



The Loss and Damage caused by climate change in Bangladesh

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20TH JULY, 2024 ,JAPAN

GLOBAL LOSSES AND DAMAGES

24%

Increase in global population's exposure to flooding (2000-2018)

31%

Economic loss from hazards were due to floods (1970-2019)

38%

Global containers port activities occurred in areas with high hurricane risk (1980-2020)

60%

Loss of total working hours in agricultural sector due to heat, by 2030

80%

Global population at risk of crop failure and hunger in Sub-Saharan Africa and South and South-East Asia

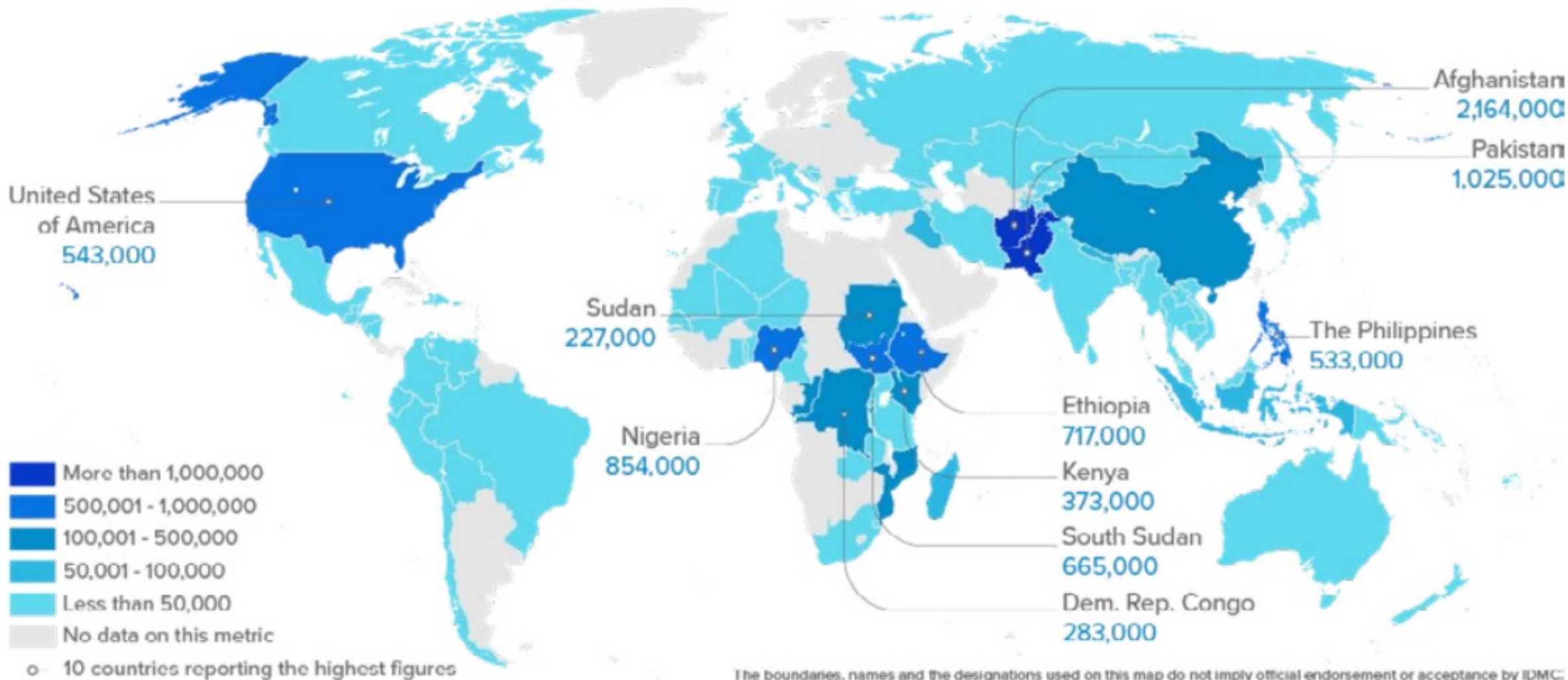
Figure 1: Observed and predicted losses and damages from diverse hazards around the globe (based on GAR Special Report 2023).

