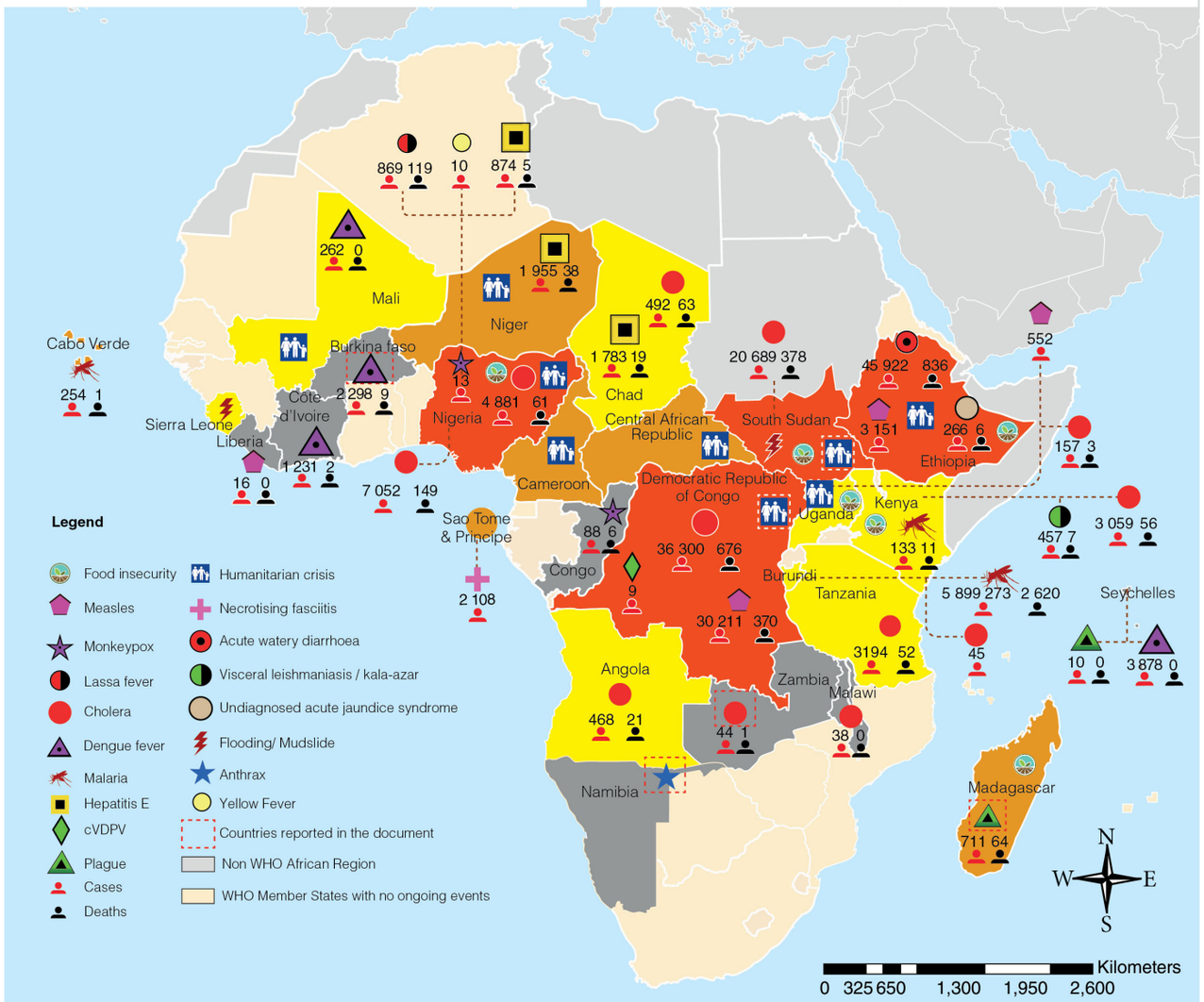
WEEKLY BULLETIN ON OUTBREAKS AND OTHER EMERGENCIES

Week 41: 7 - 13 October 2017
Data as reported by 17:00; 13 October 2017

World Health Organization
REGIONAL OFFICE FOR Africa
WHO Health Emergencies Programme

3	41	32	12
New events	Ongoing events	Outbreaks	Humanitarian crises



2 Grade 3 events	6 Grade 2 events	9 Grade 1 events	24 Ungraded events
2 Protracted 3 events	0 Protracted 2 events	1 Protracted 1 event	

Health Emergency Information and Risk Assessment

Overview

Contents

- This weekly bulletin focuses on selected acute public health emergencies occurring in the WHO African Region. The WHO Health Emergencies Programme is currently monitoring 44 events in the region. This week's edition covers key new and ongoing events, including:

  - Wildlife anthrax in Namibia
  - Cholera in Zambia
  - Plague in Madagascar
  - Dengue fever in Burkina Faso
  - Humanitarian crisis in the Democratic Republic of the Congo
  - Humanitarian crisis in South Sudan.

- For each of these events, a brief description followed by public health measures implemented and an interpretation of the situation is provided.

- A table is provided at the end of the bulletin with information on all new and ongoing public health events currently being monitored in the region, as well as events that have recently been closed.

- **Major challenges include:**

  - The outbreak of anthrax in wildlife occurring in Namibia could have serious public health consequences in the country and the subregion, and therefore needs to be handled diligently using the One Health approach.

  - The ongoing outbreak of bubonic and pneumonic plague in Madagascar remains a challenge as it continues to attract global public health concerns.

  - The humanitarian crisis in the Democratic Republic of the Congo, including the cholera outbreak has continued to deteriorate and therefore demands particular global attention.

New events

Wildlife anthrax | **Namibia** | 0 **Cases** | 0 **Deaths** | 0% **CFR**

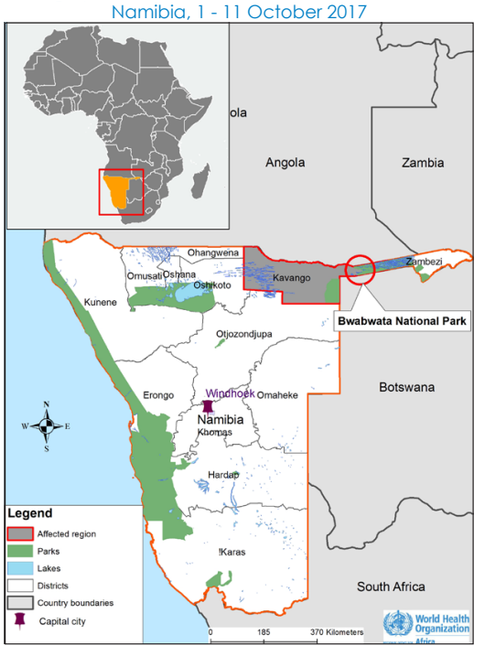
Event description

An animal health event of significance to public health is occurring in Namibia. On 1 October 2017, the wildlife authorities reported deaths of several hippopotamus (hippos) in Bwabwata National Park, Kavango East Region (which borders Botswana and Angola). Two successive aerial surveys conducted on 4 and 7 October 2017 counted 53 and 109 dead hippos, respectively. In addition, 20 buffalos were reported dead in the area. On 11 October 2017, samples collected from the hippo's carcasses (by veterinary officers) showed *Bacillus anthracis* on blood smear microscopy. Additional samples were collected from hippos, buffalo and crocodiles and shipped to the Central Veterinary Laboratory for testing.

