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Article

Codifying and Commodifying Nature: Narratives on Forest Property Rights and the Implementation of Tenure Regularization Policies in Northwestern Argentina

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Abstract: Environmental resource management requires negotiation among state and non-state actors with conflicting goals and different levels of influence. In northwestern Argentina, forest policy implementation is described as weak, due to governance structure and ambiguities in the law. We studied how policy actors' attitudes and their positions in the forest governance network relate to the implementation of land tenure regularization in a context where land tenure regularization is at the core of struggles over environmental policies. We focused on the Chaco Salteño part of the Gran Chaco ecosystem, one of the world's major deforestation frontiers. We argue that the presence of weak advocacy coalitions requires an analysis of agency to understand this policy process. Our policy network analysis revealed a lack of clear contrasting factions, due to a core-periphery structure. The core of the network brings together all core beliefs but not all of the most influential actors. Assessing network centrality and reputational influence enabled us to identify actors with exceptional agency. We contribute to the debates on advocacy coalitions and on land tenure by distinguishing between attitudes toward tenure regularization policies and their actual implementation in a context where actors have diverging interests and objectives.

Keywords: Chaco Salteño; land tenure; policy networks; agency; content analysis



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1. Introduction

Policy implementation emerges as a result of the contestation among state and non-state actors involved in a policy debate that is characterized by substantial goal conflicts, important technical disputes, and multiple actors from several levels of government [1,2]. These kinds of policy processes cannot be understood only by looking at single entities; a closer look at specific parts of the political subsystem is needed [3]. The management of environmental resources, especially in federal states, is complex and requires negotiation among different types of actors [4]. More specifically, in Argentina, the implementation of forest policy is the result of the interaction between multiple levels of government [5,6].

In this paper, we studied empirically how policy actors' attitudes and their agency in forest governance at both group and actor levels relate to the practical implementation of land tenure regularization. Land tenure is at the core of development policies at the global level; however, land registration is not enough to guarantee tenure security [7]. There is a debate in the literature on the role of land tenure in developing and tropical regions in promoting conservation [8].

We studied a context where land tenure regularization is at the core of struggles over environmental policies. Identifying actors with exceptional agencies is crucial, as these actors can influence policy outcomes and outputs [9].

Our focus, in terms of topics, was on land tenure and forest law. Geographically, we focused on the Chaco Salteño, as it is characterized by a high level of contestation among different policy actors over the use of native forests. Forest policy has a high political salience in Salta Province, for several reasons: (1) a large share of the province is covered by native forests, which are inhabited by peasants and indigenous communities; (2) Salta constitutes a deforestation frontier and is experiencing dynamic processes of commodification and eviction of local communities; (3) people in Salta have contrasting views on forest management and the land tenure framework. In Salta Province, an ongoing, and mandated, participatory process involves key stakeholders in the implementation of the forest law. This process brings together multiple actors in a series of policy forums to help shape and implement forest policy.

In our study, we examined the following questions: (1) What are the primary land tenure attitudes, and are they consistent with advocacy coalition formation (policy networks vs. core beliefs/attitudes of policy actors)? and (2) In a context of weak coalitions, how do actors with exceptional agency influence policy implementation? We argue that the presence of weak advocacy coalitions requires an analysis of agency, and we hypothesize that the land tenure attitudes of actors with exceptional agencies can influence the implementation of land tenure policy—especially in the given context of a law that is open to wide interpretation.

1.1. Research Context

The Chaco Salteño is part of the Gran Chaco, the second largest forest in Latin America, which is currently a global deforestation hotspot [10]. The political economy of Salta province strongly depends on the forest, as the high forest coverage concurs with one of the highest levels of inequality in terms of income distribution in Argentina [11]. Currently, the majority of forest inhabitants—peasants (small-scale cattle ranchers known as criollos) and indigenous communities (mostly hunters and gatherers)—have no official land property titles [12]. The process of land concentration has its roots in the colonization process, starting with Spanish conquistadors in the 16th century, that led to the dispossession of communal land and the enclosure into privately owned large estates [13]. For centuries, it has existed in Argentina's real estate cadaster system [14], and since the 1990s, the practice is scaling up to new technologies [15]. Large-scale agribusiness farms (often belonging to distant owners), which make up less than 10% of all agricultural units, occupy more than two-thirds of Salta's agricultural land, and conflicts among land users are ongoing [16]. In fact, land in the Chaco Salteño is mostly private property (i.e., owned by large-scale producers), and only a small percentage is owned by the state [17].

While Salta Province has one of the highest shares of native forest coverage in Argentina, it has experienced very high deforestation rates between 2006 and 2017 [18]. Production of commodities (mostly beef and grains) and extraction of mineral resources have had major impacts on people living in the native forest. Forests have been removed using heavy machinery and substituted with annual crops (a process referred to as *agriculturización*) or with enclosed intensive pasture systems [19].

The Argentinian Forest Law (Law 26.133), issued in 2007, is the main policy for governing forests, and it is widely recognized that its implementation is a highly complex process [18]. The law has two instruments. The first is a zoning map that classifies forests based on their conservation value. The second is a payment for ecosystem services (PESs) scheme called “*fundo de la ley de bosques*” (i.e., forest law fund). In federal law, access to this scheme is conditional on clear land tenancy [20]. In Salta Province, however, the criteria are more restrictive: only entities with a land property title can access the scheme [21].

The presence of peasant and indigenous communities in native forests is addressed in the same laws. The importance of forest for indigenous peoples' and peasant communities' material and cultural reproduction is mentioned among the criteria for forest zoning in both federal (Criterion 10) and provincial forest law. Likewise, cultural ecosystem services are listed among forest ecosystem services that should be protected and enhanced in both

federal (Art. 5) and provincial forest law (Law 7543, Art. 3); in the latter, this is also one of the 11 criteria and indicators of environmental sustainability. However, the importance given to these aspects in the law stands in contrast to the difficulties that indigenous and peasant communities face in accessing the PES scheme, as most of them lack an official land title [21]. The forest law itself does not address the issue. Argentinean legal framework focuses on creating the instruments to register the use of land, but it seems to lack measures to guarantee rights to the land users aside from a land title. There is an ongoing process of indigenous land mapping; however, this does not necessarily lead to either a land title or tenure security [22]. In Salta's policy arena, some argue that peasant and indigenous communities' livelihoods must evolve for the sake of development and that agribusiness will bring economic development [23]. Others point out how that this model of economic growth is in fact accumulation by dispossession [19].

1.2. Conceptual Framework

Our aim in this study was twofold. First, we aimed to identify forest governance actors' attitudes to land tenure security. We used content analysis techniques to attribute policy actors' sentences from interviews to a set of attitudes defined in a codebook. Second, we systematically examined where these attitudes were positioned in the policy networks in order to understand actors' agency.

The advocacy coalition framework aims to provide policy scholars with the tools to investigate coalitions, learning, and policy change and to study how coalitions use their resources and strategies to influence the policy process. The framework is based on the assumption that individuals aim to transform attitudes into policy, and they look for allies in order to do so within an advocacy coalition [24]. One of the lessons presented in the advocacy coalition framework literature is that coordination among policy actors is more likely to result in policy outcomes if these actors share beliefs [2]. In cross-sectional studies, coalitions are identified by analyzing coordination among actors and attitudes [25]. To understand these coordination processes, it is necessary to study actors' interactions through policy networks, that is, networks among actors involved in public policymaking [26].

