

# South Sudan

Integrated Disease Surveillance and  
Response (IDSR)

Annexes W32 2018 (Aug 06 – Aug 12)



**World Health  
Organization**  
South Sudan



Ministry of Health  
Republic of South Sudan

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

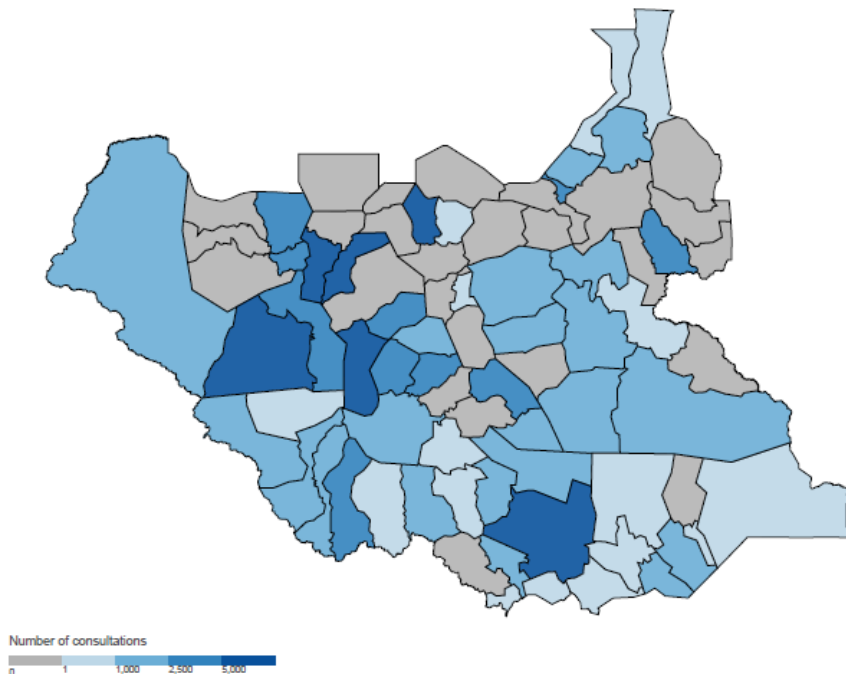
Slide 13 **Measles maps and alert management**

## 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 (W32 2018)

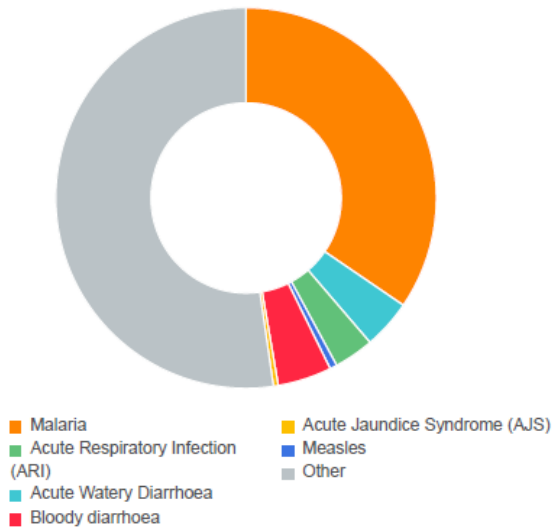


Hub	W32	2018
Aweil	6,999	393,992
Bentiu	10,812	485,875
Bor	9,459	350,958
Juba	12,884	372,029
Kwajok	20,936	752,695
Malakal	10,392	399,817
Rumbek	16,807	542,262
Torit	6,210	202,282
Wau	11,288	284,864
Yambio	12,007	365,714
South Sudan	117,794	4,150,488

The total consultation in the country since week 1 of 2018 is 4,150,488 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)

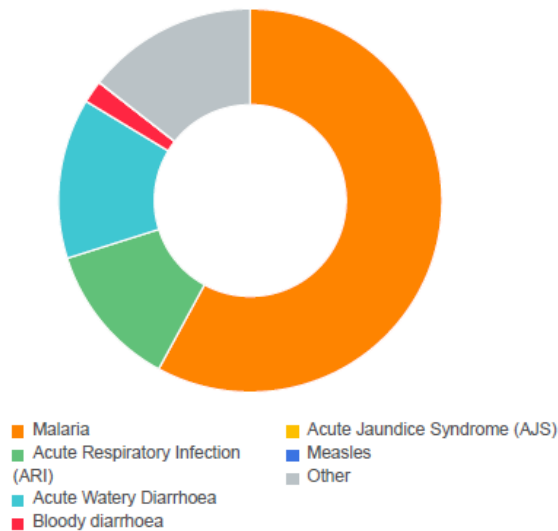


Syndrome	W32	2018		
	# deaths	% mortality	# deaths	% mortality
Malaria	6	66.7%	173	34.5%
ARI	0	0.0%	17	3.4%
AWD	0	0.0%	21	4.2%
Bloody diarrhoea	0	0.0%	23	4.6%
AJS	0	0.0%	2	0.4%
Measles	0	0.0%	3	0.6%
Other	3	33.3%	262	52.3%
<b>Total deaths</b>	<b>9</b>	<b>100%</b>	<b>501</b>	<b>100%</b>

Figure 1, above shows the proportional mortality for 2018, with malaria being the main cause of mortality accounting for 34.5% of the deaths since week 1 of 2018, followed by bloody diarrhoea, and acute watery diarrhoea.