To date, no suspected human cases have been reported. However, there were unconfirmed reports that community members in Kamutjonga village consumed meat from two hippos' carcasses. This event in wildlife has triggered preparedness and response interventions by the public health authorities, including follow up and investigation of rumours, in order to prevent a possible outbreak of anthrax in humans.

On 11 October 2017, dead hippos were reported in the Kavango River in Botswana, adjoining Bwabwata National Park. The river flows through Namibia before entering the Okavango Delta.

Geographical distribution of Wildlife anthrax case in Namibia, 1 - 11 October 2017



Public health actions

- The Ministries of Environment and Tourism, Agriculture, and Health and Social Services are responding to the event, in collaboration with WHO.
- A rapid response team from the Ministry of Health and Social Services (MoHSS) and the Namibian Field Epidemiology Training Programme (FETP) have been deployed to investigate potential human exposures.
- Two FETP residents and Environmental Health Officers are providing health education in affected districts to dissuade residents from touching and eating hippos' carcasses.
- The surrounding regions (Rundu and Katima Mullilo) have been notified to enhance readiness by heightening surveillance and placing hospitals on alert for patients presenting with signs and symptoms consistent with anthrax infection.
- Cross-border alerts with Angola and Botswana has been initiated to enhance preparedness and readiness in the subregion.
- WHO is supporting the response through the provision of personal protective equipment (PPE) and other supplies.

Situation interpretation

Although no human infections have been reported thus far, mass animal deaths due to anthrax present a formidable public health risk. Earlier this year, severe human infections were associated with similar events in Zambia (87 suspected cases, 3 deaths) and Zimbabwe (11 suspected cases, 1 death). Immediate risks posed by such animal deaths include handling and consumption of contaminated meat by local communities (causing anthrax infections), as well as potential exposure of local authorities and others while disposing of animal carcasses. As anthrax spores are abundantly present on and inside carcasses, workers are at risk of both cutaneous and inhalational anthrax. Proper use of PPE is essential, as is the safe disposal of animal carcasses to prevent environmental contamination with anthrax spores, incineration being the preferred method.

A collective One Health approach, with cross-border collaboration between Namibia, Botswana and Angola is urgently needed to control the event and prevent any human infections.

Go to overview

Go to map of the outbreaks

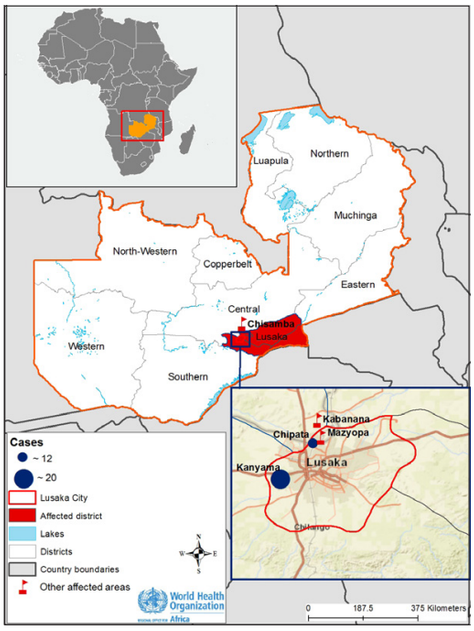
Event description

On 4 October 2017, the Zambian Ministry of Health reported an outbreak of cholera in the suburbs of Lusaka, the capital city. The outbreak that initially started in Chipata Sub-District (on 4 October 2017) eventually spread to Kanyama Sub-district by 9 October 2017, and also to other areas. As of 12 October 2017, 44 suspected cholera cases and 1 death (case fatality rate 2.3%) have been reported. The majority of the cases occurred in the two sub-districts of Kanyama (20 cases) and Chipata (12 cases). The other affected areas reported sporadic cases. All the affected communities are densely populated peri-urban areas. Thirty-three cases have fully recovered and have been discharged from cholera treatment centres (CTCs).

Two stool samples cultured *Vibrio cholerae* O1 Ogawa, while eight samples tested positive on cholera rapid diagnostic tests (RDTs). Sensitivity testing showed susceptibility to co-trimoxazole and resistance to ciprofloxacin.

Contamination of water supplies is strongly suspected as the cause of the outbreak. Of five water samples collected from five affected zones in Chipata Sub-District, two grew *V. cholerae* (type not specified) and four grew faecal coliforms. A case-control study is ongoing to corroborate these findings with epidemiological evidence.

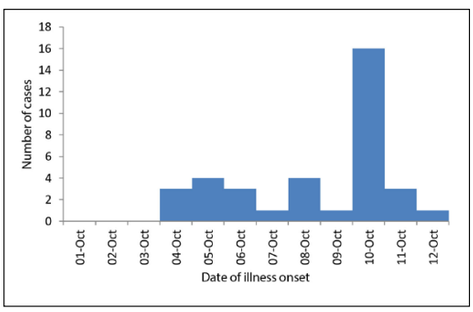
Geographical distribution of cholera cases in Zambia, as of 12 October 2017



Public health actions

- The Ministry of Health, the Disaster Management and Mitigation Unit (DMMU) under the Office of the Vice President and WHO are collaborating to control the outbreak. An Incident Management System (IMS) has been established in both affected sub-districts to coordinate the response.
- Water, sanitation and hygiene (WASH) interventions have been initiated to address the contamination of water sources and improve supplies in affected areas. This includes provision of household chlorine (448 bottles to date), disinfection of pit latrines (135 pits to date), with plans to erect water tanks, install water purifiers and intensify water quality monitoring.
- Cholera treatment centres (CTCs) have been established in both sub-districts to manage cases. Standard operating procedures and guidelines have been updated and shared with health workers.
- Contact follow-up activities are ongoing, with 69 out of 77 contacts traced and screened for signs of illness.
- Community sensitization and social mobilisation activities have begun, with key prevention messages disseminated to over 7 000 citizens. Teams (supported by WHO, Lusaka Water and Sewerage and the Lusaka City Council) have been deployed to key communal places such as markets to inspect public and food premises, and schools; raise public awareness; distribute household chlorine, and disinfect communal latrines. WHO and USAID Discover Health are providing information, education and communication (IEC) materials.