To address the various dimensions of our research questions, we combined a range of mixed quantitative and qualitative methods in a sequential research design. Integrating social network analysis and the advocacy coalition framework [25] enabled us to overcome the limitations of the older approach. Content analysis of policy actors' discourses [27–30] provided a better understanding of the structure of actors' discourse, and of actors' motivations and behavior [27–29]. For the content analysis, we coded sentences from semi-structured interviews with policy actors.

Finally, we created an instrument that enabled us to organize actors' attitudes to the controversial topic of land tenure regularization. We systematically looked for these attitudes by performing a content analysis of actors' interviews and assessing their position in the policy networks. To understand the process of coordination among actors, we also identified actors with exceptional agencies based on their position in the networks as defined in Christopoulos and Ingold [9]: policy entrepreneurs, policy brokers, and truly exceptional actors.

Policy entrepreneurs have a high effective size, positive Bonacich power, low constraint, high honest brokerage, and a low in-degree. Effective size [31] measures the number of ties of non-redundant contacts. Bonacich power [32] is a measure of centrality that describe the ability of the node to be connected to powerful ones. Honest brokerage measure the connections with otherwise will not be connected [33]. In-degree measures the number of ties that each node receives from other actors [34]. They tend to strategically use the advantage given by their structural position to gain power and increase their influence on the policy decision-making process.

Policy brokers have a low effective size, high constraint, and high honest brokerage [35]. They are strongly embedded in their network neighborhood (high constraint),

but they connect nodes that would not be connected without their presence. They seek to mediate contrasting positions with the aim of achieving a shared objective.

Truly exceptional actors have high values for centrality dimensions, including a high indegree and eigenvector, as well as a high level of honest brokerage and high effective size. This gives them a unique structural position and enables them to adjust their behavior according to different circumstances and their agenda [9].

2. Data and Methods

Data were collected between May 2018 and February 2019. We adapted an established survey instrument [36] that had been developed within the international research project Comparing Climate Change Policy Network (COMPON). The instrument is presented in supplementary material 1. We incorporated an open-ended section in order to collect policy actors' discourses on socioecological risks, land tenure regularization, and forest management policy. This made it possible to compare quantitative data deriving from multiple-choice opinion statements with qualitative data from the open-ended questions, thus enabling us to better understand policy actors' narratives. We collected three types of data: network data, node attributes, and textual data.

The respondents were representative of the participants in key policy forums in a broad sense. We approached representatives of all organizations participating in the following five policy forums: (1) the provincial land use map revision committee, established through Provincial Decree 3749/14 (in Spanish: Consejo Asesor de Revision de OTBN); (2) the provincial committee for silvopastoral forest management, established through Provincial Decree 588/17 (Consejo Asesor de Manejo de Bosques con Ganaderia Integrada); (3) the advisory committee of the "native forest and community" project (Bosques Nativos y Comunidades); (4) the governance board in Santa Victoria Este (in the north of Salta province); (5) the national board on climate change, whose composition we assessed through the institutional website of the Ministry of Agroindustry. This last forum is relevant because of the ongoing discussion of an action plan on native forests and climate change (as part of the United Nations Program on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, UN-REDD). We adopted a multilevel governance framework, as we analyzed connections between policy actors belonging to different forums at the local, provincial, and national levels.

Our sample of governance policy actors comprised 59 organizations. The overall response rate was 86.4% (52/59). One organization did not respond to the network section, and another instead responded only to the network section. In total, 52 organizations were part of at least one of our selected forums. Another six were included in the sample even though they were not part of any policy forums because they had other influential roles in policy governance; one organization participated in all sampled forums. The vast majority were members of at least two forums.

We analyzed the policy networks by mapping direct ties among the participants, recording (1) long-term mutual policy support, (2) exchange of scientific or technical information, and (3) meetings. Our data collection instrument also captured respondents' perceptions of other policy actors' influence on forest governance. Furthermore, it elicited views on socio-ecological risks and policy, as well as respondents' evaluation of tenure regularization and forest policy instruments in Argentina. The forums, all of which were set up for the implementation of forest management policies in the region, represent a venue where all stakeholders (from the private sector, state agencies, academia, NGOs, and forest inhabitants' local organizations) meet to discuss the formulation or the implementation of a specific policy instrument.

2.1. Core Beliefs

2.1.1. Identification and Assignment of Actors to Core Beliefs

Based on the collected data, we classified policy actors into three core belief groups. These groups focused on (1) profit maximization, (2) forest livelihoods, and (3) conservation, respectively [37].

Actors in the profit maximization category exhibited forest use preferences geared toward maximizing economic returns per hectare. These actors viewed environmental restrictions on land use as an obstacle to profit maximization. They demanded compensation for profit losses resulting from environmental regulations on production.

Actors in the second category perceived the forest as a crucial source of livelihood among *criollos* (small-scale cattle ranchers) and indigenous people. These actors felt that land use should primarily support the rights of people living in the forest, enabling small-scale *criollo* peasants and indigenous peoples to maintain their livelihood systems, which are considered under threat from agricultural expansion. The *criollos* make a living from extensive subsistence cattle ranching, while local indigenous peoples depend on the remaining native forests for cultural, economic, and social purposes.

Actors assigned to the conservation category emphasized the importance of forest ecosystem services and ecology. They prioritized the conservation of natural resources and the promotion of productive activities that are compatible with such protection.

This classification of actors into core belief groups enabled us to navigate the narratives of key forest management priorities discussed by all the actors participating in forest governance in Salta. The core beliefs serve to summarize the motivations driving decisions among stakeholders regarding the use of native forests. First, we identified the core beliefs using a combination of techniques derived from the methodological approach of the advocacy coalition framework [25,38]. Second, we assigned these core beliefs to each actor by combining classification by experts with cluster analysis of the policy networks.

2.1.2. Codebook for Identifying Actors' Land Tenure Attitudes

To identify actors' land tenure attitudes, we used two methods: opinion statement analysis and the analysis of key governance actors' narratives present in the open-ended questions. For the opinion statement analysis, we looked for patterns of responses in the statements relating to the topic. For the analysis of actors' narratives, we built a codebook that describes the key themes present in the actors' narratives. This allowed us to systematically identify the text units in the interviews that refer to the themes (or codes) described in the codebook.

We developed the codebook combining deductive and inductive methods. Working deductively, we identified specific theories that describe the expected positive social, economic, and environmental outcomes of land tenure regularization, as well as some critical views of its effects. Our objective was to understand forest governance actors' views on land tenure regularization policy in Salta. This policy is a controversial topic in the literature. While it is often described as a technical process, its practical implementation relates to beliefs and political systems. To understand the main theories on the links between land tenure and environmental outcomes, we reviewed the key literature. The following paragraph summarizes the literature that was instrumental in constructing the codebook.

