

Human Cost of Disasters (2000-2019)

Over the last twenty years, 7,348 disaster events were recorded worldwide by EM-DAT, one of the foremost international databases of such events. In total, as seen in Figure 1, disasters claimed approximately 1.23 million lives, an average of 60,000 per annum, and affected a total of over 4 billion people (many on more than one occasion). Additionally, disasters led to approximately US\$ 2.97 trillion in economic losses worldwide.

These numbers represent an increase of the number of recorded disaster events by comparison with the previous twenty years. Between 1980 and 1999, EM-DAT recorded 4,212 disasters linked to natural hazards worldwide, which claimed approximately 1.19 million lives and affected over 3 billion people (Figure 1). Economic losses totaled US\$ 1.63 trillion.

While better recording and reporting may partly explain some of the increase in events, it is also due to a rise in the number of climate-related disasters. Between 2000 and 2019, there were 510,837 deaths and 3.9 billion people affected by 6,681 climate-related disasters. This compares with 3,656 climate-related events which accounted for 995,330 deaths (47% due to drought/famine) and 3.2 billion affected in the period 1980-1999. The number of people affected by disasters, including injuries and disruption of livelihoods, especially in agriculture, and the associated economic damage are growing in contrast to the decrease in mortality. This is evidence that in a world where the global average temperature in 2019 was 1.1°C above the preindustrial period, the impacts are being felt in the increased frequency of extreme weather events including heatwaves, droughts, flooding, winter storms, hurricanes and wildfires. While improvements have been made in terms of early warnings, disaster preparedness and response, which have led to a reduction in loss of life in single-hazard scenarios, it is also clear that the increasingly

systemic nature of disaster risk, i.e. the overlap of events and the interplay between risk drivers such as poverty, climate change, air pollution, population growth in hazard-exposed areas, uncontrolled urbanization and the loss of bio-diversity, requires greater strengthening of disaster risk governance. Political commitment is essential if the SDGs are to be achieved and if progress is to be made on reducing the numbers of people affected by disasters and reducing the economic losses and damage to critical infrastructure that come with them.

The UN Office for Disaster Risk Reduction - UNDRR's 2019 Global Assessment Report for Disaster Risk Reduction highlights that failure to understand and manage systemic risk is a challenge for reducing disaster losses as set out in the global blueprint: the Sendai Framework for Disaster Risk Reduction (2015-2030) adopted by UN member States.

Nothing has revealed more clearly the need for an all-of-society focus on disaster risk reduction than the current COVID-19 pandemic which has laid bare many shortcomings in disaster risk management, not least in governance failures in response to repeated warnings.

Figure 1
Disaster Impacts:
1980-1999 vs. 2000-2019

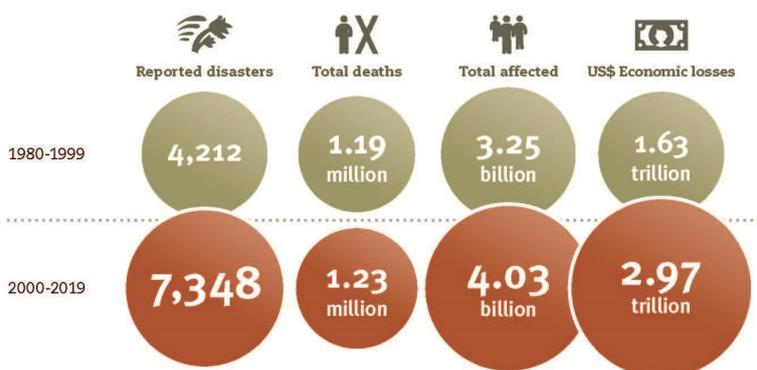
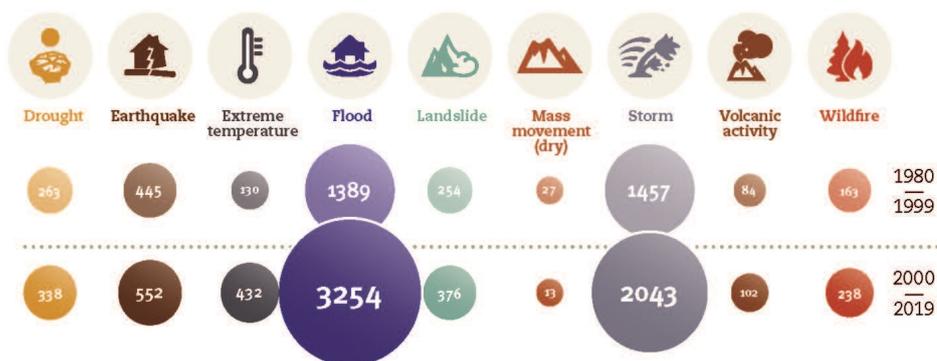