Number of cholera cases by date of illness onset, Zambia, 1-12 October, 2017



Situation interpretation

The current cholera outbreak in Lusaka is occurring in densely populated peri-urban areas, with inadequate water and sanitation services, thus vulnerable to rapid transmission. The last outbreak in Lusaka occurred in 2016 and affected 1 089 people across several areas, including the same two sub-districts (Chipata and Kanyama). An oral cholera vaccination (OCV) campaign was conducted in response to the outbreak in four locations of Lusaka (Kanyama, Bauleni, Cahwama, and George); however, Chipata Sub-District was not covered (except for the Chaisa catchment area). While this campaign may have offered some protection, OCV is not 100% effective and immunity wanes rapidly. Timely implementation of WASH interventions to address contamination of water sources and improving safe water supplies to affected communities are critical to combat the immediate threat and provide longer-term prevention. Health authorities have done well to detect this event early and rapidly scale up response, providing the best chances to contain the outbreak.

Go to overview
Go to map of the outbreaks

Ongoing events

Plague | **Madagascar** | 711 **Cases** | 64 **Deaths** | 9.0% **CFR**

Event description

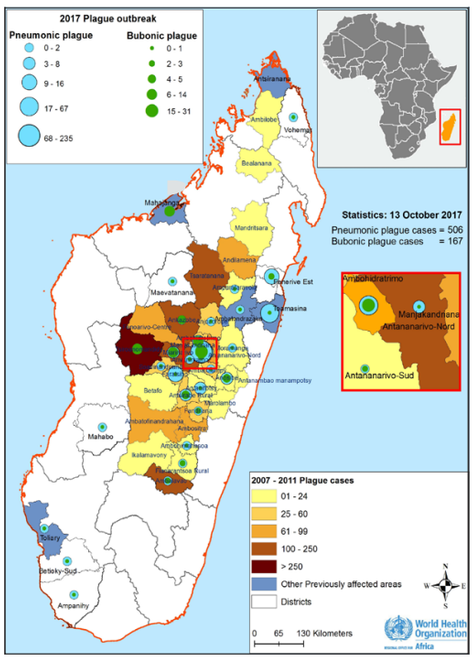
The outbreak of plague in Madagascar continues, with an overall reduction in the case fatality rate. On 13 October 2017, 53 new cases and four deaths (case fatality rate 7.6%) were reported from 12 districts, with 55% of the cases coming from Antananarivo Renivohitra District. Between 1 August and 13 October 2017, a total of 711 cases (suspected, probable and confirmed) including 64 deaths (case fatality rate 9.0%) have been reported from 37 (32.5%) out of 114 districts in the country. Of these, 506 cases (71.2%) were clinically classified as pneumonic plague, 167 (23.5%) were bubonic plague, one case was septicaemic plague, and 36 cases were unspecified. At least 26 healthcare workers have contracted plague since the beginning of the outbreak.

Of the 711 reported cases, 61 (8.6%) were confirmed by either polymerase chain reaction (PCR) or bacteriological culture, 319 (44.9%) were classified as probable after testing positive on rapid diagnostic tests (RDTs) and 331 (46.6%) remain suspected. To date, 11 strains of *Yersinia pestis* have been isolated and were sensitive to antibiotics recommended by the National Program for the Control of Plague.

Eighteen (81.2%) out of 22 regions in the country, including traditionally non-endemic areas, have been affected. Antananarivo Renivohitra District has been the most affected to date.

Plague is known to be endemic on the Plateaux of Madagascar (including Ankazobe District where the current outbreak originated) and a seasonal upsurge (predominantly the bubonic form) usually occurs every year between September and April. Unlike the usual endemic pattern, the plague season began early this year and the current outbreak has affected major urban centres, including Antananarivo (the capital city) and Toamasina (the port city).

Geographical distribution of plague cases in Madagascar, as of 13 October 2017



Public health actions

- The President of Madagascar participated in a press conference organized for the handover of WHO materials to the Government of Madagascar. The American Ambassador, Representatives of USAID and United Nations agencies were in attendance.
- A high level coordination forum to provide strategic and policy directions to the plague outbreak response has been established, chaired by the Prime Minister. Similarly, the Country Humanitarian Team of the United Nations System established a strategic coordination platform for partners, chaired by the Resident Coordinator.
- The health response is coordinated by the Ministry of Public Health, co-led by WHO and supported by agencies and partners directly involved in the health response. The health sector response is organized into four major committees: (i) surveillance, (ii) community response, (iii) case management, and (v) communication; with the logistics committee crosscutting all committees.
- The joint response plan between the Government of Madagascar and its partners has been adjusted to US$ 9.5 million, in view of the multisectoral response to the urban plague outbreak.
- To date, WHO has provided US$ 1.5 million, UNICEF US$ 0.5 million, the International Federation of the Red Cross US$ 250 000, UNDP US$ 300 000, and UNFPA US$ 331 000. In addition, other organizations have provided assistance in kind: China has provided medicines worth US$ 200 000.
- Since 27 September 2017, the Institut Pasteur de Madagascar (IPM) distributed 1 918 rapid diagnostic tests (RDTs) to Toamasina (205), the Centers Hospitaliers d'Antananarivo (619) and the Plague Department of Ministry of Public Health (282).
- Red Cross is setting up a 60-bed treatment facility.
- The protocol for case management of plague is under review, based on results of sensitivity testing and availability of antibiotics.
- USAID has donated 18 000 respirator masks, 100 000 simple masks, and 10 vehicles to support operations of the Department of Public Health.

Situation interpretation

The plague outbreak in Madagascar continues to evolve though the overall case fatality rate has markedly reduced. The Ministry of Public Health and the other national authorities, WHO and partners continue to scale up implementation of outbreak containment measures. The most critical needs at this stage include scaling up and rapidly improving effectiveness of the control interventions. Effective risk communication and coordination are equally vital. In addition, preparedness and readiness in the neighbouring regions and countries, including at the points of entry, should be enhanced.

Go to overview

Go to map of the outbreaks

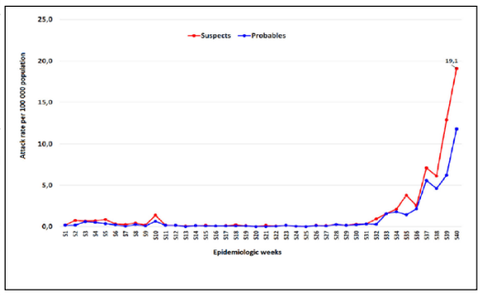
Dengue | Burkina Faso

2 298 **Cases** | 9 **Deaths** | 0.4% **CFR**

Event description

Following an outbreak in late 2016, Burkina Faso experienced sporadic cases of dengue fever at the beginning of the year until week 10 of 2017, when cases eventually ceased. However, from week 31 (week ending 6 August 2017), there has been a dramatic increase in the incidence of dengue fever in the country, especially around the districts of Ouagadougou, the capital city. On 28 September 2017, the Ministry of Health formally declared the outbreak. During week 40 (week ending 8 October 2017), 525 suspected cases including two deaths (case fatality rate 0.4%) were reported. Of these, 329 cases were classified as probable. The majority of the new suspected cases were from Bogodogo (276) and Nogr-massom (115) districts, respectively.

