

# South Sudan

Integrated Disease Surveillance and  
Response (IDSR)

Annexes W48 2018 (Nov 26– Dec 2)



**World Health  
Organization**  
South Sudan



Ministry of Health  
Republic of South Sudan

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

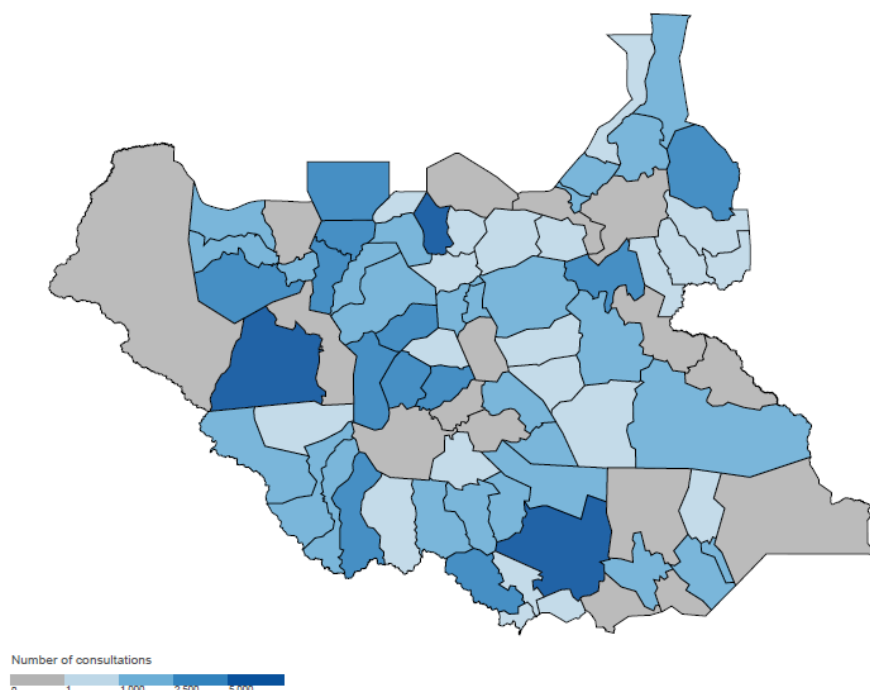
Slide 13 **Measles maps and alert management**

## 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 (W48 2018)

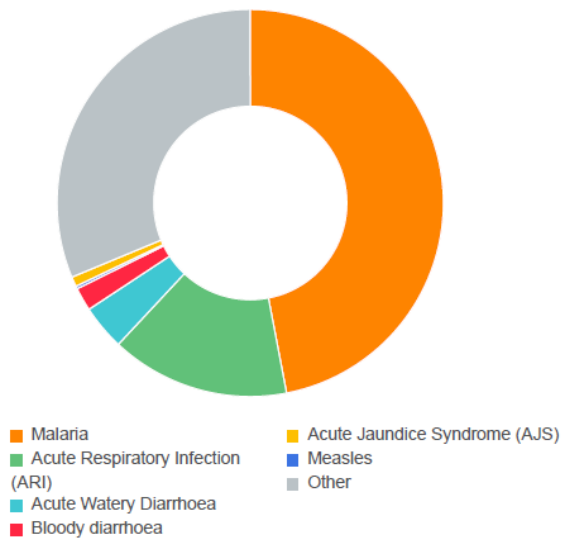


Hub	W48	2018
Aweil	7,600	673,535
Bentiu	14,141	792,348
Bor	11,073	552,101
Juba	14,257	620,528
Kwajok	19,028	1,246,383
Malakal	12,428	748,921
Rumbek	10,862	906,418
Torit	5,930	306,175
Wau	19,276	512,293
Yambio	14,371	539,561
<b>South Sudan</b>	<b>128,966</b>	<b>6,898,263</b>

The total consultation in the country since week 1 of 2018 is 6,898,263 by hub, Kwajok registered the highest number of consultations as indicated in the table above. The total number of consultations by county is shown in the map above. See the key for more information.

## Proportional mortality

Figure 1 | Proportional mortality (2018)

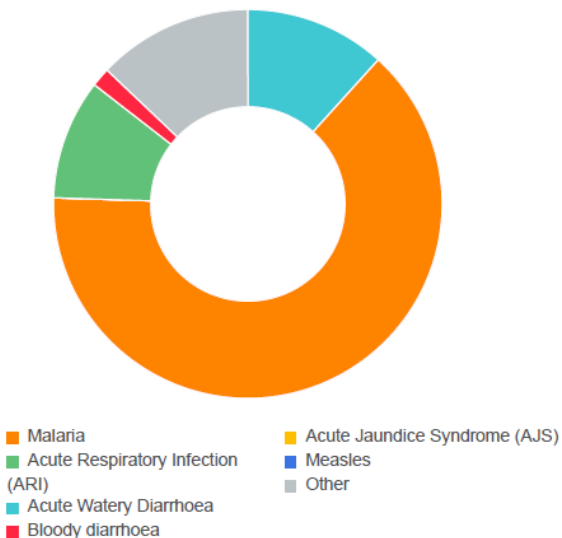


Syndrome	W48		2018	
	# deaths	% mortality	# deaths	% mortality
Malaria	10	100.0%	624	47.0%
ARI	0	0.0%	199	15.0%
AWD	0	0.0%	50	3.8%
Bloody diarrhoea	0	0.0%	26	2.0%
AJS	0	0.0%	11	0.8%
Measles	0	0.0%	3	0.2%
Other	0	0.0%	415	31.3%
<b>Total deaths</b>	<b>10</b>	<b>100%</b>	<b>1,328</b>	<b>100%</b>

Figure 1, above shows the proportional mortality for 2018, with malaria being the main cause of mortality accounting for 47.0% of the deaths since week 1 of 2018, followed by ARI AWD and bloody diarrhoea.