The global sustainable development narrative, which attempts to reconcile economic growth, poverty reduction, and environmental protection, rests on two tenets. The first is the crucial role of land tenure, in the sense of clearly defined property rights [39]. Hardin's [40] work on the tragedy of the commons has provided legitimization for policies that promote clearly defined land tenure regimes by conferring property rights either to the state or to private entities [41]. Environmental and international development policies build on a perceived direct causal link between clear forest tenure rights and good environmental outcomes. The second tenet underpinning the narrative is the concept of ecosystem services, which is considered the main instrument to measure environmental outcomes and therefore

constitutes a prominent element in environmental policies [42]. The concept builds on two dimensions: interdependence between humans and nature, and measurement of the results of their interaction [43]. PES schemes provide financial incentives for the long-term conservation of natural resources and support livelihoods [20]. It is well known that secure tenure alone is not enough to guarantee environmental conservation [8,44]. In the case of deforestation, for example, the empirical link between tenure systems and forest conditions is not univocal [45,46]. Furthermore, private property and state property very often exclude local communities. A key criticism of the ecosystem services approach is that it increases the commodification of nature [47]. PES is embedded in a market-driven logic and builds on neoclassical economic theory [48]. Furthermore, it can lead to the appropriation of resources by the most powerful, as access to PES funds is often highly unequal [49].

Two independent coders classified the responses to the open-ended questions according to this deductive codebook. However, after the first coding round, we observed that there was not much variability in the theories referred to by the interviewed actors. This is probably due to two reasons. First, actors may not have referred to critical theories because these are not represented in the policy arena. Second, actors used the same concepts to justify diverging goals. Furthermore, policy actors representing indigenous people and small producers did not agree on a common land tenure theory.

We, therefore, decided to combine the deductive approach with a more inductive one, starting from what the actors express in the interviews to understand the difficulties related to land tenure regularization policy in Salta from a practical perspective and not just at the theoretical level. Combining these two layers of analysis enabled us to understand why land tenure can be hypothetically relevant (expected benefits or opportunities), identified with the letter O, and as regards land tenure regularization, what practical difficulties actors encounter that are considered as barriers to implementation of land tenure regularization policies, identified with the letter R.

Two independent coders analyzed the responses to the open-ended questions of the interviews related to land tenure regularization policy (supplementary material 1). The coders assigned units of text to the themes described in the combined deductive and inductive codebook (see Table 1). The overall intercoder Kappa coefficient [50] is 0.68.

Table 1. Codebook.

Code Reference	Codename	Code Definition
O.1	Private property implying exclusive property rights delivers wealth maximization and individual freedom (economic dimension)	Land title would allow access to (a) economic benefits; (b) different typology of funds (forest law among others); (c) training programs and access to technology.
O.2	Land tenure triggers better forest management (environmental dimension)	Land title would incentivize better sustainable forest management, better control of activities carried out in the forest (illegal deforestation included), and fewer conflicts as nobody takes care of what has no owner clearly defined by law.
O.3	Access to more rights (Land serves as a point of struggle in one's material reproduction)	Land title would allow access to (a) social benefits; (b) forest users' rights; (c) strengthen local organizations.
R.1.1	Dependence from provincial politics	The land title depends on political decisions at the provincial level.
R.1.2	Economic interest to use forest land	There is an economic interest from different economic activities to use forest land.
R.1.3	Need for the recognition of the ethnic self-declaration	In Argentina, being indigenous is self-declaration. There is a strong narrative that challenges the validity of this identity.

Table 1. Cont.

Code Reference	Codename	Code Definition
R.1.5	Dependence from local organizations efforts	All processes of land titling start from local organizational efforts. This implies several typologies of difficulties: (a) very high and inaccessible costs for indigenous and criollos, (b) depending totally from organizations that might not act for the collective interest of the communities they represent; (c) presence of discrimination between indigenous and criollos.
R.2	No clear direction of land tenure on forest management	The land titling does not guarantee better management of natural resources, nor the absence of conflicts among forest users. The presence of rules of natural resources does not depend only on titling, as they might exist pre-existing customary rules.
R.4	Limitations in the land regularization policy framework.	Limitations in the legal framework of land tenure regulation policies: (a) there are different rules from peasant and indigenous communities; (b) communal property is only limited to indigenous and not other forest users; (c) laws do not foresee all necessary steps for receiving the land title; (d) present laws do not respond to local conditions.

2.2. Land Tenure Attitudes and Core Beliefs

In the next step, we explored the distribution of land tenure beliefs across the three core beliefs to understand how different types of actors position their narratives. We calculated the density of coded segments per core belief to explore the variability in the presence of coded text units across the different respondents and identify possible patterns.

2.3. Land Tenure Beliefs and Actors' Position in Policy Networks

Lastly, we analyzed the centrality of attitudes and actors. We explored which attitudes relate to central position in the policy networks. We focused on the long-term mutual policy support and the information exchange networks. Our decision to focus only these networks has two reasons. First, policy support displayed the strongest collaboration-based ties [51] between actors. Second, information and meeting network showed high level of correlation 0.57 in the quadratic assignment procedure test—reinforced as this is more purposive than meetings networks. We hypothesized that the attitudes of actors holding key positions in the policy networks have the greatest influence on the implementation of land tenure regularization policy. Centrality [36] measures the property of a node being on the shortest path. It, therefore, portrays a role as an intermediary and connector.

We examined which actor attributes influence the probability of an actor being at the core of the network. We accomplished this by running logistic regressions [52] and testing the following four predictors: (1) three land tenure attitudes (based on content analysis results); (2) reputational influence. The first three predictors are binary variables while reputational influence are ordinal.

Third, we focused our analysis of exceptional agency [9] on actors with a reputational influence of 3 or 4 and not on actors with the highest centrality measures as in Christopoulos and Ingold [9]. We compared the results with our findings on the structural characteristics of the actors in our policy arena. As some did not match very well, we adapted the categories to obtain more meaningful insights.

3. Results

In this section, we first present the primary land tenure attitudes observed in policy actors' discourses. Second, we compare these with the broader core belief system in which they are embedded. Third, we analyze the structure of the policy networks. Fourth, we

compare the network structure with actors' positions in the network. We conclude by analyzing actors with exceptional agencies and land tenure attitudes.

3.1. Land Tenure Attitudes

Analysis of the opinion statement section of the survey instrument did not enable us to capture differences among land tenure attitudes. Among the answers, it is relevant to highlight the presence of 96% agreement on the following sentence: "Regularization of the tenure situation of criollos and indigenous communities can contribute significantly to coping with climate change."

The content analysis of the open-ended section of our survey instrument shows the richness and depth of the narratives in relation to the importance of land tenure issues on actors' agendas. Of the 59 organizations interviewed, 51 answered the open-ended questions. Most actors (68%) focused on a maximum of three of the nine themes in the codebook (Table 1). It is important to note that all actors used hypothetical language when they spoke of regularizing the land tenure of forest users in the Chaco Salteño, as they all perceived the process to be very slow.

Figure 1 shows the number of actors that mentioned each of the themes. The average number of actors citing a theme is low, but all themes analyzed are present in actors' discourse. The themes cited by the highest number of actors relate to the lack of direct causality between land tenure and forest management outcomes, as well as to the presence of limitations in the legal framework that prevents land tenure regularization.