CONSEQUENCES OF CLIMATE CHANGE

- Increase in Global Temperature
- Melting of polar ice and glaciers
- Sea Level Rise
- Increased intensity and magnitude of disasters
- Coastal inundation
- Changes in weather pattern
- Irregular rainfall
- Desertification
- Increase of health hazards
- Threat to Biodiversity
- Ecosystem degradation
- Wild fire increase



Displaced by disasters



8.7 million

↑ 45%

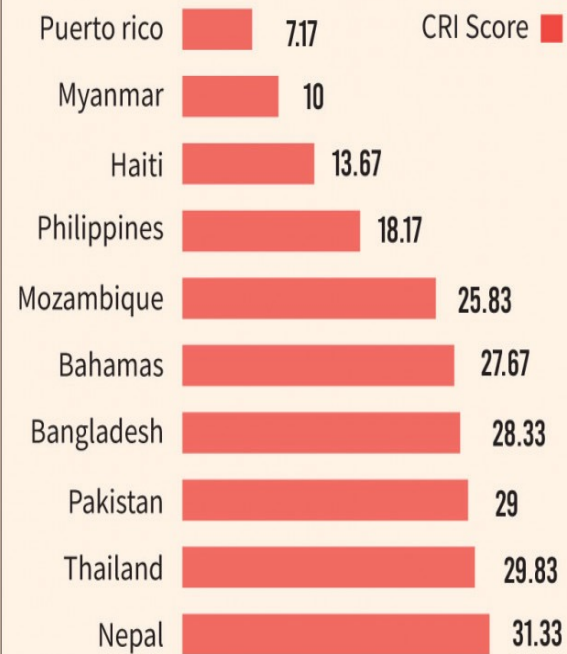
CLIMATE CHANGE AND BANGLADESH

Climate change in Bangladesh is a critical issue as the country is one of the most vulnerable for its effects. According to the Climate Risk Index, 2021 edition of Germanwatch's, Bangladesh is ranked seventh in the list of countries most affected by climate calamities.

THE LONG-TERM CLIMATE RISK INDEX

(annual averages)

