



2023 年(第 32回) ブループラネット賞
受賞者記念講演会

2023 Blue Planet Prize
Commemorative Lectures

デバラティ・グハ＝サピール教授
講演スライド集

世界の大規模災害に関する
データインフラの構築

Professor Debarati Guha-Sapir
Slides for the Lecture

Building a Data Infrastructure
for Large-scale Disasters
around the World

Climate disasters

Why is data central to reducing their human impact

PROFESSOR DEBARATI GUHA-SAPIR
University of Louvain Brussels
Johns Hopkins University Baltimore
with
Sarah Scales, MS, PhD (Epid)
Thomas Jideofor Ogbu, MA (Stat) PhD (Epid)

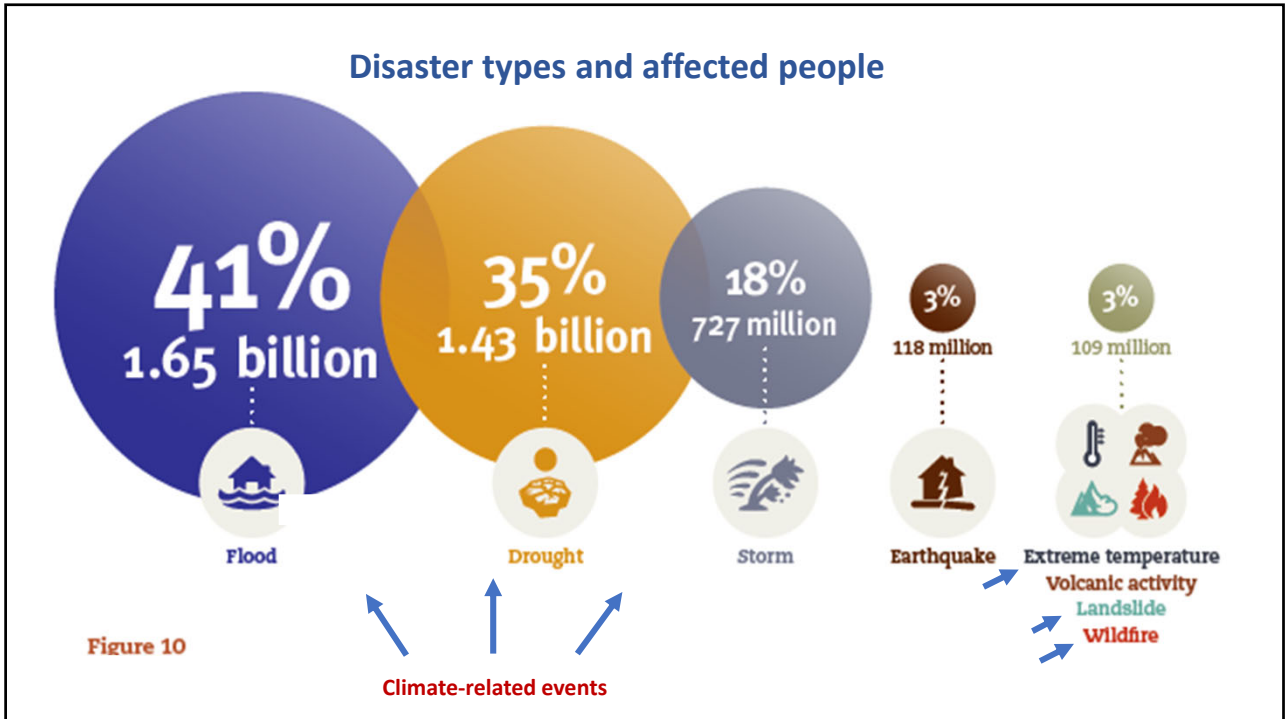
ASAHI GLASS FOUNDATION BLUE PLANET PRIZE COMMEMORATIVE LECTURE
TOKYO UNIVERSITY
5 OCT 2023