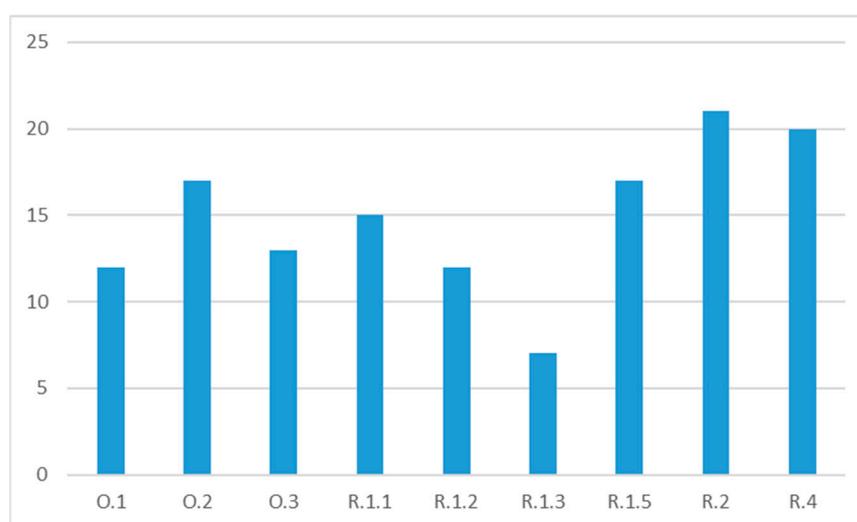


Figure 1. Number of mentions by theme.

3.2. Core Beliefs and Actors' Attitudes to Land Tenure

In this section, we explore how actors' narratives differ according to their core beliefs. Figure 2 shows the number of coded segments per theme across the three core belief groups.

Actors in the forest livelihoods group mentioned the most themes, as they are the most affected by this policy framework. Their narrative focuses on the presence of barriers to the implementation of land tenure regularization policy, such as its dependence on local organizations' efforts (R.1.5) and limitations in the normative framework (R.4).

The narrative of the profit maximization group focuses on the idea that land tenure, implying that exclusive property rights trigger better forest management (O.2). This type of narrative is consistent with the broader theories of neoclassical economics, which argue that clear property rights—i.e., exclusive property rights—deliver wealth maximization and individual freedom [53]. However, these actors also highlighted the presence of barriers to the implementation of land tenure regularization policy, stressing, in particular, its dependence on provincial politics (R.1.1).

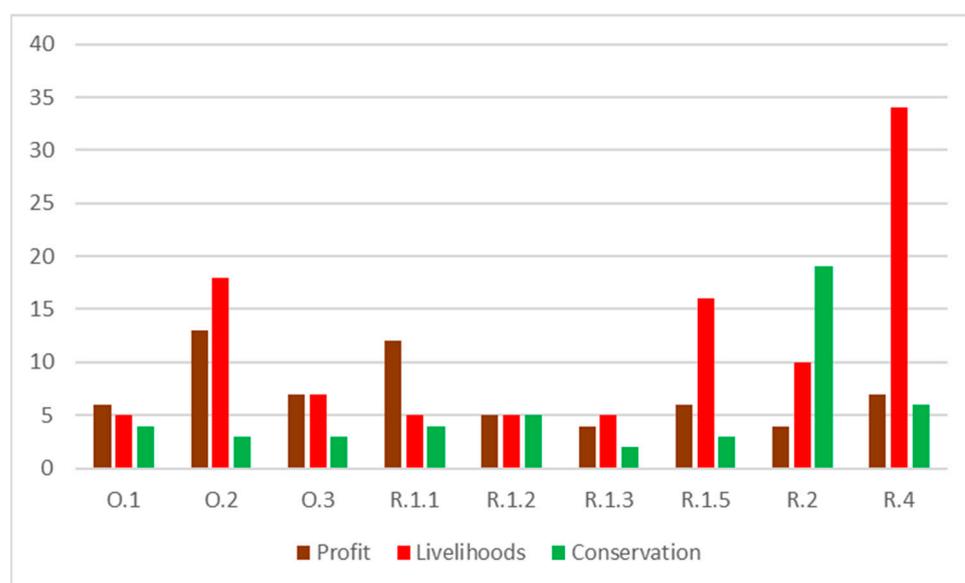


Figure 2. Code segment frequency and core beliefs.

Interestingly, actors in both forest livelihood and profit maximization groups stated that better land tenure promotes better forest management (O.2) and access to more rights (O.3). However, these statements are based on different premises. The forest livelihood group's discourse is based on the idea that land is central to material reproduction, as well as to belonging, subjectivity, and citizenship [54,55]. In contrast, actors in the profit maximization group view the formalization of property rights as an incentive for efficient land use and for investing in land conservation and improvement [56]; they refer to the theory of the tragedy of the commons [40].

Actors in the conservation group do not have a very prominent narrative on most of the land tenure attitudes described in the codebook (Figure 2). Their most evident land tenure attitude is that a land property title alone is not enough to guarantee sustainable forest management and therefore cannot prevent deforestation (R.2). Most of the actors stated that sustainable forest management very much depends on land use practices present in each specific case, in addition to the presence or absence of a specific land title. This claim broadly echoes the findings from Elinor Ostrom's work on design principles for common-pool resource management [57].

Figure 3 shows the distribution of land tenure attitudes across the three core beliefs. It is a radar chart that aims at identifying the overlap between variables [58]. The values consist of the number of organizations that have a sentence attributed to a given theme divided by the total number of organizations in the given core belief group.

Actors oriented toward profit maximization mentioned that the main weakness in the implementation of land regularization policy is its dependence on provincial politics (R.1.1). Actors focusing on forest livelihoods suggested the presence of a systemic impossibility for peasant and indigenous communities to access land titles (R.1.5 and R.4). The main reasons given were very high costs, discrimination in court, national and provincial land regularization policies that focus on mapping forest users but do not foresee clear steps for granting land titles, and lack of communal land laws. They further mentioned that the implementation of land use mapping is very weak. Finally, there is a strong narrative questioning whether certain populations are indeed indigenous, as this is a self-declared attribute in Argentina. This argument was used to counter indigenous communities' requests for land titles (R.1.3).

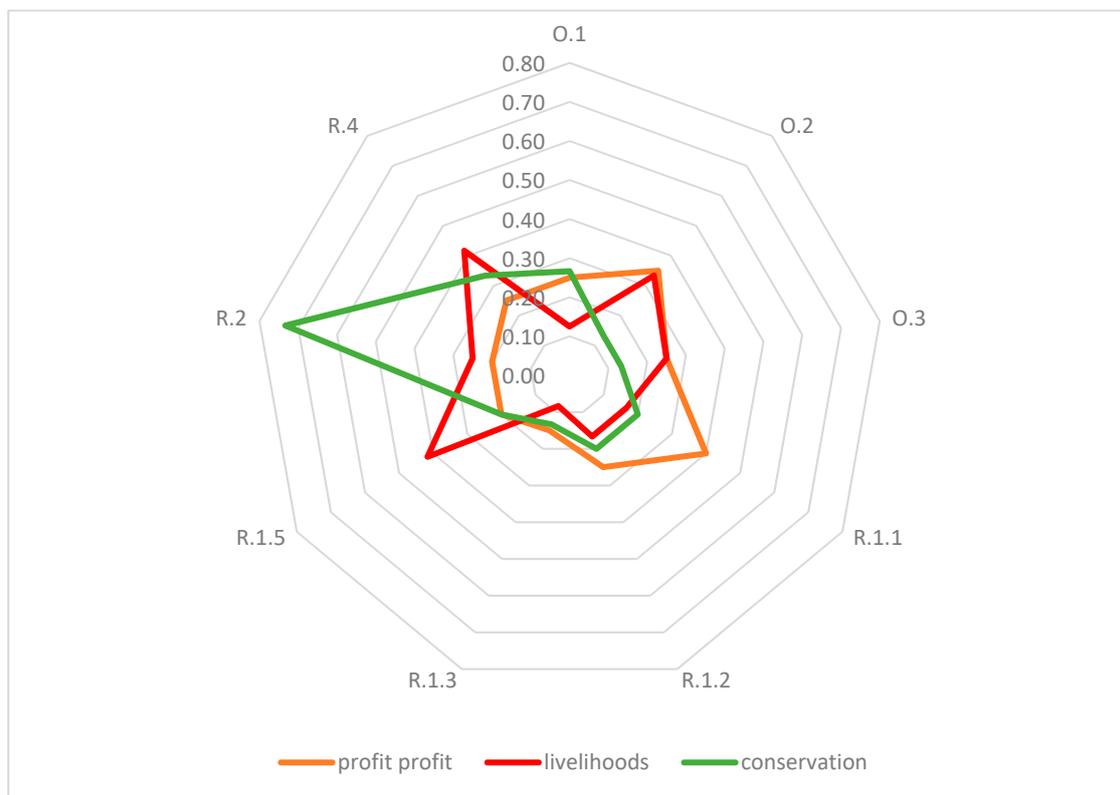


Figure 3. Land tenure attitudes and core beliefs.

