



Comprehensive Environmental, Climate, and Physical Risk Assessment of Data Centers

RS Metrics – Company and Solution Overview

RS Metrics provides analysis-ready data on an asset level for data centers to power their decision-making processes with environmental, climate, and physical risk insights. Built on 14 years of delivering “accuracy at scale”, our tools support extensive analysis and different types of assessment. We are a Build and Service [Google Cloud partner](#) and were selected to be part of Google Cloud Ready-Sustainability program.

Data Needs at a Glance

Data centers bring together 2 discrete yet distinct asset classes - real estate and infrastructure. Each type carries its own unique risk metrics, necessitating a combination of insights in order to best baseline, benchmark, and mitigate their environmental, climate, and physical risk and to spot potential opportunities. RS Metrics’ ESGSignals® supplies the necessary depth and breadth of data attributes while guaranteeing the independent, objective, and verified nature of the provided information.

In addition to that, RS Metrics’ dashboards are flexible and allow for modifying the number and type of measured assets. Through AssetTracker, a global asset-level geolocation, customers are able to use the power of satellite imagery and AI to obtain real-time, detailed insights, for efficiently monitoring their global assets through customizable DAAS platforms and dashboards.

Application

ESGSignals® data can be used to better understand:

- Key environmental risk metrics - such as emissions, water stress, land use, and land cover
- Key climate and physical risk metrics - such as heat waves, cold waves, precipitation patterns, flooding, fire hazards, drought, average temperature, etc.
- Key biodiversity metrics - proximity to World Protected Areas, Key Biodiversity Areas, and IUCN Red List Species
- Heating hazards - calculating more precisely which assets have a higher risk of overheating
- Water Consumption patterns - monitoring water usage and stress and proximity to water scarce areas
- Land usage and land cover overview - glancing at the surrounding area and whether it is changing over time
- Optimizing environmental, climate, and physical risk assessments - ESGSignals® can provide a variety of metrics that will contribute to a better understanding of both the environmental footprint of your facility (when it comes to metrics such as emissions, water stress, etc.) and of the threat of climate-related events such as floods, hurricanes, droughts, and more
- Bolstering efficiency - RS Metrics’ dashboards can be built to include the metrics that are of most interest to your management team and relate most closely to your sustainability goals
- Enhancing site selection - with ESGSignals® you can observe and estimate the potential opportunities and drawbacks of specific regions when considering the areas where you can expand your data center to and find where you can make use of renewable energy power

You can explore all attributes provided by RS Metrics’ ESGSignals® [here](#) and choose the ones that are of most interest to your company depending on the geographic area that you are in.

The Problem

Lack of real-time visibility into the location and environmental performance of physical assets can hinder operational efficiency, risk management, and decision-making. Without a doubt, overheating is one of the most common problems with data centers. That is why, it is important to use a data tool that can provide an overview of important heat metrics such as heat wave risk score along with insights into specific environmental obstacles that could be preventing the data center facilities from properly cooling off during intense workload sessions.

Value for Data Center Companies

Data center companies can benefit from integrating ESGSignals® into their planning and capex processes, both for avoiding damages related to environmental events and making strategic investment decisions.

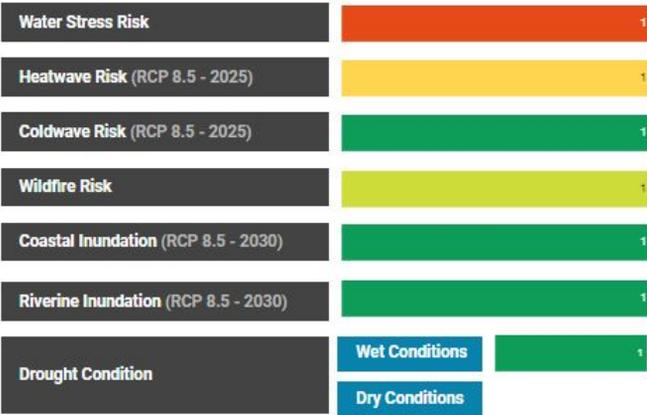
BYOA - Bring Your Own Assets is a feature of ESGSignals® that allows customers to add their own data centers to the dashboard by providing their location.

Overview of ESGSignals® Data Center Solution

Data Center Climate & Physical Risk Distribution

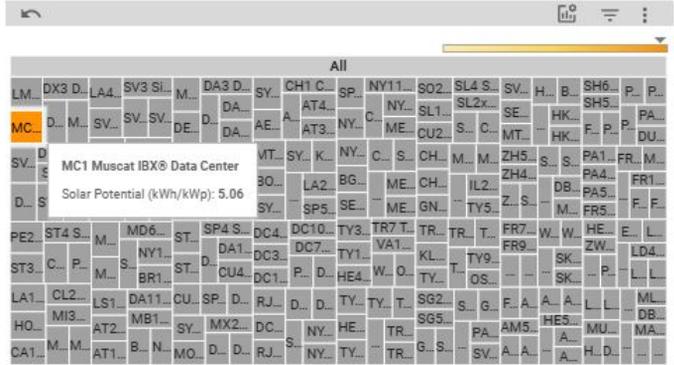


Number of Data Centers Under Each Risk Category



Solar Potential (kWh/kWp) / Earthquake Count in 2023 Around Data Centers

Click on the optional metrics icon to switch from Solar Potential to Earthquake Count. Click on a data center on the map to see the associated risk levels on the left hand side.



Data Center Level Risk Breakdown

Data Center	Avg Water Stre...	Max Fire Score	Heatwave Risk...	Coldwave Risk ...	Riverine Inund...	Coastal Inunda...	KBA Overlap W...	WPA Overlap ...
MC1 Muscat IBX® Data Center	84.88	25.91	50	0	0.03	0	0	0

RS ESGSignals® - Environmental Risk Assessment for Data Centers - the Looker dashboard provides an overview of data center locations, ownership, climate and physical risk performance per asset (such as water stress, heatwave risk, coldwave risk, wildfire risk, coastal inundation, riverine inundation, drought condition, solar potential, earthquake risk, etc.). The dashboard allows for quickly spotting locations with increased risk to inform strategic management or investment processes.

Applications of ESGSignals® include a variety of company processes such as:

- Due Diligence - Use asset-level analysis to validate against company reports and disclosures and discover discrepancies, and price environmental, climate, and physical risk accurately
- Risk Management - Identify risk and compliance issues for both ESG and non-ESG purposes
- Regulatory Alignment - TNFD, TCFD, EUDR, CSRD, SB 253-261, ISSB S1, S2 - Ensure alignment with evolving regulatory requirements and concerns
- ESG/Sustainability Reporting - Measure directly at the asset level to facilitate accurate company reporting and better compliance with standards and certifications
- Supply Chain Management - Evaluate ESG risks and opportunities across the data center supply chain while ensuring stakeholders are well informed for C-suite management

For data centers looking for more complex integrations and platforms with multiple access levels, measuring all of their assets and performing additional analysis, RS Metrics has partnered with [Cognizant](#) to integrate our data into corporate systems. Customers have the option of sourcing specific data themes that they might be lacking and adding them to their processes due to the easy-to-integrate nature of the data or subscribe to a Google Cloud-based solution to obtain information about all the risk themes that are relevant to areas where your data centers are situated.



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