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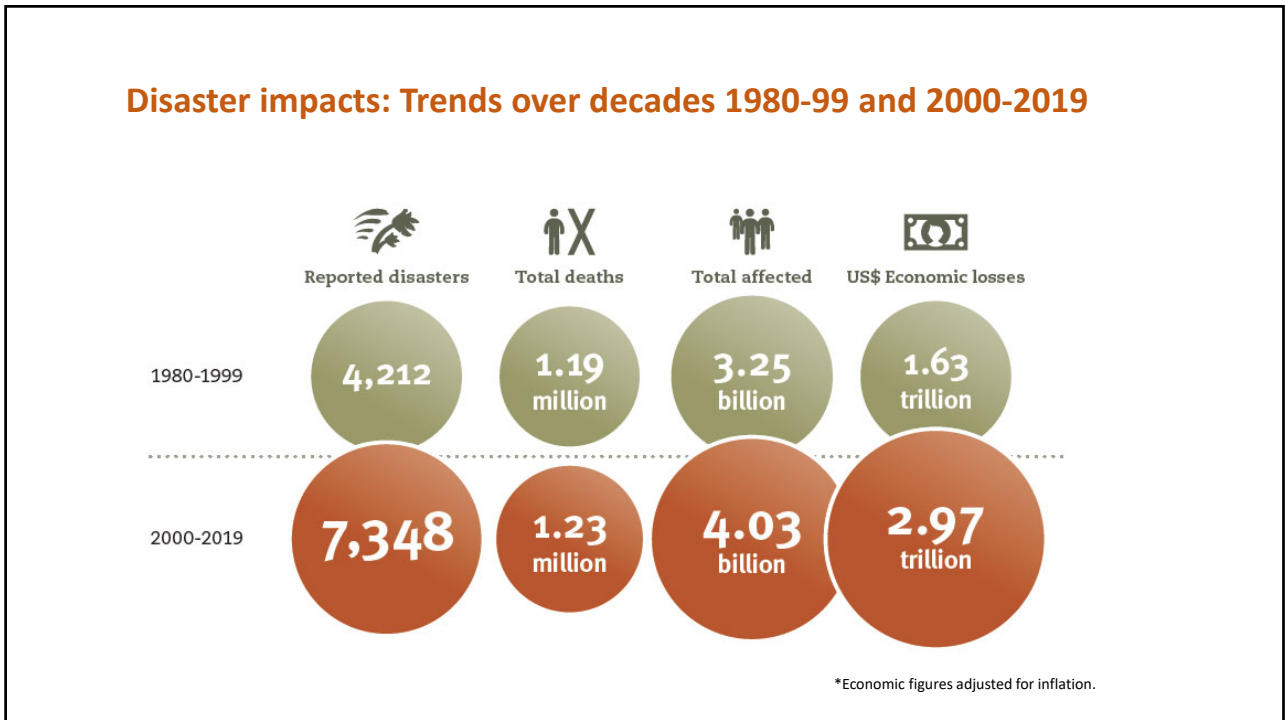
Classifying disasters correctly

 Geophysical	 Hydrological	 Meteorological	 Climatological	 Biological	 Extra-terrestrial
Earthquake Mass Movement (dry) Volcanic activity	Flood Landslide Wave action	Storm Extreme temperature Fog	Drought Glacial lake outburst Wildfire	Animal accident Epidemic Insect infestation	Impact Space weather

