Inequality in government agency response to natural disasters

Wealthier, more educated, and whiter communities receive more investments by government agencies after wildfires.

Based on Anderson, S.E., Plantinga, A., and Wibbenmeyer, M., Inequality in Agency Response: Evidence from Salient Wildfire Events. *The Journal of Politics.* 2023 85:2, 625-639. https://doi.org/10.1086/722044.

The Policy Problem

As the climate crisis intensifies, government agencies will need to make more and more tough decisions about where and when to prioritize scarce resources to adapt to and mitigate natural disasters. These decisions aren't just based on community needs. There are several other factors – including agency delegated authority, the current political landscape, public input, and the agency's own preferences – that shape agency decision making. Faced with these competing pressures, do government agencies prioritize reducing public harm, or do their actions and investments perpetuate inequality? This question is particularly important in the context of wildfire management, including fuel reduction projects like thinning existing vegetation or removing dead wood. Do government agencies allocate fuel reduction resources equitably in response to risks to communities?

Key findings and proposed solutions

- Government agencies can contribute to inequitable policy outcomes as more public goods and services are allocated to wealthier communities.
- Following wildfires, government agencies are more likely to implement fuel reduction projects near communities with a higher percentage of high-income, high-education, and white residents.
- Wealthier communities have more political power and thus a greater ability to impose costs on the government if their demands are not met. This leads to

an unequal distribution of resources to communities following natural disasters.

What We Found

When communities experience a wildfire, this raises the salience of wildfire risks. Government agencies often respond by implementing fuel reduction projects in those areas, despite the fact that much of the fuel was already reduced by the fire itself. The effect is strongest in wealthier, more educated, and whiter communities, which can lead to protecting higher-value housing even when the loss of lower-value housing would be more harmful to the individuals experiencing the loss. These findings are consistent with previous work on inequality in government responsiveness. But rather than focus on elected officials, we studied inequality in responses from unelected public agencies. Empirical evidence is consistent with a formal model we developed that shows how public agencies perpetuate inequality. In the model, we show that differences in the costs of lobbying and differences in the benefits to agencies of responding to community demands can impact agency response. Cost of lobbying and benefits to public agencies differ across demographically varying communities, leading to unequal allocation of public agency resources.

What We Did

Wildfire timing and location is arbitrary – some communities have had recent wildfires and others are left with persistent wildfire risk. To analyze the patterns of government agency investments in fuel reduction treatments, we looked at fuel reduction projects from 2003 to 2011 in communities facing wildfire risk in 15 western states that were located near public lands managed by the US Forest Service (USFS), Bureau of Land Management (BLM), or the National Park Service (NPS). We compared the fuel reduction project data with wildfires from 2000 to 2011 and demographic characteristics of the communities where the reduction projects took place: income, education, age, rental rates, and race and ethnicity. We also developed a theoretical model to explore the incentives that government agencies face when allocating fuel reduction projects. The model is consistent with our statistical results.

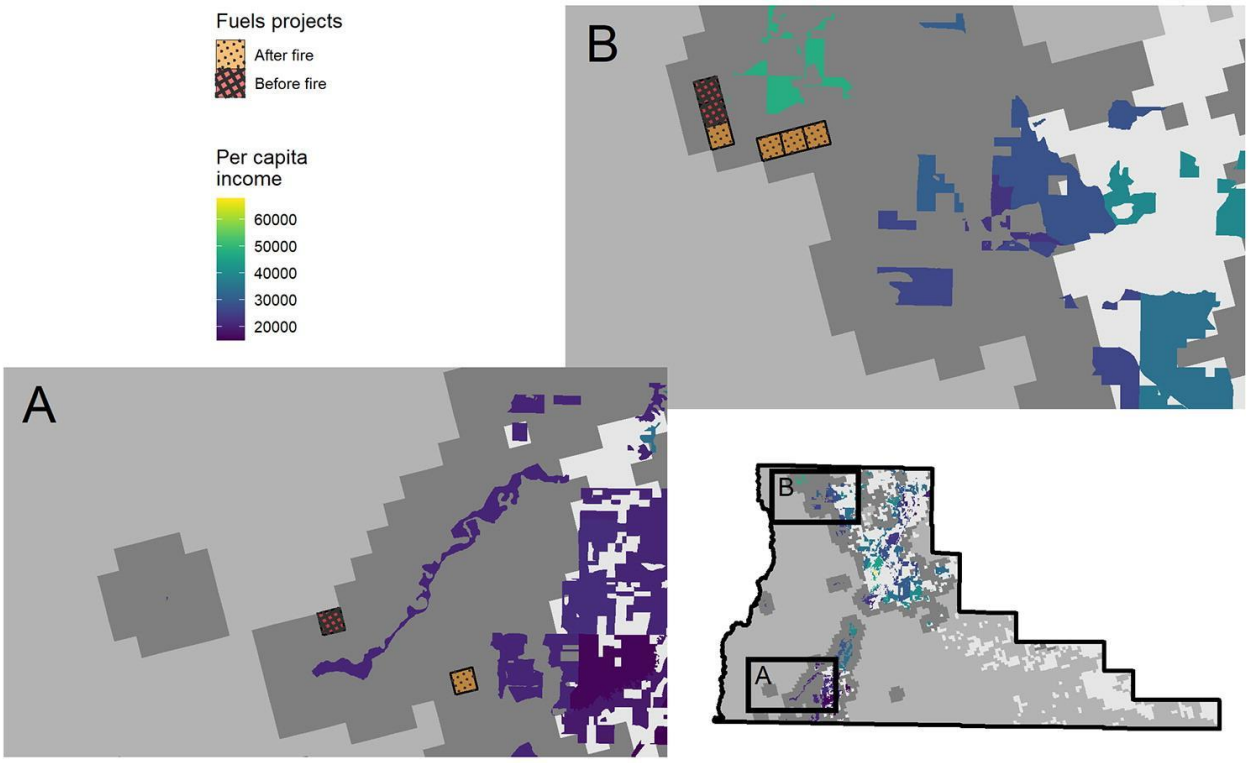

Figure 1. Hypothetical fuel reduction projects near relatively low-income communities (*A*, near La Pine, Oregon) and relatively high-income communities (*B*, near Sisters, Oregon) within Deschutes County, Oregon, before and after a wildfire event. Higher-income communities receive a greater number of prefire fuels reduction projects and a greater increase in the number of fuels projects following a fire. Public land grid cells are illustrated in medium gray; public land grid cells within 2 kilometers of WUI communities are illustrated in dark gray. Fuel treatment locations are hypothetical and chosen to illustrate the identification strategy.