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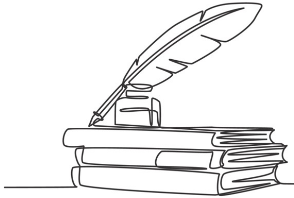
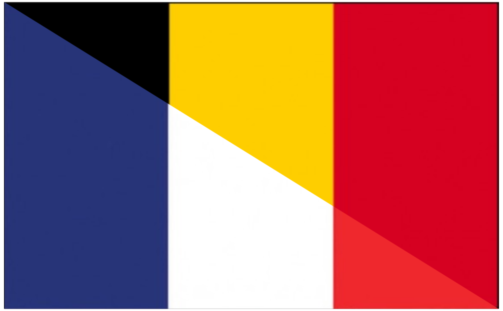
Risk In, 31 May 2024

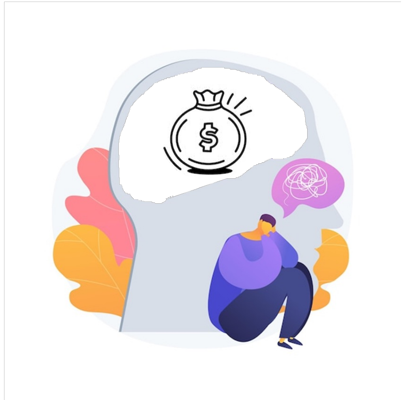
ESG and Decision-Making

Ariane Chapelle



Jérémie Bertrand





Content

1. Climate Change: Operational (Risk) Consequences
2. ESG: Reputation and Regulation
3. Case study: Assessing Climate Risk Scenarios

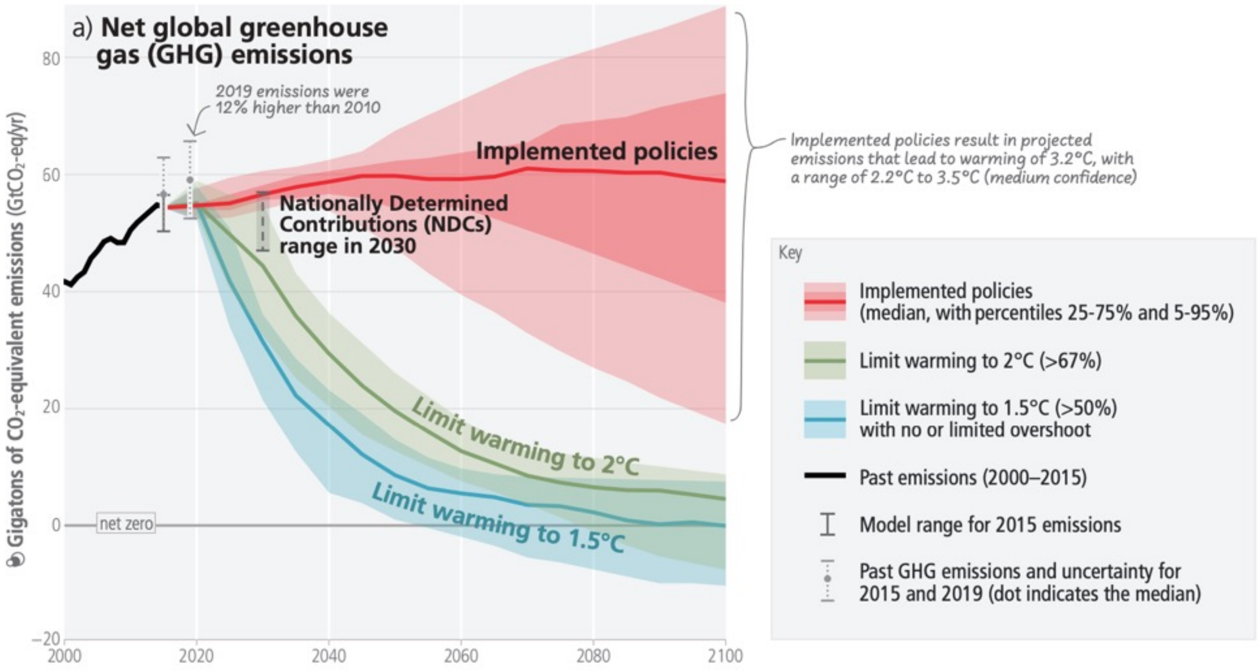
Section 1

Operational consequences of climate change

Are 1.5°C and 2.0°C scenarios realistic?