## Proportional morbidity

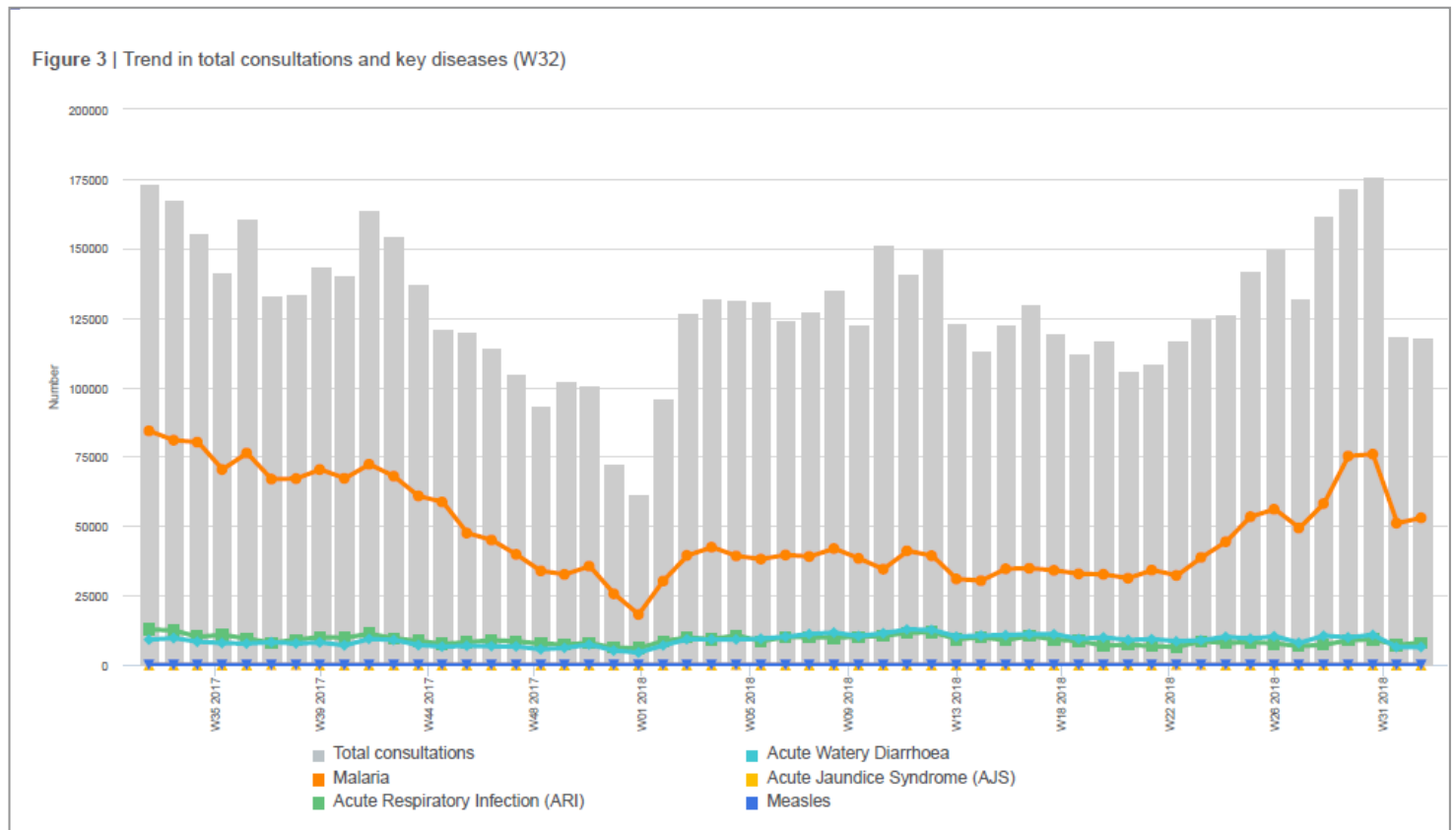
Figure 2 | Proportional morbidity (2018)



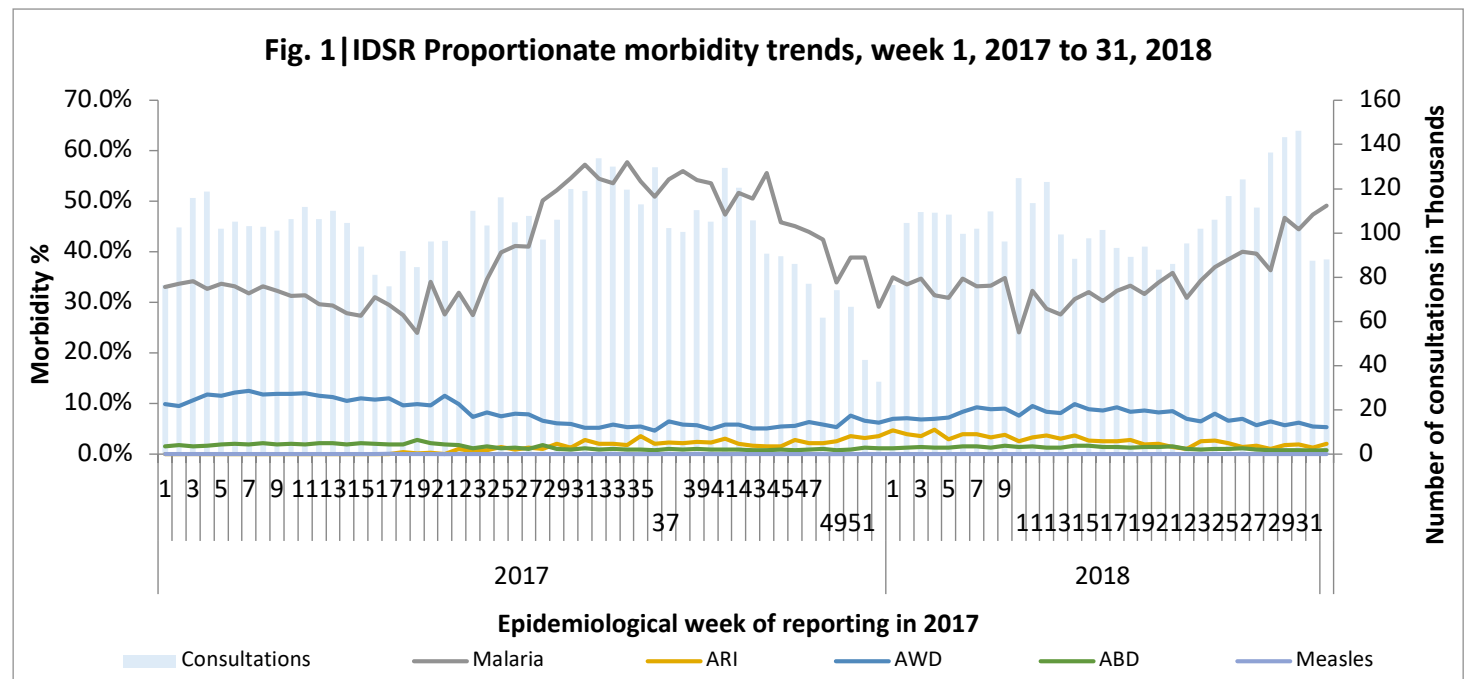
Syndrome	W32	2018		
	# cases	% morbidity	# cases	% morbidity
Malaria	52,964	67.9%	1,345,475	57.9%
ARI	8,013	10.3%	283,248	12.2%
AWD	6,396	8.2%	314,247	13.5%
Bloody diarrhoea	816	1.0%	44,176	1.9%
AJS	2	0.0%	184	0.0%
Measles	12	0.0%	384	0.0%
Other	9,745	12.5%	334,621	14.4%
<b>Total cases</b>	<b>77,948</b>	<b>100%</b>	<b>2,322,335</b>	<b>100%</b>