## Proportional morbidity

Figure 2 | Proportional morbidity (2018)

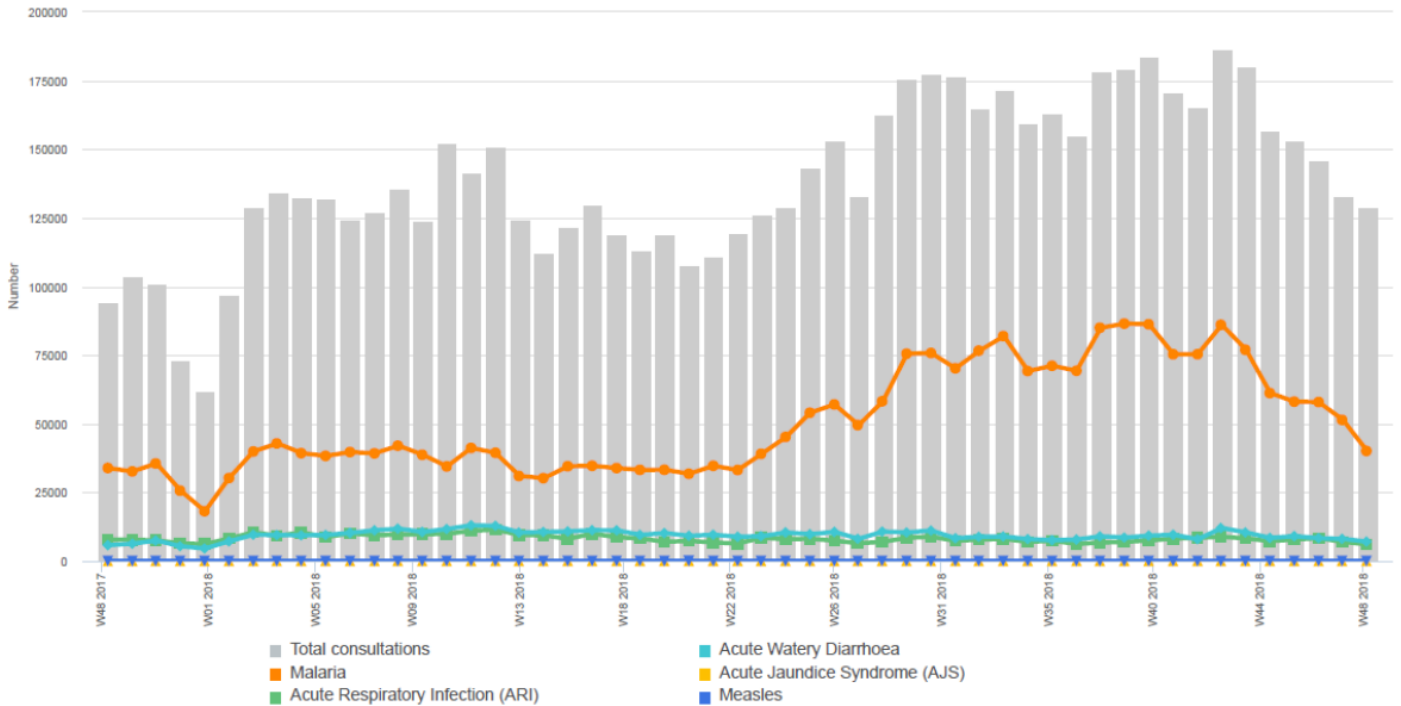


Syndrome	W48		2018	
	# cases	% morbidity	# cases	% morbidity
Malaria	40,047	63.6%	2,525,993	63.8%
ARI	6,035	9.6%	395,626	10.0%
AWD	7,046	11.2%	463,726	11.7%
Bloody diarrhoea	877	1.4%	62,825	1.6%
AJS	0	0.0%	214	0.0%
Measles	10	0.0%	433	0.0%
Other	8,980	14.3%	510,731	12.9%
<b>Total cases</b>	<b>62,995</b>	<b>100%</b>	<b>3,959,548</b>	<b>100%</b>

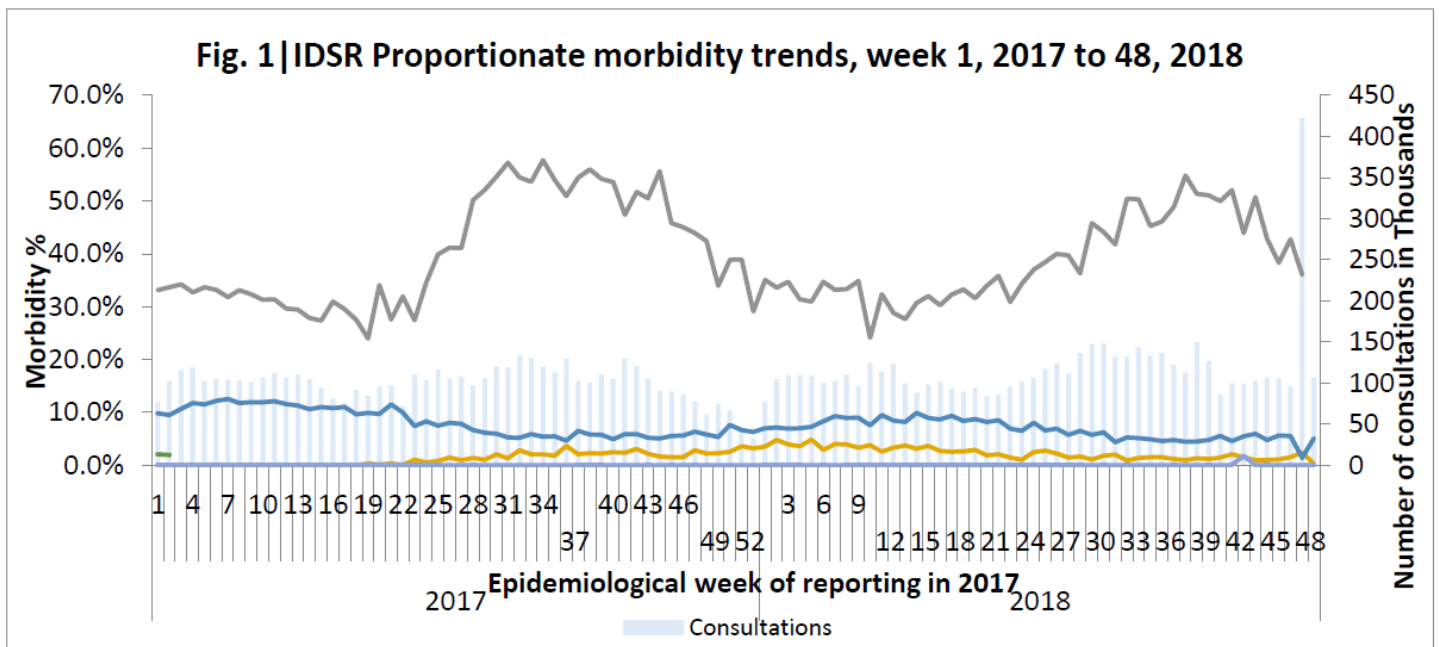
Figure 2, indicates the top causes of morbidity in the country, with malaria being the leading cause of morbidity 2,525,993(63.8%) followed by ARI, AWD and ABD respectively since week 1 of 2018. refer to the figure above for more information.

