



Four Twenty Seven

Private Sector Perspectives on Assessing Physical Climate Risks

Yoon Kim, Director of Advisory Services

+ About Four Twenty Seven



- Leading provider of climate intelligence for financial markets.
- Science-driven risk analytics and resilience solutions for asset owners, commercial banks, Fortune 100 corporations, development finance institutions and government agencies.
- Headquartered in Berkeley, CA, with offices in Washington, DC, and Paris, France. Established in 2012.
- Often quoted in:

Bloomberg

 **REUTERS**

n p r

FINANCIAL TIMES

CFO

 **MONEYWATCH**

waterstechnology

GEEK

RISK MANAGEMENT MONITOR

THE BOND BUYER

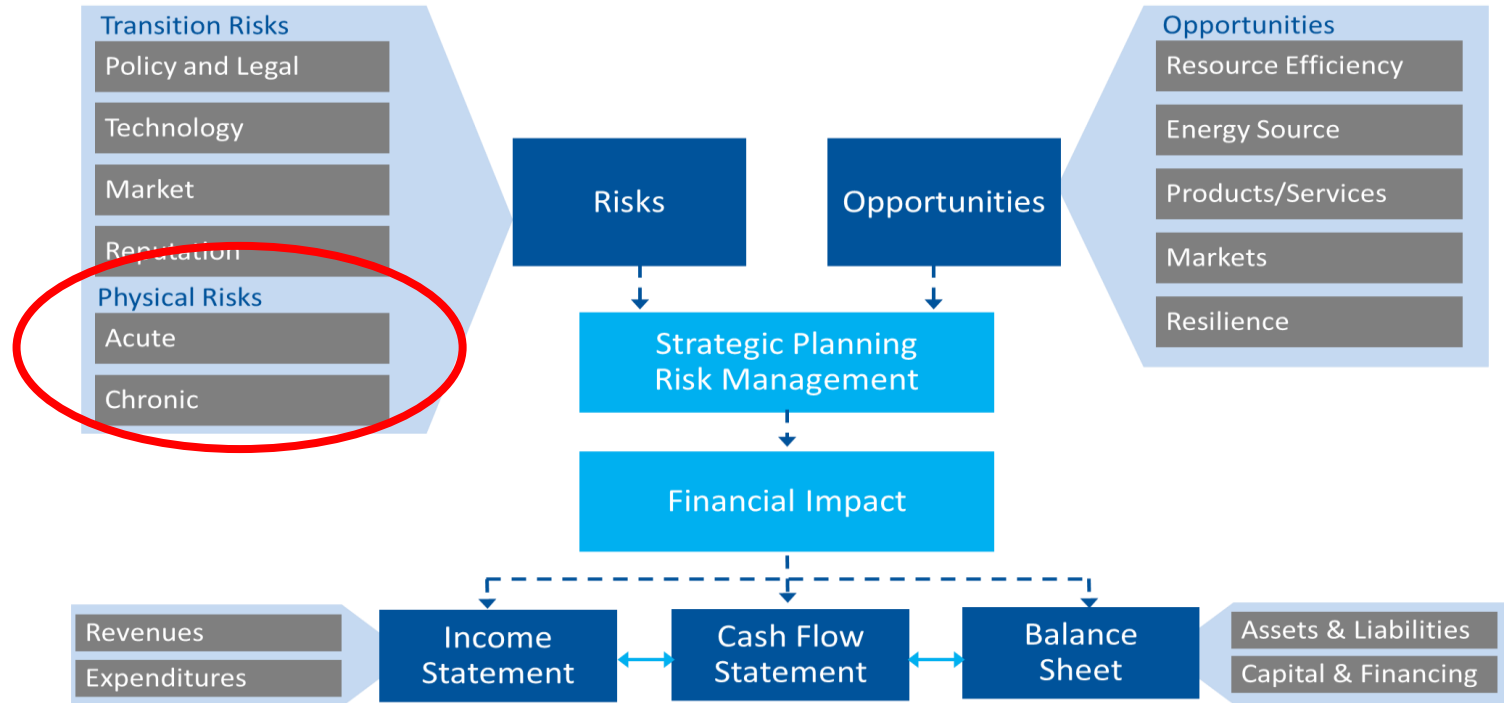
IPE

Handelsblatt

Environmental Finance

+ Global Trends and Drivers

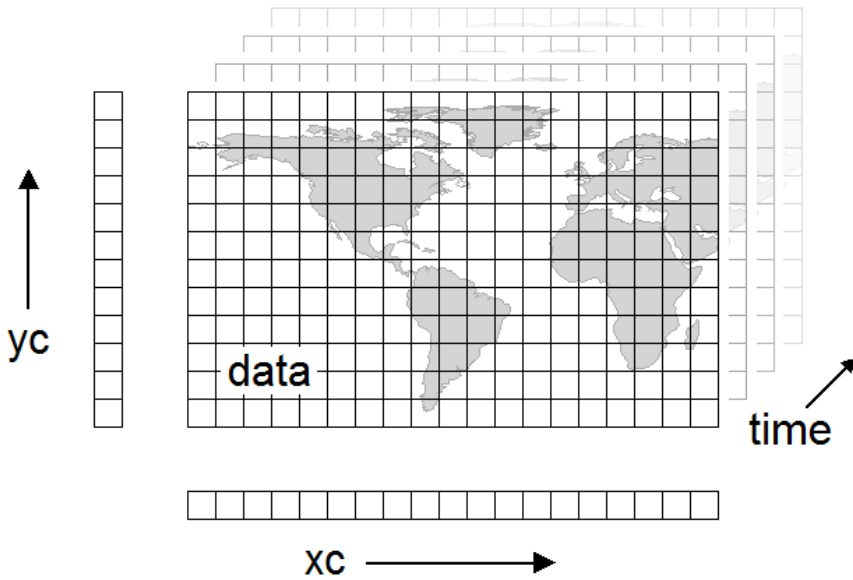
- Task Force on climate-related Financial Disclosures
- Investor interest
- Emerging regulation, particularly in Europe (Article 173, EU, etc.)



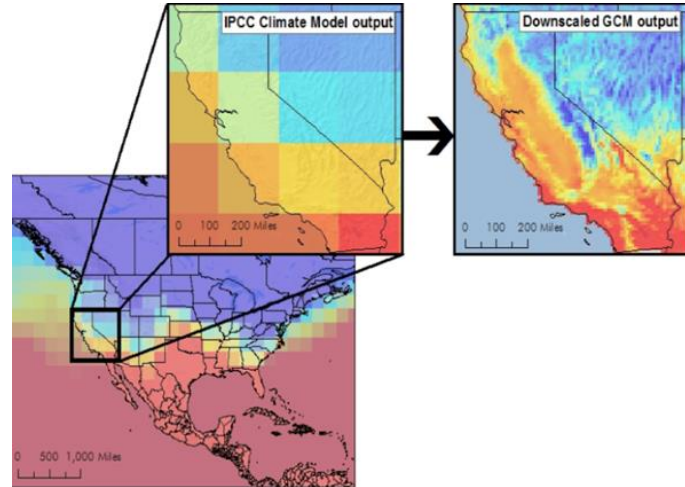
Source: Adapted from TCFD Recommendations

