Carbon Risk Modelling and Portfolio Impact Training Course

Professional Development Training Course Outline

Category	Risk Management	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In an era defined by Climate Transition and evolving ESG Regulations, Carbon Risk Modelling has become a Critical Investment Discipline. The shift towards a low-carbon economy presents significant Financial Risks from Stranded Assets due to policy changes to Physical Risks from extreme weather events. Financial institutions and corporations must urgently adopt robust methodologies to quantify these exposures. This course provides the Essential Framework and Quantitative Skills required to translate macro-level climate scenarios into granular, portfolio-level Financial Impact assessments, ensuring Climate Resilience and Sustainable Value Creation.

Carbon Risk Modelling and Portfolio Impact Training Course is meticulously designed to move beyond mere compliance, focusing on the practical application of Advanced Modelling Techniques for Portfolio Decarbonization and Active Ownership. Participants will master Scenario Analysis, Carbon Accounting, and the integration of Climate Data into traditional Risk Management and Asset Valuation processes. By developing a deep understanding of Transition and Physical Risk drivers, participants will be equipped to strategically position investment portfolios for a Net-Zero Future, driving Alpha Generation and meeting increasing Stakeholder Demands for transparency and Climate Stewardship.

Programme Curriculum

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Course Duration

5 days

Course Objectives

1. Quantify Transition Risks and Physical Risks across diverse asset classes.
2. Master Climate Scenario Analysis for stress testing investment portfolios.
3. Implement the GHG Protocol for accurate Carbon Accounting and Financed Emissions calculation.
4. Integrate Climate Data and metrics into Portfolio Construction.
5. Apply Stochastic Modelling techniques for long-term climate impact forecasting.
6. Evaluate the financial materiality of Stranded Assets under various Decarbonization Pathways.
7. Develop and articulate an effective Net-Zero and Portfolio Alignment strategy.
8. Navigate and comply with evolving ESG Disclosure Frameworks
9. Assess and manage Climate-Related Liability Risk and Greenwashing Risk.
10. Utilize Climate-Adjusted Valuation Models for equity and fixed-income assets.
11. Design a robust Climate Risk Governance structure and Risk Appetite Framework.
12. Formulate Active Ownership and Climate Engagement strategies to drive real-world change.
13. Drive Sustainable Finance product development and Climate-Resilient Investment mandates.

Target Audience

1. Portfolio Managers and Asset Owners
2. Risk Management and Chief Risk Officers (CROs)
3. ESG/Sustainability Directors and Analysts
4. Financial Regulators and Central Bank Staff
5. Investment Bankers and Credit Analysts
6. Corporate Treasury and Finance Professionals
7. Actuarial and Insurance Risk Specialists
8. Consultants specializing in Climate and Sustainable Finance

Course Modules

1. Fundamentals of Climate Risk and Finance

- Deep dive into Physical and Transition Risks and their economic channels.
- Understanding the Financial Materiality of climate change for different sectors.
- Case Study: Analysis of a global utility company's credit rating downgrade due to coal-fired Stranded Assets policy risk.

- Overview of global climate frameworks and their market implications.
- Introduction to Climate Risk Governance and setting a Climate Risk Appetite.

2. Carbon Accounting and Financed Emissions

- Mastering the GHG Protocol and Value Chain emissions.
- Methodologies for calculating Portfolio Carbon Footprint
- Case Study: Calculating the financed emissions for a diversified sovereign and corporate bond portfolio using an attribution model.
- Challenges in Data Quality and utilizing proxy data for disclosure and modelling.
- Introduction to Carbon Offsetting and the integrity of voluntary carbon markets.

3. Climate Scenario Analysis and Stress Testing

- In-depth study of key scenarios
- Quantitative translation of Climate Shocks into financial variables.
- Case Study: Performing a Climate Stress Test on a real estate portfolio using physical risk models.
- Developing bespoke internal Decarbonization Scenarios and risk horizons.
- Integration of Scenario Analysis into strategic planning and capital allocation.

4. Transition Risk Modelling and Asset Valuation

- Carbon Beta and factor-based models for measuring systematic Carbon Risk.
- Climate-Adjusted Discounted Cash Flow models and Carbon Pricing impact analysis.
- Case Study: Valuing an oil & gas company under a Below 2°C scenario, focusing on reserves and capital expenditure risk.
- Modelling the impact of Policy Risk on corporate margins.
- Assessing Technology Risk on sector profitability.

5. Physical Risk Modelling

- Introduction to Climate Science and regional physical hazard data.
- Geospatial mapping and scoring of asset-level exposure to acute and chronic risks.
- Case Study: Using catastrophe models to assess the Insurance Gap and potential losses for an infrastructure fund exposed to cyclone risk.
- Quantitative modelling of risk mitigation and Climate Adaptation costs.
- Integrating physical risk scores into Credit Risk and loan loss provisioning models.

6. Portfolio Impact and Alignment Metrics

- Measuring portfolio alignment with 1.5°C pathways using various metrics.
- Developing Portfolio Decarbonization targets and implementation plans.
- Case Study: Redesigning an equity index fund to achieve a 50% Carbon Footprint Reduction while tracking error is minimized.
- The role of Green Bonds, Climate-Themed Funds, and other Sustainable Finance products.
- Measuring the Real-World Impact of investment decisions beyond simple carbon metrics.

7. Regulation and Disclosure

- Detailed review of the TCFD recommendations
- Understanding mandatory reporting requirements under CSRD and SFDR.

- Case Study: Drafting a compliant TCFD Report for a commercial bank, including scenario analysis disclosures.
- Greenwashing prevention and ensuring integrity in climate-related claims.
- Emerging framework: Taskforce on Nature-related Financial Disclosures.

8. Climate Risk Integration and Active Ownership

- Embedding Climate Risk into Enterprise Risk Management and investment decision-making.
- Developing effective Shareholder Engagement and Proxy Voting strategies.
- Case Study: Evaluating a corporate Climate Transition Plan and engaging with the board to strengthen its Science-Based Targets
- Connecting Climate Risk to remuneration and executive compensation.
- Future trends: Artificial Intelligence and Machine Learning in climate modelling.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org **or call** +254769199797

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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