World Health Organization

HEALTH CLUSTER

Greater Horn of Africa (GHoA) Food Insecurity and Health Crisis

Date: 12 September 2024

Public Health Situation Analysis (PHSA)

This is the third WHO GHoA PHSA published in 2024.

Typologies of emergency	Main health threats	WHO grade	INFORM risk (rank)
Food Security Drought Epidemics Conflict Floods and Landslide Displacement	Malnutrition Cholera & other water borne diseases Malaria Dengue Rift valley fever Yellow fever Mpox Measles and other vaccine preventable disease (VPDs) Maternal, neonatal & child health conditions Gender Based Violence (GBV)	Grade 3 (Since May 2022)	**INFORM Risk 2024 (0-10)** Djibouti: 4.9 (High) Ethiopia: 7 (Very high) Kenya: 6.6 (High) Somalia: 8.5 (Very high) South Sudan: 8.5 (Very high) Sudan: 7.3 (Very high) Uganda: 7 (Very high)

SUMMARY OF CRISIS AND KEY FINDINGS

The Greater Horn of Africa (GHoA) region remains one of the world's most food-insecure regions with 54 million people in high levels of food insecurity with Sudan, South Sudan, and Ethiopia among hunger hotspots of highest concern. Presently, an estimated 11.4 million children under five are facing acute malnutrition with 2.8 million of them suffering the most severe form of wasting in the seven countries, primarily from Sudan, South Sudan, and Ethiopia.[1] Persistent underlying drivers of acute malnutrition including insufficient food consumption, inadequate services, and poor feeding practices have been exacerbated by escalating conflicts, cumulative effects of weather extremes, and economic shocks.

While improvements in overall nutrition levels have been observed in Kenya, Somalia, and parts of Ethiopia, severe acute malnutrition (SAM) remains high in Somalia. SAM levels also remain elevated in Sudan, Ethiopia, and South Sudan, with South Sudan experiencing a steady increase in SAM admissions throughout 2024.[2] In Sudan, over half the population (25.6 million people) are facing crisis or worse conditions (IPC Phase 3 or above) between June to September 2024 – coinciding with the lean season. Due to continued conflict and lack of humanitarian access, famine conditions have been confirmed in Zamzam internally displaced (IDP) camp in North Darfur by the Famine Review Committee (FRC).[3]

Multiple and concurrent disease outbreaks including cholera, measles, dengue, malaria, rift valley fever, anthrax, hepatitis E, meningitis and circulating vaccine derived polio virus (cVDPV2) have been reported in the region resulting in increased illness and death. Ongoing conflicts and extreme weather conditions, such as droughts and floods, have heightened displacement and disrupted essential health services, exacerbating the spread of diseases.

The high prevalence of severe acute malnutrition (SAM) among children further increases their vulnerability to these diseases and raises the risk of mortality.[4]

As of July 2024, the Greater Horn of Africa recorded its highest-ever number of forcibly displaced people, with approximately 26 million individuals, including 21 million internally displaced persons (IDPs) and 5 million refugees and asylum seekers. Of this total, 16 million have been displaced due to conflict, while 5 million have been displaced by natural disasters.[5] Since the start of the conflict in the Sudan in April 2023, 10.7 million people (2.1 million families) have been internally displaced making it the world's largest internal displacement crisis. [6]Uganda, Ethiopia, and Sudan host the highest numbers of refugees in the region.[7] Displacement is both a driver and consequence of food insecurity situation. Children and breast-feeding women are among the vulnerable population groups at risk of malnutrition and disease outbreaks as access to essential health services, water sanitation and hygiene services in the IDPs or refugee camps are limited. Moreover, protection risks are exacerbated due to displacement and inadequate access to basic facilities, increasing the risk of gender-based violence against women and girls.[8]

The region is grappling with the impact of climate shocks and El Niño, oscillating between extremes, from a prolonged drought to floods.[9] The historic four-year drought that hit East Africa has caused massive displacement and suffering. In 2024, heavy rains and flooding between March and May affected 1.6 million people across Eastern Africa. South Sudan and Sudan are currently experiencing severe flooding, worsened by the release of 2 600 cubic meters per second of water from a dam in Uganda, impacting over 789 000 people.[1011] This heavy rainfall and flooding have resulted in increased risk and surge of waterborne and vector borne diseases including a new cholera outbreak in Sudan and an upsurge of malaria in South Sudan.

This severe climate-induced shock comes against a backdrop of heightened vulnerability following the prolonged 2020-2023 drought and the floods during the June-December 2023 season.[12] This was compounded by extensive flooding between November and December 2023, displacing more than four million people in the Horn of Africa.[1314] The heavy rains from March to May 2024 resulted in significant riverine floods, flash floods, landslides, and damage to dams across Kenya, Somalia, Ethiopia, and Uganda, with particularly severe impacts observed in Kenya. This has weakened communities' coping capacity, making them highly susceptible to food insecurity, malnutrition and disease.[15,16]

Outlook for the coming months

Between August and October 2024, wetter than usual conditions are expected over central to northern Ethiopia, South Sudan, Sudan, Uganda and parts of western Kenya. However, drier than usual conditions are expected over eastern parts of the region including western Ethiopia, and parts of north-western South Sudan.[17]

The ongoing conflicts in Sudan, South Sudan, Ethiopia, and Somalia are likely to further exacerbate food insecurity, malnutrition crises and disease outbreak risks by driving displacement, disrupting health services and WASH infrastructure, causing shortages of food and non-food items (NFI), disrupting surveillance, and vector control efforts, and impeding humanitarian access and delivery of aid .[18] This crisis coincides with the lean season and severe flooding in Sudan and South Sudan, which have already displaced hundreds of thousands and are expected to deteriorate further in the coming months.

Moreover, there is a 66 percent chance that a La Niña phenomenon will unfold between September - November 2024, bringing more rain to some regions and drought to others.[19] In the past, such conditions were associated with drought in the eastern Horn of Africa.[20] La Niña is expected to bring heavy rainfall to some areas, increasing the risk of flooding and the spread of waterborne diseases like cholera and vector-borne diseases such as malaria and dengue. Conversely, countries in the Horn of Africa anticipating dry conditions may face disruptions in essential health services (due to increased health care demand, displacement and lack of clean water and sanitation), higher rates of malnutrition, and increased risk of disease outbreaks, including vaccine preventable diseases.

This report covers several countries within the GHoA, including Djibouti, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda.

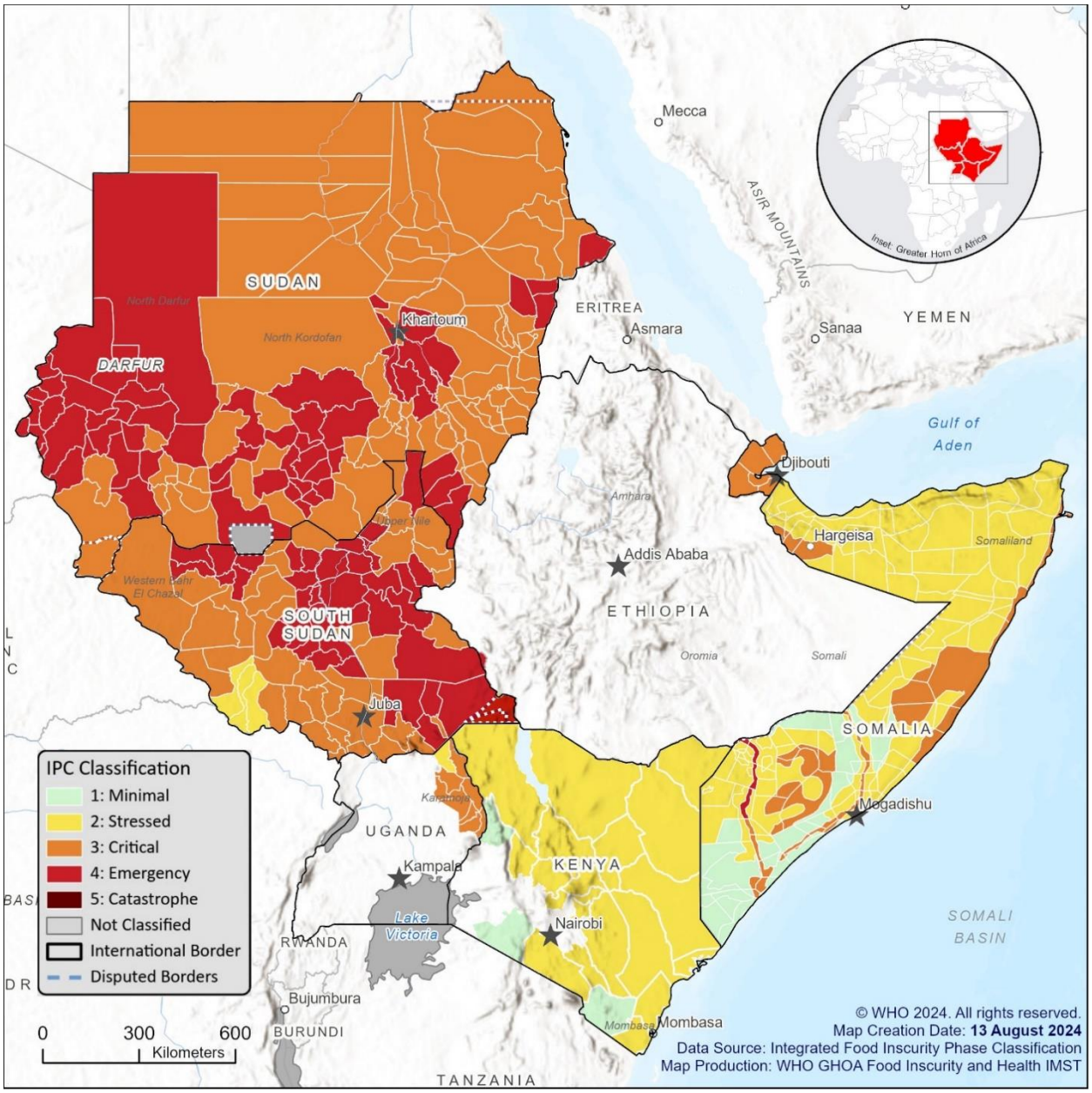

Figure 1- GHoA IPC map showing the last IPC projection available as of August 2024

HUMANITARIAN PROFILE

HUMANITARIAN RESPONSE PLAN (HRP)

Ethiopia PiN: 21.4 million

Somalia PiN: 6.9 million

South Sudan PiN: 9 million

Sudan: 24.8 million

HEALTH NEEDS (HRP)

Ethiopia: 16.4 million

Somalia: 6.6 million

South Sudan: 6.3 million

Sudan: 14.7 million

INTERNALLY DISPLACED PEOPLE (IDP)[21]

Ethiopia: 4.4 million

Somalia: 3.9 million

South Sudan: 2 million

Sudan: 10.7 million

FOOD INSECURE

IPC Phase 3+:

54 million people across seven countries[22,23]

Humanitarian Response

The Greater Horn of Africa accounts for close to 22 percent of the global humanitarian caseload in 2024, Sudan and Ethiopia alone, are two of the world's five largest humanitarian crises. The Sudan crisis accounts for almost 40 per cent (25 million people) of the regional total People in Need (PiN), followed by Ethiopia (21 million), South Sudan (9 million) and Somalia (6.9 million).[24] Of the countries in the GHoA, there are four with UN coordinated Humanitarian Response Plans (HRP). These plans for Ethiopia, Somalia, South Sudan, and Sudan are summarised below (information to date as of 27 August 2024).[25]

Country	PiN	Target	Requirement (US$)	Coverage of funds Received/required (%)
Ethiopia	21 360 484	15 467 955	3.2 billion US$	18.2%
Somalia	6 869 716	5 208 415	1.6 billion US$	37%
South Sudan	8 996 986	5 944 709	1.8 billion US$	39.7%
Sudan	24 786 370	14 657 114	2.7 billion US$	37.9%

Food Insecurity

An estimated 54 million people are highly food insecure (IPC Phase 3+) in August 2024 in the region with Ethiopia, Sudan and South Sudan among the hunger hotspots of high concern. While El Niño-induced enhanced rainfall has improved food security in many areas, especially in Kenya, floods have caused significant displacement and affected cropping seasons in many places.[26] In South Sudan, 56 percent of the population is facing high levels of food insecurity, and the situation is expected to worsen due to the lean season and the ongoing widespread flooding. [27]

In Sudan, the ongoing conflict and insecurity have given rise to a complex food crisis impacting the lives of millions of people due to restricted movements, disrupted markets and basis services, hampered agricultural production and livelihoods, and curtailed humanitarian access. Over half the population (25.6 million people) face Crisis or worse conditions (IPC Phase 3 or above) from June to September 2024 – coinciding with the lean season. Over 755 000 people face Catastrophe (IPC Phase 5) in 10 states, including the five states of Greater Darfur as well as South and North Kordofan, Blue Nile, Al Jazirah, and Khartoum states. The situation is worsened by the highly disrupted healthcare services, water contamination, and poor sanitation and hygiene conditions, driving a deadly combination of hunger, malnutrition, and disease. [28]

Food is the highest priority among IDP families, as over 97% of IDPs across Sudan were hosted in localities with high levels of acute food insecurity or worse (IPC Phase 3+). An estimated 89% of displaced families are unable to afford their daily food requirements. [29]

Famine has been confirmed by the Famine Review Committee (FRC) in July 2024 in Zamzam camp near El Fasher town and conditions are expected to continue into the August to end of October projection period. While uncertainty remains, the likelihood of famine remains high in Zamzam camp after October 2024. Many other areas throughout Sudan also remain at risk of famine, as long as the conflict and limited humanitarian access continue.[30] There is a risk of Famine in 14 areas affecting residents, IDPs and refugees – in Greater Darfur, Greater Kordofan, Al Jazirah states and some hotspots in Khartoum, if the conflict escalates further.[31] Areas are classified in Famine (IPC Phase 5) when at least 20 percent of households have an extreme lack of food and face starvation and destitution, resulting in extremely critical levels of acute malnutrition and death.

In South Sudan, 7.1 million people (56% of the total population) are in IPC Phase 3+ and the situation is expected to worsen this lean season between June-September 2024. [32] Areas in Emergency (IPC Phase 4) are expected to nearly double (to 34 counties) in the upcoming lean season between June and September 2024 amid expectations of continued high returnee burden, severe flooding under projected La Niña conditions, elevated tensions and rising violent conflict in the lead up to December 2024 elections, and likely disruptions to livelihoods, trade, and food assistance. [33]

In addition, as the lean season continues, food insecurity and acute malnutrition are expected to further worsen.[34,35] To prevent further loss of life, particularly in Sudan, Ethiopia, and South Sudan, funding must be urgently scaled up and humanitarian access expanded.

