



A participatory and collaborative governance experience for managing exotic conifer invasions in Bariloche, Argentina.

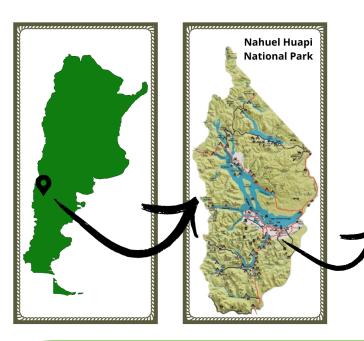
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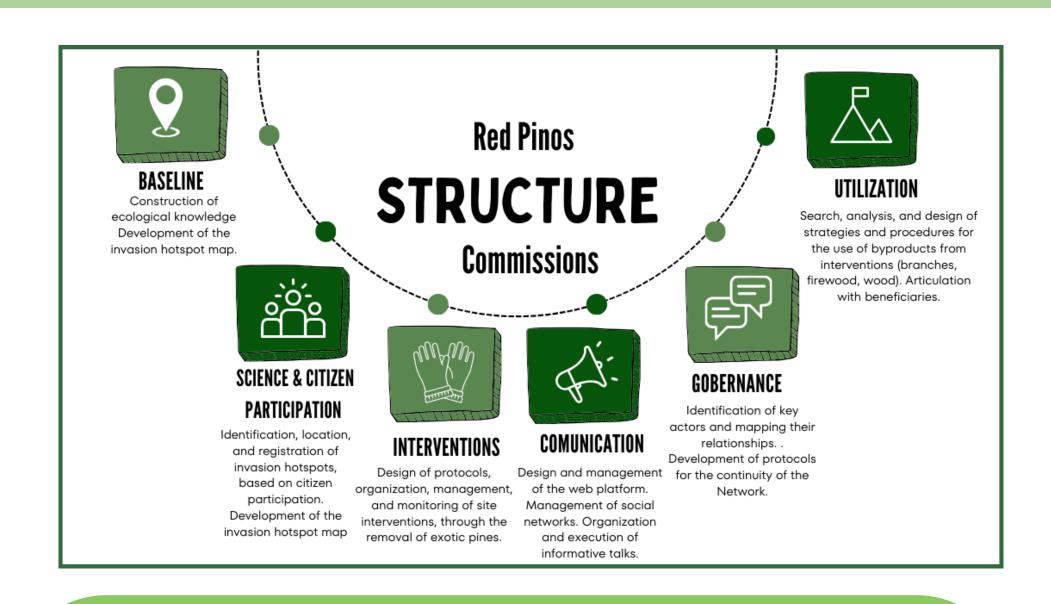
## Introduction

Invasion of pines in Bariloche: a significant challenge to biodiversity conservation and sustainable forest management





San Carlos de Bariloche is located in the northern Patagonia of Argentina, within the Nahuel Huapi National Park, a protected area that conserves different ecoregions of the Patagonian Andes and its great biodiversity. In this context, the invasion of exotic pines in urban-natural interface areas represents a complex socio-environmental issue.



Red Pinos is a participatory and collaborative governance structure, which has emerged as a neccesary and alternative for articulating and coordinating efforts to address this issue in a comprehensive and holistic manner.

Objective: Characterize Red PINOS' role in mapping social actors involved in managing pine invasion in Bariloche's natural-urban interface.

Methodology: Actor mapping and social network analysis.

30 actor groups from public, private, academic, and civil society sectors was identified.