Figure 2, indicates the top causes of morbidity in the country, with malaria being the leading cause of morbidity 1,345,475 (57.9%) 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

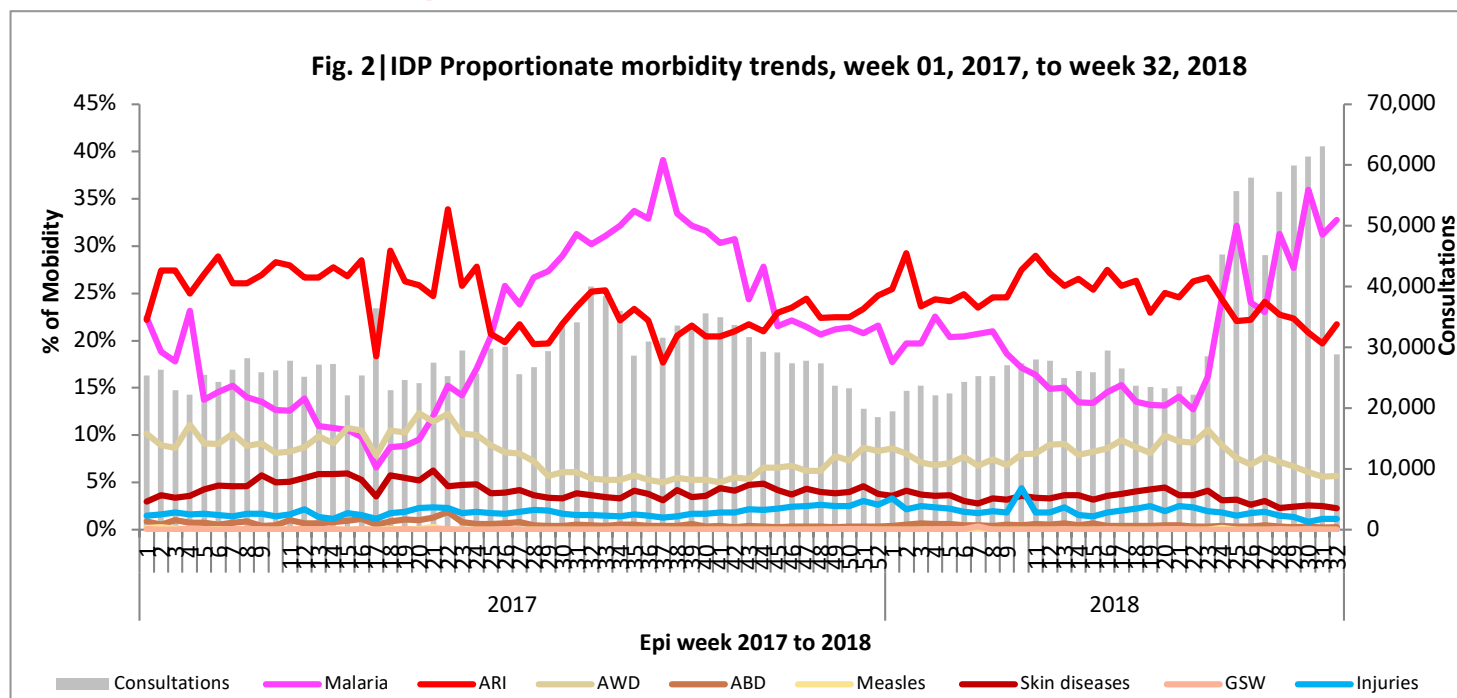


## IDSr Proportionate morbidity trends - in relatively stable states



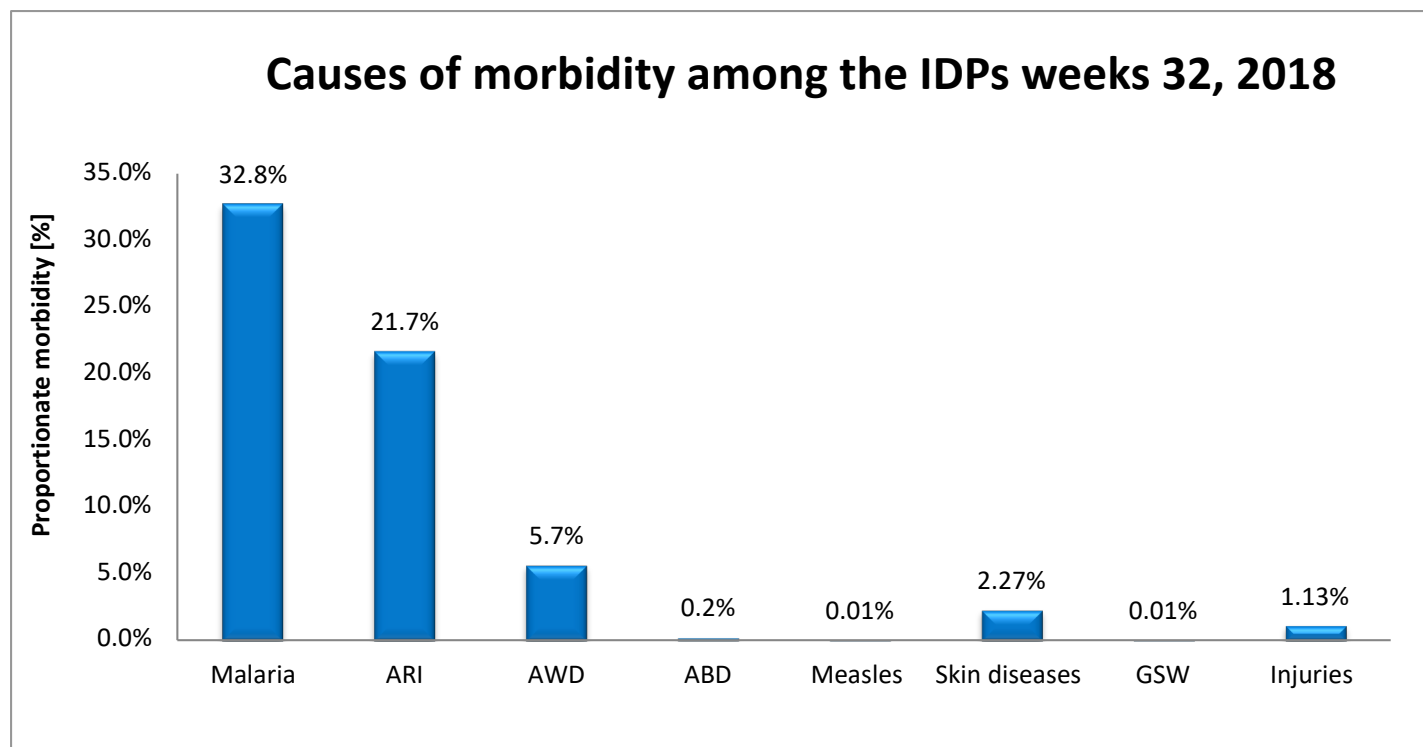
In the relatively stable states, malaria is the top cause of morbidity accounting for 49.1% of the consultations in week 32 (representing an decrease from 47.4% in week 31).

