

Site level climate risk assessments



Helping you adapt to a changing world

Importance of climate resilience

Natural hazards such as flooding, drought and forest fires are becoming more frequent and severe with climate change. The implications of these climate risks for companies, governments and society are growing in significance even as the world moves towards net-zero.

Building climate resilience will be critical to economic success and social wellbeing throughout the transition, ensuring communities are protected factories and farms continue operating, and supply chains keep flowing.

As of today, the global cost to infrastructure, property, agriculture and human health from physical climate risks with no further adaptation measures is estimated to reach between USD 1.7 to 3.1 trillion per year by 2050¹ while there is no likely scenario ² where climate hazards will not intensify for the foreseeable future, with near term impacts for organizations around the world.

¹World Economic Forum, Climate change is costing the world \$16 million per hour: study 
² IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. In Press 



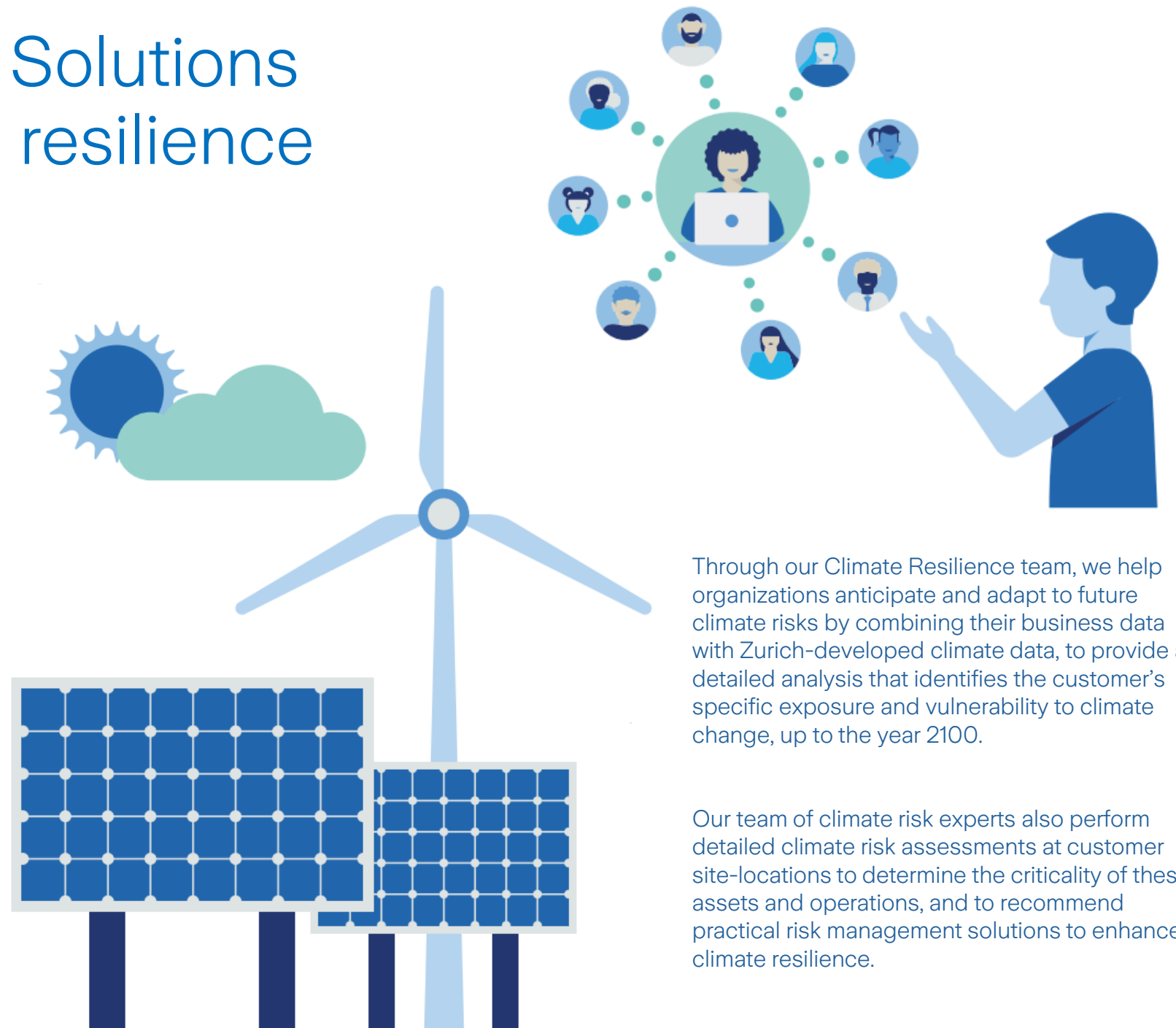
The case for investing in climate resilience is clear: According to the Global Commission on Adaptation, every USD 1 invested in climate resilient infrastructure can yield USD 4 to USD 10 in economic benefits.