## Trend in consultations and key diseases

Figure 3 | Trend in total consultations and key diseases (W48)

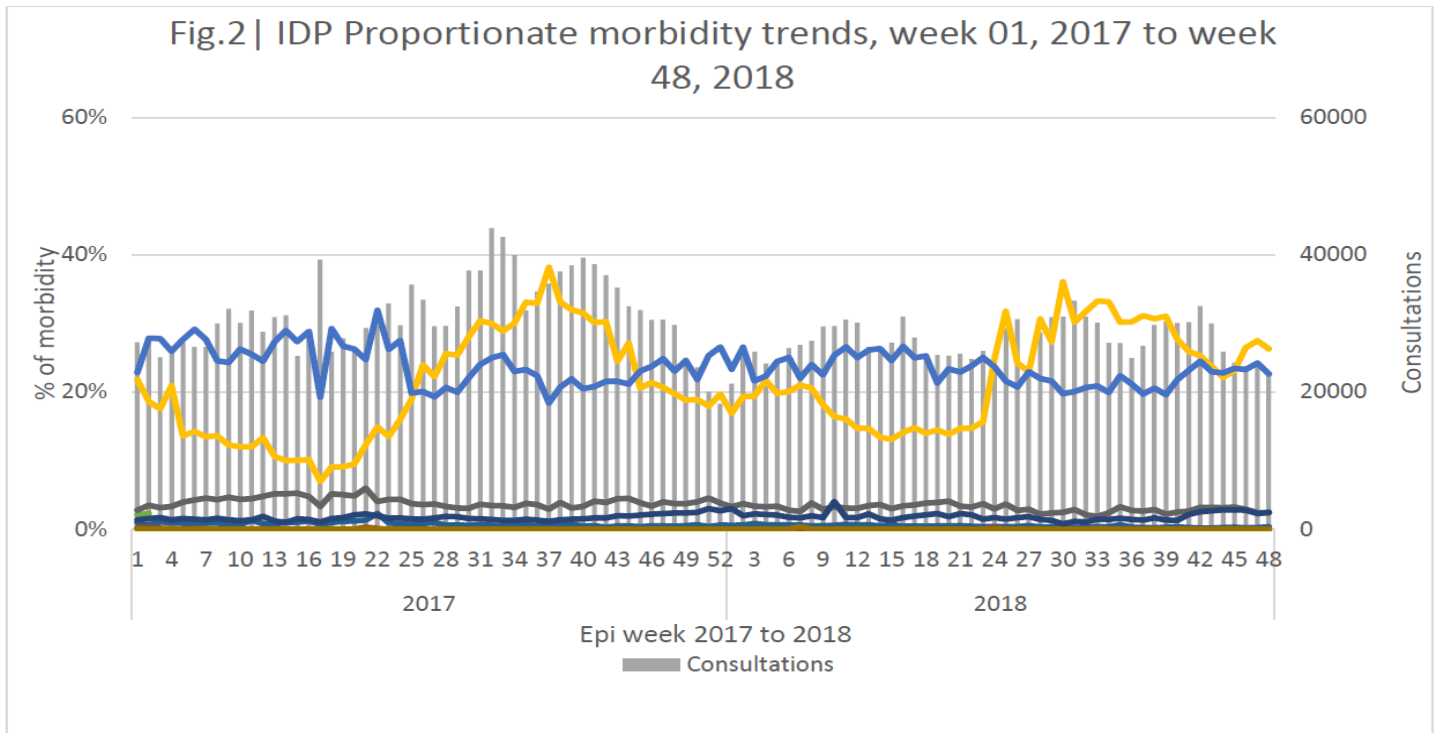


## IDSR Proportionate morbidity trends - in relatively stable states



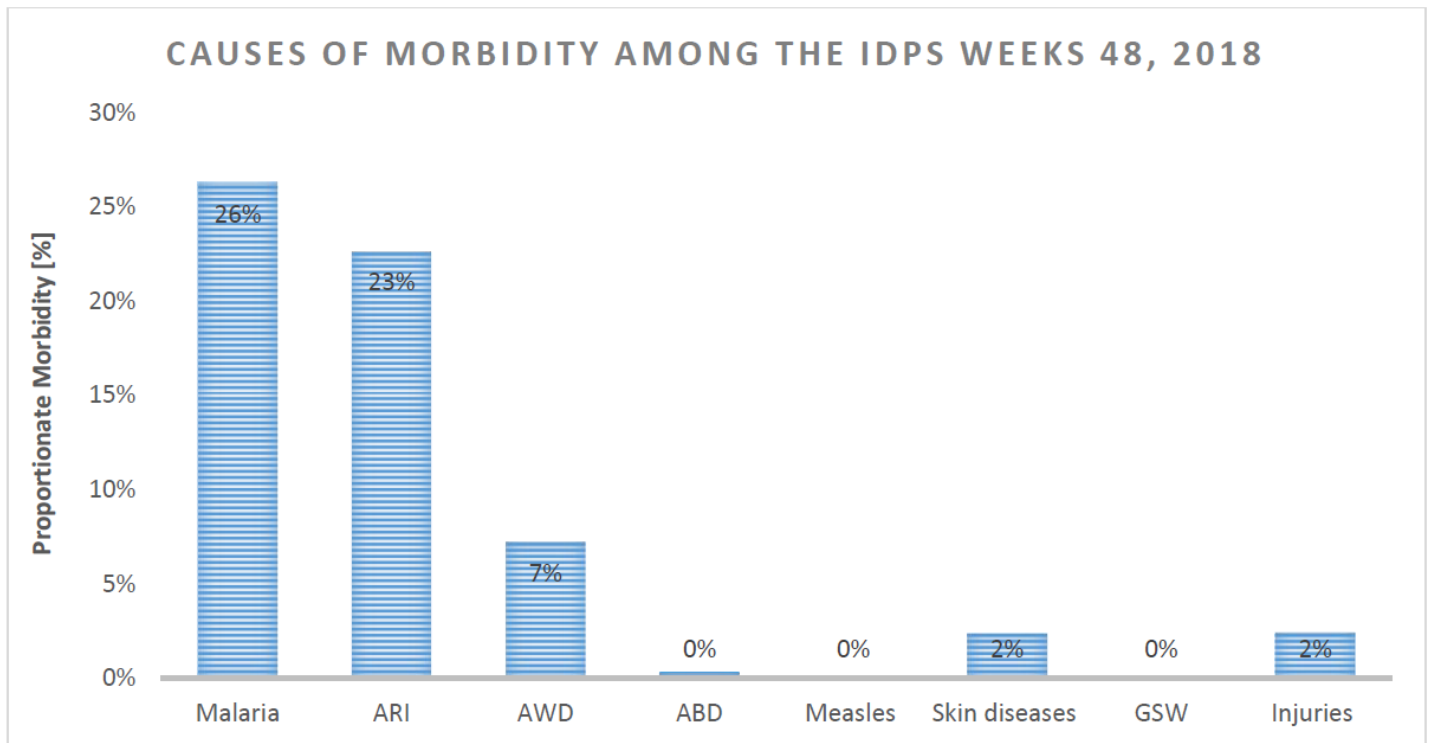
In the relatively stable states, malaria is the top cause of morbidity accounting for 32.1% of the consultations in week 48 (representing a decrease from 36.0% in week 47).

