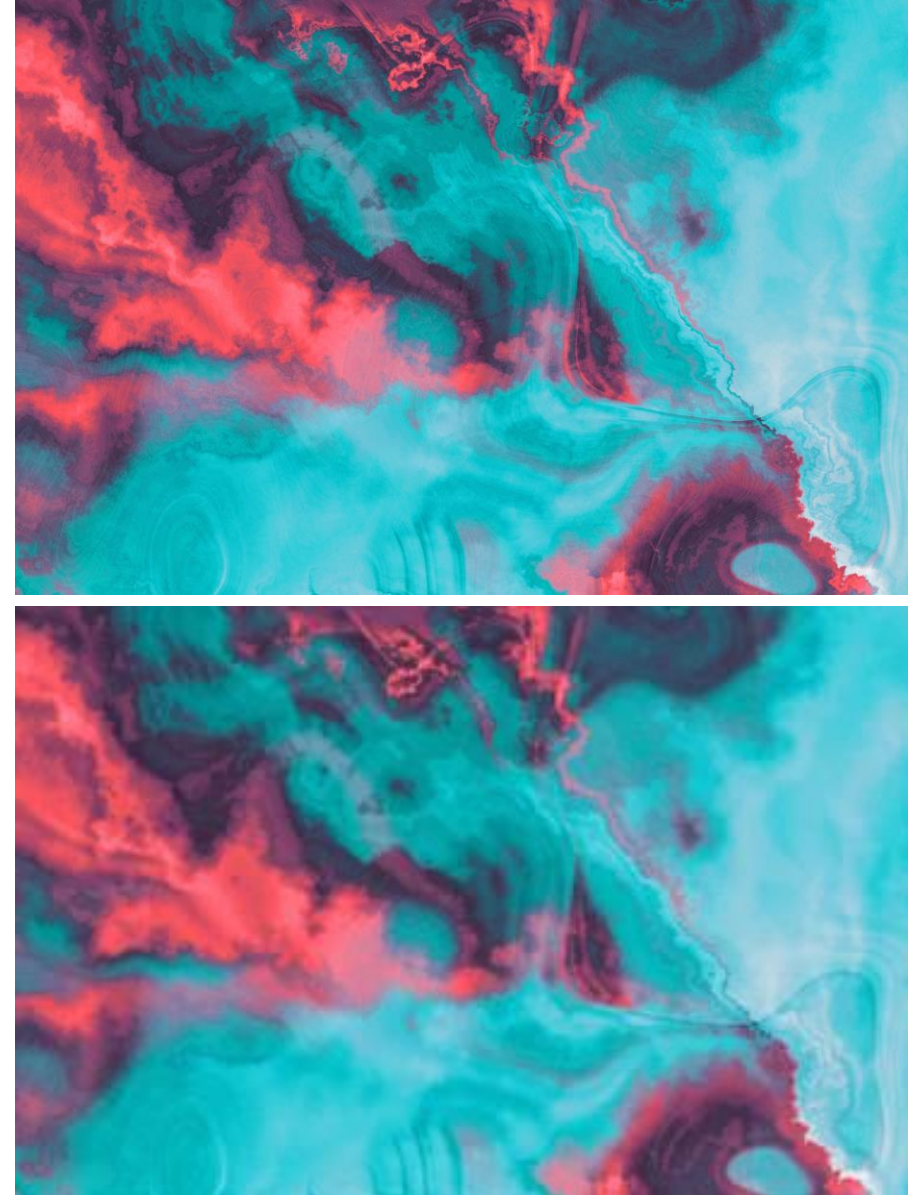


# DISASTER NURSING N110

Always Prepared...  
Ready to Serve...  
Saving Lives!

Asst. Prof. Bettina D. Evio, RN, MAN



# Learning Outcomes

At the end of the module, you should be able to:

1. Describe the general trend of disasters over time and across countries
2. Describe the general impact of major global/regional and local disasters
3. Explain the relevance of the Philippine's rank in the World Risk Index



The increasing frequency of disasters (both natural and complex) as a worldwide phenomenon leads to significant loss of lives, community and environmental damage, and economic losses (Sato, et al., 2018)

There is an urgent need to scale up nurses' capacities "...to safeguard populations, limit injuries and deaths, and maintain health system functioning and community well-being, in the midst of continued health threats and disasters" (WHO & ICN, 2009, Foreword).

# March 11, 2011 The Great East Japan Earthquake

Tohoku region, Japan, largest city - Sendai



Devastation from the tsunami





# Super Typhoon Yolanda (Haiyan)

Super Typhoon Haiyan, satellite image



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Aftermath...



[This Photo](#) by Unknown Author is licensed under [CC BY-NC-ND](#)

# Disasters during the COVID-19 pandemic

More than  
**100**  
disasters  
occurred during the  
first **6 months** of the  
**COVID-19 pandemic**



More than  
**50**  
million  
people have  
been affected



More than  
**10**  
different disasters  
affected over  
**250,000 people**



# 99%

of people affected were impacted by  
**extreme climate- and weather-related disasters**

Sources: IFRC GO, EM-DAT

Notes: WHO declared the COVID-19 pandemic on 11 March 2020. Figures are from 1 March 2020 to 1 September 2020.