Weekly attack rates of dengue fever cases in Ouagadougou, week 1 - 40, 2017



Between 1 January and 8 October 2017, a cumulative total of 2 298 (suspected, probable and confirmed) cases and nine deaths (case fatality rate 0.4%) were reported across the country. Of these, 1 514 (65.8%) were classified as probable cases after testing positive on rapid diagnostic tests (RDTs). Out of 205 samples referred to the national viral haemorrhagic fever (VHF) laboratory at the Center Muraz, 110 (54%) were positive on polymerase chain reaction (PCR). Further characterisation of 72 samples identified three serotypes of dengue virus (DENV): DENV-2 (80.6%), DENV-3 (16.7%) and DENV-1 (2.8%). Cases are currently reported in 12 of the 13 health zones in the country, with 77.8% of cases reported in the central region, particularly the city of Ouagadougou.

Public health actions

- The National Epidemic Management Committee has been activated to coordinate response activities.
- A preparedness and response plan (and budget) for dengue fever has been developed.
- An early warning system has been established, with daily notification in Ouagadougou and weekly in the other provinces.
- Provision of free medical care and treatment for severe cases in all hospitals is ongoing.
- A total of 5 000 rapid diagnostic tests (RDTs) have been distributed to reference health centres to facilitate early diagnosis.
- Development and dissemination of a national dengue management algorithm has been conducted.
- Delivery and dissemination of dengue awareness and key prevention measures through radio and television programmes is ongoing.
- Periodic shipment of samples to the national VHF laboratory is being carried out.

Situation interpretation

This outbreak of dengue fever in Burkina Faso is occurring in the context of an improved but still limited dengue surveillance system, as many public health facilities do not have access to dengue fever RDTs. The weekly case incidence has been on the rise since the detection of the outbreak in week 31, and is likely underestimated due to under-reporting from private clinics and health centres in peripheral zones.

The existence of breeding sites after the rainy season may favour the proliferation of mosquitoes such *Aedes aegypti* (the principal mosquito vector of dengue viruses). In Burkina Faso, the peripheral districts of cities are characterized by poor sanitation and the accumulation of rubbish dump sites, tyres and used containers, which provide productive breeding sites for the dengue mosquito vectors.

Dengue fever is caused by one of four distinct serotypes of dengue virus (DENV-1, DENV-2, DENV-3 and DENV-4). While initial infection with one of the four dengue serotypes is typically non-severe or asymptomatic, individuals who are subsequently exposed with one of the other serotypes are more likely to develop severe disease, which may be fatal in the absence of supportive medical care. Burkina Faso experienced an outbreak of dengue in 2016, which was caused by DENV-2. In the current outbreak, three serotypes were identified: DENV-1, DENV-2 and DENV-3. This could lead to the occurrence of more severe cases, which may not be captured by the surveillance system due to under-reporting from private clinics and healthcare centres in peripheral districts.

Go to overview
Go to map of the outbreaks

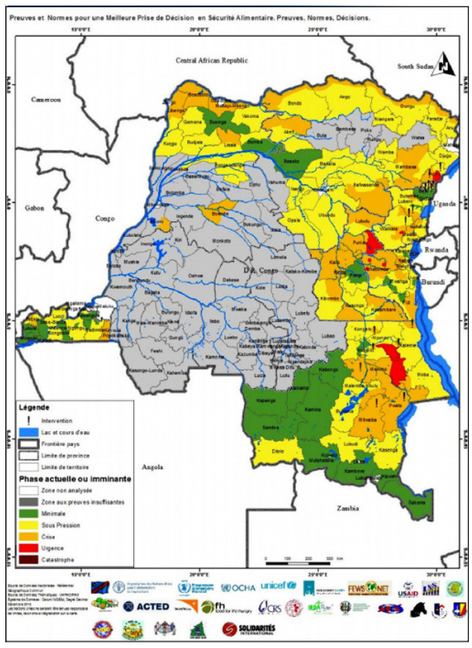
Event description

Two decades of armed conflicts and intercommunal violence have placed the Democratic Republic of the Congo as one of the largest and most complex humanitarian crises in the world. The situation has dramatically deteriorated in recent months due to intensified conflict. The number of people in need of assistance in 2017 increased from 7.3 million to 8.5 million people. More than half of the total needs are a consequence of conflict and population movements. An additional 492 000 Congolese have sought refuge in neighbouring countries, including 33 000 fleeing the Kasai conflict for Angola and 3 400 people who have fled to Zambia from Tanganyika and Haut Katanga since September 2017.

By mid-2017, close to 4 million people were internally displaced within the country, the highest number in the continent, and about half a million became refugees. The humanitarian context is aggravated by political and pre-electoral tensions, economic downturn and the spread of violence. In some areas, the situation keeps deteriorating due to physical and security obstacles. The lack of development and the significant gender inequalities also generate chronic vulnerabilities.

In addition to continued displacement, there have also been a significant number of refugees and internally displaced persons (IDPs) returning to their villages in the Kasai Region, whose homes have been completely destroyed. Lack of humanitarian capacity to support these returnees presents the risk of them falling into a vicious circle of displacements and vulnerability. The most recent (June 2017) Integrated Food Security Phase Classification (IPC) analysis shows a serious deterioration in food and nutrition security, with 7.7 million people facing acute food insecurity and livelihood crisis (IPC 3 and 4), compared to 5.9 million at the same time last year. An estimated 1.9 million children will face severe acute malnutrition (SAM) this year. The cholera epidemic is among the worst recorded in the last decade and continues to spread rapidly, with more than 36 000 cases and 650 deaths (compared to 29 000 cases and 800 deaths in 2016). Recent weeks have seen an increase in cases, ahead of the rainy season, and partners estimate an additional 20 000 people will contract cholera by the end of 2017.

