



2020 The Non-COVID Year in Disasters



389
Reported
disasters



15,080
Dead
people



98.4 million
People
affected



171.3 billion
US\$ economic
damage

Global trends
and perspectives

Executive Summary

The year 2020 rivalled 2016 as the world's hottest recorded year despite the absence of a strong El Niño effect. Apart from the COVID-19 pandemic, the year was dominated by climate-related disasters. These were largely responsible for the 389 recorded events which resulted in 15,080 deaths, 98.4 million people affected, and economic losses of at least US\$ 171.3 billion. The statistics used in this report are drawn from the latest updates in the emergency events database, EM-DAT, maintained by the Centre for Research on the Epidemiology of Disasters (CRED, UCLouvain).

At the outset, it is acknowledged that these statistics pale in comparison with the ongoing COVID-19 pandemic which by the year's end had claimed almost two million lives, resulted in more than 90 million confirmed cases, trillions of dollars in economic losses, and “extreme poverty back up to levels not seen in a generation” as the UN Secretary-General has said.

In comparison to the previous two decades (2000-2019), 2020 was higher than the annual average in terms of number of recorded events and the annual average of economic losses, which is US\$151.6 billion¹. There were considerably fewer deaths compared to the annual average of 61,709 and fewer people directly affected compared to the annual average of 201.3 million people. This decrease in impacts is due to the absence of mass casualty events, such as the 2004 Indian Ocean Tsunami (227,000 deaths) and the 2010 Haiti Earthquake (222,500 deaths) or high impact events, such as the 2015/2016 drought in India (330 million people affected). However, in 2020 there were 26% more storms than the annual average of 102 events, 23% more floods than the annual average of 163 events, and 18% more flood deaths than the annual average of 5,233 deaths.

This snapshot of the year in climate and geophysical disaster events does not consider the overlap with the impacts of the on-going pandemic. The additional losses inflicted by these reported events likely impacted those who have already suffered loss of income and employment because of COVID-19, particularly those in low- and

middle-income countries. Unravelling the impacts of one from the other is a challenge and may have contributed to under-reporting of the impacts of non-biological hazards during the year under review. There is an existing problem of chronic under-reporting of economic losses from disasters, particularly from low-income countries.

The impacts of the events were not equally shared: Asia experienced 41% of disaster events and 64% of total people affected. Heatwaves in Europe accounted for 42% of total reported deaths². In a year of record-breaking storms and wildfires the Americas suffered 53% of total economic losses, largely in the USA which experienced the bulk of the year's most costly climate-related disasters. Indonesia had the highest number of disasters (29 total events), including 25 floods. However, India and China suffered the largest human impacts with 19.6 million people and 14.9 million people affected, respectively. Floods were the most common disasters worldwide (201 events), while storms affected the highest number of people (45.5 million) and caused the most economic losses (US\$92.7 billion). Extreme temperatures were the deadliest type of disasters accounting for 42% of total deaths², followed closely by floods which accounted for 41% of total deaths.

Summer heat waves in Europe were the deadliest events for the 2nd year in a row. Heat waves in France, Belgium, the Netherlands, and the UK caused a total of 6,340 deaths,² more than double the figures for heatwaves in 2019. According to the National Oceanic and Atmospheric

¹ Economic loss figures were adjusted using yearly consumer price index (CPI) data from the OECD (2019).

² Figures derived from excess mortality statistics. Figures do not include excess mortality due to COVID-19.

Administration (NOAA), 2020 was the hottest year for the Northern Hemisphere on record, however, **underreporting on the impact of heat waves in many countries likely leads to gross underestimations in global death tolls.**

The impact of floods was felt heavily throughout Africa and Asia. In Africa, floods affected seven million people and caused 1,273 deaths, the highest figure since 2006. Somalia, Sudan, and South Sudan suffered seasonal flooding that affected approximately one million people in each country, while Kenya had the highest loss of life in Africa with 285 flood deaths. In South Asia, monsoon flooding, often associated with landslides, affected 5.4 million people in Bangladesh and caused 448 deaths in Nepal. In India, flooding was responsible for the 3rd deadliest event of the year costing 1,922 lives. China also faced significant flooding as a series of four summer floods across the country killed a total of 397 people, affected 14.3 million people, and caused US\$ 21.8 billion in economic losses.

