

# Webinar: Climate Risk

## From impact to strategy

Team Climate strategy  
2/7/2026

# High-Level

## Key topics:

How climate change can create concrete risks for sites, assets and operations.

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From climate effect to risk exposure

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How to approach (mandatory) climate risk assessments in a pragmatic way

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How climate risk can steer business strategy



Moderator:

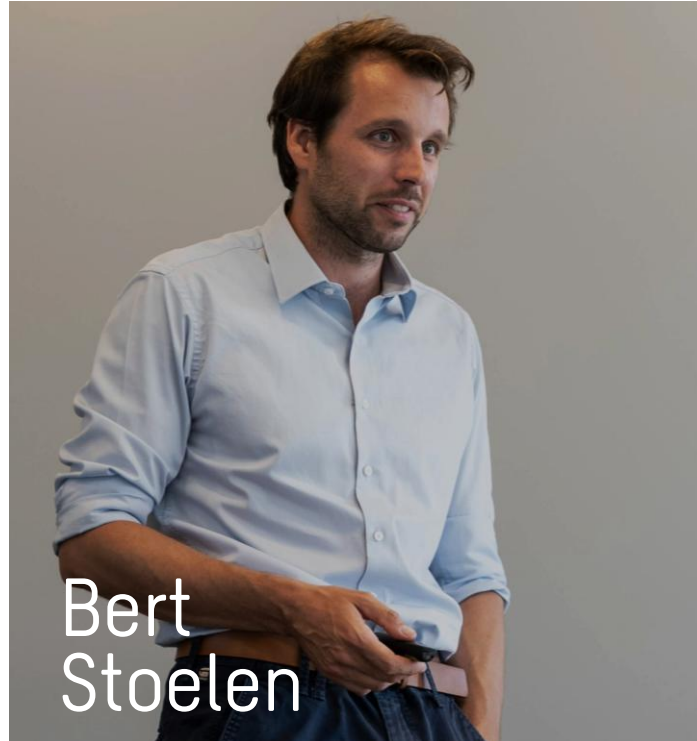
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# Experts in sustainability management



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**Carbon accounting, PCF & CSRD, Sweco**

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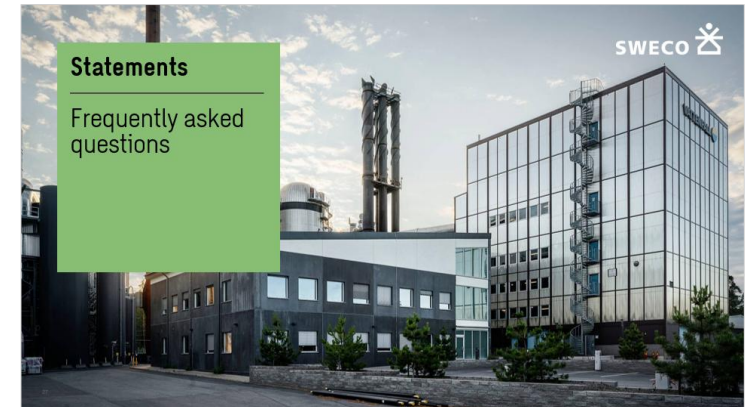
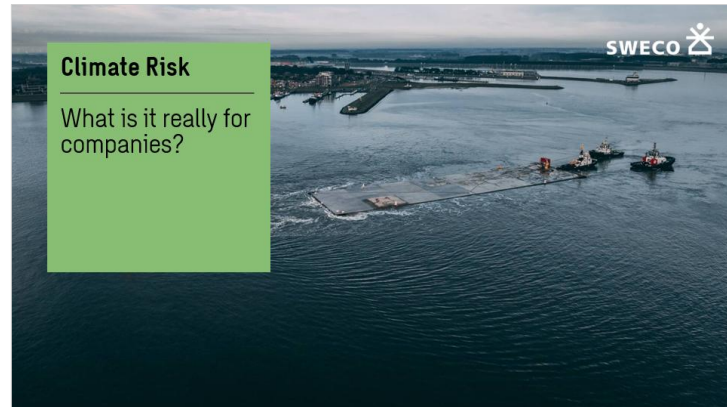
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**Climate Adaptation, Spatial Analysis**

