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An insurer‘s view on wildfire and climate change – from global dynamics to regional implications

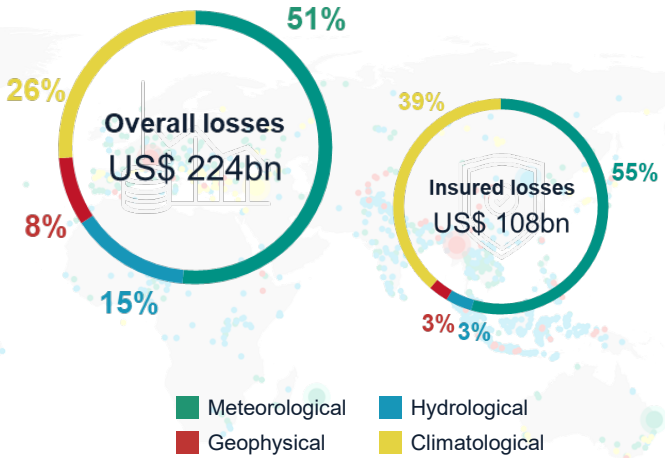
18th March 2026

Tobias Grimm
Chief Climate Scientist / Munich Re

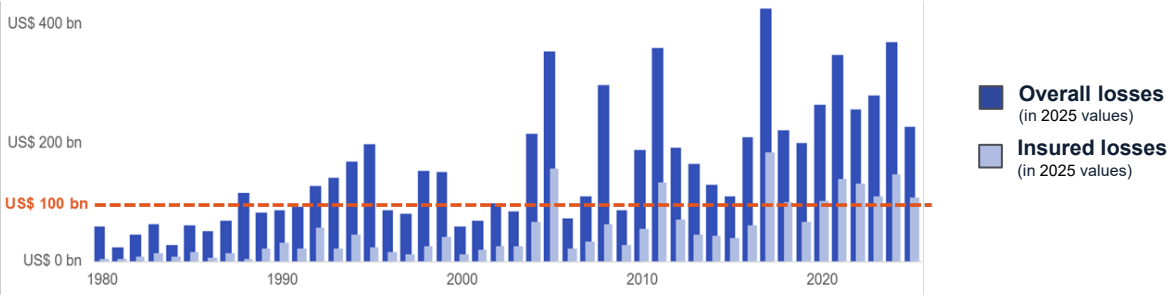
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The natural disaster year 2025 at a glimpse
and in comparison with previous years

- Insured losses again surpassed US$ 100bn mark
- Front loaded year: costliest H1 insured losses on record
- **Wildfire California:**
  costliest event with US$ 53bn / thereof US$ 40bn insured
- Costliest YTD for non-peak perils (91% of all insured losses)
- 2025's moderate losses were a product of luck, not lower hazard



Development of natural disaster losses worldwide, 1980 – 2025



Losses inflation-adjusted via country-specific consumer price index and consideration of exchange rate fluctuations between local currency and US$.

Source: Munich Re, NatCatSERVICE, January 2026
Munich Re's NatCatSERVICE is a global database containing loss data from 1980 onward for all types of natural disasters, excluding drought, and heatwaves.

Wildfires losses increased dramatically over the last decade

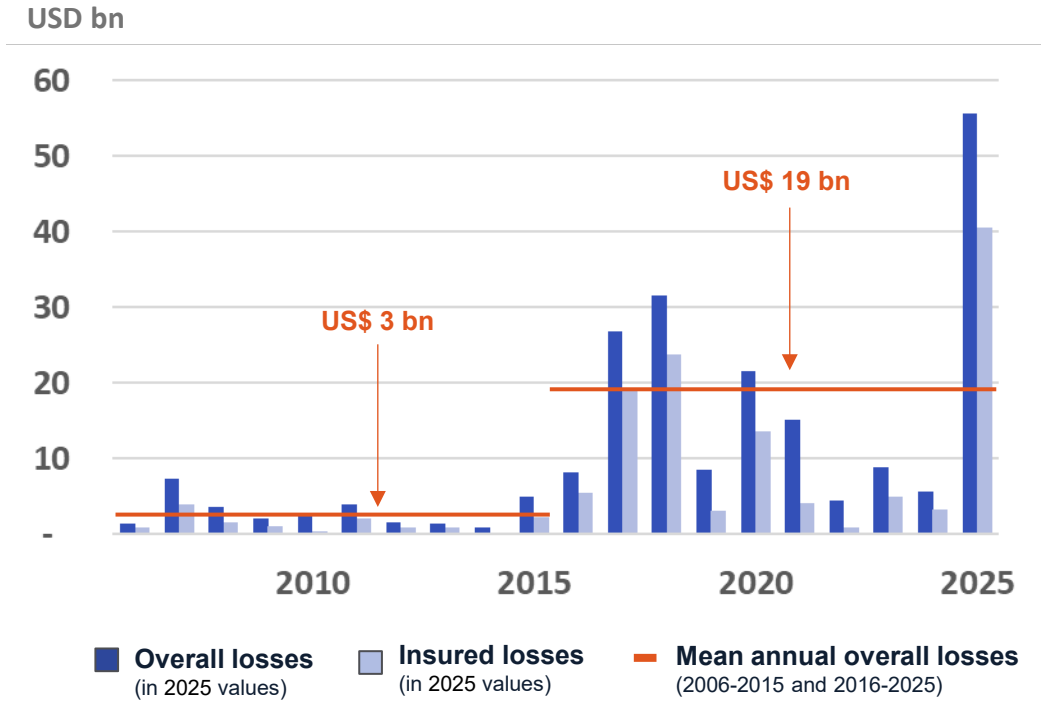
Losses from wildfires worldwide 2006-2025

