Geoneon®

MAPPING CLIMATE RISKS

PREDICTIVE WILDFIRE MAPPING FOR LONG-TERM PREPAREDNESS AND PLANNING

AI-powered severity and exposure layers to support land-use planning, infrastructure protection, and climate resilience.

PRODUCT OVERVIEW

What is Geoneon Wildfire?

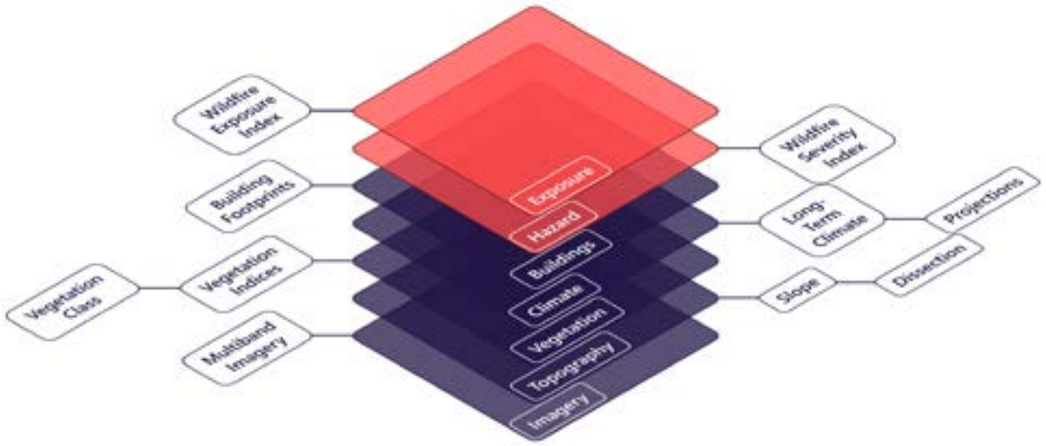
Geoneon Wildfire provides AI-driven geospatial layers that estimate wildfire severity — how intense a fire would be if it occurred — and building exposure — how much a built asset could be affected if surrounding vegetation burns.

Built for government, insurance, and infrastructure, it supports climate adaptation, planning assessments, and asset prioritisation across large regions.

THE GEONEON WILDFIRE DATA STACK

More Than a Model

Unlike traditional fire spread simulations, Geoneon Wildfire uses a layered predictive approach — the Geoneon Wildfire Data Stack — stacking key spatial predictors to deliver a consistent, scalable view of wildfire severity and exposure anywhere in the world.



Core data layers include:

- Vegetation structure — height, cover, and type from Geoneon Vegetation
- Topography — slope, elevation, and dissection
- Climate context — rainfall, moisture, and projections
- Built environment — building footprints, and proximity to flammable vegetation
- Administrative boundaries & land use — for aggregation and reporting

ACTIONABLE INSIGHTS

What Can You Do with Geoneon Wildfire?

Geoneon Wildfire helps you understand where fires are likely to burn most severely — and who or what is most exposed if they do. It goes beyond static hazard maps. Our dynamic, AI-driven model adapts to real-world change, allowing you to detect, measure, and act on evolving wildfire severity and exposure.

FUEL REDUCTION & CHANGE DETECTION

Spot treatment areas and monitor regrowth

Identify where prescribed burns or fuel reduction works have occurred, confirm treatment coverage, and measure regrowth over time. Supports evidence-based fire management and planning.

LAND-USE CHANGE TRACKING

See how exposure shifts as landscapes change

Detect new housing developments, land clearing, or major vegetation changes, and update severity and exposure layers to reflect the new conditions.

COMMUNITY & ASSET EXPOSURE METRICS

Quantify who and what is most exposed

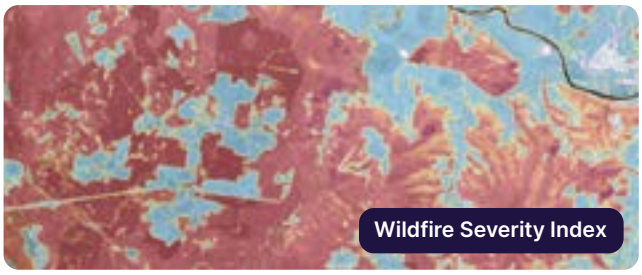
Aggregate exposure scores for suburbs, LGAs, or other administrative areas to highlight high-vulnerability zones. Ideal for councils, insurers, and emergency managers to prioritise investment and mitigation.

SEE SEVERITY AND EXPOSURE IN ACTION

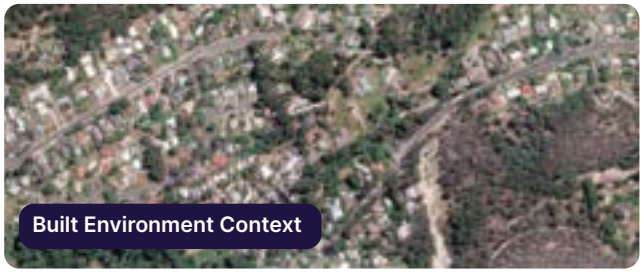
Visualise the Difference

Geoneon Wildfire turns complex data into clear, decision-ready maps. Explore interactive sliders to see how severity and exposure change with the landscape.

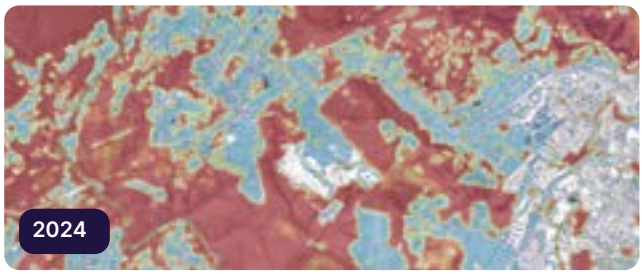
Severity Mapping

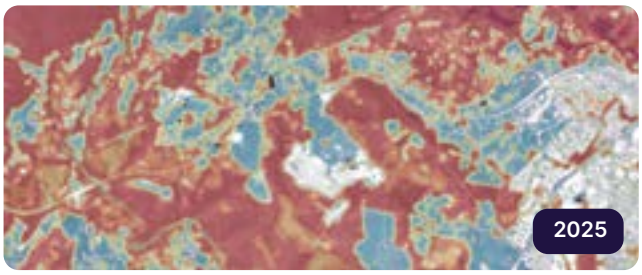


Exposure Mapping



Change Over Time

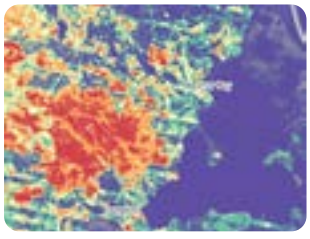




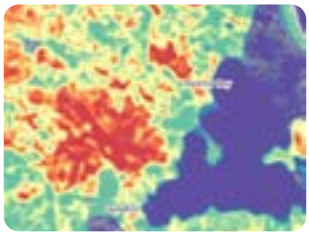
BUILT ON EVIDENCE

Proven Accuracy

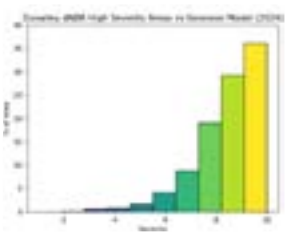
Designed to reflect real-world fire behaviour, the Geoneon Wildfire model is calibrated and tested against actual fire events. Compared with known fire events to verify predictive patterns and calibrated using event data to fine-tune severity and exposure outputs.



delta Normalized Burn Ratio (dNBR)



Geoneon Wildfire Severity Index



Prediction Evaluation