Land Use in the Southern Cone from 1950 to the Present

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In order to analyze a specific region's presence in the history of the Anthropocene, it is necessary to give historical and geographical concreteness to the debate on the subject, which usually only occurs on a generic and global level. It is clear that the starting point has to be global, because the central idea is that there has been a change of scale in humanity's presence on the planet, in such a way that the aggregate action of human beings has begun to modify the macro-structures of the Earth System. In other words, human action, understood globally, has come to acquire the weight of a geophysical agent. In quantitative terms, moreover, this change in scale occurred mainly in the period since 1945 – which has been called the Great Acceleration – when there was a huge increase in the size of the population, the global economy, the extraction of natural resources across the planet, and the spread of the human-produced industrial technosphere (Bonneuil and Fressoz 2013).

However, from the perspective of historical analysis, these global statements are insufficient. The question is: what specific historical processes – at the socioeconomic, cultural, and environmental levels – brought about this drastic change in the scale of human presence on the planet? On the other hand, how did the different countries and regions participate in this process, actively or passively? It should be remembered that major historical processes – such as the emergence of capitalism, the fossil economy, or information technology – did not occur homogeneously across the globe. They began in certain regions and then became globalized, although unevenly, through complex processes of diffusion, imposition, copying, etc. At this point, there is a conflict between the geological and historical reading of the Anthropocene. According to geological stratigraphy, the planet is not entering a new epoch bit by bit. In history, on the other hand, it is necessary to understand how the scale of human presence has been modified in specific geographical and temporal situations to produce the aggregate effect mentioned above. It is not, therefore, a matter of abandoning the global perspective, but of combining it with differentiated analyses of social processes. In fact, if one stays only at the global level, the enormous inequalities that exist in the standards of living and consump-

tion in the current international system might be forgotten. It can be affirmed that no sector of humanity is outside or can escape the Anthropocene phenomenon, but participation in the movement of the construction and reproduction of the phenomenon is extremely unequal, which in turn produces flagrant injustices.

To better understand the above statement, it is necessary to define concretely what historical changes have marked humanity's entry into the Anthropocene and which countries/regions have dominated this movement. It can be said that there is a certain consensus on some of the historical components of the model that led several human societies towards the collective construction of the Anthropocene: a) a strong aggregate increase in the levels of material consumption, although internally unequal; b) the massive use of fossil fuels; c) the strong increase in the pace of urbanization and the degree of industrialization of the economy; d) the increase in CO_2 emissions; e) the intense diffusion of a political culture founded on the desire for growth. In other words, there is a certain dominant model of production, consumption, and culture that is associated with the historical constitution of the Anthropocene. The constitution of this model was particularly strong in some geographical areas of the planet – with Western Europe as the origin – and subsequently spread very unevenly and with varying intensities to other regions.

The participation of different countries/regions in this historical macro-movement, in turn, can be discussed at least at three levels: a) their degree of insertion in the production and consumption patterns that produced the global phenomenon of the Anthropocene; b) their role as providers of natural and human resources for other countries/regions to rely on; c) their role in the formulation and/or absorption of ideologies and thought patterns that build a "culture of the Anthropocene" (Pádua 2022).

The central argument of this chapter, therefore, is that it is necessary to think about the Anthropocene also in the specific context of a region such as the Southern Cone. On the other hand, the region's entry into the Anthropocene was complex and discontinuous in space and time. In other words, the historical transformations of the Southern Cone have produced different ways of connecting its multiple realities with the broader context of the larger planetary transformation.

Based on this premise, it is possible to ask about the presence of the Southern Cone in the history of the Anthropocene. Until the Great Acceleration, it can be said that this participation was relatively modest. Most of the economies and social formations in the region before 1945 were not based on fossil fuels and were essentially organic and rural, with a limited level of urbanization. It is important to underline that this is not to talk, in relation to the Anthropocene issue, about impacts on nature and the environment, but on the planet as a whole. In all places and times, humans have related to specific environments through interaction with specific places in planetary nature. In the case of the Anthropocene, this chapter speaks about macro impacts on the Earth System itself and not on some of its spaces. It is evident that

the societies of the Southern Cone, from the colonial period until the end of the nineteenth century, have produced environmental impacts, as in the case of deforestation, wool extraction, saltpeter extraction, artisanal gold and silver mining, cattle ranching, cereal agriculture, etc. But these were economies of consumption and exchange on a local and regional scale, which were not part of the great industrial transformation that in other countries/regions was the protagonist of the macroprocess that gave rise to the Anthropocene. Even at the second level mentioned – the supply of natural resources essential for the major transformation – the region's role was limited. It did not supply oil, mineral resources, or food at the international level that would make a difference in the transformation we are talking about. This reality changed considerably in the first half of the twentieth century, especially in the case of Argentina and Uruguay, which became international exporters of grains and meat.

Furthermore, in Argentina, during the 1930s, industrialization through import substitution was promoted. This compensated for the imbalances generated by the crisis of the agro-export model in 1929. As a result, industrial production surpassed agricultural production, and textile, food, and metallurgical companies were set up. Light industry also developed. In the Chilean case, the development of copper mining clearly has an essential importance in its economic model, as well as in the territorial and environmental impacts it generates.