The majority of actors (73%) in the conservation group, unlike the other groups, argued that tenure security alone does not guarantee sustainable forest management (R2). These policy actors, who are the ones directly measuring forest management outcomes, stated that defining users' rights in a clearer way neither guarantees sustainable forest management nor reduces deforestation. In their interviews, they also reported that the process of registration of communal land has resulted in portions of land overlapping between small-scale cattle-ranging families and indigenous communities and, in some cases, has intensified land conflicts.

Policy Network Structure

Our analysis of the long-term mutual policy support network revealed a core–periphery structure. We identified three clusters with a low level of density ranging from 0.2 to 0.3 and a low overall graph clustering coefficient (0.379). In social network analysis, a core–periphery structure describes the combination of a densely connected core and a much less connected periphery. It is one of the most widespread network structures [59]. Table 2 illustrates the features of the network's core and periphery. Table 3 shows that the core contains all three core beliefs.

Table 2. Core and periphery.

	Ties	Density	Average Outdegree	Average Indegree	Number of Nodes
Core	165	0.482	17.21	13	19
Periphery	97	0.062	4.47	6.475	40

Table 3. Distribution of core beliefs across core and periphery.

Long-Term Mutual Policy Support Network	Core	Periphery	Total
Profit maximization	2	18	20
Forest livelihoods	11	13	24
Conservation	6	9	15
Total	19	40	59

The complexity of understanding this policy space lies in the fact that it has a large core (19 out of 59 actors). These 19 actors are highly connected among themselves and have different beliefs. However, being at the core does not mean being influential in the governance system, as Table 4 shows. The most influential actors (the ones that score 3 and 4) are distributed equally between core and periphery.

Table 4. Distribution of influence across core and periphery.

Influence Level	Core	Periphery	Total
0	12	26	38
1	1	3	4
2	1	6	7
3	3	0	3
4	2	5	7
Total	19	40	59

It is worth noting that actors in the profit maximization group score highest with regard to reputational influence. Table 5 shows only actors that score an influence level of 3 or 4.

Table 5. Core beliefs and influence.

	Profit Maximization	Forest Livelihoods	Conservation	Total
Core	1	1	3	5
Periphery	4		1	5
Total	5	1	4	10

3.3. Actor Centrality

We estimated 5 different logit models, to assess which actor attributes have a stronger impact on the probability of an actor being at the core of the networks in question. Given the high correlation and noting that the results are quite similar among the two of the three networks, we only report the results for the the mutual policy support and for the information networks. In Table 6, only moderately significant explanatory variables are reported.

For the information network, the results show an important effect of the reputational influence and of one of the land tenure attitudes (R.1.5), while the effect of other attitudes (namely R.1.2 and O.3) appears less substantial. For the policy support network the results point to the moderate effect of both reputational influence and land tenure attitudes. The results of the multivariate model (model 5) differ between the two networks as in the information network reputational influence and R.1.5 keep their significance even when including all variables in the model. However, it is worth noting that while in the univariate model the variable influence is positive in the multivariate model it is negative.

Table 6. Logit results.

	Information Network					Policy Support Network				
	Model1	Model2	Model3	Model4	Model5	Model1	Model2	Model3	Model4	Model5
constant	−0.4477 * (0.197)	0.9163 ** (0.3416)	0.9614 ** (0.3261)	0.0423 * (0.8069)	1.9996 *** (0.5686)	0.82673 * (0.33741)	11.455 *** (0.3435)	11.281 *** (0.3348)	10.594 (0.3310) **	1.65436 *** (0.47586)
Reputational influence	1.0477 ** (0.3517)				−0.5992 ** (0.2271)	−0.08557 (0.19157)				−0.09454 (0.21348)
R.1.5 Economic interest to use forest land		−1.2730 * (0.5996)			−2.2536 ** (0.8415)		−0.8626 * (0.3902)			−0.87844 (0.68823)
R.1.2 Dependence from local organization effort			−2.0600 ** (0.7421)		−1.5240 (0.8206)			−13.588 * (0.5698)		−1.12878 (0.73555)
O.3 Access to more rights				−0.1586 (0.6487)	1.4881 (1.0343)				−0.9782 * (0.4844)	−1.13244 (0.74687)

Note: *, ** and *** represent passing the significance test of 10%, 5% and 1%.

The fact that actors at the core of the network express land tenure attitudes more clearly than actors at the periphery is also visible in Figure 4.

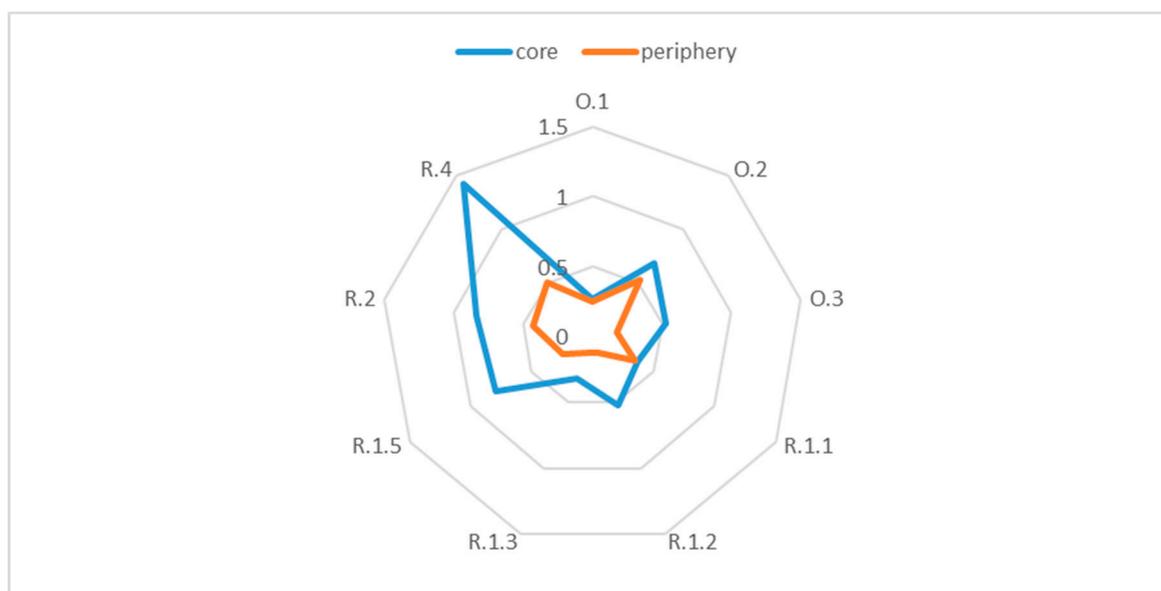


Figure 4. Land tenure attitudes at core and periphery.

