



Forest Fires

Fire, depending on where, when and why it occurs, can be either an essential factor in the ecological cycle of the forested landscape and the survival of associated plants and animals, or a destructive unnatural threat. Fire is a natural disturbance factor in boreal and temperate forest regions, but all too frequently has been introduced or encouraged in other forest types. Suppressing or encouraging fire must start with an understanding, at the landscape or regional level, of how it can maintain, restore or undermine the ecological integrity of forest ecosystems, as well as its impacts on human activities. Today we are causing major disturbances to natural fire regimes around the world: sometimes by increasing rate of fires and by setting fires in forests that would seldom burn under natural conditions; sometimes by suppressing natural fires, causing ecological damage and leading to infrequent, catastrophic fires due to a build-up of inflammable material. Some analysts think that destructive fires cause as much forest loss and degradation as poor logging practices and agricultural conversion. In many areas people now deliberately or accidentally cause most of the fires. Harmful forest fires are a symptom of the underlying causes that drive other forms of forest loss, such as: misuse of economic incentives; inequitable land tenure; failure to recognise or respect customary law; and weak government institutions. Forest removal, by cutting or burning, frequently simplifies forest landscapes, by e.g. truncating age distributions and reducing diversity. A fire strategy should be consistent with goals to maintain or restore forests' ecological integrity, by understanding how management creates conditions that deviate from natural benchmarks and developing responses that help to maintain or restore ecological processes.

WWF believes that, where fires are a problem, inadequate attention is paid to their underlying causes and to preventing a downward spiral of recurrent catastrophic fires and consequent degradation. Effective and efficient fire strategies are needed on a case-by-case basis, addressing three elements: prevention, response and restoration. **Prevention** includes social and physical strategies for minimising the risks of destructive fire through education, management and by addressing underlying causes. **Responses** range from rapid fire-fighting tactics to longer-term management changes in forested landscapes. **Restoration** is required when repeated mismanagement of the fire regime causes serious ecological damage. Effective management also needs the **participation** of stakeholders (governmental, NGO, community and private sectors) in planning and implementation.

WWF will work with governments, international organisations and communities to address underlying causes of forest fires and reduce impacts of harmful forest fires, by:

- Working on forest fire policy as an ecological integrity issue, and crafting policy responses that return fire regimes to their historic frequency and intensity levels so as to restore natural forest types and conditions
- Supporting research to improve the understanding of forest fires and their associated costs and benefits, causes and management options
- Building awareness amongst policy-makers, the public and the media as to the underlying causes of catastrophic forest fires, their associated societal and economic costs and the importance of addressing these in a systematic fashion
- Mandating and equipping managers to implement integrated fire management plans
- Involving key stakeholders (especially local communities and land managers) in management planning and, where appropriate, implementation, assisting them to obtain the knowledge, skills and resources needed to participate effectively
- Developing and enforcing compatible and mutually reinforcing land-use laws that provide a legal basis for the ecologically-appropriate use of fire but discourage misuse, and that take account of social equity, welfare and human rights issues
- Discouraging land management practices that predispose forests to harmful fires
- Promoting management strategies to mimic natural fire regimes, where their ecology is known, including techniques such as prescribed burns and wildfire management
- Avoiding manipulating natural or well-established fire regimes as a means of meeting international climate change obligations
- Establishing reliable fire monitoring systems that provide early warning of high fire risk and fire occurrence, and include evaluation of ecological and human impacts of fire.
- Preventing further forest loss and degradation from recurrent catastrophic fires, and reduce fire risk in forested landscapes, through ecologically appropriate restoration
- Incorporating considerations of fire management when planning to maximise forest resilience and land use adaptability to climate change



Position Paper

January 2002

One of a series of position papers produced as WWF's response to the WWF/IUCN Forests for Life strategy and WWF's current five-year target-driven programme on forests. For further details contact

Jill Bowling
WWF International
Tel: +41-(0)22-364-9010
jbowling@wwfint.org