

Managing wildfire is an important global issue given increased interactions among people, fire, and wildlands. While studies have shown fire has effects on ecosystem structure and functioning, there is uncertainty of its consequences to ecosystem services due to feedbacks among land cover, invasive species, and climate change. Thus, understanding the ecological and societal consequences of wildfire is key for many government, research, and conservation organizations.

Research and monitoring of Neotropical fires has not been as central to land management as in temperate and boreal regions due to the misconception of a predominantly humid environment and the smaller extent of fires. However, fire-prone grasslands, shrublands, and dry forests are abundant, and the cumulative effect of small fires has not been documented. Climate change, extended drought, and human-induced landscape fragmentation have the potential to greatly expand fire-prone areas to moist and wet tropical forests and grasslands traditionally fire-free.

This issue includes research presented at the Caribbean Fire Ecology and Management Symposium held in San Juan, Puerto Rico 17–19 April 2007. A clear message derived from the symposium is that human activities and fire are intricately linked in the Neotropics. Logging, road building, and forest fragmentation increase the likelihood of fire. Most wildfires in the Caribbean are a result of human ignition. There is no coordinated documentation, research, and management of wildfire among the nations of the Neotropics.

Articles here assess the role of fire over broad regions, i.e., the Amazon (Cochrane and Laurance), Caribbean (Robbins et al.), and Mexico (Rodríguez Trejo); and more

specifically in high elevation montane forests in the Dominican Republic (Sherman et al.), and fire dependant pine forests (O'Brien et al.). Alteration of forest cover has effects on fuels (see Brandeis and Woodall) and the interface between grasslands and forests (see Meddens et al.). González et al. assess the edge effect in forest fragments in terms of wood decomposition and Gould et al. measure woody biomass accumulation. Jain et al. review fire effects on soils and present a soil burn severity index. Papers by Weaver and Schwagerl and Santiago García et al. assess reforestation in tropical dry forests—an anthropogenically threatened ecosystem where restoration is often hampered by wildfire. It is my hope that this issue will provide good information for land management and stimulate further research on the topic.

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