

# PHASE I CONSULTATION COMMENT LETTER

By: Four Twenty Seven, Inc.

Dear Chairman Bloomberg,

Four Twenty Seven, Inc., a climate resilience research and advisory firm, is pleased to submit this letter of comment for your consideration and to help inform the work of the Task Force on Climate-Related Risk Disclosures (TCFD) during Phase II.

We commend you for the important work undertaken by the TCFD and your deliberate efforts to engage practitioners and stakeholders in providing input along the way. Providing guidance around climate risk disclosures is a critical step not only to help ensure financial markets will not be blindsided by predictable risks, but also to ensure that investors send the appropriate price signals to the decision-makers for the underlying assets – from corporate boards to public officials and real estate owners -- thus providing an incentive to better prepare for and adapt to the physical impacts of climate change.

Our comments stem from years of working closely with Fortune 500 corporations to help them understand climate change impacts, quantify risk and monetize costs. We anticipate this type of analysis will need to become widespread for corporations to comply with the forthcoming guidance from the TCFD, and wanted to share our lessons learned from our past work.

Our comments, detailed below following the questionnaire structure, center around two key takeaways:

1. The need to **redefine climate risk to better account for direct and indirect risks related to the physical impacts of climate change**. Regulatory, technology or transition risks are by no means confined to greenhouse gases, and focusing a disclosure framework only on extreme weather events and direct physical impacts would be deeply misguided. It is critical that corporations understand, address and disclose their exposure to risks and opportunities related to transition risk due to:

- **Regulatory changes** driven by climate change (e.g. changes in underground water regulation, permitting, zoning, etc.);
- Costs and revenues associated with finding and deploying **adaptive technologies** to improve corporate resilience, mitigate risk exposure and promote more efficient resources use;
- Costs associated with **capital expenditure**, retrofitting or moving facilities, infrastructure and other critical assets out of harm's way.
- Costs and revenues associated with increasing the company's **adaptive capacity**, ranging from increased legal and insurance costs to investments in human capital, supply chain risk management, engagement with local governments to support climate adaptation efforts, and other public-private partnerships.
- **Macro-economic and financial risk** for property owners, market risks for certain products, etc.

2. The need to **incorporate climate data into decision-making processes** and provide **vulnerability assessments at the asset-level** for both corporations and investors.

- Corporations need to **utilize fully the wealth of climate data and projections** that are available, and leverage sophisticated techniques and models to incorporate uncertainty into their decision processes.

- **Climate risk analysis must be performed at the asset-level**, even if the final disclosures do not include all the asset-level data, and should rely on common standards, assumptions and scenarios to enable comparison across assets and across markets.
- **Risk assessments should be subject to third-party verification** to ensure they are complete and cover all the material risks.

We hope our comments are of use and are available should you have any follow-up questions.

Best regards,



Emilie Mazzacurati, Founder and CEO  
Four Twenty Seven, Inc.

## COVERAGE AND AUDIENCES

### 1. Which types of nonfinancial firms should any disclosure recommendations cover? List in order of importance.

1. Industrials (capital goods, commercial services, transport)
2. Materials (chemicals, construction, metals & mining, paper & forest, etc.)
3. Energy (equipment, services, oil, gas etc.)
4. Utilities (electric, gas, renewables, water)
5. Telecommunications (diversified, wireless, etc.)
6. Consumer Staples (food, beverage, household etc.)
7. Consumer Discretionary (auto, durables, retailing, etc.)
8. Information Technology (semiconductors, software, hardware, etc.)
9. Health Care (equipment, services, pharma, biotech, etc.)

## CLIMATE-RISK DIMENSION

### 4. For nonfinancial preparers of climate risk and opportunity information, what are the top three key concerns that you would like the Task Force to keep in mind in making our recommendations?

Concern #1: providing voluntary recommendations for disclosures can potentially put companies that comply with those recommendations at a competitive disadvantage against corporations that choose to ignore these recommendations and do not provide detailed, transparent disclosures on physical climate risk. The stronger the mandate and the clearer the message from investors that they require this information, the easier it will be to level the playing field for companies subject to disclosures.

Concern #2: While it is impossible to precisely predict future conditions, settling on a set of warming scenarios for companies to consider will ensure that the disclosures provided by corporations will provide comparable information on how these companies will perform under a specific set of conditions. Also, climate risk reporting by companies is highly susceptible to bias, misinformation, misrepresentation, and elaborate inconclusive methods approaching pseudoscience. Third-party verification and science-based measurements should be required for disclosures.

Concern #3: Climate change remains a politically-charged topic in many executive circles in the U.S. Finding ways to tie boards' fiduciary duty to climate risk management will be critical to changing the conversation in the boardroom.