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> Sixfold increase of mean annual ***overall loss***[1]

> Eightfold increase of mean annual ***insured loss***[2]

Since 1980, **~85%** of overall losses and **98%** of insured losses occurred in USA, Canada and Australia[3]



1) 2016-2025: USD 19bn, 2006-2015: USD 3bn
2) 2016-2025: USD 12bn, 2006-2015: USD 1.0bn
3) USA (75%/90%), Canada (5%/5%) and Australia (3.7%)

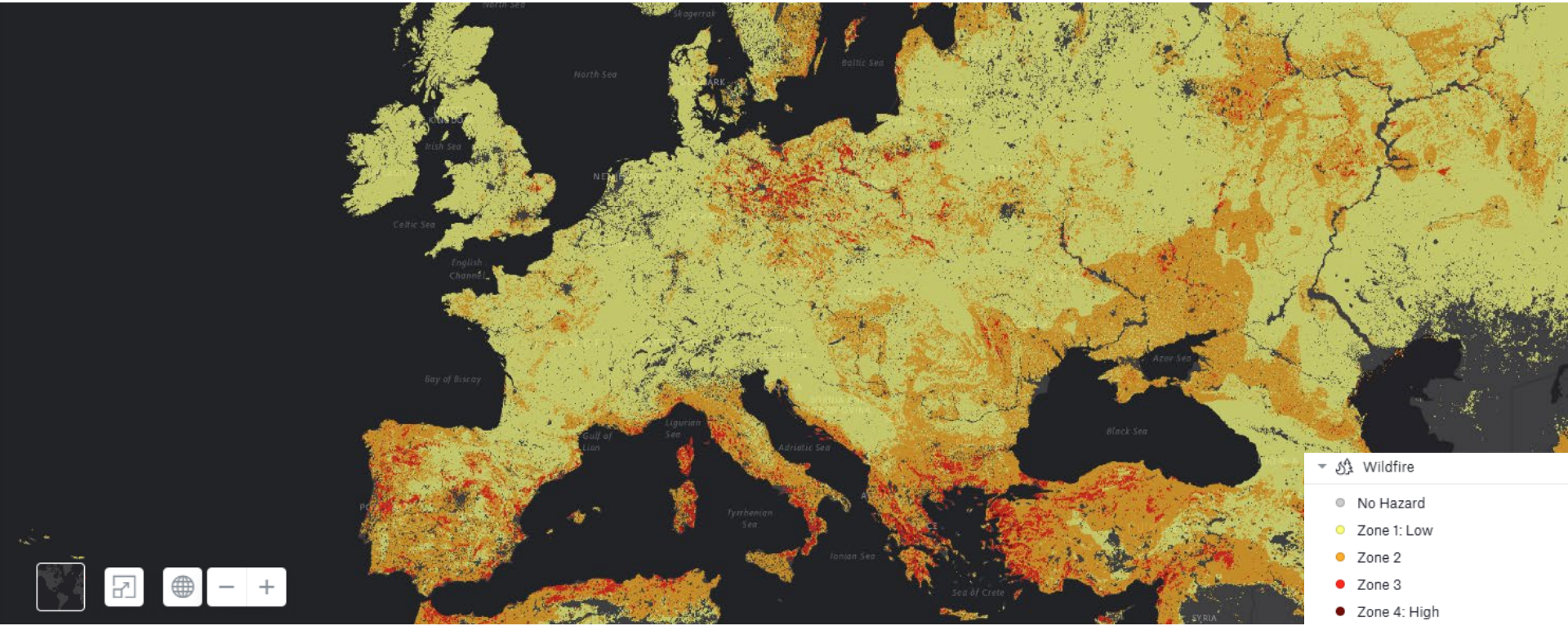
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Wildfire risk highest in Southern Europe

