



Environmental Governance in Paraguayan Humid Chaco, Pantanal, and Cerrado: State and Indigenous Narratives on the Conservation of Grasslands and Savannas, 2000–2025

Baldivieso-Soruco, Carla ^{1, 2}; Martin, Adriana ^{1, 5}; Bolívar-Santamaría, Sergio ^{1, 8}; Andrade-Díaz, Soledad ^{1, 5, 10}; Burton, Jamie ⁵; Coral, Claudia ⁴; Cárcamo Mallen, Robert ^{1, 4}; Musalem, Karim ⁶; Rodas, Oscar ⁶; Roche, Patricia ⁶; Bogarín, Ximena ⁶; Eufemia, Luca ^{1, 7}; Pedrozo, Alicia ⁶; Zimmerman, Emma ⁷; Medina, Leonardo ^{1, 9}; Sieber, Stefan ^{1, 8}; Bonatti; Michelle ^{1, 3, 9}

1 Leibniz Centre for Agricultural Landscape Research (ZALF) e. V., International Research Group on Development-Oriented Agriculture, Müncheberg, Germany.
2 Comunidad de Estudios JAINA, Tarija, Bolivia
3 Universidade Vila Velha, Espírito Santo, Brazil
4 Humboldt University of Berlin, Department of Agricultural Economics, Agri-Food Value Chain Management, Berlin, Germany
5 Freie Universität Berlin, Institute of Geographical Sciences, Human-Environment Interaction Modeling, Berlin, Germany
6 World Wide Fund for Nature (WWF) Paraguay, Asunción, Paraguay

7 World Wide Fund for Nature (WWF), Mediterranean Marine Initiative, Rome, Italy
8 Humboldt University of Berlin, Albrecht Daniel Thaer Institute of Agricultural and Horticultural Sciences, Faculty of Life Sciences, Berlin, Germany
9 Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT), Brazil
10 Leibniz Centre for Agricultural Landscape Research (ZALF) e. V., Research Group on Sustainable Grassland Systems, Müncheberg, Germany

Manuscript status: In preparation — data analysis and preliminary results.

Introduction

The Paraguayan Humid Chaco, the Pantanal, and the Cerrado face threats stemming from the expansion of agriculture and livestock ranching, as well as infrastructure development. Despite their value in terms of biodiversity and the economy, and territorial claims by indigenous and grassroots communities, these ecosystems remain inadequately protected. In this context, drawing on political ecology, we examine how indigenous and community organizations articulate narratives of conservation and territoriality, and how state policy discourses have shaped the conservation of grasslands and savannas in Paraguay between 2000 and 2025.

Theoretical Framework and Methodology

Theoretically, we draw on Blaser’s “*ontology of environmental politics*” (2009, 2013, 2019) and on notions of *territory* and *territoriality* (Fernandes, 2009a, 2009b; Svampa, 2019).

- “***Ontology of environmental politics***”: the existence of different ways of understanding the world, shaped by the interaction between humans and non-humans, which takes concrete form through certain practices and manifests itself in the form of narratives that give rise to different worldviews (Blaser, 2019). Blaser develops this term based on studies conducted in the Paraguayan Chaco with the Yshir indigenous people (Blaser, 2009, 2013).
- In general terms, ***territory*** is the space appropriated and bounded by power dynamics, while ***territoriality*** is the practice, process and experience of inhabiting that space.

Methodologically, we combine narrative analysis as an interpretive approach, using content analysis of statements of four document corpuses, divided in two tiers, as presented in Table 1.

Item	Tier 1 (Primary)		Tier 2 (Triangulation)	
	1.1. Community-based narrative: Statements, protocols, and reports from indigenous and community organizations	1.2. State narrative: State Policy Documents	2.1. NGO reports	2.2. News
Sources	N= 376 CLOC Vía Campesina - Capítulo Paraguay Federación por la Autodeterminación de los Pueblos Indígenas Unión de Comunidades Indígenas de la Nación Yshir	N= 39 National Laws Environmental Plans National Decrees	Work in progress	

Table 1: Sources of information.

Limitations: Narratives limited to secondary data, which narrows the scope of ontological analysis.

Results and Discussion

We found that the grasslands and savannas are contested territories based on different rationales. The vision of “**peasant-indigenous territory with agrarian reform**” in corpus 1.1 (*Community-based narrative*) emphasizes control over ancestral territory, conservation through production outside a market-driven logic, and life in a “non-toxic” environment (in reference to the impacts of agrochemicals). The vision of “**conservationist-productive state territory**” in corpus 1.2 (*State narrative*) emphasizes control of the territory for public benefit, and regulates conservation, acknowledging the land tenure conflict and its origin (indigenous dispossession).

Table 2 presents the dimensions of analysis for document corpus 1.1 and 1.2, as well as the relationship identified in each case.