Statuts of food security in the Democratic Republic of the Congo, September 2017



Public health actions

- WHO and partners (USAID, UNICEF, OCHA and Belgian Technical Coordination, UNFPA, WFP, Action contre la Fain, Médecins Sans Frontières (MSF-Spain and Belgium), Save the Children, ALIMA, COOPI, Caritas, SANRU) continue to support the Minister of Health (MOH) in organizing a partnership forum dedicated to health and WASH responses to the Kasai humanitarian crisis. At provincial level, WHO is leading health clusters in Kasai Central and Kasai Oriental through its sub-offices, and from 14-22 October 2017, is organizing training of MOH personnel on logistic aspects of response to health emergencies.
- The Cholera Incident Management System (IMS) will deploy three experts to the Kasai provinces to support preparedness activities.
- An IMS has been established in response to the crisis' Grade 3 status and an Emergency Manager, Incident Manager, Health Information Expert, Health Operations Expert, Operations Support/Logistic Expert, Finance Expert and Administrative Assistant have been deployed in the region, with other staff expected to be deployed in the next few weeks.
- The WCO has recruited three epidemiologists and three WASH experts who were deployed in the three Kasai priority provinces on 5 October 2017.
- MSF is supporting the MOH in measles case management in response to the measles outbreak in Lomami and has organized a reactive measles vaccination campaign in two health zones. UNICEF is supporting the vaccination campaign in Ktako Kombe (Sankuru) and is preparing the campaign in Kalambayi (Lomami).
- The Catholic Relief Services (CRS) have launched a project sponsored by USAID to reduce food insecurity and malnutrition in Kasai provinces.

Situation interpretation

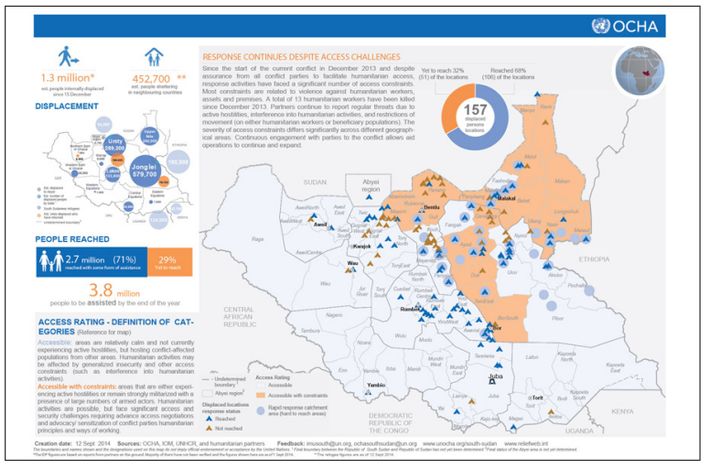
Since the beginning of 2017, the drastic deterioration in the security and humanitarian situation in the Democratic Republic of the Congo has challenged humanitarian actors' capacities to rapidly respond to the increasing humanitarian and protection needs of affected populations. Although most UN agencies and other aid actors have raised their levels of operations, the response capacities remain below the current needs, with the potential for further deterioration. Underfunding has significantly impacted on the response capacities of humanitarian actors. This situation requires new investments in order to enhance operational capabilities necessary to meet the humanitarian needs. Overall, the implementation of life-saving interventions needs to continue to be scaled up urgently. Critical areas of intervention remain nutrition; protection; health; food security; and water, sanitation and hygiene (WASH).

Go to overview Go to map of the outbreaks

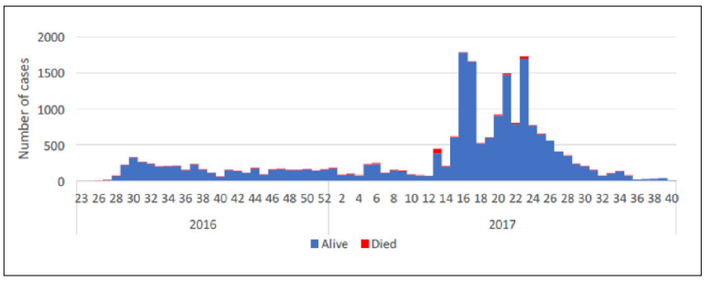
Event description

Mass population displacement continues in South Sudan as a result of unrelenting fighting and insecurity, with increasing humanitarian needs. Recent intercommunal fighting has caused displacement of 42 700 people, who are sheltering in Aweil south. Further displacement is being caused by floods (especially in Pibor, Lafon and Cuelbet Counties) following the protracted rainy season, which has destroyed farmland and roads, as well as causing an associated increase in malaria incidence and mortality. At least 12 of the 80 counties in the country reported an increasing malaria trend since week 27. The decline in cholera transmission activity (reported previously) continues. However, there is still active cholera transmission in Juba, Budi and new Fangak Counties. During week 40, 15 new cases of cholera were reported, compared to 47 cases in week 39 (week ending 1 October 2017). Cumulatively, there have been 20 689 cases since the start of the outbreak in June 2016, with 378 deaths, giving a case fatality rate of 1.8%. To date, more than 800 000 persons have received one dose of the oral cholera vaccine (76% of the target population) and more than 200 000 a second dose. The campaign is ongoing and being rolled out to additional counties.

Humanitarian Snapshot in South Sudan, as of 12 September 2017



Weekly trend of cholera cases in South Sudan, weeks 23, 2016 - 40, 2017



Public health actions

- The oral cholera vaccination programme in Juba which started on 19 September continues, with MSF as the lead implementing partner. 200 000 persons are targeted and to date 173 000 (87% of target population) have received one dose of vaccine. Second doses will be delivered imminently.
- WHO is supporting MOH to train 50 rapid response teams (RRTs) from all the 10 regions of South Sudan in the Integrated Disease Surveillance and Response (IDSR) strategy to improve the timeliness of detection, notification, reporting and response to events of potential public health concern. The training is taking the form of a training of trainers (ToT) with subsequent cascade training to be led by those trained as part of the ToT in States and Counties across the country.
- To assist in the increased incidence of malaria WHO has deployed emergency medical mobile teams to Aweil County to support case management and training of healthcare workers.
- WHO has deployed emergency medical mobile teams to Aweil County to support in the response to the increase in malaria cases.
- The MOH, together with WHO and UNICEF, have trained 90 frontline healthcare workers and distributed case management guidelines and protocols to improve effective clinical management of malaria cases.

Situation interpretation

The humanitarian crisis in South Sudan will not abate until the drivers are addressed. In the meantime, donor support is essential to address these humanitarian needs. Accordingly, there is an urgent need for additional funding for the comprehensive Humanitarian Response Plan.

The increasing incidence of malaria is of concern, particularly due to the associated high mortality, limited access to healthcare and high levels of malnutrition. The continuous decline in cholera trend is encouraging, possibly attributed to the impact of the OCV campaign across the country. The response to the cholera outbreak, including the OCV campaigns, needs to be sustained.

Go to overview
Go to map of the outbreaks

Summary of major challenges and proposed actions

Challenges

- While human infections have not yet been reported in Namibia, mass animal deaths due to anthrax present a formidable public health risk. Immediate risks posed by such animal deaths include handling and consumption of contaminated meat by local communities, as well as potential exposures while disposing of animal carcasses. The event also has the potential to spread widely in the regions since the game parks share the same ecosystem. In addition, *B. anthracis*, the etiological agent of anthrax, forms long lasting, highly resistant spores able to persist into environment for several decades.
- The ongoing outbreak of bubonic and pneumonic plague in Madagascar remains a challenge as it continues to attract global public health concern. The outbreak continues to evolve quickly though the case fatality rate has reduced markedly. Pneumonic plague is associated with increased transmissibility, high case fatality and severe epidemics, if inadequately controlled.
- The complex emergency in the Democratic Republic of the Congo, including the cholera outbreak has continued to deteriorate, outmatching the current response capacities. Underfunding has significantly impacted on the response capacities of most humanitarian actors.

