Risk Management Partners

Munich RE

Location Risk Intelligence On-Demand

Reporting Edition. You can't avoid the obligation of climate risk reporting, but you can avoid unnecessary effort

Four main challenges keep those responsible for climate reporting on their toes. **You too?**

1

More companies are now required to publish sustainability data. What reporting standard should I use?

Many companies around the world are now required to publish sustainability data, especially if regulations require ESG reporting. Compliance with standards such as TCFD, ISSB, CSRD and the EU taxonomy is presenting companies with new challenges. With Munich Re's Reporting Edition, you can ensure full compliance with these standards, using the latest IPCC climate scenarios to generate accurate and comprehensive reports.

2

How can I ensure compliance with climate risk reporting requirements and avoid legal and reputational risks?

A robust ESG management system is crucial when it comes to avoiding risks. With Munich Re's Reporting Edition, you can thoroughly assess one of the most serious business risks arising from climate change and natural catastrophes while generating accurate, auditable reports, minimising the risk of non-compliance and ensuring your ESG disclosures are reliable.

3

How do I get all the data I need in a consistent, audit-ready format that meets all the criteria auditors expect?

Consistent data is essential, but it is challenging to collect. Munich Re's Reporting Edition simplifies this by providing data formats of your choice and an easy-to-use interface, ensuring that all information is readily available, so you can fully comply with auditing standards while saving preparation time and stress.

4

How do I move from reporting to a holistic approach that manages risks and creates opportunities?

Moving to a holistic approach requires proactive risk management and strategic planning. Munich Re's Reporting Edition uses future climate projections to help you identify risks and opportunities, guide sustainable investments, and improve business resilience while meeting stakeholder expectations.

May we help you find your way through the reporting jungle?

EU TAXONOMY

- EU-wide classification system for defining what investments qualify as sustainable
- Mandates the evaluation and disclosure of a detailed list of physical climate risks, covering temperature, wind, water and solid-mass related hazards
- Intended to combat greenwashing

CSRD

- The European Union's new reporting standard, making climate risk assessment mandatory for nearly 50,000 companies in or connected to the EU
- Covers various aspects of ESG: from climate and nature risk to human rights
- Works closely with ISSB to promote transparency on the "interoperability" between disclosure standards

TCFD

- While generally voluntary, it forms the basis for the mandatory disclosure regulation of many countries around the world
- Many frameworks are moving away from voluntary to mandatory assessment
- Currently being replaced in many countries by the ISSB standard, which includes the same physical risk disclosure requirements (see right)

ISSB

- Provides capital market participants with the information they need for better economic and investment decision-making
- Global ISSB disclosure standards (IFRS S1 and S2) consolidate several established climate risk disclosure standards (TCFD, GRI and CDP)
- Aims to reduce the burden on companies having to disclose the same information repeatedly for different standards

The EU regulatory authorities require reports on 28 physical climate risks - **Reporting Edition has you covered**[1]

This is what makes Munich Re's Reporting Edition unique: its very comprehensive risk coverage paired with high data quality.

With Reporting Edition, you can reliably generate comprehensive reports that fully comply with all regulatory requirements at the push of a button. In other words, exactly the way auditors want it. It couldn't be more secure.

[1]Reporting Edition currently covers 26 of the required risks, with the two missing ones[2] expected to be added in 2025.