With 30 named storms, the 2020 Atlantic Ocean hurricane season broke the record for the highest number of named storms. Hurricane Eta was the most impactful of these storms, killing 394 people and affecting 7.1 million people in 10 countries stretching from Colombia to the USA. Honduras and Guatemala suffered the worst impacts with 4.6 million people and 2.4 million people affected, respectively. Despite the record in the Atlantic, Asia accounted for the highest number of people affected by storms in 2020. In May, Cyclone Amphan struck South Asia affecting a total of 18 million people in India and 2.6 million people in Bangladesh. In the latter part of the year, a series of storms in South-East Asia caused widespread damage. In Vietnam, six successive storms, combined with flooding and landslides over three months, killed a total of 294 people and affected 2.2 million people, and in the Philippines, five storms over the same period killed a total of 185 people and affected 9.2 million people. The quick succession of these storms in the same areas provided little respite for those affected.

Droughts were most heavily experienced across the Sahel, affecting a total of 13.4 million people in Mali, Burkina Faso, and Niger. Wildfires across the west coast of the USA marked the 3rd year in the past four years with US\$10 billion-plus in economic losses due to wildfires.³ Finally, although it was a relatively quiet year for geophysical events, an earthquake that killed 115 people in Turkey served as a reminder of the severe threat of earthquakes, the deadliest type of disaster over the previous 20 years.

Overall, the most notable features of the year were significant flood events across East Africa, South Asia, and China; a record year in the number of storms in the Americas; a series of storms in quick succession to strike South-East Asia; and summer heat waves across Europe which accounted for the deadliest disaster events for the 2nd year in a row.

Source: EM-DAT (22th February 2021): The OFDA/CRED - International Disaster Database www.emdat.be, Institute Health and Society, UClouvain, Brussels – Belgium. Contact : contact@emdat.be

3 The 2019-2020 Australian wildfires caused significant damage across Australia in the early months of 2020. However, due to classification of disasters by year, the wildfires were recorded as a 2019 event, and thus, do not feature in this year's report.

