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Deforestation of native forests and accumulation by dispossession: the case of Santiago del Estero, Argentina (1998-2019)

I. INTRODUCTION

The strong impact of capitalist accumulation over the regulation cycles of physical-natural systems leads to the irretrievable rift of the metabolic relationship between society and nature. Such phenomenon expresses the capital's second contradiction and links to the accumulation by dispossession's theory, which stands that accumulation based on predation, fraud and violence is an important and constant force of the historical geography of capital. The ecological dimension of such process involves the nature's commodification, the dismantling of environmental protection frameworks, and the degradation and exhaustion at great scale of the global environment's commons (i.e. land, water, air, biodiversity, etc.).

Deforestation assumes a key role in such process. Of nine frontiers that, in case of being overwhelmed, would lead to catastrophic scenarios for humanity, logging is tightly linked to one that has been exceeded (biodiversity loss) and another that is dangerously near to reach such limit (changes in land uses). This matter gets worse because of the growing degradation of soils demands constant incorporation of new fertile lands to the food and raw materials production, temporarily postponing the second capital's contradiction by increasing the pressure over forest masses, expelling aborigines and peasants, disarticulating subaltern production forms, favouring the private appropriation of public resources, and paving the way for the use of violence, fraud and illegality, all of which unleashes fierce social, political, and environmental conflicts.

With 4.3% of world deforestation, Argentina is the second country of Latin America and the Caribbean more logged in absolute values, as well as the second nation of the region with the highest annual deforestation rates. In addition, Santiago del Estero is the most logged province of the country, leading the world deforestation ranking. This paper demonstrate that, during the two last decades, the native forests' destruction in Santiago del Estero has implied an accumulation by dispossession's process where the agricultural frontier's advance has been carried out at the expense of ecological looting, the violent usurpation of the land, the disarticulation of subaltern production forms, the private appropriation of public resources, and the illegal logging.

II. CHARACTERIZATION OF THE STUDY AREA

Located in the Argentinean Northwest region, Santiago del Estero borders the province of Córdoba to the south, the province of Santa Fe to the southeast, the province of Chaco to the east and the north, the province of Salta to the north and northwest, and the provinces of Tucumán and Catamarca to the west. With an area of 136.351 square kilometres and a population of 918,147 inhabitants, Santiago del Estero makes part of the phytogeographic region of the Parque Chaqueño, which belongs to the Great American Chaco, the second biggest forest area of South America. Local economy is characterised by the predominance of primary-extractive activities (i.e. agriculture, cattle raising, timber, horticulture)

and third sector (i.e. government agencies, tourism, services), with an exporter matrix based on corn, soybean, cotton, bean, sorghum, and cow meat. It is worthwhile noting that Santiago del Estero is one of the poorest and most underdeveloped provinces of the country.

Santiago del Estero's native forests started to be logged during the agroexporter period (1870-1930), when a timber mining logic prevailed in order to provide hardwood and charcoal to the latifundia and railways of the Pampas region. Such situation got worse since 1929 due to the arrival of the forestry/livestock pattern, the indiscriminate forest's exploitation, the extensive grazing, the excessive animal load, and the tannin exports. Later, during the 1970s and 1980s, the problem aggravated due to the agriculturization of the Pampas -which expelled part of the livestock towards the Dry and Semiarid Chaco-, and the alternancy between the cultivation of cotton, wheat, sunflower, and soybean. As a result, of a forest masses's original area of 98.000 square kilometers, only 7.300 square kilometers remained in 1980.

