



Weekly Epidemiological Bulletin

Republic of South Sudan

Reporting period: Epidemiological Week 1

01 January 2024 to 07 January 2024

Background

This weekly bulletin presents the epidemiological status of priority diseases, conditions under surveillance, and public health events in South Sudan. The data presented in the bulletin come from various actors involved in preparedness and response to public health events in the country.

Highlights for the current reporting period

- In week 01, 2024, the IDSR reporting timeliness and completeness were at 81% and 91%, respectively, and IDSR performance at the EWARN mobile sites was at 64% and 81 for the EWARN sites
- Completeness of reporting for IDSR at private Health facilities in Juba and Wau was only at 81%
- A total of 137 alerts were triggered in week 01, 2024, and the majority were for bloody Diarrhea, Measles, and Acute Watery Diarrhea
- On 24 December 2023, the Minister of Health declared an outbreak of Yellow Fever in Yambio County upon confirmation of one case by the National Public Health Laboratory
- Ongoing preparedness measures and readiness are underway in Renk County, Upper Nile State, in response to a Ministry of Health statement on imported cholera cases in Renk in November 2023.
- As of Epi week 50, 2023, 7 862 suspected measles cases were reported, with 586 (7.6%) lab-confirmed, 173 deaths, and a case fatality rate of 2.2%.

Surveillance system performance

Timeliness and Completeness of IDSR in week 01

The epidemic alert and response system in South Sudan currently relies mainly on immediate alert notification and weekly case data reporting through the Integrated Disease Surveillance and Response (IDSR) system. This system is complemented by a weekly Early Warning Alert and Response System (EWARS)

Completeness (proportion of reports received) and timeliness (proportion of reports received by the Wednesday following the end of the reporting period) of IDSR and EWARS are shown in Table 1.

Table 1: Completeness of epidemic data reporting by county (percentage of functional facilities only, current reporting period).

Table: 1 showing performance of IDSR Timeliness and completeness for partner

Admin area	# implementing partners	# of reporting health facilities	Timeliness in Week 01	Completeness in Week 01
GPAA	2	15	100%	100%
Lakes	4	112	93%	100%
Jonglei	16	114	91%	100%
RAA	1	16	88%	99%
Warrap	9	111	87%	95%
WES	6	183	86%	95%
NBGZ	5	89	83%	93%
CES	12	124	81%	91%
WBGZ	6	83	78%	91%
EES	6	107	77%	88%
Unity	12	88	67%	86%
Upper Nile	14	136	63%	80%
AAA	2	17	18%	18%
National	95	1195	81%	91%

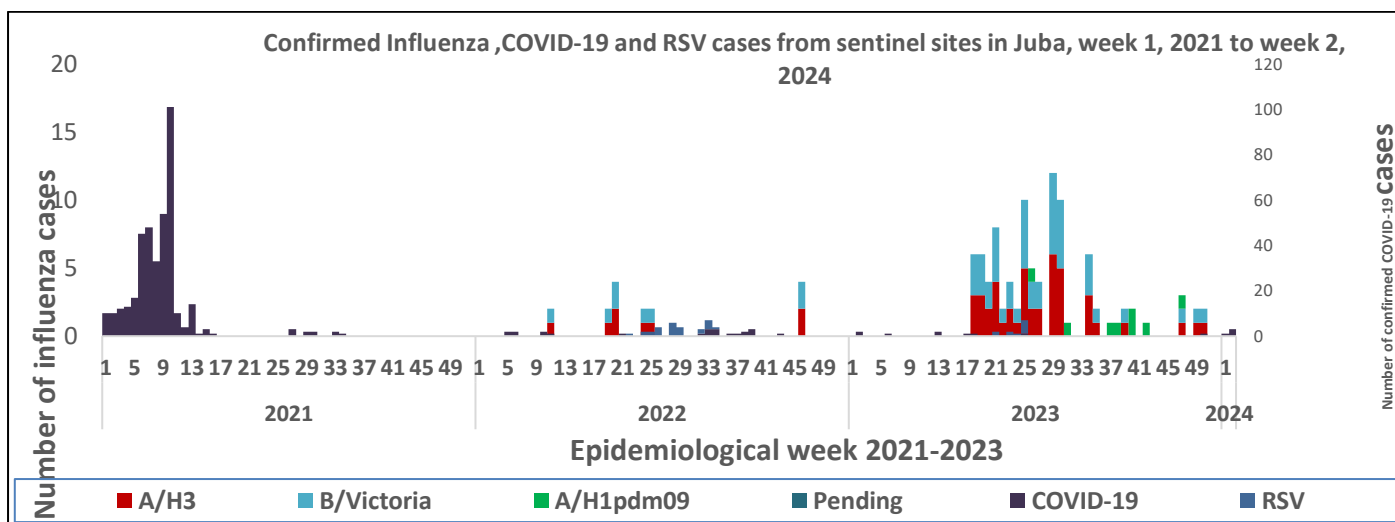
† As of end of reporting period. Completeness and timeliness indicators are calculated using functional facilities as the denominator.