Countries most affected by extreme weather events in 2000-2019



Bangladesh's losses in 185 extreme weather events over the past two decades

Fatalities
572.5

Fatalities per 1,00,000 inhabitants
0.38

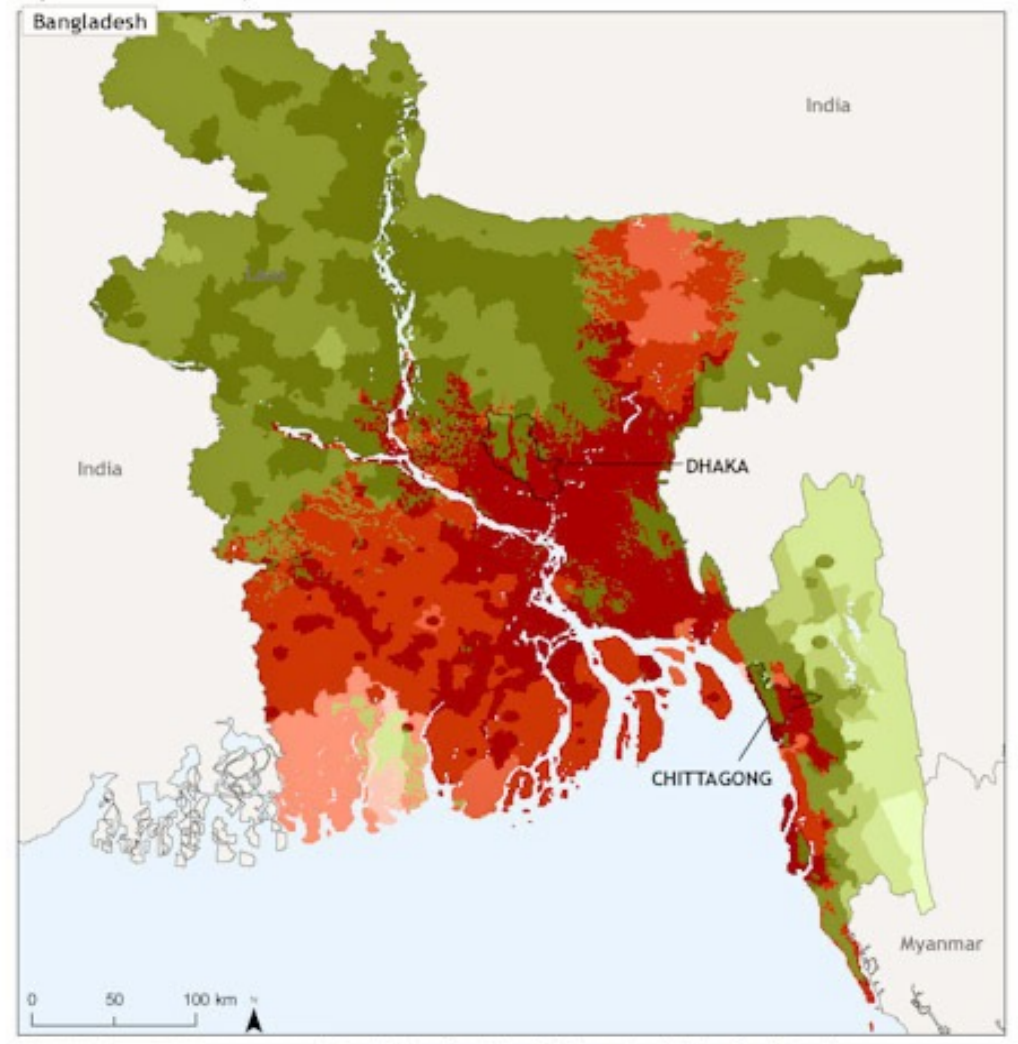
Losses in PPP \$1,860.04M

Losses per unit of GDP 0.41%

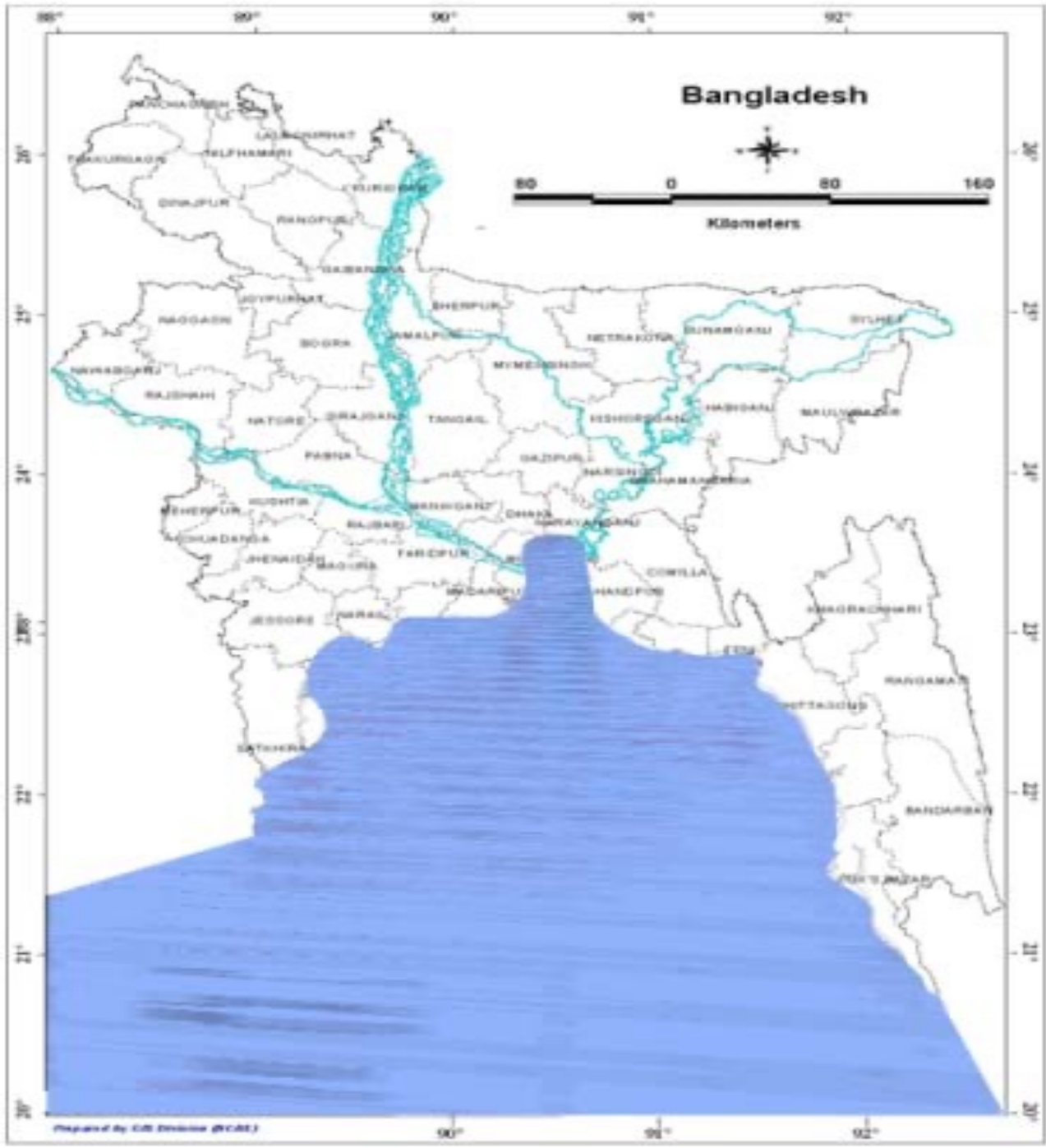


Why Bangladesh is at risk

Population Density within and outside of a 10m Low Elevation Coastal Zone



- **Geographical location**
- **Rapid glacier melt in Himalayas**
- **Most of surface <5m above sea level**
- **Frequent disaster e.g. Cyclones, floods, etc.**
- **High population density**
- **Poverty**
- **Fragile and poor infrastructure**
- **Significant people working in fishing and agriculture sector**
- **Rain water dependency on agriculture**
- **Seasonal drought**
- **Increasing heat**
- **Increasing Salinity**
- **Drinking Water Scarcity**
- **Water, Air, Soil pollution**

