

SMOKE SIGNALS

POLICY SOLUTIONS TO SUSTAIN COLOMBIAN FORESTS

Wildfires are increasing in Colombia while ecosystems are changing. To help preserve forests against these threats, Colombia needs a comprehensive fire policy that will focus on response and management in addition to prevention.

Colombia's tropical forests are important ecosystems that help ensure clean air and maintain systems of biodiversity—both in Colombia and around the world. These tropical forest ecosystems are home to thousands of unique animal and plant species, many of which are endangered.¹ Yet, increasingly, wildfires are threatening these natural resources.²

Forests include not only trees, but the many plants, animals, and insects that live together within the forest environment—an **ecosystem**. From the rainforests of the Amazon to the cloud forests of the Andes, Colombia has many forest ecosystems, each with its own natural balance of plant, animal, and insect life.

CHALLENGES AND CONSEQUENCES OF WILDFIRE

Wildfires threaten the environment, the sustainability of forests, the animals and plants that occupy them, local communities, and our planet.

A **“wildfire”** is defined as “any burning uncontrolled on any lands partially or wholly covered by timber, brush, grass, grain, or other inflammable vegetation.”³

Wildfires have many consequences for tropical forests, some of which may last for generations—or be permanent. For example:

- The loss of trees and vegetation can allow invasive or non-native species to take over the landscape and alter the ecosystem.
- Soil can erode and lose nutrients, making it harder for trees to grow back.
- Animals may be displaced, causing increased competition over food and shelter, and reducing the size of animal populations.

Local communities feel the direct effects of wildfires through loss of life, physical property, and resources.

Beyond the local community, wildfires can affect entire ecosystems. Wildfires release carbon dioxide and other greenhouse gases into the atmosphere that contribute to global climate change while reducing the number of trees available to remove carbon dioxide through natural processes.

Most tropical wildfires are caused by humans rather than natural causes.

For example:

- Wildfires are most common in areas where agriculture is expanding, including legal and illegal crops and ranching.
- Industrial farmers often use fire as a part of tropical agriculture practices to clear large spaces for agricultural production or cattle grazing.
- If fires are unmanaged, they can quickly burn out of control and spread into healthy forest areas. Once they have spread, these fires are difficult to extinguish, particularly under dry conditions.

However, indigenous communities who rely on small-scale agriculture tend to use and manage fires responsibly; their knowledge can contribute to effective prevention and management strategies.

Recent research shows that the scale and frequency of wildfires have increased in Colombia.⁴ At the same time, deforestation is increasing across Colombia, driven by wildfires and other activities, such as expanding agriculture and infrastructure.⁵

In 2017, Colombia lost nearly **twice** as much tropical forest compared to the year 2001.⁶

As rural areas in Colombia have become more stable and less violent in recent years, forested areas—including protected areas—that were previously unsafe have become accessible for economic activity, agriculture, and infrastructure projects, such as building roads. Concurrently, these protected areas have experienced a 600% increase in wildfires and 50% increase in deforestation.⁷

These data indicate the importance of taking action now—both to prevent wildfires and to manage and restore forests impacted by fire. Researchers agree that climate change will enable more frequent and severe wildfires globally, regardless of the source and in spite of increased efforts at prevention.⁸ Policies need to focus on response and restoration in addition to risk reduction and prevention of wildfires.

POLICY SOLUTIONS TO PREVENT AND RESPOND TO FOREST FIRES

Colombia has many policies and guidelines for wildfires that focus on fire suppression. However, many of these policies are outdated and do not reflect the latest research, which has indicated increasing frequency and intensity of wildfire amidst changing ecosystems. A new, comprehensive fire policy is needed that can adapt to changing ecosystems and include greater focus on response and restoration.

Rethinking wildfire prevention and management needs to start with the understanding that fire is a fundamental practice of indigenous peoples, small farmers, Afro-Colombians, and local communities. All of these communities can be a part of the solutions to prevent, detect, manage, and recover from forest fires.

Three principles form the foundation of comprehensive fire policies:

- **Prevention and Protection** requires taking specific steps to reduce the risk of fire. This includes raising awareness through community education, forming early warning sign networks, and establishing new areas of protected forest. Effective prevention efforts require bringing communities, researchers, environmental groups, and policymakers together to better understand the social norms and community practices surrounding the use of fire.
- **Detection and Management** ensures fire response teams are equipped with the knowledge, equipment, and capacity to track fires, respond quickly, and contain them. This also involves establishing locally developed fire management plans to combat and suppress wildfires.
- **Recovery and Restoration** involves restoring healthy, diverse, and resilient forest ecosystems to minimize the damage of fires. This can include carrying out impact assessments, removing dead or damaged trees, replanting trees and vegetation, and other scientifically proven restoration practices tailored to the local ecology.

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TAKE ACTION

Policymakers

Debate the comprehensive national fire policy—introduced with broad political support in Congress in 2019—that incorporates globally recognized best practices for fire prevention, management, and restoration.

National Parks Authority

Put in place a tracking and monitoring system that can provide better data about real-time changes happening in different forest environments that increase or decrease vulnerability to wildfire.

Develop environmental education programs for communities surrounding protected areas to raise awareness about forest fire prevention and integrated fire management.

Researchers

Build the interest and expertise among the academic community to conduct research on the science of fire, climate conditions that enable fire, fire management, the impacts fire can have on wildlife, and effective restoration and sustainability practices.

Partner with stakeholders, such as policymakers, National Parks Authority, and advocacy groups to translate emerging research on global climate variability, change, and fire management into programs and plans to protect forests.

Environmental Advocacy Groups

Advocate for better fire policies and increased investment by educating policymakers and communities about the importance of forest conservation and harmful effects of wildfires.

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