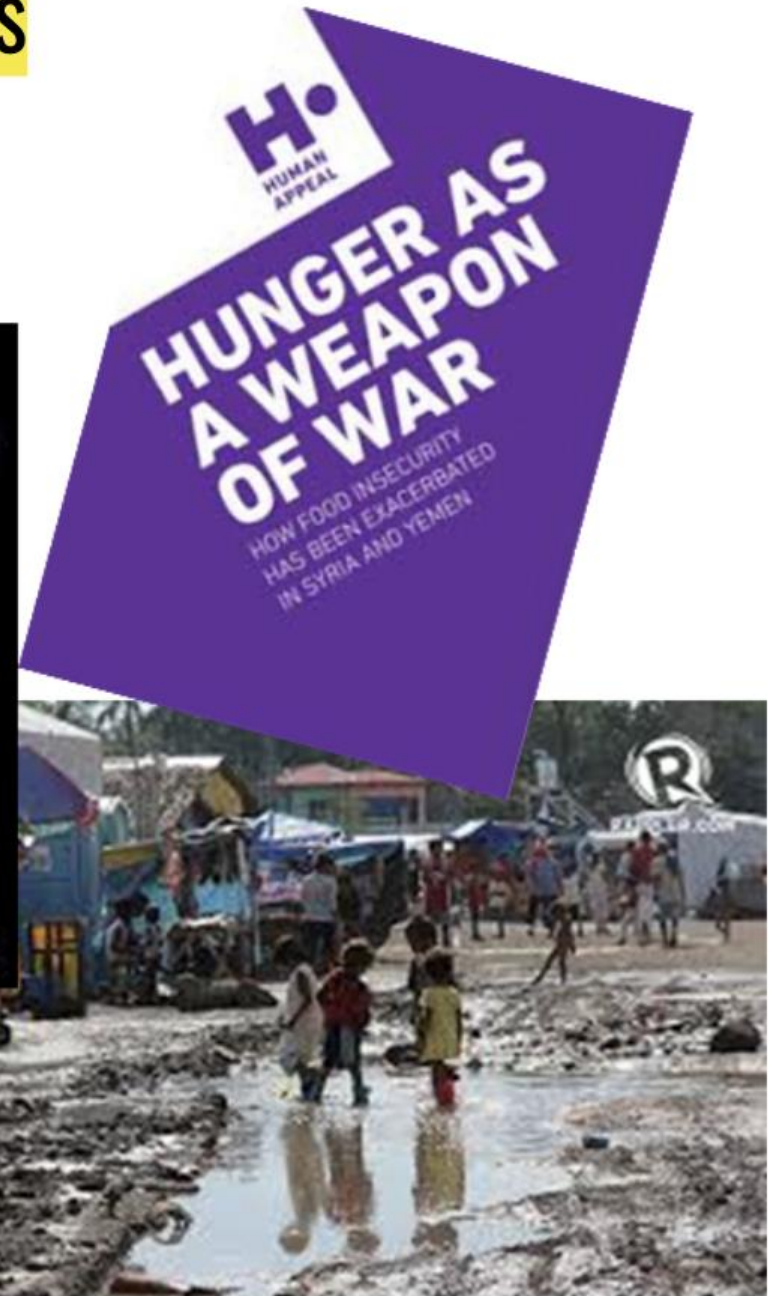
# Complex Emergencies



## Civilian Lives Lost In Some Complex Humanitarian Emergencies

Country Period	Deaths	Time
Sudan	Over 1 million	1983-Present
Ethiopia	750,000 - 2 million	1984-1993
Rwanda	500,000 - 1 million	1994 - Present
Cambodia	Over 1 million	1975-1993
Somalia	500,000	1988-present
Bosnia	200,000	1992-1996

12



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# #NotATarget

What is it?

[Why we can't save her life: On the Frontline](#)



A large, intense fire with bright orange and yellow flames against a dark background. The fire is the central focus, with a bright, glowing core at the bottom center, surrounded by swirling, turbulent flames that spread outwards. The colors range from deep reds and oranges to bright yellows and whites at the hottest points. The overall effect is one of immense heat and destruction.

# **Floods, fires and natural disasters | The World in 2023**





THE WORLD

# CLIMATE CATASTROPHE

## SURVIVAL BATTLE

---

[Disasters: The World in 2023](#)