European wildfire-risk map



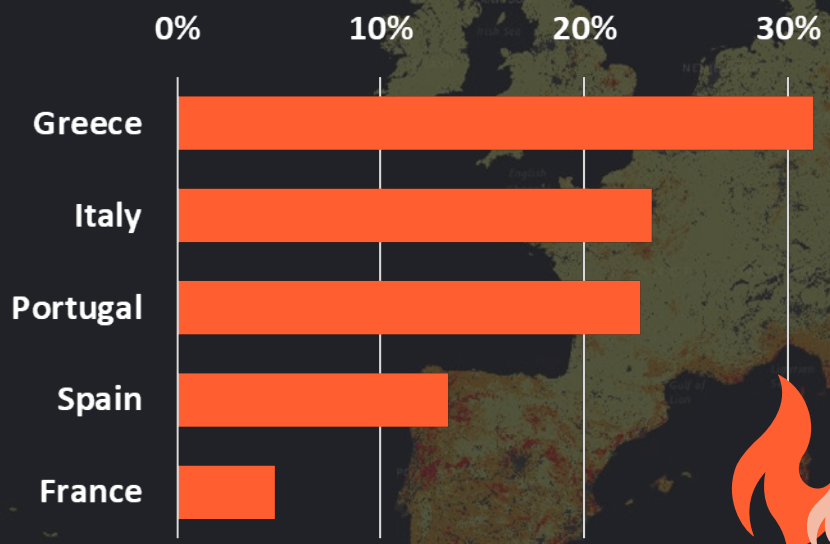
Source: Risk Management Partners / Location Risk Intelligence (https://www.munichre.com/rmp/en/products/location-risk-intelligence.html)

Five countries accounting for 95% of wildfire losses in EU (27)

But: insurance penetration very low – especially in most affected rural areas

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EU 27 countries with highest share of overall losses from wildfire, 1980-2025



US$ 19.4 bn
Overall losses*

minor
Insured losses*

*EU27 cumulated wildfire losses 1980-2025

Costliest wildfire events in EU 27 since 1980 (by overall losses, in US$ m)

Date	Country	Overall Losses	Insured Losses
Au-Se 2007	Greece	2.100	
Jul-Se 2003	Portugal	1.700	110
Au 2001	Greece	1.600	42
Jul 1983	Italy	1.500	
Ma-Jul 1990	Italy	1.400	
Jul-Au 1998	Greece	1.100	7
Jun-Au 1985	Spain	800	

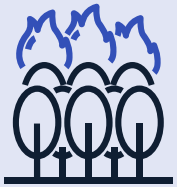
Losses inflation adjusted via country-specific consumer price index and consideration of exchange rate fluctuations between local currency and US$.

Source: Munich Re, NatCatSERVICE, January 2026; Munich Re's NatCatSERVICE is a global database containing loss data from 1980 onward for all types of natural disasters, excluding drought and heatwaves.

A decomposition of wildfire risk into the three sub-elements Exposure, Vulnerability and Hazard for Wildfire in Europe

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Wildfire Risk in Europe



Hazard

- Hotter and drier climate conditions
- Extreme wind and weather patterns
- Changes in vegetation and fuel loads



Exposure

- Expansion of Wildland Urban Interface
- Growth of secondary homes and tourism infrastructure (often in high-risk areas)
- Critical infrastructure in fire-prone areas
- High-value agricultural and forestry assets