IPC ANALYSIS (Projection period)	Assessed Population	Crisis (IPC Phase 3)	Emergency (IPC Phase 4)	Catastrophe (IPC Phase 5)	IPC Phase 3+	IPC3+ as % of assessed Pop
DJIBOUTI (Jul 24 - Dec 24)	1,181,675	232,178	52,822	0	285,000	24%
KENYA / Asal Counties (Apr 24 – Jun 24)	16,617,000	1,197,750	25,750	0	1,223,500	7%
SOMALIA (Apr 24 – Jun 24)	18,706,931	2,695,880	714,360	0	3,410,240	18%
SOUTH SUDAN (Apr 24 – Jul 24)	12,613,120	4,684,000	2,336,000	79,000	7,099,000	56%
SUDAN (June – Sep 24)	47,208,125	16,309,134	8,533,005	755,262	25,597,401	54%
UGANDA/ Karamoja (Aug 2024 - Feb 2025)	1,325,000	374,795	26,485	0	401,280	30%
Sub-Total	97,651,851	25,493,737	11,688,422	834,262	38,016,421	
OTHER FOOD SECURITY ESTIMATES						
ETHIOPIA 2024	123,000,000	People in need of food assistance (Source: HRP 2024)			15,800,000	13%
Total food insecure population in need of assistance IGAD Caseload					53,816,421	

Figure 2 - IPC figures as of 31 August 2024 (IPC, HRP)

Acute Malnutrition

An estimated 11.4 million children under five are facing acute malnutrition with 2.8 million of them suffering the most severe form of wasting in the seven countries mainly from Sudan, Ethiopia and South Sudan.[36] The nutrition situation remains dire across countries in the region as persistent underlying drivers of acute malnutrition including insufficient food consumption, inadequate services, and poor feeding practices have been exacerbated by escalating conflicts, cumulative effects of weather extremes, and economic shocks. Improvements observed in Kenya, Somalia, and parts of Ethiopia. However, levels of SAM in 2024 remain high in Somalia, Ethiopia, Sudan, and South Sudan.[37]

For South Sudan, the number of SAM cases in 2024 is the highest in the past five years. This case numbers of SAM are projected to increase even further in Sudan and South Sudan due to flooding and worsening of the food insecurity situation.

In northern and eastern Ethiopia, Global Acute Malnutrition (GAM) rates exceed the 15 per cent emergency threshold. In South Sudan and Somalia, over 1.65 million and 1.66 million children under five, respectively are estimated to be acutely malnourished.[38]

In Sudan, a worrying high level of severe wasting (>25.1%) was reported in Red Sea State based on MUAC screening conducted in May 2024 and a marked deterioration in seven out of the twelve localities of Red Sea and White Nile states. [39] Urgent response is needed alongside addressing immediate and underlying causes of malnutrition. [40]

Displacement

The displacement crisis in the region has reached unprecedented levels, with 26 million people forcibly displaced by July 2024— the highest number ever recorded. Significantly, the conflict in Sudan alone has caused the internal displacement of 10.7 million people since April 2023, now making it the world's largest internal displacement crisis. A summary of the displacement indicators across the region are displayed in the below table: [41]

DISPLACEMENT INDICATORS	Djibouti	Ethiopia	Kenya	Somalia	South Sudan	Sudan	Uganda
Internally displaced people (IDPs)	n/a	4.4 million[42]		3.9 million[43]	2 million[44]	10.7 million[45]	4800[46]
Returnees	n/a	6k[47]	n/a	343[48]	255k[49]	630 k[50]	n/a
Refugees	23k[51]	1.1 million[52]	782 k[53]	19k[54]	489k [55]	1.5 million[56]	1.7 million [57]
Asylum seekers	8k[58]	n/a		21k[59]			49k[60]

Security and Conflict

The conflicts in Sudan and Ethiopia have had a staggering impact on civilians, resulting in massive loss of life, destruction of property and large-scale displacements.[61] A summary of the key conflicts impacting the region are summarized below:

- **Ethiopia:** The conflict in northern Ethiopia resulted in trauma and displacement since November 2020. In August 2023, the conflict in Amhara region started and continued to result in increased trauma and displacement affecting humanitarian response activities. Overall, the humanitarian access has improved. However, in Amhara, Tigray and western Oromia, access to humanitarian assistance is limited due to conflict between armed groups and access restrictions. [62] In Amhara, the humanitarian situation has specifically deteriorated, with abduction for ransom and road restriction.
- **Somalia**: In the second quarter of 2024, 70 humanitarian access constraints were reported that impacted humanitarian activities. Military operations and ongoing hostilities continue to impede humanitarian operations and impact humanitarian access including the bureaucratic impediments which remain a challenge in the country. [63] In Somalia, the humanitarian access situation has worsened, with the score

rising from 4 to 5. Some affected groups, such as IDPs, often face exclusion or the denial of assistance. Insecurity remains a significant challenge for humanitarians and civilians, particularly affecting road access in central and southern Somalia.[64]

- **South Sudan:** The humanitarian situation across multiple states is rapidly worsening, with severe disruptions in delivering essential aid to vulnerable populations. In July 2024 alone, partners reported 34 incidents, highlighting an alarming and persistent trend from the previous year. The sharp devaluation of the local currency further intensifies the crisis, fuelling negative coping mechanisms and obstructing aid delivery.[65] South Sudan continues to experience very high humanitarian access constraints due to new bills, tax regulations and other bureaucratic impediments affecting the movement of humanitarian staff.[66]
- **Sudan**: The ongoing conflict in Sudan which intensified on April 15, 2023, severely impacted the country's food insecurity, malnutrition, and health crises, with consequences extending to the broader region. The violence led to mass displacements, extensive damage to infrastructure, disrupted essential services, and acute shortages of food and essential supplies. Market prices have soared, along with disruption of banking system, affecting the entire region, and areas with active conflict show the highest proportions of food-insecure populations. Insecurity and deliberate humanitarian assistance delivery obstruction by the Sudanese Armed Forces (SAF) and the Rapid Support Forces (RSF) continue to highly restrict humanitarian access in Sudan. Thousands of displaced and affected civilians, particularly in West Darfur but also in Central, East, and South Darfur, have not received assistance because of such restrictions. [67]

Extreme Weather Events

The confirmation of El Niño conditions and a positive Indian Ocean Dipole by local models resulted in increased rainfall, exceeding normal levels and causing flooding, including riverine and flash floods, across various regions such as Somalia, Kenya, Ethiopia, South Sudan, Sudan, and Uganda between October to December 2023.

This has led to significant human and economic impacts, including loss of lives, destruction of livelihoods, and displacement of communities. The heavy rains from March to May 2024 have caused significant riverine floods, flash floods, landslides, and damage to dams across Kenya, Somalia, Ethiopia, Uganda, Tanzania, and Burundi, with particularly severe impacts observed in Kenya and Burundi.[68] The cumulative toll stands at 1.6 million people affected, 480 000 displaced, displaced and at least 528 fatalities. Kenya bears the brunt of the damage, experiencing significant losses in both human health and infrastructure. A staggering 55 health facilities, 129 schools, and 67 roads were damaged.[69]

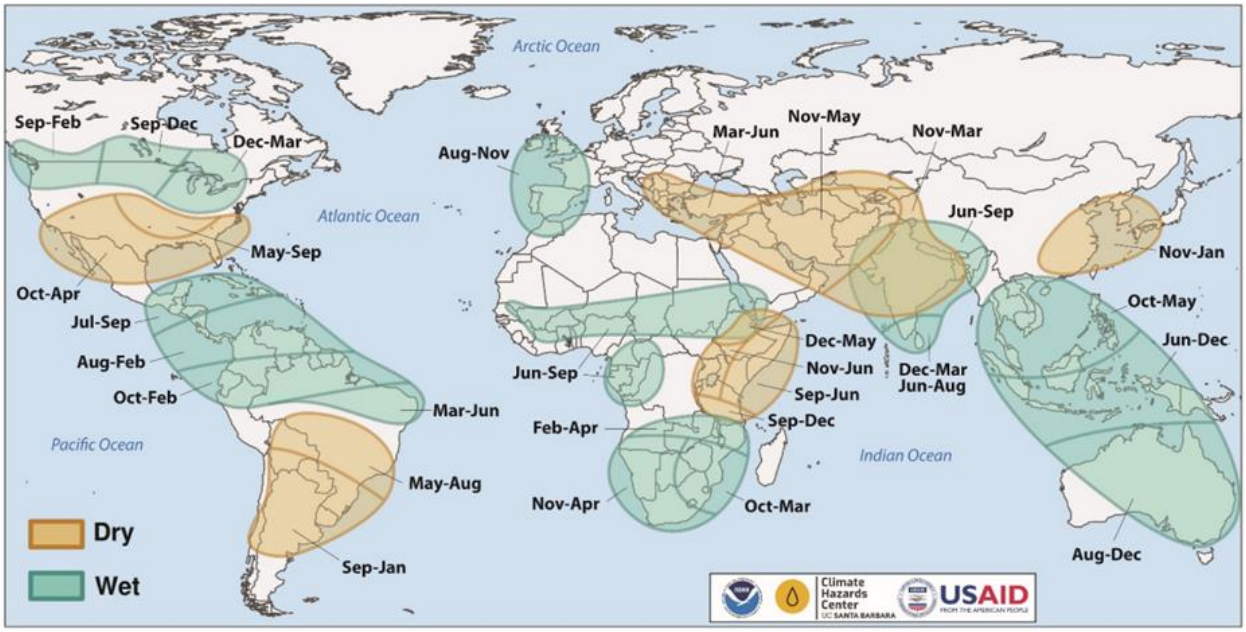

Figure 3 – Timing of wet and dry conditions related to La Niña (FEWS NET)

In South Sudan, the ongoing flooding in Upper Nile State, combined with an influx of returnees, refugees, and internally displaced people, is severely straining health services and causing shortages of medical supplies. As of August 2024, three health facilities in Unity were reported fully submerged, 15 partially submerged, and six more isolated due to the flooding. The flooding is predicted to affect approximately 1 million people in a moderate scenario and up to 3 million people in the worst-case scenario.[70]

Since June 2024, heavy rainfall and flooding has been reported in Ethiopia, South Sudan and Sudan resulting in increased risk and surge of waterborne and vector borne diseases including a new cholera outbreak in Sudan and an upsurge of malaria in South Sudan.

In Sudan, an estimated 317 000 people in 60 localities across 16 states of the country have been affected, of whom 118 000 have been displaced. [71]

A landslide in Gezei Gofa, Ethiopia on July 21st and 22nd has resulted in displacement of an estimated 40 000 people, and resulted in 276 deaths. The risk of further landslides and floods across the region remains high.[72,73]

Meteorologists have indicated a 66 percent chance that a La Niña phenomenon will unfold between September - November 2024 combined with above-normal sea surface temperatures in the eastern Indian and western Pacific Oceans bringing more rain to some regions and drought to others.[74] In the past, such conditions were associated with drought in the eastern Horn of Africa during the same period.[75] Events of El Niño tend to favour drought in numerous tropical and subtropical land areas, whereas events of La Niña tend to favour wetter conditions in numerous locations. Historically such conditions were associated with drought in the Horn of Africa during Oct-Dec short rains season. An elevated chances of dry conditions predicted during March to May 2025 long rain seasons.[76] The greatest impacts are expected in central and southern Somalia, southern Ethiopia, and the arid and semi-arid lands of Kenya. In Ethiopia, the main ways that climate variability appears are in trends such as rising temperatures and failing rainfall.[77]

Water, Sanitation and Hygiene (WASH)

In the GHoA region, the lack of adequate and safe water access, coupled with poor sanitation and hygiene practices, is a significant driver of infectious disease transmission, particularly during prolonged drought periods. Supplying clean and reliable water in drought-prone areas, such as pastoral regions, is a significant challenge. Moreover, the recent heavy rainfall and flooding which affected the region resulted in damage to WASH facilities, exacerbating water borne diseases, including cholera in Ethiopia, Somalia and Sudan. An overview of WASH indicators can be viewed in the below table (data is the most recently available, from various years):

WASH INDICATORS[78]	Djibouti	Ethiopia	Kenya	Somalia	South Sudan	Sudan	Uganda	Source
Proportion of population using safely managed sanitation services	40%	7%	31%	33%	n/a	n/a	18%	UNICEF
Proportion of population using basic sanitation services	27%	2%	5%	8%	n/a	n/a	3%	UNICEF
Proportion of population using at least basic sanitation services	67%	9%	37%	41%	16%	37%	21%	UNICEF
Proportion of population using limited sanitation services	7%	8%	24%	17%	9%	8%	17%	UNICEF

HEALTH STATUS AND THREATS

Population mortality: Between 2019 and 2022, in the GHoA region, the continued conflict, extreme weather events (drought, floods) and concurrent and multiple disease outbreaks including cholera, measles and malaria resulted in an increased proportion of deaths compared to previous years.

The top causes of death in the GHoA region in 2019, according to Global Burden of Disease data, included lower respiratory infections, diarrheal diseases, and drug-susceptible tuberculosis.[79] However, this information dates to before the drought emergency was declared in 2022, and more recent data is not yet available. Notably, drought related mortality estimates conducted in Somalia indicates that the drought crisis caused an estimated 43 000 deaths in 2022 (half of which estimated to have occurred in children under 5), more severe than the 2017-2018 drought.[80] An overview of mortality indicators can be viewed in the below table:

MORTALITY INDICATORS	Djibouti	Ethiopia	Kenya	Somalia	South Sudan	Sudan	Uganda	Year	Source
Life expectancy at birth[81]	63	66	62	56	56	66	64	2022	World Bank
Crude mortality rate (per 1000 people)[82]	9	7	8	12	11	7	6	2021	World Bank
Infant mortality rate (deaths < 1 year per 1000 births) [83]	44	34	31	68	64	37	30	2022	UNICEF
Child mortality rate (deaths < 5 years per 1000 births) [84]	52	46	41	106	99	52	41	2022	UNICEF

Vaccination coverage: Extreme weather events exacerbated by climate change and El Niño Southern oscillation, in countries with already weakened health systems, have negatively impacted on vaccination activities. In 2023, it was estimated that countries such as Kenya and Uganda had immunization coverage of over 80% for routine antigens, including pentavalent and measles-containing vaccines.[86] In contrast, Djibouti, Ethiopia, Somalia, and South Sudan reported below 80% immunization coverage during the same period.[87]

In Sudan, a decline in the implementation of planned vaccination sessions before the onset of the current conflict led to a drop in coverage of the third dose of diphtheria-pertussis-tetanus (DTP3) from 93% in 2019, before the pandemic, to 84% in 2021 and 2022. In addition, coverage of the first dose of measles-containing vaccine (MCV1) declined from 90% in 2019 to 81% in 2022. The number of children receiving zero doses was highest in 2022, influenced by the pandemic and the ongoing political and economic crisis in the country.

VACCINATION COVERAGE DATA[88]	Djibouti	Ethiopia	Kenya	Somalia	South Sudan	Sudan	Uganda	Year
DTP-containing vaccine, 1st dose	77%	77%	97%	52%	76%	57%	95%	2023
DTP-containing vaccine, 3rd dose	72%	72%	93%	42%	73%	51%	91%	2023
Polio, 3rd dose	72%	72%	92%	47%	72%	53%	89%	2023
Measles-containing vaccine, 1st dose (MCV1)	76%	61%	91%	46%	72%	51%	93%	2023

COVID-19 Vaccination: The below table provides an indication of COVID-19 vaccination rates as of March 2023:

COVID-19 VACCINATION COVERAGE DATA	Djibouti	Ethiopia	Kenya	Somalia	South Sudan	Sudan	Uganda	Year	Source
% of population who received one dose	37%	38%	26%	49%	28%	29%	43%	2023	JHU[89]
Number of people who received one dose	366,940	43.8 million	14.3 million	7.7 million	3.1 million	12.6 million	19.5 million	2023	JHU[90]

OVERVIEW OF PUBLIC HEALTH RISKS

The below tables provide an overview of public health risks for countries including Djibouti, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda.