Proposed actions

- A collective One Health approach, with cross-border collaboration between Namibia, Botswana and Angola is urgently needed to control the event and prevent any human infections.
- Efforts to scale up and rapidly improve effectiveness of the control interventions, especially focusing community level interventions.
- The complex humanitarian situation in the Democratic Republic of the Congo requires new investments in order to enhance operational capabilities necessary to meet the humanitarian needs. Global attention is urgently needed to scale up life-saving interventions and mitigate the severe public health impact arising from this crisis.

All events currently being monitored by WHO AFRO

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Newly reported events										
Zambia	Cholera	Ungraded	-	4-Oct-17	13-Oct-17	44	-	1	2.3%	Detailed update given above.
Namibia and Botswana	Anthrax	Ungraded	10-Oct-17	10-Oct-17	12-Oct-17	0	0	0	-	Detailed update given above.
Seychelles ex Madagascar	Plague	Ungraded	10-Oct-17	6-Oct-17	14-Oct-17	10	0	0	0.0%	Detailed update given above.
Ongoing events										
Angola	Cholera	G1	15-Dec-16	13-Dec-16	6-Aug-17	468	-	21	4.5%	Since 13 December 2016, cases have been detected in Cabinda (236), Soyo (227) and Luanda (5). Soyo reported zero cases since epidemiological week 26 and Cabinda reported the same since epidemiologic week 29. Luanda has not reported any cases since week 5. The high transmission areas are linked to the cholera outbreak in Kongo Central Province in DRC.
Burkina Faso	Dengue	Ungraded	4-Oct-17	1-Jan-17	8-Oct-17	2 298	110	9	0.4%	Detailed update given above.
Burundi	Malaria	G1	22-Mar-17	1-Jan-17	26-Sep-17	5 899 273	-	2 620	0.04%	Weekly case counts are exceeding 2016 rates and on the rise. North-west and central provinces reported the highest incidence of disease in week 38.
Burundi	Cholera	Ungraded	20-Aug-17	20-Aug-17	2-Oct-17	45	4	0	0.0%	Cases have been reported from five districts: Nyanza-Lac (27), Cibitoke (1), Bubanza (1), Mpanda (10), Isale (5 cas) and Kabezi (1cas)
Cameroon	Humanitarian crisis	G2	31-Dec-13	27-Jun-17	23-Jul-17	-	-	-	-	Conflict in both north-east Nigeria and Central African Republic has led to mass population movement to Cameroon. Almost 10% of the population of Cameroon, particularly in the Far North, North, Adamaoua, and East Regions, is in need of humanitarian assistance as a result of the insecurity. A detailed update was provided in the week 31 bulletin.
Cape Verde	Malaria	G2	26-Jul-17	27-Jan-17	24-Sep-17	254	254	1	0.4%	New indigenous cases continue to be reported from the city of Praia. Cases reported from São Vicente, Sal and Porto Novo all likely all acquired the infection during travel to Praia or overseas, and there is currently no evidence of indigenous transmission within these locations. One death was reported this week in an indigenous case. Thirteen additional cases have been identified in travellers returning from African countries where the disease is endemic.
Central African Republic	Humanitarian crisis	G2	11-Dec-13	11-Dec-13	29-Sep-17	-	-	-	-	Security incidents continue in several localities in the country. Humanitarian actors reported a total of 29 deaths related to violence during the period from 19-25 September, mostly civilians. Violence was particularly concentrated in five south-eastern localities (Alindao, Kémbé, Mobaye, Kouango, Rafaï and Zémio) and in Bocaranga and Niem in the north-west. These security incidents continue to cause new internal displacements.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Chad	Hepatitis E	G1	20-Dec-16	1-Aug-16	3-Sep-17	1 783	98	19	1.1%	Outbreaks are ongoing in the Salamat Region predominantly affecting North and South Am Timan, Amsinéné, South Am Timan, Mouraye, Foulonga and Aboudeia. Of the 64 cases occurring in pregnant women, five died (case fatality rate 7.8%) and 20 were hospitalized.
Chad	Cholera	G1	19-Aug-17	14-Aug-17	3-Oct-17	492	6	63	12.8%	Cases have been reported from Koukou (342) and Goz Beida (92) health districts in the Sila Region, as well as from Am Timan Health District (58) in the Salamat Region. The incidence of new cases has markedly decreased in Sila since mid September, and are being maintained at relatively low rates in Salamat.
Congo (Republic of)	Monkeypox	Ungraded	1-Feb-17	18-Jan-17	30-Sep-17	88	8	6	6.8%	The monkeypox outbreak is still on-going with four new cases reported between 25 August and 04 September 2017. Other suspect cases were reported from Manfouété, which currently cannot be investigated due to inaccessibility of the area.
Cote d'Ivoire	Dengue fever	Ungraded	3-May-17	3-May-17	29-Aug-17	1 231	311	2	0.2%	Abidjan city remains the epicentre of this outbreak, accounting for 97% of the total reported cases. The main health districts affected include Cocody, Abobo, Bingerville and Yopougon. Of the cases confirmed, 181 were dengue virus serotype 2 (DENV-2), 78 were DENV-3 and 13 were DENV-1. In addition, 39 samples were confirmed IgM positive by serology.
Democratic Republic of the Congo	Humanitarian crisis	G3	20-Dec-16	17-Apr-17	6-Oct-17	-	-	-	-	Detailed update given above.
Democratic Republic of the Congo	Cholera		16-Jan-15	1-Jan-17	13-Oct-17	36 300	-	676	1.9%	During week 40 2 243 new suspected cases and 27 deaths were reported, compared to about 2 516 cases the previous week. The worst affected health zones include Masisi in North Kivu, Malemba-Nkulu in Upper Lomami, Katana and Idjwi in South Kivu, Kimpese in Central Kongo.
Democratic Republic of the Congo	Circulating vaccine-derived polio virus type 2 (cVDPV2)		17-May-17	20-Feb-17	4-Oct-17	9	9	0	0.0%	One new case of cVDPV2 reported in a 17-month-old child from Lwamba, Haut Lomami. Ongoing transmission is occurring in two separate outbreaks in: in Haut Lomami Province (7 cases, most recent case onset was 27 July 2017), and Maniema Province (2 cases with onset on 26 March and 18 April 2017, and an additional isolate detected in a sample collected 2 May 2017 from a healthy individual).