# Disaster and risk trends



## 2023 Disasters in Numbers



A Significant Year  
of Disaster Impact



# Occurrence of Disasters<sup>12</sup>

**Figure 1**

**Number of Disasters by Continent  
and Top 10 Countries<sup>13</sup> in 2023**

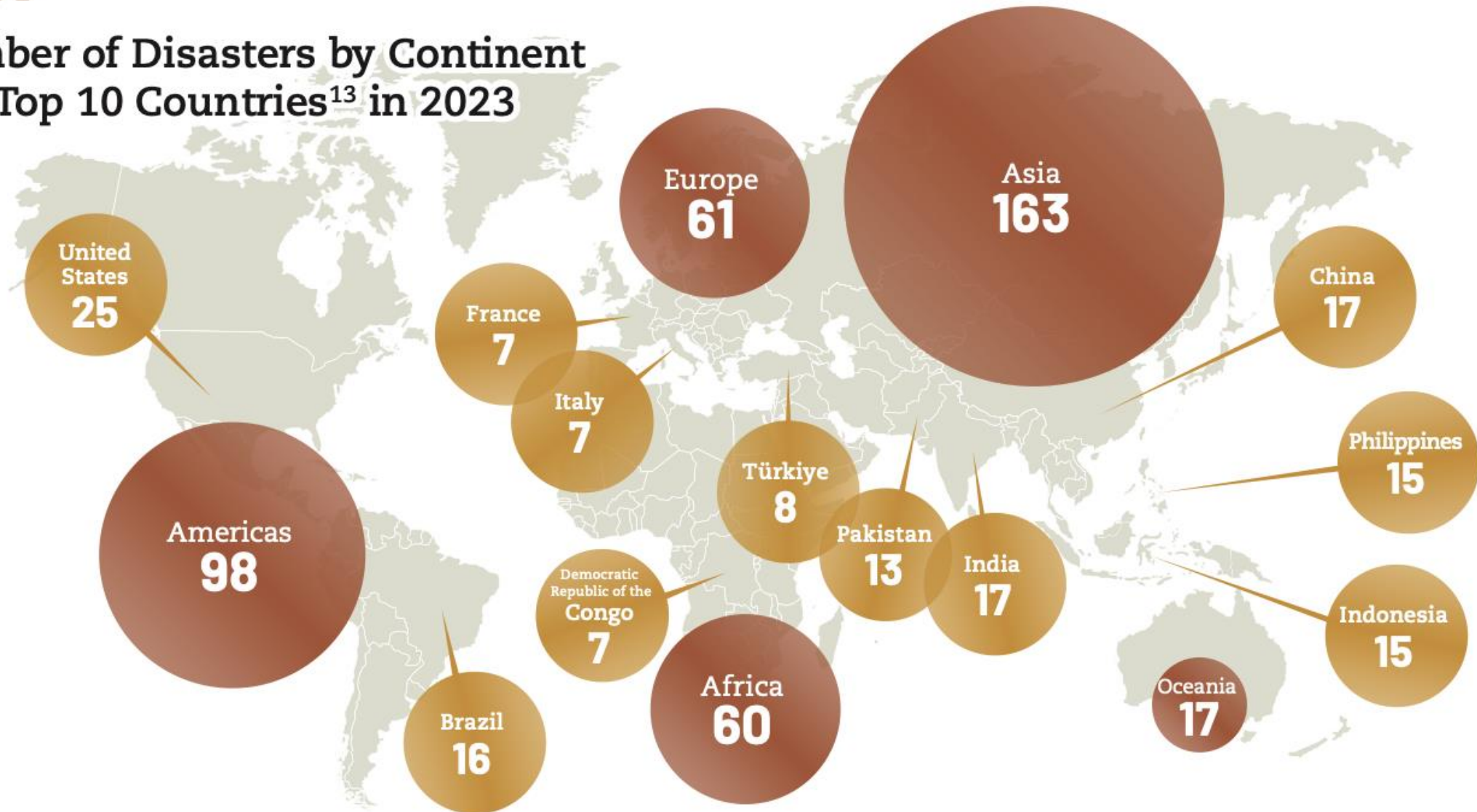
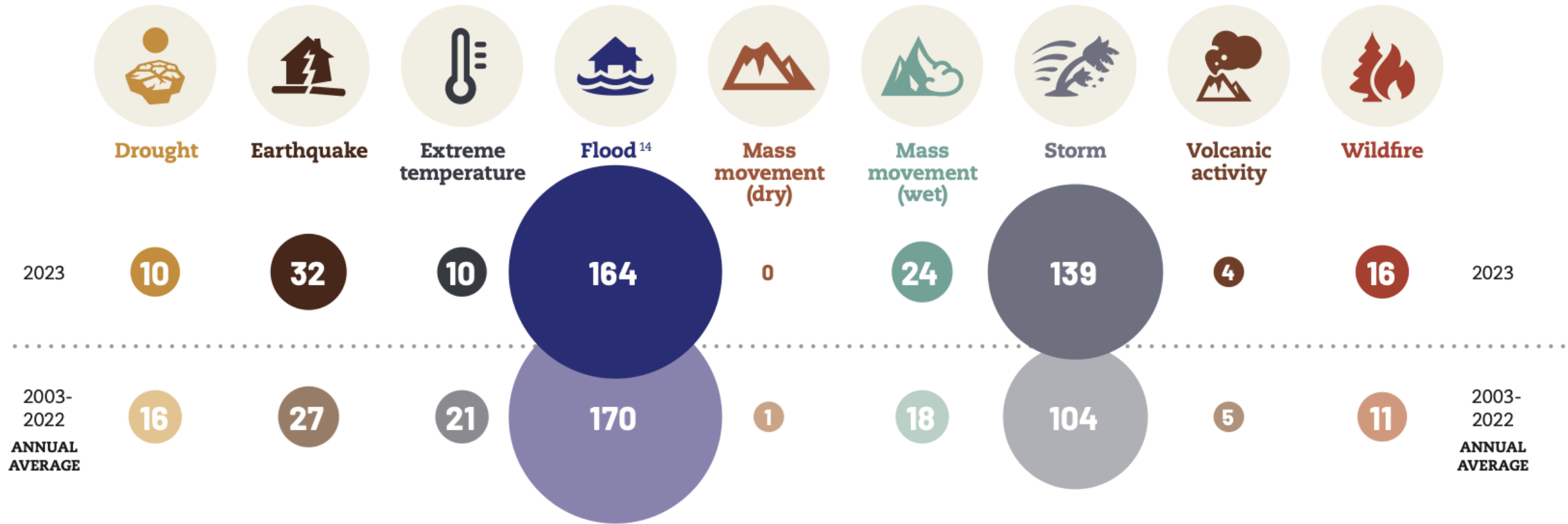