Occurrence of disasters

Figure 1

Number of disasters by continent and top 10 countries⁴

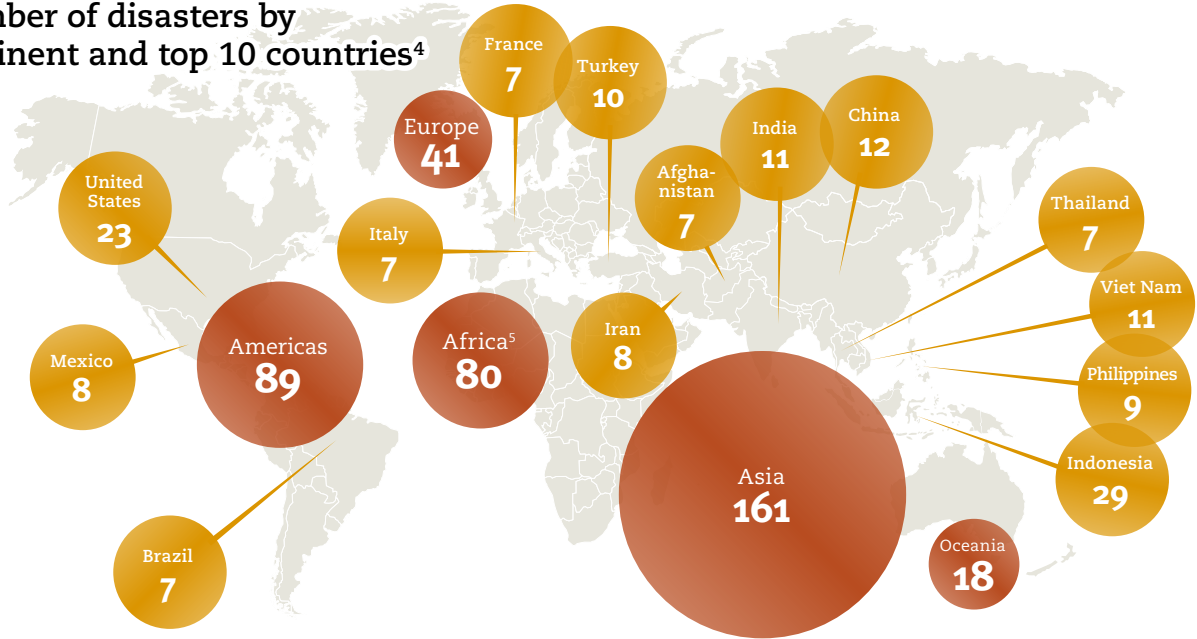


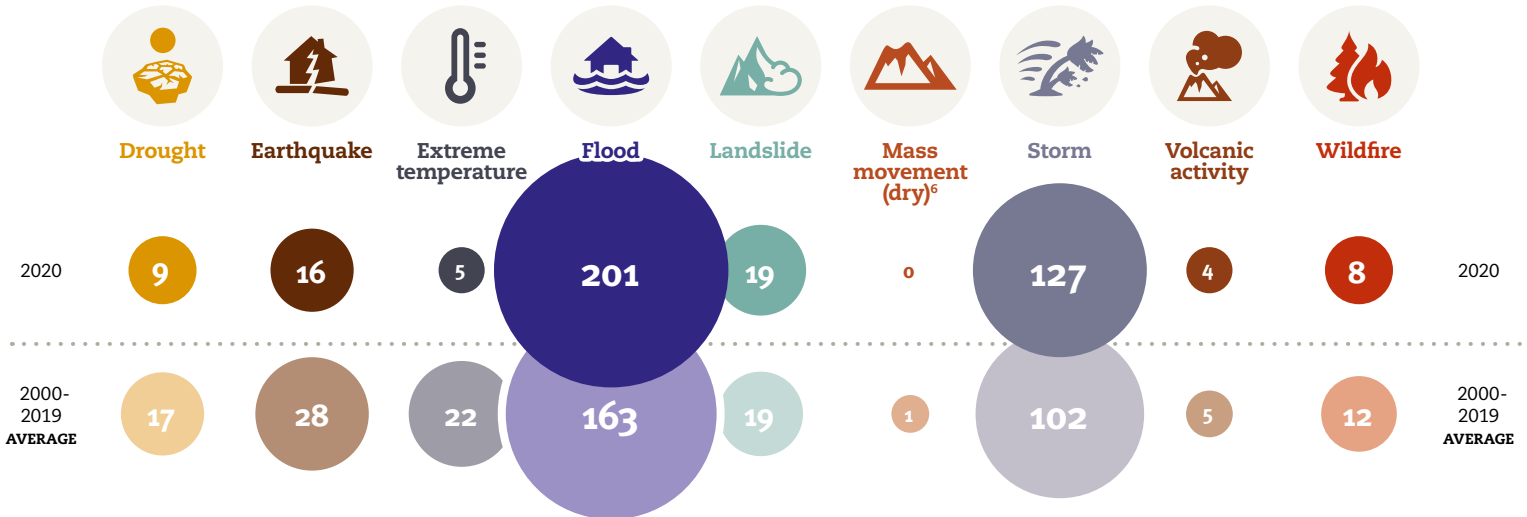
Figure 2

Occurrence by disaster type: 2020 compared to 2000-2019 annual average

368
2000 to 2019

<

389
in 2020



⁴ The 10th spot in the list had 5 countries tied with 7 events, therefore the list actually comprises 14 countries.

⁵ There were a total of 80 disasters across 36 African countries. Uganda and D.R. Congo had the highest number of disasters, both having 6 in total.

⁶ Mass movements in EM-DAT are landslides caused by geophysical hazards (such as earthquakes), while landslides in EM-DAT are caused by hydrological hazards (such as floods).