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# Agenda



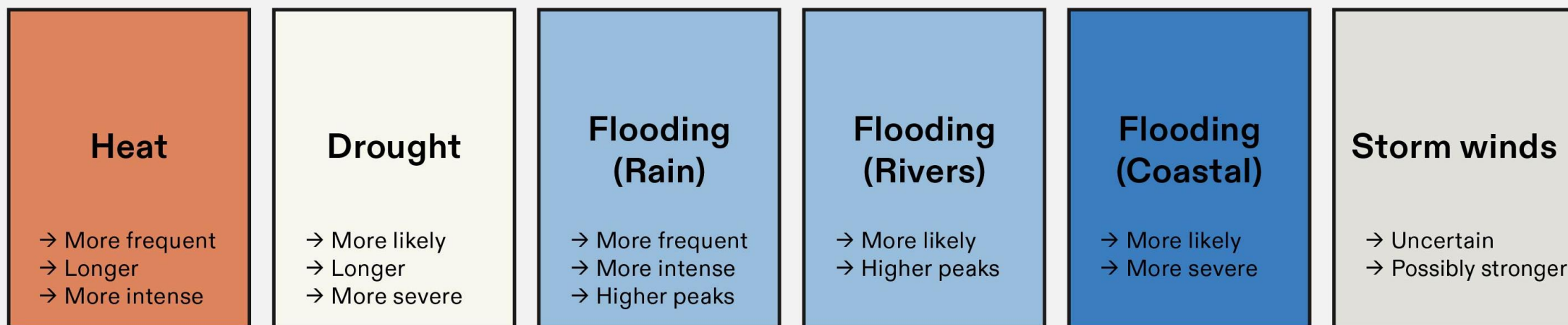
# Climate Risk

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What is it really for companies?

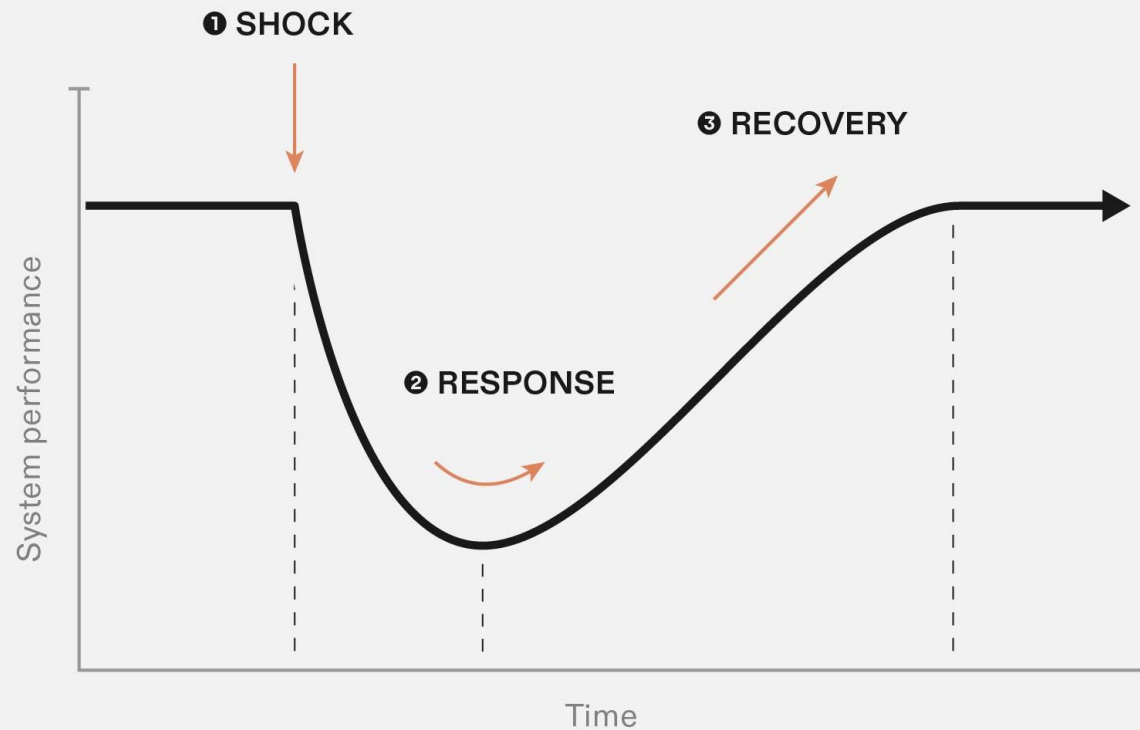


# Entering uncharted territory



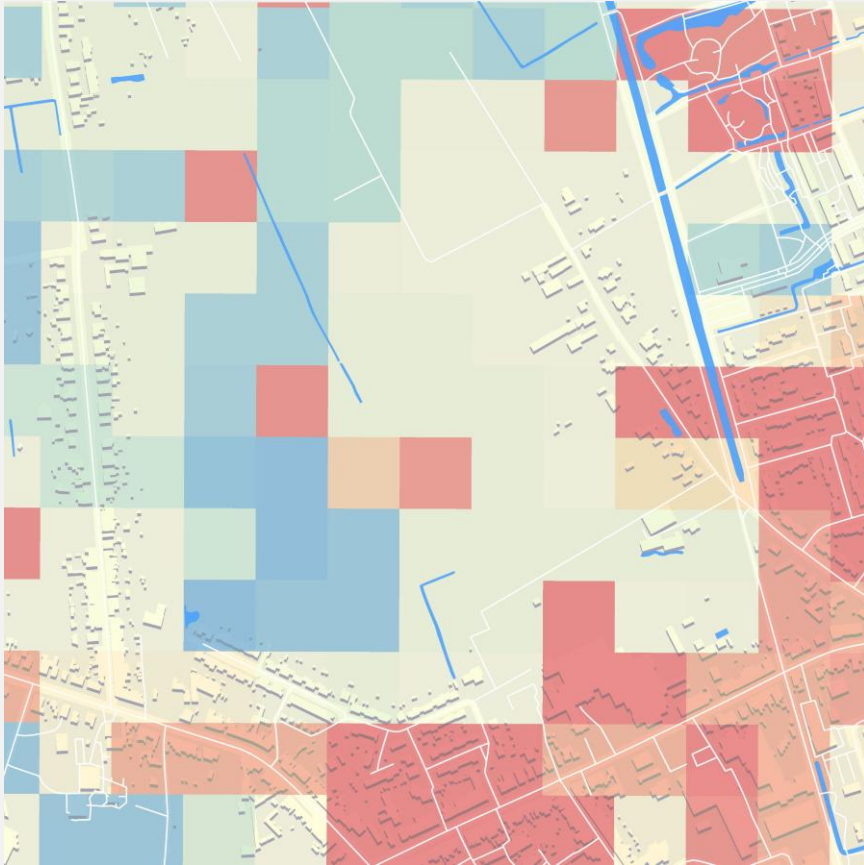
- **Imagination gap** between what is theoretically possible what we are prepared to believe, plan for and act on
- This creates a **false sense of security**: past experience is no longer a reliable indicator of future continuity