Limiting warming to 1.5°C and 2°C involves rapid, deep and in most cases immediate greenhouse gas emission reductions

Net zero CO_2 and net zero GHG emissions can be achieved through strong reductions across all sectors



Source: IPCC Report, March 2023

Ten operational impacts of climate and transition risks

1. Physical impacts on operations: damage and disruptions
2. Supply chain disruptions
3. Regulatory compliance and costs
4. Increased insurance costs
5. Market and investor pressures
6. Stranded assets and depreciation
7. Transition risks
8. Legal and liability risks
9. Talent attraction and retention
10. Reputational risks

1. Climate-related risks aggravate multiple existing financial and non-financial risks;

2. The management of climate-related risks must be integrated into the ERM Framework;

3. It should <u>not</u> be managed separately, as a stand-alone risk class or, worse, with a separate framework.

EBA Guide on climate-related and environmental risks

1. Banks are expected to identify and assess their various exposures to climate risks and uncertainties on all their risk types (credit, market, liquidity, operational) and the costs associated to these exposures
   - Increasing part of ICAAP exercise, best addressed through scenario analysis
2. Banks are expected to integrate climate-related risks into their risk appetite limits (including reputation risk) and risk governance arrangements, with corresponding monitoring metrics
3. Banks are expected to disclose meaningful information and metrics, consistent with TCFD recommendations, and NFRD (and now CSRD) requirements. Expected disclosure around 5 themes: business model and strategy (1), policies & due diligence (2), outcomes (3), risks and risk management (4), KPIs (5)

A typology of climate-related risks

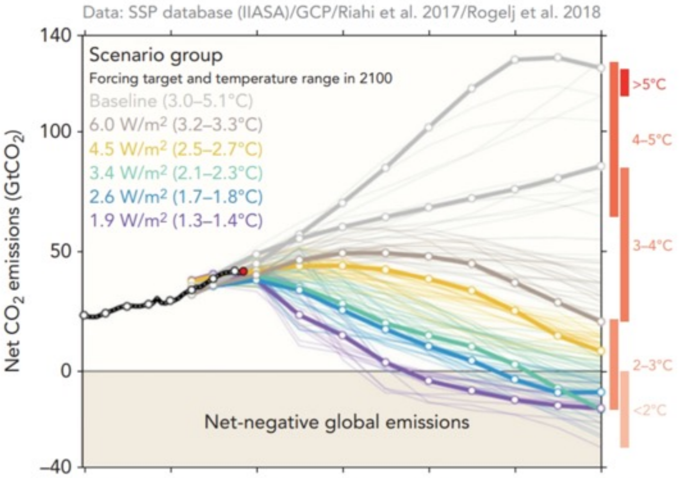
Climate Risk	Hazards / Drivers	Exposure	Vulnerability
Physical Risk	▪ **Acute weather hazards** (*floods, cyclones, droughts*) ▪ **Chronic weather hazards** (*sea level rise, heat, water stress*)	Facility level: Anything in a **hazard zone** (*infrastructure, residential property, commercial facilities*) Corporate level: Firms with facilities/supply chains in hazard areas	Facility level: Extent of **adaptive infrastructure** (*e.g., flood pumps, fire breaks*) Corporate level: Viability of contingency plans; access to insurance
Transition Risk	▪ **Policy changes** (*carbon tax, coal shutdowns*) ▪ **Technological changes** (*cheaper renewables*) ▪ **Consumer pressure**	Facility level: **High-emissions assets** (*fossil fuel power plants, steel plants, ICE vehicles*) Corporate level: Firms with business operations dependent on emissions	Facility-level: Extent of **ability to decarbonize** (*e.g., biomass or hydrogen conversion*) Corporate-level: Viability/robustness of transition plans

Source: Caldecott et al. (2021)