DJIBOUTI: KEY HEALTH RISKS IN COMING MONTHS		
Public health risk	**Level of risk**	**Rationale**
Malaria		Djibouti is a malaria endemic country that was in pre-elimination phase in 2006–2012. From 2013, however, malaria has re-emerged in the country, and its prevalence has been increasing every year.[91]
Malnutrition		More than 41 301 children aged 6 to 59 months are expected to face high levels of acute malnutrition including 9 260 cases of SAM by December 2024. A deterioration in malnutrition situation is expected between May to December 2024. This is due to high and recurrent food insecurity, poor WASH conditions, a high disease burden (including AWD, childhood illnesses), low immunization coverage and poor dietary intake feeding practices.[92]
Maternal and Child Health Risks		The proportion of births attended by skilled health personnel is 87.4% (2017), with significant urban/rural. Despite the high proportion of births attended by skilled health personnel, maternal mortality continues to be high.[93] The maternal mortality rate of 248 per 100 000 live births is almost five times the regional average.[94] Access to sexual and reproductive health and reproductive rights information and services remains a particular challenge for a large segment of the population.[95] A total of 18% of women have unmet family planning needs.[96]
Measles and other vaccine preventable diseases		Weak health system, low access and utilization of immunization facilities resulted in high dropout rate and low immunization coverage, particularly for measles vaccine. There is an increased risk for vaccine preventable diseases due to above factors and expected deterioration of nutrition situation which will put children at risk of contracting diseases. The country has been experiencing outbreaks of measles and polio recently.
Mpox		No mpox cases have been reported in the country as of August 2024. However, with countries in Eastern Africa affected, the risk of spread to Djibouti is high. Spread of mpox in Djibouti would cause significant morbidity and mortality. There is an increased population movement from other countries in the region using Djibouti as a transit to the Middle East .

Diarrheal diseases (including Cholera acute watery diarrhea (AWD))		Lower availability of water is reducing handwashing and other safe hygiene and sanitation practices. This is likely to increase the spread of infectious disease outbreaks and water-related illnesses. The drought also placed an additional strain on Djibouti's fragile healthcare system. [97] Djibouti has witnessed an annual increase in the cases of AWD, with 7629 cases in 2013 to 37875 in 2023. There are over 700 cases of AWD being reported weekly in 2024.
Non-communicable diseases (NCD)		Djibouti has shown limited progress towards diet-related non-communicable disease (NCD) targets.[98] A total of 20% of adults (aged 18 years and over) women and 10% of adult men are living with obesity. Djibouti's obesity prevalence is lower than the regional average of 20.8% for women but is higher than the regional average of 9.2% for men. At the same time, diabetes is estimated to affect 8% of adult women and 9% of adult men. [99]
Dengue		There have been reports of increased number of dengue cases in 2023 and 2024. There is a favourable environment for mosquito breeding due to climate change.
Protection Risks (including Gender Based Violence)		Domestic and cross-border population movements expose women and girls to higher risks of sexual exploitation and abuse, gender-based violence, child labour, child marriage, and domestic violence.[100] Improving health outcomes is difficult without addressing the entrenched culture and practice of gender inequality, discrimination against women and gender-based violence in its various forms.[101]
Red: **Very high risk**. Could result in high levels of excess mortality/morbidity in the upcoming month. Orange: **High risk**. Could result in considerable levels of excess mortality/morbidity in the upcoming months. Yellow: **Moderate risk.** Could make a minor contribution to excess mortality/morbidity in the upcoming months. Green: **Low risk.** Will probably not result in excess mortality/morbidity in the upcoming months.		

ETHIOPIA: KEY HEALTH RISKS IN COMING MONTHS		
Public health risk	**Level of risk**	**Rationale**
Malnutrition		The nutrition situation in Ethiopia is already alarming as indicated by recent surveys.[102] Malnutrition, coupled with measles outbreaks, pose a high risk of morbidity and mortality amongst children under five years of age[103] The proportion of severely malnourished children with complications had already reached 10.3% as of March 2024, compared to 9.4% registered during the same time last year.[104] Between 19-25 August 2024, a total of 9 566 SAM cases were reported; of these 1 239(13%) were admitted for SAM with medical complications.[105]
Maternal and Child Health Risks		The maternal mortality ratio (deaths per 100 000 live births) in 2017 was 401, while the percentage of births attended by skilled health personnel (2004-2020) was just 50%.[106] However, with the onset of the conflict, the maternal mortality rate has increased fivefold in Tigray.[107]
Malaria		The number of malaria cases so far this year is far exceeding the number of cases reported during the same period in 2023 and is the highest in the past 7 years.[108] Nationally, a total of 5 260 555 confirmed and clinical malaria cases and 956 deaths were reported in 2024, as of 25 August 2024. [109]

		There has been extensive challenges with reporting due to network and security issues especially in conflict affected areas.[110]
Measles		The measles outbreak is worryingly expanding.[111] As of 31 August, there were a total of 27,538 cases with 211 deaths (CFR=0.76) reported in 2024. The outbreak is impacting 14 woredas and active in four regions as of 31 August 2024. The regions with active woredas were Oromia (7), SE (5),Amhara (1) and SWE(1). [112]
Diarrheal diseases (including Cholera acute watery diarrhea (AWD))		Despite positive impact from STOP CHOLERA NOW! campaign led by the Ethiopian Public Health Institute (EPHI), new cholera outbreaks continue to be reported from access-restricted areas in Oromia, Somali, and Amhara.[113] Between August 27, 2022, to July 29, 2024, there were 54 797 cases reported, with 688 deaths (CFR: 1.26%). There are more than 405 woredas affected, with the outbreak active in 68 woredas.[114] The spread of the cholera outbreak is being exacerbated by the flooding, poor sanitation, lack of safe drinking water, and limited humanitarian response.[115]
Meningitis		Between 19-29 August(epi week 34), a total of 2294 suspected meningitis cases were reported.[116] There is a direct correlation between drought and the epidemiology of meningitis.[117]
Protection Risks (including Gender Based Violence)		More than half of women (65%) (aged 15-49 years) consider a husband to be justified in hitting or beating his wife for at least one of the specified reasons.[118] Health experts estimate that between 40 and 50% of women in Tigray experienced gender-based violence (GBV).[119] Health risks associated with GBV include post-traumatic stress disorder, depression, reproductive organ injuries and disorders including urinary incontinence, faecal incontinence, abnormal uterine bleeding, uterine prolapse, chronic pelvic pain, and fistulas.[120] Almost half (40%) of women (aged 20-24 years) are married or in union before age 18.[121]
Mpox		No Mpox cases have been reported in Ethiopia as of August 2024. However, with countries in Eastern Africa affected, including neighbouring country Kenya, the risk of spread to Ethiopia is high. Spread of Mpox in Ethiopia would cause significant morbidity and mortality.
Poliovirus type 2 (cVDPV2)		As of 29 July, there were five new cVDPV2 outbreaks reported from Gambella (2) Amhara (2) and Afar (1) regions.[122] As of May 2023, polio outbreaks were declared by EPHI due to circulating vaccine-derived poliovirus type 2 (cVDPV2) in Tigray (1), Waghemira Zone in Amhara (2), Zone 2 in Afar (1), and Itang Special Woreda in Gambella (2 cases). [123] Poor sanitary conditions coupled with low vaccination coverage rates render polio a potentially high-risk condition. IDPs are particularly at risk, due to the interruption of essential health service in some areas and challenges in implementation of specific strategies in hard to-reach-areas. [124]
Trauma and Injuries		With conflict on-going in Amhara and the recent conflict in Tigray, there are high numbers of many reports of casualties requiring long term care and rehabilitation.[125]
Acute Respiratory Tract Infection		COVID-19 and ARTIs remains a priority public health concern with reports of significant numbers of respiratory tract infections reported in the Tigray region. However, with limited diagnostic capacity, it is difficult to confirm

(including COVID-19)		suspected cases.[126] Notably, childhood acute respiratory infection remains the commonest global cause of morbidity and mortality among under-five children. In Ethiopia, it remains the highest burden of the health care system.[127]
Dengue Fever		The El-Niño driven drought has impacted Ethiopia's summer rains, resulting in conditions for increased transmission.[128] As of 31 August, there were a total of 2 886 cases with zero death reported from Afar, Dire Dawa and Somali regions (for 2024).[129]
Non-Communicable Diseases (NCD)		Access to essential health services has been disrupted in many conflict-affected and flood-affected areas, which means crucial medications for the treatment of NCDs (such as diabetes and hypertension) have been severely impacted.
Tuberculosis (TB)		Among the top 30 high TB burden countries, Ethiopia ranked seventh in the world in 2021.[130] TB is a major public health problem. Disruptions to health systems are impacting services to existing patients.
Mental health		Population displacement, high mortality, living in combat areas and exposure to violence are risk factors for mental health issues. Mental health and psycho-social needs of survivors of gender-based violence is a major gap.
Human immunodeficiency virus (HIV)		Low prevalence of HIV in northern Ethiopia but there are currently severe medication shortages and limited diagnostic testing. This leaves patients exposed to the risk of opportunistic infections.[131]
Scabies		Between 19-25 August 2024, there were a total of 3 260 scabies cases reported. A total of 41% of the scabies cases were reported from most drought affected regions.[132]
Visceral Leishmaniasis		As of 29 July, there were cases of visceral leishmaniasis in SER and Somali regions.[133]
Anthrax		In Ethiopia, anthrax is assumed to be endemic, although laboratory confirmation has not been previously routinely performed.[134] Between 19-25 August 2024, there were 174 suspected Anthrax cases reported from Amhara (153), Tigray (20) and SE (1) regions.[135]
Rift Valley Fever		The viral disease, which affects both animals and humans, was first identified in 1931 during an outbreak of sudden deaths and abortions among sheep along the shores of Lake Naivasha in Kenya's Rift Valley and had caused sporadic outbreaks in other parts of Africa since then.[136] Potential for cross border transmission.
Mpox		In August 2024, the upsurge of mpox in the Democratic Republic of the Congo (DRC) and a growing number of countries in Africa was declared a public health emergency of international concern (PHEIC).[137] To date there are no cases confirmed in Ethiopia.
Red: **Very high risk**. Could result in high levels of excess mortality/morbidity in the upcoming month. Orange: **High risk**. Could result in considerable levels of excess mortality/morbidity in the upcoming months. Yellow: **Moderate risk.** Could make a minor contribution to excess mortality/morbidity in the upcoming months. Green: **Low risk.** Will probably not result in excess mortality/morbidity in the upcoming months.		

KENYA: KEY HEALTH RISKS IN COMING MONTHS		
Public health risk	**Level of risk**	**Rationale**
Diarrheal diseases (including Cholera acute watery diarrhea (AWD))		Kenya has continued to report cholera cases annually in the last five years. In 2024, there were reports of cholera outbreaks that affected five counties: Lamu, Nairobi, Tana River, Siaya, and Isiolo.[138] Damage to WASH facilities with recent flooding, reduced access to health facilities and safe drinking water, and a global shortage of OCV vaccine could see the outbreak spread further.
Leishmaniasis		Leishmaniasis is a critical tropical disease reported in Kenya over the past decades, specifically with outbreaks reported in 2008, 2011, 2013, 2014, 2017 and 2019. In 2024, at least nine people have reportedly died, and over 80 others are seriously ill in Kargi, Marsabit and Mandera East County. Over 5 million people in Kenya are considered at risk of exposure to leishmaniasis, with an incidence rate of 2.96 per 10 000 people.[139]
Acute Respiratory Infection		An outbreak of acute respiratory infection is already ongoing and is expected to increase with the ongoing floods. Mombasa county has been reporting a high number of paediatric admissions from February to April 2024.[140]
Mpox		Five confirmed cases of mpox have been reported to date (Nairobi, Nakuru, Taita Taveta, Busia and Mombasa), with one being locally transmitted. However, due to many inter- and intranational travel movements especially with the countries already affected by the outbreak, there is a high risk of importation and/or further spread of mpox in Kenya.
Malaria		Malaria is a major public health problem in Kenya. Due to altitude, rainfall patterns, and temperature, more than 75% of the Kenyan population is at risk for malaria. The disease accounts for at least 13% of outpatient consultations nationally.[141] Upsurges in malaria morbidity and mortality has recurred during the drought and severe rainy seasons.
Rift Valley Fever		RVF outbreaks are recurrent in Kenya and there have been several RVF outbreaks in the past (1998, 2006-2007, 2014, 2018, 2019, 2021, 2024). The latest outbreak for 2024 affected humans and animals in Isiolo (Ewaso Nyiro), Mandera (Dawa), Marsabit, Wajir and Garissa counties is associated with rivers flooding. [142]
Dengue		Outbreaks of dengue have been common in the country, including in 2024 when multiple counties reported upsurges in numbers. While there is no current outbreak of dengue fever in the country, there are still high chances of recording outbreaks due to the flooding and increase in vector population.
Yellow Fever		Kenya is endemic for yellow fever and is classified as a high-risk country. Previous outbreaks have been reported in 1992, 1993, 1995, 2011 and 2022 in the western part of the country (Rift Valley zone), Isiolo, and Garissa. Epidemic spread of yellow fever is a risk in Kenya as the estimated routine yellow fever vaccination coverage is very low among the target population (7% in 2022) and is limited in scope to four counties in the western part of the country (Baringo, Elgeyo Marakwet, West Pokot and Turkana).[143]
Non-Communicable Diseases (NCD)		In Kenya, NCDs are responsible for more than 50% of in-patient hospital admissions and 39% of all deaths annually. Cardiovascular diseases (CVD) account for most NCD-related deaths in the country. It is also likely that prevalence of NCDs is underestimated, considering the low level of screening.[144]

Malnutrition		About 847 000 children under 5 are estimated to face acute malnutrition by September 2024 (March 2024, IPC). The upcoming lean season, along with flood damage to crops and farmland will have a negative impact on the nutrition situation in the country. Overall, the nutrition situation has improved on country level. However, improvement and recovery has not been uniform across the country and hence some areas remain of very high concern, including Turkana.
Measles		A measles outbreak has persisted since last quarter of 2022, with active cases reported in 13 counties: Garissa, Kilifi, Mombasa, Turkana, Samburu, Meru, Kwale, Wajir, Mandera, Isiolo, Marsabit, Kajiado and Tana River. Due to overcrowding, disruptions in primary healthcare & displacement of populations due to flooding, measles vaccination activities are likely to be hampered.
Mental Health Risks		Despite all the policies and plans, discrimination against people with mental health conditions is systemic and deeply entrenched, including in language used in relation to mental health. The Penal Code uses "imbeciles" and "idiots" when referring to people with mental health conditions.[145]
Maternal and Child Health Risks		Maternal and new-born deaths are a major public health problem in Kenya. Available data have shown that one in six adolescent girls aged 15 to 19 years either becomes pregnant or is already a mother, resulting in over 260 000 teen pregnancies annually. Progress on reducing maternal mortality appears to be slow and persistently higher than the global average, despite efforts by the government's provision of free maternity services in both private and public facilities in 2013.[146]
Typhoid fever		In Kenya, typhoid fever poses a significant public health burden, particularly affecting children and low-income populations. The lack of proper sewage disposal and reliance on unsafe water sources contribute to the spread of the disease. In communities where residents often collect water from contaminated rivers and store it in unhygienic conditions, there is a high risk of typhoid.
Human immunodeficiency virus (HIV) and Tuberculosis (TB)		In 2021, the estimated TB incidence in Kenya was 133 000, and an estimated 32 000 people died from TB related causes. There is an increased risk of HIV transmission among people living in camps, with reports from the ministry indicating instances of unprotected sex among participants in Nairobi.
Poliovirus type 2 (cVDPV2)		A new circulating Vaccine-derived poliovirus 2 (cVDPV2) has been detected in a community child Dagahaley refugee Camp, Dadaab Sub- County in Garissa County. On 21 Feb 2024, one sample was collected from the child and sent to the KEMRI polio laboratory. Further analysis by genomic sequencing at the CDC Atlanta Laboratories confirmed that the virus was circulating vaccine-derived polioviruses type 2. cVDPV2 isolates were also reported from four(4) community healthy children in Turkana West sub county, Turkana County and one (1) environmental sample from Eastleigh C site, Kamukunji sub county in Nairobi County
Chikungunya		In March 2022, an outbreak was reported in Wajir County, Tarbaj sub county in Kutulo village with a total of 297 cases reported with two confirmed cases. In November 2021, Wajir County reported cases of chikungunya from Tarbaj sub-county in Kutulo village.