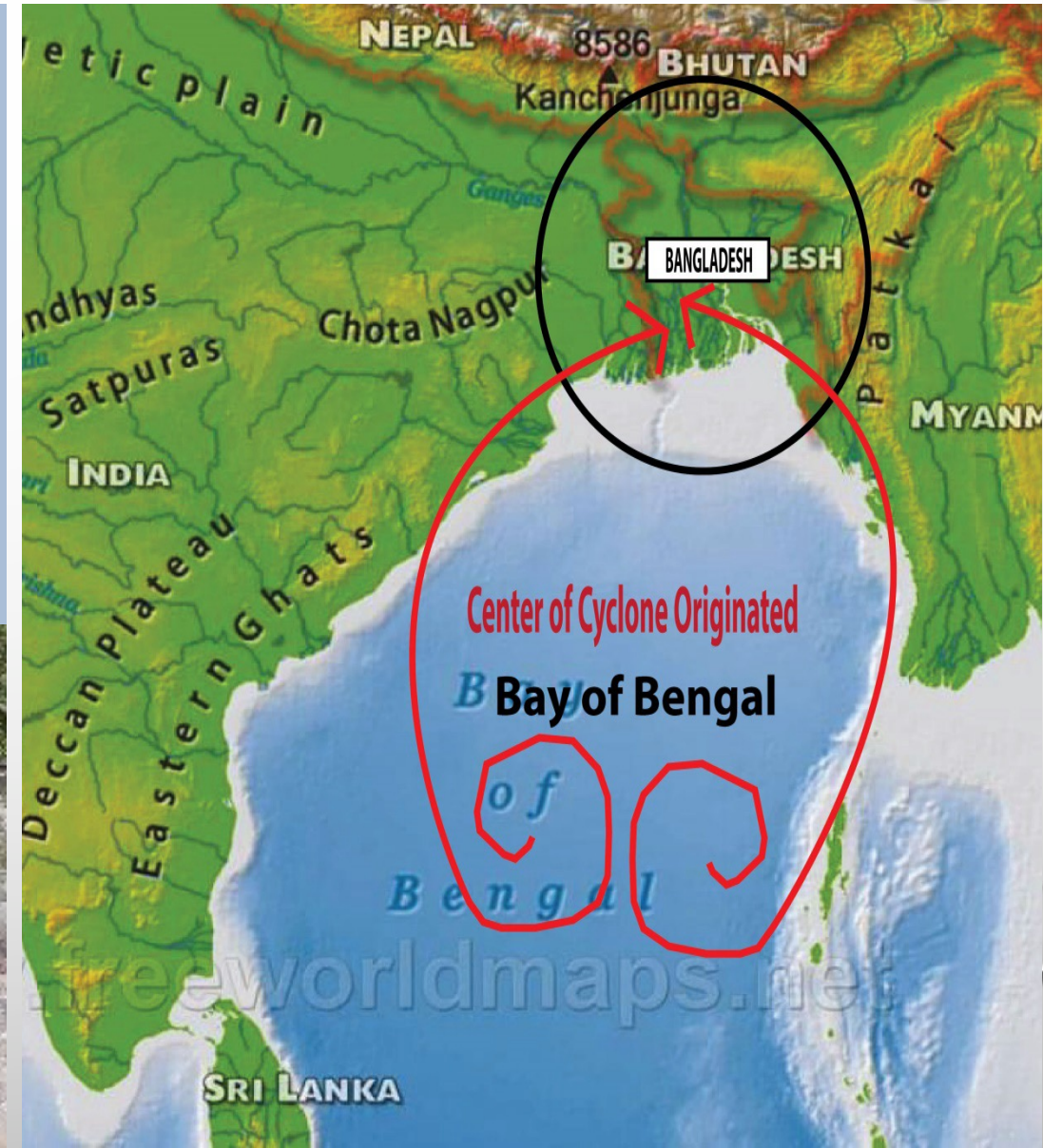


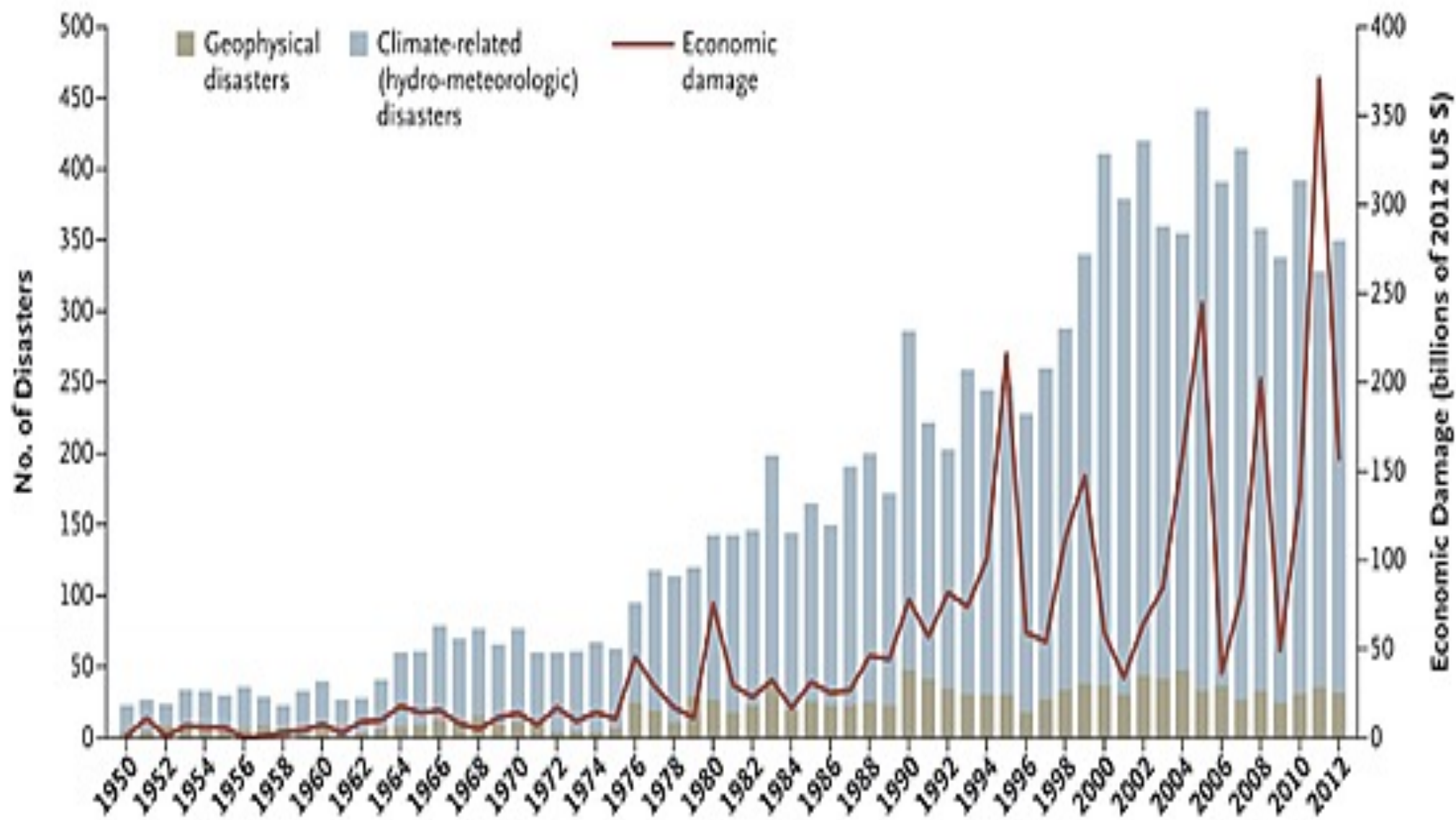
1 Meter Sea Level Rise (2050-2075 ?)