## IDP Proportionate morbidity trends - in displaced population



Among the IDPs, Malaria and ARI accounted for 32.8% and 21.7% of the consultations in week 32. The other significant causes of morbidity in the IDPs includes AWD, Skin diseases, and Injuries.

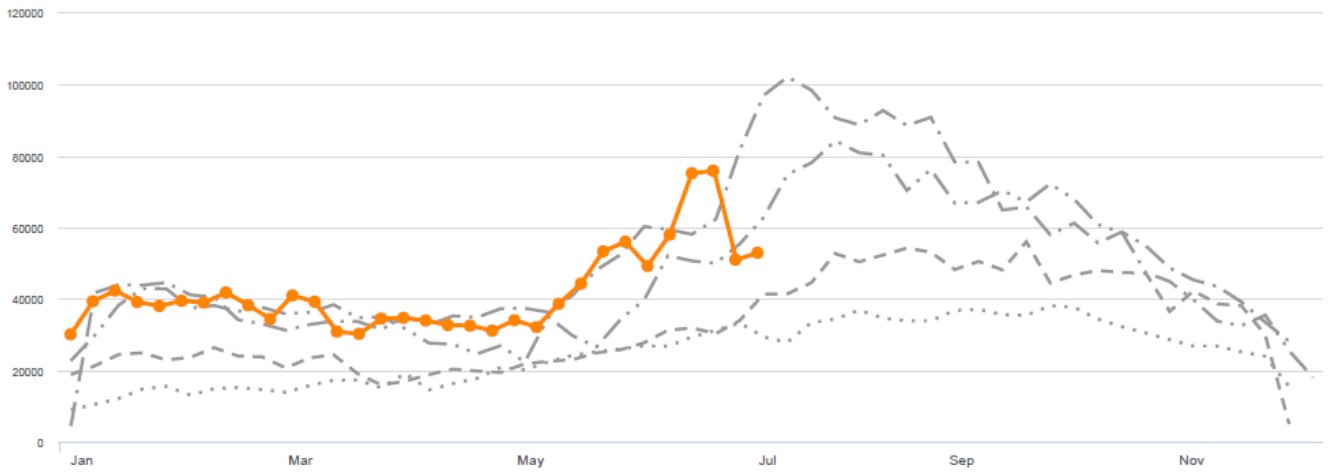
## IDSR Proportionate morbidity trends - in displaced population



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)