# Climate resilience

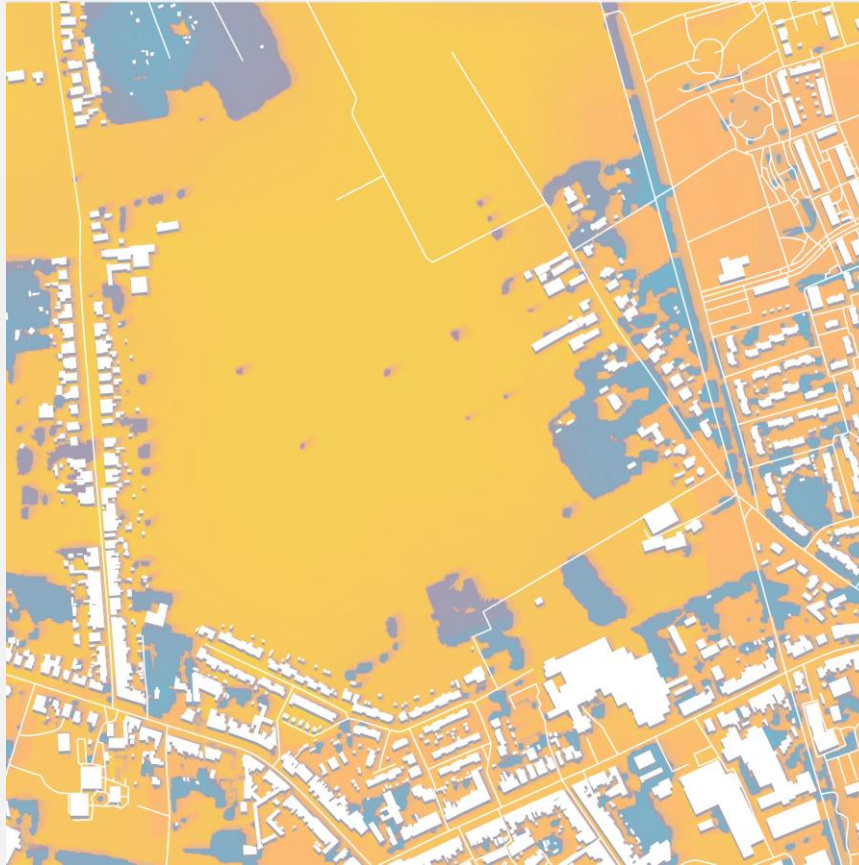


*The ability of a company, asset or system to **anticipate, withstand and recover** from climate-crisis related shocks and **stresses**, while adapting to future conditions.*

# Mapping climate effects



Extreme Agricultural Drought (data: VMM 2025)



Max. apparent temperature during an extreme (T20) heatwave (data: VMM 2025)

- **Precision** of map data **varies** per climate effect
- Public **availability** depends on country and region
- **Impact can differ** between people and assets (e.g. heat = feels-like temperatures not applicable for hard assets)

# Assessing impact severity and criticality of assets

**Effect** × **Vulnerability** × **Impact** = **Risk Exposure**

## Examples:

- Located in flood-prone area
- Subject to overheating
- Located on shrink-swell sensitive soils