Zurich Resilience Solutions

Experts in climate resilience

Established in 2020, Zurich Resilience Solutions (ZRS) is the risk consultancy business of the Zurich Insurance Group, providing organizations with specialist insights and advice on how to minimize and prevent the risks they face – including climate change.

We have been built from 75 years of risk engineering experience, and 150 years of risk and insurance knowledge and expertise. We have a global team of more than 950 risk experts and consultants, carrying out 60,000 risk assessments per year, with a specialist team focused specifically on Climate Resilience.



Through our Climate Resilience team, we help organizations anticipate and adapt to future climate risks by combining their business data with Zurich-developed climate data, to provide a detailed analysis that identifies the customer's specific exposure and vulnerability to climate change, up to the year 2100.

Our team of climate risk experts also perform detailed climate risk assessments at customer site-locations to determine the criticality of these assets and operations, and to recommend practical risk management solutions to enhance climate resilience.

Identify, assess, mitigate and adapt to climate change-related risks

Your Challenges

Risk of physical impact from extreme climate events

There is a potential increase in both likelihood & severity for climate related events. These can be modelled for different climate scenarios and time horizons..

Climate Adaptation measures to prevent financial loss

It is important to identify and protect the critical parts of your operations against these events and build resilience for the future.

Regulatory requirements and Stakeholder Expectations

Apart from the regulatory demands, your customers, investors and employees expect organizations to demonstrate their ability to adapt and protect against climate risks, to protect the financial sustainability of the business in the long term



Our Solutions

Bring clarity and simplification through our own climate models

We assist you to navigate through the Climate data complexity and help you to understand your actual hazards and perils at your facilities.

Combine climate risk adaptation measures and financial impact

Our resilience services provide, based on our long-time experience, loss scenarios analysis and development of risk adaptation solutions.

Support on regulatory and reporting.

Our Climate Resilience assessment output can be used as part of the reporting for climate-related physical risk on annual reports



Site-level climate risk assessments

Bringing together a team of Climate Resilience experts, we offer a suite of site-level climate risk assessment solutions for our customers. These are designed to help you develop an in-depth understanding of the potential impacts that present-day natural hazards, and forward looking climate risks may have on your assets, operations, people and critical infrastructure. Our experts provide customized and practical recommendation to adapt your assets and mitigate risk..

Outputs from our reports not only help inform you on what climate resilience measures are required to build resilience to climate change, but can also be utilized in your sustainability and climate risk reporting requirements.



Climate risk quantification per location and proposed adaptation measures

Bespoke site-level assessments, desktop reviews or onsite visits by specialized climate risk consultants

Practical recommendations to adapt your assets and operations to climate change.

A comprehensive approach to climate data analysis for site-level risk assessments

Climate Data Analysis: This is the foundational step for all site-level assessments.

Utilization of ZRS Climate Hazard Data Models**:

- Identify material hazards specific to the site.
- Tailor assessments to understand exposure, vulnerabilities, and necessary controls.

Incorporation of Climate Scenarios and Time Horizons**:

- Use selected climate scenarios.
- Consider both current and future climate conditions.
- Integrate climate resilience measures based on these scenarios.

This approach ensures a thorough understanding of a site's physical climate risks and helps to devise effective resilience strategies.