4. Discussion

Actors with Exceptional Agencies and Land Tenure Attitudes

One of our hypotheses was that the land tenure attitudes of actors with exceptional agencies can influence the implementation of land tenure policies. In this section, we explore the narratives of policy actors looking at their position in the long-term mutual policy support network.

Our analysis of actors with exceptional agencies based on centrality measures and level of reputational influence enabled us to identify and categorize actors with exceptional agencies. We identified the following categories adapting from Ingold and Christopolous [9]:

1. Policy entrepreneurs have a reputational influence value of 3, and clear land tenure attitudes—possibly because they seek to strengthen their position at the core of the network;
2. Multivocal/inscrutable actors have a reputational influence value of 4. Their assignment to a core belief group differed between the experts’ classification and the network cluster analysis. They are mostly located at the periphery of the network;
3. Institutional actors include all institutional agencies that represent key constituencies related to forest policy governance. They have a reputational influence value of 4.

Given the importance of these key policy actors in influencing policy outcomes, we analyzed where their narratives on land tenure attitudes were positioned in the networks. Figure 5 shows the distribution of land tenure attitudes among the various types of actors with exceptional agencies as defined by Christopolous and Ingold [9]. It shows that non-exceptional actors have quite a neutral discourse that does not feature any clear land tenure attitude.

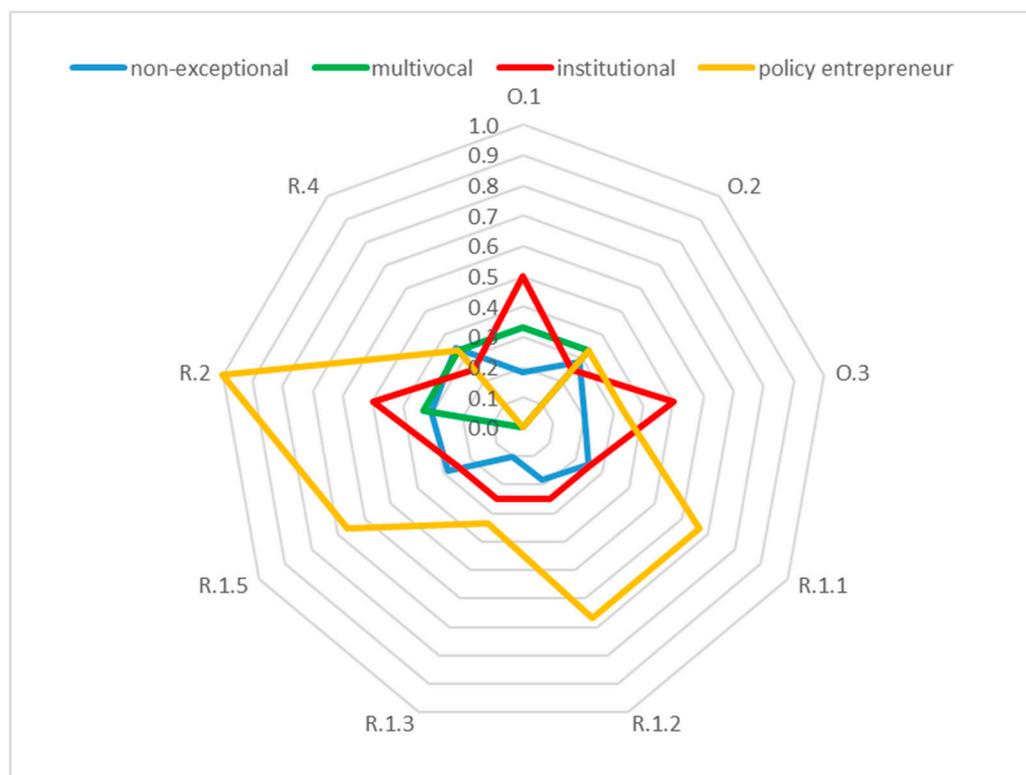


Figure 5. Exceptional actors and land tenure attitudes.

Policy entrepreneurs have a more complex discourse that takes into consideration the challenges related to tenure regularization. They pointed out the dependency of land regularization policies on provincial politics (R.1.1). They also emphasized important barriers to policy implementation, such as strong economic interests in the native forest (R.1.2) and the dependency on local actors to initiate a process toward land tenure access (R.1.5). Furthermore, in their answers to the open-ended interview questions, they often pointed out that the effect of land tenure on forest management shows no clear direction (R.2). This narrative preference relates to the characteristic of policy entrepreneurs of acting in a way that allows them to gain space in the policy arena [9]. In contrast, institutional actors emphasized the benefits resulting from land tenure (O.1 and O.3) in their discourse.

The result of the logit model that indicates that reputational influence has a negative coefficient in the multivariate model (Table 6), together with the distribution of influential actors (Table 4) seems to suggest that centrality and reputational influence are not strictly related. A possible interpretation is that the networks we have mapped with our survey do not overlap completely with the factual decision making arenas.

5. Conclusions

In this article, we examined the governance of the forest law implementation process in Salta Province, Argentina. The law prescribes that enforcement must occur in a participatory process, through collaborative governance. However, the literature suggests that implementation of the forest law in Salta has not been effective to date [60]. We adopted a networked governance approach to understanding actors' core beliefs and the structure and

functioning of advocacy coalitions. We systematically analyzed actors' core beliefs, their interactions in policy networks, and how these impact governance outcomes. We focused specifically on land tenure attitudes, as it is a very crucial element in land use policies but also a contested topic with diverging preferences. Land tenure influences conservation and agricultural expansion [61] but land tenure registration alone is not enough to guarantee tenure security [7].

We obtained a number of notable results by combining expert classification and analysis of actors' narratives and policy networks. At the group level, core beliefs are fairly consistent with the way in which the network is clustered. However, the presence of some inconsistencies at both group and actor levels reduces the strength of advocacy coalitions. This has weakened the governance process related to the implementation of the forest law. We believe that the policy process could be improved if actors adopted clearer policy positions on specific issues. The analysis of the interviews showed the presence of some obstacles in implementing land tenure regularization policies due to some legal framework limitations (R.1.2, R.1.5). These elements emerging from our analysis might suggest areas to improve the legal framework in order to facilitate the process of land tenure regularization.

We argue that further research should examine the narratives and the strategic behavior of actors concerning a specific controversial topic. The mixed-methods design we used for our study enables a nuanced understanding of actors' roles within the policy arena. Our key contribution to collaborative governance analysis is our focus on actors in a policy setting characterized by a high level of contestation. We studied how they speak and behave, examined their narratives, and investigated their collaboration networks. Our analysis offers insights that can help actors strengthen the implementation of Salta's forest law. Our methodological approach holds promise for the analysis of other governance systems where multiple stakeholders engage in consensus-oriented decision-making.