## IDP Proportionate morbidity trends - in displaced population



Among the IDPs, Malaria and ARI accounted for 26% and 23% of the consultations in week 48. The other significant causes of morbidity in the IDPs includes AWD, Skin diseases, and Measles.

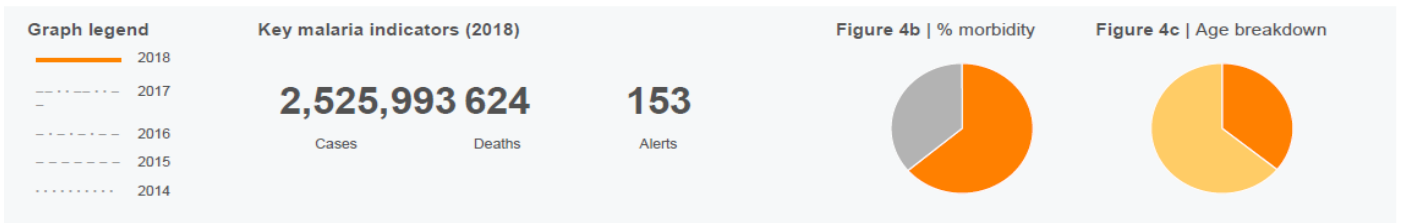
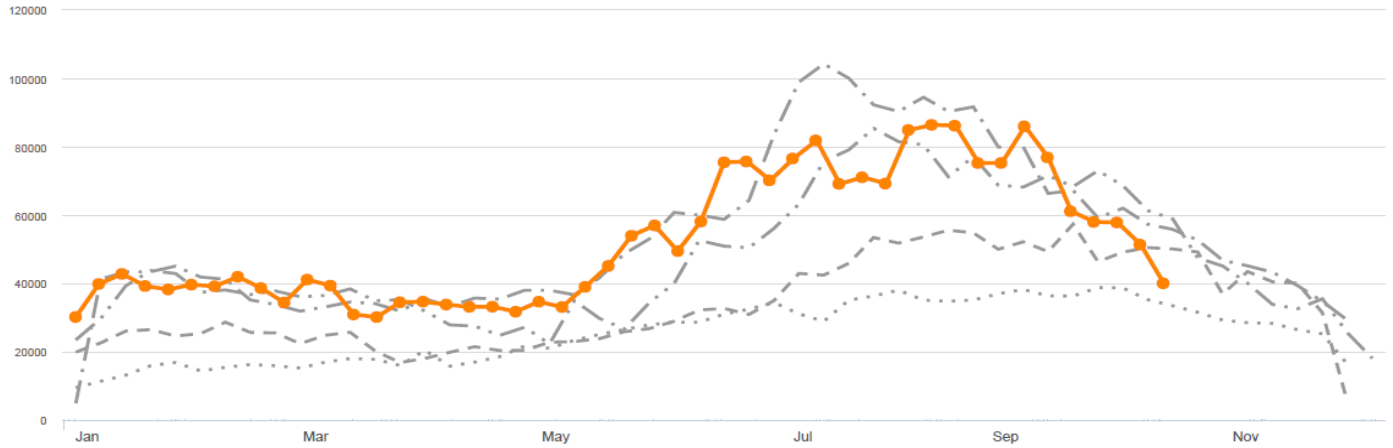
## IDP Proportionate morbidity trends - in displaced population