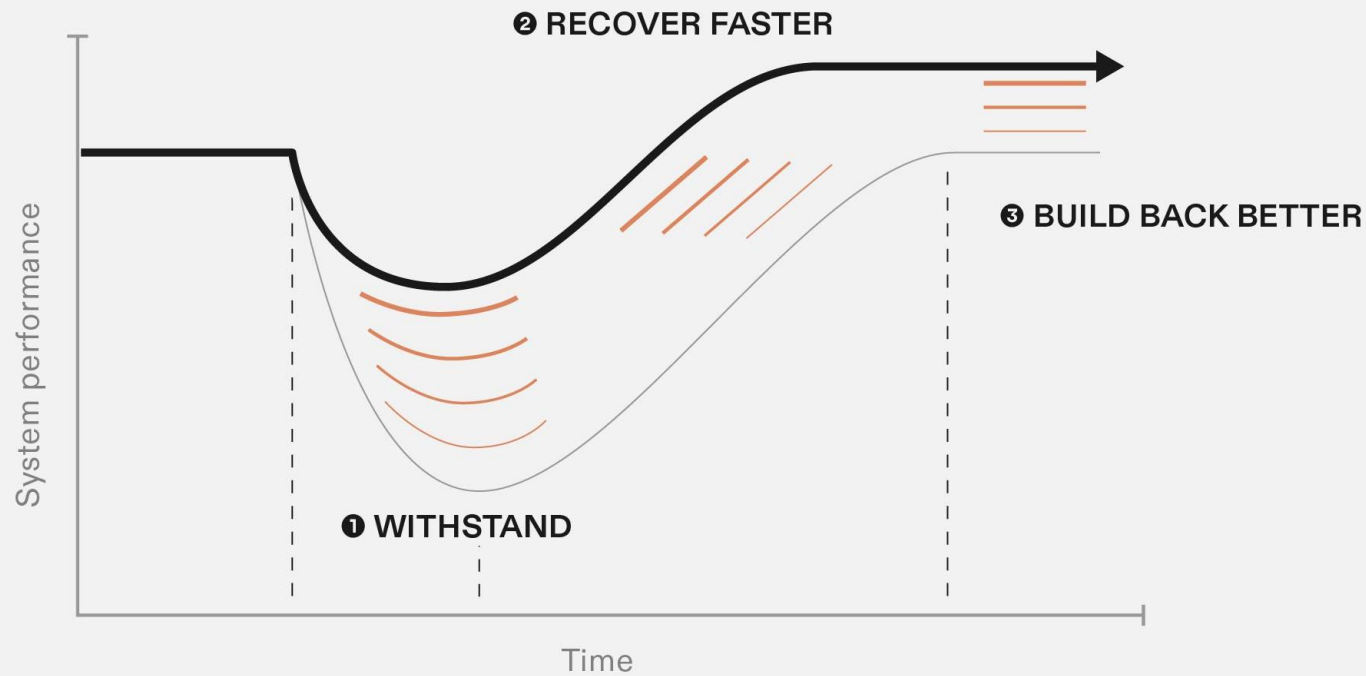
## Examples:

- Electrical systems fail above 30cm of water
- Cooling systems under acute stress above 35°C ambient temperature with 5h direct sun exposure
- Underground pipes can take damage from soil shifting

## Examples:

- Company server outage
- Product loss and discontinuity
- Pipeline failure

# Preparedness and building back better



- Operational recovery
- Physical recovery
- Strategic recovery

# Actionable frameworks for adaptation measures

← Quick wins

High Ambition →



Nature-based-solutions (NBS)

Technical upgrades

Minimal interventions,  
no permitting needed

For new builds or in  
combination with structural  
renovations

Examples:

- Rainwater capture
- Tree planting
- Depaving unused surfaces

Examples:

- Grey water system with buffering and infiltration
- Biosolar roofs
- Waterpermeable materials

# From Risk to Compliance & Strategy

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Reporting is not an  
end, but a means



# Why it matters – or doesn't

## Compliance

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- What is **minimally** required

## Focus

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- Value for **most** sectors
- Value for **specific** sectors

## Strategic Assessment

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- Strategic Repositioning
- Exposure

# Compliance – Climate risk assessment frameworks

## Shared baseline requirement:

To evaluate physical climate-related risks at an appropriate level of granularity

### EU Taxonomy

#### Asset-level project focus

- Per project or investment
- Requires evaluating **adaptation solutions** and assessing **remaining** climate risks

### CSRD

#### Company-wide value chain

- Company-wide risks, including value chain
- Other components (e.g. transition risk)

# Compliance – Climate risk assessment methodology

## 1. Screening of relevant climate-related hazards

### Approach

- Differentiation between Own Operations and Value Chain
- Based on state-of-the-art climate models & latest scientific evidence
- Tailored to your entity-specific locations and activities

- Quantitative Assessment
- Qualitative Assessment
- Qualified exclusion from Long List

APPENDIX A: CLASSIFICATION OF CLIMATE-RELATED HAZARDS<sup>669</sup>

|         | Temperature-related                                    | Wind-related                                       | Water-related                                                      | Solid mass-related |
|---------|--------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------|--------------------|
| Chronic | Changing temperature (air, freshwater, marine water) ● | Changing wind patterns ●                           | Changing precipitation patterns and types (rain, hail, snow/ice) ● | Coastal erosion ●  |
|         | Heat stress ●                                          |                                                    | Precipitation or hydrological variability ●                        | Soil degradation ● |
|         | Temperature variability ●                              |                                                    | Ocean acidification ●                                              | Soil erosion ●     |
|         | Permafrost thawing ●                                   |                                                    | Saline intrusion ●                                                 | Solifluction ●     |
|         |                                                        |                                                    | Sea level rise ●                                                   |                    |
|         |                                                        |                                                    | Water stress ●                                                     |                    |
| Acute   | Heat wave ●                                            | Cyclone, hurricane, typhoon ●                      | Drought ●                                                          | Avalanche ●        |
|         | Cold wave/frost ●                                      | Storm (including blizzards, dust and sandstorms) ● | Heavy precipitation (rain, hail, snow/ice) ●                       | Landslide ●        |
|         | Wildfire ●                                             | Tornado ●                                          | Flood (coastal, fluvial, pluvial, ground water) ●                  | Subsidence ●       |
|         |                                                        |                                                    | Glacial outburst ●                                                 |                    |

Other hazards - Entity-specific

Low Ground Water Level

Clay Soil damage to buildings

...