Vulnerability

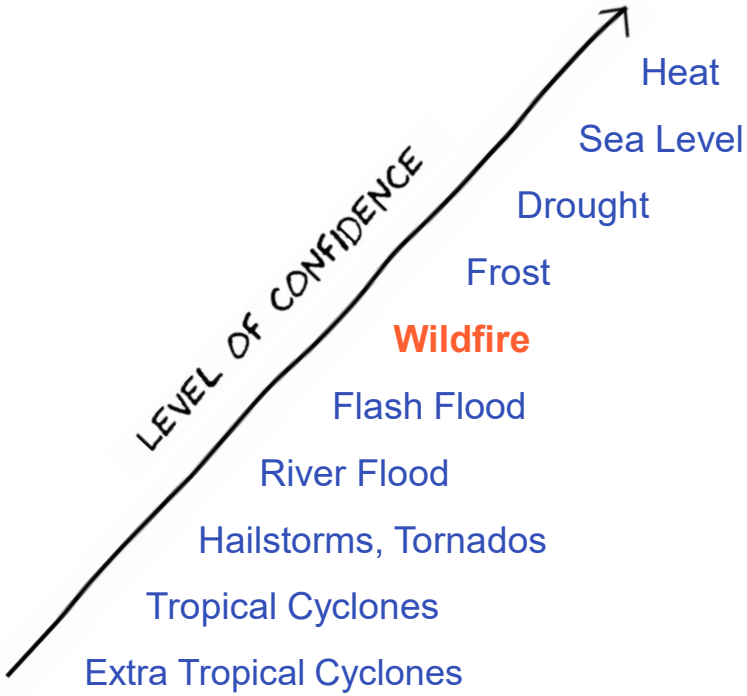
- Emergency Preparedness Gaps
- Building materials and design
- Limited mitigation management
- Aging and rural populations

Climate change plays a major and increasing role for the wildfire risk in Europe, but strengthening resilience can limit future losses

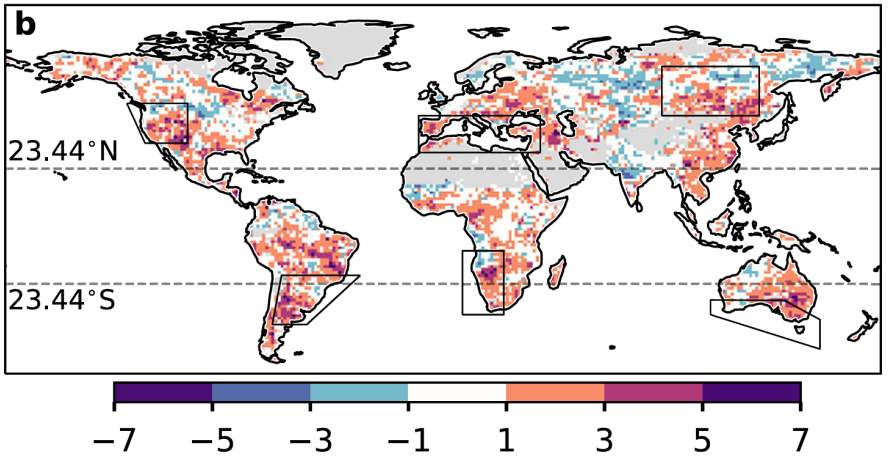
Fire weather conditions exacerbate with climate change

Wildfire trends globally and in Europe

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Change in number of years with combination of drought and above average number of fire weather days, 1971-1995 to 1996-2020[1]



1) Richardson et a., 2022, DOI

► Fire management efforts need to keep up with increasing fire risk

Catastrophic fires start in Wildland Urban Interface (WUI)

Definition of WUI and case study Palisade Wildfire, LA 2025

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Wildland Urban interface grows globally

- Wildland Urban interface (WUI) links wildland to densely populated areas:
  → in WUI, homes and infrastructure intermingle with fire-prone vegetation and wildland ecosystems.
- Destructive wildfires often originate in large, wildland areas and spread into the WUI
- Fraction of WUI increased globally since 2005[1], mostly in areas not yet prone to fire[1]