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

# Malaria | Trends over time

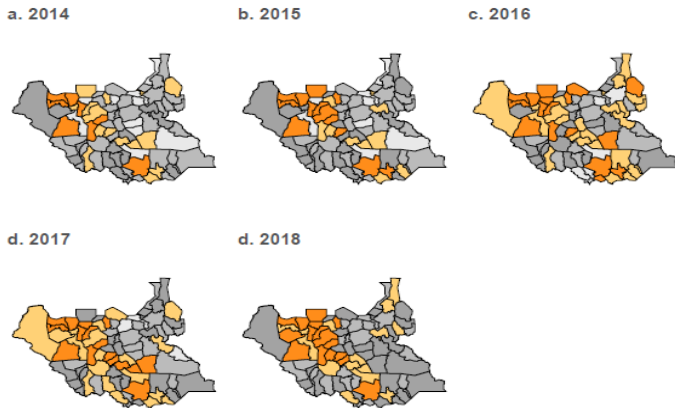
Figure 4a | Trend in number of cases over time (South Sudan)



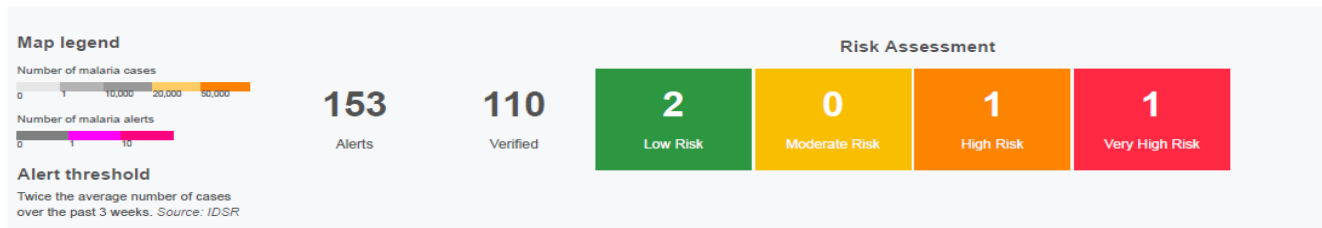
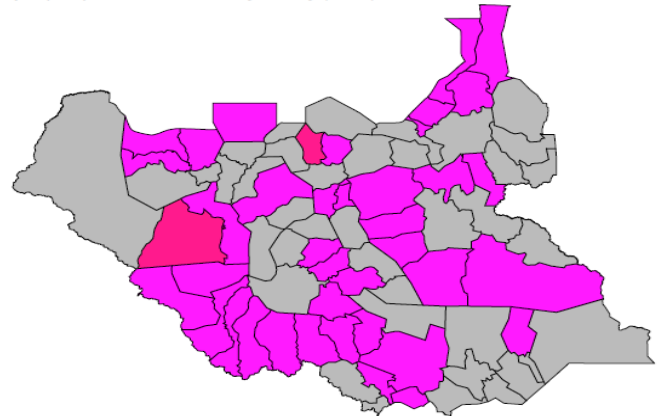
Malaria is the top course of Morbidity in the country, a total of 2,525,993 cases with 624 deaths registered since week 1 of 2018. malaria trend for week 48 of 2018 is below 2015, 2016, and 2017 as shown in the figure 4a, above.

# Malaria | Maps and Alert Management

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



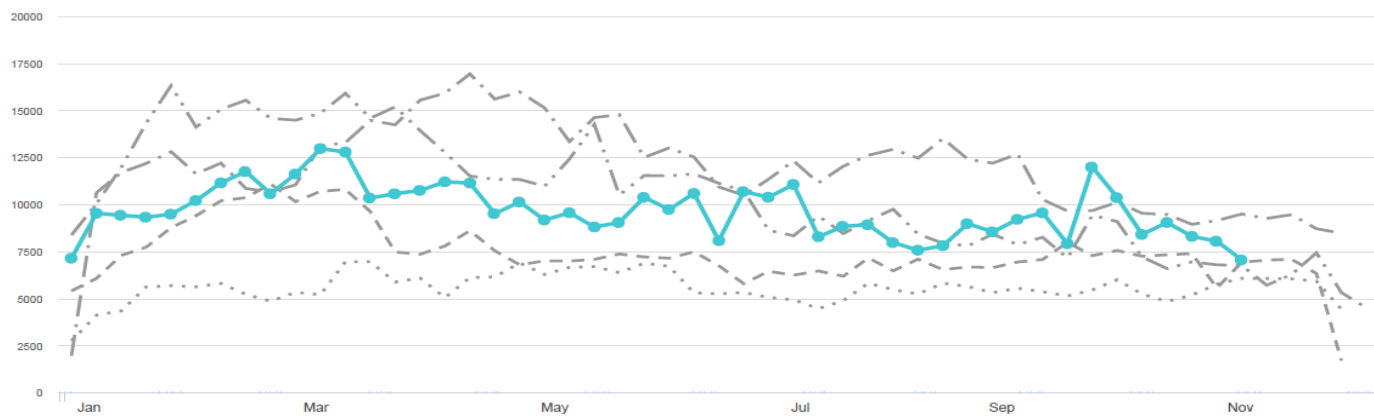
Map 3 | Map of malaria alerts by county (2018)



Since the beginning of the year, a total of 153 malaria alerts have been triggered, 110 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)