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SOMALIA: KEY HEALTH RISKS IN COMING MONTHS		
Public health risk	**Level of risk**	**Rationale**
Malnutrition		1.7 million children are estimated to be malnourished, of which 430,00 suffering from severe wasting. There have been improvements in food insecurity and nutrition situation in the country following the return of rains but the ongoing disease outbreaks like cholera and measles are putting children at risk of malnutrition. Due to the projected La Nina, deterioration of nutrition situation is expected in the last quarter of 2024.
Diarrheal diseases (including Cholera acute watery diarrhea (AWD))		Somalia has had uninterrupted AWD/cholera transmission since 2022 and in Banadir region since the drought of 2017.[147] While safe water and proper sanitation can prevent such diseases, 28% of Somali families are estimated to lack a functional sanitation facility while 34% practice open defecation and 80% lack a handwashing facility.[148] Limited WASH facilities, increased risk of water contamination due to recent floods,
Respiratory Infection		Lower respiratory infections are still the leading cause of deaths in Somalia.[149] Care-seeking for children under age five with acute respiratory infections (ARI) in Somalia increased to 22.5% in 2019, up from 13% in 2006.[150]
Maternal and Child Health Risks		Somalia is still one of the most dangerous places for women to give birth. There are still significant inequalities in access to opportunities for mothers and their children to live long and healthy lives based on where they live.[151] Limited access and utilisation of high impact interventions such as antenatal care (ANC), safe birth deliveries by skilled birth attendants and institutional delivery, and a low contraceptive prevalence rate, are believed to contribute to the high maternal mortality in Somalia.[152] More than 80% of new-born deaths are due to prematurity, asphyxia, complications during birth, or infections such as pneumonia, diarrhoea, measles and neonatal disorders.[153]
Malaria		Somalia managed to reduce the prevalence rate of malaria from 20.1% in 2015 to 4.1% in 2023 in the most affected areas by adopting an integrated disease response[154] Somalia also has many people on the move: nomadic communities, internally displaced people, and people entering from the neighbouring countries. This tends to increase the disease prevalence, including malaria, owing to contributing factors such as overcrowded environments, limited access to health care, and lack of awareness. [155]
Dengue		Recurrent outbreaks of dengue reported from Somaliland has resulted in increased illness and death. This also creates a favourable environment for mosquitos following floods.
Measles		Measles is endemic and new cases are reported every year. In 2022, 3509 measles cases were documented between the first of January and the end of March 2022 in the 18 regions of the country.[156] These is limited access to essential health services including immunization, resulting in a high dropout rate for vaccines.
Diphtheria		Low routine immunization coverage, reduced access to essential health services including immunization, high dropout rate for vaccines, weak health system. Increased number of suspected diphtheria cases were reported in 2023 and ongoing outbreak in 2024 with 517 cases reported between 1 January and 21 July 2024.

Poliovirus type 2 (cVDPV2)		Eight cases of cVDPV2 were reported from four provinces in 2023 and two cases reported this year from Gedo and Bay. There is high cross border movements with Kenya and Ethiopia.
Mpox		No mpox cases have been reported in Somalia as of August 2024. However, countries like Kenya have reported four laboratory-confirmed and increased number of suspected cases. There is a moderate risk to Somalia due to cross border movement.
Yellow fever		Countries in the region reported outbreaks of yellow fever including Kenya, affecting two counties in 2022. The vaccine has not been introduced in the routine immunization program yet.
Visceral Leishmaniasis (VL)		The country is endemic for visceral leishmaniasis (VL) and is regarded by WHO as one of the 14 "high burden" countries for VL.[157]
Mental Health		Mental illness is generally highly stigmatized.[158] Somalis acknowledge feelings of hopelessness, despair, anxiety, and anguish as part of their symptomatology, despite not explicitly labelling such experiences and symptoms. The after-effects of trauma among Somalis have also been described in somatic terms, with emphasis on headaches and other unexplained body pains.[159]
Tuberculosis (TB)		TB is a major public health problem in Somalia. TB incidence has reduced from 286 cases per 100 000 population in 2010 to 246 cases per 100 000 population in 2023, a 14% decrease over 14 years.[160]
Protection Risks (including Gender Based Violence)		GBV continues to be an issue of major concern in Somalia, with recent spikes in Intimate Partner Violence, rape, sexual exploitation, sexual harassment, and abuse. In IDP camps and host communities, aggravating factors include inadequate physical infrastructure, distance to services (water points, markets, health facilities and schools), poor lightening, and a lack of suitable WASH facilities. Harmful coping mechanisms such as early marriage and sex in exchange for favours are common among women and adolescent girls to assure food security.[161]

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SOUTH SUDAN: KEY HEALTH RISKS IN COMING MONTHS		
Public health risk	**Level of risk**	**Rationale**
Malaria		In South Sudan, malaria remains a disease of public health significance and a major cause of illness and death, particularly among pregnant women and children under five years of age. [162] It accounts for 66% of outpatient consultations, 50% of admissions and about 30% of deaths. [163] About 8750 malaria cases are reported daily, and about 20 people die of malaria daily in South Sudan - putting the country among the highest malaria incidence in the region.[164]
Malnutrition		Malnutrition is a major health issue for children under five in South Sudan. The country is facing several public health crises, contributing to a high level of acute malnutrition (16%), exceeding the WHO emergency threshold (15%). The main drivers are high food insecurity, diseases, poor hygiene, inadequate maternal and childcare, and environmental sanitation services. Severe acute wasting increases the risk of death by nine times, and 10-20% of children with this condition will develop life-threatening medical complications.[165]
Mpox		No confirmed mpox cases reported in South Sudan as of September 2024. However, with cases confirmed in the neighbouring countries like Kenya, Uganda, DRC and CAR, the risk of spread to South Sudan is high. Spread of Mpox in South-Sudan would cause significant morbidity and mortality due to weak health systems
Maternal and Child Health Risks		In South Sudan, the maternal mortality rate remains one of the world's highest (due mostly to infection, haemorrhage, and obstructed labour). [166] A low perception of risk regarding childbirth and social norms prevents many mothers in South Sudan from using skilled birth attendants, giving birth at a health facility, or seeking antenatal care. [167] South Sudan's coverage rates of vaccination in children have historically been suboptimal, with the third dose of DTP-containing vaccine at 69% 2018-2021, down from a prior peak of 63% in 2012. Similarly, the first dose of measles and third dose of pentavalent vaccination coverage was just 72% and 73% in 2023 respectively. [168]
Diarrheal diseases (including Cholera acute watery diarrhoea (AWD))		South Sudan has suffered from perennial cholera outbreaks with devastating effects on the health, wellbeing, and socio-economic status of the people. Since the 2013 crisis, cholera cases have been reported every year between 2014-2017 in major urban centres such as Juba, in internally displaced populations and cattle camps, flood affected locations, and other locations with inadequate access to safe water, sanitation and hygiene (WASH)[169] The ongoing devastating floods and high influx of refugees and returnees from Sudan conflict put the country at increased risk of water borne diseases including cholera.
Measles		Given the challenging context of the country and the suboptimal immunization coverage, there have been outbreaks of measles[170] Measles outbreaks were reported in several counties in 2023 and 2024 following high refugee influxes from Sudan.
Meningitis		The country is in the meningitis belt, with the risk exacerbated by weak health systems, low routine immunization coverage, access challenges, and significant displacement. In July 2024, a total of 129 suspected cases have been documented, with 23 samples sent to NICD South Africa for confirmation. Of these samples, 21 out of 23 (91.3%) tested positive for bacterial pathogens through PCR analysis but none of the payams had reached the epidemic threshold.

Poliovirus type 2 (cVDPV2)		On 7th of December 2023, South Sudan received a notification of a Polio Virus Type 2 (PV2) in a sample from an Acute Flaccid Paralysis case by Ugandan Virus Research Institute (UVRI). The Ministry of Health declared the cVDPV2 as a public health emergency on December 22, 2023. 11 polio cases and 5 positive environmental samples were reported by August 2024. Conflict and insecurity continued to pose challenges in access to essential health services including immunization.
Hepatitis E		An outbreak was declared in Rubkona County in Unity State since 2018 and still being reported in Bentiu IDP camp. In 2024, Fangak County in Jonglei and Wau County in Western Bahr el Ghazal State reported Hepatitis E cases, and a new outbreak was reported from Abyei Administrative Area in July 2024[171][172]. By August 2024, some 5786 cases reported including 30 deaths since the outbreak began in 2018. There is no cure for hepatitis E and 70 000 people die from the disease each year globally.[173]
Non-communicable Diseases (NCD)		South Sudan has a high burden of NCDs, making up 28% of deaths in 2019.[174] The age-standardised mortality rate across four major NCDs (Cardiovascular Disease, Chronic Respiratory Disease, Cancer and Diabetes) was 531 per 100 000 in males and 443 in females in 2019 (increasing from 513 and 433, respectively, in 2015). [175]
Mental Health Risks		South Sudan is a country affected by a long civil war that left many people affected by trauma and mental health conditions. The impact of trauma and mental health is an unresearched area within the South Sudanese population, with limited data available.[176]
Ebola (EVD)		South Sudan is bordering DRC and Uganda, where EVD has been reported in recent years.
Visceral Leishmaniasis		Recently, an outbreak of visceral leishmaniasis was declared in East Africa (Kenya and Ethiopia), putting South Sudan at risk.
Anthrax		Since January 2024, outbreaks were reported from four counties in two states (Warrap and Western Bahr el Ghazal). A total of 133 cases, including three deaths, were reported as of 22 August 2024.[177] This outbreak could be related to inadequate vaccination of livestock against anthrax, increasing the likelihood of outbreaks.
Protection Risks (including Gender Based Violence)		Studies indicate that 65% of women and girls have experienced physical and/or sexual violence in their lifetime, and some 51% have suffered intimate partner violence (IPV). Some 33% of women have experienced sexual violence from a non-partner, primarily during attacks or raids. Many girls and women experience sexual violence for the first time under the age of 18.[178]
Human immunodeficiency virus (HIV) and Tuberculosis (TB)		Tuberculosis treatment coverage has progressively increased since 2015, with an 82% treatment success rate. The estimated burden is 227 TB cases per 100,000 in 2021. The mortality rate of TB cases (all forms, excluding HIV coinfection) has reduced since 2015, from 54 to 28 per 100 000 population in 2021, and the TB mortality rate among HIV-positive people has fallen from 13 to 8.5 in the same period. A total of 77% of people living with HIV who know their status are on treatment. There is limited data on the number of people living with HIV and on treatment who are virally suppressed. Approximately 47 440 people were receiving antiretroviral treatment in 2021.[179]

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SUDAN: KEY HEALTH RISKS IN COMING MONTHS		
Public health risk	**Level of risk**	**Rationale**
Trauma and injury		The security situation in Sudan remains highly volatile, characterised by ongoing armed conflict, criminal activities and communal tensions.[180] More than 18 800 people have been killed and over 33 000 injured since the conflict broke out in April 2023 according to humanitarian partners.[181] Access to trauma care is impeded by a lack of access to hospitals, and an urgent need for access to trauma kits.
Malnutrition		Sudan has one of the highest rates of child malnutrition worldwide.[182] A stark and rapid deterioration of the food security situation has been reported, and 54% of the population (25.6 million) in the country is classified as IPC 3 or above. This includes 755 000 people (2% of the population) categorized as IPC 5 (Catastrophe).[183] Furthermore, famine conditions are confirmed to be prevalent in parts of North Darfur, notably the Zamzam IDP camp, south of El Fasher.[184]
Measles		The current measles outbreak began in 2023, and as of 9 August 2024, 5462 cases have been reported from 14 states, with likely more cases in hard-to-reach (non-reporting) areas. A total of 119 deaths have been reported from nine states, for a case fatality rate (CFR) of 2.2%. There is low immunization coverage, particularly in hard-to-reach areas. The risk of measles outbreaks will be particularly high for mobile populations including IDPs, refugees, and any others in camp settings. This risk is further exacerbated by limited access to vaccination.
Cholera		A new cholera outbreak in Kassala and other states was officially declared on 12 August 2024, and the cumulative number of cases and deaths has reached nearly 2700 and 120, as of the end of August 2024.[185] The previous cholera outbreak started in June 2023 and was officially declared in September 2023. As of 12 July 2024, a total of 11 241 cases had been reported from 12 states. The weekly reported cases peaked in epidemiological week 49 at the end of last year, with over 1468 cases from 2 to 8 December 2023, followed by a declining trend. A total of 323 deaths had been reported from 11 states, for a CFR of 2.8%.[186] The previous outbreak had unofficially ended before the present one began (more than two incubation periods without a case).
Malaria		Malaria accounts for around 20% of total outpatient consultations.[187] Since the beginning of 2023 and as of 9 August 2024, 1 736 841 cases have been reported from 15 states. A total of 177 deaths have been reported from seven states, for a CFR of 0.01%.[188] Malaria has remained stagnant on the list of the top ten causes of illness, and it remains a substantial health problem and national health priority.[189]
Dengue Fever		Dengue remains a major health burden in the country. From 17 July 2023 through 23 August 2024, 9484 cases have been reported from 12 states. The weekly reported cases peaked between 7 and 13 October 2023, with over 700 cases, followed by a declining trend. A total of 75 deaths have been reported from nine states, for a CFR of 0.79%.[190]
Non-communicable Diseases (NCD)		NCDs contribute to over half of all mortalities in Sudan, with specifically high burdens such as rheumatic heart disease, hypertension, and diabetes.[191] Data from the NCD Progress Monitor showed that the percentage of NCD-related mortality had increased from 32% in 2015 to 54% in 2022.[192]

		The current conflict has disrupted essential services and supplies of medicine. Insulin has been identified as an urgently needed medical supply.[193] Access to haemodialysis remains a challenge for patients with chronic kidney disease and acute kidney injury.
Mental health		Sudan's civil wars have been linked to an increase in mental health conditions such as depression and post-traumatic stress disorder (PTSD), particularly among children and women. [194] No national prevalence study has been conducted, but higher rates of psychiatric disorders have been found among internally displaced persons (53%). [195] Many communities throughout Sudan use traditional and religious healers to help meet their mental health needs. [196]
Acute Respiratory Tract Infections (ARTI)		Viral: Among the viral ARTI, SARS-CoV-2 transmission may be somewhat exacerbated by crowded conditions due to displacement. Increased mortality and morbidity may occur among severe cases due to a lack of access to oxygen and other lifesaving care caused by the conflict. [197] As of March 2023, there had been 63 829 cases reported in Sudan, with 5017 deaths.[198] Bacterial: Due to the conflict, the vaccination coverage remains low in most areas of the country. *Haemophilus influenzae* type b (Hib), pneumococcal and pertussis put disease burdens high, particularly among children. Hib can cause pneumonia, sepsis and meningitis. Pneumococci are a commensal host of the nasopharynx, with carriage prevalence often ranging between 50-80% in children, occasionally leading to pneumonia and more rarely sepsis and meningitis. Pertussis risk of disease and severity is highest among young infants. There have been reports of suspected pertussis outbreaks in Darfur in the period of May-August 2024.
Acute enteric diseases, including typhoid and rotavirus		Acute enteric diseases are a leading cause of morbidity and mortality in Sudan, particularly in Darfur in the current context. Examples include rota virus and typhoid. Poor water, sanitation and hygiene (WASH), coupled with susceptible populations due to disrupted vaccination campaigns, remains a risk. Typhoid fever is still a major public health issue in Sudan, notably in communities with limited healthcare systems, with a high percentage of the population living in unhygienic environments, and don't have access to safe water.[199] Since the escalation of violence on 15 April 2023 through 9 August 2024, a total of 228 303 cases have been reported across 15 States. In addition, although based on the EPI schedule in Sudan, the Rotavirus 1-valent (RV-1) vaccine is administered at six, 10 and 14 weeks, the vaccination remains suboptimal after the onset of the conflict.
Protection Risks (including GBV)		Reports of the numerous incidents of conflict-related sexual violence perpetrated by parties to the conflict, sexual slavery and trafficking, child and forced marriage, and the recruitment of boys by armed forces have increased since December 2023. [200] Many incidents may go unreported due to poor communications, lack of access to services and community stigma. [201]
Poliovirus type 2 (cVDPV2)		In January 2024, a new strain (SUD-RED-1) of circulating vaccine-derived poliovirus type 2 (cVDPV2) was isolated from environmental samples collected from the Port Sudan district of Red Sea state in Sudan;[202] it was detected in six wastewater samples collected from September 2023 to March 2024. [203] The risk at the national level is assessed as high given the massive conflict within the country, sub-optimal surveillance system, disrupted vaccination, and concurrent health emergencies. [204]

