

## **Indigenous Communities, Land Use and Tropical Deforestation (INCLUDE)**

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Tropical deforestation is an important contributor to climate change, through the release of significant amounts of carbon in the atmosphere. The main proximate cause of deforestation is agricultural expansion, followed by resource extraction. This project looks at the problem of deforestation in the Argentinean dry Chaco in the province of Salta (the Chaco Salteño). The Chaco Salteño, part of the Great American Chaco (the second largest tropical forest in the American continent after the Amazon), experiences one of the fastest deforestation rates in the world, represents an important agricultural frontier (with over 6 million ha of forest left) and hosts significant ethnic and cultural diversity, including both ‘criollos’ (small scale livestock farmers of European descent) and indigenous peoples (IPs). The project, funded by the European Research Council under the Consolidator Grant scheme, addresses the following three themes:

### **1 Governance structures and land use policy in Salta province (Argentina)**

Ten years after the introduction of the forest law, the project INCLUDE studies governance structures behind the implementation of sustainable forest management policies through the lenses of social network analysis.

A policy networks approach aims at understanding if this system of governance, set up in the forest law as collaborative, is actually a discourse or a practice in the implementation of forest management related policies. The main objective is to characterize the network topology of the governance system and determine how it shapes stakeholders’ influence on policy implementation.

All key policies related to forest management in Salta have set up a committee, where all stakeholders (from private sector to state agencies, academia, civil society organization and forest inhabitants’ organizations) meet to discuss implementation or definition of a specific policy instrument. In the present study, we identified five committees: 1) provincial land use map revision committee; 2) provincial committees for the Manejo de Bosque con Ganaderia Integrada (MBGI, forest management with integrated livestock); 3) consulting committee of Bosque Nativo y Comunidad project (i.e., native forest and community); 4) local governance board and 5) climate change board. It is important to notice that, participating in the committee does not necessarily mean that the stakeholder will be able to influence the implementation or definition of a policy. Analysing the combinations between affiliations (i.e., membership to one or more of the boards) together with direct ties among stakeholders is crucial to explain agency in forest management policy implementation.

The data collection instrument adopted for our survey also incorporates an assessment of the other stakeholders’ influence on the governance of sustainable forest management and land use change. We also incorporate a section on visions of risk, land tenure regularization and forest

management policy. Comparing stakeholders' perception of influence with the stakeholder position on the networks allows us to understand how network topology relates to influence.

## **2 Sustainable land management practices among small-scale livestock farmers**

The introduction of genetically modified herbicide tolerant soybean varieties in the 90s and the high international prices, has resulted in the expansion of the agricultural frontier in the province of Salta, in order to supply international commodities markets. Marginal land, formally owned by distant absentee land-owners, have suddenly become valuable. As a result, small-scale livestock farmers ('criollos'), who had been living on these lands for many years without any formal title, have been increasingly displaced. Following the increasing pressure on the limited land resources, both conflicts and land degradation increased.

In this difficult context, one aspect that deserves attention, is to determine how the adoption of sustainable land management practices could be fostered. The adoption of such practices is essential in order to achieve the economic viability of small-scale livestock farming, reduce land degradation and pressure on the remaining forests, and alleviate conflicts with the indigenous communities.

Traditionally, small scale 'criollos' farmers live within the forest and use natural vegetation as fodder for their animals. These smallholders are sometimes in a conflict with other forest users, and most notably indigenous communities or with large-scale agribusiness players who contribute to deforestation.

We investigate how different agricultural practices can contribute to reduce conflicts between 'criollos' and different groups. Land tenure also plays a key role in adoption of these technologies. We study how land tenure, alongside a number of socio-economic characteristics, affects the adoption of specific land/forest management practices, designed to reduce land/forest degradation and improve economic viability. Moreover, we also investigate what are the main obstacles affecting land titles for smallholders are. A survey on these issues was conducted with more than 500 producers in September 2018. In 2019, we plan to develop these issues by implementing semi-experimental methods.

## **3 Deforestation narratives in the Chaco Salteño: an indigenous peoples' perspective**

The expansion of the agricultural frontier in the Chaco Salteño is threatening both the local bio diversity of this ecosystem as well as the human and cultural habitats. In this context, it becomes essential to explore the complex ways in which local indigenous peoples are caught up in the larger socio-economic processes (i.e., agricultural expansion to supply international commodity markets) and what their responses might reveal about potential sustainable futures in departments of General San Martín and Rivadavia of Salta province, which provide the focus for this study.

Social movement mobilisations had forced the state's hand to implement a fiercely debated forest protection law in 2009. The research so far notes that environmental protectionism, even when enshrined in law, has been subjected to manipulation as it collides with the neoliberal mantra of a deregulated free market. In this tension between environmental legislation, a decentralised state and the country's leading export sector, indigenous people are awkwardly positioned. Their collective identity, closely bound up with 'traditional' uses of forest flora and fauna, is opposed by the necessity of earning a living, which for lack of available options forces them to sell their labour-power cheaply to the tasks of deforestation, while they then also face

legal reprisals for infringing the Forest Law that was designed to protect them. Moreover, the survival of a collective identity tied to the forest is crucial for the indigenous struggle for land rights. These contradictions contribute to conflicts and divisions within communities that in the larger scheme of things feel powerless. In this regard, it appears useful to draw a distinction between small-scale deforestation even when used for commercial purposes, and the bulldozer type deforestation that clears thousands of hectares overnight. This is a necessary exercise for indigenous communities to be able to envisage sustainable but realistic productive strategies. The initial fieldwork, carried in 2018, has explored six major highways and roads through and around the Chaco Salteño to gauge difference and sameness of local manifestations of current economic trends that drive deforestation and the agrarian expansion. Future work will hone in on the daily life experiences and will try to describe how dominant ideologies and ideas crystalize amongst indigenous forest habitants, and how that in turn informs uses of land and forest.