Figure 3.1 Physical and Transition Risk

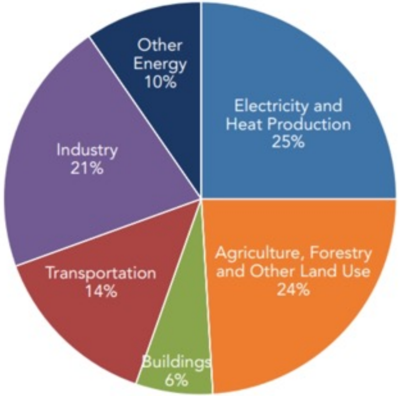
Source: Garp, SCR, 2023, Chap. 3

Pathways and industry impacts



Source: "Explainer: How 'Shared Socioeconomic Pathways' explore future climate change" (April 2018) Chart produced for Carbon Brief by Glen Peters and Robbie Andrews from the Global Carbon Project. Reprinted with permission of CarbonBrief.

Figure 3.7



Source: IPCC AR5 Climate Change 2014: Mitigation of Climate Change.

Figure 3.8

Scenarios and stress testing need to include:

1. **model uncertainties -> range of severities**
2. **differentiated impacts per location and activities: temperature variations on sea, land and latitudes (up to detailed maps)**
3. **individual firms' responses: of adaptation and mitigation**

Source: Garp, SCR, 2023, Chap. 3

Pause and Reflect

Climate Risk Preparation

- *How prepared are you for risk-related climate changes (both for physical risks and transition risks)?*
- *Is climate risk management integrated to your ERM framework (identification & taxonomy, assessment, mitigation & scenarios)?*

Section 2

ESG: Reputation and Regulation

A BDO Survey with Mercuri Urval of over >150 EU companies (March 2024) Finds:

1. *75% of the participants aim to create value from the ESG transition, vs. 25% being compliance-driven.*
2. *+97% believe sustainability will reshape their company's business model and activities*
3. ***The biggest pressures will come from:***

   1) clients

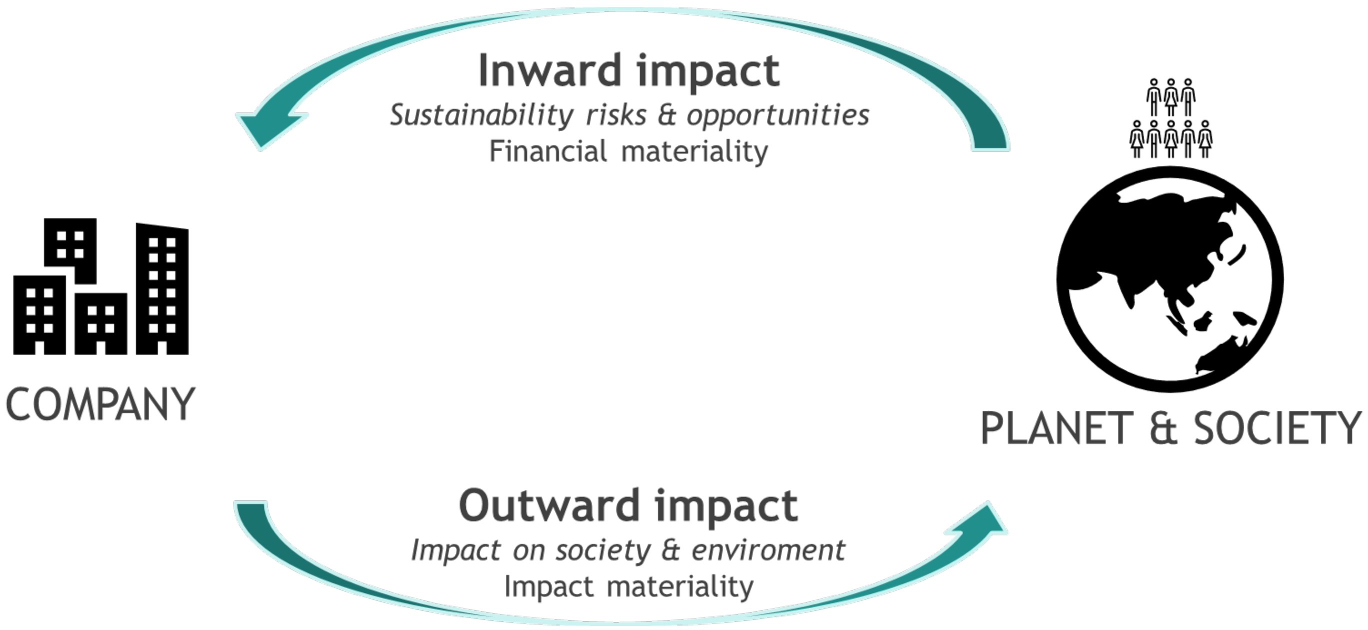
   2) employees and future talent

   3) Public authorities and governments

CSRD – Reporting topics (ex-NFRD, from FY 2024)