Human impact: total deaths⁷

Figure 3

Share of deaths (%)
by continent

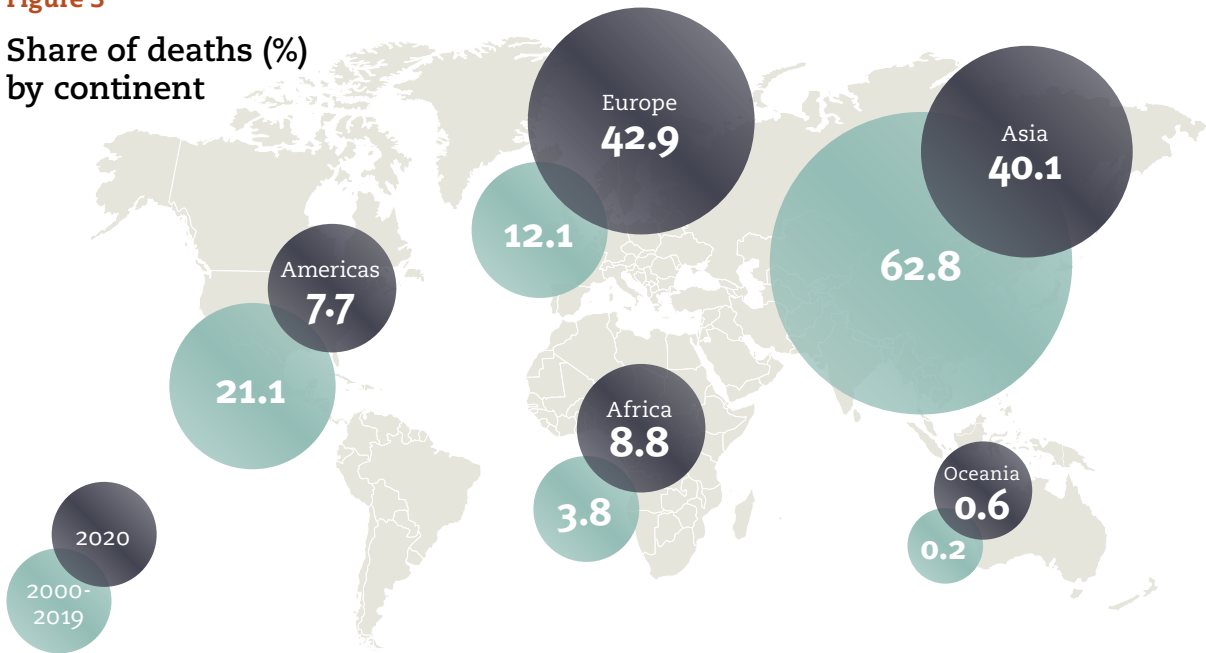


Figure 4

Number of deaths by disaster type: 2020
compared to 2000-2019 annual average

61,709
2000 to 2019

>

15,080
in 2020

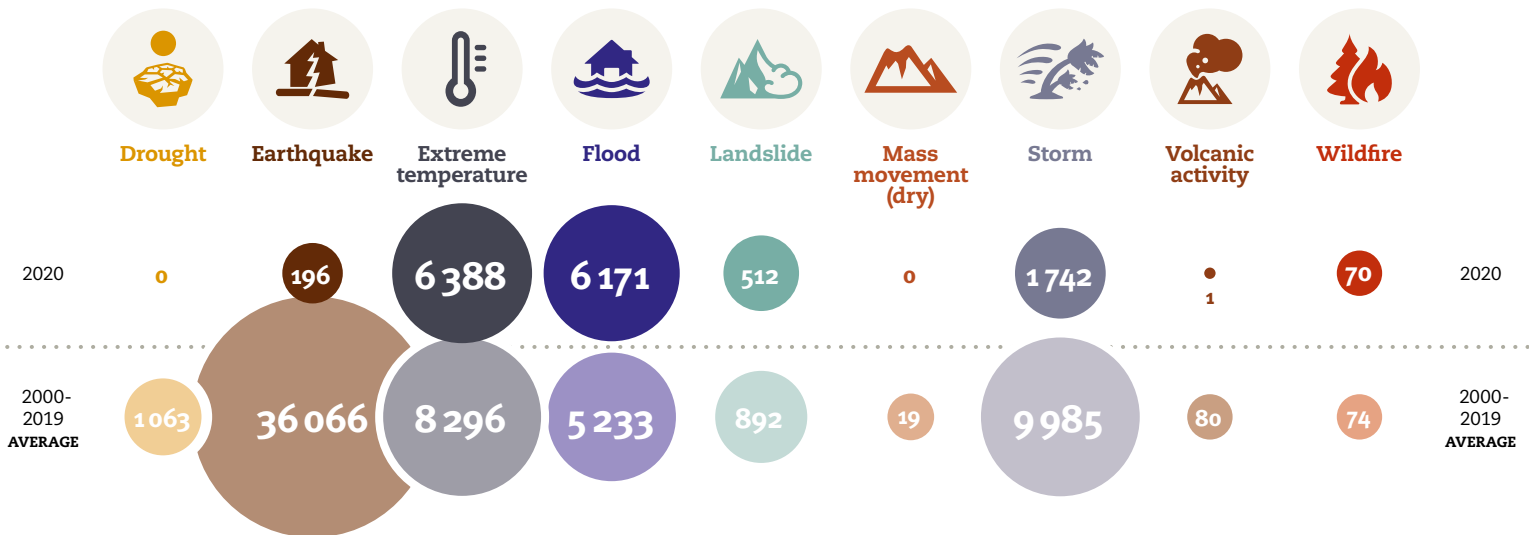


Table 1

Top 10
mortality
– 2020

🇬🇧 UK	Heat Wave	2,556	🇵🇰 Pakistan	Flood	410
🇫🇷 France	Heat Wave	1,924	🇳🇱 Netherlands	Heat Wave	400