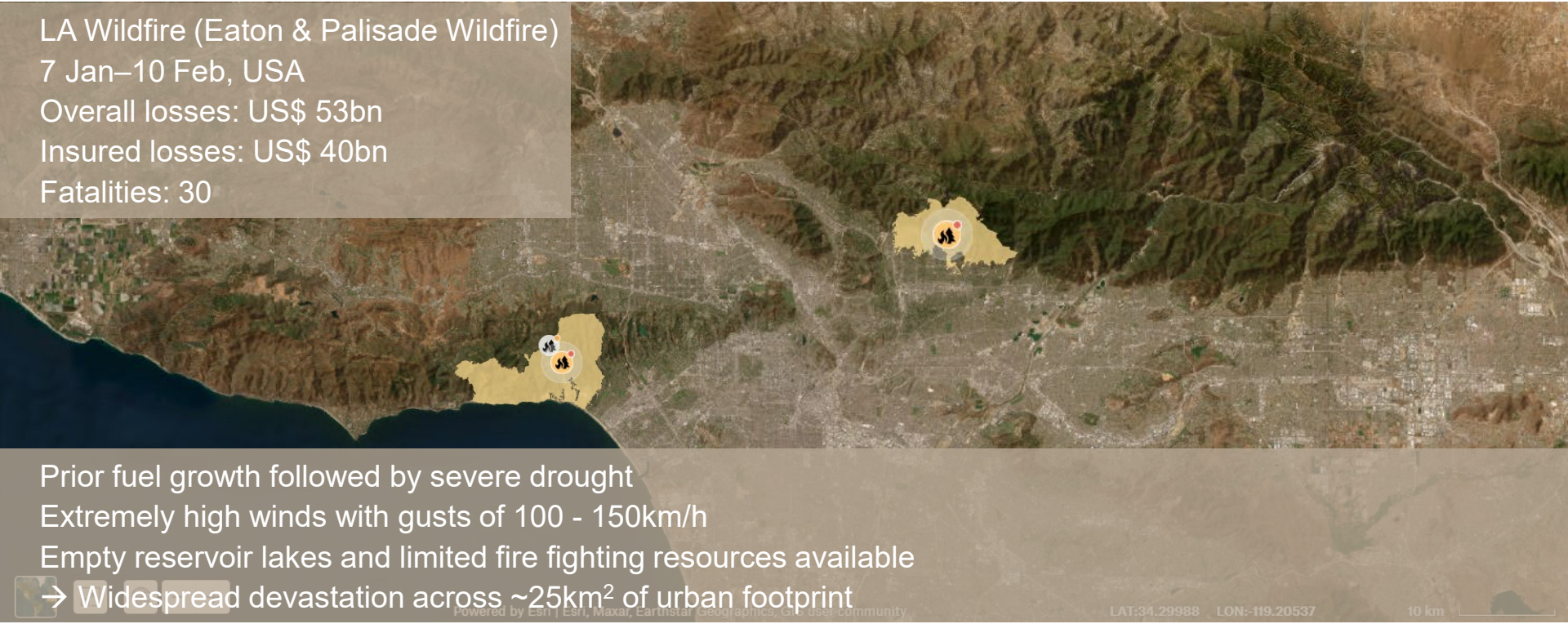


1) e.g., 10% in North America, 13% in Europe, 16% in Oceania
From Tang et al, 2024, DOI 10.1088/1748-9326/ad31da

Vulnerability Case Study, LA Wildfire 2025 (1/2)

Sequence of extreme conditions led to costliest wildfire in modern history

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Sources:
Munich Re, NatCatSERVICE, January 2026; Munich Re's NatCatSERVICE is a global database containing loss data from 1980 onward for all types of natural disasters, excluding drought and heatwaves.
Map: Risk Management Partners / Location Risk Intelligence (https://www.munichre.com/rmp/en/products/location-risk-intelligence.html)

Can urban conflagration happen also in Europe?

A California-like event is less likely to happen in Europe but possible

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Factors for sub/urban conflagration:



Three key factors that significantly reduce the risk of urban conflagration wildfire events in Europe:

1. **Building standards**: Brick houses dominant in Europe, vs. wood houses in the US (but: ember storms can still overcome masonry advantages)
2. **Fire weather conditions**: Catabatic winds such as Santa Ana winds are unique – European versions are less extreme, but capable of producing conflagration conditions in rare years
3. **Accumulation of assets**: Exposure concentration is lower than in parts of California but growing in southern Europe

- Considerable extend of WUI and fire weather in Europe: risk from communities with medium hazard and little to no awareness and resilience
- aggregated risk from small villages can lead to major losses

- Europe is structurally less predisposed to wildfire-driven urban conflagration than parts of western US – but under extreme compound condition, the risk is real and increasing

Managing fire risk is a collective responsibility

Fire risk mitigation for government, homeowners & insurance industry

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Government

- Strengthen wildfire management and land planning
- Improve rules and community protection
- Educate and incentivize action

Homeowner

- Harden the home against fire
- Reduce ignition risks, clear the perimeter
- Add protective systems

Insurance

- Offer classical and innovative financial risk mitigation
- Provide services to assess wildfire risks
- Support and incentivize risk mitigation measures



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Thank You!

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Tobias Grimm

Chief Climate Scientist

Head of Climate Advisory
Climate Change Solutions

TGrimm@munichre.com
linkedin.com/in/tobias-grimm76

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