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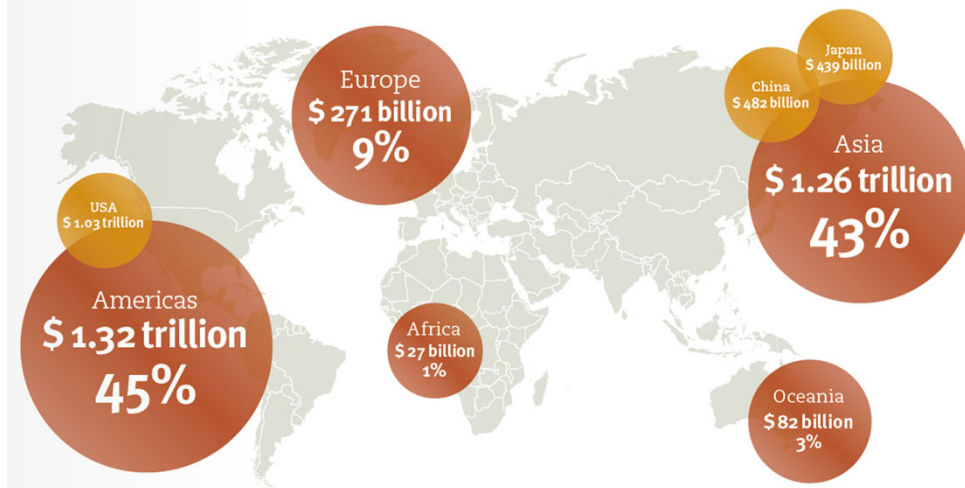
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Economic Impacts

Breakdown of recorded economic losses (US\$) by continent (2000-2019)



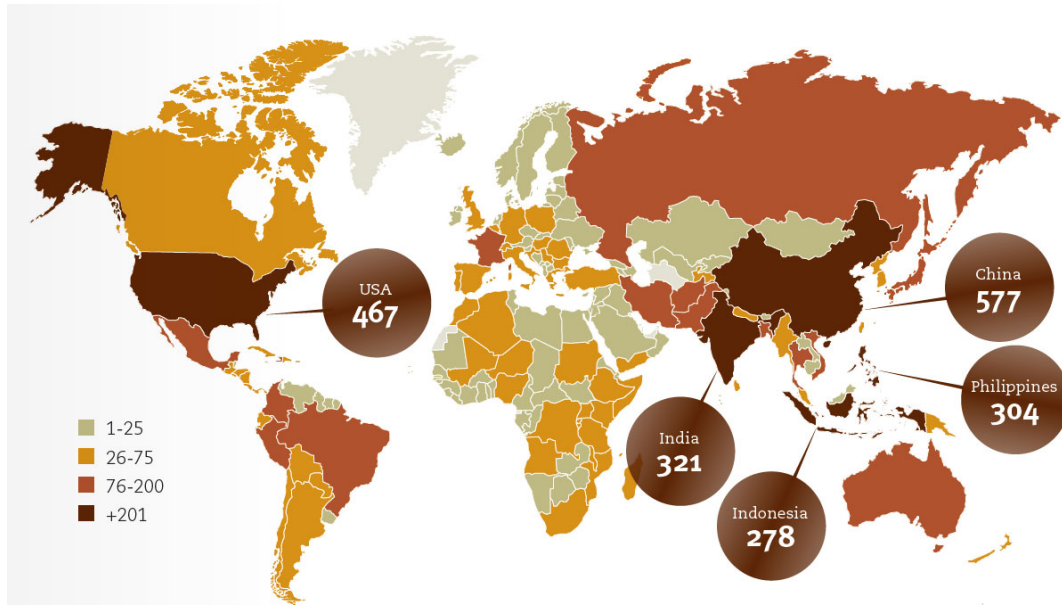
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Challenges for quality of data on disaster impact

- ✓ Sound methodology in data collection techniques
- ✓ Definitions of variables and inclusion and exclusion criteria
- ✓ Checking for validity
- ✓ Completeness and accuracy