Maternal and neonatal health		More than one million women in Sudan are pregnant and in need of immediate and continuous access to essential reproductive health services. The collapse of maternal services in Khartoum and in many parts of Sudan left thousands of Sudanese pregnant women without basic maternal health services.[205] Given the high rates of female genital mutilation (FGM) in Sudan, where 87% of women females aged 15–49 years have undergone the practice[206] and 50% of them have been infibulated, women face increased maternal and neonatal health risks due to lack of access to de-infibulation during childbirth.
Chronic infectious diseases (TB/HIV)		For all chronic infectious diseases, interruption of treatment is likely given the ongoing conflict. This is exacerbated by a current lack of diagnostic capacity and medication.
Hepatitis B		Recent evidence classifies Sudan among countries with a high hepatitis B virus infection (prevalence ≥ 8% according to WHO 2016 data).[207] Increased risk may occur in a context of gender-based and sexual violence, and higher severity in the absence of access to healthcare for infections resulting in severe acute hepatitis.
Hepatitis E		There has been an ongoing hepatitis E outbreak in the country since 2021. As of 14 April 2023, a total of 2 884 suspected cases (AR 0.51/1,000) including 24 associated deaths (CFR 0.83%) had been reported.[208] Since the escalation of violence on 15 April 2023 through 9 August 2024, a total of 573 cases have been reported across nine States. There is a risk of increase in cases, given issues with access to clean water, sanitation, and hygiene products.[209]
Mpox		The total reported suspected mpox cases between 1 January 2022 and 4 April 2023 reached 378: this included 19 confirmed cases and one associated death. In total, 38 localities from 13 States reported suspected cases and 11 localities from six states reported 19 confirmed cases.[210] There are no confirmed cases from Sudan in 2024, although two suspected cases have been identified in Central Darfur and Khartoum states.[211] The first suspected case was reported on 18 July 2024 from Central Darfur for child who had recently travelled from Chad. However, details are still pending. The second suspected case was reported from Khartoum State. The case is a 2-year-old male presented with fever and skin rash starting on 10 August 2024. He admitted to the hospital on 17 August 2024 and received the treatment. A skin lesion specimen was collected, and blood serum is pending for transport to Port Sudan for PCR testing, as the initial RDT was negative.
Meningitis		Worldwide, the incidence of meningitis is highest in the African meningitis belt, which includes Sudan; in the meningitis belt, at least 350 million people are at risk for meningitis during annual epidemics. Between 15 April 2023 and 9 August 2024, 155 cases were reported from 10 states, with 20 associated deaths from six states (CFR 10.4%); these are recorded as 'viral meningitis' but it is not clear that none of these have been meningococcus, as there is not systematic testing. The vaccination remains suboptimal after the onset of the conflict, and the availability of antibiotics for bacterial meningitis remains limited.
Diphtheria		Pre-conflict in 2022, diphtheria was considered one of the high-risk hazards facing Sudan.[212] Although routine DTP vaccination is part of the Expanded Programme on Immunization (EPI), there are still reported cases and outbreaks of diphtheria across the country.[213] The most recent outbreak occurred in 2019 with 105 reported cases, with most cases coming from one locality in South Darfur state.[214]

		Since the escalation of violence in April 2023 through 9 August 2024, a total of 26 cases of diphtheria have been reported from three states, although surveillance is very limited. The availability and access to treatment (e.g., anti-toxin) remains challenging.
Yellow Fever		Sudan belongs to the yellow fever zone, and large epidemics were reported in Sudan in 1940, 1959, 2003, 2005, 2012 and 2013. Sudan conducted a yellow fever risk assessment exercise in early 2013 and confirmed that the yellow fever virus was circulating in all parts of the country. Also, there have been reports of laboratory confirmed cases from surrounding countries (e.g., Chad in October 2023, South Sudan in December 2023) as well as suspected cases, and there remains a risk of transmission that needs to be addressed with vector control.
Technological and environmental health risks		In April 2023, WHO officials initially believed it was extremely dangerous when one side in the conflict seized the National Public Health Laboratory and asked technicians to leave.[215] However, according to the WHO Rapid Risk Assessment that followed, all pathogens present in the laboratory were already present in the community, so there was little risk of major community outbreaks due to leak of samples from the lab.[216]
Red: **Very high risk**. Could result in high levels of excess mortality/morbidity in the upcoming month. Orange: **High risk**. Could result in considerable levels of excess mortality/morbidity in the upcoming months. Yellow: **Moderate risk.** Could make a minor contribution to excess mortality/morbidity in the upcoming months. Green: **Low risk.** Will probably not result in excess mortality/morbidity in the upcoming months.		

UGANDA: KEY HEALTH RISKS IN COMING MONTHS		
Public health risk	**Level of risk**	**Rationale**
Malaria		Malaria remains a public health problem in Uganda, with an estimated 12.4 million cases in 2021 (with incidence rate of 211 cases per 1000 people) and resulting in 3547 deaths. The country is off-track to meet the Global Technical Strategy for Malaria targets as the incidence rate per 1 000 population has increased since 2015, widening the gap between the targets and the actual incidence rate.[217] Malaria is one of the top cause of morbidities both in outpatient and inpatient level.
Diarrheal diseases (including Cholera acute watery diarrhoea (AWD))		The first cholera outbreak in Uganda occurred in 1971 and since then the country has continued to report cholera cases. In the last two decades, Uganda reported cholera outbreaks almost every year.[218] This year, total of 57 cases of acute of acute watery diarrhoea were reported from Kyotera district following heavy rains and flooding in April and May 2024. The cases were investigated for cholera, but no outbreak was declared by the MoH.
Mpox		As of 12 September 2024, 11 mpox cases have been confirmed in five districts of Uganda. Measures are in place to prevent further spread. However, with neighbouring countries Kenya, CAR and Rwanda affected, there is a high risk of reintroduction and further spread of mpox.
Ebola (EVD)		On 20 September 2022, Uganda declared an Ebola disease outbreak caused by the Sudan ebolavirus species, after the confirmation of a case in Mubende district in the central part of the country. It was the country's first Sudan ebolavirus outbreak in a decade.

		In total during this outbreak, there were 164 cases (142 confirmed and 22 probable), 55 confirmed deaths and 87 recovered patients. On 11 January 2023, Uganda declared the end of the outbreak.[219]
Measles		Uganda has registered measles outbreaks in more than eight districts/cities across the country since January 2024. The Ministry of Health conducted a rapid measles risk assessment which revealed that an estimated 41 districts are at high risk of measles, an additional 73 districts are considered at moderate risk of measles and other vaccine preventable diseases. This is a threat to the current progress Uganda has made to stop measles in the country.[220] Recently, an outbreak has been reported in three districts (Moroto, Kibuku and Sembabule) with 272 suspected cases and 6 deaths reported. Moreover, areas bordering with Kenya also reported an increased number of measles cases due to low immunization coverage and increased cross border movements.
Maternal and Child Health Risks		Uganda has improved its child survival rates between 2015 and 2021; however it is not yet meeting the SDG targets for neonatal or under-five mortality rates.[221] The under-5 mortality rate has fallen from 56 to 42 per 1000 live births between 2015 and 2021, it is still above the SDG target of 25 per 1000 live births. Similarly, neonatal mortality fell from 22 to 19 per 1000 live births in the same period, although it remains above the SDG target of 12.[222]
Non-communicable diseases (NCD)		There is also a growing burden of NCDs including mental health disorders.[223] NCDs made up 36% of deaths in 2019.[224] The age-standardised mortality rate across four major NCDs (Cardiovascular Disease, Chronic Respiratory Disease, Cancer and Diabetes) was 709 per 100,000 in males and 506 in females in 2021.[225]
Human immunodeficiency virus (HIV) and Tuberculosis (TB)		Uganda's burden of disease is dominated by communicable diseases, which account for over 50% of morbidity and mortality. Malaria, HIV/AIDS, TB, and respiratory, diarrhoeal, epidemic-prone and vaccine-preventable diseases are the leading causes of illness and death.[226] High TB burden especially in Karamoja region. 1.2 million people were receiving antiretroviral treatment in 2021 in Uganda. Steady progress has been made in reducing HIV and TB mortality and the country is close to achieving the 95-95-95 goals for HIV, achieving 89-92-95 in 2021.[227]
Malnutrition		More than one third of all young children – 2.4 million – are stunted. Half of children under five and one quarter of child-bearing-age women are anaemic. Women tend to get pregnant when young and have low birth-weight babies, which predisposes children to malnutrition. Repeated childhood infections such as diarrhoea and low breastfeeding rates also lead to wasting and stunting.[228] In Karamoja region, 112 000 children are estimated to be acutely malnourished with 22,000 to be severe by February 2025.[229]
Rift Valley Fever		Reports of outbreaks in 2023 and 2024. 14 suspected cases with seven lab confirmed were reported from Mbarara district as of 21 June 2024.[230]
Anthrax		Recurrent outbreaks in several districts across the country reported in the last two years. A total of 91 suspected cases (8 lab- confirmed) were reported from Amudat district between 1 January and 16 July 2024.
Mental Health Risks		Mental, neurological and substance use disorders are a major public health burden. Depression, anxiety disorders, and elevated stress levels are the most common, sometimes leading to suicide attempts. Uganda is ranked among the top six countries in Africa in rates of depressive disorders, while 2.9% live with anxiety disorders.[231]

Protection Risks (including Gender Based Violence)		In Uganda, GBV remains widespread, with 51% of adolescents (15–19 years) reportedly experiencing physical violence since age 15. 22% of women aged 15–49 years reported to have experienced sexual violence since the age 15. Experience of violence is more likely to occur as women age; among divorced, separated, or widowed women; employed women; women living with a disability; those living in rural areas; uneducated women; or women living in households with low socio-economic status.[232]

Red: **Very high risk**. Could result in high levels of excess mortality/morbidity in the upcoming month.
Orange: **High risk**. Could result in considerable levels of excess mortality/morbidity in the upcoming months.
Yellow: **Moderate risk.** Could make a minor contribution to excess mortality/morbidity in the upcoming months.
Green: **Low risk.** Will probably not result in excess mortality/morbidity in the upcoming months.

DETERMINANTS OF HEALTH

Maternal and Newborn Care Health Risks

Despite interventions, preventable maternal deaths in Africa remain high, majorly caused by complications such as haemorrhage, eclampsia, sepsis, and delivery complications. [233] The main causes of maternal mortality in Africa are eclampsia and haemorrhage. [234] Institutional delivery is vital, as childbirth facilitated by trained healthcare professionals can significantly reduce maternal mortality. However, systemic issues like staffing shortages, accessibility, and service quality seriously challenge many regions.[235]

A summary of maternal and new-born care health indicators are displayed below (data is the most recently available, from various years):

MATERNAL AND NEWBORN HEALTH INDICATORS[236]	Djibouti	Ethiopia	Kenya	Somalia	South Sudan	Sudan	Uganda	Source
Postnatal care for mothers – percentage of women (aged 15-49 years) who received postnatal care within 2 days of giving birth (Female)	54%	34%	53%	11%	8%	27%	54%	UNICEF/ PAPFAM 2012(for Djibouti)
Antenatal care 4+ visits – percentage of women (aged 15-49 years) attended at least four times during pregnancy by any provider (Female)	24%	43%	59%	24%	31%	51%	57%	UNICEF
Skilled birth attendant – percentage of deliveries attended by skilled health personnel (Female)	87%	50%	70%	32%	40%	78%	74%	UNICEF
C-section rate – percentage of deliveries by caesarean section	8%	2%	9%	2%	1%	9%	6%	UNICEF

Infant and Young Child Feeding Practices

Infant and young child feeding (IYCF) practices directly affect the health, development and nutritional status of children less than two years of age and, ultimately, impact child survival. Improving IYCF practices in children 0–23 months of age is therefore critical to improved nutrition, health and development. [237] A summary of breastfeeding related indicators is displayed below (data is the most recently available, from various years):

NUTRITION INDICATORS[238]	Djibouti	Ethiopia	Kenya	Somalia	South Sudan	Sudan	Uganda	Source
Early initiation of breastfeeding	52%	72%	62%	60%	51%	69%	66%	UNICEF
Exclusive breastfeeding (0-5 months)	12%	59%	61%	34%	45%	55%	66%	UNICEF

Protection Risks

Gender Based Violence (GBV): Food insecurity and hunger places additional stress on households, which can contribute to negative coping strategies, and reduce likelihood of conception during seasonal periods of hunger. Influenced by these factors, food security has been associated with increased levels of intimate partner violence. [18] Displacement and travelling long distances to access safe waters sources can expose women and girls to increased risks of gender-based violence (GBV). [239]

Due to the multiple shocks affecting Ethiopia, the population in several areas of the country was exposed to severe protection risks, especially those in conflict zones. Health experts estimate that between 40 and 50% of women in Tigray experienced gender-based violence (GBV), with more than 80% of those having been raped, and nearly 70% of those having been gang raped.[240]

According to the Sudan GBV sub-cluster, since 15 April when the armed conflict started in Sudan between the Sudanese army and the Rapid Support Forces (RSF), the number of people in need of GBV services increased from over 1 million to 4.2 million. Most at-risk groups are internally displaced persons (IDPs) fleeing from one state to another. Displaced women and girls are at very high risk of sexual violence and exploitation. In more than 90% of the localities across Sudan, GBV services are unavailable.