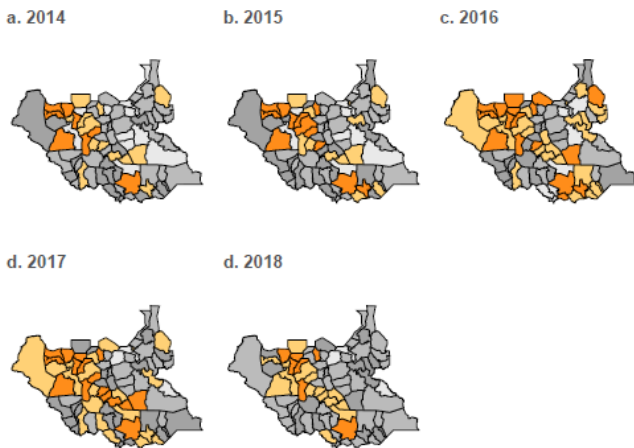


<p><b>Graph legend</b></p> <ul style="list-style-type: none"> <li>— 2018</li> <li>- - - 2017</li> <li>- · - 2016</li> <li>- - - 2015</li> <li>····· 2014</li> </ul>	<p><b>Key malaria indicators (2018)</b></p> <p><b>1,345,475</b> <b>173</b></p> <p>Cases Deaths</p>	<p><b>91</b></p> <p>Alerts</p>	<p><b>Figure 4b   % morbidity</b></p>	<p><b>Figure 4c   Age breakdown</b></p>
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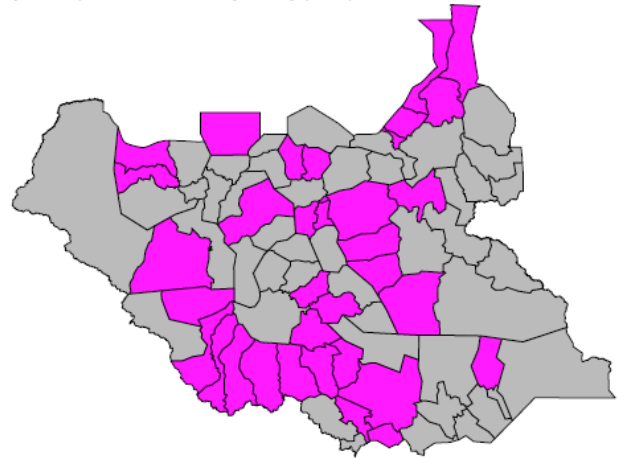
Malaria is the top course of Morbidity in the country, a total of 1,345,475 cases with 173 deaths registered since week 1 of 2018. malaria trend for week 32 of 2018 is above 2014, and 2015 as shown in the figure 4a, above.

# Malaria | Maps and Alert Management

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



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

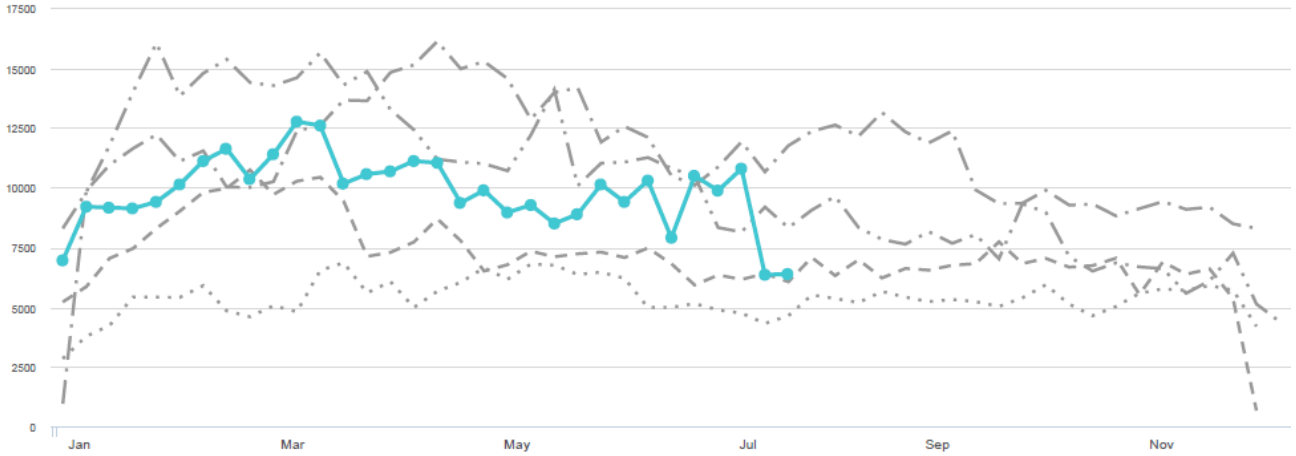


<p><b>Map legend</b></p> <p>Number of malaria cases</p> <p>Number of malaria alerts</p> <p><b>Alert threshold</b> Twice the average number of cases over the past 3 weeks. Source: IDSR</p>	<p><b>91</b></p> <p>Alerts</p>	<p><b>60</b></p> <p>Verified</p>	<p><b>Risk Assessment</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: #28a745; color: white;"><b>2</b> Low Risk</td> <td style="background-color: #ffc107; color: white;"><b>0</b> Moderate Risk</td> <td style="background-color: #ff7f0e; color: white;"><b>1</b> High Risk</td> <td style="background-color: #d62728; color: white;"><b>1</b> Very High Risk</td> </tr> </table>	<b>2</b> Low Risk	<b>0</b> Moderate Risk	<b>1</b> High Risk	<b>1</b> Very High Risk
<b>2</b> Low Risk	<b>0</b> Moderate Risk	<b>1</b> High Risk	<b>1</b> Very High Risk				

Since the beginning of the year, a total of 91 malaria alerts have been triggered, 60 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)