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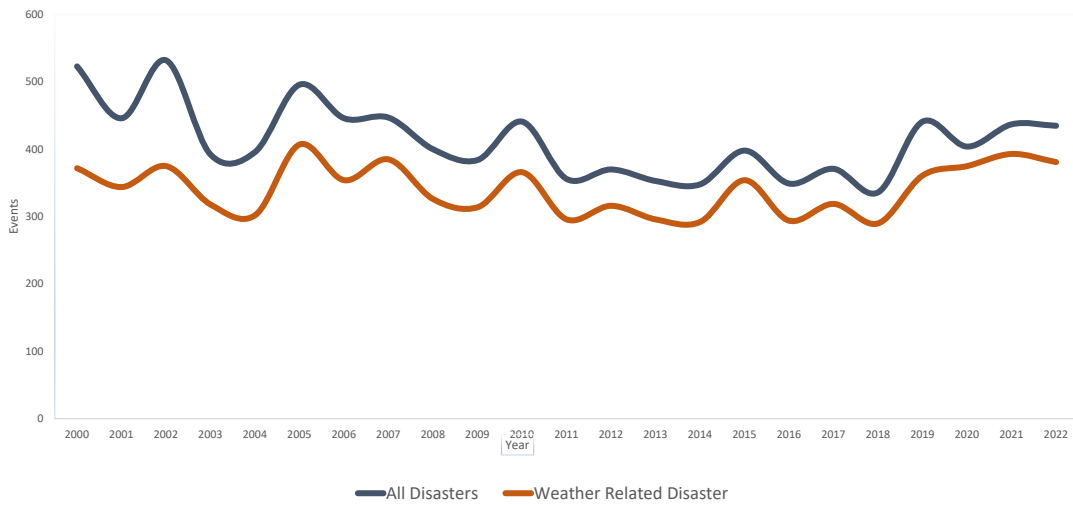
Average disasters/year by country /territory 2000 -2022



Source: EMDAT (CRED)

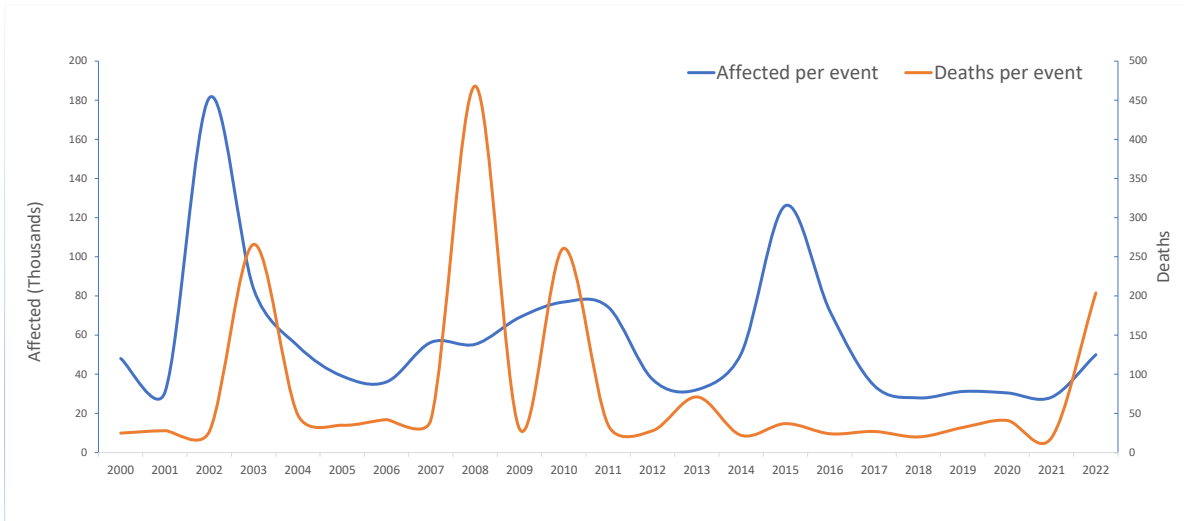
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Trends in Global Natural Disasters 2000 - 2022