- ***Environmental Reporting: including***
  - Climate change mitigation and adaptation measures
  - Water and resource use
  - Biodiversity impact
  - Pollution levels
  - Circular economy metrics
- **Social and Employee** Matters
- **Human Rights**
- **Anti-bribery and Anti-corruption**
- **Corporate Governance**
- **Strategy and Targets**
- **Due Diligence Process**
- Double Materiality Assessment (DMA) (financial and external)

What is a Double Materiality Assessment (DMA)?



Source: BDO Belgium:https://www.bdo.be/en-gb/insights/articles/2024/double-materiality-assessment-(dma)-white-paper

Who is impacted by the CSRD and when?

	EU Firms (and large non-EU subsidiaries)			Global firms
Report due (based on FY t-1)	2025	2026	2027	2029
Scope	Large public interest entities (PIEs) with 500+ workers, already subject to NFRD	Large private companies with (at least 2 of): 250+ workers €50m+ net turnover €25m+ assets	Listed SMEs	Non-EU companies with : (i) €150m net turnover in EU (last 2 years), and either (ii) a large or listed subsidiary (iii) or a significant EU branch (€40+ net turnover)
Required standards	ESRS	ESRS	**Simplified ESRS**	Simplified ESRS

Source: Accountancy Europe & Denkstatt

DMA roles beyond reporting

An opportunity for strategy and management

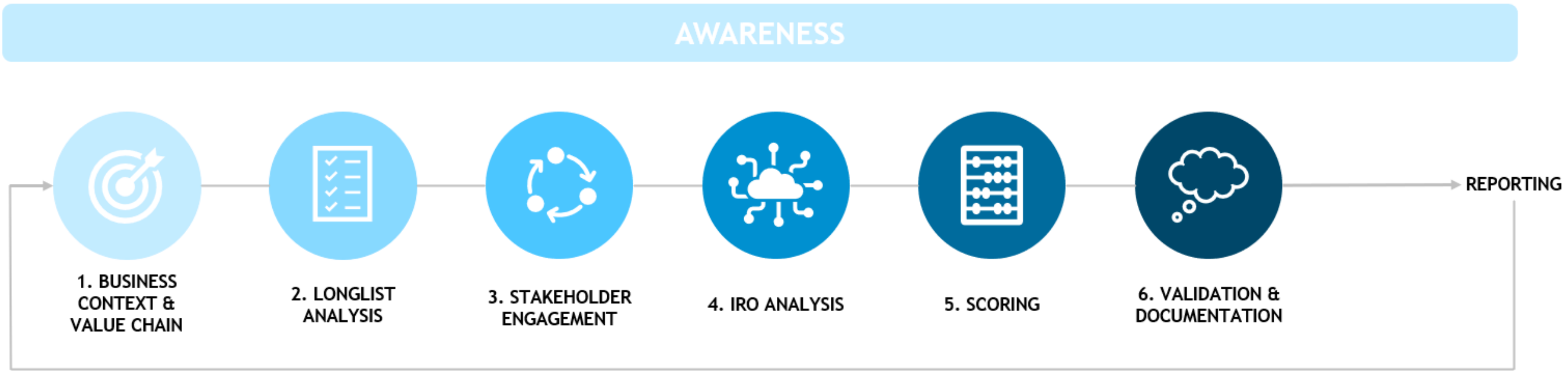
- Financial and Impact Materiality are correlated, and sector-specific
- The most impacted (and impactful sectors) face the biggest opportunities to transform
- All industries could use this mandatory reporting as a strategic tool to plan for future years and communicate to investors

Pause and Reflect

ESG reporting & adaptation

- *How prepared are you for ESG trends and transitions?*
- *How do you integrate ESG considerations in your decision-making process?*

