Towards an intercultural and participative management and conservation policy: The value of local indigenous knowledge for sustainable management and conservation of natural resources in Canaima National Park, Ve

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UNIVERSIDAD SIMÓN BOLÍVAR

DISEÑO DE PLANES DE ACCIÓN EN CAMBIO CLIMÁTICO

Embajada Británica Caracas

INPARQUES

UNIVERSIDAD CENTRAL CARACAS - VENEZUELA

IVIC Instituto Venezolano de Investigaciones Científicas

BRITISH ACADEMY for the humanities and social sciences

Indigenous Lands protect environment

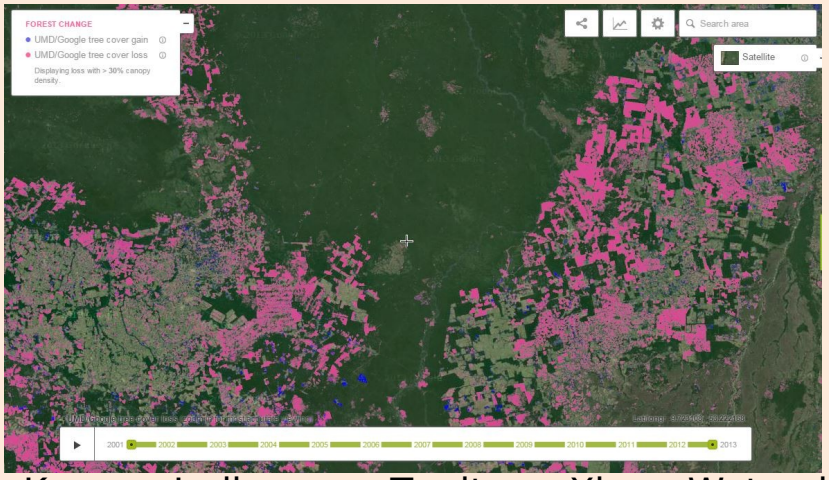
Increasing evidence that Indigenous Lands protect the natural environment, e.g. reduced rates of deforestation and habitat conversion, and lower green house gas (GHG) emissions, compared to surrounding areas:

e.g. Stevens et al. (2014) - study of 80 forest areas in 14 countries in South Asia, East Africa, and Latin America

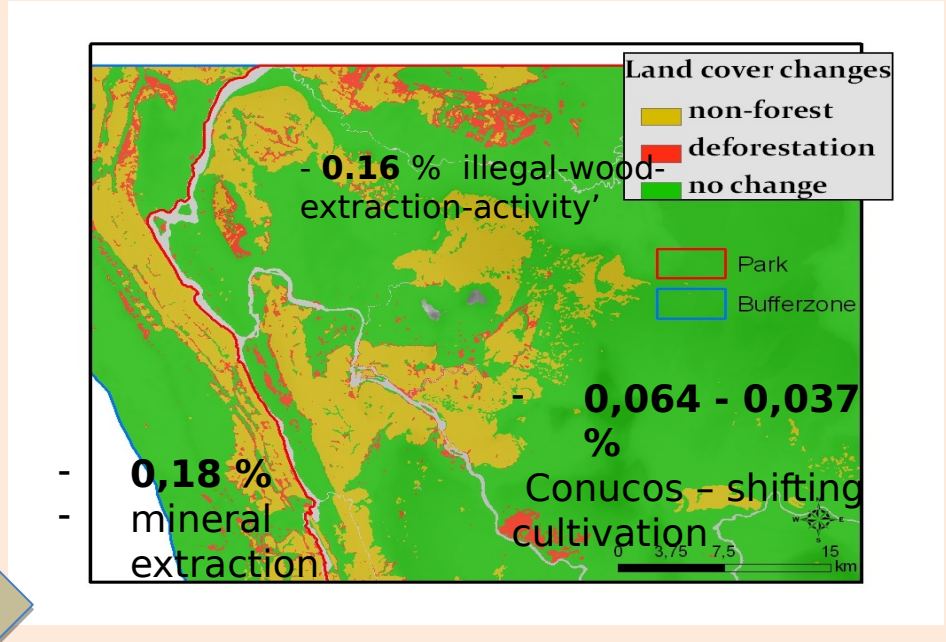
Ricketts et al. (2010) for Brazilian Amazon

Carranza et al. (2014) Brazilian cerrado

Flantua and Bilbao (2013) Venezuelan Forest



Kayapo Indigenous Territory, Xingu Watershed, Mato Grosso, Brazil (Source: Hansen et al. 2013)



The use of fire for shifting agriculture and hunting is a common sustainable practice by Amerindian Indigenous people in tropical areas and constitutes the main subsistence activities.

