

#EUSpace 

EU SPACE WEEK 2023

7 - 9 November - Sevilla, Spain

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

Elena Maksimovich

PhD in Geophysics and Climatology
IPCC AR6 WGI Expert Reviewer
Founder of Weather Trade Net

www.weathertrade.net

contact@weathertrade.net



European
Commission



UE23
PRESIDENCIA ESPAÑOLA
CONSEJO DE LA UNIÓN EUROPEA

NEW CLIMATE REGULATORY POLICY

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United Kingdom



Japan



New Zealand



Hong Kong



Mexico



Colombia



India



Canada

#CSRD
#ESRS



European Union



Singapore



United States

2024 - mandatory in 40+ countries

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



Australia



Switzerland



Brazil

WHERE ? WHAT ? WHEN ?

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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



- 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



QUANTITATIVE & COMPARABLE RISK METRICS

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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

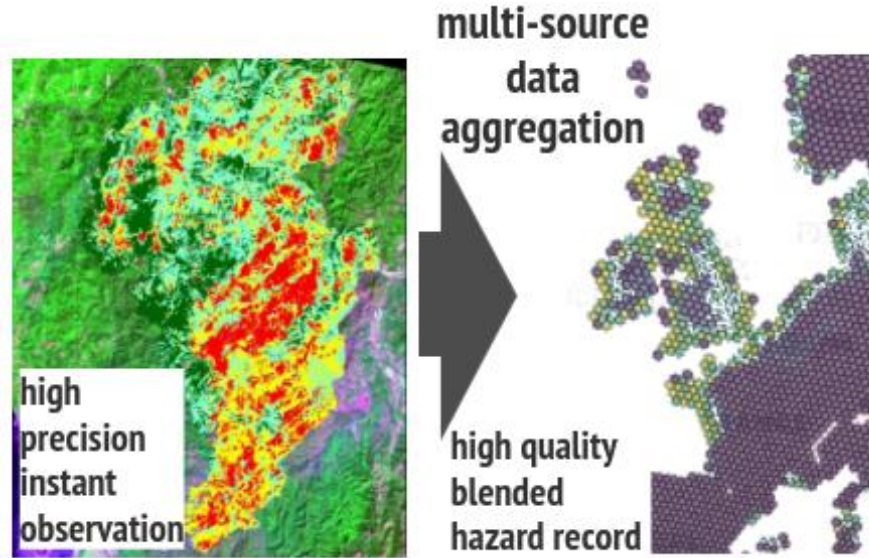
Risk score = 5

💡 *"This climate hazard
is my own problem"*

RISK RECONSTRUCTION: WORKFLOW



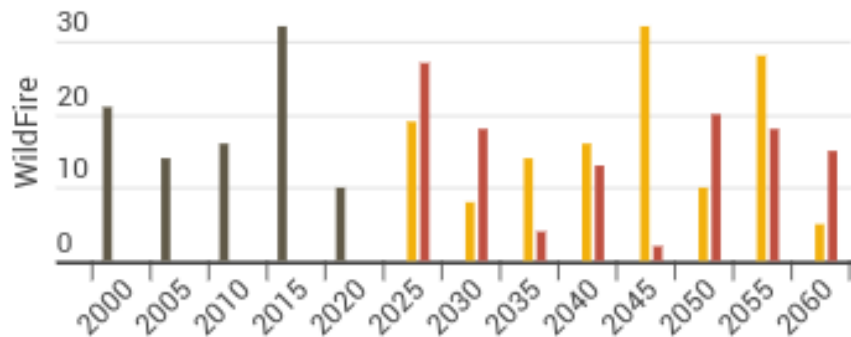
INPUT RAW DATA



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



GEOSPATIAL DATA

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

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USER NEEDS FOR EO/GNSS

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- 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



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