reask
earth system risk

Reask
Modelling Wildfire Risk



18th March 2026

Reask is a extreme weather risk modeling startup

Critical (re)insurance Nat Cat market problem

Most modelling solutions rely on long term climatology

whereas

The climate that produced the historical record is not the climate producing today's extreme weather.

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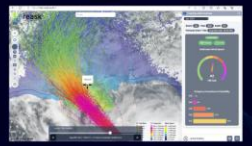
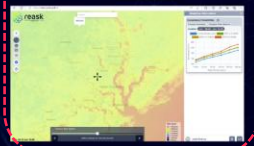
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Reask approach

Climate-aware and physics-based hazard models

Primarily for the (re)insurance and ILS sectors

Historical catalogue (has happened)	Real time data feed (is happening)	Probabilistic datasets (can happen)
All historic events since 1945	Real time event data starting 3 days before landfall	Synthetic event data under a range of climate views
Global coverage	Global coverage	Global coverage*

Wildfire probabilistic datasets

Wildfire risk and (re)insurance

An increasingly material peril

Limited models availability
(geographical coverage)

A complex peril combined with a data scarce problem



Globfire, historical burnt areas 2002-2023

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Reask approach

Large scale, climate-aware probabilistic events catalogues

Data rich event tables and footprints

Ability for clients to explore views of risk in a transparent manner



Reask Fire Occurrence return period map

- ✓ Europe released in 2025
- ➢ California release in 2026
- ➢ US in development

Modelling approach – From continental to local scale risk factors

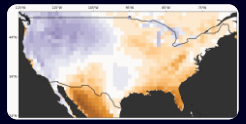
Continental to Regional
Yearly

Fire activity modelling

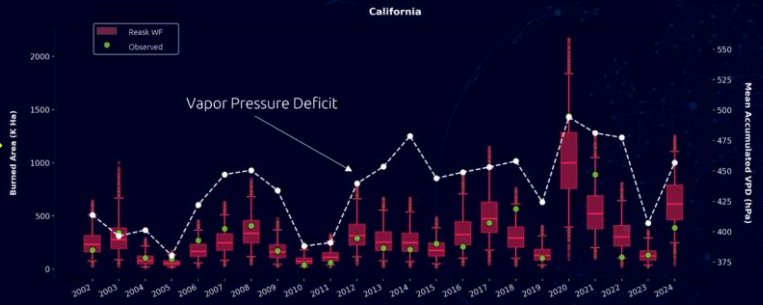
What large scale climate patterns impact burnt area the most?

Climate Variables (reanalysis)

Quantile Regression Forests & Bayesian framework



50K years



Modelling approach – From continental to local scale risk factors

Continental to Regional
Yearly

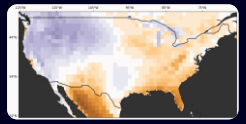
Regional to Local
Daily

Fire activity modelling

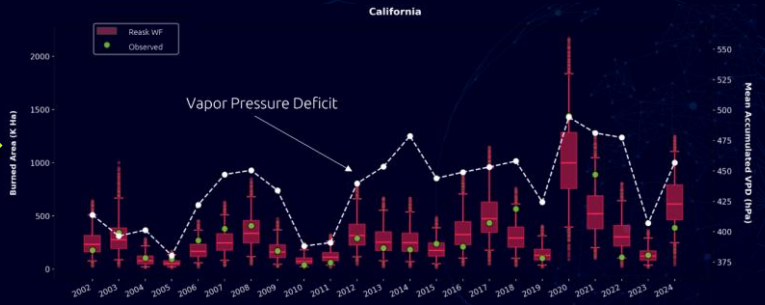
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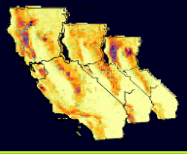


Ignition modelling

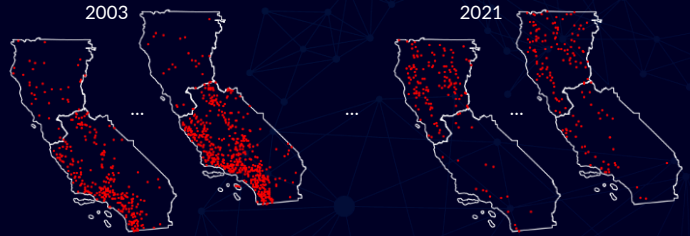
How natural and anthropogenic factors impact seasonality and spatial patterns of ignition risk?