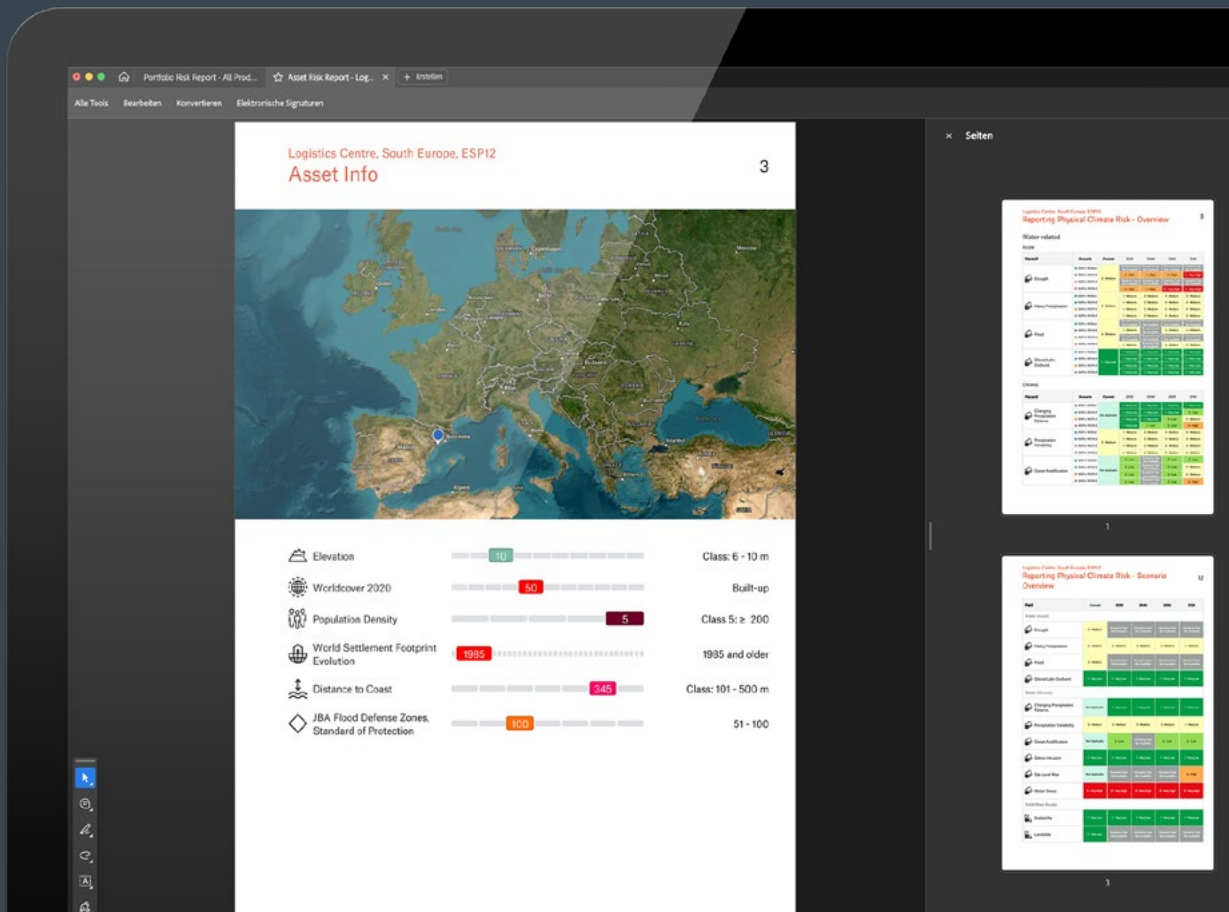
Temperature-related | acute	**Heat Wave**	The Heat Wave Score combines heat wave parameters measuring the intensity and frequency of prolonged periods of successive unusually hot days. Geographic coverage: Global | Resolution: 0.1° (~11 km, Raster) | Projection years: Current, 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: Munich Re
	Cold-Frost	The Cold-Frost Score describes frost and ice days which occur when temperatures drop to or below freezing, causing frost formation. Geographic coverage: Global | Resolution: 0.1° (~11 km, Raster) | Projection years: Current, 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: Munich Re
	Wildfire	The Wildfire Score describes the hazard of wildfire, based on climatological data and land cover data, capturing wildland-urban interfaces in high-risk areas in high resolution. Geographic coverage: Global | Resolution: 1 km (Raster) | Projection years: Current | Source: Munich Re
Temperature-related | chronic	**Changing Temperatures**	The Changing Temperature Score describes the chronic and gradual change of mean near-surface air temperatures. Geographic coverage: Global | Resolution: 0.1° (~11 km, Raster) | Projection years: 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: Munich Re
	Heat Stress	The Heat Stress Score combines multiple temperature-related parameters and classifies the climatological heat stress situation. Geographic coverage: Global | Resolution: 0.1° (~11 km, Raster) | Projection years: Current, 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: Munich Re
	Temperatures Variability	The Temperature Variability Score combines several temperature variability metrics which capture fluctuations of near-surface air temperatures over timescales ranging from diurnal to seasonal. Geographic coverage: Global | Resolution: 0.1° (~11 km, Raster) | Projection years: Current, 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: Munich Re
	Permafrost Thawing	The Permafrost Thawing Score depicts the existence of permafrost and the future melting hazard of permanently frozen soil by combining ground temperatures with ground properties that affect permafrost stability. Geographic coverage: Global | Resolution: 1 km (Raster) | Projection years: Current, 2050, 2100 | Scenarios: RCP2.6, RCP4.5, RCP8.5 | Source: ESA Climate Change Initiative