Figure 2

## Occurrence by Disaster Type: 2023 Compared to the 2003-2022 Annual Average

369 < 399  
2003 to 2022 in 2023



# Human Impact: Total Deaths<sup>15</sup>

Figure 3

Proportion of Deaths  
by Continent in 2023

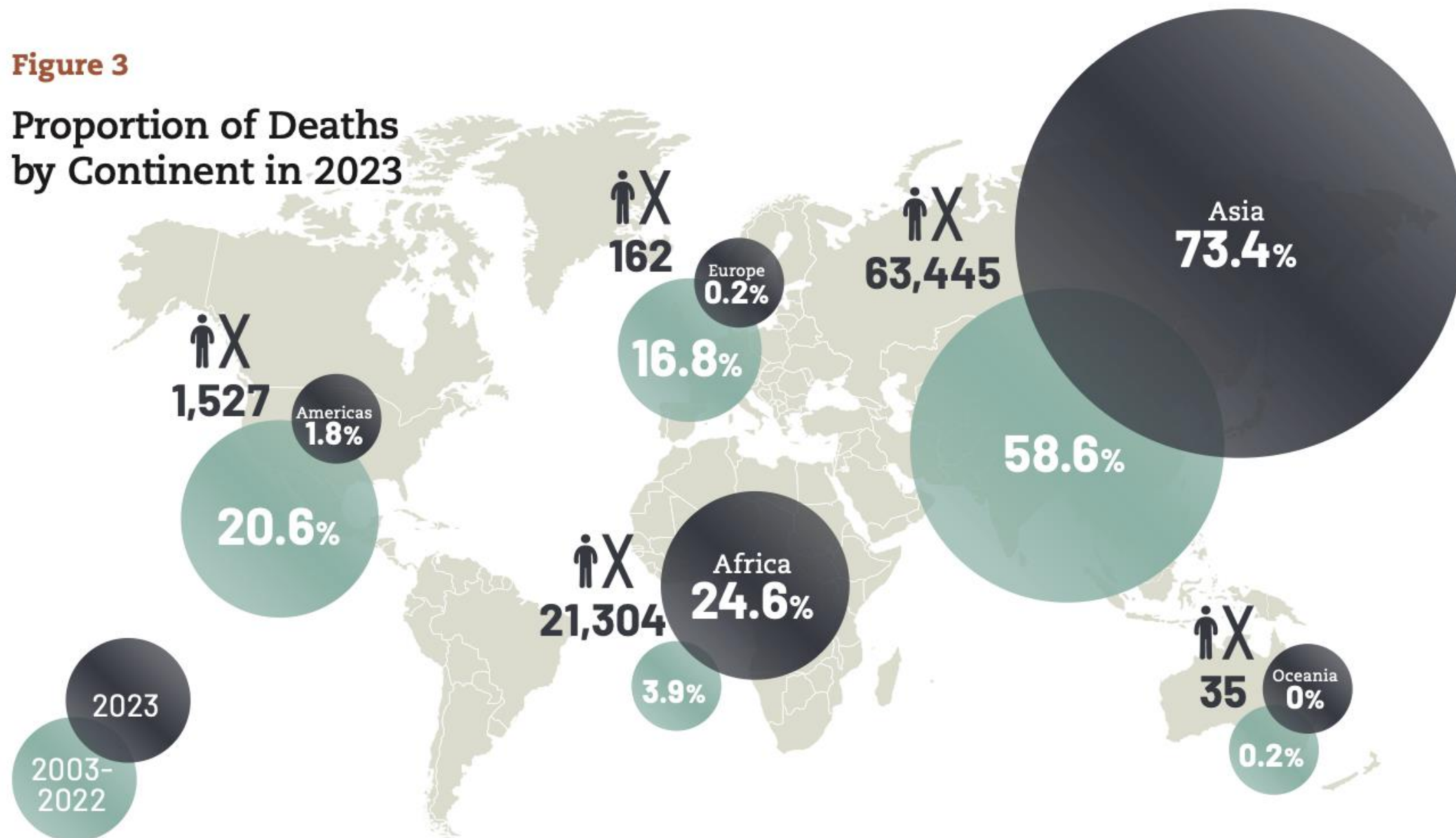




Figure 4

Number of Deaths by Disaster Type: 2023  
Compared to 2003-2022 Annual Average

64,148 < 86,473  
2003 to 2022 in 2023

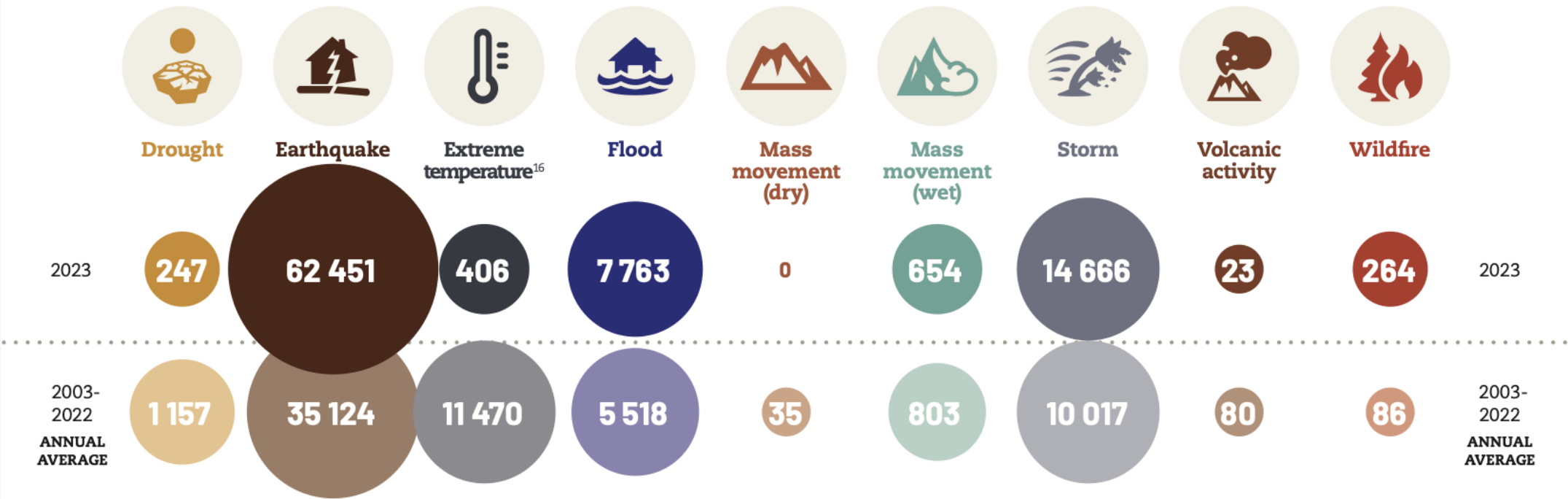












Table 1

Top 10 Mortality  
– 2023

	Türkiye	Earthquake	50,783		Afghanistan	Earthquake	2,445
	Libya	Storm Daniel	12,352		India	Flood	1,529
	Syrian Arab Rep.	Earthquake	5,900		Malawi	Tropical Storm Freddy	1,209
	Congo (Democratic Rep.)	Flood	2,970		Nigeria	Flood	275
	Morocco	Earthquake	2,946		Yemen	Flood	248