Challenges in Assessing Physical Climate Risks

Terabytes of Data

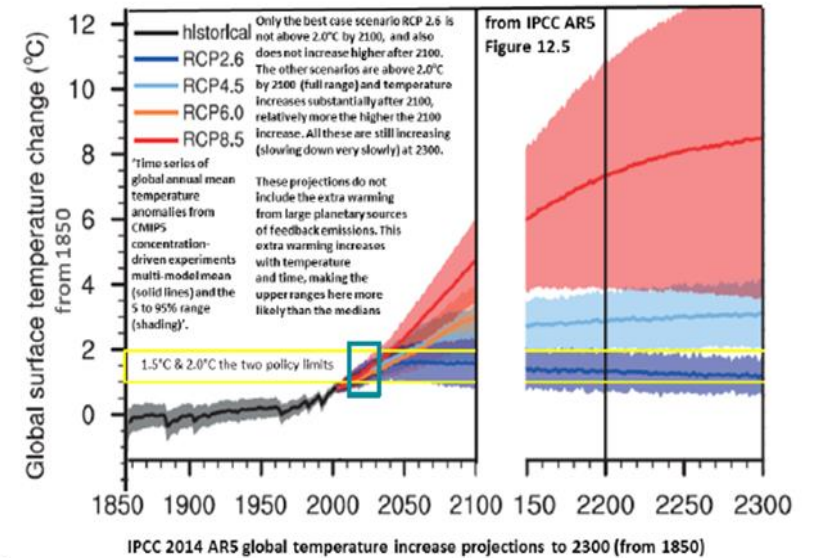


Varying Resolutions



Over A Long Horizon

IPCC AR5 temperature increases 1850-2300



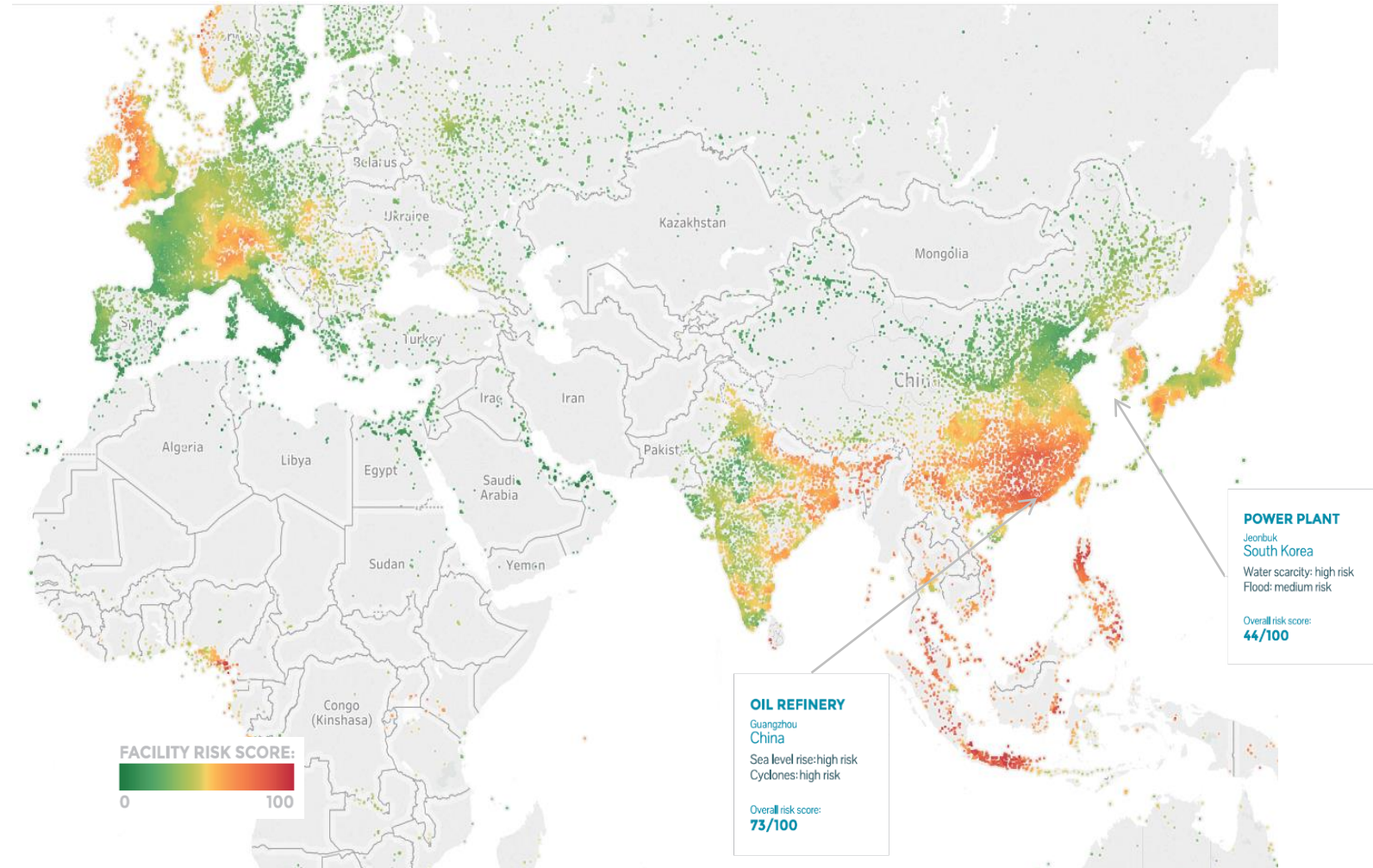


Questions of Analysis

- Which investments, facilities, etc. are at greatest risk?
- Where is risk concentrated from a geographic and sectoral perspective?
- What is driving risk?
- Which risks pose a material concern?
- How do my risks compare to others in my industry and/or region?

Scales of Analysis

- Portfolio (e.g. real estate, real assets / infrastructure, equities, munis, sovereign)
- Operations
- Supply chains
- Individual site / facility
- **Data** that provides site-specific insights and enables comparison at scale





Assessing Exposure



■ Hazards



■ Timeframe

■ Past

- Impacts from extreme weather events
- Impacts from weather variability

■ Future

- Direct impacts of acute and chronic hazards in short (2-5 years) to medium term (5-20 years)
- Direct impacts of acute and chronic hazards in long-term (>20 years) and indirect impacts (using scenario analysis)



Understanding Local Adaptive Capacity



- Why are investors and businesses interested in understanding local adaptive capacity?
 - Impacts on regional water, energy, transport, communications, etc. infrastructure affect businesses and investments
 - Local communities' ability to manage risks shapes the nature of risks for investors and businesses
 - Lays foundation for engagement and partnerships...
- What elements of adaptive capacity are they considering?
 - Awareness
 - Economic and financial characteristics
 - Adaptation planning and action



Four Twenty Seven

Yoon Kim – ykim@427mt.com

www.427mt.com