Democratic Republic of the Congo	Measles		10-Jan-17	2-Jan-17	22-Aug-17	30 211	449	370	1.2%	The incidence of new cases has declined since the current outbreak peaked in early 2017.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Ethiopia	Humanitarian crisis	Protracted 3	15-Nov-15	n/a	26-Sep-17	-	-	-	-	This complex emergency includes outbreaks of AWD, measles and AJS (reported separately below) and El Niño-related drought and food insecurity affecting the Horn of Africa. The estimated IDP population stands at 1 099 776 as of 26 September 2017. Heavy rainfall causing floods have affected over 18 600 households and displaced some 93 000 people. Addis Ababa, Jima, and south-east and south-west Shewa were worst affected.
Ethiopia	Acute watery diarrhoea (AWD)		15-Nov-15	1-Jan-17	3-Oct-17	45 922	-	836	1.8%	405 new cases reported in week 39, including cases in Somali (85), Amhara (114), Oromia (63), Tigray (92) and Afar (51) regions.
Ethiopia	Measles		14-Jan-17	1-Jan-17	3-Oct-17	3 151	-	-	-	382 new cases were reported in week 39.
Ethiopia	Acute jaundice syndrome (AJS) - hepatitis A suspected		23-Aug-17	23-Aug-17	2-Oct-17	266	0	6	2.3%	Cases have been reported from Dollo Zone (230) and Liben Zone (36). During week 39, 6 and 3 cases were reported from these respective zones. Seventeen blood samples were ent to IP Dakar on 21 Sept 2017. Updated results received on 12 October reported 8/17 samples were positive on hepatitis A RT-PCR, and one sample was IgM positive (PCR negative) for dengue virus. All other tests performed as part of the differiential diagnosis were negative.
Kenya	Cholera	G1	6-Mar-17	1-Jan-17	3-Oct-17	3 059	572	56	1.8%	Nationally case numbers continue to decrease. Three countries are currently reporting active outbreaks: Nairobi, Machakos and Kajiado.
Kenya	Leishmaniasis, visceral (kala-azar)	Ungraded	7-Jun-17	4-Jan-17	26-Aug-17	457	362	7	1.5%	Marsabit (338) and Wajir (119) counties have been affected by outbreaks since early 2017. The outbreak remains active in Marsabit, where the last reported case was reported on 26 August 2017. The outbreak has been controlled in Wajir, where the last reported case was reported on 17 June 2017. No new cases were reported in the past week.
Kenya	Drought/food insecurity	G1	10-Feb-17	n/a	24-Aug-17	-	-	-	-	As of 24 August, SMART surveys estimated the (low-medium-high) prevalence GAM in Kenya at 2.6-22.9-32.8, and SAM at 0.2-4.0-9.8%.
Kenya	Malaria	Ungraded	-	25-Sep-17	3-Oct-17	133	57	11	8.3%	The suspected outbreak is affecting three districts in Marasbit.
Liberia	Measles	Ungraded	24-Sep-17	6-Sep-17	1-Oct-17	16	4	0	0.0%	The situation remains unchanges in Bong County. In an unrelated event, Nimba County has reported an outbreak. During week 39, 17 new suspected cases were reported from Nimba; further details awaited.
Madagascar	Plague	G2	13-Sep-17	13-Sep-17	11-Oct-17	711	63	64	9.0%	Detailed update given above.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Madagascar	Food insecurity	Ungraded	23-Feb-17	n/a	15-Jul-17	-	-	-	-	Food insecurity continues in the south parts of the island. A recent food security assessment showed that from June to September 2017, an estimated 409 000 people (25% of the affected area population) will be in need of humanitarian assistance. A detailed update was provided in the week 30 bulletin.
Malawi	Cholera	Ungraded	n/a	23-Jul-17	16-Sep-17	38	3	0	0.0%	A relatively small outbreak of cholera was detected in week 30 in Chikwawa District, with low rates of illness maintain in subsequent weeks. During week 39, only 2 new cases were reported.
Mali	Dengue fever	Ungraded	4-Sep-17	1-Aug-17	1-Oct-17	262	25	0	0.0%	Active case search activities completed following detection of a case during a study has identified a total of 25 confirmed case from 262 suspected cases tested to date.
Mali	Humanitarian crisis	Protracted 1	n/a	n/a	3-May-17	-	-	-	-	Limited information is available on this event. At the last update (3 May), the security situation remained unstable, and incidents of violence and inter-ethnic conflicts were increasingly spreading.
Niger	Hepatitis E	Ungraded	2-Apr-17	2-Jan-17	2-Oct-17	1 955	441	38	1.9%	The majority of cases have been reported from the Diffa (1 224), N'Guigmi (305) and Bosso (244) health districts. Case incidence continues to decline.
Niger	Humanitarian crisis	G2	1-Feb-15	1-Feb-15	11-Aug-17	-	-	-	-	The security situation remains precarious and unpredictable. On 28 June 2017, 16 000 people were displaced after a suicide attack on an IDP camp in Kablewa. In another attack on 2 July 2017, 39 people from Ngalewa village, many of them children, were abducted. The onset of the rainy season is impeding the movements of armed forces around the region.
Nigeria	Lassa Fever	Ungraded	24-Mar-15	19-Feb-17	29-Sep-17	869	264	119	13.7%	The outbreak is currently active in nine states: Ondo, Edo, Plateau, Bauchi, Lagos, Ogun, Kaduna, Kwara, and Kogi. During week 39, 3 new confirmed cases were reported.
Nigeria	Humanitarian crisis	Protracted 3	10-Oct-16	n/a	1-Oct-17	-	-	-	-	An estimated 8.5 million people are in need in Borno State, including 1.8 million IDPs. Aside from the cholera outbreak (see below), malaria remains the leading cause of morbidity with over 6 800 suspected cases reported through IDSR in week 39.
Nigeria	Cholera (Borno State)		20-Aug-17	14-Aug-17	13-Oct-17	4 881	119	61	1.2%	177 new cases were reported during the week of 9-15 October, versus 348 the previous week and over 1 200 per week at the hight of the epidemic. The majority on new cases are being reported in Jere. To date, cases have been reported in 5 LGAs: Jere (2 463 cases, 43 deaths), Monguno (1 638 cases, 3 deaths), Dikwa (736 cases, 13 deaths), MCC (38 cases, 6 deaths), and Mafa (6 cases with no deaths).