# Human Impact: Total Affected<sup>17</sup>

Figure 5

Proportion of Affected  
by Continent in 2023

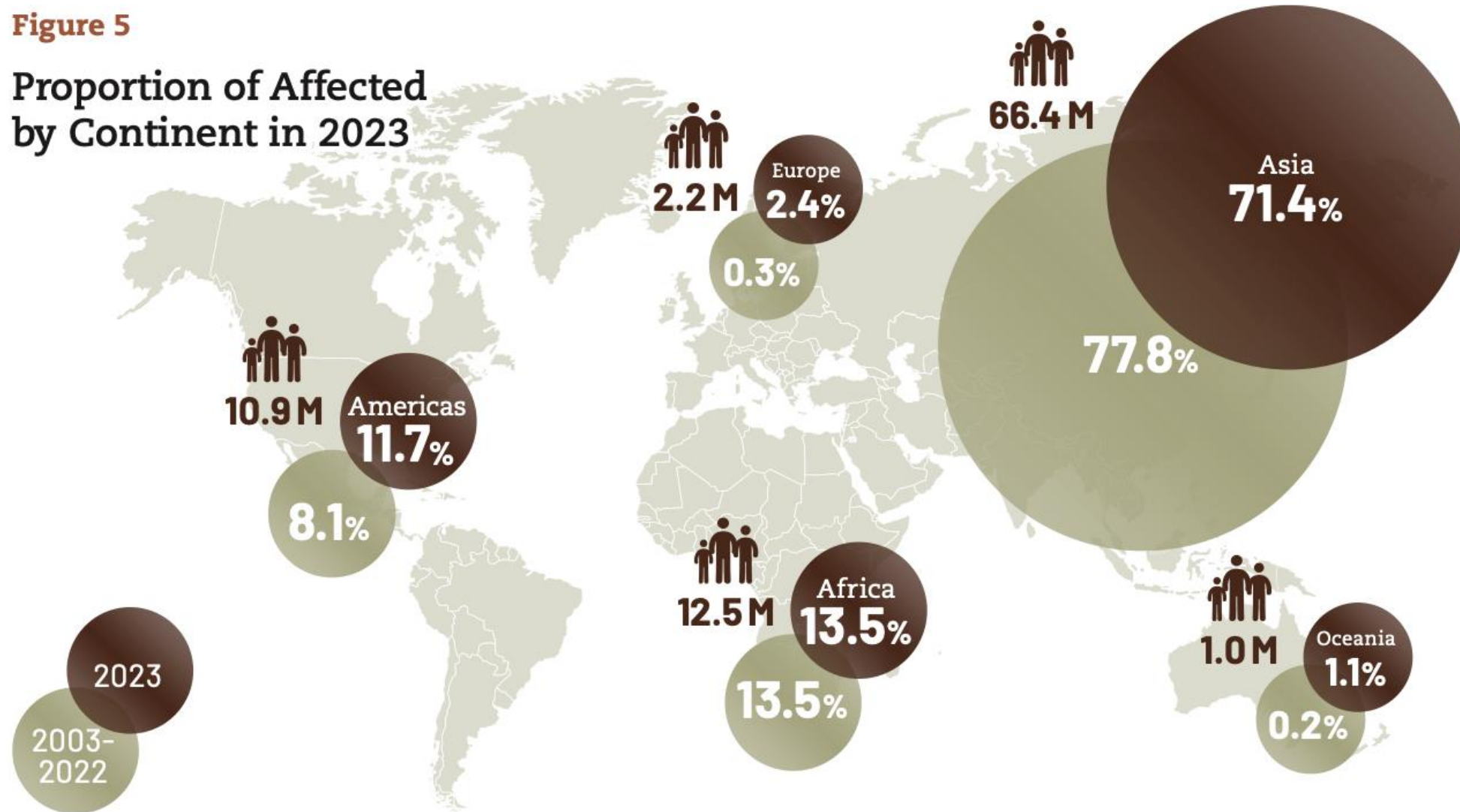
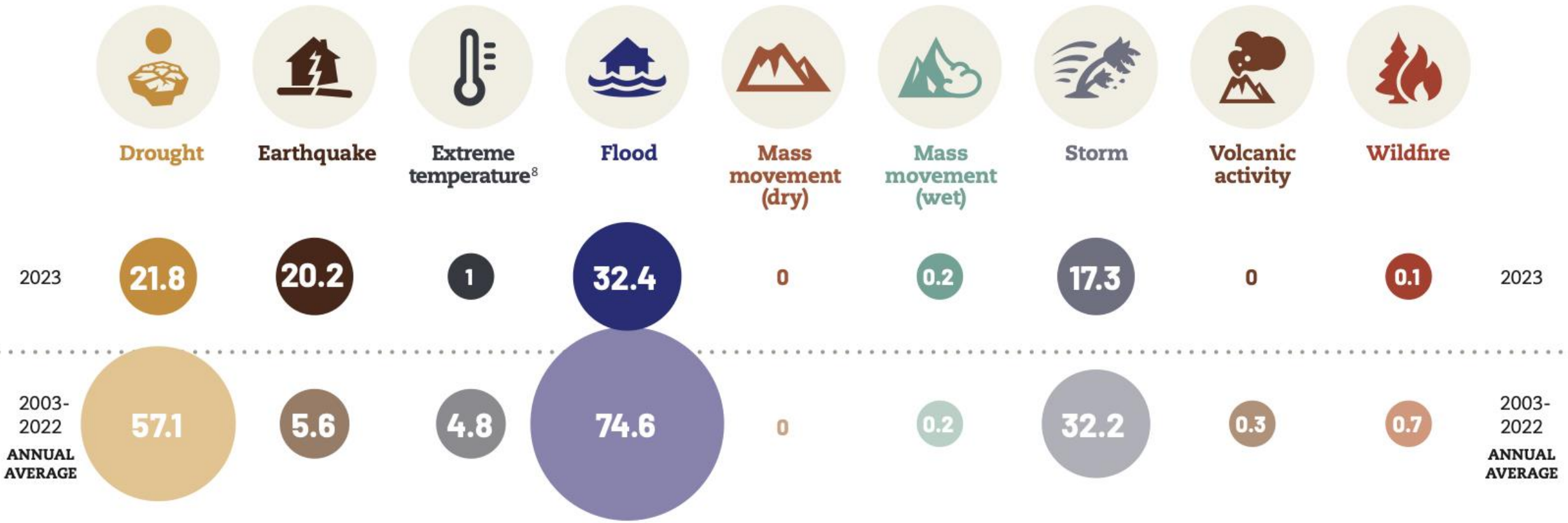


