, mortality data was received from Bentiu PoC, UN House PoC and Akobo in week 26. (Table 6). **A total of 17** deaths were reported during the week. Bentiu PoC report 14 deaths (82%) in the week. During the week, 14 (82%) deaths were recorded among children <5 years in (Table 6).

The causes of death during week 26 are shown in Table 6.

Mortality in the IDPs - Crude and Under five mortality rates



The U5MR in all the IDP sites that submitted mortality data in week 26 of 2018 is below the emergency threshold of 2 deaths per 10,000 per day (Fig. 20).

The Crude Mortality Rates [CMR] in all the IDP sites that submitted mortality data in week 26 of 2018 were below the emergency threshold of 1 death per 10,000 per day (Fig. 21).

Mortality in the IDPs - Overall mortality in 2018

Table 7 | Mortality by IDP site and cause of death as of W26, 2018

IDP site	acute watery diarrhoea	cancer	GSW	Gunshot wound	Heart Failure	Kala-Azar	malaria	Meningitis	perinatal death	pneumonia	Rabies	SAM	Sepsis	TB/HIV/AIDS	Trauma	HIV/AIDS	TB	Others	Grand Total
Bentiu	7	1	2	2	1	2	14	3	18	10	1	11	16	10	1	15	7	159	280
Juba 3	1	1			1		7			3		2		1		5	7	44	72
Malakal			1		3	1			1	1							2	17	26
Akobo				1		2	4			2		1	2	1	1			7	21
Wau PoC							1											0	1
Grand Total	8	3	2	3	5	5	26	3	19	16	1	14	18	12	2	20	16	227	400
Proportionate mortality [%]	2%	1%	1%	1%	1%	1%	7%	1%	5%	4%	0%	4%	5%	3%	1%	5%	4%	57%	100%

A total of 400 deaths have been reported from the IDP sites in 2018 [Table 7](#).

The top causes of mortality in the IDPs in 2018 are shown in [Table 7](#).

**This bulletin is produced by the Ministry of Health with
Technical support from WHO**

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Notes

WHO and the Ministry of Health gratefully acknowledge health cluster and health pooled fund (HPF) partners who have reported the data used in this bulletin. We would also like to thank ECHO and USAID for providing financial support.

The data has been collected with support from the EWARS project. This is an initiative to strengthen early warning, alert and response in emergencies. It includes an online, desktop and mobile application that can be rapidly configured and deployed in the field. It is designed with frontline users in mind, and built to work in difficult and remote operating environments. This bulletin has been automatically published from the EWARS application.

More information can be found at <http://ewars-project.org>