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Nigeria	Cholera (nation wide)	Ungraded	7-Jun-17	1-Jan-17	18-Sep-17	7 052	145	149	2.1%	Confirmed outbreaks have been reported from 7 states: Borno, Kebbi, Zamfara, Kano, Lagos, Oyo, Kwara and Kaduna States. The outbreak was recently confirmed in Kaduna State (40 cases, 2 confirmed). Apart from Kwara where the outbreak has been controlled for an extended period, outbreaks are continuing on or being sustained at low levels in other states.
Nigeria	Hepatitis E	Ungraded	18-Jun-17	3-May-17	28-Aug-17	874	42	5	0.6%	The outbreak is concentrated in Borno State, with incidence steadily declining after peaking in week 26. The majority of cases have been reported Ngala (697), Mobbar (71) and Monguno (62).
Nigeria	Yellow fever	Ungraded	14-Sep-17	7-Sep-17	10-Oct-17	10	1	0	0.0%	One confirmed case detected in Ifelodun LGA, Kwara State. Nine samples tested PCR positive at LUTH from four states: Kwara (4), Kogi (2), Plateau (2) and Edo (1), and 1 sample from Abia was inconclusive. Samples have been referred to IP Dakar for confirmatory testing: the sample from Edo was ELISA and PCR negative, all others are current pending. Reactive vaccination campaign scheduled to start 13 October targeting over 850 000 people in Kwara and Kogi states.
Nigeria	Monkeypox	Ungraded	26-Sep-17	24-Sep-17	10-Oct-17	13	1	0	0.0%	Investigations are ongoing. Of 13 suspected cases, 4 are currently admitted. 53 contacts are being monitored. Six samples have been sent to IP Dakar; 1 was positive on RT-PCR for monkeypox. All others were negative.
São Tomé and Principé	Necrotising cellulitis/ fasciitis	G2	10-Jan-17	25-Sep-16	8-Oct-17	2 108	-	0	0.0%	It is now more than 12 months since the start of the epidemic of necrotizing faciitis/cellulitis in São Tomé and Príncipe. Since the peak of new cases between weeks 49 and 51, 2016, the weekly incidence of new cases appears to be fluctuating between 17 and 39. During week 40 a total of 34 new cases were reported: Me-zochi (16), Agua Grande (5), Lobata (3), Cantagalo (6), Caue (0), Lembá (4) and Príncipe (0).
Seychelles	Dengue fever	Ungraded	20-Jul-17	18-Dec-15	10-Sep-17	3 878	1 295	-	-	Dengue virus serotype 2 (DEN-2) is predominating. Cases have been reported from all regions of the three main islands (Mahé, Praslin and La Digue). A detailed update was provided in the week 32 bulletin.
Sierra Leone	Flooding/mudslide	G1	14-Aug-17	14-Aug-17	28-Sep-17	-	-	-	-	Recovery efforts are ongoing a month since mudslides and flash floods devastated parts of Freetown, Sierra Leone. Burial of 502 corpses and 139 body parts was completed. Search for dead bodies has been stopped, 500 individuals declared missing. 1 247 households were affected in 6 communities with 5 905 persons displaced.
South Sudan	Humanitarian crisis	G3	15-Aug-16	n/a	1-Oct-17	-	-	-	-	Detailed update given above.
South Sudan	Cholera	Ungraded	25-Aug-16	18-Jun-17	1-Oct-17	20 689	1 585	378	1.8%	Detailed update given above.

Country	Event	Grade†	WHO notified	Start of reporting period	End of reporting period	Total cases	Confirmed cases	Deaths	CFR	Comments
Tanzania	Cholera	G1	20-Aug-15	1-Jan-17	1-Oct-17	3 194	-	52	1.6%	The trend of reported cholera cases has increased to 119 new cases and 2 deaths in week 39, compared to 86 cases and 1 death in week 38. During this week, cases were reported from Songwe (43), Mbeya (41) and Iringa (35). Zanzibar has reported zero cases since 11 July 2017.
Uganda	Humanitarian crisis - refugee	Ungraded	20-Jul-17	n/a	30-Aug-17	-	-	-	-	The influx of refugees to Uganda has continued as the security situation in the neighbouring countries remains fragile. According to UNHCR, the total number of registered refugee and asylum seekers in Uganda stands at 1 326 750, as of 1 August 2017. More than 75% of the refugees are from South Sudan. Detailed update given in the week 35 bulletin.
Uganda	Measles	Ungraded	8-Aug-17	24-Apr-17	18-Sep-17	552	-	-	-	The outbreak is in the two urban districts of Kamala (309 cases) and Wakiso (243 cases).
Uganda	Drought/food insecurity	G1	1-Jul-17	n/a	24-Aug-17	-	-	-	-	This event forms part of a larger food insecurity crisis in the Horn of Africa. The northern and eastern regions are predominantly affected.
Uganda	Cholera	Ungraded	28-Sep-17	25-Sep-17	10-Oct-17	157	15	3	1.9%	The outbreak remains confined to Kasese District but has spread from 5 sub-counties (Nyakiyumbu, Munkunyu, Bwera, Isango, and MLTC) to include Ihandiro, Karambi, and Kyondo sub-counties; however, the daily incidence of new cases remains low.
Recently closed events										
Central African Republic	Pertussis	Ungraded	6-Sep-17	29-Jul-17	29-Sep-17	5	0	-	-	Field investigations were conducted in the suspected outbreak of pertussis in the Boda Health District, with initially over 200 cases. After verification, the investigative team invalidated 118 suspect cases from the line list. 5 cases met the operational case definition. Nasopharyngeal samples were collected from these cases; results pending. Community liaison officers were briefed to strengthen community-based surveillance. WHO has provided a Pneumonia Kit to the district to strengthen case management in health facilities.

†Grading is an internal WHO process, based on the Emergency Response Framework. For further information, please see the Emergency Response Framework: http://www.who.int/hac/about/erf/en/.
Data are taken from the most recently available situation reports sent to WHO AFRO. Numbers are subject to change as the situations are dynamic.

Correspondence on this publication may be directed to:
Dr Benido Impouma
Programme Area Manager, Health Information & Risk Assessment
WHO Health Emergencies Programme
WHO Regional Office for Africa
P O Box. 06 Cité du Djoué, Brazzaville, Congo
Email: afrooutbreak@who.int

Contributors
P. Mhata (Namibia)
A. Lamina (Madagascar)
G. Guracha (South Sudan)
L. Moyenga (Burkina Faso)

Graphic design
Mr. A. Moussongo

Editorial Team
Dr. B. Impouma
Dr. C. Okot
Dr. E. Hamblion
Dr. B. Farham
Dr. V. Sodjinou
Ms. C. Machingaidze
Mr. B. Archer
Dr. P. Ndumbi

Production Team
Dr. S. Dlamini
Mr. T. Mlanda

Editorial Advisory Group
Dr. I. Soce-Fall, *Regional Emergency Director*
Dr. B. Impouma
Dr. Z. Yoti
Dr. Y. Ali Ahmed
Dr. F. Nguessan
Dr. M. Djingarey

Data sources
Data is provided by Member States through WHO Country Offices via regular situation reports, teleconferences and email exchanges. Situations are evolving and dynamic therefore numbers stated are subject to change.

Health Emergency Information and Risk Assessment

World Health Organization
REGIONAL OFFICE FOR Africa