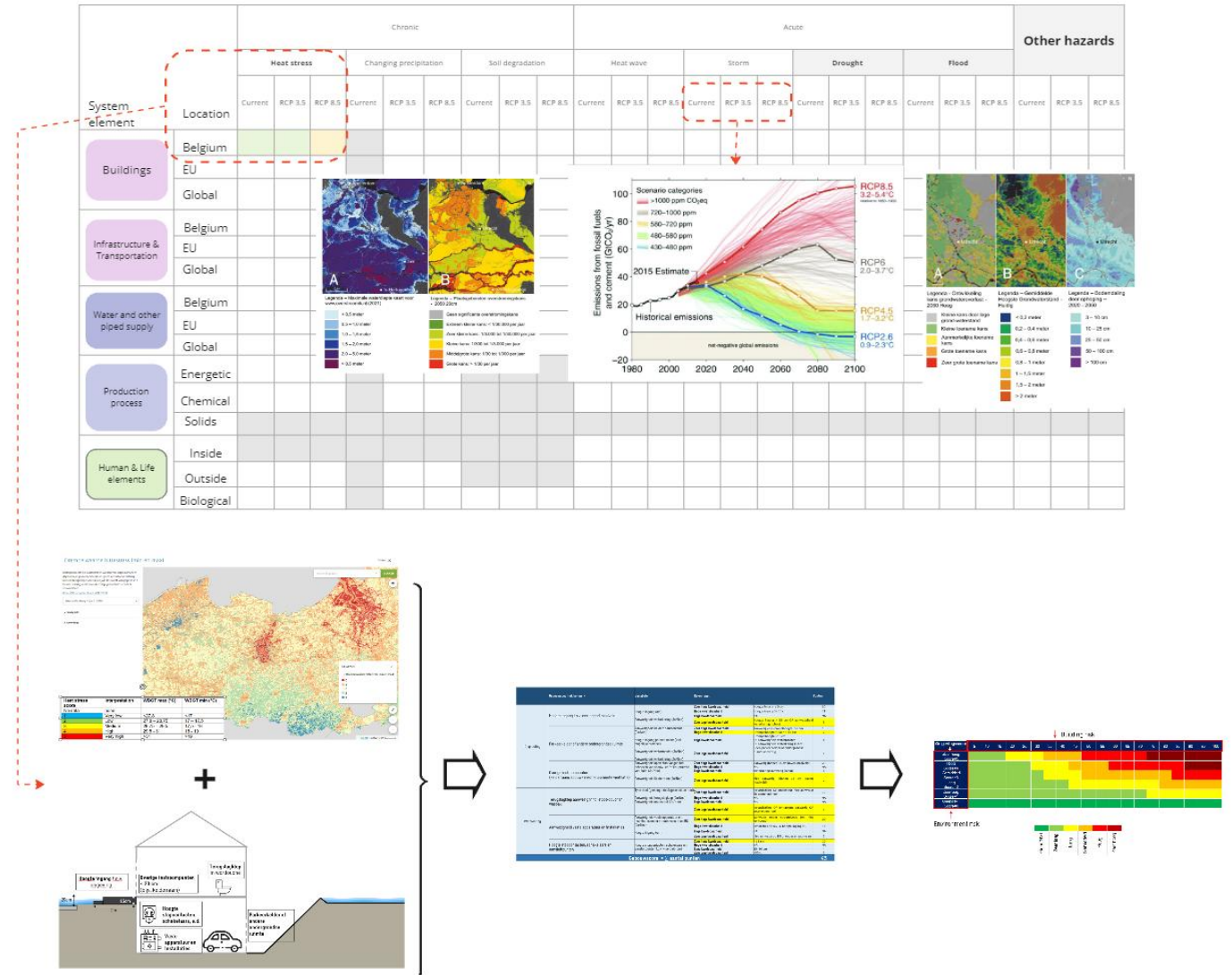
# Compliance – Climate risk assessment methodology

1. Screening of relevant climate-related hazards

## 2. Quantitative & Qualitative scoring

1. Risk = Hazard x Exposure x Vulnerability x Impact

2. Geo-located, per climate scenario



# Compliance – Climate risk assessment methodology

1. Screening of relevant climate-related hazards
2. Quantitative & Qualitative scoring
3. **Result = Risk Matrix → NOT (yet) an actionable result**