INCREASE IN CATASTROPHES 10 TIMES IN 50 YEARS

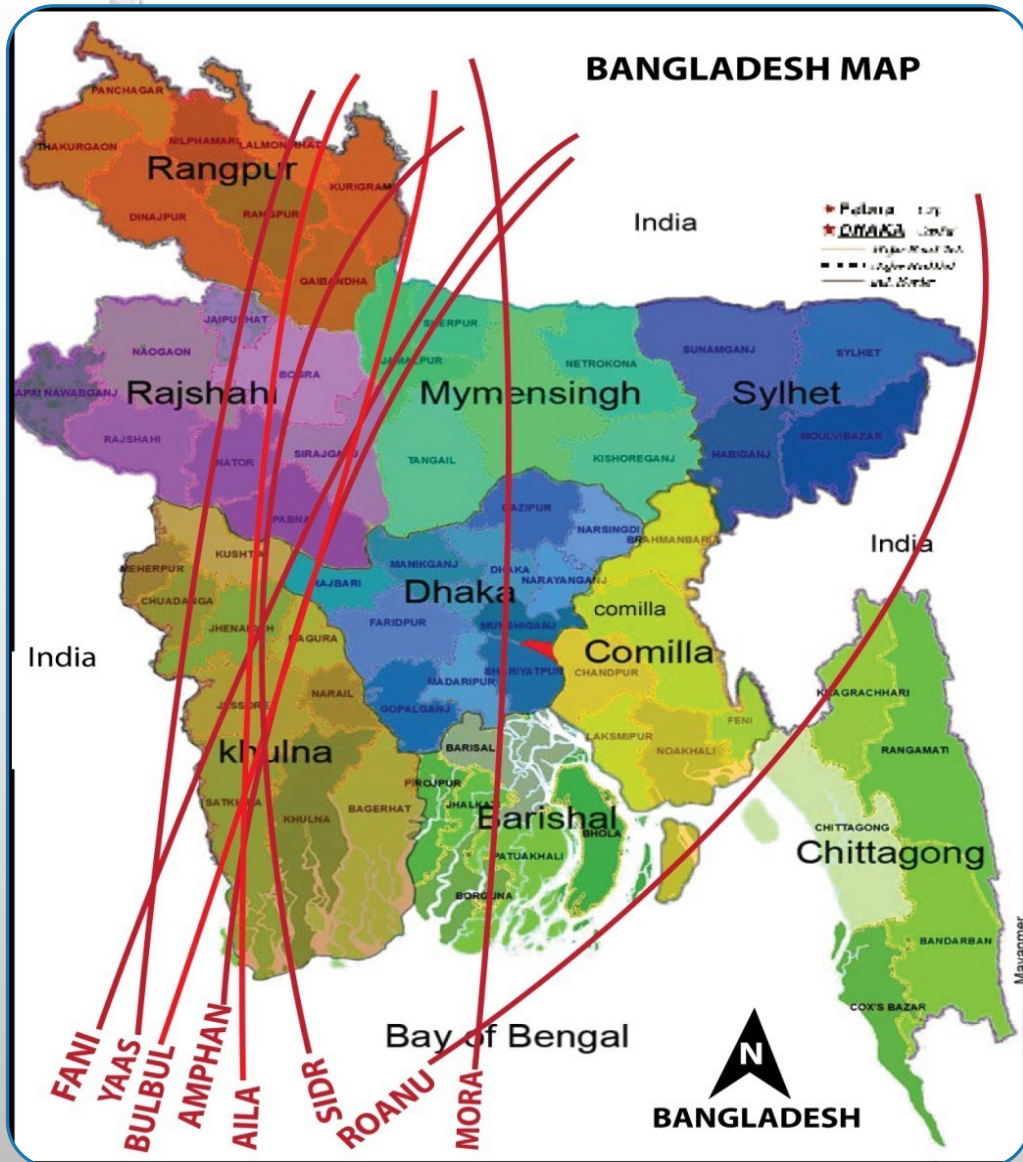
Catastrophes increased ten times in 2000-2020 compared to 1955-1975

- ❖ Strong cyclones created in the Indian Ocean and Bay of Bengal due to tropical location
- ❖ Oceanic disasters lie towards Bangladesh due to geographical location
- ❖ Huge loss and damage occur due to disaster; local inhabitants face most of the losses





Southwest region in high risk for oceanic disasters



- ❖ 75% disaster generated in Indian ocean and Bay of Bengal in the last 15 years hit the south-west coast
- ❖ Topical cyclones cause 1 billion\$ in losses annually
- ❖ If the sea level rises 30-100 cm by 2100, then 834 KM will be submerged or flooded
- ❖ 10/15 million people will be homeless