CONUCO
(shifting cultivation practices within the forest)

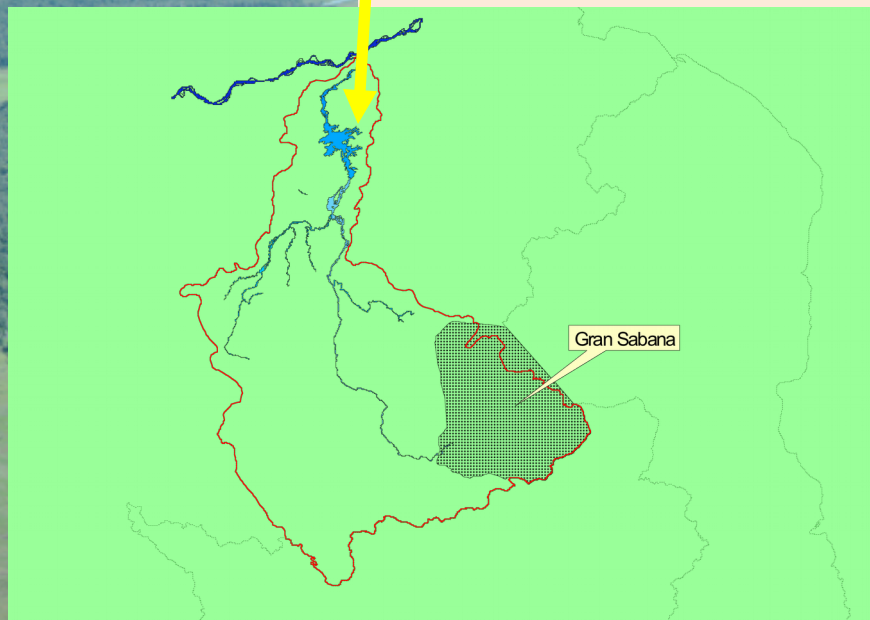
HUNTING
(savanna-forest borders)