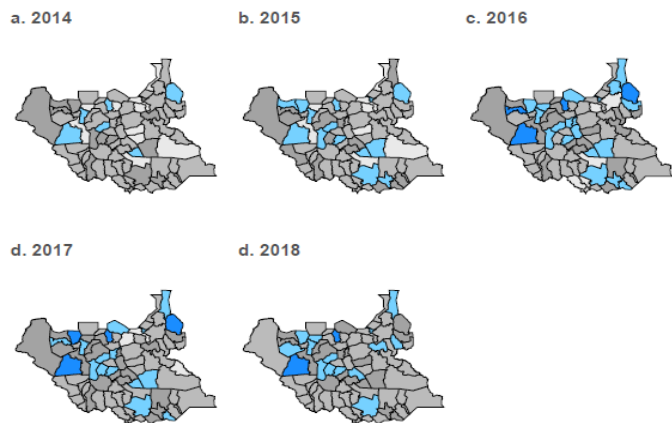


<p><b>Graph legend</b></p> <ul style="list-style-type: none"> <li>— 2018</li> <li>- - - 2017</li> <li>- - - 2016</li> <li>- - - 2015</li> <li>- - - 2014</li> </ul>	<p><b>Key AWD indicators (2018)</b></p> <p><b>463,726</b>   <b>50</b>   <b>141</b></p> <p>Cases   Deaths   Alerts</p>	<p><b>Figure 5b   % morbidity</b></p>	<p><b>Figure 5c   Age breakdown</b></p>
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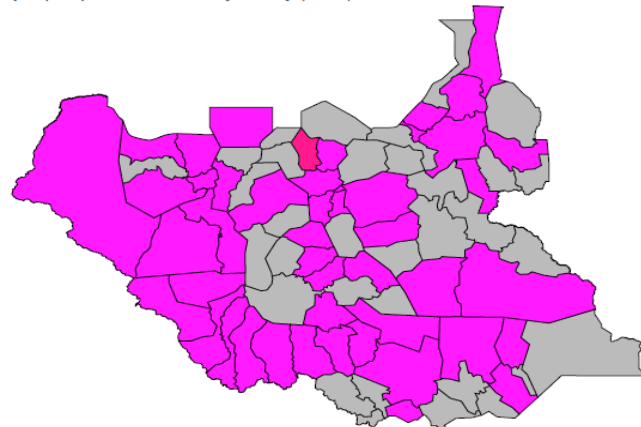
AWD is one of the top causes of morbidity in the country with 463,726 cases reported since week 1 of 2018 including 50 deaths. AWD trend for week 48 of 2018, shows a decline and is below 2016 and 2017, as shown in figure 5a, above.

# 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)

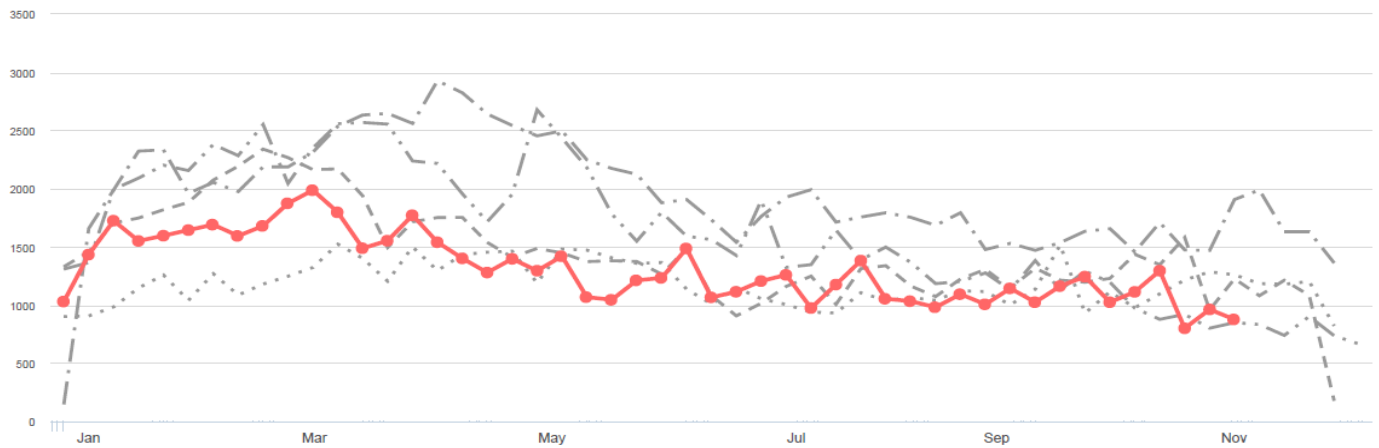


<p><b>Map legend</b></p> <p>Number of AWD cases</p> <p>Number of AWD alerts</p> <p><b>Alert threshold</b> Twice the average number of cases over the past 3 weeks. Source: IDSR</p>	<p><b>141</b></p> <p>Alerts</p>	<p><b>99</b></p> <p>Verified</p>	<p><b>Risk Assessment</b></p> <table border="1"> <tr> <td style="background-color: green; color: white; text-align: center;"><b>0</b> Low Risk</td> <td style="background-color: orange; color: white; text-align: center;"><b>1</b> Moderate Risk</td> <td style="background-color: red; color: white; text-align: center;"><b>0</b> High Risk</td> <td style="background-color: darkred; color: white; text-align: center;"><b>0</b> Very High Risk</td> </tr> </table>	<b>0</b> Low Risk	<b>1</b> Moderate Risk	<b>0</b> High Risk	<b>0</b> Very High Risk
<b>0</b> Low Risk	<b>1</b> Moderate Risk	<b>0</b> High Risk	<b>0</b> Very High Risk				

The number of AWD alerts triggered since week 1 of 2018 is 141, out of which 99 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)

