Climate Risk Seminar

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An overview of climate risk and its impact

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1. Overview of climate risk

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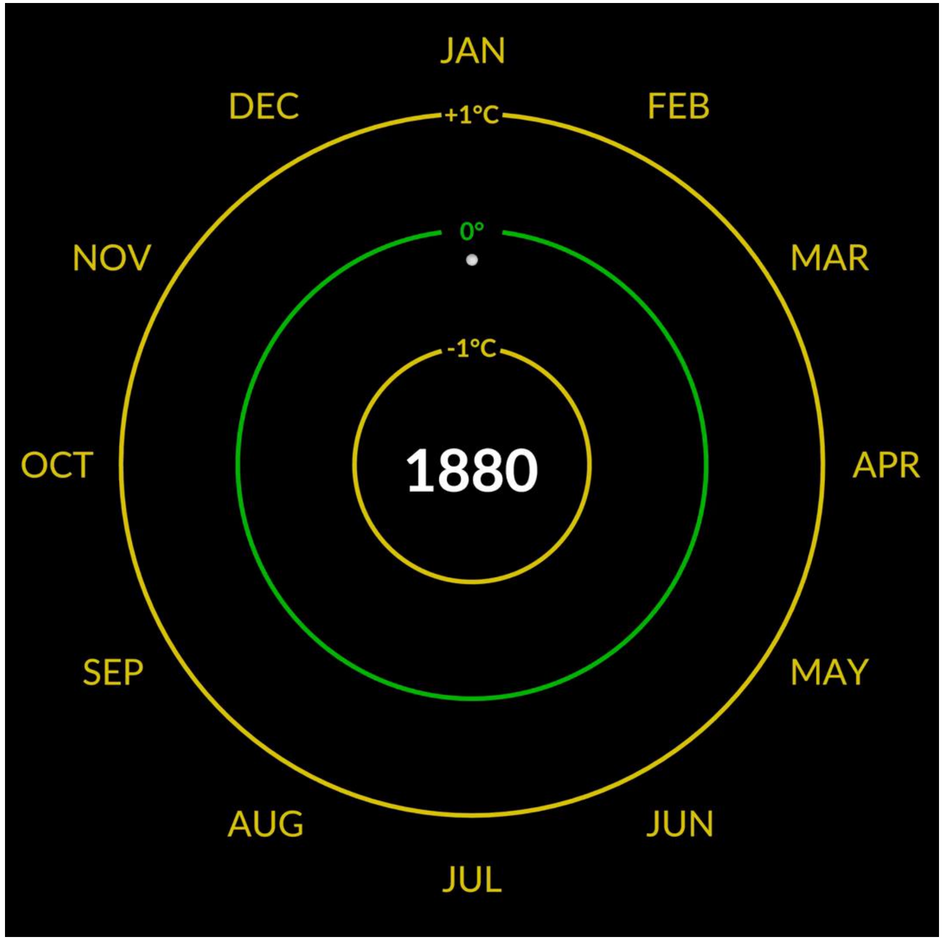
Climate change: Change in temperature over time



Pictured example: Blue Glacier , Mt Olympus , USA

Per capita world GDP would have been 37 per cent higher today had the global mean temperatures not risen by about 0.75 degree Celsius between 1960 and 2019 – A Study by Harvard and Northwestern University

Impact of climate change


Chennai floods


Assam floods


Droughts

- **3-10 % of India's GDP may be lost annually by 2100** due to climate change as per RBI reports

- Natural catastrophes in India have led to uninsured economic losses of **$32.94 billion** during the five period of 2018-22

- Insurance protection against natural catastrophe risks is low: **93% of the exposures are uninsured** as per Swiss Re reports.

- Average annual loss due to flood in Assam is to the tune of **Rs. 200.00 Crore**s as per Govt of Assam

First Climate Change Bankruptcy – PG&E case

Background

- Wildfires for the 2013-2022 period cost **USD 98.87bn** in economic losses globally and **USD 69.92bn** in insured losses as per Swiss Re reports.
- Largest climate-related business failure in history.
- The company's expected liabilities from the devastating wildfires in 2017 and 2018 are estimated at over **USD 30 billion** and
- The company's share price has dropped by over 90% since before the 2017 fire.

PG&E's Risk Exposure:

- Exceptional droughts in recent years, causing tinder-dry conditions across the state for longer periods.
- Utilities in California can be held liable for damage caused by their old and faulty equipment.

Lessons:

- Climate-related risks that may cause companies to fail in the future: physical risks, policy-related risks, and technological risks**.**
- Fall in market value due to climate impacts
- Huge cost for insurers due to losses triggered in possible form of insurance
- Affirms the need for collective action against climate change.
- Increased risk and exposure to lenders.

Climate risk as a cross-cutting theme

Unique in scale, urgency, magnitude and complexity of action

Scale

A **global challenge** that affects us all.