🇮🇳 India	Flood	1,922	🇰🇪 Kenya	Flood	285
🇧🇪 Belgium	Heat Wave	1,460	🇨🇳 China	Flood	280
🇳🇵 Nepal	Flood	448	🇬🇩 Bangladesh	Flood	257

⁷ Persons confirmed as dead and persons missing and presumed dead.

Human impact: total affected⁸

Figure 5

Share of affected (%) by continent

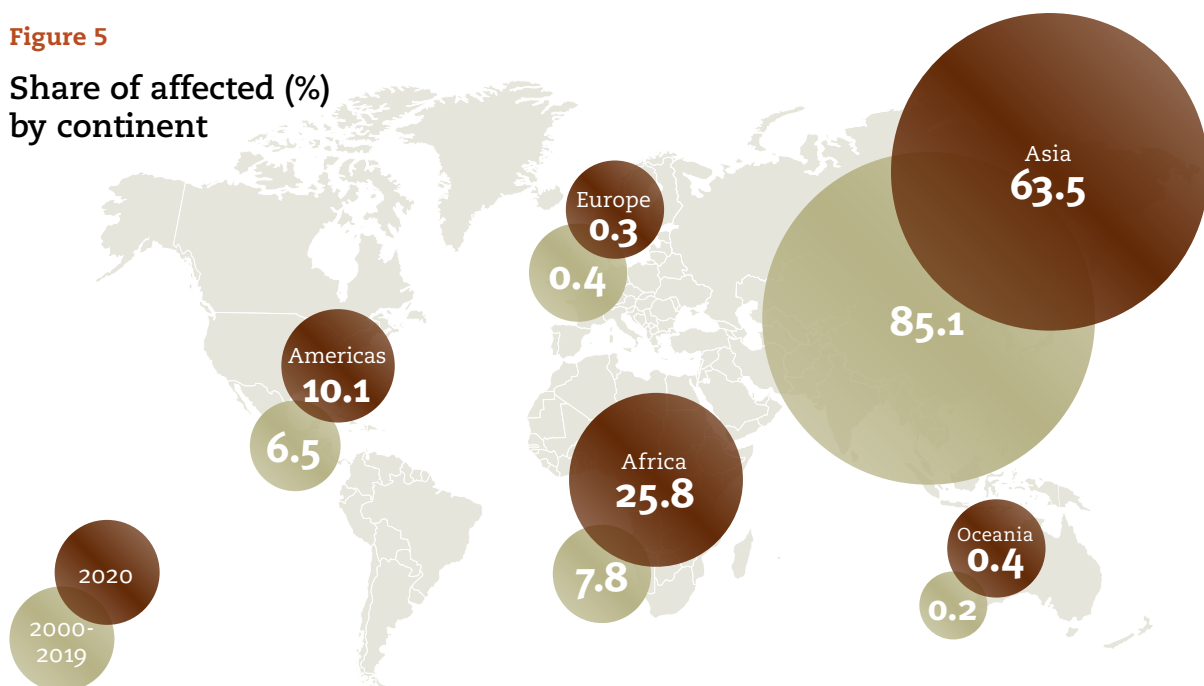


Figure 6

Number of affected (million) by disaster type: 2020 compared to 2000-2019 annual average