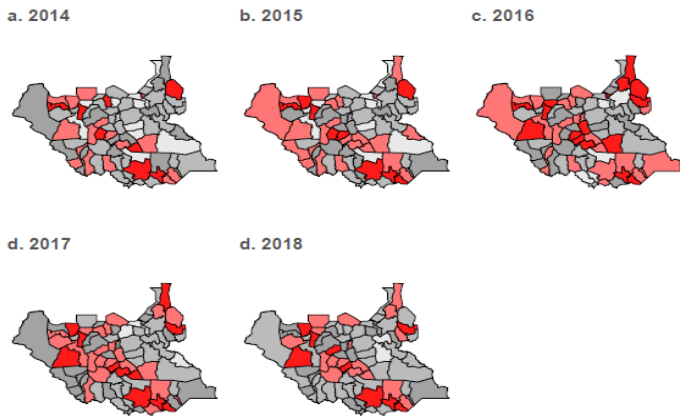


<p><b>Graph legend</b></p> <ul style="list-style-type: none"> <li><span style="color: red;">—●—</span> 2018</li> <li><span style="color: grey;">- - - - -</span> 2017</li> <li><span style="color: grey;">- · - · -</span> 2016</li> <li><span style="color: grey;">- - - - -</span> 2015</li> <li><span style="color: grey;">· · · · ·</span> 2014</li> </ul>	<p><b>Key bloody diarrhoea indicators (2018)</b></p> <table border="0" style="margin: auto;"> <tr> <td style="font-size: 24pt; font-weight: bold;">62,825</td> <td style="font-size: 24pt; font-weight: bold;">26</td> <td style="font-size: 24pt; font-weight: bold;">178</td> </tr> <tr> <td>Cases</td> <td>Deaths</td> <td>Alerts</td> </tr> </table>	62,825	26	178	Cases	Deaths	Alerts	<p><b>Figure 6b   % morbidity</b></p>	<p><b>Figure 6c   Age breakdown</b></p>
62,825	26	178							
Cases	Deaths	Alerts							

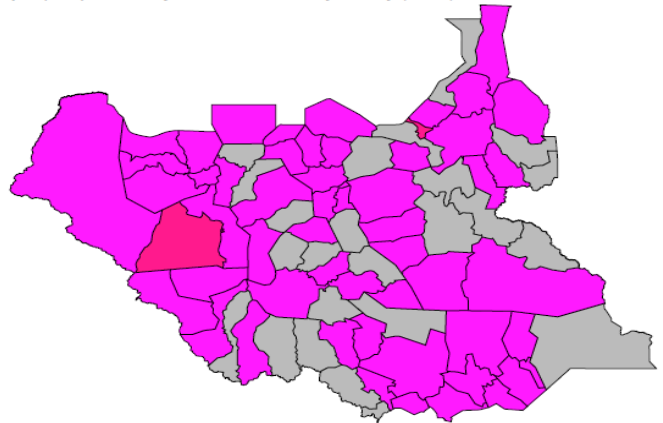
Since week 1 of 2018, a total of 62, 825 cases of ABD have been reported country wide including 26 death. ABD trend for 2018 is below 2015, 2016, and 2017 respectively. Refer to figure 6a, above.

# 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)



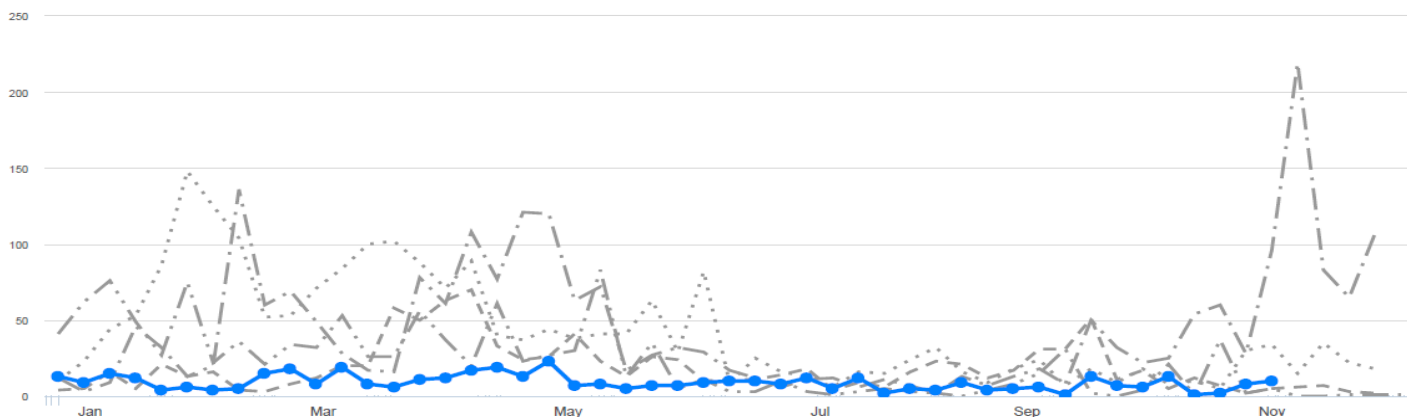
<p><b>Map legend</b></p> <p>Number of bloody diarrhoea cases</p> <p>Number of alerts</p> <p><b>Alert threshold</b> Twice the average number of cases over the past 3 weeks. Source: IDSR</p>	<p><b>178</b></p> <p>Alerts</p>	<p><b>128</b></p> <p>Verified</p>	<p><b>Risk Assessment</b></p> <table border="1" style="margin: auto;"> <tr> <td style="background-color: green; color: white; text-align: center; font-weight: bold;">1</td> <td style="background-color: yellow; color: black; text-align: center; font-weight: bold;">0</td> <td style="background-color: orange; color: black; text-align: center; font-weight: bold;">0</td> <td style="background-color: red; color: white; text-align: center; font-weight: bold;">0</td> </tr> <tr> <td style="text-align: center;">Low Risk</td> <td style="text-align: center;">Moderate Risk</td> <td style="text-align: center;">High Risk</td> <td style="text-align: center;">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 178 alerts were generated since week 1 of 2018, of which 128 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)