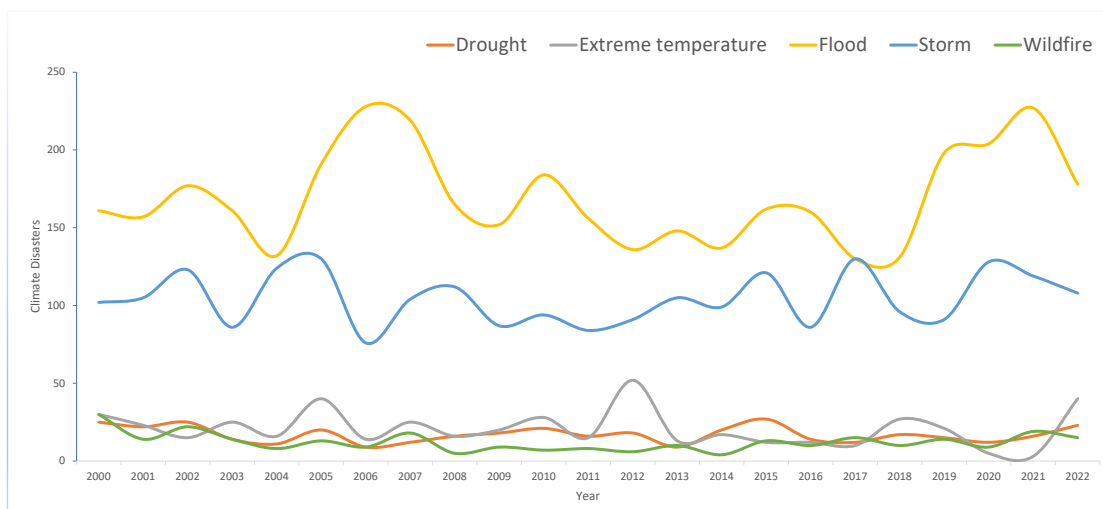
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What are the trends in human impact ?



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Climate related disaster events from 2000 - 2022

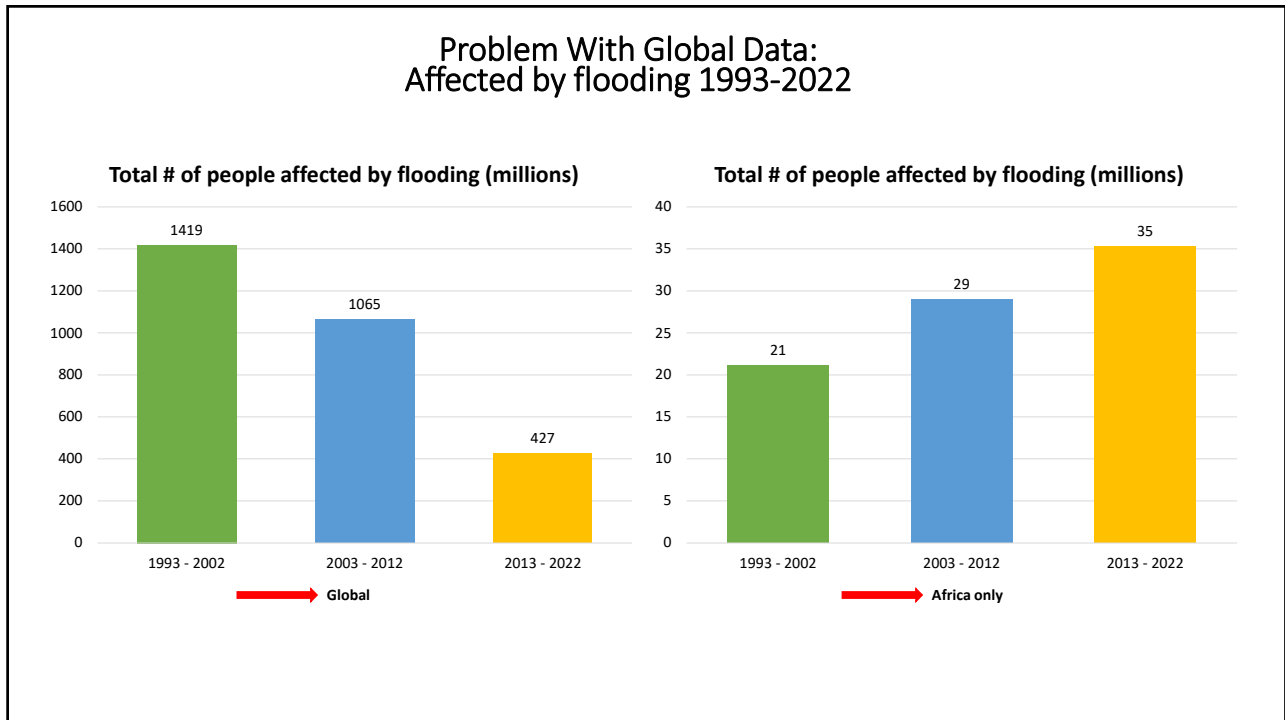


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Exposure to damp air brings pneumonia; contaminated water brings diarrhoea, dengue