201.3 2000 to 2019 > 98.4 in 2020

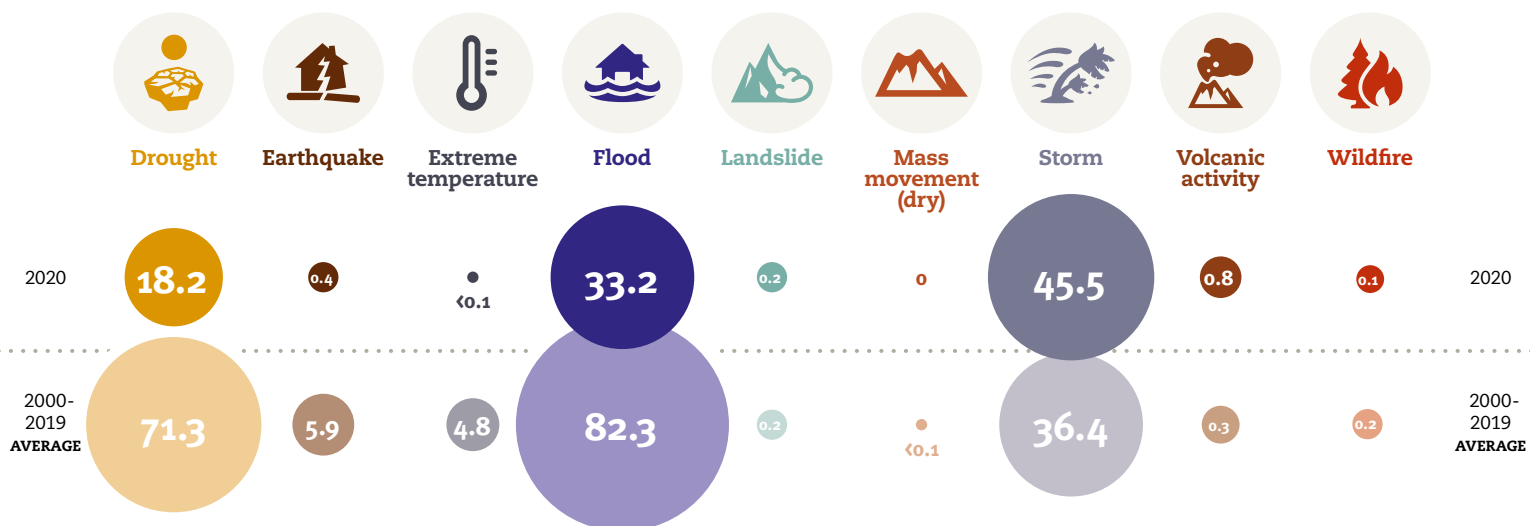


Table 2

Top 10 total affected – 2020

India	Cyclone Amphan	18.0 million	Honduras	Hurricane Eta	4.6 million
China	Flood	10.0 million	China	Flood	4.2 million
Mali	Drought	6.8 million	Niger	Drought	3.7 million
Bangladesh	Flood	5.4 million	Philippines	Typhoon Rolly (Goni)	3.4 million
Philippines	Typhoon 'Ulysses' (Vamco)	4.9 million	Burkina Faso	Drought	2.9 million

⁸ Sum of injured, homeless and affected.

