

A NOVEL WILDFIRE INSURANCE CAN REWARD FIRE RISK MITIGATION ACTIONS



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The **wildfire pilot** assessed the efficiency of wildfire risk mitigation plans to quantify risk reduction. Regional climate change adaptation was integrated into parametric wildfire insurance design, allowing risk reduction efforts to be explicitly modelled and priced for the benefit of households, forest owners, and the communities in central Portugal.

HAZARDS	STATUS	TARGET GROUPS	PILOT CONTEXT
wildfires	(present/outlook): acute in southern Europe/risk increasing across Europe	Local and national authorities, insurance companies, forest owners and managers, homeowners, disaster risk reduction and climate change adaptation communities	Caramulo and Ribeira de Mega regions in Central Portugal (total pilot area 43 900 ha)

Why is it urgent to develop a novel wildfire insurance concept that integrates and prices the climate change adaptation and fire risk reduction plans?

- wildfires are a recurrent threat to property and forests
- wildfire insurance uptake remains limited
- the most fire-prone areas are at risk of becoming uninsurable
- fire spread models can estimate efficiency of fire mitigation measures e.g. fuel breaks
- this novel insurance concept enhances the development and realization of fire risk mitigation measures

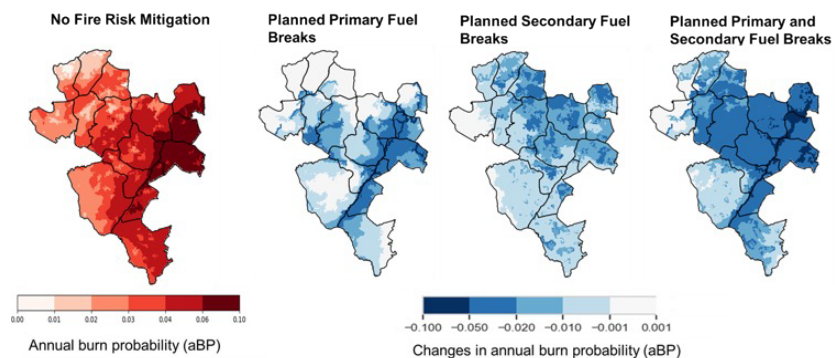


Figure: Simulated annual burn probability for the baseline and adaptation scenarios with planned fuel-breaks in the Caramulo region.



Key Results

- A parametric wildfire insurance design allowing risk reduction efforts to be explicitly modelled and priced was co-designed and -developed with the assistance of the Agency for Integrated Rural Fire Management (Portugal).
- Results demonstrated that combined primary and secondary fuel break networks were more effective than single-type treatments, and full fuel removal outperforms partial removal highlighting the importance of the maintenance of fuel breaks.
- Pilot demonstrated that wildfire insurance with integrated risk reduction incentives is both technically feasible and economically meaningful, showcasing that the impact of fire risk reduction measures can be quantified.



Recommendations to enable a wider uptake of this novel wildfire insurance concept:

- Enhance collaboration between insurers, planners, and forest managers on adaptation and risk reduction
- Establish regulatory frameworks recognizing risk reduction actions supported by insurance requirements/incentives
- Implement the fire spread model into the Climate Adaptation Digital Twin of Destination Earth to estimate performance of fire reduction measures in future climates
- Improve the availability, quality and compatibility of data on fires, impacts, and fuels

Learn more:

PIISA Wildfire Report: [Pilots for Forests](#)

PIISA Wildfire Report: [Preliminary Design of the New Insurance Instrument](#)

PIISA Report: [Role and potential of insurance in accelerating climate adaptation in Europe](#)

PIISA Blog: [Quantification of forests adaptation measures for insurance application](#)

Webinar: [Adaptive Forest Management and Policy to Tackle Climate Risks \(jointly with HEU SWIFTT\)](#)

Webinar: [Modelling as a tool to understand wildfire risk and risk reduction potential \(jointly with the Destination Earth's Climate Change Adaptation Digital Twin\)](#)

Webinar: [Climate resilient natural resources management: simulation-based approaches, forest insurances and climate services \(jointly with HEU PRECILIENCE\)](#)