III. NATIVE FOREST, LOGGING AND ACCUMULATION BY DISPOSSESSION IN SANTIAGO DEL ESTERO DURING THE CURRENT HISTORICAL PERIOD

According to data extracted from the First National Inventory of Native Forests of Argentina and the National Monitoring Reports of the Native Forest Area carried out by the National Secretary of Environment and Sustainable Development and the National Ministry of the Environment, 6,208,223 hectares of native forests were destroyed in Argentina between 1998 and 2016, at a rate of 344,901.28 hectares per year. Out of a total of sixteen provinces surveyed, only five (Santiago del Estero, Salta, Chaco, Formosa, and San Luis) concentrated 71.36% of the area logged, while the first three accounted for 64.83% (4,024,669 hectares). With 1,984,850 ha cleared (average rate of 110,239.44 ha per year), Santiago del Estero is the most deforested province in the country, accounting for almost a third (31.96%) of the total. In addition, Santiago del Estero widely exceeded the international average in all the sub-periods surveyed, with figures that were between almost 4 and 19 times higher than such indicator. Likewise, the provincial deforestation rate was the highest in the country during twelve of the eighteen years analysed.

With 61.97% of the logged area in the province, five departaments were the most seriously affected by defor-

estation: Juan F. Ibarra, Pellegrini, General Taboada, Alberdi, and Moreno, followed by Aguirre, Ojo de Agua, Quebrachos, Choya, Copo and Jiménez. Out of a total of 212 Argentinean departments where clearings reported, the eleven aforementioned districts accounted for 27% (i.e. 1,676,060 hectares) of the logged area throughout the country. The eight worst cases came to concentrate almost a fifth (1,229,362 hectares, equivalent to 19.80%). More importantly, only one department (Moreno) represented 26.79% and 8.56% of the cleared area in the provincial and national territory, respectively, standing out as the second most logged department of Argentine.

The expansion of the agricultural frontier has been the main driver of the current advance in the deforestation of native forests in both Argentina and Santiago del Estero. In fact, the four most cleared provinces in the country (i.e. Santiago del Estero, Salta, Chaco, and Formosa) contributed 10% (1,214,369 hectares) of the expansion of the national soybean area. Santiago del Estero contributed the fifth largest area to soybean growth in the whole country (5.74%), while the 700,572 hectares gained between 1998-2016 by this crop are equal to 35.30% of the provincial cleared area. Regarding the cattle raising, the four most cleared jurisdictions contributed almost half (2,403,635 heads of cattle) of the national livestock's absolute growth reported between 2002 and 2017 (4,814,376 heads of cattle). During such period, Santiago del Estero's livestock increased by 560,086 heads of cattle, which represents 11.63% of the variation of national livestock. The same situation was replicated at the departmental level. The eleven departaments that concentrated 84.47% of the provincial deforestation were the same which accounted for both 78% of the soybean area and 67.11% of the livestock.

Seeking to free fertile lands, the expansion of the agricultural frontier, the native forests' destruction and the land grabbing in Santiago del Estero have carried out through violence, oppression, robbery, fraud, and illegality. Under the so-called "twenty-year law" -which in the absence of deeds or another legal form of property grants tenure rights to those who prove that they have inhabited and/or exploited plots for at least twenty years-, a good part of the wooded areas of, generally speaking, the Argentinean North, and particularly, Santiago del Estero, has been traditionally occupied for decades by indigenous and peasant communities. For them, the link with land and nature is vital for the reproduction of both their subsistence economies and their cultural identity. However, the advance of capitalist agriculture and cattle raising has turned the rural lands of the province into a scene

of unprecedented levels of violence and socio-territorial and environmental conflicts. In fact, 122 land conflicts have been identified in Santiago del Estero during the last two decades, equivalent to more than half (54.64%) of the 224 cases reported for the entire Dry Chaco region. Linked to problems of titling, eviction and usurpation, 70% of the provincial conflicts began during the 2008-2009 biennium. Led by some foreign investors, local firms and, specially, soybean, livestock and forestry companies from Córdoba, Santa Fe, Buenos Aires, Salta and Tucumán, these conflicts have confronted, on the one hand, peasant and indigenous organizations, and the other hand, a complex chain of complicities that includes legislators, deputies, judges, prosecutors, lawyers, security forces, and businessmen.