Table 6: Climate risk estimate for an industrial site (example with fictitious values)

|                                   |                                                            | Climate-related hazard (EU Taxonomy) |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|-----------------------------------|------------------------------------------------------------|--------------------------------------|---------------------|----------------------|--------------------------------------------------------|---------------------|----------------------|-----------------|---------------------|----------------------|--------------|---------------------|----------------------|
|                                   |                                                            | Heat wave/<br>Heat stress            |                     |                      | Storm (including<br>blizzards, dust<br>and sandstorms) |                     |                      | Flood - fluvial |                     |                      | etc. ...     |                     |                      |
|                                   |                                                            | Current risk                         | RCP8.5 - optimistic | RCP8.5 - pessimistic | Current risk                                           | RCP8.5 - optimistic | RCP8.5 - pessimistic | Current risk    | RCP8.5 - optimistic | RCP8.5 - pessimistic | Current risk | RCP8.5 - optimistic | RCP8.5 - pessimistic |
| System elements (industrial site) | Buildings in general                                       |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Superstructures on buildings                               |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Basements                                                  |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Indoor operating facilities                                |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Outdoor operating facilities                               |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Indoor warehouses                                          |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Outdoor warehouses                                         |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Access to the site, site traffic (car, truck, train, ship) |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Regional accessibility (car, truck, train, ship)           |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Water supply                                               |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Power supply                                               |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Other piped supply                                         |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Production process                                         |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |
|                                   | Employees                                                  |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |              |                     |                      |

Key Low risks Medium risks High risks

# Compliance – Climate risk assessment methodology

1. Screening of relevant climate-related hazards
2. Quantitative & Qualitative scoring
3. Result = Risk Matrix → NOT (yet) an actionable result

→ Think about your **level of granularity!**

Table 6: Climate risk estimate for an industrial site (example with fictitious values)

|                                                            | Climate-related hazard (EU Taxonomy) |                     |                      |                                                        |                     |                      |                 |                     |                      |
|------------------------------------------------------------|--------------------------------------|---------------------|----------------------|--------------------------------------------------------|---------------------|----------------------|-----------------|---------------------|----------------------|
|                                                            | Heat wave/<br>Heat stress            |                     |                      | Storm (including<br>blizzards, dust<br>and sandstorms) |                     |                      | Flood - fluvial |                     |                      |
|                                                            |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
|                                                            | Current risk                         | RCP8.5 - optimistic | RCP8.5 - pessimistic | Current risk                                           | RCP8.5 - optimistic | RCP8.5 - pessimistic | Current risk    | RCP8.5 - optimistic | RCP8.5 - pessimistic |
| Buildings in general                                       |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Superstructures on buildings                               |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Basements                                                  |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Indoor operating facilities                                |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Outdoor operating facilities                               |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Indoor warehouses                                          |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Outdoor warehouses                                         |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Access to the site, site traffic (car, truck, train, ship) |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Regional accessibility (car, truck, train, ship)           |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Water supply                                               |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Power supply                                               |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Other piped supply                                         |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Production process                                         |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |
| Employees                                                  |                                      |                     |                      |                                                        |                     |                      |                 |                     |                      |

Key: Low risks Medium risks High risks



| System Elements             | Climate-related hazard matrix |                     |                     |
|-----------------------------|-------------------------------|---------------------|---------------------|
|                             | Heat wave/ Heat stress        | Storm               | Flood - fluvial     |
|                             | RCP8.5 - optimistic           | RCP8.5 - optimistic | RCP8.5 - optimistic |
| Production Site             |                               |                     |                     |
| Critical element at site    |                               |                     |                     |
| Value Chain - Raw Materials |                               |                     |                     |

*Simplified Climate Risk Assessment*



| Flood - fluvial                   |                                                            | RCP8.5 - pessimistic |
|-----------------------------------|------------------------------------------------------------|----------------------|
| System elements (industrial site) | Buildings in general                                       |                      |
|                                   | Superstructures on buildings                               |                      |
|                                   | Basements                                                  |                      |
|                                   | Indoor operating facilities                                |                      |
|                                   | Outdoor operating facilities                               |                      |
|                                   | Indoor warehouses                                          |                      |
|                                   | Outdoor warehouses                                         |                      |
|                                   | Access to the site, site traffic (car, truck, train, ship) |                      |
|                                   | Regional accessibility (car, truck, train, ship)           |                      |
|                                   | Water supply                                               |                      |
|                                   | Power supply                                               |                      |
|                                   | Other piped supply                                         |                      |
|                                   | Production process                                         |                      |
|                                   | Employees                                                  |                      |

# Why it matters – or doesn't



## Compliance

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- What is **minimally** required



## Focus

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- Value for **most** sectors
- Value for **specific** sectors

## Strategic Assessment

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- Strategic Repositioning
- Exposure

# Focus: flooding

- For most companies, flooding impacts are the most relevant to fully assess
- Other climate factors can be assessed by 'common sense' → scope check!

## Flooding:

- Very location-specific
- Vulnerability-specific (current mitigations)
- Clear adaptation solution on site-level



*Figuur 6: Zelfopdrijvend schot (SCFD - Self Closing Flood Barrier)*

# Focus: other

- For most companies, flooding impacts are the most relevant to fully assess
- **Other climate factors can be assessed by ‘common sense’ → Scope check!**

## Heat:

- Some effect on productivity of employees
- Rise in energy cost
- Solution is clear and straight-forward
- Check on critical elements

## Drought:

- Operational stoppage due to water shortages
- Adaptation on company-level is difficult (**tragedy of the commons**)
- Regional

# Focus: specific

## Look at critical processes

Calculations & Insights through **past events**

→ Keep an **actionable end result** in mind!

