Human Cost of Disasters 2000-2019
Key Insights

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Climate-related events make up the bulk of disaster impacts

Disasters by sub-groups by year (2000-2019)

91% of events from 2000-2019 were climate-related disasters.
Climate-related events accounted for approx. 95% (3.9 billion people) of the people affected by disasters.

Additionally, climate-related events were responsible for 74% of economic losses (approx. 2.2 trillion USD).

This raises alarms considering the IPCC predictions for an increase in magnitude of all climate-related events.
Droughts and extreme temperatures are of particular concern considering climate change

Droughts:
- 29% increase in drought events;
- Affected 1.43 billion people between 2000-2019;
- Droughts predominantly affected poorer regions of the world;
- 134 of drought events were in Africa (some 40% of the global total), including 70 droughts in East Africa alone.

Extreme Temperature:
- 232% increase in extreme temperature events;
- Killed approx. 165,000 people between 2000-2019;
- 91% of extreme temperature deaths are due to heatwaves;
- Europe accounted for 88% of heatwave deaths worldwide, highlighting demographic impacts and data challenges.
Take away lessons.

As seen in EMDAT data;

1. Extreme temperatures events have increased dramatically in previous decades.
2. Droughts have a large impact worldwide, and disproportionate impact poorer regions of the world.

IPCC projections for 1.5°C to 2°C global temperature increase*:

• More frequent heatwaves in most land regions (high confidence);
• 2°C increase would expose more than 1/3 of the world’s population to ‘severe heatwaves’;
• Temperature increases in Sub-Saharan Africa are projected to be higher than the global mean temperature increase;
• Parts of Africa to have more consecutive dry days impacting livelihood, water access, and agricultural outputs;
• Risk of extreme drought conditions for the Middle East and Mediterranean regions (high confidence)

*IPCC Chapter 3: Chapter 3: Impacts of 1.5o C global warming on natural and human systems.
Geophysical disasters alone were responsible for over 50% of disaster deaths.

- Earthquakes and tsunamis killed over 700,000 people worldwide, more than all other disaster types combined;
- 6 out of the top 10 deadliest disaster events of 2000-2019 were earthquakes.
• Earthquakes are difficult to predict, therefore preparation is even more crucial;

• Despite the notion that solutions to earthquake risks are only feasible in wealthy countries, such as Japan, there are a range of viable risk reduction solutions;

• Range of solutions includes hard and software which should be used in a context-specific manner;

• Governments should take responsibility and take action, before it’s too late;

• Countries with the highest risk are those on the Pacific Ring of Fire (ex: Japan & Indonesia) and on the Alpide Belt (ex: India, China, & Iran)
Disasters disproportionately impact smaller and lower income countries

### Total numbers of deaths compared to the average number of deaths per disaster by income group (2000-2019)

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<tr>
<th>Number of total deaths</th>
<th>Average number of deaths per disaster</th>
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<tr>
<td>600,000</td>
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<td>500,000</td>
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- Low and Low-Middle Income countries have the highest absolute death tolls. When comparing deaths per disaster, Low Income countries have 4x higher death tolls per disaster event compared to High Income countries.
Rich countries account for the majority of losses, however, compared to GDP, losses are proportionately more impactful in poorer nations worldwide.

This is even more striking when considering poor data reporting.

8 of the top 10 countries/territories by economic losses as % of GDP are small island nations.
Poor reporting remains a major challenge in disaster epidemiology.

- From 2000 to 2019, 65% of all disaster events did not report any figures for economic losses;
- Nearly 90% of all disaster events in Africa and nearly 80% of events in South Asia had no data on economic losses;
- About 70% of droughts and over 90% of extreme temperature events reported no figures for economic losses;
- From 2000 to 2019, 2/3 of extreme temperature events had no reports on the numbers of people affected;
- Drought impacts are hard to measure and reports often exclude deaths from malnutrition, disease, and displacement, the primary outcomes of droughts;
Thank You

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