

Disasters in Africa: 20 Year Review (2000-2019*)

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Every year Africa is affected by dozens of various disasters across the continent. Despite these events, deadlier or costlier disasters in Asia and North America often overshadow disasters in Africa. However, with a rapidly growing population and increasing impact of climate change, the disaster impact in Africa will likely increase in the coming decades. Therefore, CRED Crunch 56 will focus on disasters across the African continent in the past 20 years.

With over 50 countries across approximately 30 million square kilometers of land, the threat of natural hazards in Africa varies greatly by geography and season. Figure 1 demonstrates the type of disaster that affects the highest number of people in each African country. Regions of southern Africa, the Horn of Africa, and the Sahel have been most affected by drought, while much of central Africa and western Africa has been most affected by floods. Countries in south-eastern Africa (some of which are not featured on the map) face an annual cyclone season leaving them most affected by storms.

Although disasters occur across the entire continent, some countries are more affected than others. Since 2000, Kenya (60 events), Mozambique (55 events), and South Africa (54 events) experienced the highest number of disasters as they regularly face storms, droughts, and flooding. The 3 most populated sub-Saharan countries, Nigeria (49 events), Ethiopia (43 events), and D.R. Congo (41 events), also fall into the top 10. In terms of death tolls, as seen in Figure 2, Somalia ranks first primarily as a result of the 2010 drought, while Algeria ranks second with most deaths occurring from a single earthquake.

As seen in Figure 3, floods and droughts were the most prevalent and impactful type of disasters on the continent. From 2000-2019, floods were responsible for 64% of disaster events, followed by storms at 15%. Unlike other continents, such as Asia, earthquakes and volcanoes are not prominent types of disasters. As well, due to relatively poor health surveillance, the impacts of extreme temperatures are considered to be under reported.

Figure 1: Disaster Type Affecting Highest Number of People by Country (2000-2019*)

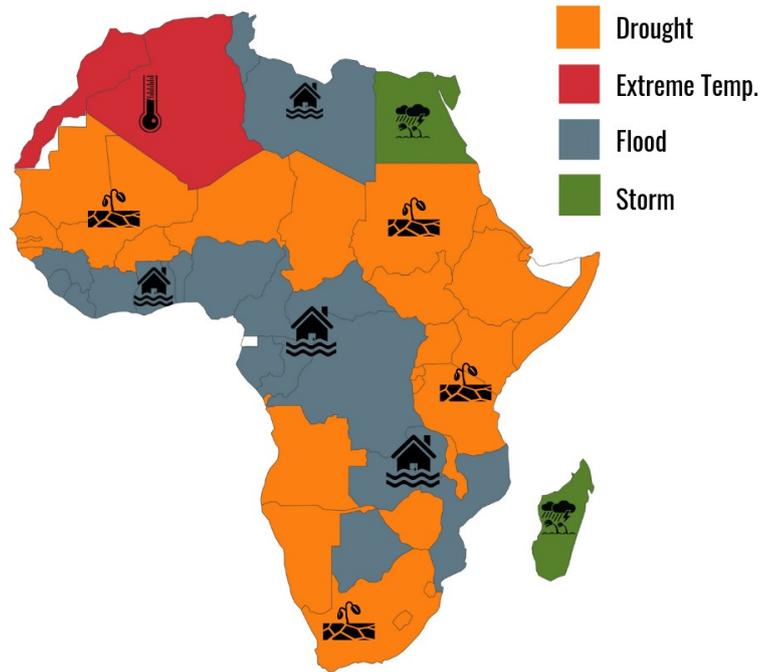
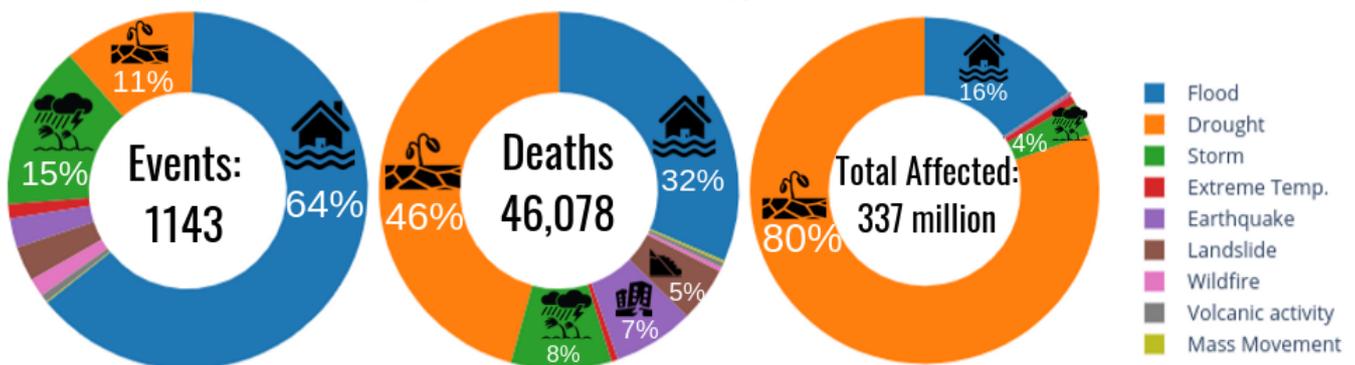