Figure 6











Number of Affected by Disaster Type:  
2023 Compared to 2003-2022 Annual Average

175.5 > 93.1  
2003 to 2022 in 2023





**Table 2**  
**Top 10**  
**Total Affected**  
**– 2023**

 Indonesia	<b>Drought</b>	<b>18.8 million</b>	 India	<b>Tropical Storm Michaung</b>	<b>4.4 million</b>
 India	<b>Flood</b>	<b>10.2 million</b>	 Tanzania	<b>Flood</b>	<b>2.9 million</b>
 Türkiye	<b>Earthquake</b>	<b>9.2 million</b>	 Somalia	<b>Flood</b>	<b>2.5 million</b>
 Syrian Arab Rep.	<b>Earthquake</b>	<b>8.8 million</b>	 Malawi	<b>Tropical Storm Freddy</b>	<b>2.3 million</b>
 Guatemala	<b>Flood</b>	<b>4.4 million</b>	 Philippines	<b>Flood</b>	<b>2.1 million</b>

# Economic Losses<sup>18</sup>

Figure 7

Proportion of Economic Losses  
by Continent in 2023



Figure 8

Economic Losses (US\$ billion) by Disaster Type:  
2023 Compared to the 2003-2022 Annual Average

196.3 < 202.7  
2003 to 2022 in 2023

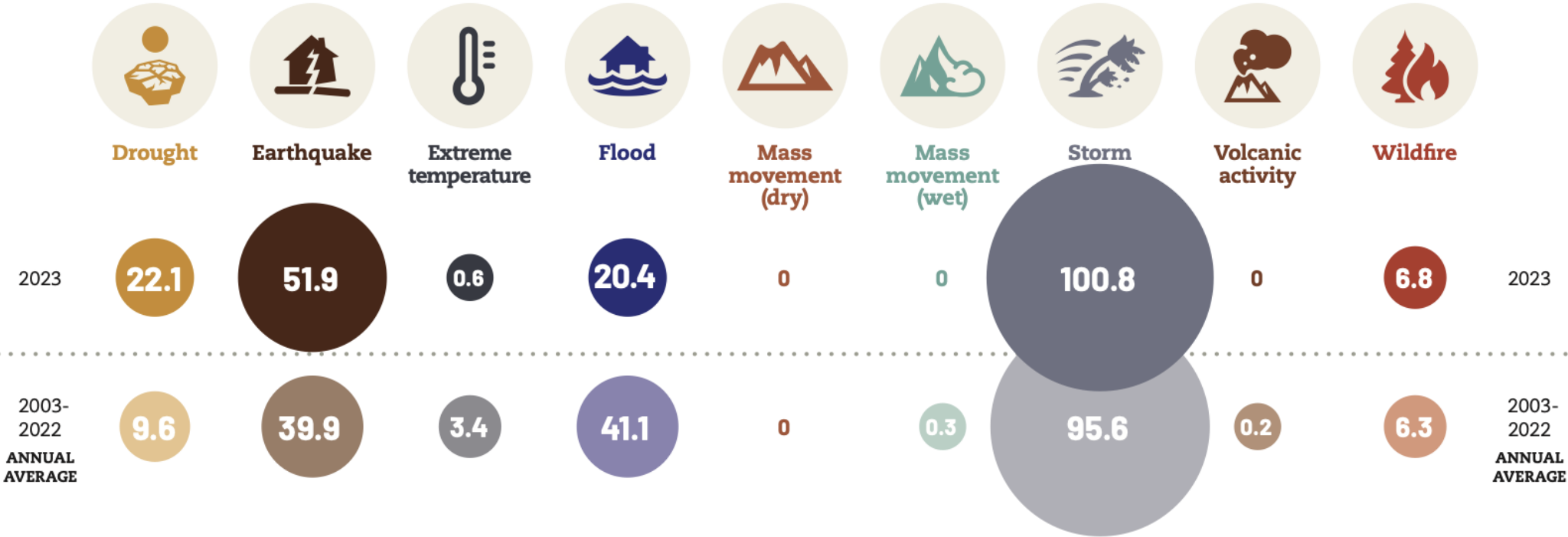












Table 3

Top 10  
Economic  
Losses  
- 2023

	Türkiye	Earthquake	34 billion		Syrian Arab Rep.	Earthquake	8.9 billion
	China	Tropical Storm Doksuri	25 billion		Morocco	Earthquake	7.0 billion
	USA	Drought	14.5 billion		Lybia	Storm Daniel	6.2 billion
	Mexico	Tropical Storm Otis	12 billion		USA	Storm	6 billion
	Italy	Flood	9.8 billion		USA	Wildfire (Lahaina)	5.5 billion

