

The importance of local knowledge in the identification of factors influencing wildfire occurrence in protected areas of the Colombian Amazon

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When it comes to the Amazonian forest fires, satellite imagery can tell us a lot about where and when these fires occur, but it takes the perspectives of local people to tell us why. In this study we built mind maps—visual representations of the perspectives of multiple parties—with Amazonian stakeholders to understand not only the direct drivers of forest fire such as forest clearance for cattle ranching and land-grabbing, but also the underlying needs for viable economic alternatives, effective territorial control, and the equitable distribution of land.

Colombia contains 7% of the Amazon Basin, which plays a key role in regulating the global climate, maintaining the world's biodiversity, and supporting local livelihoods.

Both urban and rural stakeholders rely on the region's ecosystem services such as the provision of fresh water, soil nutrients and erosion control. However, since the historic peace agreement between the Government and the rebel group FARC (Revolutionary Armed Forces of Colombia), the protected areas of this megadiverse country have been increasingly threatened by the sixfold increase in forest fires.

We worked with cattle ranchers, national park rangers and local authorities to create a shared mind map of the political, economic and social interactions that affect forest fires in Colombia's protected areas. By comparing this mind map with the perspectives of key political stakeholders, we identified broad agreement on the importance of addressing cattle ranching, land-grabbing, lack of investment in basic public services, lack of governance and untitled land to mitigate forest fire occurrence. There was disagreement over the role of roads, which some stakeholders characterised as a cause for further forest clearance. Cattle ranchers, on the other hand, described a

well-maintained road network as necessary to support more sustainable economic alternatives to ranching.

The results suggest that policies advancing the peace agreement's commitments to strengthened territorial control and rural development must consider local needs. By adopting a holistic approach to regional development, decisionmakers can move beyond fighting the symptoms of forest fire occurrence to addressing the root causes through promoting sustainable livelihoods and equitable land distribution.

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