Economic Losses

Figure 7

Share of economic losses (%) by continent

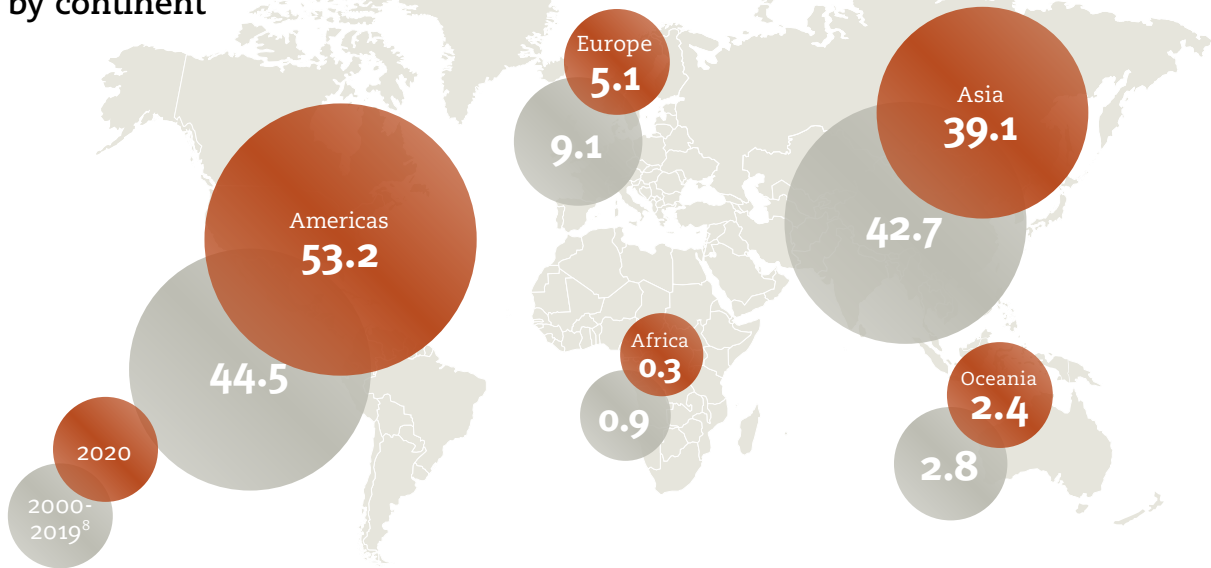


Figure 8

Economic losses (billion US\$) by disaster type: 2020 compared to 2000-2019 annual average⁹

151.6 billion US\$ (2000 to 2019) < 171.3 billion US\$ (in 2020)