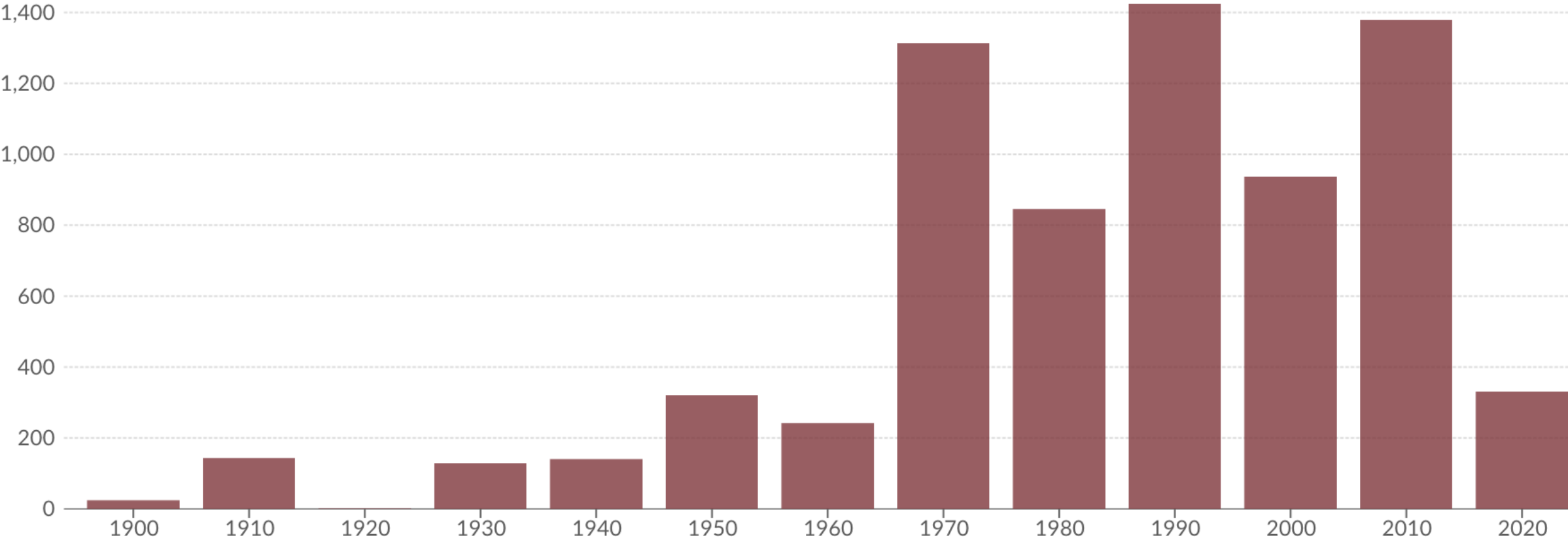


Disasters include all geophysical, meteorological and climate events including earthquakes, volcanic activity, landslides, drought, wildfires, storms, and flooding. Decadal figures are measured as the annual average over the subsequent ten-year period.

Table

Map

Chart



Play time-lapse

1900

2020

**Data source:** Our World in Data based on EM-DAT, CRED / UCLouvain, Brussels, Belgium – [www.emdat.be](http://www.emdat.be) (D. Guha-Sapir) – [Learn more about this data](#)

**Note:** Decadal figures are measured as the annual average over the subsequent ten-year period. This means figures for '1900' represent the average from 1900 to 1909; '1910' is the average from 1910 to 1919 etc. Data includes disasters recorded up to April 2024.

# The Climate Change Crisis

**77%**  
climate- or  
weather-related  
disasters

Disasters  
triggered  
by natural  
hazards

Disasters triggered by  
climate- and weather-related  
hazards in 2019

Affected  
people

**97%**  
were affected  
by climate- and  
weather-related  
disasters

Next slide





PHOTO: USAID/Safe Wat

# **PHILIPPINES**

## **CLIMATE CHANGE COUNTRY PROFILE**

[https://www.usaid.gov/sites/default/files/2023-11/USAID-%20Philippines-Climate-Change-Country-Profile\\_0.pdf](https://www.usaid.gov/sites/default/files/2023-11/USAID-%20Philippines-Climate-Change-Country-Profile_0.pdf)



# NATIONAL INTEGRATED CLIMATE CHANGE DATABASE AND INFORMATION EXCHANGE SYSTEM

ABOUT ▾ GHG INVENTORY ▾ MITIGATION ▾ ADAPTATION ▾ ACTION PLANS ▾ MORE ▾



CLIMATE CHANGE

CLIMATE CHANGE IMPACTS

CLIMATE ACTIONS

NICCDIES



## ↓ RESOURCES

[Republic Act No. 9729](#)

[Climate Change and the Philippines\\_  
Executive Brief 2018-01](#)

[Republic Act No. 10174](#)