Thus, Creole peasants and native peoples are denounced in their own ancestral domains for usurpation of private property, threats, disobedience and resistance to authority, damages and forest theft, becoming subject of evictions, night raids, mass arrests, entry of bulldozers for clearing, harassment, obstruction of roads, blocking access to drinking water, deliberate contamination of wells, burning of crops, killing of farm and domestic animals, house fires, repression executed by the security forces, and murders perpetrated by para-police groups. In fact, Santiago del Estero is the third province in the country in terms of violent deaths of peasants and aborigines. Suggestively, the most resonant conflicts are located in those departments strongly affected by clearing, such as Copo, Alberdi and Ibarra, where forestry, soybean, livestock and energy companies carry out the indiscriminate felling of the native forest.

As a consequence, this has forced the emigration of peasants and aborigines to precarious settlements located in the urban peripheries. Santiago del Estero's rural population was reduced by 28.64% between 2001 and 2010, going from 272,852 to 194,712 inhabitants, which implies that the entire center, west, south and southwest of the province became population-expelling subregions. Stripped of their means of production and forced to relocate to cities, these subaltern groups are pushed towards proletarianization, turning into a workforce reserve army and a marginal mass placed at the disposal of capital.

Other forms of accumulation by dispossession related to the problem addressed here are the commodification of nature and state redistributions. Although native forests can be enclosed and privatised with relative ease, the same does not happen with the environmental services they provide, which constitute an indivisible asset with diffuse delimitation, common affectation and

undifferentiated ownership. These environmental services did not arise to be exchanged or to produce a profit for their owners, but the logic of capital has developed new and ingenious mechanisms to convert them into merchandise.

An example of this is the legislation currently in force in Argentina. Driven by the seriousness of the situation and the environmental and human rights organizations' pressure, the national State regulated deforestation by sanctioning in 2007 and regulating in 2009 Law No. 26,331 "Minimum Budgets for the Environmental Protection of Native Forests", commonly known as the Forest Law. The new legislation suspended logging until the respective provincial governments carried out a Territorial Ordering of their Native Forests (TONF) that includes three categories: 1) Category I (red), where clearing or exploitation of any kind is forbidden; 2) Category II (yellow), which cannot be deforested but can be subjected to sustainable use, harvesting, tourism, and research; and 3) Category III (green), where the partial or total transformation is authorised. In the case of Santiago del Estero, its TONF registered an area of 7,108,203 hectares of wooded land, classifying 972,658 hectares in Category I (red), 5,836,563 hectares in Category II (yellow) and 298,982 hectares in Category III (green).

Such zoning could be interpreted as "protectionist", since it allows clearing in only 4.21% of the provincial forest area, one of the lowest figures in the country. However, appearances are deceiving. Firstly, Santiago del Estero's government lowered the standards of the Forest Law to favor large agricultural and forestry producers. Secondly, local authorities promoted the so-called "property recategorizations", which are expressly prohibited by law 26,331. In fact, the provincial government created a more complex zoning that divided Category II (yellow) into two subcategories: IIa, where clearing is forbidden and only sustainable exploitation is allowed; and IIb, which in addition to authorizing the latter enables the deforestation of "green spots" arbitrarily inserted and delimited by the provincial government within protected areas. Through this new zoning, Santiago del Estero allocated 10% to 20% of Category II to forage clearings and up to 40% to forestry-grazing activity, leaving only 40% to 50% reserved for protection and forest management. Due to its incompatibility with Law 26,331, this practice has been questioned without success by the Ministry of the Environment, the National Auditor's Office and different actors from civil society.

This explains why Santiago del Estero contributed almost half (48.8%, i.e. 470,704 hectares) of the 964,605

hectares illegally logged in Argentina between 2007 and 2016. Clandestine clearings represented 83.35% of provincial deforestation (564,359 ha), largely exceeding the national average (57.47%) and turning Santiago del Estero into the fifth province most affected by this matter. Taking the analysis to a more detailed scale, illegal logging represented 100% of the total deforestation in ten of the twenty seven provincial departments (Choya, Quebrachos, Ojo de Agua, Guasayán, Loreto, Aguirre, Salavina, Mitre, Atamisqui, and Silípica), which constituted, together with six other districts (Avellaneda, Capital, Copo, Pellegrini, Río Hondo, and Sarmiento), the hard core of this problem (Fig. 5). The situation was also worrying in other departments, such as Alberdi, Moreno, Juan F. Ibarra, Figueroa, Jiménez, Banda, and San Martín. Notwithstanding its wide spread, clandestine deforestation was spatially concentrated in a handful of departments. In fact, only five districts (Moreno, Alberdi, Pellegrini, Copo, and Juan F. Ibarra) concentrated two thirds (66.35%), i.e. 312,285 hectares. Out of a total of 192 Argentinean departments affected by this question, these five localities accounted for 32.37% of the illegally deforested area nationwide.

