Supplementary material: Private-Land Control and Deforestation Dynamics in the context of implementing the Native Forest Law in the Northern Argentinian Dry Chaco

**Annex 2 (A.2):** The Native Forest Law and its Implementation

The NFL was passed in 2007, and the generation of the forest-zonation maps was a task delegated to the provincial authorities. Forest-zonation maps of our study area were created by provincial laws between 2008 and 2010: in 2008 in Salta province, in 2009 in Santiago del Estero and Chaco provinces, and in the year 2010 in Formosa and Tucumán provinces.

According to the NFL, the forest-zonation maps should be revised and updated every five years, from the moment the land zonation maps were initially finished onwards. However, the zonation update process is not regular, and has only been completed for the province of Santiago del Estero (act, number 3133 of the year 2015), while it is in the final phase in Formosa (law number 1660 of the year 2018, pending on national government approval). The remaining four provinces of the NADC are still working on updating of the forest-zonation maps (SAyDS 2018).

While the sanction of the NFL represents an advance in land-use regulation, there are some limitations to the NFL in relation to deforestation reduction, especially in very dynamic land-use areas (as in some departments of Salta province) (Leake and Ecónomo 2008; Ceddia and Zepharovich 2017; Volante and Seghezzo 2018). Deforestation still occurs in red and yellow zones of the land zonation of the NFL (Aguiar et al. 2018). The main reasons that have been proposed for the failure of the enforcing mechanism are: (i) few provinces are contributing to the National Registry of Offenders (a public register of people who cannot access clearing or management permits, since they broke the law 26331 and failed to comply the sanctions imposed), and thus the area recorded is very low in comparison to the area deforested; (ii) low-payment amount for sanctions imposed for illegal clearing – in comparison to the high profitability of the further agricultural activities derived from the deforestation; and (iii) strong links between the agribusiness and the provincial institutions with responsibility over the control of the NFL’s fulfillment (Aguiar et al. 2018), which in some cases shape land zonation and thus limit subnational-forest protection (Fernández Milmanda and Garay 2019).

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