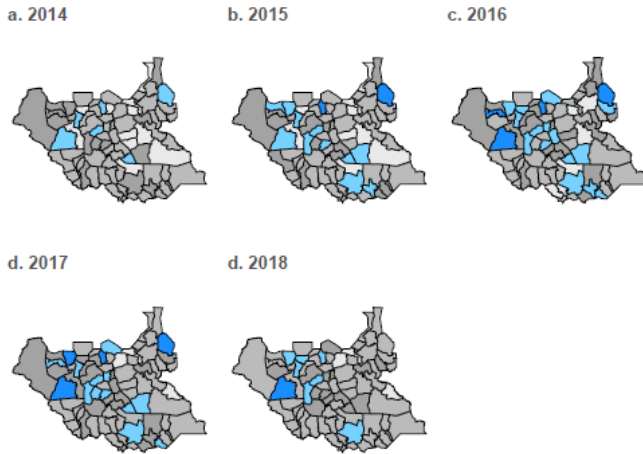


<b>Graph legend</b> — 2018 - - - 2017 - - - 2016 - - - 2015 ..... 2014	<b>Key AWD indicators (2018)</b> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p><b>314,247</b></p> <p>Cases</p> </div> <div style="text-align: center;"> <p><b>21</b></p> <p>Deaths</p> </div> <div style="text-align: center;"> <p><b>87</b></p> <p>Alerts</p> </div> </div>	<b>Figure 5b   % morbidity</b> 	<b>Figure 5c   Age breakdown</b> 
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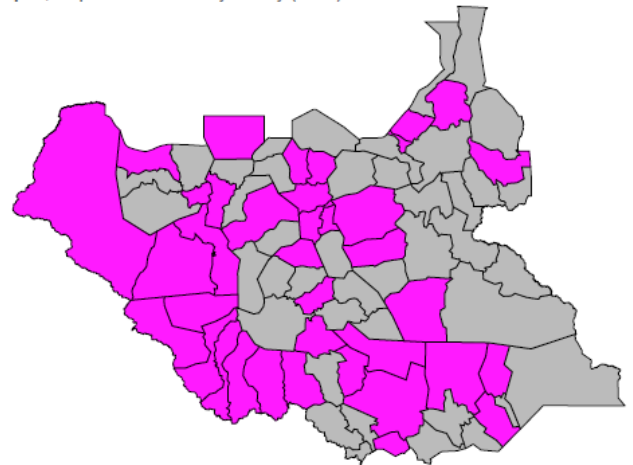
AWD is one of the top causes of morbidity in the country with 314,247 cases reported since week 1 of 2018 including 21 deaths. AWD trend for 2018 is below 2016 and 2017, as shown in figure 5a, above.

# 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)



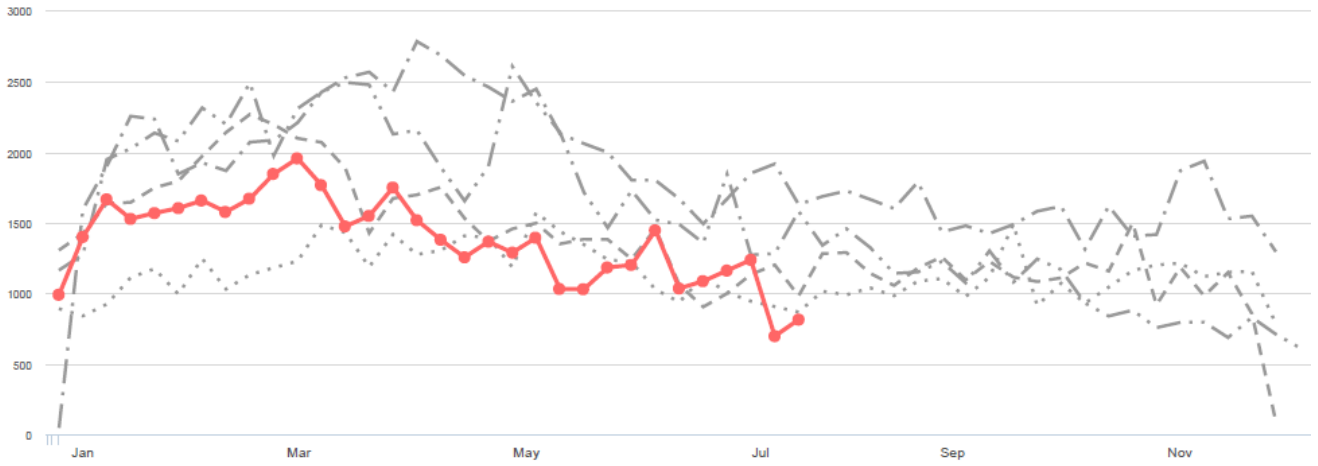
<b>Map legend</b> Number of AWD cases 0 — 5,000 — 10,000 — 20,000 Number of AWD alerts 0 — 10 <b>Alert threshold</b> Twice the average number of cases over the past 3 weeks. Source: IDSR	<b>87</b> Alerts	<b>61</b> Verified	<b>Risk Assessment</b> <div style="display: flex; justify-content: space-around;"> <div style="background-color: green; color: white; padding: 5px; text-align: center;"> <b>0</b> Low Risk         </div> <div style="background-color: yellow; color: black; padding: 5px; text-align: center;"> <b>0</b> Moderate Risk         </div> <div style="background-color: orange; color: white; padding: 5px; text-align: center;"> <b>0</b> High Risk         </div> <div style="background-color: red; color: white; padding: 5px; text-align: center;"> <b>0</b> Very High Risk         </div> </div>
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The number of AWD alerts triggered since week 1 of 2018 is 87, out of which 61 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)