Child Protection: Children in the Horn of Africa are facing multiple protection concerns, such as safety in new resettlement sites, fear of exploitation, increased social tensions and violence stemming from changes in gender roles due to the loss or injury of male family members.[241] A summary of key protection indications is displayed in the below box (data is the most recently available, from various years):

CHILD PROTECTION INDICATORS[242]	Djibouti	Ethiopia	Kenya	Somalia	South Sudan	Sudan	Uganda	Year	Source
Percentage of women (aged 20-24 years) married or in union before age 18	6%	40%	23%	45%	52%	34%	34%	2022	UNICEF
Percentage of children (aged 5-17 years) engaged in child labour (economic activities and household chores)	n/a	45%	n/a	n/a	n/a	18%	18%	2022	UNICEF
Percentage of children (aged 1-14 years) who experienced any physical punishment and/or psychological aggression by caregivers	n/a	n/a	n/a	n/a	n/a	64%	85%	2022	UNICEF
Percentage of girls and women (aged 15-49 years) who have undergone female genital mutilation (FGM)	90%	65%	15%	99%	n/a	87%	0%	2022	UNICEF

Mine Risks: While Djibouti achieved 'mine safe' status in 2004,[243] Uganda completed mine clearance operations in November 2012.[244] In Kenya, mines are only a small recurring problem in the Kenya-Ethiopia border area.[245] However, the other countries in the GHoA are significantly impacted with a summary provided below:

- **Ethiopia**: Following a series of internal and international armed conflicts throughout its history, Ethiopia has a legacy of landmines scattered throughout the country, with unaddressed contamination totalling 726 square kilometre.[246] The outbreak of conflict in Tigray, Afar and Amhara has added new explosive ordnance contamination that poses an immediate threat to life and livelihoods.[247] According to data collected in 2023, 1 500 (1014 male and 486 female) victims of Explosive Ordnance have been reported in Northern Ethiopia, although not all cases have been verified. It is believed that many other accidents go unreported. Initial analysis shows that children make more than 25% of all casualties known.[248]
- **Somalia**: Landmines and explosive remnants of war (ERW) contaminate several regions of south-central Somalia including Galmudug, Hirshabelle, Jubaland, and South-West states; as well as Puntland and Somaliland.[249] From 1999–2022, there were 3495 casualties (1 376 killed; 1 766 injured; and 353 with an unknown survival outcome) in Somalia.[250]
- **South Sudan**: As of 2017, there were 1 368 killed and 3 609 injured because of 4 977 landmine mine and unexploded remnants of war (ERW). The UN Mine Action Service (UNMAS) reported that there is no formal data collection system in place in the Republic of South Sudan and such a system is unlikely to be developed due to the considerable humanitarian problems faced in the country. The mine/ERW casualty figures, particularly those in more recent years, are substantially unreliable and most likely significantly underestimate the problem.[251]
- **Sudan**: The widespread use of conventional weapons including field artillery, mortars, air-dropped weapons and anti-aircraft guns has left copious unexploded ordnance (UXO) in Khartoum and other urban areas.[252] In January 2024, for the first time since the conflict began, civilian deaths were reported to have been caused by landmines. On 21 January, 10 civilians were reportedly killed when their bus ran over a landmine in River Nile state.[253]

HEALTH SYSTEMS STATUS AND LOCAL HEALTH SYSTEM DISTRIBUTIONS

Health system status

The health systems across the seven GHoA countries face significant challenges, including severe shortages of healthcare workers, poor distribution of health services, and heavy reliance on out-of-pocket payments for medical care. Rural and remote areas are particularly underserved, with notable disparities in accessibility. Many countries, such as South Sudan and Somalia, rely heavily on external funding and NGOs for basic healthcare services, while conflict and economic instability further exacerbate the fragility of health systems, as seen in Sudan.

A summary of the 2021 Universal health coverage (UHC) index report is provided in the below box on each of the GHoA countries.[254]

Country	UHC index [255]	Summary of health system status
Djibouti	44%	Djibouti's health service, largely provided by the public sector, is free of charge to its population regardless of social status and is relatively accessible. 11.2% of total government expenditure is spent on health (2010). [256] However, there are disparities in accessibility between urban and rural areas and of the nomadic population.[257]
Ethiopia	35%	Assessment of the health services in Ethiopia is hampered by a lack of credible data, including outdated population with the last census conducted as way back as 2007. This has made it difficult to establish the number of healthcare facilities and medical staff per given population size.[258] Since 2020, the country has faced consecutive challenges to public health service delivery and overall health security. There were continued weaknesses in systems for emergency preparedness, operations, and financing.[259]
Kenya	53%	Kenya is characterised by facing an acute shortage of health workers. In addition, poor distribution and retention of health care workers remains a serious concern. The high cost of healthcare remains a major barrier to access, especially for the poor who spend a large share of their household income to meet their healthcare needs. Health information systems are challenged by a lack of complete and accurate health data.[260]
Somalia	27%	The healthcare system grapples with significant challenges in meeting the diverse health needs of its population.[261] The healthcare workforce in Somalia is unevenly distributed, with a heavy focus on urban areas, leaving rural and remote communities underserved. Healthcare financing in Somalia presents several complex issues, with a significant proportion of healthcare cost covered through out-of-pocket payments by individuals. International comparisons reveal that per capita expenditure on healthcare in Somalia is notably low.[262]
South Sudan	34%	South Sudan, the youngest nation globally, has struggled to provide access to good quality health services to its people.[263] This is due to a major dearth of health care workers, non-functional supply chain management system for essential medicines and medical supplies, weak health coordination and oversight system which limits access to basic healthcare services.[264] Furthermore, the less than 3% of its GDP which is allocated to the health sector and out of pocket spending on health of over 50% is inadequate to fund healthcare services delivery in the country. Thus, most of the available health care services are primarily provided by national and international non-governmental organizations (NGOs) which are largely funded externally.[265]
Sudan	44%	Due to the conflict, as of February 2024, about 65% of the population lacked access to healthcare according to OCHA .[266] Healthcare in Sudan also heavily relied on Khartoum, as almost 80% of health services were based in the city, meaning it affected the entire system when Khartoum's healthcare was debilitated. This direct effect of the conflict, which has affected both civilians and infrastructure, has further eroded the stability of the system.[267] Due to the crisis and the rapid devaluation of the Sudanese Pound, funds

		for operating expenses and running costs (fuels and electricity) for health structures are scarce and salaries are not paid regularly, affecting the delivery of health services.[268]
Uganda	49%	The major challenges affecting the health system are the lack of resources to recruit, deploy, motivate and retain human resources for health, particularly in remote localities; ensuring quality of the health care services delivered; ensuring reliability of health information in terms of the quality, timeliness and completeness of data; and reducing stock-out of essential/tracer medicines and medical supplies. [269] The emergence of antimicrobial resistance due to the rampant inappropriate use of medicines and irrational prescription practices and the inadequate control of substandard, spurious, falsely labelled, falsified or counterfeit medicines are also key problems in the sector. [270]

Attacks on health care

Attacks on health care facilities interrupt the effectiveness of response efforts. There is currently information on attacks against healthcare for Somalia, South Sudan and Sudan. Between 1 January 2023 and 29 August 2024, there were 104 verified attacks on health care reported, resulting 153 deaths and 136 injuries. A summary of these attacks is below:

- **Sudan**: 99 attacks (68 impacted facilities, 42 personnel, 35 supplies, 12 transport & 27 patients while 15 impacted warehouses). Of these attacks, 99% of attacks on health care reported following the outbreak of conflict in April 2023.[271]
- **Somalia**: 3 attacks (2 impacted facilities, personnel and supplies, 1 impacted transport).[272]
- **South Sudan**: 2 attacks (2 impacted personnel, 1 impacted facility, supplies and transport).[273]

Countries	Registered attacks on health care in Somalia, Sudan, and South Sudan (1 January 2021 to 29 August 2024) [274]											
	Attacks				Deaths				Injuries			
	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Somalia	1	1	3	0	0	48	0	0	0	3	10	0
South Sudan	13	9	2		24	11	0		35	33	8	0
Sudan	29	23	65	34	4	7	38	115	38	4	45	73
TOTAL	**43**	**33**	**70**	**34**	**28**	**66**	**38**	**115**	**73**	**40**	**63**	**73**

HUMANITARIAN HEALTH RESPONSE

Global Health Cluster: Of the countries in the GHoA, there are four with UN coordinated Humanitarian Response Plans (HRP). As part of these plans, the Global Health Cluster people in need (PiN), target and funding details for Ethiopia, Somalia, South Sudan and Sudan are summarised below (information to date as of 27 August 2024):

Country	Health Cluster PiN	Health Cluster Target	Health Cluster Requirements (US$)	Coverage (US$)
Ethiopia	16.4 million	6.7 million	303 million US$	24%[275]
Somalia	6.6 million	3.8 million	197 million US$	47%[276]
South Sudan	6.3 million	3.2 million	128 million US$	68%[277]
Sudan	15.5 million	4.9 million	178 million US$	70%[278]

Health Cluster Partners Presence: Four countries in the GHoA region (Ethiopia, Somalia, South Sudan, and Sudan) have established cluster coordination systems, including the health cluster. WHO leads 26 sub-national health cluster hubs under the national cluster in these countries, providing coordination, guidance, and technical assistance during crises. As of 30 June 2024, 310 health partners are operational, with the highest number located in South Sudan. Most of the health cluster partners in the four countries are national NGOs (38%) followed by international NGOs (35%), donors (10%) and UN agencies (8%).[279]

Country	Health Cluster Sub-National Hubs[280]	Number of partners [281]
Ethiopia	10	71
Somalia	5	52
South Sudan	10	106
Sudan	1	81
TOTAL	**26**	**310**

Funding Shortages: Despite the need for scaling up and sustaining the humanitarian assistance in the region, partners continued to face funding shortages resulting in interruption of the service provision and scaling down some of their activities. With the presence of multiple disease outbreaks and an increased number of people in high level of acute food insecurity and malnutrition, more funding is needed for partners to be able to reach the people in need and contribute to the reduction of morbidity and mortality in the region.

INFORMATION GAPS / RECOMMENDED INFORMATION SOURCES		
	Gap	**Recommended tools / guidance for primary data collection**
Health status and threats	Lack of an integrated nutrition and disease surveillance systems in most of the countries	Integration of systems in place and standardization across countries
	Insufficient cross-border disease surveillance	Strengthen regional surveillance capacity and work closely with regional offices, IGAD and partners
	Limited information on mortality data (disease, nutrition)	Facility-based mortality surveillance, mortality study
Health system needs	Limited information on attacks on health care from countries in the region	Use of WHO SSA
Health response coordination	Limited inter-sectoral coordination and collaboration	Joint inter-sectoral mapping and performance evaluation/assessment at the national and regional level, Joint product on response activities
	Inadequate information on partner's presence, reporting and information sharing	Cluster coordination mechanism, partner's mapping (3W/4W/5W) matrix
	Information on quality of humanitarian health services provided to beneficiaries (accountability to affected populations)	Beneficiary satisfaction survey
Availability / functionality of health resources	Lack of adequate information on health services availability and functionality	Establish HeRAMS across the GHoA region, use of existing systems in place

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FOOTNOTES

[1] IGAD Regional Focus of the 2024 Global Report on Food Crises (22 August 2024) IGAD Regional Focus of the 2024 Global Report on Food Crises - ICPAC
[2] FSNWG, Food Security and Nutrition Working Group, 29 August 2024
[3] FAMINE IN SUDAN: IPC Famine Review Committee Confirms Famine Conditions in parts of North Darfur | IPC - Integrated Food Security Phase Classification (ipcinfo.org)
[4] WHO (11 March 2024) Greater Horn of Africa Food Insecurity and Health Snapshot as of 31 January 2024
[5] UNHCR(31 July 2024), Refugees, returnees and internally displaced persons in the IGAD region as of 31 July 2024
[6] IOM (August 2024), DTM Sudan Mobility Update (06)[EN]
[7] UNHCR(31 July 2024), Refugees, returnees and internally displaced persons in the IGAD region as of 31 July 2024
[8] WFP, Regional Bureau for Eastern Africa floods update #1 (15 May 2024)
[9] ECHO (Feb 2024), EU provides initial €171 million in humanitarian aid for Greater Horn of Africa region
[10] OCHA South Sudan, Flooding Situation Flash Update (29 August 2024),
[11] OCHA Sudan, Humanitarian impact of heavy rains and flooding Flash Update (25 August 2024)
[12] WFP (17 May 2024), Regional Bureau for Eastern Africa floods update #1 (15 May 2024)
[13] WHO (7 May 2024) Greater Horn of Africa Food Insecurity and Health Snapshot as of 31 March 2024
[14] WHO (30 May 2024), Public Health Situation Analysis: Greater Horn of Africa - as of 31 December 2023
[15] WMO (Feb 2024), Greater Horn of Africa is forecast to get above-average rainfall - March to May 2024
[16] WWA, Urban planning at the heart of increasingly severe East African flood impacts in a warming world
[17] ICPAC (August- October 2024), Rainfall probabilistic forecast Seasonal forecast - ICPAC
[18] WHO (11 March 2024) Greater Horn of Africa Food Insecurity and Health Snapshot as of 31 January 2024
[19] UN News (April 2024), UN officials urge swift action to tackle El Niño-induced extreme weather
[20] Food Security and Nutrition Working Group (FSNWG) La Nina alert(2 August 2024)
[21] UNHCR (31 July 2024), Regional Dashboard RB EHAGL: Refugees, returnees and internally displaced persons in the IGAD region
[22] Eastern Africa | IPC - Integrated Food Security Phase Classification (ipcinfo.org))
[23] OCHA, Ethiopia HRP 2024 | Humanitarian Action
[24] OCHA (14 March 2024), The Greater Horn of Africa: Humanitarian Key Messages (February 2024)
[25] OCHA (2024), Humanitarian Action, available at: https://humanitarianaction.info/ [accessed 27/8/24]
[26] IGAD Regional Focus of the 2024 Global Report on Food Crises (22 August 2024) IGAD Regional Focus of the 2024 Global Report on Food Crises - ICPAC
[27] IPC South Sudan, South Sudan: Acute Food Insecurity Situation for September - November 2023 and Projections for December 2023 - March 2024 and for April - July 2024
[28] OCHA (July 2024), Sudan Humanitarian Update (29 July 2024) [EN/AR]
[29] OCHA (July 2024), Sudan Humanitarian Update (29 July 2024) [EN/AR]
[30] IPC (July 2024), Famine in Sudan (1 Aug 2024)
[31] Food Security and Nutrition Working Group (FSNWG) (27 June 2024)
[32] South Sudan: Acute Food Insecurity Situation for September - November 2023 and Projections for December 2023 - March 2024 and for April - July 2024 | IPC - Integrated Food Security Phase Classification (ipcinfo.org)
[33] FEWS NET, Widespread Emergency (IPC Phase 4) likely at the peak of the lean season, https://fews.net/east-africa/south-sudan/food-security-outlook/february-2024-0
[34] IPC Alert Sudan, https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1156903/?iso3=SDN
[35] OCHA (14 March 2024), The Greater Horn of Africa: Humanitarian Key Messages (February 2024)
[36] IGAD Regional Focus of the 2024 Global Report on Food Crises (22 August 2024) IGAD Regional Focus of the 2024 Global Report on Food Crises - ICPAC
[37] FSNWG, Food Security and Nutrition Working Group, 29 August 2024
[38] Summary of the estimated acute malnutrition numbers for 2024 sourced from IPC and HRP by WHO
[39] Food Security and Nutrition Working Group (FSNWG) (27 June 2024)
[40] OCHA (14 March 2024), The Greater Horn of Africa: Humanitarian Key Messages (February 2024)
[41] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[42] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[43] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes

