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AlphaGeo for Insurance

Amid the devastation of this year's Pacific Palisades wildfires, a few homes remained almost unscathed, including a 4,200-square-foot home in Malibu now known as the "last house standing." What set it apart was its climate-adapted construction: stucco and stone with a fireproof roof, anchored by pilings driven 50 feet into bedrock.

As climate volatility intensifies, insurers should view the "last house standing" as a beacon of hope -- and a clear signal that insurance products require not only enhanced risk modelling, but the integration of adaptation and resilience into underwriting.

Integrate resilience into underwriting with AlphaGeo

Insurance companies already excel at modelling climate-driven hazards. The competitive edge now lies in adaptation and resilience. Innovative, climate-ready insurance products should incentivize customer adaptation and incorporate climate resilience data into underwriting to price premiums more accurately and profitably.

AlphaGeo's data analytics empower insurers to sustain presence in high-risk areas where competitors may retreat.

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OUR PRODUCT: RESILIENCE-ADJUSTED RISK

AlphaGeo's Climate Risk and Resilience Index combines climate model data with local adaptation measures to create resilience-adjusted risk scores.

Physical Climate Risk	0	72/100	Resilience-adju	sted Risk 🕕	57 /10	
		ENCHMARK-BEATING			BENCHMARK-BEATING	
2 at	78 Country Benchmark	97 Worst	-¦ 37 Best	60 Country Benchmark	8 Wo	
Heat Stress Physical		100 /100	Heat Stress Resilience-adjuste	d	90 /100	
Drought Physical		60 /100	Drought Resilience-adjuste	d	40 /100	
Hurricane Wind		10 /100	Hurricane Wi Resilience-adjuste		10 /100	
Enland Flooding Physical		10 /100	Esilience-adjuste		10 /100	
Coastal Flooding Physical		60 /100	Coastal Flood	ding d	50 /100	
Wildfire Physical		0 /100	Wildfire Resilience-adjuste		0 /100	

Figure 1: AlphaGeo's Climate Risk and Resilience Index includes both physical and resilience-adjusted risk data.

This dual scoring system distinguishes high-risk locations from those where robust adaptation mitigates climate risk impacts, enabling insurers to price more accurately, and stay competitive in high-risk zones.

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The maps of California (for wildfire risk) below illustrate how our Climate Risk and Resilience Index scores reveal "safer" locations within a high-risk state.

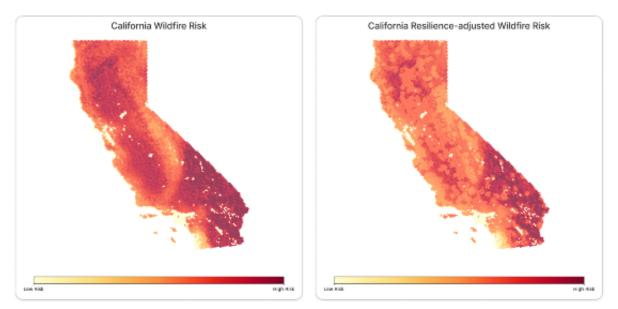


Figure 2: Resilience-adjusted Risk data enables discovery of "safer" locations even in high-risk states.

All scores are provided with their underlying risk (Figure 3) and resilience drivers (Figure 4, in section below on **Global Adaptation Layer**).

Overview Heat Stress •	Drought • H	lurricane Wind • Inland	Floodin 🕨 ┥	Mid Century (2045-2050)
Drought Physical		60 /100	Drought Resilience-adjusted	40 /100
	Risk			Resilience
Features	Current (2020-2025)	Early Century (2030-2035)	Mid Cer (2045-20	
Maximum consecutive days without precipitation	52 days	55 days	45 da	ays 38 days
Number of days above 38°C (100°F)	137 days	147 days	152 d	lays 189 days
Number of days above 40°C (105°F)	111 days	122 days	130 d	lays 169 days
Water demand-supply ratio	1.70	1.70	0	2.20

Figure 3: Underlying risk drivers for Drought risk. Each hazard has its own feature set.

Use Case: Resilience-Enhanced Underwriting

- Refine underwriting with adaptation data for accurate pricing.
- Offer premium reductions for verified climate resilience measures.

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GLOBAL ADAPTATION LAYER

Powering our resilience-adjusted risk scores is our **Global Adaptation Layer dataset**, which quantifies 20+ hazard-specific adaptation measures worldwide.

This data identifies adaptation gaps at a granular level, enabling insurers to play a proactive role in strengthening resilience in their coverage zones. An example is shown below for inland flooding adaptations.

Overview Heat Stress • Drought •	Hurricane Wind	Inland Fl	 Mid Centur 	r y (2045-2050)	
Enland Flooding	100 /100	a inlan Resilier	d Flooding nce-adjusted	70 /100	
Risk	Resilience				
Features		This Location	Regional Average	National Average	
Resilience to urban runoff		70 /100	76 /100	81 /100	
Presence and coverage of direct flood ba	0 /100	0 /100	1 /100		
Presence and capacity of drainage syster	0 /100	0 /100	1 /100		
Proximity to nature-based flood defense		100 /100	9 /100	13 /100	
Proximity to flood storage and control sys	stems	0 /100	8 /100	27 /100	

Figure 3: AlphaGeo's Global Adaptation Layer covers over 20 hazard-specific adaptation measures worldwide. The example here is for inland flooding adaptations.

Use Case: Adaptation-driven Pricing and Customer Engagement

- Advise policy holders on adaptation to enhance asset resilience
- Calibrate premiums based on the degree of adaptation to specific risk