Dominant discourse on Indigenous fire management

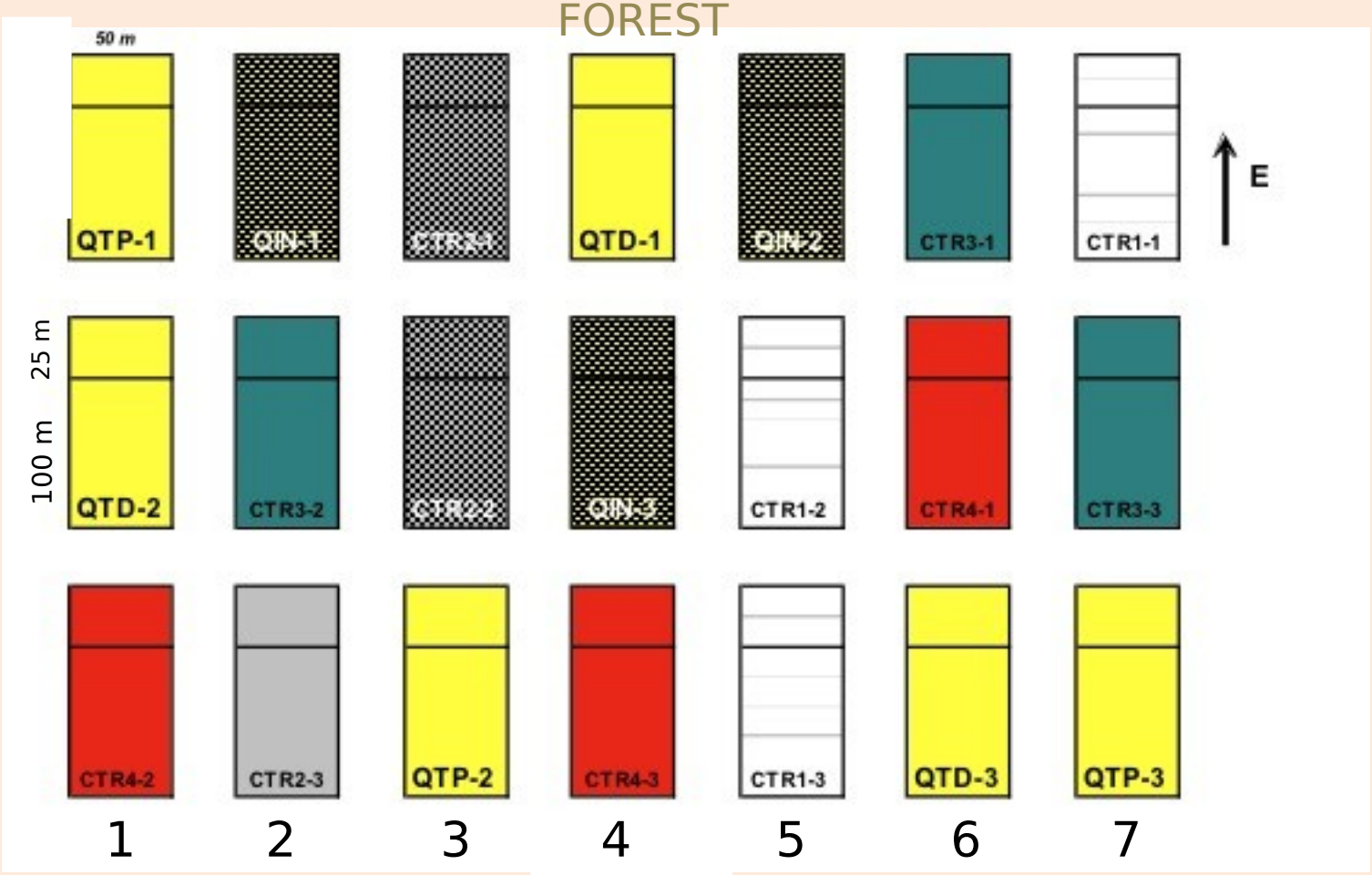
- Fire are a threat to forests, and therefore fires should be prevented and controlled.

- Policy and funding focused on fire prevention and fire fighting.