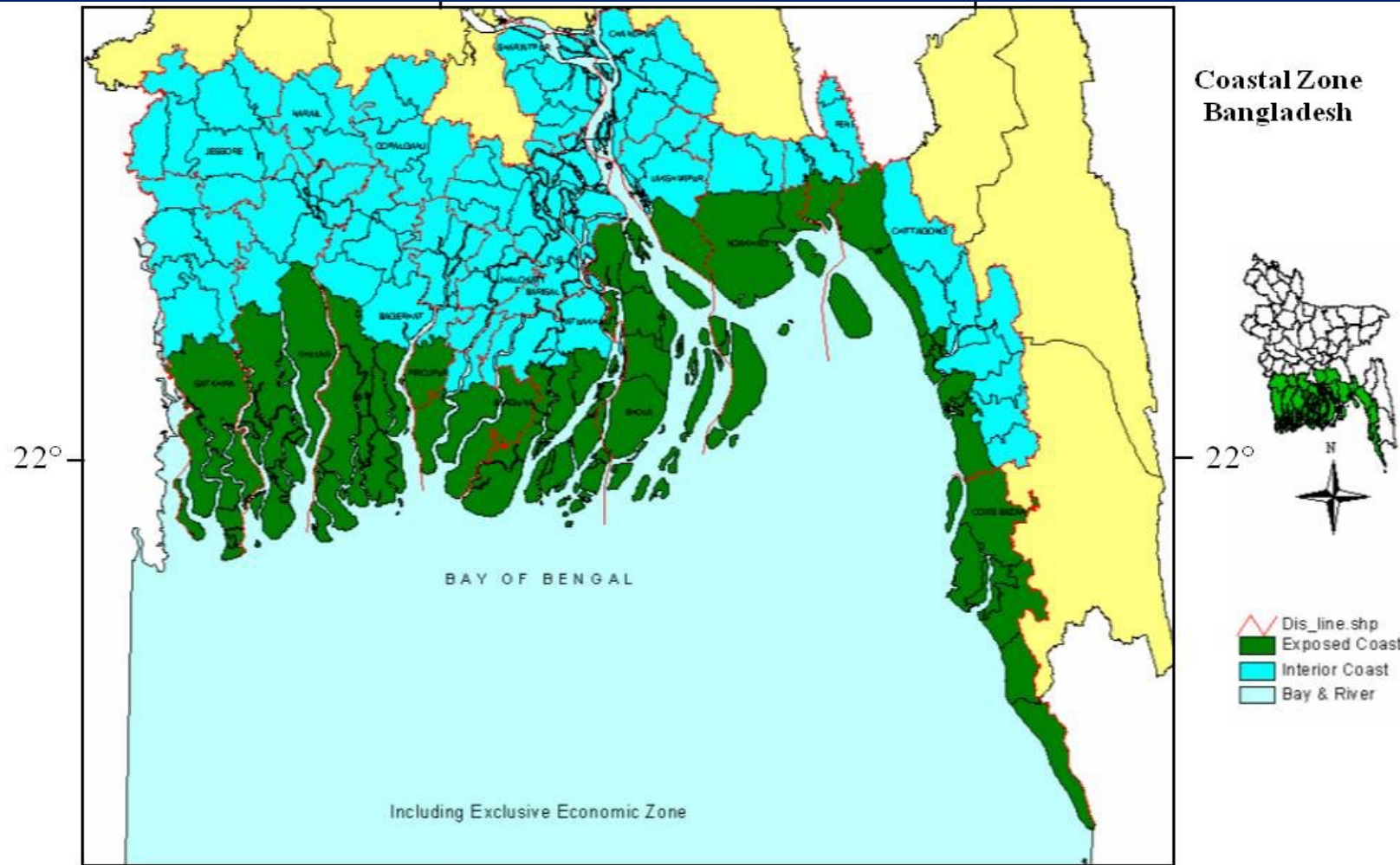


BANGLADESH METEOROLOGICAL DEPARTMENT (BMD), 2021 & GLOBAL CLIMATE RISK INDEX, 2021

- **Last 50 years temperature increased 1.5 degree**
- **Bangladesh lost 246,000 hectares of forests between 2001 and 2023**
- **7.2 million people in nine north-eastern districts severely affected by the flash flood (2022, 2023 & 2024)**
- **In last 12 years, around 8.6 million people displaced from coastal areas**
- **In last 35 years salinity increased by 26%**
- **Estimated 20 million people in coastal region of Bangladesh are drinking saline water**