During the reporting period, facilities supported by Tri-SS did not submit an EWARS report, while 06 partners achieved 100% EWARS completeness and timeliness:As shown in Table 2 below during the reporting period,

Table: 2 showing performance of IDSR partners and private health facilities week 01, 2024 and week 52, 2023

Partners Mobile sites	# Reporting Mobile Sites	Timeliness in week 01	Completeness in week 01	Payams	# of reporting private health facilities	% Completeness in week 01	% Completeness in week 52
IMC	4	100%	100%	Kator	3	100%	100%
SSHCO	1	100%	100%	Marial Baai	1	100%	100%
SMC	1	100%	100%	Juba	10	100%	100%
SCI	2	100%	100%	Northern Bari	1	100%	100%
HFO	3	100%	100%	Rajaf	4	100%	75%
WVI	2	75%	100%	Muniki	12	100%	42%
SP	4	33%	75%	Wau North	13	92%	85%
TRI-SS	2	0%	0%	Wau South	20	85%	90%
TOTAL	18	74%	84%	TOTAL	64	94%	81%

Indicator-Based Surveillance (IBS) Influenza Surveillance



In Juba, 4 surveillance sites (Juba Teaching Hospital, Al Sabah Children’s Hospital, Rumbek State Hospital, and Juba Military Hospital) are collecting data and samples from people with ILI/SARI symptoms.

As of the end of week 52 in 2023, 861 cases were tested, of which 8 were positive for COVID-19, 40 for Influenza A (H3), 21 for Influenza B (Victoria), 8 for A/H1pdm09, and 13 for RSV.

From week 2 in 2024, 39 cases were collected, with four positive for COVID-19, 1 for Influenza B (Victoria), and none for Influenza A (H3), A/H1pdm09, or RSV.

Epidemic alerts

Error! Reference source not found. lists alerts that were either pending resolution as of the last bulletin or were newly detected during this reporting period. Since the start of the year, 137 alerts have been detected: 49/137 (36%) have been verified.

Table3: Summary of new and pending epidemic alerts

Admin area	Acute jaundice syndrome		Acute Respiratory Infections		Acute Watery Diarrhoea		Bloody Diarrhoea		Cholera		Malaria		Measles		Guinea Worm		Total verified	
	Number Reported	Number Verified	Number Reported	Number Verified	Number Reported	Number Verified	Number Reported	Number Verified	Number Reported	Number Verified	Number Reported	Number Verified	Number Reported	Number Verified	Number Reported	Number Verified	Number Reported	Number Verified
EES	0	0	0	0	2	2	3	3	0	0	0	0	3	3	0	0	8	8
GPAA	0	0	1	1	0	0	2	1	0	0	0	0	0	0	0	0	3	2
Jonglei	1	0	1	0	2	0	3	0	1	0	0	0	5	0	5	0	18	0
Lakes	0	0	4	4	2	2	0	0	0	0	3	3	1	1	8	8	18	18
NBGZ	0	0	3	0	1	1	2	2	0	0	2	0	2	2	0	0	10	5
RAA	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	0	4	2
Unity	2	0	2	0	2	0	5	0	2	0	2	0	2	0	0	0	17	0
Upper Nile	1	0	2	0	3	0	3	0	1	0	1	0	8	0	0	0	19	0
Warrap	0	0	0	0	0	0	0	0	0	0	0	0	4	3	0	0	4	3
WBGZ	2	2	2	2	2	1	3	2	1	0	6	2	1	1	1	1	18	11
WES	0	0	3	0	6	0	2	0	0	0	4	0	3	0	0	0	18	0
Grand Total	6	2	18	7	20	6	24	8	5	0	19	6	30	11	14	9	137	49

Situation as of the reporting period

Confirmed epidemics

Table 4 lists ongoing and newly confirmed epidemics since the last reporting period. Cases are as reported to the epidemic alert and response system. Attack rates are based on the estimated population within each location.

