

Fire management by traditional communities in Brazil

Ludivine Eloy^{1,7*}, Rossano M. Ramos², Marcus Schmidt³, Katia Y. Ono⁴, Angela Steward⁵, Joice Ferreira⁶

¹ Universidade de Brasília, (UNB), Brasília, Brasil;

² Instituto Brasileiro de Meio Ambiente e Recursos Naturais Renováveis (Ibama), Brasília, Brasil;

³ Universidade de São Paulo, (USP), São Paulo, Brasil;

⁴ Instituto SocioAmbiental (ISA), São Paulo, Brasil;

⁵ Universidade Federal do Pará, Belém, Brasil;

⁶ Embrapa Amazônia Oriental, Belém, Brasil,

⁷ Centro Nacional de Pesquisa Científica (CNRS), Montpellier, France. *E-mail: ludivine.elay@gmail.com

ABSTRACT – Traditional ecological knowledge about fire management is internationally recognized as strategic to mitigate and to adapt to climate changes, conserve biodiversity and ecosystems services and to support the Integrated Fire Management. The objective of this study was to investigate the diversity of the uses of fire in Brazil, evaluating the wildfires causes and identifying possibilities of dialogue of knowledge about the problem. The results are based on a literature review and experiences with fire management in different regions and socio-cultural contexts in the country. The multiplicity and regularity of the uses of fire carried out by indigenous, quilombola and other traditional communities has productive but also symbolic motivations, involving collective and individual practices of landscape management at different scales. For many of these communities, the recurrence of wildfires started to become evident in the 2000s and is related to several interdependent factors. Climate change, associated with changes in environmental, political and economic conditions, increased sources of ignition and generated fuel load, which modifies the seasonality of the burns and the behavior of the fire. On the other hand, the recurrence of fires, combined with the gradual overcoming of the zero-fire paradigm, opened possibilities for dialogue between managers, researchers and traditional populations, providing a better understanding of the complexity and transformations of local uses and fire behaviors. Despite these changes, there is still a need for a dialogue between different stakeholders and scales of environmental governance in order to recognize and respect the dynamic and innovative nature of traditional fire management knowledge. In many regions, the anti-fire discourse is promoted by agribusiness actors, as part of a narrative contesting the territorial rights of traditional peoples and communities. In addition, the literature on the subject also shows a separation between an "objective science" and "traditional uses" of fire, incorporating only partially the traditional ecological knowledge in management decisions. The carrying out of joint activities of monitoring, planning and experiments related to fire can create learning situations where the different actors may contribute to develop adaptive strategies to cope with changing fire regimes.

Keywords: traditional ecological knowledge, integrated fire management, wildfires.