IGAD Region | Population of concern to UNHCR
[44] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[45] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[46] IOM (2024), available at: https://www.internal-displacement.org/countries/uganda/ [accessed 21/ 5/24]
[47] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[48] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[49] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[50] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[51] UNHCR (2024) Open Data, available at: https://data.unhcr.org/en/country/sdn [accessed 31/7/24]
[52] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[53] UNHCR (2024) Open Data, available at: https://data.unhcr.org/en/country/sdn [accessed 21/5/24]
[54] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[55] UNHCR (2024), Regional Bureau For East Horn Of Africa And Great Lakes
IGAD Region | Population of concern to UNHCR
[56] UNHCR(2024), Sudan Situation Map Weekly Regional Update - 26 Aug 2024[accessed 27/8/24]
[57] UNHCR (2024) Open Data, available at: https://data.unhcr.org/en/country/sdn [accessed 31/7/24]
[58] UNHCR (2024) Open Data, available at: https://data.unhcr.org/en/country/sdn [accessed 31/7/24]
[59] UNHCR (2024) Open Data, available at: https://data.unhcr.org/en/country/sdn [accessed 31/7/24]
[60] UNHCR (2024) Open Data, available at: https://data.unhcr.org/en/country/sdn [accessed 31/7/24]
[61] HRW (2024), Horn of Africa: Impunity Fueling Abuses [EN/AR/SW]
[62] ACAPS, Humantiarian Access Overview report, , July 2024
[63] OCHA Somalia, Humanitarian Access Snapshot, 30 June 2024
[64] ACAPS, Humantiarian Access Overview report, July 2024
[65] OCHA South Susan, Humanitarian Access Snapshot July 2024
[66] ACAPS, Humantiarian Access Overview report, , July 2024
[67] ACAPS, Humantiarian Access Overview report, July 2024
[68] WFP (17 May 2024), Regional Bureau for Eastern Africa floods update #1 (15 May 2024)
[69] WHO GHoA Food Insecurity and Health weekly briefing note, 28 May 2024
[70] South Sudan Ministry of Water and Irrigation statement on possible flooding , 7 May 2024
[71] OCHA (25 August 2024), Sudan: Humanitarian impact of heavy rains and flooding Flash Update No. 03
[72] OCHA (26 July 2024), Ethiopia: Flash Update #3 - Update on Landslide in Gofa Zone, South Ethiopia Region (as of 26 July 2024)
[73] Food Security Cluster (5 August 2024), Report on landslide monitoring in Geze Gofa Woreda, located in the Gofa Zone of the Southern Region of Ethiopia, in July 2024
[74] UN News (April 2024), UN officials urge swift action to tackle El Niño-induced extreme weather
[75] Food Security and Nutrition Working Group (FSNWG) La Nina alert(2 August 2024)
[76] The Trends and Spatiotemporal Variability of Temperature and Rainfall in Hulbarag District, Silte Zone, Ethiopia (May 2024) Kelifa Ahmed Kerebo, Yechale Kebede Bizuneh, Abren Gelaw Mekonnen, Yimer Mohammed
[77] The Trends and Spatiotemporal Variability of Temperature and Rainfall in Hulbarag District, Silte Zone, Ethiopia (May 2024) Kelifa Ahmed Kerebo, Yechale Kebede Bizuneh, Abren Gelaw Mekonnen, Yimer Mohammed
[78] UNICEF (2024), Country Profiles, available at: https://data.unicef.org/country/dji/ [accessed 20th May 2024]
[79] Institute for Health Metrics and Evaluation (IHME). GBD Compare Data Visualisation. Seattle, 2020. https://vizhub.healthdata.org/gbd-compare//
[80] World Health Organization, Somalia – News "New study finds that 43 000 "excess deaths" may have occurred in 2022 from the drought in Somalia". https://www.emro.who.int/somalia/news/new-study-finds-that-43000-excess-deaths-may-have-occurred-in-2022-from-the-drought-in-somalia.html
[81] World Bank (2024), Life expectancy at birth, total (years) 2022 available at: https://data.worldbank.org/indicator/SP.DYN.LE00.IN [accessed 4/7/24]
[82] World Bank. Death rate, crude (per 1,000 people) and life expectancy at birth, total (years). https://data.worldbank.org/indicator/SP.DYN.CDRT.IN?most_recent_year_desc=true
[83] UNICEF (2024), Country Profiles, available at: https://data.unicef.org/country/dji/ [accessed 20th May 2024]
[84] UNICEF (2024), Country Profiles, available at: https://data.unicef.org/country/dji/ [accessed 20th May 2024]
[85] UNICEF (2024), Country Profiles, available at: https://data.unicef.org/country/dji/ [accessed 20th May 2024]
[86] WUENIC (2023), WHO UNICEF national estimation of immunization coverage (WUENIC), 15 July 2024
[87] WUENIC (2023), WHO UNICEF national estimation of immunization coverage (WUENIC), 15 July 2024

[88] Data received as of June 26, 2023. All data from individual country profiles – available at: https://data.unicef.org/resources/immunization-country-profiles/ [accessed 3/6/24]
[89] John Hopkins University (2024), Understanding Vaccination Progress, Global Dashboard available at https://coronavirus.jhu.edu/vaccines/international [accessed 22/5/24]
[90] John Hopkins University (2024), Understanding Vaccination Progress, Global Dashboard available at https://coronavirus.jhu.edu/vaccines/international [accessed 22/5/24]
[91] Moussa, R.A., Papa Mze, N., Arreh, H.Y. *et al.* Molecular investigation of malaria-infected patients in Djibouti city (2018–2021). *Malar J* 22, 147 (2023). https://doi.org/10.1186/s12936-023-04546-x
[92] Djibouti: Acute Malnutrition Situation January - April 2024 and Projection for May - December 2024. https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1157049/?iso3=DJI
[93] United Nations (2017) United Nations Population Fund Country programme document for Djibouti
[94] World Bank (2022), Djibouti: New Financing to Strengthen Health and Nutrition Services
[95] United Nations (2017) United Nations Population Fund Country programme document for Djibouti
[96] United Nations (2017) United Nations Population Fund Country programme document for Djibouti
[97] UNICEF (2022), Djibouti Highlights
[98] Global Nutrition Report (2024), The burden of malnutrition at a glance
[99] Global Nutrition Report (2024), The burden of malnutrition at a glance
[100] UNICEF (2022), Djibouti Highlights
[101] United Nations (2017) United Nations Population Fund Country programme document for Djibouti
[102] OCHA (June 2024), Ethiopia - Situation Report, 10 June 2024
[103] OCHA (June 2024), Ethiopia - Situation Report, 10 June 2024
[104] OCHA (June 2024), Ethiopia - Situation Report, 10 June 2024
[105] WHO (29 July), Weekly PHEM Report Update (EPI-week 29), WHO (internal document)
[106] UNFPA, World Population Dashboard- Ethiopia (2022). Available at: https://www.unfpa.org/data/world-population/ET [cited on 28th October 2022]
[107] UNFPA (29th June 2023), Strengthening Maternity Waiting Homes to reduce maternal and new-born deaths in Tigray.
[108] WHO/ Health Cluster (May 2024), Ethiopia Health Cluster Bulletin (May 2024)
[109] WHO (29 July), Weekly PHEM Report Update (EPI-week 29), WHO (internal document)
[110] WHO/ Health Cluster (May 2024), Ethiopia Health Cluster Bulletin (May 2024)
[111] OCHA (June 2024), Ethiopia - Situation Report, 10 June 2024
[112] WHO (29 July), Weekly PHEM Report Update (EPI-week 29), WHO (internal document)
[113] Health Cluster (2024), Ethiopia Health Cluster Bulletin (July 2024)
[114] WHO (29 July), Weekly PHEM Report Update (EPI-week 29), WHO (internal document)
[115] Joint Government Humanitarian Partners' National Flood Contingency Plan, 2024 Belg/Gu Season, February 2024
[116] WHO (29 July), Weekly PHEM Report Update (EPI-week 29), WHO (internal document)
[117] WHO, Public Health Situation Analysis: Horn of Africa Drought (2022).
[118] UNICEF (2024), Ethiopia Indicators, available at: https://data.unicef.org/country/eth/ [accessed 28/6/24]
[119] Relief International (March 2024), Scars of War and Deprivation: An Urgent Call to Reverse Tigray's Humanitarian Crisis
[120] Relief International (March 2024), Scars of War and Deprivation: An Urgent Call to Reverse Tigray's Humanitarian Crisis
[121] UNICEF (2024), Ethiopia Indicators, available at: https://data.unicef.org/country/eth/ [accessed 28/6/24]
[122] WHO (29 July), Weekly PHEM Report Update (EPI-week 29), WHO (internal document)
[123] WHO/ Health Cluster (May 2024), Ethiopia Health Cluster Bulletin (May 2024)
[124] WHO (2024), Ethiopia Polio Transition Snapshot
[125] ICRC (16th August 2023), Operational Update on Ethiopia: Hospitals in Amhara receive lifesaving medical supplies.
[126] Health Cluster Ethiopia, Advocacy Notes Tigray (August 2022).
[127] Amsalu ET, Akalu TY, Gelaye KA (2019) Spatial distribution and determinants of acute respiratory infection among under-five children in Ethiopia: Ethiopian Demographic Health Survey 2016. PLoS ONE 14(4): e0215572. https://doi.org/10.1371/journal.pone.0215572
[128] Concern (9th February 2024), Concern launches emergency response to alarming hunger levels in Ethiopia
[129] WHO (29 July), Weekly PHEM Report Update (EPI-week 29), WHO (internal document)
[130] BMJ (5th July 2023), Epidemiology of childhood tuberculosis and predictors of death among children on tuberculosis treatment in central Ethiopia: an extended Cox model challenged survival analysis.
[131] Health Cluster, Advocacy Note On HIV/AIDS And Anti-Retroviral Therapy (March 2022)
[132] WHO (29 July), Weekly PHEM Report Update (EPI-week 29), WHO (internal document)
[133] WHO (29 July), Weekly PHEM Report Update (EPI-week 29), WHO (internal document)
[134] Ashenefe Wassie B, Fantaw S, Mekonene Y, Teshale AM, Yitagesu Y, Tsige E, Getahun D, Tasew G, Abichu G, Moges B, Abate E, Abayneh T, Zeru T, Belay Z, Mor SM. First PCR Confirmed anthrax outbreaks in Ethiopia-Amhara region, 2018-2019. PLoS Negl Trop Dis. 2022 Feb 10;16(2):e0010181. doi: 10.1371/journal.pntd.0010181. PMID: 35143510; PMCID: PMC8865639
[135] WHO (29 July), Weekly PHEM Report Update (EPI-week 29), WHO (internal document)
[136] GAVI (3 April 2024), How climate change increases pandemic risk
[137] WHO (2024), WHO Director-General declares mpox outbreak a public health emergency of international concern
[138] Kenya MoH Public Health Emergency Operations Centre: March-April-May (MAM) Rains Public Health Situation Report 015 09th May 2024
[139] Jones CM and Welburn SC (2021) Leishmaniasis Beyond East Africa. *Front. Vet. Sci.* 8:618766. doi: 10.3389/fvets.2021.618766
[140] MoH Kenya, Disease Outbreak Situation Report as of 2nd May-Epi Week 17, 2024.

[141] USAID (2022), Kenya - malaria
[142] WHo (2021), Rift valley fever – Kenya 12 February 2021
[143] WHO (2022), Disease Outbreak News Yellow fever – Kenya 25 March 2022
[144] Kiragu ZW, Rockers PC, Onyango MA, Mungai J, Mboya J, Laing R, Wirtz VJ. Household access to non-communicable disease medicines during universal health care roll-out in Kenya: A time series analysis. PLoS One. 2022 Apr 20;17(4):e0266715. doi: 10.1371/journal.pone.0266715. PMID: 35443014; PMCID: PMC9020677.
[145] Human Rights Watch (2023) Kenya's Troubled 60-Year Mental Health Journey
[146] Masaba, B.B., Mmusi-Phetoe, R., Rono, B. *et al.* The healthcare system and client failures contributing to maternal mortality in rural Kenya. *BMC Pregnancy Childbirth* 22, 903 (2022). https://doi.org/10.1186/s12884-022-05259-w
[147] WHO (2024), Somalia: 2024 AWD/Cholera outbreak Flash Update No.1 (As of 22 January 2024)
[148] WHO (2024), Somalia: 2024 AWD/Cholera outbreak Flash Update No.1 (As of 22 January 2024)
[149] African Union (2022), Somalia's Disease Burden and The Spiral of Silence on Mental Illness
[150] Morrison J, Malik SMMR. Population health trends and disease profile in Somalia 1990-2019, and projection to 2030: will the country achieve sustainable development goals 2 and 3? BMC Public Health. 2023 Jan 10;23(1):66. doi: 10.1186/s12889-022-14960-6. PMID: 36627611; PMCID: PMC9832660.
[151] Morrison J, Malik SMMR. Health equity in Somalia? An evaluation of the progress made from 2006 to 2019 in reducing inequities in maternal and newborn health. Int J Equity Health. 2024 Mar 5;23(1):46. doi: 10.1186/s12939-023-02092-1. PMID: 38443921; PMCID: PMC10916226.
[152] Ahmed Aweis, Abdirahman H Osoble, Suleyman A Mohamed, Abdulkadir Aweis, Obstetric transition: trends in maternal mortality in Somalia over the last two decades, *International Health*, 2024; ihad121, https://doi.org/10.1093/inthealth/ihad121
[153] UNICEF (2024), Somalia- Health *Every child has the right to survive and thrive*
[154] WHO (2024), Somalia's tangible progress on malaria, even in the face of new strains
[155] WHO (2024), Somalia's tangible progress on malaria, even in the face of new strains
[156] Mohamud AK, Ahmed OA, Ali IA, Dirie NI. Demographical, clinical, and complication differences between vaccinated and unvaccinated hospitalized children with measles in mogadishu somalia: a hospital-based retrospective cohort study. Ann Med Surg (Lond). 2023 Apr 15;85(5):1550-1555. doi: 10.1097/MS9.0000000000000672. PMID: 37229064; PMCID: PMC10205263.
[157] Control of visceral leishmaniasis in Somalia: achievements in a challenging scenario, 2013–2015
Weekly epidemiological record- 22 September 2017
[158] WHO (2012) A manual for checking Mental Health Best Practices in Somalia
[159] Salad AM, Malik SMMR, Ndithia JM, Noor Z, Madeo M, Ibrahim M. Prevalence of mental disorders and psychological trauma among conflict-affected population in Somalia: a cross-sectional study. Front Public Health. 2023 Sep 27;11:1219992. doi: 10.3389/fpubh.2023.1219992. PMID: 37829096; PMCID: PMC10565346.
[160] WHO (2024), World TB Day 2024: Somalia reaffirms commitment to make TB history
[161] UNFPA (2021), Overview of Gender-Based Violence in Somalia
[162] WHO (2023), South Sudan marks Malaria Day with calls for robust multisectoral actions to reduce the Malaria burden
[163] WHO (2023), South Sudan marks Malaria Day with calls for robust multisectoral actions to reduce the Malaria burden
[164] WHO (2023), South Sudan marks Malaria Day with calls for robust multisectoral actions to reduce the Malaria burden
[165] WHO (2024), Saving lives and empowering communities in South Sudan's remote areas: Akon's journey from despair to hope *13 May 2024*
[166] UNICEF (2023), USAID, UNICEF, and the United Kingdom Recommit to Preventing Child and Maternal Deaths in South Sudan 23 March 2023
[167] UNICEF (2023), USAID, UNICEF, and the United Kingdom Recommit to Preventing Child and Maternal Deaths in South Sudan 23 March 2023
[168] WUENIC (2023), WHO UNICEF National Estimation of Immunization Coverage (WUENIC), 15 July 2024
[169] WHO (2024), South Sudan available at: https://www.who.int/about/accountability/results/who-results-report-2020-mtr/country-story/2022/aiming-for-zero-cholera-in-south-sudan [accessed 22/5/24]
[170] WHO (2024), South Sudan commemorates 50 Years of Immunization with 2024 Immunization Week - Humanly Possible: Immunization for All 30 April 2024
[171] OCHA (10 May 2024), South Sudan: Humanitarian Snapshot (April 2024)
[172] WHO South Sudan (15 August 2024), Ongoing Health Emergency Events in South Sudan
[173] MSF (Jan 2024), South Sudan: Amid deadly hepatitis E outbreak, MSF launches mass vaccination campaign to reach remote communities and prevent more deaths
[174] WHO (2023), South Sudan- Country Disease Outlook 2023
[175] WHO (2023), South Sudan- Country Disease Outlook 2023
[176] The War Trauma and Mental Health Challenges for South Sudanese Men in the Diaspora
Akuch Kuol Anyieth, William Abur- People Centred – The Journal of Development Administration | People Centred – The Journal Of Development Administration | Published : 2022
[177] WHO South Sudan (22 August 2024), Ongoing Health Emergency Events in South Sudan
[178] UNICEF (2019), Gender-Based Violence December 2019
[179] WHO (2023), South Sudan- Country Disease Outlook 2023
[180] UNHCR (2024), Sudan situation: Gender-based violence update (June 2024)
[181] OCHA (29 July 2024), The Resident and Humanitarian Coordinator for Sudan, Clementine Nkweta-Salami, condemns attacks at a hospital and livestock market in Al Fasher, North Darfur [EN/AR]
[182] USAID (28 Feb 2024), Sudan Crisis Situational Analysis - 28 February 2024
[183] IPC (June 2024). Sudan: Acute Food Insecurity Situation for April - May 2024 and Projections for June - September 2024 and October 2024 - February 2025
[184] IPC (July 2024), Famine in Sudan: IPC Famine Review Committee confirms famine conditions in parts of North Darfur