**Graph legend**

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

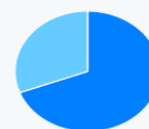
**Key measles indicators (2018)**

**433** Cases  
**3** Deaths  
**149** Alerts

**Figure 7b | % morbidity**



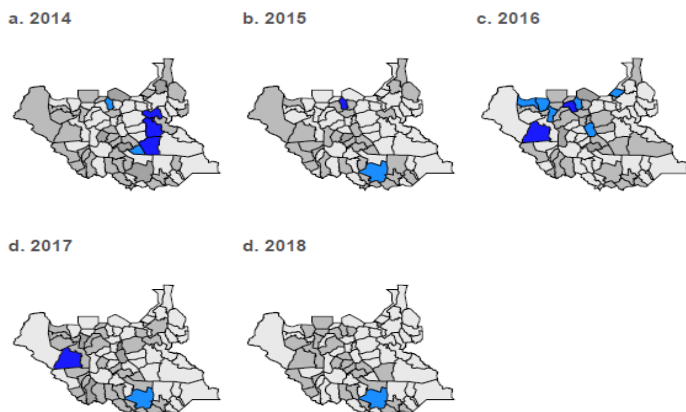
**Figure 7c | Age breakdown**



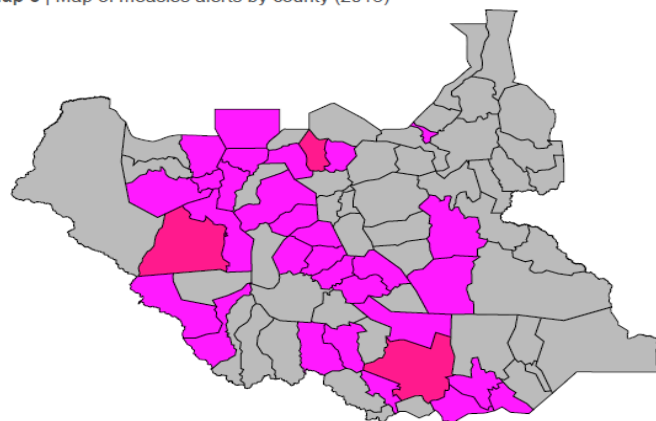
Since the beginning of 2018, at least 433 suspect measles cases including 3 death (CFR 0.74%) have been reported. . Of these, 415 suspect cases have undergone measles case-based laboratory-backed investigation with 309 samples collected out of which 48 measles IgM positive cases; 78 clinically confirmed cases; and 56 cases confirmed by epidemiological linkage.

# Measles | Maps and Alert Management

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



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



**Map legend**



**Number of measles alerts**



**Alert threshold**

1 case.  
 Source: IDSR

**149** Alerts  
**121** Verified

**Risk Assessment**



Since week 1 of 2018, 149 alerts of measles were triggered and 121 of those have been verified at county level. Maps of areas raising alerts from 2014 to 2018 are shown above.

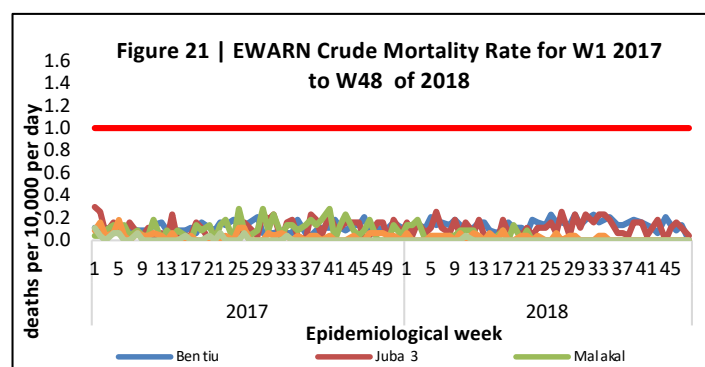
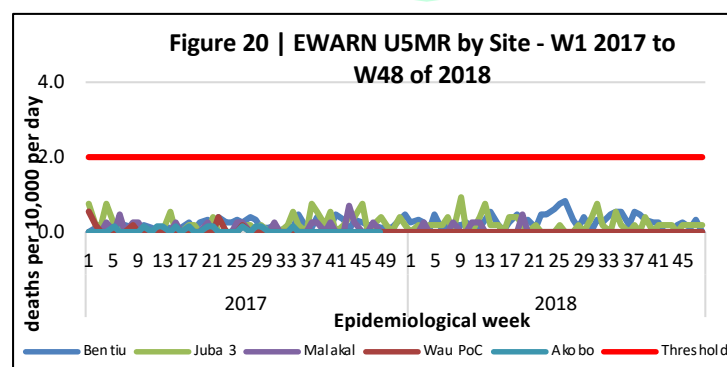
**Table 6 | Proportional mortality by cause of death in IDPs W47 2018**

	Juba 3	Total deaths
Cause of Death by IDP site	<5yrs	
Severe dehydration		1
Total deaths		1

Among the IDPs, mortality data was received from Juba 3 in week 48. (Table 6). **A total of 1** deaths was reported during the week in Juba 3 (1) in the week. During the week, 1 (100%) of the deaths were recorded among children <5yrs years in (Table 6).

The causes of death during week48 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 48 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 48 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 W48, 2018**

IDP site	acute watery diarrhoea	cancer	G5W	Heart Failure	Kala-Azar	malaria	Meningitis	perinatal death	pneumonia	Rabies	SAM	Sepsis	TB/HIV/AIDS	Trauma	HIV/AIDS	TB	Others	Grand Total
Bentiu	12	1	8	2	3	55	3	30	14	1	19	25	14	1	30	7	311	536
Juba 3	1	1		5		12		2	8		3	1	1		15	7	93	149
Malakal		1		3	1			1	1							2	17	26
Akobo			1		2	4			2		2	2	1	1			10	25
Wau PoC						1											0	1
<b>Grand Total</b>	<b>13</b>	<b>3</b>	<b>9</b>	<b>10</b>	<b>6</b>	<b>72</b>	<b>3</b>	<b>33</b>	<b>25</b>	<b>1</b>	<b>24</b>	<b>28</b>	<b>16</b>	<b>2</b>	<b>45</b>	<b>16</b>	<b>431</b>	<b>737</b>
<b>Proportionate mortality [%]</b>	2%	0%	1%	1%	1%	##	0%	4%	3%	0%	3%	4%	2%	0%	6%	2%	58%	100%

A total of 737 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  
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**For more help and support,  
please contact:**

Dr. Pinyi Nyimol Mawien  
Director General Preventive Health Services  
Ministry of Health  
Republic of South Sudan  
Telephone: +211916285676

Dr. Mathew Tut Moses  
Director Emergency Preparedness and Response (EPR)  
Ministry of Health  
Republic of South Sudan  
Telephone: +211922202028

## 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>

