

Transforming fire suppression into an intercultural and participative fire management policy in Canaima National Park, Venezuela. A learning together and Indigenous, academic and institutional knowledge integration process

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ABSTRACT – Canaima National Park (CNP, Venezuela), located in the core of Guiana Shield and inhabited by the Pemón indigenous people, is an area of great value due to its biological and cultural singularity. High incidence of fires, together with increased forest vulnerability to fire as a result of global climate and socio-environmental changes, have been considered threats, since they could put at risk, both ecosystems and human well-being. The conflict over fire use is exacerbated by the fact that whereas the Pemón depend for their livelihood on the use of fire, the policy of CNP government agencies has been fire exclusion (although this is not effectively enforced). The aim of this work is to present the experience gained during the development, for almost 20 years, of three participative and trans-disciplinary research-action areas: 1) long-term indigenous, fire-fighters and scientists collaborative fire experiments to study fire behavior and effects on bio-geo-chemical cycles and biodiversity; 2) facilitation of the process of collection, systematization and transmission of ancestral knowledge inside the very same Pemón Indigenous communities, regarding to the origin, use and fire management techniques, and 3) articulation of knowledge and experiences for the formulation of a legitimate intercultural fire management policy, and the participation of different actors involved in the socio-ecological issues of the Park (Indigenous people, environmental managers, fire-fighters, academics, etc.). Our results reveal a sophisticated Indigenous knowledge system about the use of fire for the main subsistence activities, especially shifting cultivation, and collaborative burning practices in savanna-forests borders to protect forest from catastrophic wildfires. Furthermore, ecological studies showed fire exclusion promotes “megafires” by accumulation of fuel material enhanced by current drier and hotter climatic conditions. Thus, through the development of a systemic approach, based on learning together and long-term cooperative fire experiments with Pemón Indigenous communities, forest fire-fighters and the collaboration and exchange of different stakeholders, a shift of the fire paradigm was successfully negotiated that valorise the relevance of Pemón millenary culture for a sustainable resources management as well as adaptation to climate change.

Keywords: Long-term fire experiment; fire management policy; Pemón Indigenous communities; savanna; Canaima National Park

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