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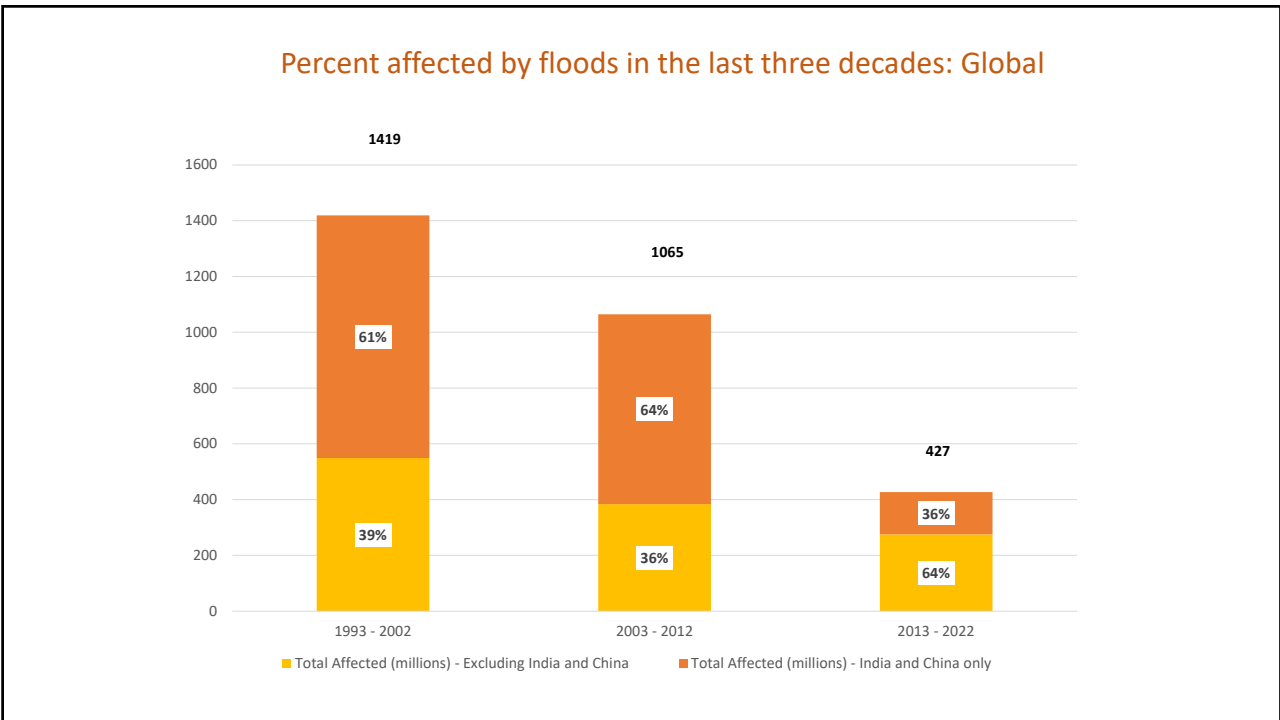