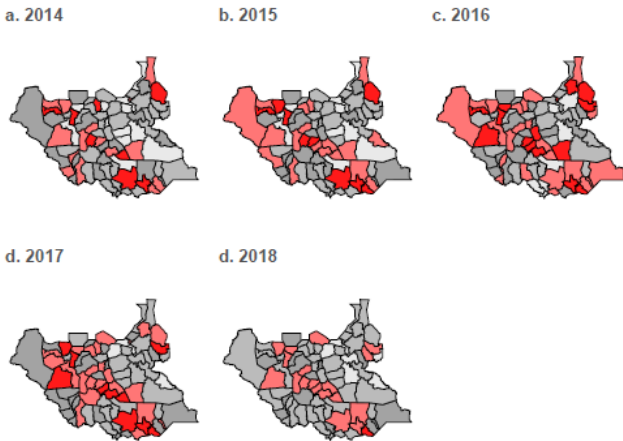


<b>Graph legend</b> — 2018 - - - 2017 - - - 2016 - - - 2015 - - - 2014	<b>Key bloody diarrhoea indicators (2018)</b> <b>44,176</b> Cases <b>23</b> Deaths <b>117</b> Alerts	<b>Figure 6b   % morbidity</b> 	<b>Figure 6c   Age breakdown</b> 
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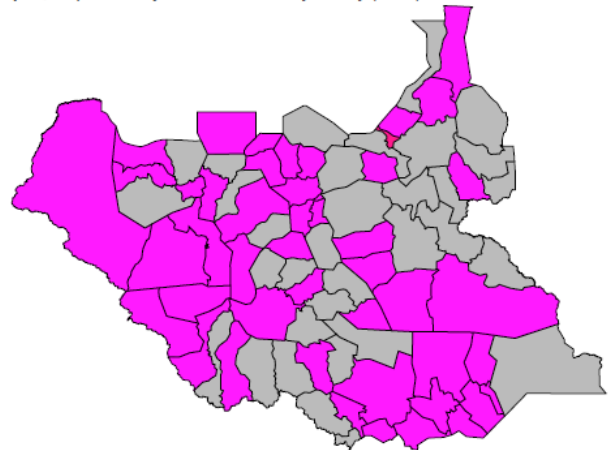
Since week 1 of 2018, a total of 44, 176 cases of ABD have been reported country wide including 23 death. ABD trend for 2018 is below 2014, 2015, 2016, and 2017 respectively. Refer to figure 6a, above.

# 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)



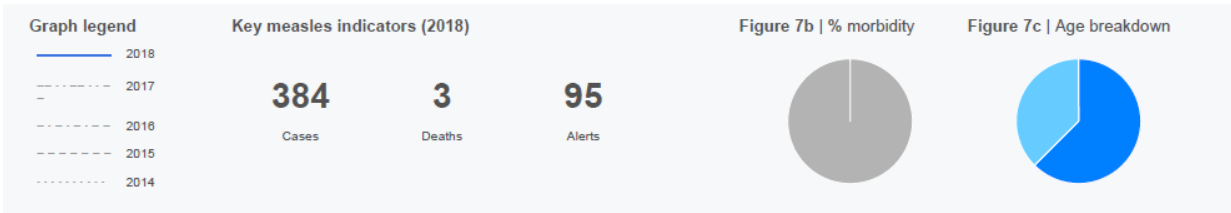
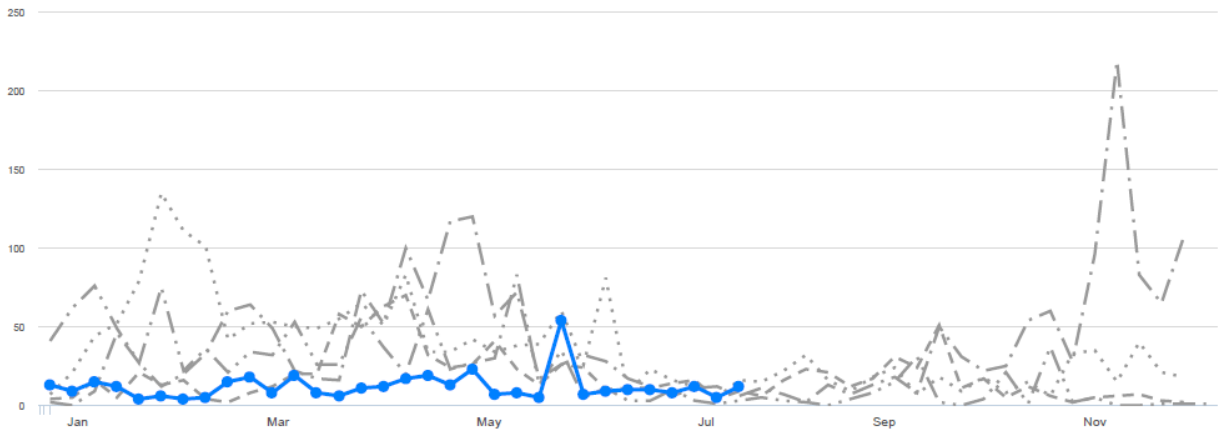
<b>Map legend</b> Number of bloody diarrhoea cases 0 500 1,000 2,000 Number of alerts 0 1 10 <b>Alert threshold</b> Twice the average number of cases over the past 3 weeks. Source: IDSR	<b>117</b> Alerts <b>76</b> Verified	<b>Risk Assessment</b> <table border="1"> <tr> <td style="background-color: green; color: white; text-align: center;"><b>1</b> Low Risk</td> <td style="background-color: yellow; color: black; text-align: center;"><b>0</b> Moderate Risk</td> <td style="background-color: orange; color: black; text-align: center;"><b>0</b> High Risk</td> <td style="background-color: red; color: white; text-align: center;"><b>0</b> Very High Risk</td> </tr> </table>	<b>1</b> Low Risk	<b>0</b> Moderate Risk	<b>0</b> High Risk	<b>0</b> Very High Risk
<b>1</b> Low Risk	<b>0</b> Moderate Risk	<b>0</b> High Risk	<b>0</b> Very High Risk			

Total of 117 alerts were generated since week 1 of 2018, of which 76 were verified by the county surveillance team. Maps indicating areas triggering alerts since 2014 to 2018 are shown above.