DMA Step by Step



Video on: https://www.bdo.be/en-gb/insights/videos/2024/double-materiality-assessment

- Steps overview: 1 to 3

Business Context

- Understand the **context** the firm operates in
- Map the **value chain** (upstream, own operations, downstream) and the geographical locations
- Understand the **business model** & **strategy** and its **link with ESG matters**
- Consider **key activities**, incl. products and services offered

Longlist analysis

- Basis: **topics included in ESRS**
- **Sector-specific ESRS** are under development
- **Legal** and **regulatory** landscape
- **Benchmark** analysis
- Build on **existing knowledge**

Stakeholder Engagement

- Identify **key stakeholders** (affected stakeholders, users of ESG report, don't forget silent stakeholders)
- Develop a **strategy** to stakeholder engagement
- Surveys, interviews, workshops, etc. depending on the stakeholder group and circumstances

- Steps overview: 4 to 6

Impact Risks & Opportunity (IRO) Analysis

- Positive or negative (impact)
- Risk or opportunity
- Actual or potential
- Time horizon (1 – 5 – 5+ years)
- Location of the IRO (own operations vs value chain)

Scoring

- Impact Materiality: **scale**, **scope**, **irremediability** & **likelihood**
- Financial Materiality: **magnitude** & **likelihood**
- Based on all input gathered in previous steps
- Establish **objective thresholds**
- Material from impact materiality perspective, financial materiality perspective or both

Validation & Documentation

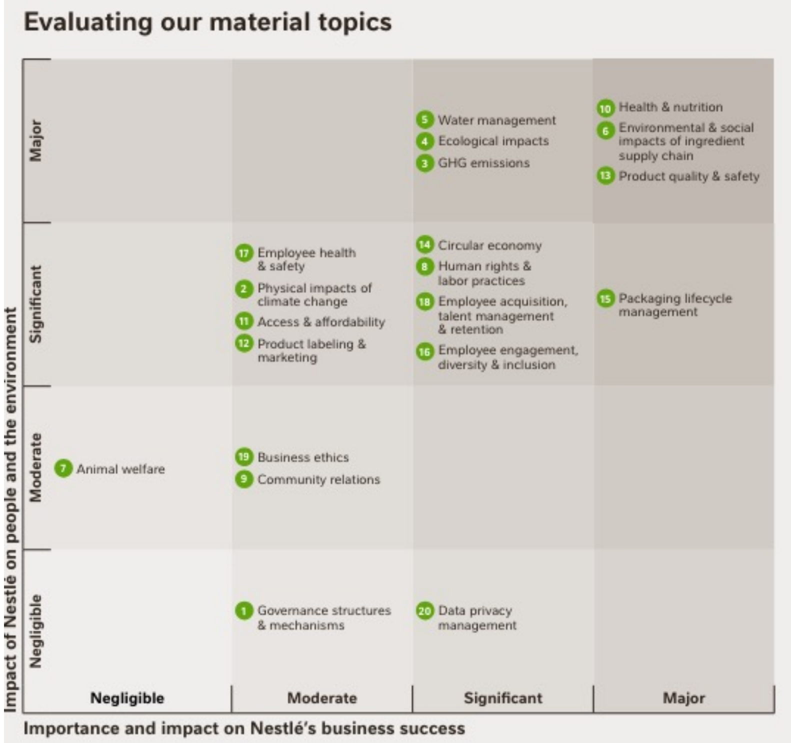
- Internal review and validation by management
- Auditor validation
- Documented process
- Update yearly (especially if material changes)

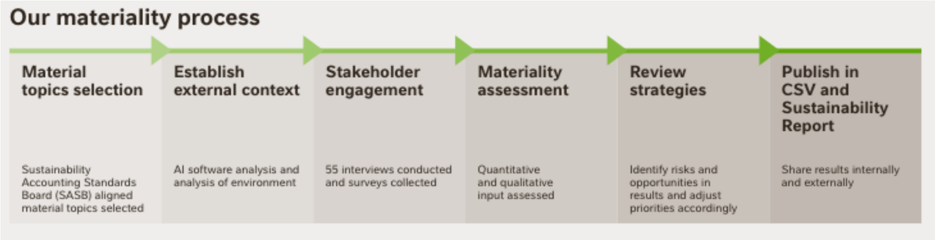
Some examples of interesting reporting (FS)