Figure 2

Total disaster events by type: 1980-1999 vs. 2000-2019

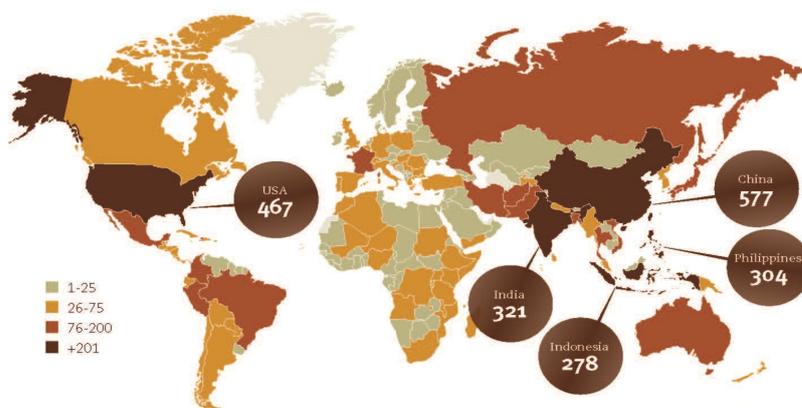


Key points and recommendations:

- A temperature increase of 3°C of the global climate is estimated to increase the frequency of potentially high impact natural hazard events across the world. This could render current national and local strategies for disaster risk reduction and climate change adaptation obsolete in many countries;
- Shifting rainfall patterns and greater variability in precipitation poses a risk to 70% of global agriculture that is rain-fed and the 1.3 billion people dependent on degrading agricultural land;
- The concentrated impact due to a single disaster type in some countries provides an opportunity for a more focused approach on disaster risk reduction. However, COVID-19 demonstrates the need for a systemic, multihazard approach in an increasingly globalized and interconnected world;
- There is a requirement for strengthening disaster risk governance to manage disaster risk with clear vision, competence, plans, guidelines, funding and coordination across sectors and in a manner which takes account of the increasingly systemic nature of disaster risk;
- Public and private investment in disaster risk prevention and reduction through structural and non-structural measures needs to be stepped up to create disaster resilient societies.

Figure 3

Number of disasters reported per country/territory (2000-2019)



References:

CRED—Human cost of disasters. An overview of the last 20 years 2000-2019. <https://cred.be/sites/default/files/CRED-Disaster-Report-Human-Cost2000-2019.pdf>

Cred updates and recent publications

Two new articles published in scientific magazines:

- Guha-Sapir, D.; Scales, S.E.. *Challenges in public health and epidemiology research in humanitarian settings: experiences from the field*. In: *BMC Public Health*, Vol. 20, no.1, p. 6p. (2020). doi:10.1186/s12889-020-09851-7
- Enenkel, M. ; Brown, M. E. ; Vogt, J. V. ; McCarty, J. L. ; Reid Bell, A. ; Guha-Sapir, D.; Dorigo, W. ; Vasilaky, K. ; Svoboda, M. ; Bonifacio, R. ; Anderson, M. ; Funk, C. ; Osgood, D. ; Hain, C. ; Vinck, P.. *Why predict climate hazards if we need to understand impacts? Putting humans back into the drought equation*. In: *Climatic Change*, Vol. 00, no.00, p. 16p. (2020). doi:10.1007/s10584-020-02878-0

One new report published: Froment, R.; van Loenhout, J.; Vanwambeke, S.; Guha-Sapir, D. STENTOR: Use of Earth Observation Satellites to Improve Effectiveness of Humanitarian Operations ; 2020. <https://cred.be/sites/default/files/STENTORReport.pdf>

Two mapping tools developed at national and subnational levels are available (after registration) at: <https://public.emdat.be/mapping>