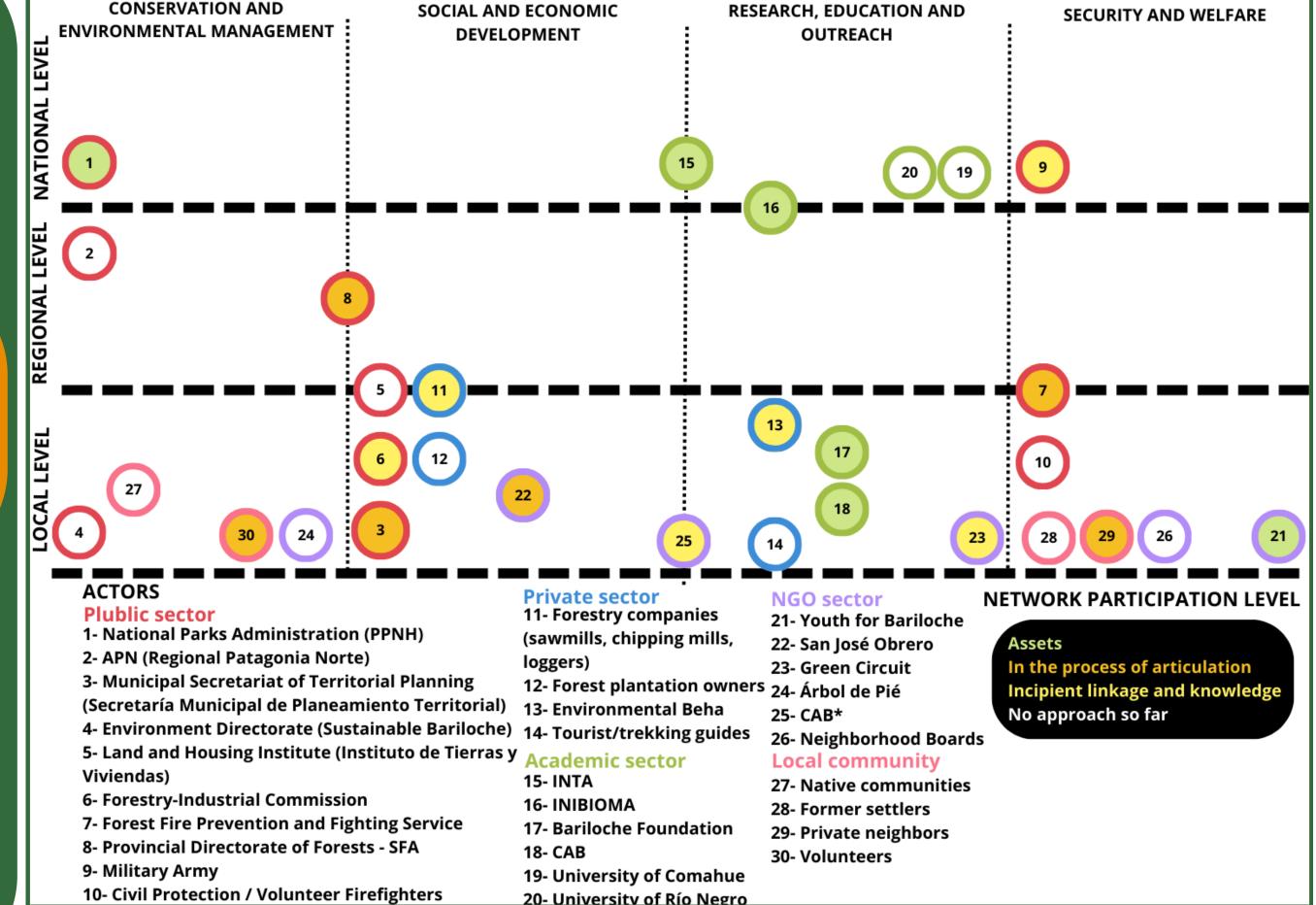
Key Findings: A multi-actor round table was established, comprising mainly academic-scientific members, followed by public sector and civil society.

Impact: Initial links have been established with 70% of actor groups, fostering collaboration across sectors.

The actor map is organized by:

- Geographical levels: Actors are grouped into national, regional, and local levels.
- Sectors: Five sectors are represented:
  - Public sector (red): e.g., National Parks, fire prevention.
- Private sector (blue): e.g., forestry companies. Academic-scientific sector (green): e.g., INTA, universities.
- NGOs (purple): e.g., environmental collectives.
- Local community (pink): e.g., indigenous groups, neighbors.
- Areas of influence: Conservation, social development, research, and security.
- Participation levels:
  - Strong participation (green). ∘ In the process of articulation (orange). ∘ No approach (white).
- Incipient links (yellow).

The map highlights the complexity and diversity of actors involved in managing pine invasion in Bariloche, each with different levels of influence and distinct areas of focus. The network is dynamic, comprising public, private, academic, NGO, and local community actors, with scientific and public sector players dominating decision-making processes, while local community and private sector participation remains more fragmented or incipient. This analysis allows for a better understanding of the network structure, helping to identify gaps in collaboration and opportunities to strengthen articulation between different sectors and areas of influence.



## Discussion

The partial results demonstrate that Red Pinos is facilitating greater communication, consensus, cooperation, and synergy among government entities, non-governmental organizations, the scientific community, and civil society regarding action strategies for more efficient and effective pine invasion management.

Different actions, such as the collaborative removal campaigns carried out, the engagement of various individuals seeking advice, the progress in connections with different groups of stakeholders, and the growth of the Network, represent signs of the importance of the Red Pino as a nexus and a space for generating new ways of managing pine invasions.