- Standard Chartered – Sustainability resource hub
- https://www.sc.com/en/sustainability/resource-hub/

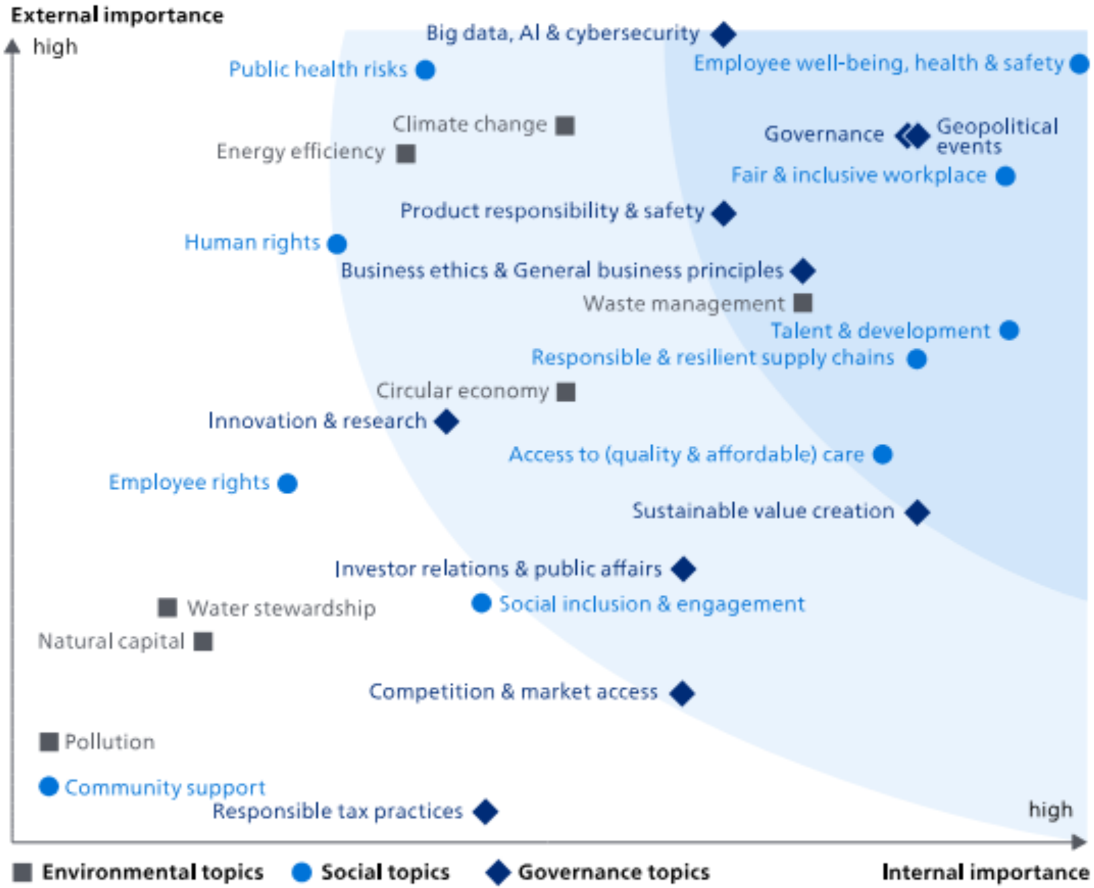
- ING – Climate risk report 2022
- https://www.ing.com/Newsroom/News/ING-publishes-climate-report.htm

Nestlé Double Materiality Matrix, 2023





Philips Double Materiality Matrix, 2023



Section 3

Case study: Assessing Climate Risk Scenarios

Key points

- Scenario analysis is a **key element** of the risk management framework, not to avoid or postpone.
- **Structured scenario analysis** is the best method to assess rare events without being (too) dependent on human biases.
- It is most useful to **estimate capital needs** for tail risks and evaluate the effectiveness of **risk mitigation** mechanisms in place in the firm.