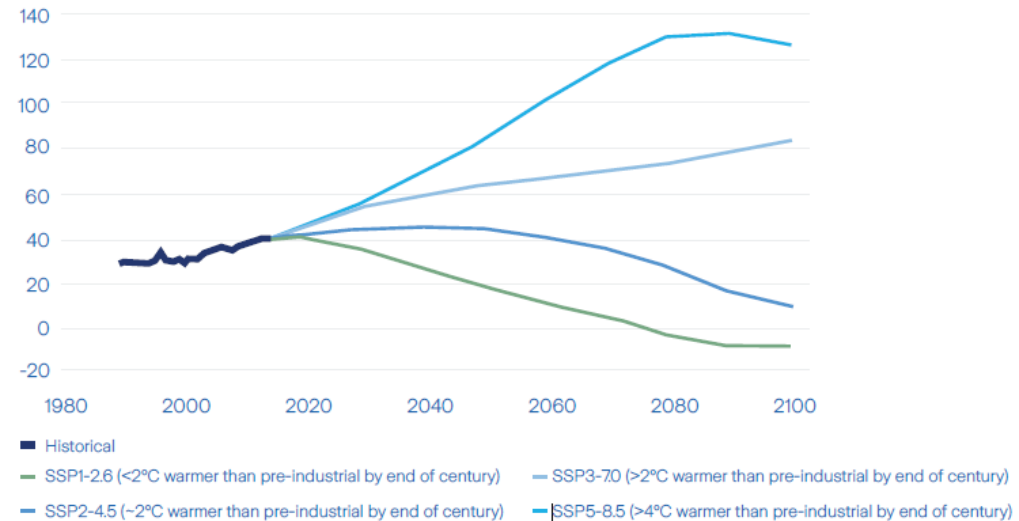
Analysis based on 11+ climate perils, including:

Flood (pluvial and fluvial), Storm Surge, Precipitation, Hail, Windstorm, Heat, Cold and Drought, Tornado, Wildfire and Rise in Sealevel.

These are all analysed using Zurich's proprietary climate data.

Available climate scenarios and time horizons

Four climate scenarios



Four time horizons

Current

Near	2015-2045; average 2030
Medium	2045-2075; average 2060
Far	2070-2100; average 2085

Site-level solutions to adapt to climate change

Greenfield Sites

The assessment will allow you to understand the impact both current natural hazards and future climate hazards (based on the selected climate scenarios and time horizons) may have on a planned acquisition or investment.

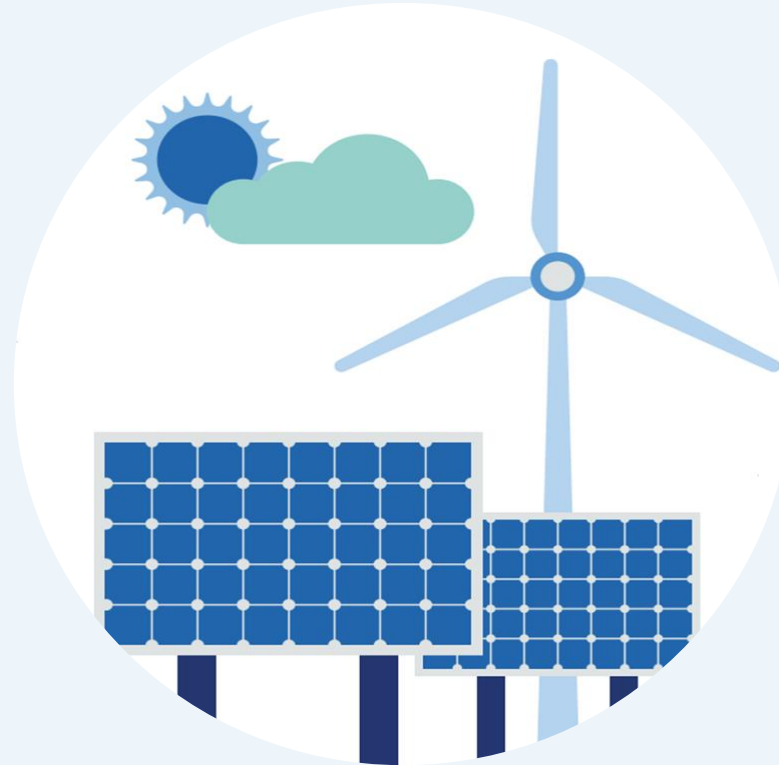
The study will help inform site selection, design of new buildings, operations, infrastructure resilience measures required across the planned lifespan of the development.

Desktop Assessments:

The desktop assessments are the starting point for understanding and assessing what is exposed to the current natural hazards and future climate hazards, assessing adequacy of controls, and what resilience measures may be required both now and in the future.