Table 4: Summary of new and ongoing confirmed epidemics

Aetiologic agent	Location (hub, county)	Date first reported	New cases since last bulletin	Cumulative cases to date (attack rate %)	Response activities				
					Surveillance/Lab	Case management	Vaccination	Health promotion	IPC/WASH
<i>New epidemics</i>									
Yellow Fever	Yambio, Nzara, Ezo, Tambura	21 Dec 2023	3	25	1 Laboratory confirmed	Ongoing	Planned	Ongoing	Ongoing
<i>Ongoing epidemics</i>									
Measles	69 counties	2022	19	7964	609	ongoing	ongoing	ongoing	ongoing
Hepatitis E									
cVDPV	Yambio and Juba	19/Dec 2023	2	2	2	ongoing	ongoing	ongoing	ongoing

Other events

Meningitis: There has been a suspected meningitis outbreak in two counties, Akobo and Nyirol. In Nyirol County, five cases have been recorded, including two deaths. Meanwhile, Akobo County (Walgak Payam) has reported a total of eight cases as of January 22, 2024, with three deaths reported among these cases. To investigate the outbreak, two teams, consisting of members from WHO and NMOH, will travel to both locations this week. To enhance surveillance, WHO has prepositioned Meningitis investigation kits in the region with suspected meningitis.

Flooding: During the last four consecutive years, South Sudan has experienced consecutive years of devastating floods, affecting over 1 million people. The most impacted states include Northern Bahr el Ghazal, Warrap, Unity, Western Equatoria, Jonglei, and Upper Nile. These recurring floods have worsened an already dire situation, leaving people without food and viable land for cultivation. The same states affected by severe flooding are now receiving refugees and returnees from Sudan, further straining the capacity to respond. With the onset of the rainy season, the re-prioritization of limited resources to address people's needs because the Sudan crisis has created gaps in flood preparedness efforts, posing challenges in effectively responding to ongoing emergencies and preparedness measures. Insufficient funding and access limitations have constrained the humanitarian response in 2023

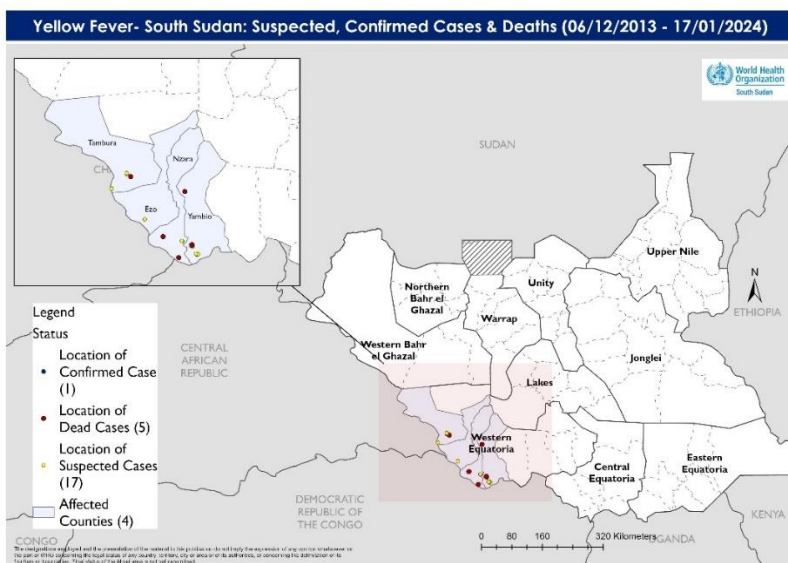
Sudan crises: South Sudan has received 512,002 individuals at several (21) points of entry along the border with Sudan since April 2023. More than 81% (414,722) of these arrivals are South Sudan returnees, 433,609 are arriving through Joda in Renk County, and the majority prefer Upper Nile as their destination state. Host communities and healthcare systems are struggling to cope with the increased demand for health and other services, morbidity, and mortality among the returnees and refugees. The interconnectedness between Sudan's and South Sudan's economies has resulted in the conflict significantly affecting market prices. According to the Cash Working Group, the average cost of a Multi-Sectoral Survival Minimum Expenditure Basket has risen by 28 percent since April 2023, indicating the extent of the impact.