Climate change may be reaching a **tipping point** of cascading changes

Urgency

Temperatures already at 1°C above pre-industrial levels.

Next 10 years essential to keep temperature rise well below 1.5˚C

Magnitude

Risks to health, livelihoods, food security, water supply, and economic growth

Complexity of action

Necessitates **global coordination** among regulators, governments, and societies, requiring **collective and concerted action** to effectively meet this challenge

What are climate related financial risks?

ESG provides an umbrella framework to consider a company's impact and dependencies on the environment and society, as well as to the quality of its corporate governance.

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"The potential risks that may arise from climate change or from efforts to mitigate climate change, their related impacts and their economic and financial consequences." **RBI, Draft Disclosure Framework 2024**

Environmental

- Emissions, waste and pollution
- Climate change
- Nature & biodiversity
- Deforestation, land protection
- Environmental taxes, green subsidies

Social

- Community engagement and social acceptance
- Land rights and Fair work conditions
- Equal pay, living wages and Equality and diversity
- Safeguarding employees and customers

Governance

- Ethical behaviour, whistleblowing
- Aligning ESG policy with tax strategy
- Tax reporting and stakeholder communication
- Process controls and compliance assurance programme (co-operative compliance)
- Risk and opportunity oversight disclosure

Climate Change

Transition Risk

Losses from transitioning towards a low carbon economy

Losses due to extreme weather events and longer-term shifts in the climate

Physical Risk

Direct sources:

- Oil and Gas
- Thermal/Metallurgical coal mining
- Cement
- Shipping
- Chemicals
- Automotive
- Steel

Indirect sources:

- Real estate
- Trade
- Land use change
- Paper

Climate risks transmission to financial sector

Climate risks

3. Key Global Regulations

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Global efforts in managing climate risk

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Coordinated and multifaced approach

Financial regulatory bodies	Accounting bodies	Financial institutions alliances	Sovereign action
NGFS, BIS	IFRS, SASB, TCFD	Net-zero banking alliance, Net Zero Asset Managers Initiative, Science Based Targets, The Alliance For Green Commercial Banks	UN environment programme, COP28 UAE
Development of best practices to be implemented by regulators in the areas of sustainable finance & climate risk management	Develop reporting and disclosure standards to promote transparency and consistency in managing climate risks	FI alliances to develop charters, goals or methodologies for member entities to initiate action towards managing climate risk	International Forums to further sovereign actions to manage climate change

Paris Agreement 2015

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- Legally binding and each country establishes the national targets to fight against the climate change.
- To keep the global temperature well below 2 deg Celsius compared to pre – industrial levels and continuing efforts to limit it to 1.5 deg Celsius.
- 195 countries report their national commitments to combat climate change starting 2020 and will be reviewed every 5 years.
- Developed countries must finance developing countries with at least 100,000 million dollars a year starting 2020 for mitigation and adaptation.
- Common frame of transparency to all countries that includes information on emissions and investment contributions.
- Long term goal to achieve Net Zero emissions by reducing the green house gas emissions.

India's Nationally Determined Contributions 2022

India strives to achieve net zero emissions target by 2070

6.67%
Share of global GHG emissions

To mobilize **domestic and new & additional funds** from developed countries to implement mitigation and adaptation actions

45%
Conditional GHG emission reduction target by 2030.

50%
Targeted energy production from green sources by 2030.

To create an additional carbon sink of **2.5 to 3 billion** tonnes of CO2 equivalent through additional forest and tree cover by 2030.

Adaptation and resilience areas in NDCs

- Agriculture
- Water
- Coastal Region and Islands
- Health
- Infrastructure
- Biodiversity and Ecosystem
- Disaster Risk Management
- Rural Livelihood Security

4. Role of Financial Sector in managing climate risk

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Role of Financial sector in managing climate risk

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Banks | **Asset Management Companies** | **Life Insurance Companies** | **General Insurance Companies**

Resilience building

The FIs can aid resilience against climate change by incentivizing and underwriting investments/loans in climate-resilient infrastructure and practices.

Product innovation-sustainable insurance offerings

FIs can help create new products, such as sustainable finance & parametric insurance to address specific climate related risks.

Public awareness and education

Educating customers about climate risks, promoting sustainable practices through their products, and advocating for policies that incentivize climate resilience and mitigation efforts.

Climate modelling and data analysis

It involves using historical data, climate projections, and advanced statistical techniques to assess and quantify potential impacts of climate change on insured assets and liabilities.

Collaboration with government/policy-makers

Providing data-driven insights, supporting policy development for climate resilience, and participating in public-private partnerships to mitigate and manage climate risks effectively.

Risk transfer and reducing protection gap

Increasing penetration in unserved and underserved areas. Improving risk assessment and pricing to reflect climate risk accurately and helping transfer risk from individuals to insurers.

Thank you

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