## Asset Cost-Benefit Analysis

River water as coolant

→ production reduction or shutdowns due to heatwave/drought

→ quantify projected losses

**New CAPEX? → take climate effects into account!**

### Europe's heatwave curbs French nuclear plants

By Forrest Crellin and Hugo Lhomedet

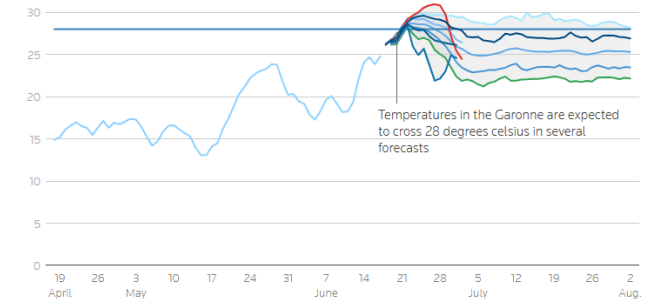
June 24, 2026 1:56 PM GMT+2 · Updated 18 hours ago



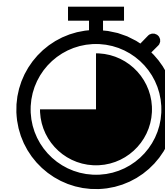
View from a car window of steam rising from a cooling tower of the Electricite de France (EDF) nuclear power plant in Golfech, France, February 16, 2025. REUTERS/Manon Cruz [Purchase Licensing Rights](#)

Reuters news – June 22nd

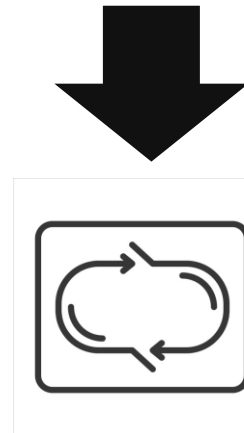
### High Garonne river temperature forecast expected to limit nuclear production at the Golfech nuclear plant



Source: LSEG data | Tristan Veyet



Planning



Closed/Hybrid cooling systems



Cooling towers

SWECO

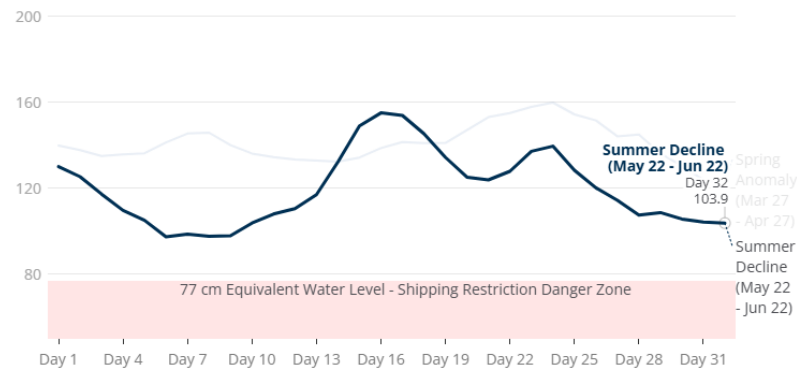
# Focus: specific

## Inland waterway logistics – Rhein Region - Drought

- Increase in downtimes → surcharges & delays



Rhine River Water Gauge Readings at Kaub Station



Freight Perspectives – June 22nd 2026

| Impact type              | Current avg days/year | Projected avg. days/year - 2040 | Change vs today |
|--------------------------|-----------------------|---------------------------------|-----------------|
| Any load reduction       | 30-45                 | 60-90                           | ~2×             |
| Severe load reduction    | 15-25                 | 30-50                           | ~2×             |
| Near-stoppage / stoppage | 5-10                  | 15-30                           | ~3×             |

# Why it matters – or doesn't



## Compliance

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- What is **minimally** required



## Focus

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- Value for **most** sectors
- Value for **specific** sectors

