



Report on Climate and Catastrophe Insight

For Prelims: 2024 Climate and Catastrophe Insight, [Natural Disasters](#), [early warning systems](#), [Sendai Framework for Disaster Risk Reduction 2015-2030](#).

For Mains: 2024 Climate and Catastrophe Insight, Strategies for Disaster Risk Reduction.

[Source: DTE](#)

Why in News?

Recently, the **2024 Climate and Catastrophe Insight** report has been published by a risk-mitigation service provider Aon PLC, which highlighted that the year 2023 recorded significant damages due to [Natural Disasters](#).

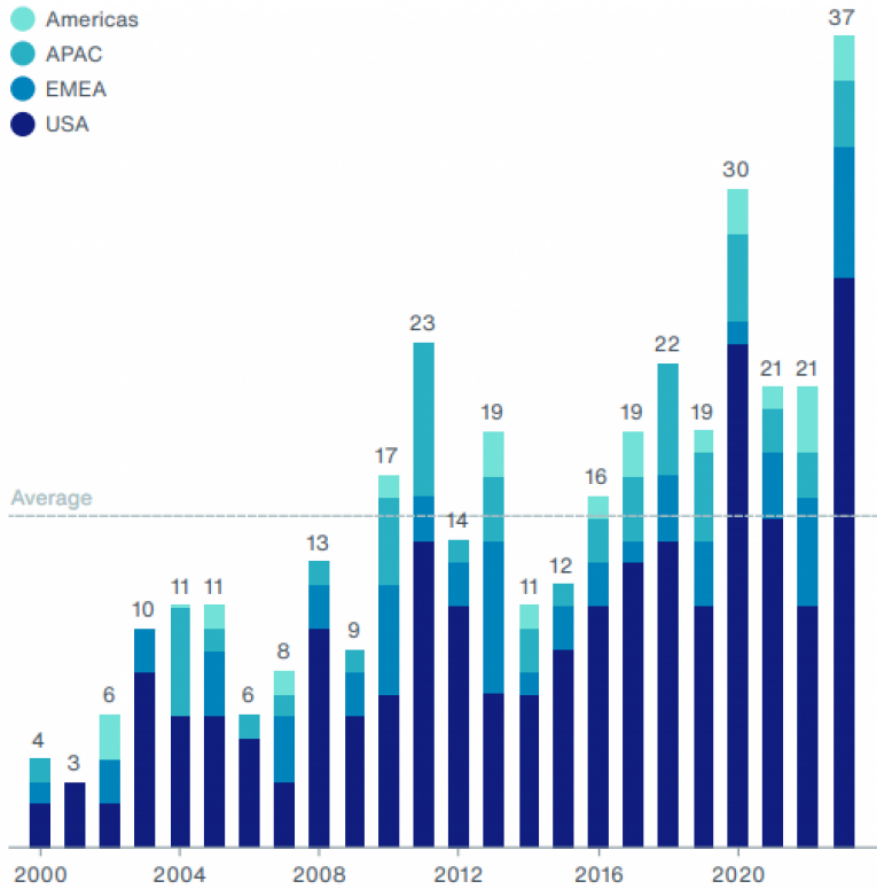
- Aon plc is a leading provider of advice and solutions for commercial, reinsurance, retirement, health, and data & analytic services in over 120 countries and sovereignties.
- Their mission is to shape decisions for the better, protecting and enriching the lives of people around the world.

What are the Key Highlights of the Report?

- **Increased Damages and Record-Breaking Events:**
 - In 2023, the world witnessed **398 notable natural disasters**, resulting in a staggering USD 380 billion in economic losses.
 - These losses surpassed the **estimated economic loss in 2022** and marked the hottest year on record, underscoring the urgent need for better disaster preparedness, risk reduction, and increased resilience.
- **Weather-Related Factors and Vulnerabilities:**
 - 95% of the natural disasters (that occurred in 2023) causing damages exceeding USD 1 billion were attributed to **Weather-related factors**.
 - From extreme heat to severe storms and earthquakes, these events highlight the threat **posed by catastrophe risk** to our lives and livelihoods.