The most serious thing is that, to a large extent, illegal deforestation is financed by the national State through the so-called National Fund for Enrichment and Compensation of Native Forests (NFE CNF), a public organism designed to compensate the owners of wooded lands that they were included in Categories I (red) and II (yellow), where logging is forbidden. To access the resources of the NFE CNF, the holders of these areas -the vast majority, agricultural companies- must present Conservation Plans (CP), Sustainable Management Plans (SMP) or Formulation Projects (FP). As a result, State literally agrees to pay agents -the vast majority of whom are private- in exchange for them to “conserve” native forests or, at least, stop destroying them, not penalizing but awarding millionaire subsidies to those who were responsible for the appropriation and destruction of that common good.

Between 2010 and 2019, 2,237.6 million pesos were assigned to the NFE CNF. With the weak participation of public organizations, NGOs and universities, 86% of this mass of resources was capitalised by individuals and private companies, in contrast to the insignificant 2% perceived by rural and indigenous communities. Of the 8,335 plans and projects presented throughout the country, Santiago del Estero gathered only 639, allocating only 3.3% of the area declared in its TONF to CP and SMP, but monopolizing 39.1% of the total financing. Even worse, a large part of the Santiago del Estero’s

illegally logged area coincides with the forested areas whose owners received public resources. This shows the paradox of a national State that commodifies nature by putting a price on the environmental services provided by the native forests, financing clandestine logging through the same law designed to prevent it, and transferring a vast mass of public subsidies to the capitalists of the agricultural, livestock, and forestry sector.

These fraudulent forms of accumulation by dispossession take place because of the regulatory weakness and the political corruption. While the field inspections of the regulation agencies have been systematically reduced, Santiago del Estero has been subject to less than 6% of the controls carried out. Although the approved SMPs are forestry-grazing systems, in practice they behave as basically livestock farms, with marginal (or null) importance of the forestry component. Other irregularities refer to agricultural and livestock operations enabled in areas theoretically classified in Category I (red), the coexistence of both authorised and illegal clearings on the same property, and the presence of both clandestine deforestation and approved projects in illegally logged areas. Despite the fact that the fines applied to illegal clearings in Santiago del Estero are relatively expensive (in 2017, 956 dollars per hectare), they are rarely collected by the provincial government, since that large soybean and livestock companies delay or avoid payment.

IV. CONCLUSIONS

The empirical evidence recollected along this paper corroborates the hypothesis that the current phase of native forests’ destruction in Santiago del Estero features all the attributes of an accumulation by dispossession process. During the last decades, the acceleration of logging has caused the loss of almost 2 million of hectares, boosting social practices que crudely illustrate the dark side of the capitalist agriculture and cattle raising’s expansion in the Argentinean North. Thus, ecological looting and environmental degradation combines with land expropriation and grabbing, as well as the aborigines and peasants proletarianisation. The biased enforcement of Forests Law shows that, although theoretically Santiago del Estero has one of the most protectionist forest zoning of the country, provincial government has transgressed such territorial ordering by creating a parallel legislation that allows logging in protected areas. In addition, Forests Law uses the euphemism of “payment of environmental services” to turn native forests into an exchange

value, distributing public resources among private agents to both compensate them for potential loss of profit and subsidise the deforestation's advance. To resume, agricultural frontier's advance towards the forest lands of Santiago del Estero is a temporary space-time solution

to the capital's second contradiction that not only accelerates the loss of biodiversity and the changes in land uses, but also adds tension to the metabolic rift between society and nature and unchains several expropriatory dynamics over the local subaltern groups.