Figure does not include the following: Cape Verde (Drought), Comoros (Storms), Mauritius (Storms), Reunion (Storms), Saint Helena, Ascension and Tristan da Cunha (Storms), Seychelles (Storms)

Figure 2: Top 10 Countries by Total Disaster Death Toll (2000-2019*)

	Country	Total Deaths
1.	Somalia	20,739
2.	Algeria	3,777
3.	Mozambique	2,291
4.	Nigeria	1,696
5.	Madagascar	1,644
6.	Ethiopia	1,639
7.	Kenya	1,572
8.	Sierra Leone	1,289
9.	D.R. Congo	1,072
10.	Malawi	985

Figure 3: Share by Disaster Type (2000-2019*)

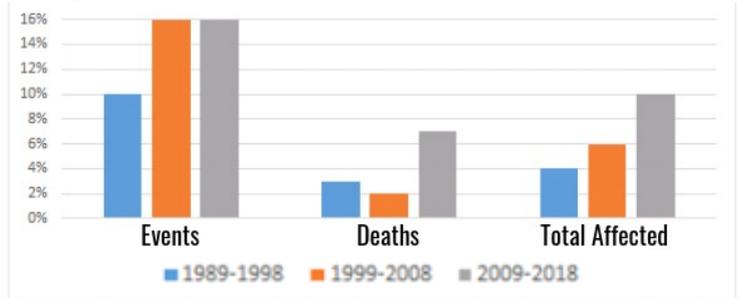


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So far in this century, droughts have been the deadliest disaster type, followed by floods. In fact, most of the drought deaths can be attributed to a single event, namely the one in Somalia in 2010 when approximately 20,000 people died. This drought, along with the Somali Civil War, led to a famine declaration due to high mortality and malnutrition.

In terms of people affected, droughts make up by far the largest share of disasters in Africa. This figure may be attributed to various climatic and geographic features, as well as the reliance on rain-fed agriculture by large portion of the population in low resource rural areas. The most impactful drought events so far this century by number of people affected were the 2003 and 2004 South African drought (15 million & 12.6 million people affected respectively), 2015 Ethiopian drought (10.2 million people affected), and 2009 Niger drought (7.9 million people affected).

Figure 4: Contribution of African Disasters to Global Total



In recent years the share of global events, deaths, and people affected occurring in Africa has risen; as seen in figure 4. This trend will likely continue as Africa's share of the global population rises from approximately 13% in the year 2000 to 26% by 2050 (1). In absolute terms, the population of Africa is projected to increase from the current 1.3 billion inhabitants to 2.5 billion by 2050, thus nearly doubling the potential population affected by disasters (1). Additionally, rapid growth in population increases the likelihood of urbanization in areas exposed to natural hazards and resource shortages. In addition to population growth, the Intergovernmental Panel on Climate Change (2) has stated that Sub-Saharan Africa has experienced more frequent and intense climate extremes in previous decades as a result of climate change, a trend that is likely to continue as the impacts of climate change intensifies. Regions across the continent are expected to face increased extreme temperatures, droughts, and increases in heavy rainfall (2).

Cyclone Idai

The 2018-2019 South-West Indian Ocean cyclone season caused an unprecedented level of damage, most notably from Cyclone Idai which primarily affected Mozambique and Zimbabwe (figure 5). In early March of 2019, a tropical depression over Malawi caused widespread flooding affecting nearly 1 million people. Having moved back out to sea, the tropical depression then formed into Cyclone Idai eventually striking the coastal city of Beira in eastern Mozambique and dissipating in eastern Zimbabwe.

The storm resulted in the deaths of at least 602 people in Mozambique and 299 people in Zimbabwe, making Cyclone Idai the deadliest storm on record to strike the African continent. The direct impact of the storm caused considerable damage to vital health infrastructure and cut off entire communities leaving thousands out of reach and hampering rescue efforts. In Mozambique's Safala province, roughly 20,000 square kilometres of land was flooded for days after the storm, with some communities submerged under 10 meters of water. Additionally, the highly vulnerable and fragile health system in Mozambique resulted in a cholera outbreak of more than 6000 cases reported (3). CRED is currently setting up a case study, in which we aim to assess the impact of Cyclone Idai on local health services. We look at the impact on general hospital admissions, with a specific focus on cholera cases. This study is carried out in collaboration with the National Institute of Health of Mozambique

Figure 5: Top 10 Deadliest Storms in Africa (1990-2019*)

	Country	Storm	Year	Total Deaths
1.	Mozambique, Zimbabwe	Cyclone Idai	2019	901
2.	Madagascar	Cyclone Galifo	2004	363
3.	Zimbabwe	Storm Dineo	2017	251
4.	Mozambique	Cyclone Nadya	1994	240
5.	Madagascar	Daisy, Geralda	1994	200
6.	Senegal	Tornado	1999	165
7.	Somalia	Cyclone 3A	2013	162
8.	Madagascar	Cyclone Gretelle	1997	140
9.	Madagascar	Eline, Gloria	2000	130
10.	Madagascar	Storm Hubert	2010	120

1. United Nations, World Population Prospects 2019.

2. Hoegh-Guldberg O., et al. IPCC. Impacts of 1.5C Global Warming on Natural and Human Systems.

3. OCHA Situation Report, n°18. Mozambique: Cyclone Idai and Floods

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•Data are subject to change, for enquires: contact@emdat.be