[185] WHO Sudan SITREP in August 2024
[186] WHO (July 2024), Sudan conflict and refugee crisis, Multi-country External Situation Report #2 - 17 July 2024
[187] UNICEF (2019) Sudan Annual Report- Water, Sanitation And Hygiene 2019
[188] UNICEF (2019) Sudan Annual Report- Water, Sanitation And Hygiene 2019
[189] National Multi-Hazard Health Emergencies Preparedness and Response Plan for Sudan, 2022
[190] UNICEF (2019) Sudan Annual Report- Water, Sanitation And Hygiene 2019
[191] MSF Sudan Briefing Note: Urgent need for rapid scale-up of non-communicable disease medication and treatment v. 15 November 2023
[192] Elhadi YAM. Progress and challenges in implementing non-communicable disease policies in Sudan. Health Res Policy Syst. 2023 Dec 6;21(1):130. doi: 10.1186/s12961-023-01079-2. PMID: 38057882; PMCID: PMC10698879.
[193] WHO (June 2023), Public Health Situation Analysis Report (internal document, not published)
[194] Shoib S, Osman Elmahi OK, Siddiqui MF, Abdalrheem Altamih RA, Swed S, Sharif Ahmed EM. Sudan's unmet mental health needs: A call for action. Ann Med Surg (Lond). 2022 May 11;78:103773. doi: 10.1016/j.amsu.2022.103773. PMID: 35600171; PMCID: PMC9117552.
[195] Osman AHM, Bakhiet A, Elmusharaf S, Omer A, Abdelrahman A. Sudan's mental health service: challenges and future horizons. BJPsych Int. 2020 Feb;17(1):17-19. doi: 10.1192/bji.2019.19. PMID: 34287408; PMCID: PMC8277530.
[196] Osman AHM, Bakhiet A, Elmusharaf S, Omer A, Abdelrahman A. Sudan's mental health service: challenges and future horizons. BJPsych Int. 2020 Feb;17(1):17-19. doi: 10.1192/bji.2019.19. PMID: 34287408; PMCID: PMC8277530.
[197] WHO (June 2023), Public Health Situation Analysis Report (internal document, not published)
[198] John Hopkins University (2023), Sudan, available at: https://coronavirus.jhu.edu/region/sudan/[Accessed 28/2/24]
[199] Mohamed AAA, Ahmed MAI, IbnIdriss GEO, et al. Typhoid fever: prevalence and risk factors among symptomatic Sudanese patients. *J Bacteriol Mycol Open Access*. 2023;11(2):72-75. DOI: 10.15406/jbmoa.2023.11.00347
[200] UNHCR (2024), Sudan situation: Gender-based violence update (June 2024)
[201] UNHCR (15 Feb 2024), At a Glance: Protection Impacts of the Conflict: Update no. 24, 15 February 2024
[202] WHO (Feb 2024), Internal Report- Event Information Site (EIS) Sudan | Circulating Vaccine Derived Poliovirus type 2 (cVDPV2)
[203] WHO (11 Mar 2024), Sudan to respond to new emergence of variant poliovirus in Red Sea State
[204] WHO (Feb 2024), Internal Report- Event Information Site (EIS) Sudan | Circulating Vaccine Derived Poliovirus type 2 (cVDPV2)
[205] Bonavina G, Kaltoud R, Daelli FC, Dané F, Bulfoni A, Candiani M, Ciceri F. Women's health amidst Sudan's civil war. Lancet. 2024 May 11;403(10439):1849-1850. doi: 10.1016/S0140-6736(24)00694-9. PMID: 38734467.
[206] Ahmed W, Puttkammer N, Gloyd S, Adam A, Eltayeb D, Farquhar C. Turning the tide on female genital mutilation in a high prevalence country: a programmatic data analysis for Sudan's comprehensive health sector response, 2016-2018. BMJ Glob Health. 2022 Oct;7(10):e010020. doi: 10.1136/bmjgh-2022-010020. PMID: 36270660; PMCID: PMC9594515.
[207] WHO (2022), Country Cooperation Strategy for WHO and Sudan 2022–2025
[208] WHO (June 2023), Public Health Situation Analysis Report (internal document, not published)
[209] WHO (June 2023), Public Health Situation Analysis Report (internal document, not published)
[210] WHO (June 2023), Sudan Public Health Situation Analysis Report (internal document, not published)
[211] Africa CDC (2024), Disease Outbreaks / Mpox Situation in Africa 30 July 2024
[212] National Multi-Hazard Health Emergencies Preparedness and Response Plan for Sudan, 2022
[213] Leena El-Samani, Razan Abdalla Taha, Yousef Khader (2020), Investigation of diphtheria outbreak in Al-Sunta locality in South Darfur State - Sudan, 2019/2020: a teaching case-study, Pan African Medical Journal
[214] Leena El-Samani, Razan Abdalla Taha, Yousef Khader (2020), Investigation of diphtheria outbreak in Al-Sunta locality in South Darfur State - Sudan, 2019/2020: a teaching case-study, Pan African Medical Journal
[215] Al Jazeera (25 Apr 2023), WHO says 'huge biological risk' after Sudan fighters occupy lab
[216] WHO (June 2023), Sudan Public Health Situation Analysis Report (internal document, not published)
[217] WHO (2013) Country Cooperation Strategy at Glance
[218] Bwire G, Waniaye JB, Otim JS, Matseketse D, Kagirita A, Orach CG. Cholera risk in cities in Uganda: understanding cases and contacts centered strategy (3CS) for rapid cholera outbreak control. Pan Afr Med J. 2021 Jul 12;39:193. doi: 10.11604/pamj.2021.39.193.27794. PMID: 34603574; PMCID: PMC8464210.
[219] WHO (2022), Ebola - Home/Situations/Ebola outbreak 2022 – Uganda Overview
[220] Uganda: Epidemic - 01-2024 - Measles Outbreak (2024-03-26) Format Situation Report - IFRCUganda Red Cross
[221] WHO (2013) Country Cooperation Strategy at Glance
[222] WHO (2013) Country Cooperation Strategy at Glance
[223] WHO (2013) Country Cooperation Strategy at Glance
[224] WHO (2023) Country Disease Outlook August 2023- Uganda
[225] WHO (2023) Country Disease Outlook August 2023- Uganda
[226] WHO (2013) Country Cooperation Strategy at Glance
[227] WHO (2023) Country Disease Outlook August 2023- Uganda
[228] UNICEF (2024), Uganda- Nutrition *Scaling up high impact nutrition interventions*
[229] IPC Uganda, Acute Malnutrition Situation March - May 2024 and Projections for June - October 2024 and November 2024 - February 2025
[230] FSNWG (27 June 2024), WHO update on ongoing disease outbreaks
[231] American Psychological Association (2023), Mental health in Uganda
[232] Bukuluki, P., Kisaakye, P., Bulenzi-Gulere, G. *et al.* Vulnerability to violence against women or girls during COVID-19 in Uganda. *BMC Public Health* 23, 23 (2023). https://doi.org/10.1186/s12889-022-14951-7

[233] Onambele L, Guillen-Aguinaga S, Guillen-Aguinaga L, Ortega-Leon W, Montejo R, Alas-Brun R, Aguinaga-Ontoso E, Aguinaga-Ontoso I, Guillen-Grima F. Trends, Projections, and Regional Disparities of Maternal Mortality in Africa (1990-2030): An ARIMA Forecasting Approach. Epidemiologia (Basel). 2023 Aug 29;4(3):322-351. doi: 10.3390/epidemiologia4030032. PMID: 37754279; PMCID: PMC10528291.
[234] Onambele L, Guillen-Aguinaga S, Guillen-Aguinaga L, Ortega-Leon W, Montejo R, Alas-Brun R, Aguinaga-Ontoso E, Aguinaga-Ontoso I, Guillen-Grima F. Trends, Projections, and Regional Disparities of Maternal Mortality in Africa (1990-2030): An ARIMA Forecasting Approach. Epidemiologia (Basel). 2023 Aug 29;4(3):322-351. doi: 10.3390/epidemiologia4030032. PMID: 37754279; PMCID: PMC10528291.
[235] Onambele L, Guillen-Aguinaga S, Guillen-Aguinaga L, Ortega-Leon W, Montejo R, Alas-Brun R, Aguinaga-Ontoso E, Aguinaga-Ontoso I, Guillen-Grima F. Trends, Projections, and Regional Disparities of Maternal Mortality in Africa (1990-2030): An ARIMA Forecasting Approach. Epidemiologia (Basel). 2023 Aug 29;4(3):322-351. doi: 10.3390/epidemiologia4030032. PMID: 37754279; PMCID: PMC10528291.
[236] UNICEF (2024), Country Profiles, available at: https://data.unicef.org/country/dji/ [accessed 20th May 2024]
[237] WHO (2021), Indicators for assessing infant and young child feeding practices: definitions and measurement methods
[238] UNICEF (2024), Country Profiles, available at: https://data.unicef.org/country/dji/ [accessed 20th May 2024]
[239] PLAN International (2023). Girls in Kenya face violence as further drought expected. Available from: https://plan-international.org/news/2023/04/26/girls-in-kenya-face-violence-as-further-drought-expected/
[240] OCHA (February 2024), Ethiopia 2024 Humanitarian Response Plan
[241] Save the Children (2024), For millions of children affected by the drought-driven hunger crisis in the Horn of Africa, time is running out
[242] UNICEF (2024), Country Profiles, available at: https://data.unicef.org/country/dji/ [accessed 20th May 2024]
[243] US Dept of State (2004), Djibouti: First Horn of Africa Country to Become Free from Impact of Landmines
[244] Landmine and Cluster Munition (2024), Uganda Impact Last updated: 22 April 2021
[245] US Dept of State (2001), To Walk The Earth In Safety The United States Commitment
To Humanitarian Demining
[246] UNMAS (2024) Ethiopia
[247] UNMAS (2024) Ethiopia
[248] UNCT (5 April 2024), International Day for Mine Awareness & Assistance in Mine Action in Ethiopia
[249] Landmine and Cluster Munition (2024), Somalia Impact Last updated: 17 March 2024
[250] Landmine and Cluster Munition (2024), Somalia Impact Last updated: 17 March 2024
[251] Landmine and Cluster Munition (2024), South Sudan Casualties Last updated: 10 October 2018
[252] UNMAS (June 2023), Sudan Profile
[253] UNHCR (15th February 2024), At a Glance: Protection Impacts of the Conflict: Update no. 24, 15 February 2024
[254] WHO (2023) Tracking universal health coverage 2023 global monitoring report
[255] WHO (2023) Tracking universal health coverage 2023 global monitoring report
[256] WHO (2012) Djibouti – Rising to the Challenge Report
[257] WHO (2012) Djibouti – Rising to the Challenge Report
[258] OCHA (February 2024), Ethiopia 2024 Humanitarian Needs Overview (HNO)
[259] OCHA (February 2024), Ethiopia 2024 Humanitarian Needs Overview (HNO)
[260] USAID (2022), Kenya Health Systems Strengthening
[261] Said AS, Kicha DI. Implementing health system and the new federalism in Somalia: challenges and opportunities. Front Public Health. 2024 Feb 1;12:1205327. doi: 10.3389/fpubh.2024.1205327. PMID: 38362207; PMCID: PMC10867962.
[262] Said AS, Kicha DI. Implementing health system and the new federalism in Somalia: challenges and opportunities. Front Public Health. 2024 Feb 1;12:1205327. doi: 10.3389/fpubh.2024.1205327. PMID: 38362207; PMCID: PMC10867962.
[263] Anib VA, Achiek MM, Ndenzako F, Olu OO. South Sudan's road to universal health coverage: a slow but steady journey. Pan Afr Med J. 2022 Jun 7;42(Suppl 1):1. doi: 10.11604/pamj.supp.2022.42.1.34035. PMID: 36158928; PMCID: PMC9475057.
[264] Anib VA, Achiek MM, Ndenzako F, Olu OO. South Sudan's road to universal health coverage: a slow but steady journey. Pan Afr Med J. 2022 Jun 7;42(Suppl 1):1. doi: 10.11604/pamj.supp.2022.42.1.34035. PMID: 36158928; PMCID: PMC9475057.
[265] Anib VA, Achiek MM, Ndenzako F, Olu OO. South Sudan's road to universal health coverage: a slow but steady journey. Pan Afr Med J. 2022 Jun 7;42(Suppl 1):1. doi: 10.11604/pamj.supp.2022.42.1.34035. PMID: 36158928; PMCID: PMC9475057.
[266] OCHA(17 Feb 2024), Sudan: Ten months of conflict - Key Facts and Figures (15 February 2024)
[267] ACAPS (29 Feb 2024), ACAPS Briefing note - Sudan: Healthcare and epidemics in the context of hunger, 27 February 2024
[268] WHO (June 2023), Public Health Situation Analysis Report (internal document, not published)
[269] WHO (2013) Country Cooperation Strategy at Glance
[270] WHO (2013) Country Cooperation Strategy at Glance
[271] WHO Surveillance systems for attacks on health care(SSA) SSA Home | Index (who.int)
[272] WHO Surveillance systems for attacks on health care(SSA) SSA Home | Index (who.int)
[273] WHO Surveillance systems for attacks on health care(SSA) SSA Home | Index (who.int)
[274] WHO Surveillance systems for attacks on health care(SSA) SSA Home | Index (who.int)
[275] OCHA (2024), Ethiopia HRP available at: https://fts.unocha.org/plans/1128/summary [accessed 29/8/24]
[276] OCHA (2024), Somalia HRP available at: https://fts.unocha.org/plans/1133/summary [accessed 29/8/24]
[277] OCHA (2024), South Sudan HRP available at: https://fts.unocha.org/plans/1111/summary [accessed 29/8/24]
[278] OCHA (2024), Sudan HRP available at: https://fts.unocha.org/plans/1188/summary [accessed 29/8/24]
[279] WHO, Health Cluster Dashboard-Q2 June 2024 (who.int)
[280] WHO, Health Cluster Dashboard-Q2 June 2024 (who.int)
[281] WHO, Health Cluster Dashboard-Q2 June 2024 (who.int)