Food Insecurity: An estimated 7.8 million people are estimated to be in Crisis (IPC Phase 3) or worse acute food insecurity, with 43,000 people in Catastrophe (IPC Phase 5) in Akobo, Canal/Pigi and Fangak counties of Jonglei State; and Leer and Mayendit counties of Unity State between April and July. In March, several

hunger-related deaths were reported in Kapoeta East, which triggered an IRNA and despite varying causes of death, 59% of assessed communities reportedly did not have access to adequate food

Figure 1 shows the locations of current alerts and ongoing epidemics

Figure 1: Location of current alerts and ongoing epidemics (current reporting period)



Weekly Update on Event-Based Surveillance (Week 01)

EBS is the organized collection, monitoring, assessment, and interpretation of mainly unstructured ad hoc information regarding potentially risky events to public health. This information could be rumours and other ad hoc reports transmitted through formal and informal channels including media, health workers, community structures, NGOs, etc.

Weekly Update on Indicator-Based Surveillance (Week 01)

Indicator-based surveillance is implemented in South Sudan through the EWARS platform according to the IDSR 3rd guidelines where approximately 59 priority diseases and public health events are monitored and reported from health facilities across the country on regular basis.

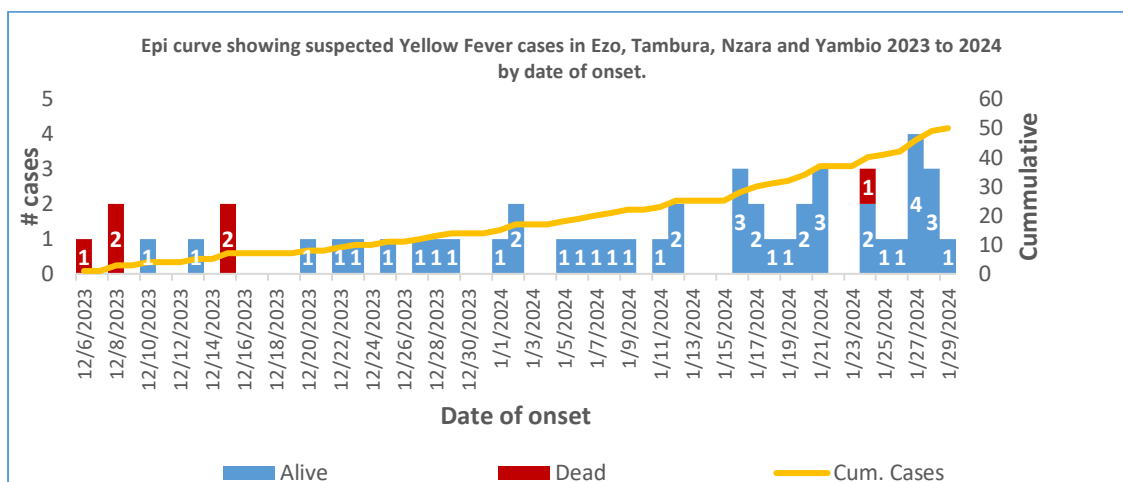
Yellow Fever outbreak in Yambio December 2023 to January

On December 14, 2023, an 18-year-old male from Gangura Centre Village in Gangura Payam, Yambio County, developed an illness characterized by generalized body weakness, headache, epigastric discomfort, fever, and vomiting. Initially, the patient was diagnosed with typhoid and received treatment on the same day. However, a sample was collected on December 21, 2023, and tested positive for yellow fever virus on December 24 at the National Public Health Laboratory using RT-PCR. Consequently, the Minister declared a yellow fever outbreak in Yambio County.