Dimension	1.1. Community-based narrative	1.2. State narrative	Relationship
When? (temporality)	Dual record: long-standing indigenous identity (“hundreds of years of indigenous peoples”) + documentary-notarial time (resolutions, hectares, dates). There is no distinct ecological timeline: The origin is always anchored in the organization. The horizon is organizational continuity.	Institutional-regulatory reorganization from SEAM to MADES, sequence of time treaty ratifications (CBD, CITES, Ramsar, Paris). The horizon is presented as regulatory goals and consolidated protected area systems.	<i>Exclusionary</i> : The two timeframes almost never overlap because they measure different things (institutions vs. mobilization).
How? (causal logic / solution)	It identifies the same causal chain: agribusiness, monoculture, “co-optation” by foreign capital, and land grabbing by elites. Proposed solution: through comprehensive agrarian economic benefits reform/land redistribution and food sovereignty/agroecology; granting of title to ancestral lands as a separate legal registry is of marginal importance.	It documents the same causal chain—“traditional agricultural and livestock development” and international demand for meat— and explicitly states that the economic benefits “do not reach the local community or the indigenous peoples.” Proposed solution: through regulatory and administrative measures—permits, registration, enforcement authorities, and criminal and administrative penalties.	<i>Partial disagreement</i> : Full agreement on the cause (agribusiness + international demand). <i>Direct conflict over the solution</i> : the state’s approach is “protected area” (public domain); the community’s approach is “redistributed land” (peasant and indigenous use).
Who? (agency / protagonism)	Communities portray themselves as protagonists in 30% of their appearances—as agents of their own outcomes (“the result of organized struggle”)—and hold the state responsible in 45% of the state’s appearances. The first person voice is the norm in the corpus. The displaced/repressed actor is the central narrative focus, almost always with named victims.	Indigenous peoples are central to 100% of the documents, yet they have no voice of their own in any of them. Indigenous dispossession is acknowledged, but only in the diagnostic sections of strategic instruments (ENPAB, Pantanal Plan), not as an operative provision in binding legislation; indigenous leadership is almost always mediated by the INDI.	<i>Mutual exclusion of agency</i> . <i>Shared exception</i> : both identify the dispossession of Indigenous peoples as a fact.
What? (values / conservation objectives)	Conservation = habitable, “non-toxic” territory under peasant and Indigenous control. Environmental damage is almost always intertwined with harm to specific individuals (e.g., children affected by agrochemical spraying), and never as an abstract loss of biodiversity. Legitimizing value: peasants as political subject (UN Declaration on the Rights of Peasants).	Conservation = an ecological-forestry category within a public domain framework. The environmental/ecological problem is relatively visible. Legitimizing value: “social interest and public utility” (1992 Constitution). SINASIP’s own assessment: 70% of protected areas are subject to land tenure conflicts involving indigenous claims.	<i>Mutual conceptual exclusion</i> : On the meaning of conservation and what the process involves.
Why? (conservation principles)	Dominant logic: Four operational logics: 1) legal-agroecological/food sovereignty, administrative (dominant), 2) with a focus on conservation economic-utilitarian (REDD+, PES, through alternative production “natural capital”), 3) scientific-methods, rather than taking land out of use. It also emphasizes the cultural/ancestral worldview and the legal-constitutional framework. It explicitly identifies and rejects market mechanisms (biodiversity PNPI credits, environmental offsets).	Four operational logics: 1) legal-agroecological/food sovereignty, administrative (dominant), 2) economic-utilitarian (REDD+, PES, scientific-methods), 3) reciprocal logic—indigenous through reciprocity (“jopói”) and legal pluralism—appears only in the PNPI. It also emphasizes the international compliance. A fifth, exceptional logic—indigenous through reciprocity (“jopói”) and legal pluralism—appears only in the PNPI.	<i>Disagreement</i> : regarding market logic. It <i>partially and operationally complements</i> the worldview/territory axis through the PNPI, although that link goes within the PNPI itself, with a forest conservation incentive scheme that is structurally aligned with the market logic that the community rejects (<i>Disagreement</i>).

Table 2: Synthesis of the results based on core analytical dimensions and identified relationships.

Abbreviations: SEAM: Secretariat of the Environment (predecessor institution to MADES); MADES: Ministry of the Environment and Sustainable Development; CBD: Convention on Biological Diversity; CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora; ENPAB: National Strategy and Action Plan for Biodiversity Conservation; INDI: Paraguayan Institute for Indigenous Affairs; SINASIP: National System of Protected Wild Areas of Paraguay; REDD+: Reducing Emissions from Deforestation and Forest Degradation, plus the conservation, sustainable management, and enhancement of forest carbon stocks; PES: Payment for Ecosystem Services; EIA: Environmental Impact Assessment; PNPI: National Plan for Indigenous Peoples; INDERT: National Institute for Rural Development and Land.

Conclusions

The conceptual disagreements and exclusions identified—despite partial agreements (e.g., PNPI)—reveal different conceptions and horizons of governance. The analysis of these narratives provides us with a basis for reflecting on these “divergent” narratives in light of different “ontologies” that entail distinct forms of socio-territorial construction. Therefore, conservation is a process of construction, negotiation, and dispute among actors with varying degrees of agency and differing rationalities.

Acknowledgments

This work was carried out as part of the SULU Project — Safeguarding overlooked ecosystems: protect, manage and restore grasslands and savannas in Argentina, Colombia and Paraguay — funded by the International Climate Initiative (IKI) on behalf of the German Federal Ministry for the Environment, Climate Action, Nature Conservation, and Nuclear Safety (BMUKN). We thank our consortium partners for their contributions: World Wildlife Fund (WWF) Germany, Fundación Vida Silvestre Argentina, WWF Colombia, WWF Paraguay, the International Union for Conservation of Nature (IUCN) network, the Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF) e. V., and Global Networks GUG/agri benchmark.

Disclaimer

The content and main ideas presented in this poster are the sole responsibility of the authors and do not represent the official position of the funding institutions.

Poster references and link to the SULU project:

