S&P Global Sustainable1

Physical Risk Exposure Scores and Financial Impact Dataset

Notice of Methodology Enhancements

December 2024

The S&P Global Sustainable1 Physical Risk Exposure Scores and Financial Impact dataset and underlying methodologies will be updated and enhanced in Q1 2025. This notice describes the methodology enhancements that are currently under review and that S&P Global Sustainable1 intends to incorporate in Q1 2025, which we expect to release in March 2025. The methodology updates contained in this notice are under currently review and may be subject to change. The purpose of this notification is to ensure we maintain transparency in our methodological process and decisions with the market. The full release will be accompanied by a detailed methodology report describing the data sources, methods and assumptions used in the analysis, and a release note describing the impact of the methodology changes on the dataset.

Methodology Enhancements under Review

The following table describes the methodology enhancements that are under review and being considered for the Q1 2025 Physical Risk Exposure Scores and Financial Impact dataset release, the expected impact on the dataset, and the intended benefit of these enhancements for clients. The enhancements described below may be subject to change and the related expected impact may also differ from what has been described below as these updates are yet to be implemented and are under review.

Enhancement Name	Enhancement Description	Client Benefit	Expected Impact on the Dataset
Annual Update of All Input Datasets	Annual update of all asset level data and company reference information used in the calculation of the dataset	Up to date data inputs for the calculation of climate physical risk metrics	The majority of asset and company level datapoints will change as a result of this update.
New Asset Data Source	Integration of expanded asset level data collected by S&P Global Market Intelligence with the goal of collecting all material asset locations for target companies.	Improved asset level data coverage for ~3,000 companies in the S1 core universe More accurate physical risk metrics for covered companies	The majority of asset and company level datapoints for covered companies will change as a result of this update.
New Analysis Methodology	A new analysis methodology flag – Fully Researched Asset Level Data – will be added to the 'Analysis Methodology' field indicating companies that have been analyzed based on complete asset level data coverage.	More accurate physical risk metrics for covered companies More granular differentiation of asset data coverage and analysis methodologies for companies	New 'Analysis Methodology' flag added to the dataset
Changes to Analysis Methodology Rules	The following thresholds will be applied to determine the analysis methodology applied to each company. Companies will be required to have a minimum of 5 linked assets, of which one much be a non-office or headquarter asset type, for the 'Asset Level	Improved robustness and reliability of company level climate physical risk datasets	Approximately 50% of companies are analyzed using the 'Asset Level Data' analysis methodology

	Data' analysis methodology to be applied.		
Landslide Hazard	Addition of a new hazard to the dataset representing exposure to landslide. Exposure scores and financial impact will be included in this release	One new hazard added to the dataset for all clients	All users will have access to the new landslide changes hazard
Enhanced Water Stress Hazard	Update to the water stress hazard to utilize the Aqueduct 4.0 dataset published by the World Resources Institute	Improved water stress projections that are consistent with the World Resources Institute Aqueduct tool	Water stress results for all assets and companies are expected to change
Updated Composite Score Methodology	Updates to the composite exposure score and sensitivity adjusted composite score methodology to accommodate the new hazard (landslide)	Continued publication of composite exposure scores and sensitivity adjusted composite score methodologies whilst minimizing score 'inflation' due to the addition of the new hazard	Composite exposure scores and sensitivity adjusted composite scores are expected to change for all assets and companies
Xpressfeed Coverage Expansion	Expansion of company coverage on Xpressfeed and CIQ Pro to ~70,000 corporate entities and >6 million assets	Expanded coverage of private and small-cap companies	New coverage of companies outside of the S1 core universe
dMAAL Aggregation for the Physical Risk Dataset	Climanomics currently offers asset level disaggregated MAAL (dMAAL) results which breaks down the financial impact of hazard exposure by impact pathway e.g. cleanup costs, business interruption. This enhancement will implement a methodology to aggregate dMAAL from asset level to company level and apply to the physical risk dataset	The asset level and company level dMAAL dataset will be made available to all clients via EDX initially and via Xpressfeed in future	The dMAAL dataset will be separate from, and will not impact, the Physical Risk Exposure Scores and Financial Impact dataset, and would represent a new data offering for clients

In addition to the above changes, the hazard enhancements from the 2024 annual update will still be in effect, namely:

- **Fluvial Flood Resolution Enhancement**: Fluvial flood hazard resolution enhanced to 1x1km through the integration of projected 1-in-100 year flood extent data sourced from the WRI Aqueduct Floods dataset.

- **Enhanced Wildfire Hazard Modelling**: Wildfire hazard modelling enhanced via a transition from the Z-Index to the Fire Weather Index (FWI). Calculation of wildfire exposure is now calculated based on the fraction of days per annum in which the FWI is consistent with high, very high or extreme wildfire danger.

- **Enhanced Drought Hazard Modelling**: Drought hazard modelling enhanced via a transition from the Palmer Drought Severity Index (PDSI) to the Standardized Precipitation Evapotranspiration Index (SPEI). Calculation of drought exposure is now calculated based on the fraction of months per annum in which the SPEI is consistent with severely dry or extremely dry conditions.

- **Pluvial Flood Hazard Modelling**: Pluvial flood hazard modelling has been added to the physical risk dataset in the Q1 2024 release. Pluvial flood hazard is modelled as the projected frequency of the 1-in-100 flood depth at approximately 25x25km resolution.
    - **Enhanced Extreme Heat and Extreme Cold Hazard Modelling**: The scoring thresholds applied in the calculation of exposure scores for extreme heat and extreme cold have been modified to better reflect the underlying hazard magnitude.

For more information on last year's hazard enhancements, please refer to the 2024 Notice of Methodology Changes

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