**5. For users of climate risk and opportunity information, what are five specific points of information that you wish to secure?**

1. *Asset-level vulnerability assessment*: what are the potential hazards for each asset? Evaluate exposure, sensitivity and adaptive capacity at the asset level and over the useful lifetime of an asset.
2. *Natural resource dependency* and information on dependency on key commodities & resources that will themselves be affected by climate change.
3. *Regulatory awareness*: is the company tracking and anticipating climate adaptation-related regulatory developments that may impact its operations or business model?
4. *Technology savviness*: Investors need a better understanding of how companies in their portfolio are equipped to integrate new technologies that will help them adapt to a new physical and regulatory operating environment.
5. *Systemic resilience*: is the company proactively engaging with critical external partners (local governments, suppliers, other third parties) to understand its risk exposure outside for the physical facilities' fence line where the greatest vulnerabilities might lie. A company's adaptive capacity goes beyond traditional governance and risk management capabilities to include a corporation's resilience to disaster hitting the communities where they operate, where their employees and customers are located.

**6. Are there any best-practice disclosures of climate risks by companies that you would like to bring to our attention? What specific climate elements of this disclosure would you like to highlight?**

Current voluntary and mandatory reporting framework do not enable corporations to effectively disclose the findings from their internal risk assessments. For example, CDP reports contains a few examples of corporations that have performed detailed climate risk assessment for part of their activities (e.g. supply chain or operations or a certain geography), but the reporting framework forces the reporters into disclosing a long laundry list of potential hazards that dilutes the findings and prevents corporations from highlighting effectively what may constitute a material risk and why.

See for example **Merck** and **3M** CDP Climate Change Investor reports 2015, questions 5.c on Physical Climate Risk (publicly available on CDP website)

**7. "Transition Risk" in terms of climate is an evolving term. How would you define this risk? What specific disclosures would help measure it?**

While the term “Transition Risk” is often used to refer to the risks to carbon and energy-intensive companies from the transition to a low-carbon economy, we also think it should include the risks from a transition to a 2°C world. Specifically, certain sectors exposed to correlated risks (insurance, agriculture), certain markets and geographies (e.g. real estate and muni bonds in Florida), as well as the cost of adaptation to corporations at large: investment in new technology, building retrofits, potential relation costs, changes in sourcing costs, market opportunities, etc. ) However, that while transition will often bring costs in the short term, it can represent significant return on investment in the mid- to long-term. Investors may correlate high transition costs with low investment viability; and we believe disclosers should time discount the future benefits of today’s transaction costs when applicable so that proactive companies and early adopters receive a positive market signal.

**8. Which three sectors do you think most exposed to climate risks? For these sectors, how are physical, transition, and liability risks best measured and reported?**

Historically, the sectors that have suffered the greatest economic losses from climate and hydro-meteorological events have been those sectors that are particularly exposed and sensitive to direct impacts from changes in the climate, such as agriculture, mining, tourism and transportation. While exposure and sensitivity are important indicators for identifying the sectors at the greatest relative risk from climate change, additional criteria items are needed that measure the potential impact on the wider economy in the event of a disruption, as well as a sector’s wider impact on dwindling natural resource regimes that could affect other sectors and communities.

The industrial sector is one such example. In the U.S. equities market, the industrials sector is twice the size as the basic materials and utilities sectors combined, and it is highly susceptible to material input shortages, disruptions, and regulatory fines as a significant consumer of dwindling global freshwater reserves. Conversely, the utilities sector represents a relatively small share of the U.S. equity market, but its revenues are highly concentrated among a few firms supporting a vast network of connected transmission infrastructure that is particularly sensitive to increases in average and extreme temperatures, humidity, and wind as well as secondary impacts such as drought, flooding and landslides. Energy sub-sectors, timber, mining, and real estate will suffer even greater losses due to policy shifts or physical risks such as drought, coastal flood as influenced by sea level rise, wildfire or more extreme storms. Without providing a rank of the most at-risk or impacted sub-sectors, we recommend using a balanced approach to identifying and ranking the importance of sectors. A sector’s exposure to the physical impacts of climate change is equally as important as a sector’s weight and interdependence within the wider global economy.

For these sectors and others, physical climate risks and the subsequent impacts should be measured using scientific methods but communicated using business language, and contextualized for investors, customers, and regulators in units that can be clearly understood (e.g., working days, operations/ capital costs, share value, etc.). While the economic impacts of climate change are most evident following one or many extreme disruptive events, attention must also paid to both the subtle impacts (e.g., the cumulative impact of increasing temperatures) and the long-term economic impacts of gradual climate change.