Examples of climate-related scenarios

Climate transition risk	• Stranded assets and shift in energy sources and prices
Climate / ESG litigation risk	• Claim from customers/activists following the involvement of third-party in environmental damage
Reputation risk	• Consumer attrition and brand value: loss of market share after poor sustainability positioning
Chronic weather risks	• Productivity drop in staff and increased absenteeism
Disruption and IT risks	• Loss of data centre following AC breakdown

Fault Trees Analysis (FTA) & Structured Scenarios

Form of causal modeling: **decomposes an event into ranges of cause drivers and impact drivers**

- (+) Increases the robustness of the assessment
- (+) More specific in the definitions of risk drivers, scenario dependency and probabilities
- (+) Highlights the preventative and the facilitation factors of a risk occurring (low and high probabilities of the branches of the tree), useful for risk management response
- (-) Sensitive to the branches of the tree
- (-) Sensitive to the attribution of probabilities

Stylized example of structured scenario assessment: Extreme weather event on fixed assets

Impact types per sector

1. **Damage to infrastructure/fixed assets (% destruction x replacement value)**
   - Port: flood
   - Crops: drought
   - Utility: power plant
   - Bank: data center (op risk) or asset collateral (credit risk)
2. **Loss of business (€/time x duration)**
   - Port: containers rerouting
   - Crops: harvest loss
   - Utility: service loss
   - Bank: disruption costs

Impact types per sector (cont'd)

3. Remediation costs (internal: #man-days x OR/staff; external: TP service), for:

- Crisis management
- Investigation and repair
- Report and monitoring

4. Stakeholder impacts

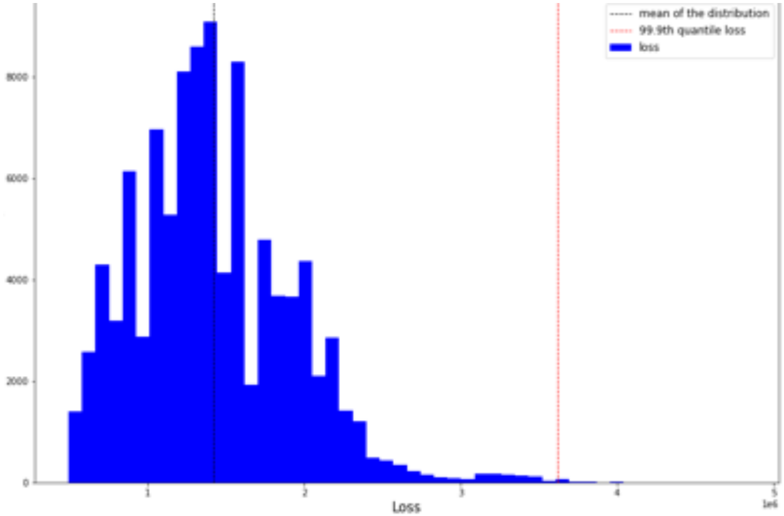
- Suppliers, staff, governments /regulators, communities/activists
- Reputation damage
- Legal costs

Scenario Structuring and Quantification

Simple table

	25%	50%	25%
Impacts	**L**	**M**	**H**
Damage to fixed assets	10	20	30
Loss of business	6	8	12
Remediation cost	1	3	5
Stakeholders impact	3	4	6
Total	**20**	**35**	**53**

With MC simulations (and more variables)



Pause and Reflect

Scenario Analysis

- *How much do you use scenario analysis as part of your risk management framework?*
- *Do you use structured scenarios to quantify Climate and ESG-related risks?*

In Conclusion

Integration	• Climate-related & ESG risks elevate multiple corporate risks: climate risk & ESG management must be fully integrated into the ERM framework, both as a specific risk type and as a driver of other risks
Substance over Form	• Regulatory pressure of reporting creates the temptation to rush to communication, before having a proper framework and content in place. This can only aggravate a firm's vulnerabilities to climate-related and litigation risks.
Preparedness	• Climate impacts are vastly uncertain, but they will be massive, even in the best-case scenarios. The firms best prepared will be those who survive the storms, literally.

Resources (selection)

- EFRAG (European Financial Reporting Advisory Group) – DMA implementation guidance (22 Dec 2023): EFRAG DMA guidance
- EFRAG on ESRS (European Sustainability Reporting Standards): EFRAG ESRS
- OECD due diligence guidelines: OECD guidelines
- SASB materiality tool: SASB
- MVO risk checker materiality tool: MVO - risk checker