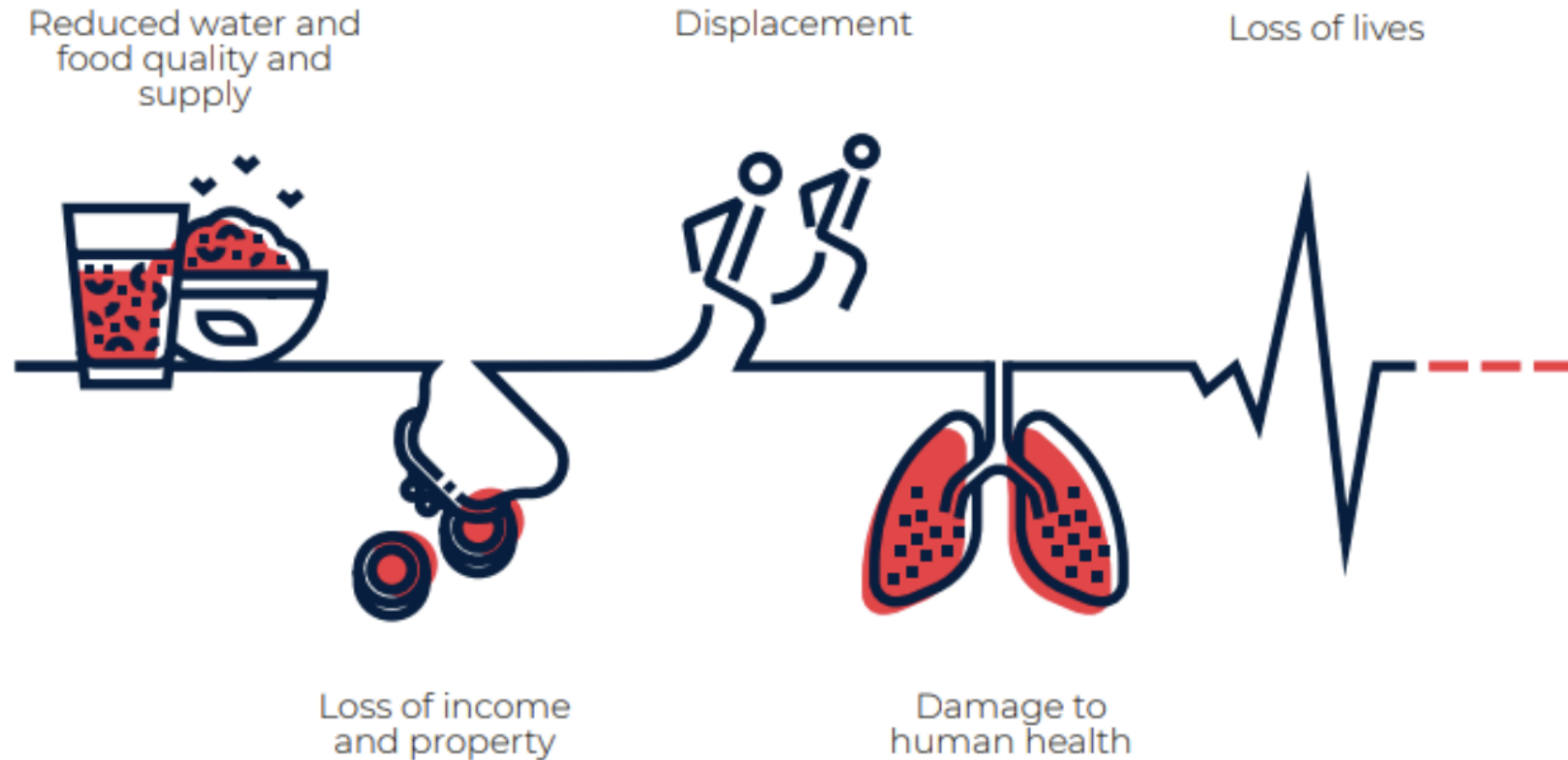
## CLIMATE CHANGE IMPACTS

Philippines is the third most vulnerable country to climate change according to the 2017 world risk report. Impacts of climate change in the Philippines are immense, including: annual losses in GDP, changes in rainfall patterns and distribution, droughts, threats to biodiversity and food security, sea level rise, public health risks, and endangerment of vulnerable groups such as women and indigenous people.

### Philippines to lose 6% GDP annually by 2100

<https://niccdies.climate.gov.ph/climate-change-impacts>

# Impacts of Disasters



Disasters do not only cause direct deaths, but bring about secondary impacts that can affect people's health and lives





# WorldRiskReport 2023

Focus: Diversity



# The Concept of the WorldRiskReport

## Exposure



number and share of the population regarding

Strong ⚡  
Severe ⚡⚡  
Extreme ⚡⚡⚡

Intensity Levels



Earthquakes



Tsunamis



Cyclones



Coastal Floodings



Riverine Floodings



Droughts



Sea-level rise



$$\text{WorldRiskIndex} = \sqrt{\text{Exposure} \times \text{Vulnerability}}$$

## Vulnerability



is composed of

Susceptibility



Lack Of Coping Capacities



Lack Of Adaptive Capacities



Rank	Country		Risk
1.	Philippines		46.86
2.	Indonesia		43.50
3.	India		41.52
4.	Mexico		38.17
5.	Colombia		37.64
6.	Myanmar		36.16
7.	Mozambique		34.61
8.	Russian Federation		28.20
9.	Bangladesh		27.29
10.	China		27.10
11.	Pakistan		26.45
12.	Papua New Guinea		26.30
13.	Peru		25.55
14.	Somalia		25.09
15.	Yemen		24.39
15.	Vietnam		24.39

# WorldRiskIndex 2023 Overview

Classification		WorldRiskIndex			Exposure			Vulnerability			Susceptibility			Lack of Coping Capacities			Lack of Adaptive Capacities		
very low		0.00	–	1.84	0.00	–	0.17	0.00	–	9.90	0.00	–	7.17	0.00	–	3.47	0.00	–	25.28
low		1.85	–	3.20	0.18	–	0.56	9.91	–	15.87	7.18	–	11.85	3.48	–	10.01	25.29	–	37.47
medium		3.21	–	5.87	0.57	–	1.76	15.88	–	24.43	11.86	–	19.31	10.02	–	12.64	37.48	–	48.04
high		5.88	–	12.88	1.77	–	7.78	24.44	–	33.01	19.32	–	34.16	12.65	–	39.05	48.05	–	59.00
very high		12.89	–	100.00	7.79	–	100.00	33.02	–	100.00	34.17	–	100.00	39.06	–	100.00	59.01	–	100.00

From 2022 the WorldRiskIndex and its elements will use fixed thresholds for the classification of countries to enable medium- and long-term trends analyses. These threshold values for the WorldRiskIndex and each dimension were calculated as the median of the quintiles from the results of the last 20 years.

Rank	Country		WorldRiskIndex		Exposure		Vulnerability		Susceptibility		Lack of Coping Capacities		Lack of Adaptive Capacities
1.	Philippines		46.86		39.99		54.92		51.21		58.84		54.98
2.	Indonesia		43.50		39.89		47.43		45.46		50.59		46.38
3.	India		41.52		35.99		47.89		37.79		55.86		52.04
4.	Mexico		38.17		50.08		29.09		44.78		12.28		44.76
5.	Colombia		37.64		31.54		44.93		39.65		50.01		45.75
6.	Myanmar		36.16		22.43		58.28		52.14		58.83		64.54
7.	Mozambique		34.61		18.10		66.17		65.78		64.15		68.65
8.	Russian Federation		28.20		28.35		28.05		14.97		39.00		37.81
9.	Bangladesh		27.29		16.57		44.93		35.30		57.88		44.39
10.	China		27.10		64.59		11.37		14.75		11.54		8.63





LET'S SAVE LIVES