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Number of Events Above \$1B



▪ **Protection Gap and Insurance Coverage:**

- Insurance only paid out USD 118 billion, or 31%, of the total damages incurred indicating a significant “**protection gap**” of approximately 69% as opposed to 58% in 2022.
- The majority of disaster losses were covered in the US, whereas most of the losses in three other regions — **Americas (Non-US), Europe, Middle East and Africa (EMEA) and Asia and Pacific (APAC)** — were uninsured.
 - The widest protection gap of around 91% existed in the APAC region, followed by 87% for non-US Americas and the EMEA.

▪ **Global and Regional Insights:**

- **US:** Economic losses from natural disasters reached USD 114 billion, with insurance covering 70%. **Severe convective storms (SCS)** contributed significantly to the financial toll.
 - **Convective storms or thunderstorms** are severe local storms associated with thunder, lightning, heavy rain, hail, strong winds and sudden temperature changes. They can occur all year round but are **most common during summer**.
- **Americas (Non-US):** Insurance covered only USD 6 billion of the USD 45 billion in economic losses.
 - **Hurricane Otis occurred in Mexico's southern Pacific coast**, stood out as the costliest individual event.
 - Drought impacted **several regions in South America**.
- **Europe, Middle East, and Africa (EMEA):** The region faced USD 150 billion in economic losses due to natural catastrophes, driven by devastating earthquakes.
 - The **Turkey and Syria earthquake** had a significant impact.
- **Asia and Pacific:**
 - Economic losses hit USD 65 billion with a protection gap of 91% as insurance losses reached USD 6 billion.
 - Flooding events resulted in USD 1.4 billion of insured losses in China and USD 1.3 billion in New Zealand. A multi-week-long heatwave impacted many countries in South and Southeastern Asia.

▪ Recommendations:

- There is a need to use climate analytics as catalysts that can provide **forward-looking diagnostics** for a range of extreme events.
- There is a need for the organisations – from **insurers to highly impacted sectors** such as construction, agriculture and real estate — to utilise forward-looking diagnostics to help **analyse climate trends and mitigate the risk**, as well as protecting their own workforces.
- The insurance industry can play a pivotal role in **unlocking and speeding up the flow of capital into green investments** and volatility management through innovative risk transfer programmes.

What is the Significance of Disaster Preparedness, Risk Management, and Resilience-Building?

- **Disaster Preparedness:** It refers to proactive measures **taken before a disaster occurs** to enhance readiness and response.
 - **Early Warning Systems:** Preparedness involves setting up **efficient early warning systems**. These systems provide timely alerts about impending disasters (e.g., cyclones, floods, earthquakes), allowing people to evacuate and take necessary precautions.
 - **Training and Drills:** Regular training sessions and mock drills prepare emergency responders, healthcare professionals, and the public to **handle crises effectively**.
 - **Stockpiling Supplies:** Preparedness includes **stockpiling essential supplies** (food, water, medicines) to meet immediate needs during disasters.
 - **Community Awareness:** Educating communities about disaster risks and preparedness measures fosters a culture of safety and resilience.
- **Risk Management:** It involves identifying, assessing, and mitigating risks associated with disasters.
 - **Risk Assessment:** By analysing vulnerabilities, exposure, and potential impacts, risk management helps prioritise actions.
 - **Risk Reduction Strategies:** Implementing structural (e.g., building codes) and non-structural (e.g., land-use planning) measures reduces vulnerability.
 - **Financial Protection:** Insurance and risk financing mechanisms provide financial resilience against losses.
 - **Climate Adaptation:** Risk management integrates climate change adaptation strategies to address evolving risks.
- **Resilience-Building:** Resilience refers to a community's ability to bounce back after a disaster.
 - **Social and Psychological Resilience:** Strengthening social networks, community cohesion, and mutual support enhances resilience. Mental health support and coping mechanisms help individuals recover from trauma.
 - **Economic and Infrastructural Resilience:** Diversifying livelihoods, promoting local businesses, and creating employment opportunities contribute to economic resilience. Building robust infrastructure (roads, bridges, utilities) that can withstand shocks is vital.
 - **Environmental Resilience:** Conserving ecosystems (forests, wetlands) contributes to overall resilience.