Climate states
Fire weather
Topography
Land cover
Human activity

Machine Learning & Sampling Engine



~15M events



Modelling approach – From continental to local scale risk factors

Continental to Regional
Yearly

Regional to Local
Daily

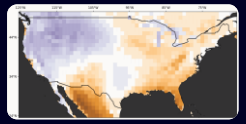
Local
Hourly

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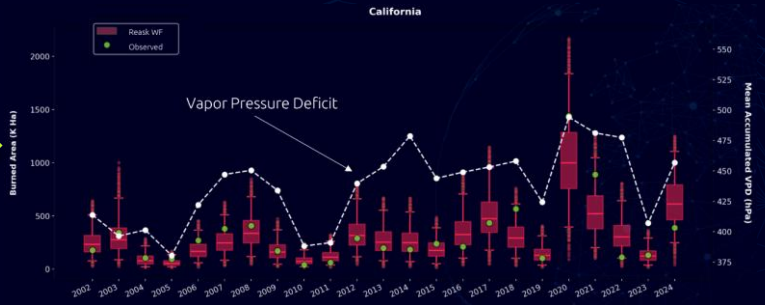
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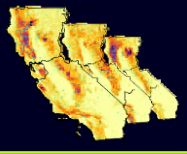


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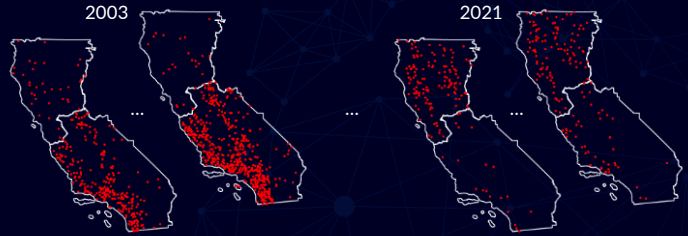
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Propagation modelling

How to predict fire behaviour to estimate wildfire perimeters?

(Fire) Weather
Fuel type/conditions
Topography
Landscape continuity
WUI

Scott & Burgan raster model



~15M footprints



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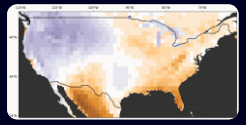
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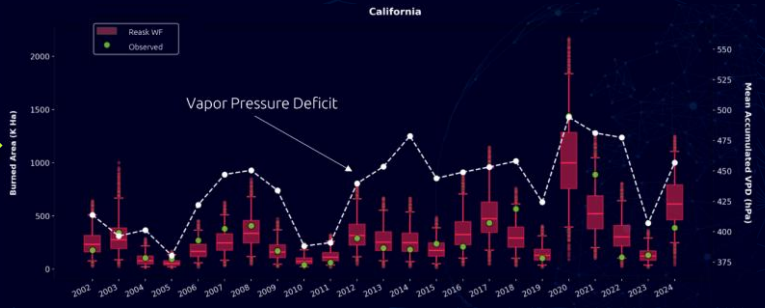
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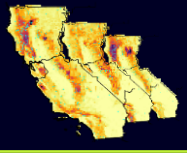


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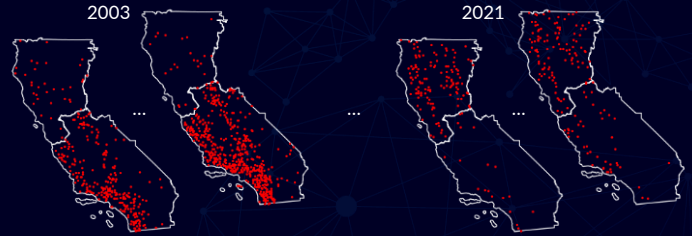
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More to come!

- Intensity footprints
- Smoke footprints
- Improved extreme fire behaviour