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References

1. Figueroa, L.M. Proceso de formación y uso de estrategias de las coaliciones estado-sociedad en el tratamiento de dos proyectos de leyes ambientales en Argentina (bosques nativos y humedales). *Rev. Urug. Cienc. Polit.* **2020**, *29*, 7–32. [CrossRef]
2. Sabatier, P.A.; Weible, C.M. *The Advocacy Coalition Framework*; Westview Press: Nashville, TN, USA, 2019; pp. 189–220. [CrossRef]
3. Ingold, K.; Leifeld, P. Structural and Institutional Determinants of Influence Reputation: A Comparison of Collaborative and Adversarial Policy Networks in Decision Making and Implementation. *J. Public Adm. Res. Theory* **2016**, *26*, 1–18. [CrossRef]

4. Gregorio, M.D.; Fatorelli, L.; Paavola, J.; Locatelli, B.; Pramova, E.; Nurrochmat, D.R.; May, P.H.; Brockhaus, M.; Sari, I.M.; Kusumadewi, S.D. Multi-level governance and power in climate change policy networks. *Glob. Environ. Chang.* **2019**, *54*, 64–77. [CrossRef]
5. Alcañiz, I.; Gutierrez, R.A. Between the Global Commodity Boom and Subnational State Capacities: Payment for Environmental Services to Fight Deforestation in Argentina. *Glob. Environ. Polit.* **2020**, *20*, 38–59. [CrossRef]
6. Milmanda, B.F.; Garay, C. The Multilevel Politics of Enforcement: Environmental Institutions in Argentina. *Polit. Soc.* **2020**, *48*, 3–26. [CrossRef]
7. Valkonen, A. Examining sources of land tenure (in)security. A focus on authority relations, state politics, social dynamics and belonging. *Land Use Policy* **2021**, *101*, 105191. [CrossRef]
8. Robinson, B.E.; Masuda, Y.J.; Kelly, A.; Holland, M.B.; Bedford, C.; Childress, M.; Fletschner, D.; Game, E.T.; Ginsburg, C.; Hilhorst, T.; et al. Incorporating Land Tenure Security into Conservation. *Conserv. Lett.* **2017**, *11*, e12383. [CrossRef]
9. Christopoulos, D.; Ingold, K. Exceptional or just well connected? Political entrepreneurs and brokers in policy making. *Eur. Polit. Sci. Rev.* **2014**, *7*, 475–498. [CrossRef]
10. Corntassel, J. Toward Sustainable Self-Determination: Rethinking the Contemporary Indigenous-Rights Discourse. *Altern. Glob. Local, Polit.* **2008**, *33*, 105–132. [CrossRef]
11. INDEC, Encuesta Permanente de Hogares 2010–2014. Available online: <http://www.indec.gov.ar/bases-de-datos.asp> (accessed on 10 September 2021).
12. Brent, Z.W. Territorial restructuring and resistance in Argentina. *J. Peasant. Stud.* **2015**, *42*, 671–694. [CrossRef]
13. Paz, R.; Jara, C.; Wald, N. Tensions around Land Tenure in Argentina’s Agrarian Periphery: Scales and Multiple Temporalities of Capitalism in Santiago del Estero, Argentina. *Lat. Am. Res. Rev.* **2019**, *54*, 694–706. [CrossRef]
14. Gautreau, P.; Garavaglia, J.C. The Weak-State Cadastre: Administrative Strategies to Build Territorial Knowledge in Post-colonial Argentina (1824 to 1864). *Cartogr. Int. J. Geogr. Inf. Geovisualization* **2012**, *47*, 29–49. [CrossRef]
15. Georgiadou, Y.; Kleusberg, A.; Meyere, J.D.; Alvarez, M.; Carlos, J. The Argentine cadastre in transition. *Geomatica* **1997**, *51*, 143–151. [CrossRef]
16. Seghezzo, L.; Venencia, C.; Buliubasich, E.C.; Iribarnegaray, M.A.; Volante, J.N. Participatory, Multi-Criteria Evaluation Methods as a Means to Increase the Legitimacy and Sustainability of Land Use Planning Processes. The Case of the Chaco Region in Salta, Argentina. *Environ. Manag.* **2016**, *59*, 307–324. [CrossRef] [PubMed]
17. Nolte, C.; Waroux, Y.L.P.D.; Munger, J.; Reis, T.N.P.; Lambin, E.F. Conditions influencing the adoption of effective anti-deforestation policies in South America’s commodity frontiers. *Glob. Environ. Chang.* **2017**, *43*, 1–14. [CrossRef]
18. Vallejos, M.; Sans, G.H.C.; Aguiar, S.; Mastrángelo, M.E.; Paruelo, J.M. The law is spider’s web: An assessment of illegal deforestation in the Argentine Dry Chaco ten years after the enactment of the ‘Forest Law’. *Environ. Dev.* **2021**, *38*, 100611. [CrossRef]
19. Cáceres, D.M. Accumulation by Dispossession and Socio-Environmental Conflicts Caused by the Expansion of Agribusiness in Argentina. *J. Agrar. Chang.* **2014**, *15*, 116–147. [CrossRef]
20. Núñez-Regueiro, M.M.; Fletcher, R.J.; Pienaar, E.F.; Branch, L.C.; Volante, J.N.; Rifai, S. Adding the temporal dimension to spatial patterns of payment for ecosystem services enrollment. *Ecosyst. Serv.* **2019**, *36*, 1. [CrossRef]
21. Aguiar, A.S.; Mastrangelo, M.E.; Collazo, M.A.G.; Sans, G.H.C.; Mosso, C.E.; Ciuffoli, L.; Schmidt, M.; Vallejos, M.; Langbehn, L.; Brassiolo, M.; et al. ¿Cuál es la situación de la Ley de Bosques en la Región Chaqueña a diez años de su sanción? Revisar su pasado para discutir su futuro. *Ecol. Austral.* **2018**, *28*, 400–417. [CrossRef]
22. Preci, A. Fixing the territory, a turning point: The paradoxes of the Wichí maps of the Argentine Chaco. *Can. Geogr. Géographe Can.* **2020**, *64*, 20–31. [CrossRef]
23. Langbehn, L. Arenas públicas, modelos de desarrollo y políticas de protección del ambiente: La Ley de Bosques entre ‘conservación’ y ‘producción’. In *Cartografías del Conflicto Ambiental en Argentina II*; CLACSO: Buenos Aires, Argentina, 2016; pp. 141–168.
24. Weible, C.M. An Advocacy Coalition Framework Approach to Stakeholder Analysis: Understanding the Political Context of California Marine Protected Area Policy. *J. Public Adm. Res. Theory* **2006**, *17*, 95–117. [CrossRef]
25. Weible, C.M.; Ingold, K.; Nohrstedt, D.; Henry, A.D.; Jenkins-Smith, H. Sharpening Advocacy Coalitions. *Policy Stud. J.* **2019**, *48*, 1054–1081. [CrossRef]
26. Ingold, K.; Fischer, M.; Christopoulos, D. The roles actors play in policy networks: Central positions in strongly institutionalized fields. *Netw. Sci.* **2021**, *9*, 213–235. [CrossRef]
27. Fischer, F. *Discourse Versus Advocacy Coalitions: Interpreting Policy Change and Learning*; Oxford University Press: Oxford, UK, 2003; pp. 94–114. [CrossRef]
28. Hajer, M.; Versteeg, W. *Voices of Vulnerability: The Reconfiguration of Policy Discourses*; Oxford University Press: Oxford, UK, 2011. [CrossRef]
29. Plehwe, D. Transnational discourse coalitions and monetary policy: Argentina and the limited powers of the Washington Consensus. *Crit. Policy Stud.* **2011**, *5*, 127–148. [CrossRef]
30. Vieira, D.M. The discourse and coordination among advocacy coalitions: The case of Belo Monte. *RAUSP Manag. J.* **2019**, *55*, 86–99. [CrossRef]
31. Burt, R.S. *Structural Holes: The Social Structure of Competition*; Harvard University Press: New York, NY, USA, 1992.