Wind-related acute	**Cyclone-Hurricane-Typhoon**	The Tropical Cyclone Score is based on globally consistent, basin-specific models for tropical cyclones (known as hurricanes and typhoons in some regions). Future projections incorporate a high-atmospheric-resolution climate model to quantify projected changes in the intensity and frequency of tropical cyclones. Geographic coverage: Global | Resolution: 5 km (Raster) | Projection years: Current, 2030, 2050, 2100 | Scenarios: RCP4.5, RCP8.5 | Source: Munich Re
	Storm	The Storm Score depicts the hazard posed by extratropical storms (also known as winter storms) as well as sand and dust storms. Geographic coverage: Global | Resolution: 0.01° (~1 km, Raster) | Projection years: Current | Source: Munich Re, UNCCD
	Tornado	The Tornado Score is based on the annual frequency of tornadoes over an area of 10,000 km², derived from meteorological data. Geographic coverage: Global | Resolution: Vector geometry (Polygons) | Projection years: Current | Source: Munich Re
Wind-related chronic	**Changing Wind Patterns**	The Changing Wind Patterns Score describes the gradual shifts in the characteristics of wind and its variability. Geographic coverage: Global | Resolution: 0.1° (~11 km, Raster) | Projection years: 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: Munich Re
Water-related acute	**Drought**	The Drought Score is based on the dry-spell conditions and the Standardised Precipitation Evapotranspiration Index (SPEI), which is used to describe the duration and magnitude of drought conditions. Geographic coverage: Global | Resolution: 0.1° (~11 km, Raster) | Projection years: Current, 2030, 2040, 2050, 2100 | Scenarios: SSP2-4.5, SSP5-8.5 | Source: Munich Re
	Heavy Precipitation	The Heavy Precipitation Score combines the meteorological hazard posed by hail and high precipitation. Geographic coverage: Global | Resolution: 0.1° (~11 km, Raster) | Projection years: Current, 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: Munich Re
	Flood	The Flood Score describes the hazard of flooding by storm surges (coastal flooding), river floods (fluvial flooding) and flash floods (pluvial flooding). Geographic coverage: Global | Resolution: 30 m (Raster) | Projection years: Current, 2030, 2050, 2100 | Scenarios: SSP2-4.5, SSP5-8.5 | Source: Munich Re, JBA Risk Management
	Glacial Lake Outburst	The Glacial Lake Outburst Score identifies regions at risk of glacial lake outburst flooding, a catastrophic event in which a glacial lake suddenly releases its water. Geographic coverage: Global | Resolution: Vector geometry (Polygons) | Projection years: Current | Source: Munich Re