As of January 21, 2024, there have been thirty (30) Yellow Fever cases reported in five counties of Western Equatoria state: Yambio County (15), Nzara County (05), Tambura County (07), Ibba (02), and Ezo (01). Of the total 30 cases, 29 are suspected, and one is confirmed. Unfortunately, there have been five deaths, resulting in a Case Fatality rate of 17%.

Among the total cases, 57% are males, and 43% are females. The majority (83%) of the reported cases are 15 years and above, while 17% are among 1 to 4-year-olds.

Figure 2: Epi curve showing suspected Yellow Fever cases 2 by date of onset



Response update

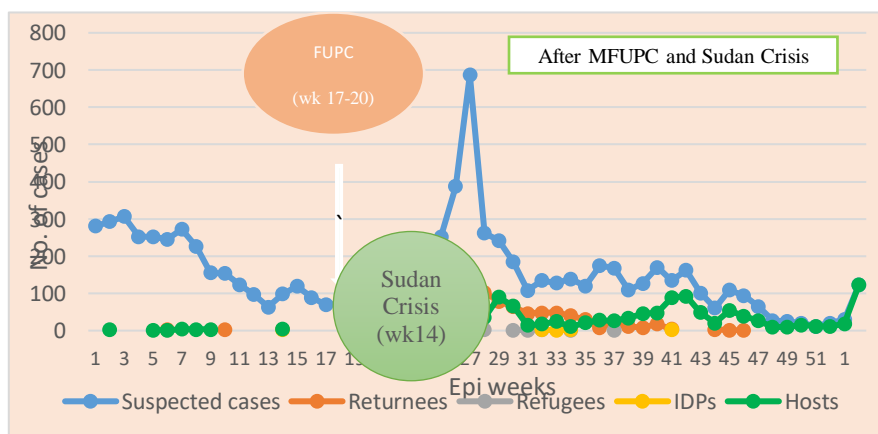
The Ministry of Health, in collaboration with the World Health Organization (WHO) and other partners, has prepositioned essential medical supplies in the affected areas to strengthen the management of Yellow Fever cases. Frontline healthcare workers are given refresher training on case definition, diagnosis, and treatment of Yellow Fever. A vaccine request has been submitted to the International Coordinating Group (ICG), and 410,596 doses have been approved for Yambio, Nzara, Tambura, Ezo, and Ibba Counties. A vaccination campaign is planned for February 2024. An entomological assessment was concluded, and the preliminary findings reveal the presence of Yellow Fever vector (mosquito) larvae in many residential areas in the affected counties.

Measles Update

As of Epidemiological (Epi) week 2 in 2024, 154 suspected cases of measles were reported, out of which 19 cases (12.3%) were lab-confirmed. There were no deaths reported, and the case fatality rate was 0.0. **cumulatively there are 8, 113 cases (7,989) in 2023 (124) in week 0 2 of 2024**

During the week under review, two (2) ongoing outbreaks in Tambura and Yambio involved two (2) payams. Although Nagero, Nzara, Rumbek North, Torit, Aweil South, Aweil West, Aweil East, Yei, Maridi, and Wau continue to report suspected/confirmed cases, they have not reached the outbreak threshold in the last four weeks. Therefore, they need to collect more samples for testing following the revised Standard Operating Procedures (SOP).

Figure 2: Trend of suspected measles cases against their residential status by (epi week1 2023 – week2 2024)



FINAL CLASSIFICATION	2024	
	NO. OF CASES	%
Lab confirmed	19	12.3
Epi-linked	40	26.0
Clinically Compatible	88	57.1
Total	147	95.5
Discarded (-ve)	7	4.5
Grand Total	154	100.0

Table 5: Distribution of cases by final classification 2024

Response activities

- **In Phase I;** over 65,000 children under 15 years were vaccinated in five counties (Renk, Aweil East, Aweil North, Aweil West, and Rubkona)
- **Phase II: 17 counties had implemented the reactive campaign to vaccinate over 910,728 (92%) children under 15 years,** of which **150,202(16%)** are returnees and refugees. Seven counties (Ayod, Leer, Fangak, Abyei, Gogrial West, Bentiu POC, and Malakal) were supported by Partners (MEDAIR, IMA, HFO, IHO, MSF, and Save the Children). **Kapoeta East:** the campaign is completed late last year, and final data is yet to be submitted

Next step

"Please support WES and Warrap states for implementing a vaccination response in Mundri East, Maridi, and Tonj North counties. Additionally, plan for a response in Tonj South and East. Discuss the ongoing feasibility and plan for a measles vaccination response in Yambio and integrate it with the YF ongoing response. Please continue supporting the POE and Temporary vaccination sites and monitoring the measles situation. We must maintain the measles line-listing, sample collection and testing support, and detailed outbreak investigation and response plan."