32. Bonacich, P. Power and Centrality: A Family of Measures. *Am. J. Sociol.* **1987**, *92*, 1170–1182. [[CrossRef](#)]
33. Ahuja, G. Collaboration Networks, Structural Holes, and Innovation: A Longitudinal Study. *Adm. Sci. Q* **2000**, *45*, 425–455. [[CrossRef](#)]
34. Robins, G. *Doing Social Network Research: Network-based Research Design for Social Scientists*; SAGE: Newcastle upon Tyne, UK, 2015.
35. Burt, R.S. The social capital of structural holes. In *The New Economic Sociology: Developments in an Emerging Field*; Russell Sage Foundation: New York, NY, USA, 2002; pp. 148–190.
36. Gronow, A.; Yla-Anttila, T. Cooptation of ENGOs or Treadmill of Production? Advocacy Coalitions and Climate Change Policy in Finland. *Policy Stud. J.* **2020**, *47*, 860–881. [[CrossRef](#)]
37. Inguaggiato, C.; Ceddia, M.G.; Tschopp, M.; Christopoulos, D. Collaborative Governance Networks: A Case Study of Argentina's Forest Law. *Sustainability* **2021**, *13*, 10000. [[CrossRef](#)]
38. Ocelík, P.; Svobodová, K.; Hendrychová, M.; Lehotský, L.; Everingham, A.-N.; Ali, S.; Badera, J.; Lechner, A. A contested transition toward a coal-free future: Advocacy coalitions and coal policy in the Czech Republic. *Energy Res. Soc. Sci.* **2019**, *58*, 101283. [[CrossRef](#)]
39. Valkonen, A. Conceptions, Practices and Power Plays Around the Notion of Tenure Security: Examining the Land Policy Development and Implementation Process in Madagascar. Ph.D. Thesis, University of East Anglia, Norwich, UK, 2018.
40. Hardin, G. The Tragedy of the Commons. *Science* **1968**, *162*, 1243–1248. [[CrossRef](#)] [[PubMed](#)]
41. Haller, T. *Towards a New Institutional Political Ecology: How to Marry External Effects, Institutional Change and the Role of Power and Ideology in Commons Studies*; Routledge: Abingdon, UK, 2019; pp. 90–120. [[CrossRef](#)]
42. Plieninger, T.; Bieling, C.; Fagerholm, N.; Byg, A.; Hartel, T.; Hurley, P.; López-Santiago, C.A.; Nagabhatla, N.; Oteros-Rozas, E.; Raymond, C.; et al. The role of cultural ecosystem services in landscape management and planning. *Curr. Opin. Environ. Sustain.* **2015**, *14*, 28–33. [[CrossRef](#)]
43. Abson, D.; von Wehrden, H.; Baumgärtner, S.; Fischer, J.; Hanspach, J.; Härdtle, W.; Heinrichs, H.; Klein, A.; Lang, D.; Martens, P.; et al. Ecosystem services as a boundary object for sustainability. *Ecol. Econ.* **2014**, *103*, 29–37. [[CrossRef](#)]
44. Robinson, B.E.; Holland, M.B.; Naughton-Treves, L. Does secure land tenure save forests? A meta-analysis of the relationship between land tenure and tropical deforestation. *Glob. Environ. Chang.* **2014**, *29*, 281–293. [[CrossRef](#)]
45. Shi, M.; Yin, R.; Zulu, L.; Qi, J.; Freudenberger, M.; Sommerville, M. Empirical linkages between devolved tenure systems and forest conditions: Selected case studies and country experiences. *For. Policy Econ.* **2016**, *73*, 286–293. [[CrossRef](#)]
46. Tseng, T.-W.J.; Robinson, B.E.; Bellemare, M.F.; BenYishay, A.; Blackman, A.; Boucher, T.; Childress, M.; Holland, M.B.; Kroeger, T.; Linkow, B.; et al. Influence of land tenure interventions on human well-being and environmental outcomes. *Nat. Sustain.* **2020**, *4*, 242–251. [[CrossRef](#)]
47. Kull, C.; de Sartre, X.A.; Castro-Larrañaga, M. The political ecology of ecosystem services. *Geoforum* **2015**, *61*, 122–134. [[CrossRef](#)]
48. Shapiro-Garza, E.; McElwee, P.; Van Hecken, G.; Corbera, E. Beyond Market Logics: Payments for Ecosystem Services as Alternative Development Practices in the Global South. *Dev. Chang.* **2019**, *51*, 3–25. [[CrossRef](#)]
49. Calvet-Mir, L.; Corbera, E.; Martin, A.; Fisher, J.; Gross-Camp, N. Payments for ecosystem services in the tropics: A closer look at effectiveness and equity. *Curr. Opin. Environ. Sustain.* **2015**, *14*, 150–162. [[CrossRef](#)]
50. Fleiss, J.L. Measuring nominal scale agreement among many raters. *Psychol. Bull.* **1971**, *76*, 378–382. [[CrossRef](#)]
51. Granovetter, M.S. The strength of weak ties. *Am. J. Sociol.* **1973**, *1360*–1380.
52. Menard, S.W. *Logistic Regression: From Introductory to Advanced Concepts and Applications*; SAGE: Los Angeles, CA, USA, 2010.
53. Alchian, A.; Demsetz, H. The Property Right Paradigm. *J. Econ. Hist.* **1973**, *33*, 16–27. [[CrossRef](#)]
54. Property, B.S. Authority and Citizenship: Land Claims, Politics and the Dynamics of Social Division in West Africa. *Dev. Chang.* **2010**, *40*, 23–45. [[CrossRef](#)]
55. Sullivan, S. Green capitalism, and the cultural poverty of constructing nature as service-provider. *Rad. Anthropol.* **2009**, *3*, 18–27.
56. Deininger, K.; Ali, D.A.; Alemu, T. Impacts of Land Certification on Tenure Security, Investment, and Land Market Participation: Evidence from Ethiopia. *Land Econ.* **2011**, *87*, 312–334. [[CrossRef](#)]
57. Baggio, J.A.; Barnett, A.J.; Perez-Ibarra, I.; Brady, U.; Ratajczyk, E.; Rollins, N.; Rubiños, C.; Shin, H.C.; Yu, D.J.; Aggarwal, R.; et al. Explaining success and failure in the commons: The configural nature of Ostrom's institutional design principles. *Int. J. Commons* **2016**, *10*, 417. [[CrossRef](#)]
58. Miettinen, K. Survey of methods to visualize alternatives in multiple criteria decision making problems. *Spectr* **2014**, *36*, 3–37. [[CrossRef](#)]
59. Borgatti, S.P.; Everett, M.G. Models of core/periphery structures. *Soc. Netw.* **2000**, *21*, 375–395. [[CrossRef](#)]
60. Milmanda, B.F.; Garay, C. Subnational variation in forest protection in the Argentine Chaco. *World Dev.* **2019**, *118*, 79–90. [[CrossRef](#)]
61. Baver, S. Nature Conservation, Extractivist Conflicts, and Indigenous Rights in the Americas. *Glob. Environ. Polit.* **2020**, *20*, 192–197. [[CrossRef](#)]