ne experiences from Canaima National Park, Venezuela



FOREST

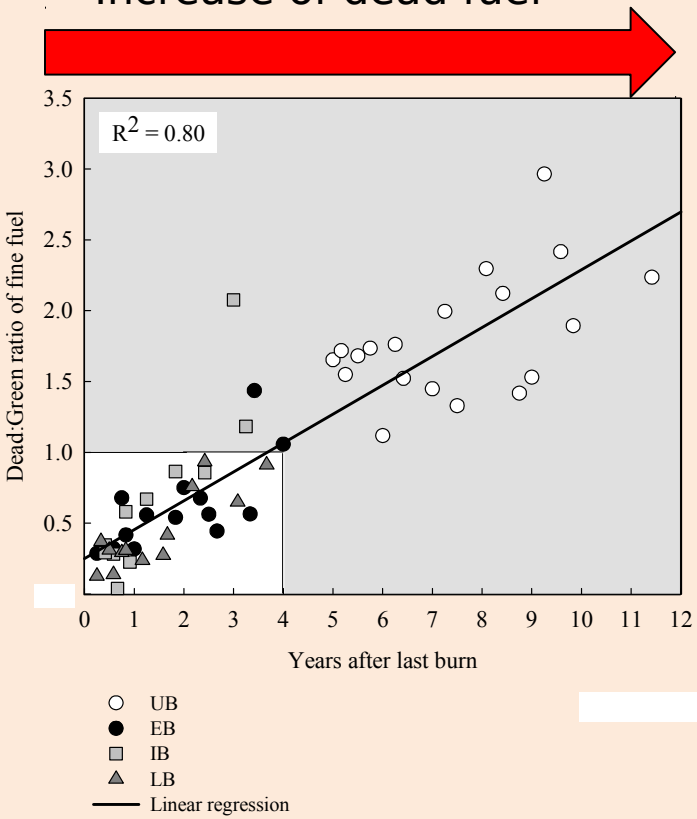


SAVANNA

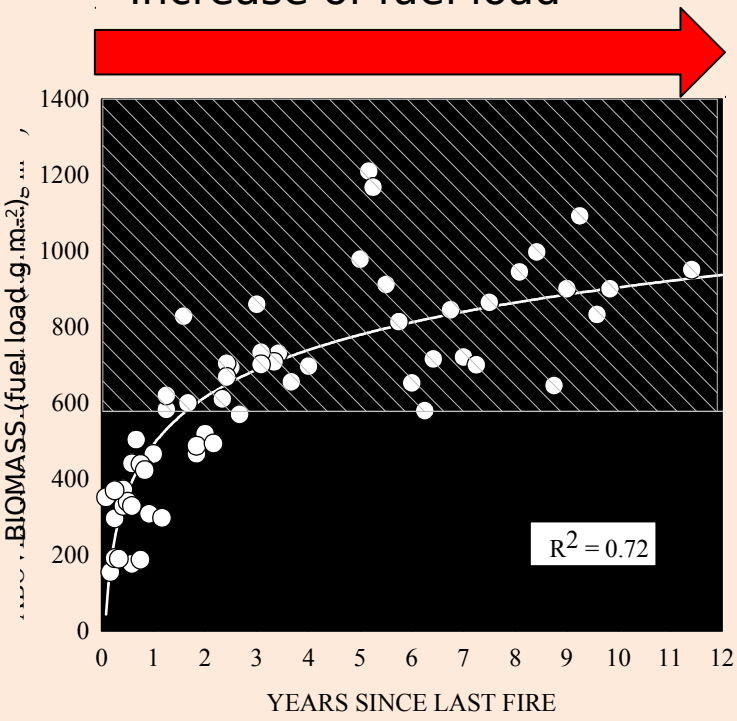
SAVANNA – FOREST TRANSITION

Fire suppression leads to an increase in dry fuel loading predisposing to high intensity fires!

