NEWSROOM

Linking Forest Treatment to Insurance Benefits by Reducing Wildfire Risk

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Nature-Based Solutions in New Insurance Rule

"We are pleased the new regulation issued by the California Department of Insurance requires that when computer models are used for catastrophic load by insurers to establish rates, the models have to account for property, community and landscape scale mitigation such as ecological forest treatment and nature-based flood risk reduction. The Nature Conservancy developed this concept with insurance experts and advocated to include nature-based approaches to risk reduction in risk models, and we appreciate Insurance Commissioner Lara's support for this new concept by including it in the new regulation."

Michael Jarred, Associate Director External Affairs and Policy

California has the highest wildfire risk in the US. In recent years, the state has experienced a growing number of highly destructive wildfires—of the 20 most destructive wildfires in the state's recorded history, 13 have occurred since 2017. The devastating impacts of these increasingly frequent and severe wildfires have accelerated insurance rate increases, non-renewals and market instability, causing an insurance crisis in California. In the last year, companies representing more than half of California's insurance market have either stopped or capped writing new insurance policies and have increased non-renewals due to heavy losses from wildfires and the potential for more destruction in the future.

While climate change is partly responsible for the growing frequency and severity of wildfires, over a century of logging and fire suppression has led to overstocked forests with many more small diameter trees than historically existed. Overstocked forests are particularly vulnerable to more, bigger and hotter wildfires. In an effort to save lives, protect property and address the insurance crisis, California has prioritized efforts to prevent wildfires and reduce their severity. Targeted hazardous fuel reduction through ecological thinning, prescribed fire and managed wildfire reduce accumulated high fuel loads and promote healthier, more resilient forests, thus decreasing the risk of high-severity wildfire at large spatial scales.

to get or afford insurance is growing. TNC is helping to address this problem by working with state leaders to craft impactful public policy change and with insurance companies to bring an innovative new insurance product to market that links forest restoration to insurance benefits. This work builds on the **report TNC and WTW, a global risk advisor, published in 2021**, which found that forest thinning and prescribed burning in the Northern Sierra Nevada can reduce insurance company losses by 40 to 60% with a commensurate decrease in insurance premiums (see more below).

Incorporating Forest Restoration into Catastrophe Models

In March 2024, California's Insurance Commissioner proposed new regulations to allow insurers to use forward-looking catastrophe models that account for climate change to price premiums. Current regulations only allow consideration of historic losses in pricing, and the proposed change is part of the Commissioner's Sustainable Insurance Strategy, a package of new regulations aimed at stabilizing California's property insurance market. The proposed regulations would also require any catastrophe models used for pricing to incorporate wildfire mitigation at the property, community and landscape levels. The state, alone, has appropriated over $3.7B for forest treatment since 2017. Requiring mitigation to be included in insurance pricing models would reward the state, communities and homeowners for investing in home hardening, defensible space and forest treatment.

Despite being a proven tool in mitigating wildfire risk, insurance pricing models don't currently recognize the value of forest restoration. The inclusion of landscape-scale mitigation in the catastrophe models would be a novel addition, given the industry's focus on home hardening and defensible space. This draft regulation is the start of fixing the broken feedback loop so that insurance premiums reward investments in thinning and prescribed burning to reduce wildfire risk. TNC is continuing to work with California Department of Insurance (CDI) to ensure there's a clear link to the billions being invested in forest restoration to make California's communities safer.

While the inclusion of landscape-scale wildfire mitigation in catastrophe models used for insurance pricing is a big step forward, it only fixes part of the broken feedback loop between wildfire mitigation and insurance benefits. CDI's regulatory authority includes rate-setting, but the Insurance Commissioner does not have the authority to regulate the underwriting decisions carriers first make about whether to cover or renew homeowners and businesses facing wildfire risk. And if consumers can't get insurance in the first place, they won't benefit from lower rates that reward investments in wildfire mitigation.

To fix this problem and align with the Commissioner's Sustainable Insurance Strategy, TNC worked with Senator Becker to introduce the FIRE Act to require underwriting models to account for wildfire mitigation, since changes to underwriting practices in California require state legislation. The FIRE Act requires any underwriting models used to incorporate wildfire mitigation at the property, community and landscape level. Under the FIRE Act, insurers retain all discretion over underwriting decisions, while ensuring that underwriting models fairly give credit for the billions of dollars that California has invested in wildfire resilience, forest health and community protection.

Piloting Wildfire Resilience Insurance

In 2021, we co-authored a report with global insurance broker WTW that found accounting for forest treatment in industry models could reduce average annual insurance losses 40–60% and as a result, premium prices for homes and businesses in the Northern Sierra Since then, TNC has been working to place a new insurance product that accounts for forest restoration—wildfire resilience insurance—in the market.

We're focused on parametric insurance, an innovative type of insurance that pays out based on a pre-defined trigger. Because of its speed and flexibility, parametric insurance is well-suited to business interruption, as opposed to traditional property insurance. Commercial owners of forested land who are both at risk for wildfire losses and have been investing in forest restoration to reduce their wildfire risk are the target customer. Lost revenue (e.g.,

t covered by traditional insurance.

By placing wildfire resilience insurance is the market for the first time, we aim to fix the broken feedback loop between forest health and insurance benefits, thereby increasing the incentive to invest in forest restoration.

