



## Fire evolution in the eastern Andean slopes since 1982

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Future scenarios of climate change present unprecedented challenges to ecosystems on the Andean slopes. Major simulation models predict a 4 °C temperature increase by 2100 in these areas. Taking a change in temperature with elevation of 5.5°C per 1000m, this will require plants to migrate ~800m altitudinally within a single generation to remain in equilibrium with climate. The speed and magnitude of climate change raises acute questions for conservation biologists with regard to biodiversity hotspots. Among these questions, one of special interest is whether there exist potential barriers—natural or anthropogenic—that might hinder tree migration. This last point is of singular importance in the high Andes due to anthropogenic tree line depression caused by frequent burning of the high altitude puna grasslands. However, almost nothing is known about fire regimes in the puna and the surrounding Tropical Cloud Montane Forests (TMCFs). The present proposal builds upon the Joint Research Centre's global burned area database from 1982-1999 to answer two fire questions: i) What is the fire history evolution in the High-Andean Puna-TMCFs transitions and ii) how have local protected areas suffered from fire disturbances since the 80's. Improving our knowledge on these two questions will guide the conservation efforts in the area.