**9. How should the task force consider the challenge of aggregate versus sector-specific climate-related financial risks and opportunities?**

**10. Is there a role for scenario and sensitivity analysis—for the nonfinancial and/or financial sectors?**

**Please provide three specific examples.**

In the next 30 years, the impacts from climate change will be similar whether a low or high emission scenario is selected. Currently, the rate of warming is consistent with a business-as-usual emission scenarios (RCP8.5), and we believe this emission path should be used by reporters to account for the worst-case scenario and to instill a consistent scenario for future disclosures. We also believe that projections that merely describe “average” future conditions are insufficient and probabilistic projections, including tail-end low probability high impact events, should be disclosed along with information about the associated financial impacts. Disclosures should also consider scenarios specific to company growth and consumption patterns as these trends are closely related to a company’s level of exposure and resilience in the future. Lastly, the projection of forward-looking risks should incorporate short-term risks occurring over seasons and years and describe the level of sensitivity and locations where abnormal but increasingly frequent and severe seasonal/ annual weather patterns (e.g., ENSO, NAO, MJO, etc.) could significantly affect company operations.

**ASSET-CLASS DIMENSION****11. Which are the key asset classes that require initial attention? Are there any gaps that we should focus on? Within this, what are the top two priorities for action?**

The key asset classes that require initial attention include: Commodities and Real Estate, Muni bonds, Equity. Over time, it is possible climate change will also become a material driver for Emerging Markets and Foreign Exchange, in particular in a high emission scenario, more likely to cause sudden and long-lastime disruption to a country’s economy. In the short run, we recommend as priorities for action Equity and Real Estate.

**LOOKING AHEAD****18. How should the Task Force define “success”?**

Success for the Task Force would be in a robust disclosure framework that can be used both as a template for regulations and as concrete guidance for the market to set the norm for voluntary disclosure. Success will also come from changing market standards and expectations, and helping move corporate valuation away from quarterly results exclusively. In practice, success could include:

- Several corporations (e.g. TCFD members) including extensive, TCFD-compliant climate risk disclosures in their 2017 10-K
- G20 countries taking on TCFD recommendations to develop strong country-level guidance or regulations
- Rating agencies explicitly including climate risk consideration into their climate risk ratings

**19. What are the key barriers that you believe the Task Force needs to overcome?**

We performed an extensive literature review on the barriers to corporate adaptation for the UN Global Compact in 2015, and identified the following barriers for corporations to address climate change risk. We believe many of these barriers are also applicable to investors and the financial sector at large with regard to climate risk, and therefore the barriers that the Task Force needs to overcome.

For more details, please see: The Business Case for Responsible Corporate Adaptation, a Caring for Climate report by UN Global Compact, UNFCCC, UNEP and partners.

1. Information gaps and risk uncertainty
  - Lack of awareness
  - Difficulty accessing and using climate data
  - Uncertainty around nature, timing and magnitude of impact
  - Lack of guidance on climate risk assessments
2. Challenges integrating long-term forecasts into business planning (short-termism)
  - Climate change perceived as a long term risk
  - Adaptation perceived as distant benefits
3. Lack of incentives to take adaptation action
  - Difficulty measuring and quantifying benefits of corporate adaptation
  - Lack of incentives in companies' performance management systems
  - Lack of incentive for corporations to take action
  - Lack of incentive to invest in public goods (e.g. infrastructure)
  - Conflicting incentives to publicize corporate adaptation efforts
4. Access to financing
  - Poor access to capital for long term resilience projects
  - Poor access to capital for small businesses
5. Policy, regulatory, and socio-cultural barriers
  - Conflicting policies and regulations
  - Socio-cultural barriers to adaptation
  - Overcoming policy, regulatory, and socio-cultural barriers

**20. Is the Task Force focused on the appropriate set of topics for its Phase II work plan?**

Yes, but the Task Force has set high expectations and the scope of work is extremely broad, so it is critical that the Task Force puts sufficient resources to address in a meaningful manner all the issues it listed under Phase II.

**21. What additional topics should it consider?**

**22. The Task Force plans to reach out to a broad sample of key stakeholders among preparers, users, and standard setters. Are there particular types of entities or organizations that you believe the Task Force should reach out to?**

The Task Force will gain considerable insights from engaging with climate data service providers: professional organizations (public/private/non-profit) specialized in helping end-users integrate climate data into decision-making processes. Our experience working directly with Fortune 500 corporations to help them account for projected physical impacts of climate risk gives us a refined understanding of barriers and enablers inside the corporation, as well as challenges with data availability, time and spatial scale, framing uncertainty, etc. We would be happy to further support the work from the TCFD from that standpoint.