What is the Role of Insurance Coverage in Mitigating Economic Losses?

- **Safety Net in Difficult Times:**
 - High **Inflation** and economic volatility can lead to **unexpected financial losses** and during such periods, insurance acts as a safety net.
 - For instance, repairing or rebuilding damaged property is now more expensive due to increased costs of building materials and services. Labour shortages and disrupted supply chains can further delay repairs.
 - Insurance coverage ensures **that individuals and businesses are financially protected** against such losses. Without coverage (or with inadequate coverage), the financial burden can be devastating.
- **Increased Risk Awareness:**
 - Financial shocks prompt consumers to **become more cautious and aware of risks**.

- Insurance companies can capitalise on this by emphasising their value in managing inflation risk and providing financial security.
- By offering timely payouts, **insurers help businesses and individuals recover faster**, allowing economic activities to resume after catastrophes.
- **Economic Development and Stability:**
 - Insurance turns accumulated capital into productive investments. It enables businesses to mitigate losses, maintain financial stability, and promote trade and commerce activities.
 - A robust insurance sector contributes to sustainable economic growth.
- **Disaster Mitigation and Risk Reduction:**
 - Insurance companies increasingly contribute to disaster mitigation by encouraging policyholders to invest in risk reduction measures. By incentivizing long-term thinking, insurers play a role in reducing overall risks.
 - For example, [PMFBY \(Pradhan Mantri Fasal Bima Yojana\)](#) offers financial protection to farmers against crop losses due to **natural calamities such as droughts**, floods, cyclones, pests, and diseases.
 - By providing timely compensation for crop damages, PMFBY helps farmers recover from losses and reduces their vulnerability to economic shocks triggered by disasters.

What are the Initiatives for Disaster Risk Reduction?

- **Global:**
 - [Sendai Framework for Disaster Risk Reduction 2015-2030](#)
 - [The Climate Risk and Early Warning Systems \(CREWS\)](#)
 - [International Day for Disaster Risk Reduction - 13th October](#)
 - Green Climate Fund's Sectoral Guide on Climate Information & Early Warning Systems
- **India's Initiatives:**
 - [Coalition for Disaster Resilient Infrastructure Society \(CDRIS\)](#)
 - [National Disaster Management Plan \(NDMP\)](#)

Conclusion

- Investing in disaster preparedness, risk management, and resilience-building is not only a matter of protecting lives and livelihoods in the short term but also crucial for ensuring the long-term sustainability and prosperity of communities in an increasingly uncertain world.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims:

Q. In which one of the following groups are all the four countries members of G20? (2020)

- (a) Argentina, Mexico, South Africa and Turkey
- (b) Australia, Canada, Malaysia and New Zealand
- (c) Brazil, Iran, Saudi Arabia and Vietnam
- (d) Indonesia, Japan, Singapore and South Korea

Ans: (a)

Mains:

Q. Discuss the recent measures initiated in disaster management by the Government of India departing from the earlier reactive approach. (2020)

Q. Vulnerability is an essential element for defining disaster impacts and its threat to people. How and in what ways can vulnerability to disasters be characterised? Discuss different types of vulnerability with reference to disasters. **(2019)**

Q. Describe various measures taken in India for Disaster Risk Reduction (DRR) before and after signing 'Sendai Framework for DRR (2015-30)'. How is this framework different from 'Hyogo Framework for Action, 2005'? **(2018)**

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