Sudan Crises response updates

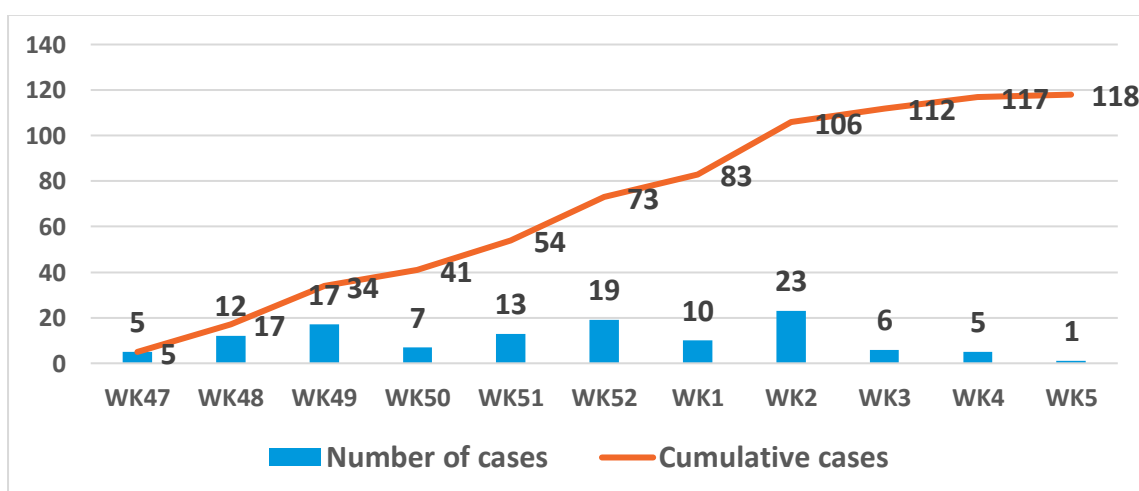
As of 7 February, 1,228 individuals have entered South Sudan. The cumulative number of arrivals since 16 April 2023 is 548,195. Of this number, 437,762 individuals (79.8%) are returnees, while 110,433 individuals (20.2%) are refugees.

Currently, 22 points of entry (PoEs) are being monitored, accounting for 83% of the total reported influx figures.

Cholera Preparedness and Readiness updates in Renk

A health screening desk was established at Wanthou/Joda, and as of week 05, 95,440 individuals were screened. 7,847 consultations were conducted, with ARI being the leading morbidity cause at 26%, followed by Malaria at 17%, and AWD at 6%. A total of 118 AWD alerts have been issued since December, with 77 samples collected on four tested positive for cholera RDT, all negative by culture as seen in the graph below.

Alerts of Acute Watery Diarrhea Surveillance in Renk County from week 47 of 2023 to week 5 of 2024



Acute Watery Diarrhea Surveillance Total alert 118

1. Number of samples collected 76
2. Number of samples tested positive by RDT 4, culture negative
3. Number of samples tested negative by RDT 41
4. Number of samples discarded 31

I hope this helps!

Data sources

- DHIS2
- EWARS
- Measles dashboard and sitrep

Acknowledgments

Thanks to the State Surveillance Officers, County Surveillance Officers and Health Facility in-charges for sharing the weekly IDSR data.

Thanks to all following partners for supporting IDSR weekly reporting and sharing the line lists,

Thanks to the following donors

To access the IDSR bulletins for 2023 use the link below:

<https://www.afro.who.int/publications/south-sudan-weekly-disease-surveillance-bulletin-2023>

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 the surveillance officers [at state, county, and health facility levels], health cluster and health pooled fund (HPF) partners who have reported the data used in this bulletin. We would also like to thank ECHO, USAID and World Bank 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>