Increase of dead fuel

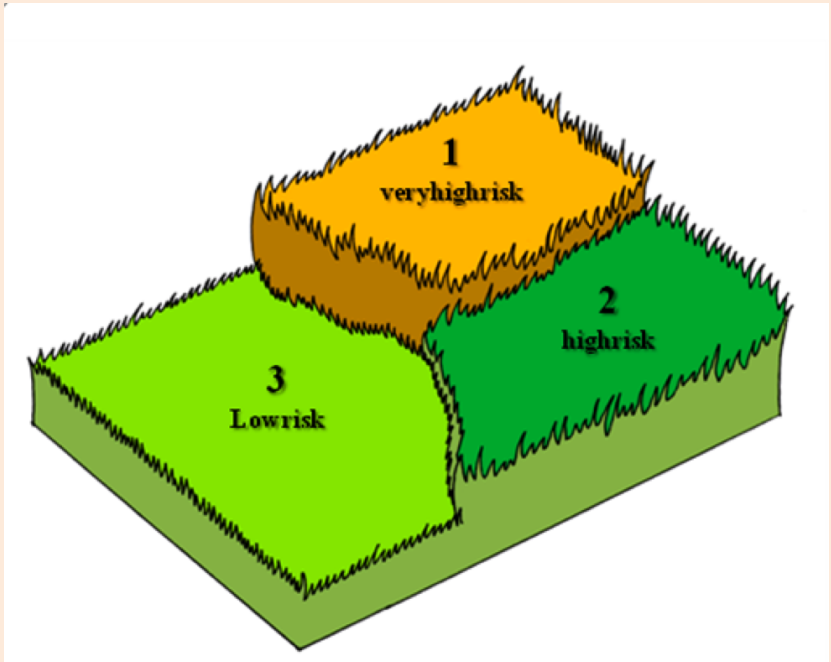


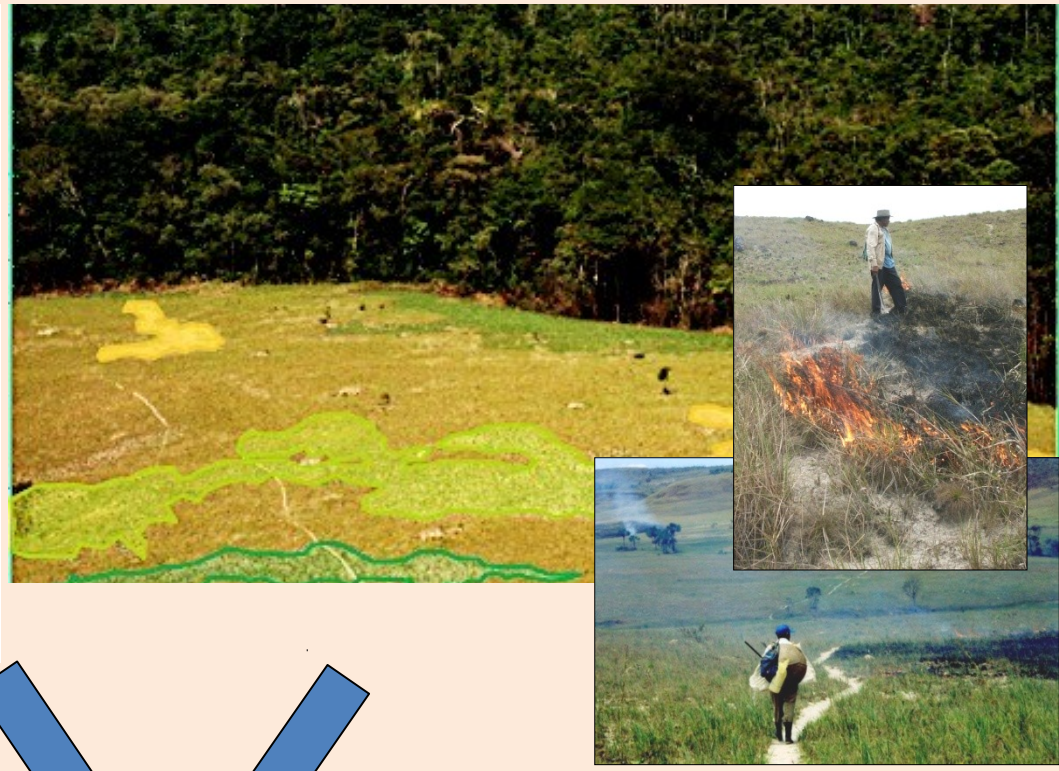
Increase of fuel load



To summarize, the heterogeneous conditions generated by fire behavior variability could lead to a variety of grassland environments as regards the amount of biomass (176-1271 g m^{-2}), dead/live ratios (0.36-3.0) and biodiversity (species abundance and composition, data not shown) produced by the exposure to burning over time in different areas.

Gilbaboetal.2010





Savanna vegetation could support the creation of a mosaic of patches with different fire histories that could be used as firewalls, reducing the risk of hazardous wildfires, mainly in the vulnerable and diverse savanna-forest transitions. This technique is referred to

This technique imitates ancient practices employed for centuries by the Pemon people through the cooperative burning of savannas in the use of fire for the sustainable management of the savanna–forest boundaries

Participative Action-Research Projects

- IAB (Interactions atmosphere – Biosphere of the 'Gran Sabana'),
- RISK (Risk factors in the reduction of habitats in Canaima National Park: vulnerability and tools for sustainable development),
- APOK (Ecological and traditional knowledge bases of fire of Pemón people: local solutions for global climate change problems).
- Development of a practical action plan and agreement, for integrating community owned solutions and scientific research into national climate change mitigation and adaptation policies.

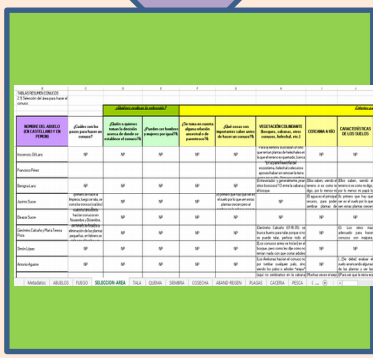
Long term-fire experiments in permanent plots savanna-forest gradient