Water-related chronic	**Changing Precipitation Patterns**	The Changing Precipitation Patterns Score offers insights into changes in annual precipitation due to global warming. Geographic coverage: Global | Resolution: 0.1° (~11 km, Raster) | Projection years: 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: Munich Re
	Precipitation Variability	The Precipitation Variability Score describes fluctuations of precipitation on timescales ranging from daily to annual. Geographic coverage: Global | Resolution: 0.1° (~11 km, Raster) | Projection years: Current, 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: Munich Re
	Ocean Acidification	The Ocean Acidification Score captures the change in pH of ocean water, due to the uptake of atmospheric carbon dioxide into the ocean. Geographic coverage: Global | Resolution: 1° (~110 km, Raster) | Projection years: 2030, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: IPCC
	Saline Intrusion	The Saline Intrusion Score describes the hazard of saltwater intruding into coastal freshwater aquifers, contaminating groundwater supplies and making them unfit for drinking and irrigation. Geographic coverage: Global | Resolution: 30 m (Raster) | Projection years: Current, 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP5-8.5 | Source: Munich Re
	Sea Level Rise	The Sea Level Rise Score depicts the areas with elevated risk of flooding due to rising sea levels in 2100. The model is based on storm surge hazard zones, IPCC data on sea level rise and elevation information. Geographic coverage: Global | Resolution: 30 m (Raster) | Projection years: 2100 | Scenarios: RCP2.6, RCP4.5, RCP8.5 | Source: Munich Re
	Water Stress	The Water Stress Score is derived from the ratio of total water demand to available renewable surface and groundwater supplies. Geographic coverage: Global | Resolution: Vector geometry (Polygons) | Projection years: Current, 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP3-7.0, SSP5-8.5 | Source: WRI Aqueduct Water Risk Atlas
Solid Mass-related | acute	**Avalanche**	The Avalanche Score describes the threat posed by avalanches and is derived from potential avalanche starting zones combined with a flow accumulation model. Geographic coverage: Global | Resolution: 250 m (Raster) | Projection years: Current | Source: Munich Re
	Landslide	The Landslide Score describes the landslide hazard on a global scale, combining rainfall-triggered and earthquake-triggered landslide hazards. Geographic coverage: Global | Resolution: 1 km (Raster) | Projection years: Current | Source: World Bank
	Subsidence	The Subsidence Score describes the hazard of gradual sinking or sudden collapse of the ground. It accounts for natural shrink-swell subsidence in clay soils as well as man-made subsidence due to groundwater depletion, groundwater depletion-related sinkholes and mining activities. Geographic coverage: Global | Resolution: 500 m (Raster) | Projection years: Current, 2030, 2040, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 | Source: Munich Re

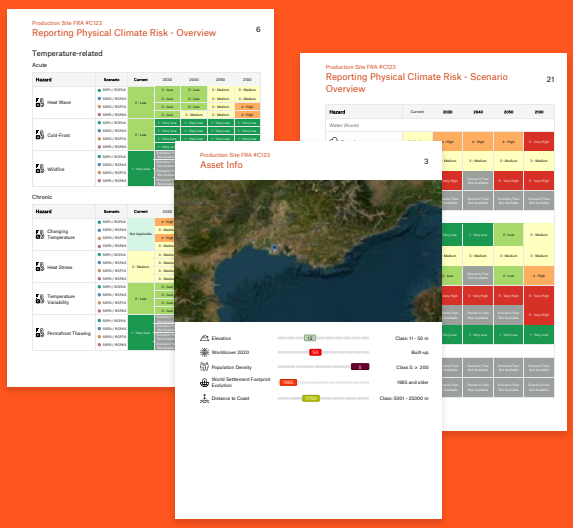
Solid Mass-related | chronic

Coastal Erosion	The Coastal Erosion Score is derived from potential erosion of maritime coastlines over time, taking account of the coast type and incoming wave energy. Geographic coverage: Global | Resolution: 0.005° (~ 550 m, Raster) | Projection years: 2050, 2100 | Scenarios: RCP4.5, RCP8.5 | Source: Munich Re
Soil Erosion	The Soil Erosion Score describes the hazard of soil being worn away by natural forces such as water and wind. Geographic coverage: Global | Resolution: 100 m (Raster) | Projection years: Current, 2050, 2100 | Scenarios: SSP1-2.6, SSP2-4.5, SSP5-8.5 | Source: Munich Re
Soil Degradation[2]	Soil degradation refers to the decline in soil quality caused by natural processes, land use or other man-made disturbances. This score is expected to be added in 2025
Solifluction[2]	Solifluction refers to the slow flow of soil downhill, driven by freeze-thaw processes in sub-polar regions with permafrost and in highland areas. This score is expected to be added in 2025



3 simple steps

to assess the risks for any location in the world



The fastest way to a physical climate risk assessment for any location worldwide

1. **Create an account and buy credits**
2. **Enter any address or coordinate**
3. **Get all the risks displayed in a clear panel for downloading as a report**

Start your risk assessment now!

munichre.com/rmp

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