# Measles | Trends over time

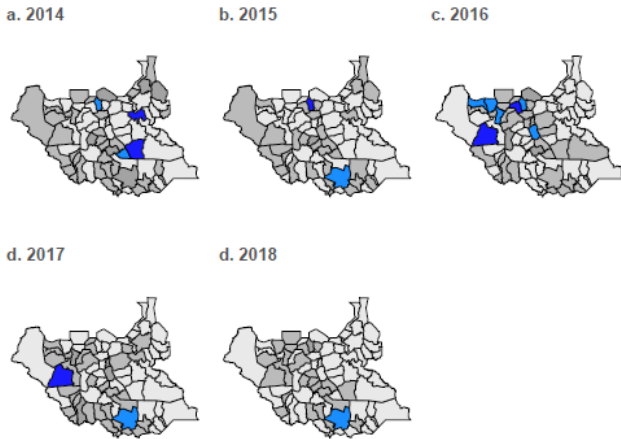
Figure 7a | Trend in number of cases over time (South Sudan)



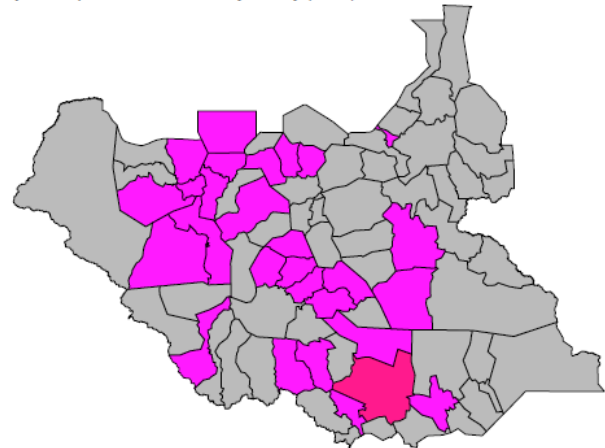
Since the beginning of 2018, at least 384 suspect measles cases including 3 death (CFR 0.82%) have been reported. Of these, 282 suspect cases have undergone measles case-based laboratory-backed investigation with 235 samples collected out of which 26 measles IgM positive cases; 63 clinically confirmed cases; and 34 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)



Since week 1 of 2018, 95 alerts of measles were triggered and 75 of those have been verified at county level. Maps of areas raising alerts from 2014 to 2018 are shown above.

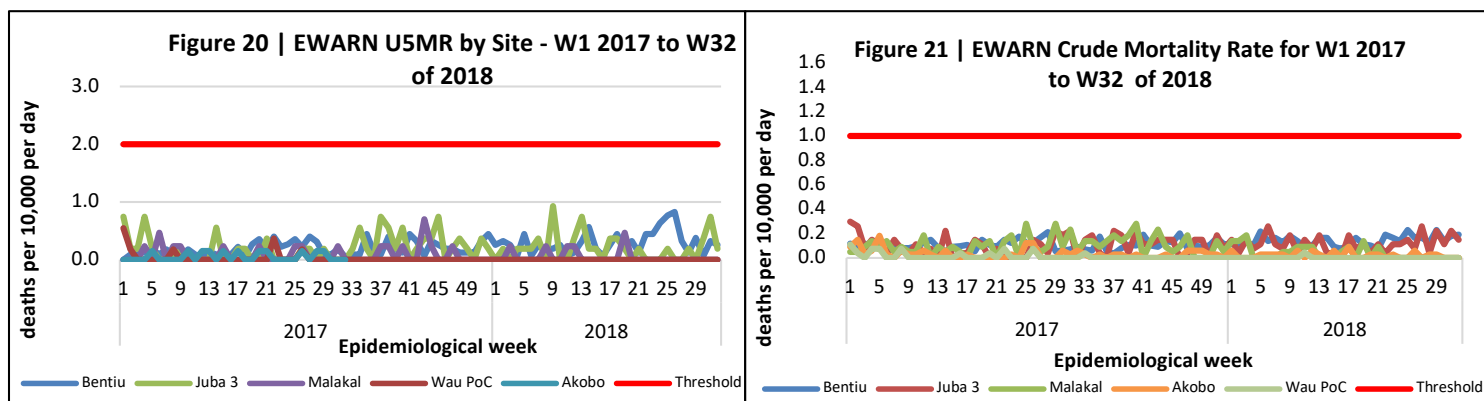
**Table 6 | Proportional mortality by cause of death in IDPs W32 2018**

Cause of Death by IDP site	Bentiu		Juba 3		Total deaths
	<5yrs	≥5yrs	<5yrs	≥5yrs	
Hepatitis B		1			1
malaria		2			2
perinatal death	1				1
SAM	1		1		2
TB				2	2
Unkown	1	5		1	7
LRTI	1				1
Gun Shot Wound		1			1
Anaemia		1			1
Cardiopulmonary Arrest + Shock.		1			1
<b>Total deaths</b>	<b>4</b>	<b>11</b>	<b>1</b>	<b>3</b>	<b>19</b>

Among the IDPs, mortality data was received from Bentiu PoC & UN House PoC in week 32. (Table 6). **A total of 19** deaths were reported during the week. Bentiu PoC report 14 deaths (75%) in the week. During the week, 5 (26%) deaths were recorded among children <5 years in (Table 6).

The causes of death during week 32 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 32 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 32 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 W32, 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	32	3	25	10	1	14	16	13	1	19	7	205	361
Juba 3	1	1			5		10			5		3		1		6	7	60	99
Malakal		1			3	1			1	1							2	17	26
Akobo				1		2	4			2		1	2	1	1			9	23
Wau PoC							1											0	1
<b>Grand Total</b>	<b>8</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>9</b>	<b>5</b>	<b>47</b>	<b>3</b>	<b>26</b>	<b>18</b>	<b>1</b>	<b>18</b>	<b>18</b>	<b>15</b>	<b>2</b>	<b>25</b>	<b>16</b>	<b>291</b>	<b>510</b>
<b>Proportionate mortality [%]</b>	2%	1%	0%	1%	2%	1%	9%	1%	5%	4%	0%	4%	4%	3%	0%	5%	3%	57%	100%

A total of 510 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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## 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>

