



Research Spotlight

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Wildfire Impacts Increasing

Wildland fires on forest and other lands mostly go undocumented worldwide. But recently, increases in numbers of wildland fires are being reported in many regions. Studies predict this trend to continue with climate change.

Fire often plays an essential role in ecosystem function. Fire also can have serious negative impacts on human safety, health, regional economies, and climate change. Fire management (fire suppression and prescribed use of fire) is increasing in complexity with greater range and intensity of environmental, social, and economic impacts from fire. Fire researchers and managers from around the world are working to improve the understanding of these impacts and develop new fire management techniques.

The International Union of Forest Research Organizations (IUFRO) is a global network for forest science cooperation, uniting over 15,000 scientists in almost 700 member organizations from 110 countries. IUFRO serves as a liaison among its members and several international organizations in addressing common issues related to forests and trees worldwide. One of many areas in which members of IUFRO collaborate is in promoting the exchange of fire research and fire management knowledge within the international fire community.

In May 2007, IUFRO members participated in the 4th International Wildland Fire Conference in Sevilla, Spain, where state-of-the art fire science, fire management and fire management training information was presented. The meeting was held under the auspices of the United Nations and European Commission and hosted by the Government of Spain and, regionally, Andalusia. Key findings from the conference include

- Demographic changes are altering sustainable fire regimes
- Widespread poverty associated with unemployment, exurban migration, and land tenure conflict is resulting in more human-caused fires
- Fire is increasingly used in land-use conversions as vegetation types change, notably in the tropics, and land use is expanded into fire-sensitive areas, for example, wetlands
- The costs of fire suppression are increasing
- Expansion of the wildland-urban interface is increasing the vulnerability and exposure of rural settlements to severe damage from fires
- Consequences of climate change include extreme droughts; desiccation of wetlands; thawing of permafrost; a general trend of increased area burned, fire intensity, and fire severity; and longer fire seasons
- Human health and security is threatened by increased wildfire activity releasing more pollutants and causing greater public exposure to hazardous emissions
- Human security and peace is threatened by fires burning on radioactively contaminated lands, areas with unresolved conflicts, and territories with post-war hazards such as landmines and unexploded ordnance.

For more information from the 4th International Wildland Conference: <http://www.fire.uni-freiburg.de/sevilla-2007.html>. IUFRO links to several international fire research programmes. A joint fire information system can be found through the Global Fire Monitoring Center: <http://www.fire.uni-freiburg.de/>. For details on IUFRO and forest fires: <http://www.iufro.org/science/divisions/division-8/80000/80100/80110/>.

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