Weather and Climate physical risks: we can’t manage what we can’t measure

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NEW CLIMATE REGULATORY POLICY

2024 - mandatory in 40+ counties

2025 - mandatory for 1 million of companies in 80+ countries

Need for decision tools powered by business-oriented risk metrics and asset-specific climate risk knowledge with the forward-looking capability and the global data coverage
WHERE ? WHAT ? WHEN ?

Decision makers, businesses, governments, financial regulators and local communities, asset owners, investors and risk managers need clear & business-oriented Physical Climate Risk knowledge - as of TODAY and also for the 5-10-20 year horizon.
WEATHER TRADE NET: TECHNOLOGY

WTN SOLUTION: with just **2 clicks** you get the Physical Climate Risk Analytical Report + quantitative risk metrics

Example of a corporate report: a snapshot

Risk metrics + Report for all facilities, operational sites and physical assets

- **Overall COMPANY multi-hazard Physical Climate RISK SCORE**
  - Historical risk score
  - Forward looking tendency +10 years

- **Severe Storm**
  - Risk Level: 2

- **Extreme Rainfall**
  - Risk Level: 2

- **Heat Wave**
  - Risk Level: 3

- **Sea Level Rise**
  - Risk Level: 2

- **Drought**
  - Risk Level: 4

- **WildFire**
  - Risk Level: 5

- **Landslide**
  - Risk Level: 1

Location-specific data

- Global coverage

- Instant access: Online platform & API

- Forward-looking data

- Scenario analysis

- Analytical reports

- All climate hazards at one place

- Continuous update with new flood/wildfire observations

- Easy to use metrics: 1-to-5 rating / Low - Moderate - High

#EUSpace
Decision-Useful Financial Metrics for Risk Management

1-to-5 Risk Rating

**NO RISK**
Risk score = 1
"No action is required. Insurance is cheap"

**INSURABLE**
Risk score = 2, 3, 4
"Risk hedging is more-or-less affordable"

**UNINSURABLE**
Risk score = 5
"This climate hazard is my own problem"
RISK RECONSTRUCTION: WORKFLOW

INPUT RAW DATA

multi-source data aggregation

high precision instant observation

high quality blended hazard record

OUTPUT RISK METRICS

Climate hazard
- Heat Wave
- Cold Stress
- Drought
- Extreme Rainfall
- Sea Level Rise / Coastal Flood
- Severe Storm

Climate hazard
- Precipitation Change
- WildFire Potential
- Landslide
- Temperature Change
- Inland - River - Pluvial Flood

WildFire chart

INSURABLE

NO RISK

UNINSURABLE
# GEOSPATIAL DATA

<table>
<thead>
<tr>
<th>Climate hazard</th>
<th>Satellite product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Wave</td>
<td>Copernicus Sentinel-3 mission’s radiometer, MODIS Aqua</td>
</tr>
<tr>
<td>Cold Stress</td>
<td>ERA5, E-OBS, SYNOP</td>
</tr>
<tr>
<td>Drought</td>
<td>European and Global Drought Observatory; Copernicus Global Land Service</td>
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<tr>
<td>Extreme Rainfall</td>
<td>Multi-satellite Precipitation Analysis (TMPA); CHIRPS</td>
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<tr>
<td>Sea Level Rise / Coastal Flood</td>
<td>Sentinel-6 Michael Freilich; Global Extreme Sea Level Analysis (GESLA-3) database</td>
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<td>Severe Storm</td>
<td>COPERNICUS</td>
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<td>DEFRA, EU/JRC, GloFAS-ERA5, DEFRA (UK)</td>
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<tr>
<td>WildFire Potential</td>
<td>Terra and Aqua MODIS-derived daily surface reflectance</td>
</tr>
<tr>
<td>Landslide</td>
<td>Integrated Multi-satellite Retrievals for GPM (IMERG);</td>
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USER NEEDS FOR EO/GNSS

- Blended multi-sensor products in a form of long time series
- Aggregated high-resolution products: representative for 1km resolution
- Bias corrected products
- Wind gust metrics
- Hail statistics: frequency
- Extreme rainfall products: frequency