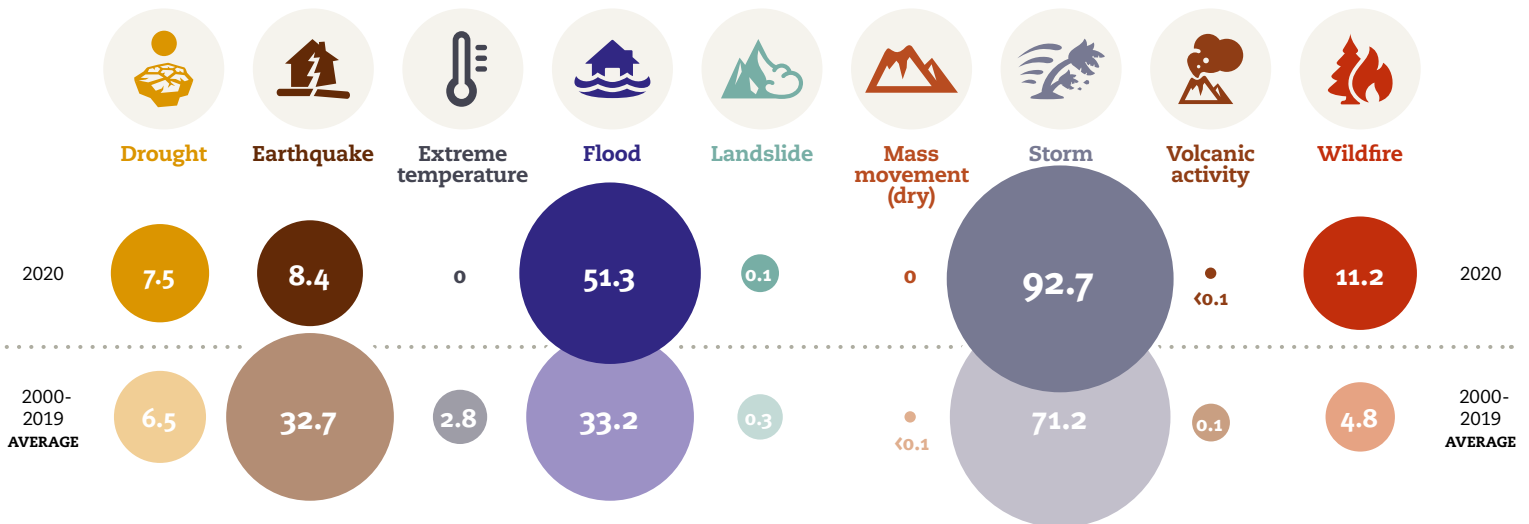


Table 3

Top 10 economic losses - 2020

China	Flood	17 billion	USA	Storm	6.8 billion
India	Cyclone Amphan	13 billion	USA	Hurricane Sally	6.3 billion
USA	Hurricane Laura	13 billion	Japan	Flood	5.8 billion
USA	Wildfire	11 billion	Croatia	Earthquake	5.6 billion
India	Flood	7.5 billion	Honduras	Hurricane Eta	5.0 billion ¹⁰

⁹ Economic loss figures were adjusted using yearly consumer price index (CPI) data from the OECD.

¹⁰ Figures are likely an overestimate. Interpret with caution until further validated data available.

Who Are We

CRED and EM-DAT

The Centre for Research on the Epidemiology of Disasters (CRED) is one of the leading agencies for the study of public health during mass emergencies, including the structural and socio-economic impacts of natural hazard related, technological disasters and human conflicts. CRED was founded in 1973 at the School of Public Health of UCLouvain, Belgium. Since then, CRED has been working closely with United Nations agencies, intergovernmental and governmental institutions, non-governmental organizations (NGOs), research institutes and other universities. Disaster preparedness, mitigation and prevention, and protecting vulnerable populations, have also gained a higher profile within CRED's activities in recent years. CRED manages the Emergency Events Database (EM-DAT) which contains the world's most comprehensive data on the occurrence and effects of more than 24,000 technological and natural hazard-related disasters from 1900 to the present day. The main objective of EM-DAT is to inform humanitarian action at the national and international levels in order to improve decision-making in disaster preparedness, provide objective data for assessing communities' vulnerability to disasters and to help policy-makers set priorities. For the purposes of this report, the term "disaster" is reserved for natural hazard-related disasters, excluding biological disasters.

Contact : Regina Below
regina.below@uclouvain.be
+32 (0)2 7643326

Clos Chapelle-aux-Champs, 30 B1.30.15,
1200 Brussels, Belgium
More info on: www.emdat.be and www.cred.be



www.facebook.com/creducl



[@CREDUCL](https://twitter.com/CREDUCL)

This report has been funded by UNDRR with partial support from the United States Agency for International Development (USAID) and UCLouvain. This report was put together by Regina Below, Joris van Loenhout, and Nima Yaghmaei. We thank Denis McClean and the UNDRR team who provided insight and helped refine the text. We are also grateful to MARDI for the layout. The contents of this report remain the responsibility of the authors alone.

We encourage the free use of the contents of this report with appropriate and full citation:
CRED & UNDRR. 2020: *The Non-COVID Year in Disasters*. Brussels: CRED; 2021.
This document is available at: https://emdat.be/sites/default/files/adsr_2020.pdf

UNDRR

The UN Office for Disaster Risk Reduction was established in 1999 and serves as the focal point in the United Nations System for the coordination of disaster risk reduction. It supports the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030, which maps out a broad people-centered approach towards achieving a substantial reduction in disaster losses from natural and man-made hazards and a shift in emphasis from disaster management to disaster risk management. UNDRR and partners produce the biennial Global Assessment Report on Disaster Risk Reduction which provides evidence for the integration of disaster risk reduction into private investment decision-making and public policy in urban, environmental, social and economic sectors. UNDRR also coordinates the Making Cities Resilient 2030, ARISE private sector network and supports governments in the implementation and monitoring of the Sendai Framework.

Contact : Denis McClean
mccleand@un.org
+41 22 9178897
9-11, rue de Varembé,
CH 1202 Geneva, Switzerland
More info on: www.undrr.org