SERVICE 09

Portfolio Climate Risk Assessment

■ Illustrative Scenario

CLIENT PROFILE

Client Type	Sovereign Wealth Fund
AUM	$4.2 billion
Location	Singapore
Situation	Investment board mandating climate risk assessment across global portfolio; beneficiary advocacy groups filing resolutions; investment committee lacked technical climate risk capability
Engagement	Portfolio Climate Risk Assessment | $65,000

THE CHALLENGE

A $4.2 billion Singapore-based sovereign wealth fund received a formal investment board directive to conduct a comprehensive climate risk assessment of the fund's portfolio and report findings to the full board within 6 months. The directive aligned with Singapore's MAS net-zero commitments and was triggered by visible climate-related financial losses in the fund's real assets portfolio and increasing pressure from global institutional co-investors.

The investment board had no internal climate risk expertise and lacked the analytical tools to conduct a TCFD-aligned assessment across a portfolio spanning public equities, fixed income, private equity, real estate, and infrastructure across multiple geographies. They needed a credible, board-presentable assessment aligned to Singapore's MAS ESG reporting guidance and international TCFD standards.

VERDE ADVISORS APPROACH

Verde Advisors conducted a full TCFD-aligned portfolio climate risk assessment, analyzing the fund's exposure to both physical and transition climate risks across all asset classes.

The physical risk analysis evaluated the fund's real assets and infrastructure holdings for exposure to acute climate hazards (flooding, wildfire, extreme heat) and chronic climate trends (sea level rise, precipitation pattern shifts) using geographic and asset-level data. This identified approximately $180 million in real assets with material physical climate exposure requiring active management.

The transition risk analysis modeled the fund's public equity and credit portfolios against three climate scenarios — 1.5°C, 2°C, and business-as-usual pathways — assessing how carbon pricing, technology disruption, and regulatory change would affect portfolio valuations over a 10-year horizon. The analysis identified sector-level concentration risks and manager-level transition readiness gaps.

Results were synthesized into a TCFD-aligned board report with scenario analysis, risk quantification, and a prioritized action plan addressing the fund's highest-exposure positions.

KEY DELIVERABLES

- TCFD-aligned climate risk assessment report — physical and transition risk across all asset classes
- Physical risk heatmap — geographic and asset-level exposure analysis for real assets and infrastructure
- Scenario analysis — portfolio valuation impacts under 1.5°C, 2°C, and BAU pathways

- Transition risk scorecard — sector concentration and manager transition readiness assessment
- Quantified risk summary — estimated financial exposure by asset class and climate pathway
- Board presentation (20 slides) — executive summary with prioritized action plan

OUTCOMES & RESULTS

$4.2B	3	$180M
Portfolio Assessed	Climate Scenarios Modeled	High-Risk Assets Identified

This is an illustrative scenario based on the types of engagements Verde Advisors is equipped to deliver. Client details are hypothetical. Climate risk modeling involves significant uncertainty; results should be interpreted as directional analysis, not precise predictions.