REPORT: WILDFIRE RESILIENCE INSURANCE

Quantifying the Risk Reduction of Ecological Forestry with Insurance

READ THE FULL REPORT

Ecological Forest Thinning and Prescribed Burns Lower Insurance Premiums Significantly

This 2021 study by TNC and Willis Towers Watson finds a 41% decrease in residential insurance premiums when ecological forestry is applied to relevant areas

Media Hits

Insurers Pushed to Account for California Fire Funding (Bloomberg, May 3, 20024)

How Insurers Game Out Disaster Risk and Drop Customers (The Wall Street Journal, April 27, 2024)

Measure addressing California fire insurance crisis advances in Senate (CBS News, April 24, 2024)

California wildfire bill may enhance homeowners insurance protections (KCRC, April 22, 2024)

California spent $3.7 billion reducing wildfire fuel. Bill would make insurers factor that into coverage (The Mercury News, April 17, 2024)

New California bill would boost homeowners insurance protections (NBC Bay Area, April 17, 2024)

A California bill could lead to lower home insurance costs. Here's why companies hate it. (SacBee, April 11, 2024)

California's firefighters can't get fire insurance (POLITICO, April 11, 2024)

Ecological Forest Thinning and Prescribed Burns Lower Insurance Premiums Significantly

A portion of the premium savings on premiums can pay for forest treatment creating a "virtuous cycle"

The Nature Conservancy, working with Willis Towers Watson, the third largest insurance broker in the world, has today published analysis that shows how ecological forest management, which reduces the risk of severe wildfires in fire-adapted forests, can be combined with insurance and significantly reduce insurance costs.

By modeling the impact on insurance of controlled burning and ecological thinning of overgrown forests, researchers at TNC and WTW were able to quantify insurance premium savings. In turn, these savings could be used to fund further investments in sustainable forest management.

The report, Wildfire Resilience Insurance: Quantifying the Risk Reduction of Ecological Forestry with Insurance, finds that the practice known as ecological forestry, which includes prescribed burns and the removal of smaller trees and other vegetation in

...lihood of extreme wildfires in these communities.

The report explores how the insurance savings from ecological forestry could be captured and applied to pay debt service on bonds which would be issued to pay for ecological forest treatment. In this way, the insurance savings can contribute to funding or financing the ecological forest treatment, creating a "virtuous circle".

For the first time, the project tested "parametric" insurance as applied to the intensity and acreage of wildfires, resulting in a reduction in both losses and premiums. Such a parametric product, which can provide instant access to funds to pay for costs not covered by indemnity insurance, would be new to the market and is an innovative way for insurers to cover fire risk.

The project used an ecological forest restoration project in the watershed of Placer County Water Agency in the Tahoe National Forest in northern California. The researchers found that ecological forestry in the watershed reduced the risk of wildfire substantially for the 81,000 homes in and around the watershed, which in turn could reduce aggregate home insurance premiums $21 million a year

"For the first time we are demonstrating that insurance modeling and pricing can account for the severe wildfire risk reduction benefit of ecological forest treatment," said Dave Jones, Senior Director of Environmental Risk at The Nature Conservancy and former California Insurance Commissioner. "These widely-supported forest treatment practices -- prescribed burns and ecological thinning -- provide the triple benefit of improving forest health, decreasing the risk of catastrophic wildfires, and providing a pathway to keep insurance available. Insurers' models do not currently take into account forest treatment, but now that we have shown it can be done, we expect insurers will begin doing so."

Due to the high risk of wildfires and associated losses, insurers are finding it a challenge to write insurance in areas at risk of wildfire. In late 2020, the California Department of Insurance reported that between 2018 and 2019 there was a 61% increase in non-renewals by insurers for homes in ZIP codes having an area with moderate to very high fire risk, and a 203% increase in the top 10 counties with the highest exposure of homes in high to very

continue writing insurance in high risk areas.

"Wildfire risk in California and throughout the western United States is becoming uninsurable thanks to increasing risks due to climate change and overgrown forests laden with fuel," said Dr. Nidia Martínez, Director of Climate Risk Analytics at the Climate and Resilience Hub, Willis Towers Watson. "The state-of-the-art analytics described in this report provide insurers across the board with tools to incorporate the true value of wildfire risk reduction through ecological forestry into underwriting decision making. And the product innovations we present offer new approaches to protecting communities and businesses in the Wildland-Urban Interface through insurance."

"If we want to continue to have insurance in these areas and to reduce the loss of life and property, we need a lot more private and public funding for ecological forestry in national and other forests," said Jones. "This spending is really an investment in the future of these areas."

The case study results are applicable to other similarly forested regions in California and other western states. The work also opens up the possibility to consider combining nature-based risk mitigation and risk transfer in other fire-prone regions around the world.

The report also includes a series of recommendations, including for federal, state and local policymakers to fund more forest treatment in national and other forest lands, so that communities and businesses can see the resulting risk reduction and insurance benefits shown in the paper.

The Nature Conservancy will continue its comprehensive approach with these stakeholders to improve wildfire resilience, including through the upcoming launch of a collaborative discussion series in partnership with the Aspen Institute.

Read our full report and summary here.

The project and paper were funded in part through an Innovative Finance in National

Forestry and Communities, Inc. (the "Endowment") is a not-for-profit corporation that

works collaboratively with partners in the public and private sectors to advance systemic, transformative and sustainable change for the health and vitality of the nation's working forests and forest-reliant communities.

The Nature Conservancy is a global conservation organization dedicated to conserving the lands and waters on which all life depends. Guided by science, we create innovative, on-the-ground solutions to our world's toughest challenges so that nature and people can thrive together. We are tackling climate change, conserving lands, waters and oceans at an unprecedented scale, providing food and water sustainably and helping make cities more sustainable. The Nature Conservancy is working to make a lasting difference around the world in 81 countries and territories (40 by direct conservation impact and 41 through partners) through a collaborative approach that engages local communities, governments, the private sector, and other partners. To learn more, visit nature.org or follow @nature_press on X.

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