The assessment is a remote analysis which considers the highest hazard levels material to the value chain and how these may impact the site-specific criticalities. The assessment utilises available property fire reports, site information provided by you and where applicable and available open-source data.

We can develop high level loss scenarios and loss estimates to assist your in decision making and prioritization of Climate adaptation and resilience measures.



Physical On-Site Assessments

The on-site assessments allows you to fully understand the impact of physical climate hazards on the specific site. It allows for an in-depth analysis of your sites value chain, criticalities, and controls.

Loss scenarios and estimates are incorporated and are based on the identified site criticalities. Scenarios and estimates are considered for both current natural hazards and future climate related scenarios and time horizons.

Climate resilience and adaptation measures are based on this detailed assessment.

Climate Hazard Snapshot:

The assessment shows the evolution of the hazard level from the baseline (year 2020), over the selected time horizons and climate scenarios. The snapshot can be used to identify those hazards which may require further investigation to determine the property's vulnerability and resilience levels.

The Climate Hazard Snapshot only provides an overview of the climate hazards associated with this location; however, it does not consider the vulnerabilities or controls which exist for the location.

Take the next step on your climate resilience journey today.

Get in touch with one of our Climate Resilience experts for a free consultation.

Contact us [here](#)

You can find more information about our Climate Resilience solutions on our website.

Visit our website [here](#)

This is a general description of (insurance) services such as risk engineering or risk management services by Zurich Resilience Solutions which is part of the Commercial Insurance business of Zurich Insurance Group and does not represent or alter any insurance policy or service agreement. Such (insurance) services are provided to qualified customers by affiliated companies of Zurich Insurance Company Ltd, including but not limited to Zurich American Insurance Company, 1299 Zurich Way, Schaumburg, IL 60196, USA, The Zurich Services Corporation, 1299 Zurich Way, Schaumburg, IL 60196, USA, Zurich Insurance Europe AG, Platz der Einheit 2, 60327 Frankfurt am Main, Germany, Zurich Resilience Solutions (Europe) GmbH, Platz der Einheit, 2, 60327 Germany, Zurich Management Services Limited, The Zurich Centre, 3000b Parkway, Whiteley, Fareham, Hampshire, PO15 7JZ, UK, Zurich Insurance Company Ltd, Mythenquai 2, 8002 Zurich, Switzerland, Zurich Australian Insurance Limited, ABN 13 000 296 640, Australia.

The opinions expressed herein are those of Zurich Resilience Solutions as of the date of the release and are subject to change without notice. This document has been produced solely for informational purposes. All information contained in this document has been compiled and obtained from sources believed to be reliable and credible but no representation or warranty, express or implied, is made by Zurich Insurance Company Ltd or any of its affiliated companies (Zurich Insurance Group) as to their accuracy or completeness. This document is not intended to be legal, underwriting, financial, investment or any other type of professional advice. Zurich Insurance Group disclaims any and all liability whatsoever resulting from the use of or reliance upon this document. Nothing express or implied in this document is intended to create legal relations between the reader and any member of Zurich Insurance Group.

Certain statements in this document are forward-looking statements, including, but not limited to, statements that are predictions of or indicate future events, trends, plans, developments or objectives. Undue reliance should not be placed on such statements because, by their nature, they are subject to known and unknown risks and uncertainties and can be affected by numerous unforeseeable factors. The subject matter of this document is also not tied to any specific service offering or an insurance product nor will it ensure coverage under any insurance policy. This document may not be distributed or reproduced either in whole, or in part without prior written permission of Zurich Insurance Company Ltd, Mythenquai 2, 8002 Zurich, Switzerland. No member of Zurich Insurance Group accepts any liability for any loss arising from the use or distribution of this document. This document does not constitute an offer or an invitation for the sale or purchase of securities in any jurisdiction.

Zurich Australian Insurance Limited ABN 13 000 296 640 trading as Zurich Resilience Solutions does not assume any liability of any kind resulting from the use or reliance upon any information contained herein. Zurich does not guarantee particular outcomes and there may be conditions on your premises or within your organisation which may not be apparent to us. You are in the best position to understand your business and your organisation and to take steps to minimize risk, and we wish to assist you by providing the information and tools to assess your changing risk environment.