## Strategic Assessment

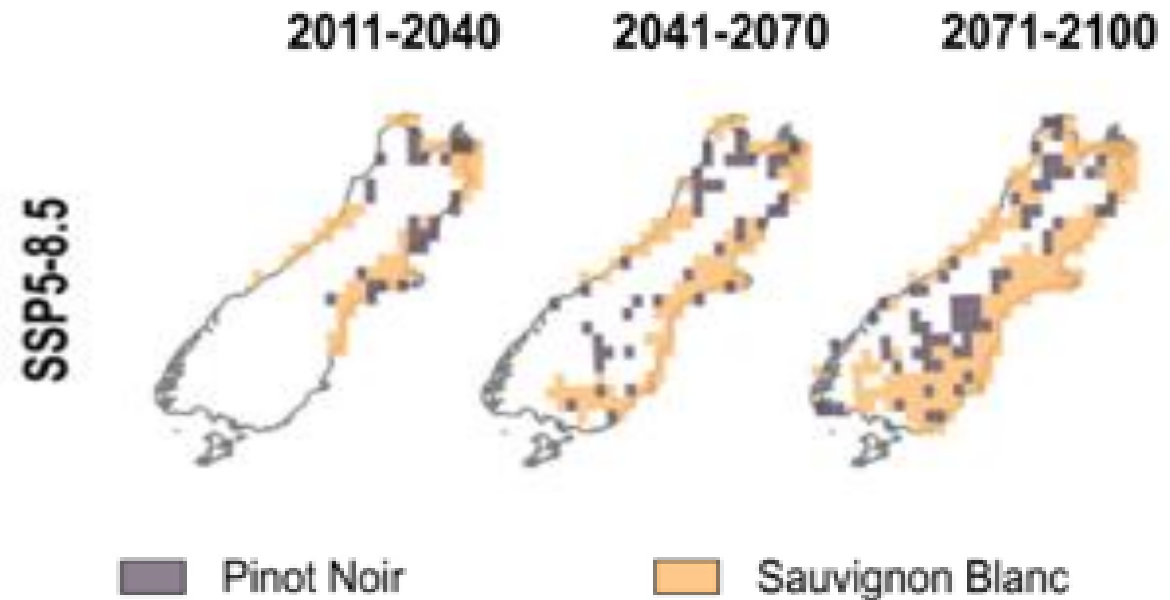
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- Strategic Repositioning
- Exposure

# Strategic Assessment: Strategic Repositioning

## Strategic repositioning

- Change in Product Portfolio or Location
- Diversification
- Opportunities



Identification of the best viticultural areas by spatial optimisation. Application in New Zealand South Island in the context of climate change; Oeno-One publication; Baptiste Hamon et al.

Figure shows Projected best solutions for Sauvignon blanc (a) and Pinot noir (b) with ACCESS-CM2 (in the near-term (2011–2040), mid-term (2041–2070) and long-term (2071–2100) with SSP2–4.5 and SSP5–8.5.

# Strategic Assessment: Exposure

## Banks, Insurance & Real Estate

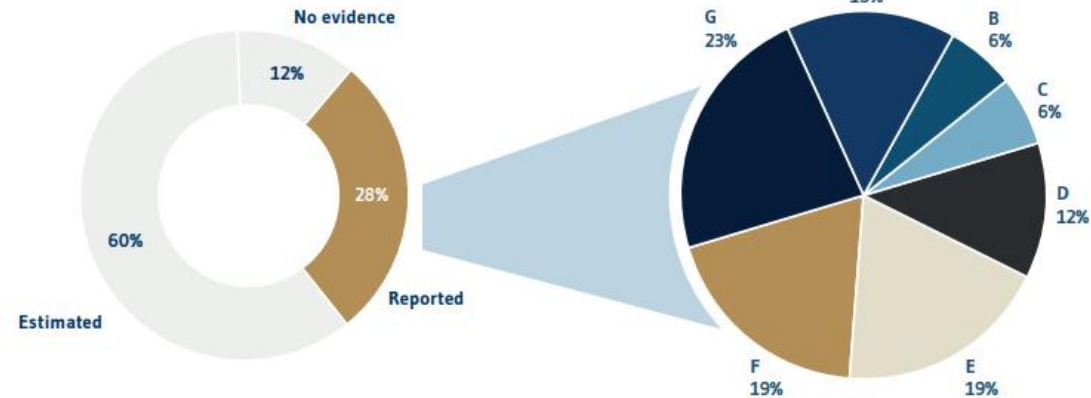
- Insurance approvals or risk premiums
- Lending rates & conditions
- Portfolio Valuation & credit risk

## EPC

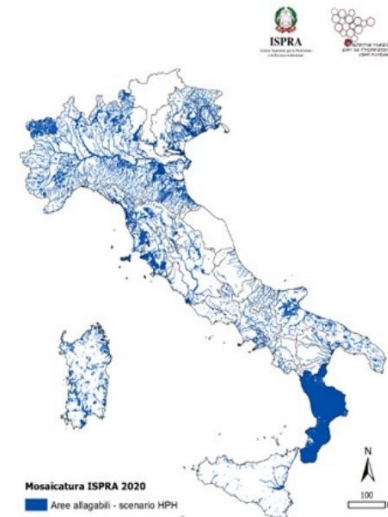
- Collateral value depreciation → credit risk
- Guidance on lending strategies / conditions

## Flood Hazards

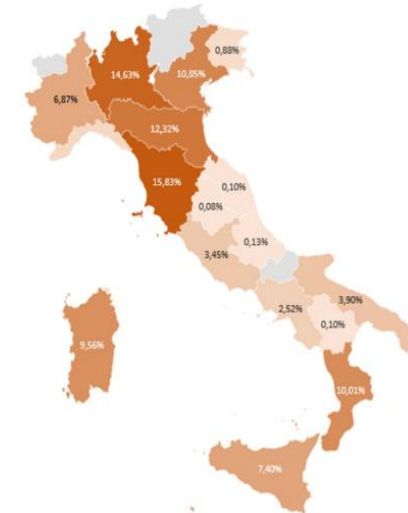
- Credit exposure
- Lending strategies; higher insurance premium & deductibles
- Proof of mitigation



## Flood Hazard



## FLOOD HAZARD



# Statements

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## Frequently asked questions





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Transforming  
society  
together