Training and integration of the team: Indigenous researchers and academics

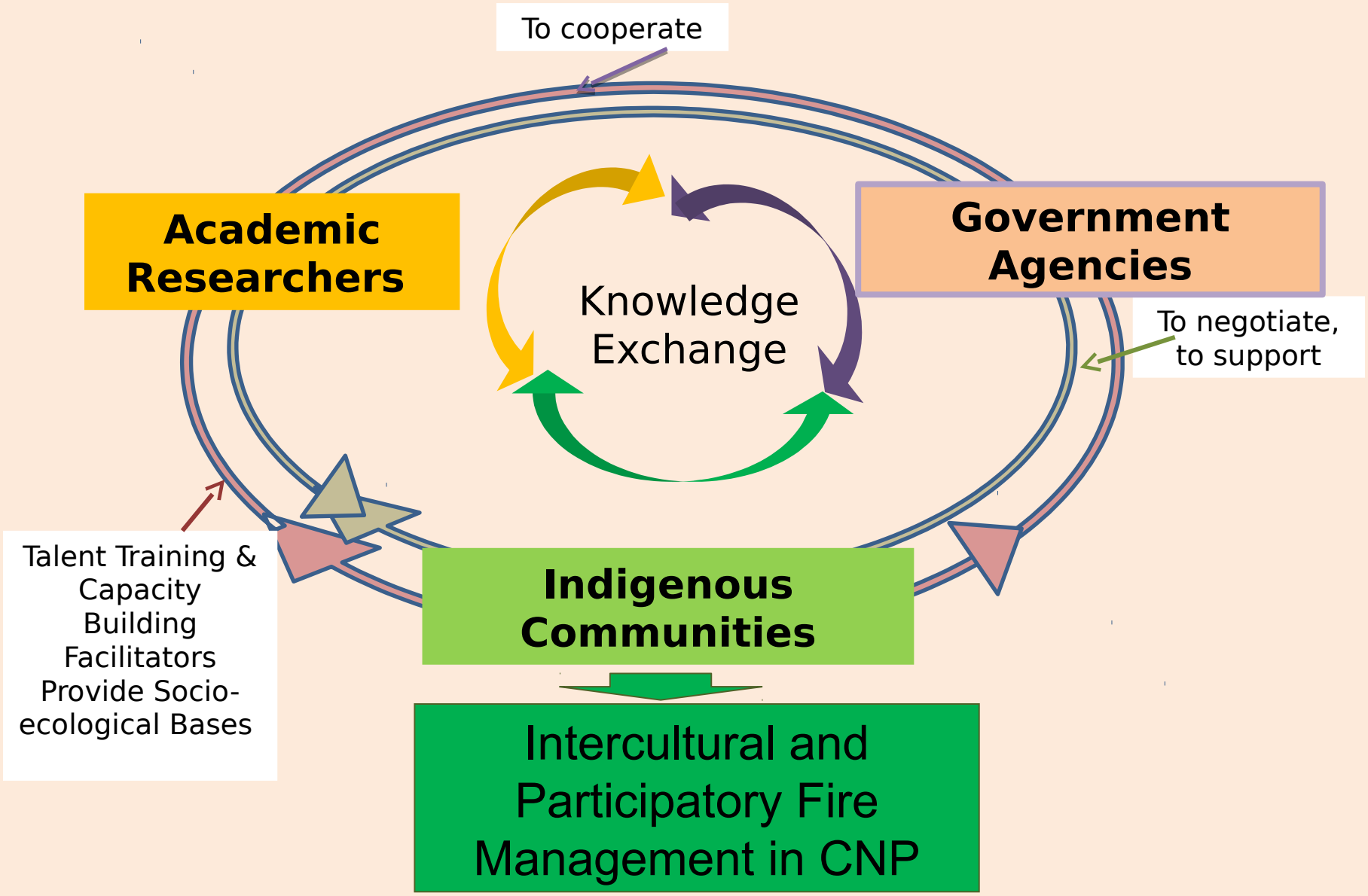
Intercultural interface for dialogue between IP, Academics and Governmental Institutions

Facilitated the process of collection, systematization and transmission of IP knowledge

Development of articulated knowledge for the foundation of a new fire management paradigm



TOWARDS A PROPOSAL OF LEGITIMATE AND EFFECTIVE ENVIRONMENTAL FIRE MANAGEMENT POLICY



Advances

- Dialogue between Indigenous communities, academics and institutions.
- Greater respect and valorisation for Indigenous knowledge by academics and institutions
- Greater confidence and trust in institutions by Indigenous peoples
- Commitment by institutions including Indigenous knowledge and participation within fire management plans and development of a practical action plan and agreement, for integrating community owned solutions and scientific research into national climate change mitigation and adaptation policies.

The articulation of traditional and academic-scientific knowledge is a promising strategy for the formulation of effective fire management policies in the CNP that could be more successful for forest conservation and climate change mitigation and adaptation, as well as the conservation of Pemón cultural integrity.

Challenges - debate

How to change the academic framework to promote participatory action research?