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News: Gross Domestic Climate Risk Ranking

Gross Domestic Climate Risk Ranking

- Gross Domestic Climate Risk Ranking, released by Cross Dependency Initiative (XDI) calculates the 'Physical climate risk' to built environments such as buildings and properties across 2,600 States and provinces globally in 2050.
- XDI is a global organisation specialising in climate risk analysis for regions, banks and companies.
- According to the ranking, India has nine states in the 50 high risk states including Punjab, Bihar, Uttar Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Gujarat, Kerala and Assam.
- The index assigned an Aggregated Damage Ratio (ADR) to each region, which signifies the total amount of damage a region's built environment would sustain in 2050. A high ADR signifies more peril.

Findings of the report

Vulnerabilities

- Risk originates from 8 climate change Hazards: Riverine and surface flooding, coastal inundation (coastal flooding), extreme heat, forest fire, soil movement (drought-related), extreme wind and freeze thaw.
- Most damage posed to build infrastructure globally is caused by “riverine and surface flooding or flooding combined with coastal inundation.

Global Findings

- According to report the vast majority (80%) of 50 provinces facing the highest climate risk to their physical infrastructure by 2050 are in China, the US, and India.
- Two of China’s largest sub-national economies – Jiangsu and Shandong – top the global ranking; followed by the U.S. which has 18 regions in the top 100 list.
- Asia dominates the list with 114 of the top 200 regions falling in the continent, including Pakistan, Indonesia and most South East Asian countries.
- Devastating flooding in 2022 affected 30% of the area of Pakistan and has partially or fully damaged more than 9 lac houses in Sindh province.

India Specific Findings

- Under high emissions scenarios such as the Representative Concentration Pathway (RCP) 8.5, high risk provinces will witness an average of 110% increase in damage risk by 2050.
- Currently, with 0.8 degrees rise in temperature, India's 27 states and more than three-quarters of its districts are extreme event hotspots accounting for a 5% loss in GDP.
- If global warming is not limited to 2-degree thresholds, climate-vulnerable states in India will lose more than 10% of their gross state domestic product (GSDP).
- Bihar, Assam, and Tamil Nadu had the highest ADR among other Indian States. Assam, in particular, would witness the maximum increase of climate risk: rising up to 330% by 2050.
- Assam has witnessed an experienced exponential increase in flood events since 2011, and it had 15 of India's 25 districts most vulnerable to climate change.
- 11 of the 36 districts in Maharashtra were found to be "highly vulnerable" to extreme weather events, droughts and dwindling water security.

Significance of the Report

- The ranking data can also be significant for investors, as extensive built-up areas overlap with high levels of economic activity and property wealth.
- It can inform climate resilient investment, in conjunction with adaptation measures and infrastructure planning undertaken by state and provincial governments.
- The finance industry can directly compare global industrial hubs like Mumbai, New York and Berlin using a like-for-like methodology to check vulnerability of global supply chains.

Steps taken to abate Disaster Risk

Sendai Framework for Disaster Risk Reduction /

Sendai - 7

- Sendai framework for Disaster Risk Reduction, or simply Sendai – 7 is an international non-binding document adopted by UN member states in 2015.
- Place and Conference: World Conference on Disaster Risk Reduction, Sendai, Japan.

The Sendai Framework sets four specific priorities for action

- Understanding disaster risk;
- Strengthening disaster risk governance to manage disaster risk;
- Investing in disaster risk reduction for resilience;
- Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction.

Seven objectives have been set by the conference by the Name Sendai-Seven which have to be obtained by 2030

- **Substantially reduce global disaster mortality by 2030**, aiming to lower average per 100,000 global mortality in 2020-2030 compared to 2005-2015;
- **Substantially reduce the number of affected people globally by 2030**, aiming to lower the average global figure per 100,000 in 2020-2030 compared to 2005-2015;
- **Reduce direct disaster economic loss in relation to global gross domestic product by 2030**;
- **Substantially reduce disaster damage to critical infrastructure and disruption of basic services**, among them health and educational facilities, including through developing their resilience by 2030;

- Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020;
- Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of the framework by 2030;
- Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.

International Coalition for Disaster Resilient

Infrastructure (CDRI)

- The International Coalition for Disaster Resilient Infrastructure (ICDRI) was launched on 23rd September 2019 at the UN General Assembly.
- It intends to bring the Head of States to generate commitments for combating the effects of climate change and resulting disasters and will provide the high-level.
- Objective of ICDRI is to promote research and knowledge sharing in the fields of infrastructure risk management, standards, financing, and recovery mechanisms.

Members

- Afghanistan, Australia, Bhutan, Fiji, Germany, Italy, **India**, Japan, Mauritius, Maldives, Mongolia, Nepal, Sri Lanka, United Kingdom and United States.
- The CDRI is the second major coalition launched by India outside of the UN, the first being the **International Solar Alliance**. Both of them are seen as India's attempts to obtain a global leadership role in climate change matters.
- **Infrastructure for Resilient Island States**, launched at CoP 26 to UNFCCC, is under the aegis of CDRI.