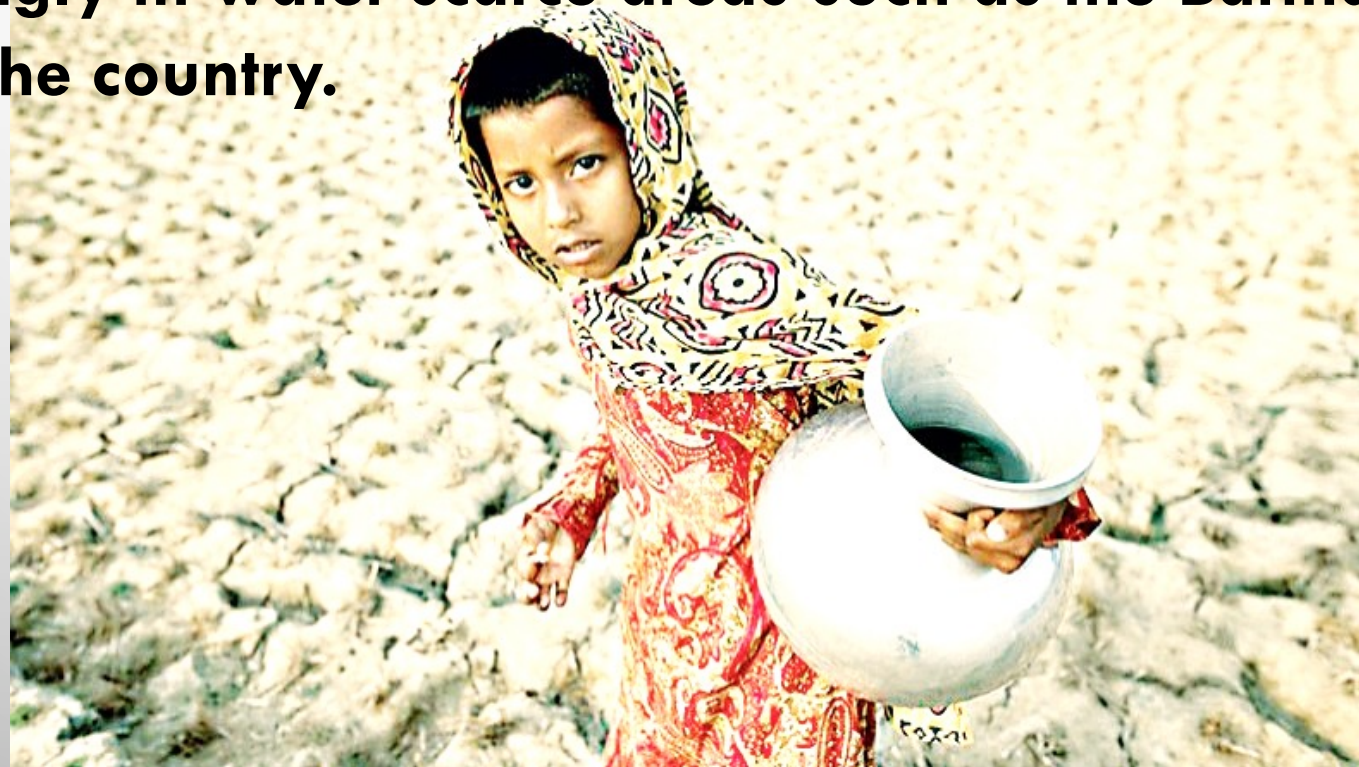
Salinity affected land- 83.3 million hectares in 1973, 102 million hectares in 2000, 105.6 million hectares in 2009 and is continuing to increase (SRDI).



More than 40% of people in Bangladesh don't have access to safe water (WaterAid Bangladesh)

The Climatic impacts are compounded by unsustainable development agendas. Due to unmitigated urbanization and Industrialization, groundwater levels across Bangladesh are depleting.

This is felt strongly in water scarce areas such as the Barind Tract in the North-West of the country.



Loss and Damages due to Disasters

Name	Date	Death	Loss
Cyclone Remal	May 26, 2024	16	(More than) USD 600 million
Cyclone Mocha	May 23, 2023	463 (Myanmar & Bangladesh)	US\$1.07 million
Cyclone Yaas	May 26, 2021	20	US\$2.84 billion
Cyclone Amphan	20 May 2020	26	US\$13 billion
Cyclone Fani	4 May 2019	17	US\$63.6 million
Cyclone Aila	27–29 May 2009	150	US\$1 billion
Cyclone Sidr	15 November 2007	10,000	US\$ 1.7 billion
Cyclone Akash	14–15 May 2007	14	US\$982 million

Cyclone Remal: losses estimated at over Tk 7,000cr (Ministry Of Disaster Management & Relief) and (The Daily Star, July 12, 2024)

FINANCIAL DAMAGES

📌 Fisheries: TK **2,241.65cr**

📌 Housing: TK **2,051.6cr**

📌 Roads: TK **1,012.04cr**

📌 Bridges & Culverts: TK **748.54cr**

📌 Agriculture: TK **712.48cr**

📌 Embankments: TK **186.6cr**

📌 Forestry, afforestation, nursery: TK **65.12cr**

📌 Education sector: TK **39.55cr**

📌 Religious establishment: **14.54cr**

📌 Tube well: TK **10.29cr**

📌 Agri, non-agri industries: TK **646,8,000**

Source: Draft estimation by Ministry of Disaster Management and Relief

MIGRATION STATUS

Largest internal displacements in Asia were the result of disaster rather than conflicts and violence

Top five countries in Asia based on new internal displacements-

- Pakistan - 8 Million
- Philippines - 5.5 Million
- China - 3.6 Million
- India - 2.5 Million
- Bangladesh - 1.5 Million



MIGRATION STATUS

Bangladesh ranked 4th globally in child displacement from natural disasters between 2016 and 2021 : UNICEF

- 43.1 million children displaced globally
- 26% in South Asia
- 3.3 million in Bangladesh



The image features a light gray background with a subtle gradient. In the top-left and bottom-right corners, there are several realistic water droplets of various sizes, rendered with soft shadows and highlights to give them a three-dimensional appearance. The text "THANK YOU" is centered in the middle of the page.

THANK YOU