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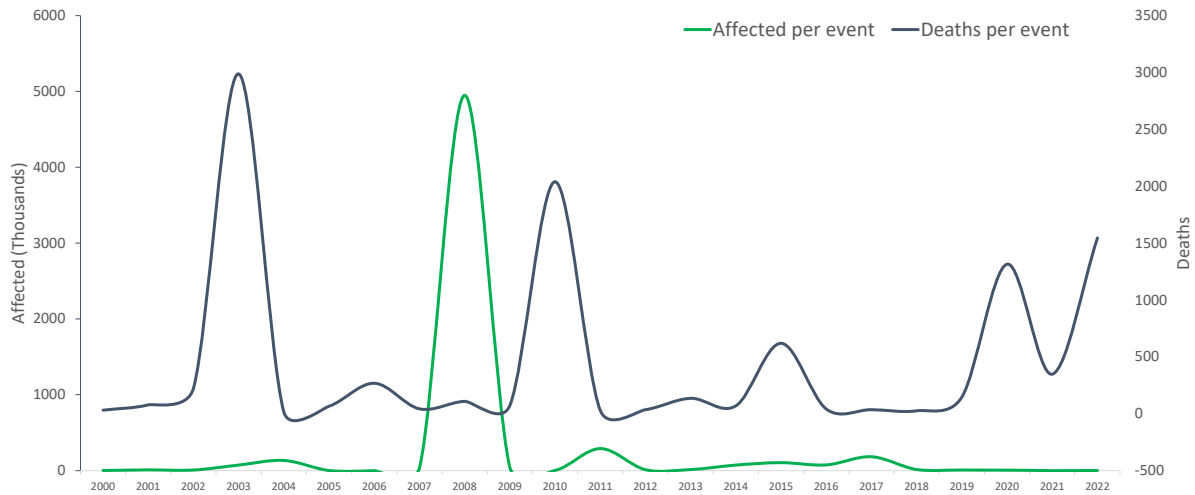
People find solutions!

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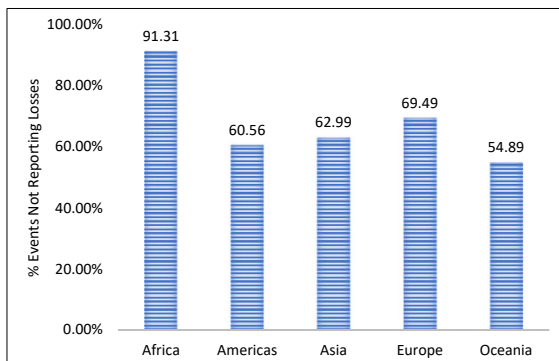
Extreme Temperature from 2000 to 2022



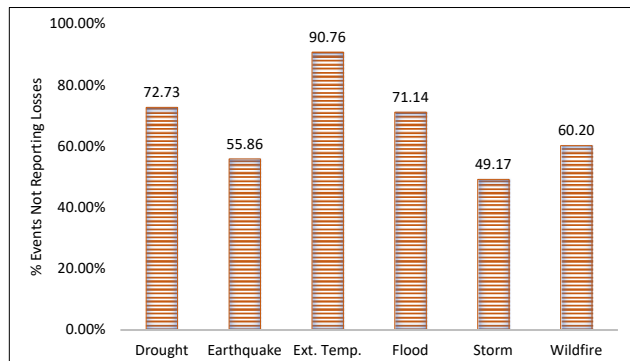
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Quality Issue Related to Data Gaps: Percent Share of Missing Data, 2000 – 2023 (Sept)

BY REGION



BY DISASTER TYPE



A large proportion of disaster events do not have reported economic losses.

Events with reported total damages recorded in EM-DAT, 2000 – 25 September 2023.

Data extracted after database validation and update on 25 September 2023.

Region reporting represents all disaster types recorded in EM-DAT, 2000 – 25 September 2023.

Ext. Temp. - extreme temperature

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Phase 1
EMDAT Data collection:
Secondary sources

Phase 2:
Shifting to survey data, satellite
data and creation of data
cooperatives

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**Impacting policy: UN Press conference on disasters
UNDRR USG Mrs Mami Mizoturi and Debby Guha-Sapir
Geneva 2019**



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HOW CAN WE IMPROVE?

- Better models of socio-economic impact
- Resolve methodological challenges for measuring the impact of climate disasters - heatwaves, droughts, and wildfires.
- Use higher resolution (subnational) data on disaster footprints and exposed populations

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THANK YOU

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