In Brazil, despite some flourishing regional economies (such as the meat and lard industry, as well as wheat in Rio Grande do Sul, yerba mate in Paraná, and a small textile industry in Santa Catarina), the fundamental elements of anthropocenic transformations – such as export agriculture and industrialization – have occurred mainly in the southeast and, to a lesser extent, in the northeast or north. Since the decline of the mining-based economy between the late eighteenth and early nineteenth centuries, regional elites and rulers have introduced cattle, coffee plantations, and other crops. In the historical period prior to 1930, the average coffee exported by the country was between 50 percent and 70 percent of total export profits; rubber, due to the wars, represented 40 percent of total Brazilian exports in the 1910s, reaching its peak at that time; other fundamental products for the agrarian export economy were sugar, cacao, and cotton, keys for attracting capital that would later be invested in the country's industrial base. Until the 1950s, the textile, food, and footwear industries accounted for almost half of the country's total industrial production. The insertion of the Southern Cone into the global economy, with its various industries and agricultural industrialization, contributed significantly to the increase of regional participation in the Anthropocene, either as an exporter of resources or as a consumer. Therefore, this point will be addressed throughout the text.

In summary, in the context of the Great Acceleration, the Southern Cone experienced a significant increase in the region's participation in the Anthropocene,

whether as an exporter of primary resources or as a growing consumer of energy and manufactured products.

Geographic-Ecological and Socio-Historical Context

Although the concept of Southern Cone has been defined basically from a geopolitical perspective, it can also be thought of in terms of its territorial and socio-environmental dynamics. In this sense, the environmental history of the Southern Cone is largely associated with the evolution, transformation, and understanding of two regions that structure its geographical and biophysical profile. On the one hand, the La Plata Basin stands out on the eastern slope of the Southern Cone, as it constitutes a common socio-environmental space that unites and integrates an important part of the countries that make up the region: Brazil, Argentina, Paraguay, Uruguay, and Bolivia. On the other hand, the Andean mountain range structures the Southern Cone in its longitudinal north-south axis and, therefore, Chile and western Argentina, with its own unique and multifaceted environmental and territorial features.

To analyze the La Plata Basin, perhaps the most obvious approach would be to understand it as a centrifugal force, where the conflicts, diversities, and heterogeneities that seem to make up a territory are difficult to assimilate into a common space. Simultaneously, another force – deeper, less visible, but at the same time more powerful – unifies the diverse, unites the fractures that spread on the surface, and gives a homogeneous character to the heterogeneous. That force is related to the ways different societies established relations to the rivers and plains of the La Plata region in different historical situations. It is there where great common processes appear that transform the space and its people in the same direction, with nuances and heterogeneities, but still within the great common framework that is ultimately the La Plata Basin – and, therefore, one of the two most dynamic and substantial spaces of the Southern Cone.

This basin is formed by three main rivers: the Paraná (4,352 km), the Paraguay (2,459 km), and the Uruguay (1,600 km), which are among the longest in the world. The estuary of the La Plata River is the widest in the world (its outer limit measures 256 km) and the average annual flow of the river, when it flows into the South Atlantic, is about 23,000 m^3/sec. All this results in one of the most productive and diverse marine ecosystems. In addition, the water that infiltrates this basin produces the largest volume of recharge of the subterranean water system that makes up the Guarani Aquifer, one of the largest reservoirs of quality inland water in the world.

With 3,100,000 km^2, the La Plata Basin is the fifth largest in the world and includes most of the territory of Brazil, Argentina, Bolivia, and Uruguay, along with the entirety of Paraguay. Four of the five national capitals of the countries that

make up the basin – Buenos Aires, Brasilia, Asunción, and Montevideo – are located within it, and it is home to more than 50 percent of the total population of these five countries. The combined population of these cities went from 61 million in 1968 to 150 million in 2000.

The hydroterritorial network of the Paraná and Uruguay rivers is home to and source of many environmental resources and services that have a fundamental value in the region, the continent, and the world. There are several biomes or ecoregions, depending on the case, with particular characteristics, some already highly transformed or degraded and others in the process of degradation: the Alto Paraná Atlantic Forest, the Pantanal, the Brazilian Cerrado, the Yungas, the Altiplano, the Chaco, the Iberá wetlands, the pampean grasslands, the Delta, etc. are unique ecosystems in the world and of great ecological value. In addition, the largest wetland system on the planet is located there, including the recharge and discharge areas of the Guaraní Aquifer. Many of these conditions allow the region to be the edaphic substrate for a sector of agricultural production of major global importance.

The enormous environmental value of the basin is the basis of the largest urban centers in South America, hence its importance in the history of Latin America and the Southern Cone in particular. It is one of the largest freshwater reserves in the world, with exceptional biological and cultural diversity.

The Southern Cone is complemented, in territorial terms, by the presence of another region that plays a leading role in the processes associated with anthropocenic transformations: the axis of the Andes mountain range. In strictly political terms, it includes Chile and the entire western edge of Argentina. In this context, the social-ecological systems of the Andes support the livelihoods of millions of people and are essential for conserving and maintaining one of the most biodiverse regions on the planet. Here the most evident problems associated with the Anthropocene are the decrease in the scarce vegetation cover as a consequence of firewood extraction and overgrazing; the contamination and drying up of water sources, as a result of mining activity; and the decline in faunal diversity.

In turn, the part of the Southern Cone located within the Brazilian territory presents, as in the case of other countries, similarities and singularities in the context of the general features that define the bioregion. Boasting a great variety of reliefs – with plateaus, plains, mountains, and depressions – the geography of the region resulted from its diverse geological formations and the complexity of its morphogenetic agents, which exert a considerable influence on climate and vegetation (da Silva, Brandt, Carvalho, and Mundstock 2016).

In the case of Brazil, its membership in the Southern Cone also includes a particularly important region: the Cerrado, a vast tropical savannah ecoregion covering almost 2,000,000 km² that encompasses the state of Goiás, the Federal District, most of Mato Grosso, Mato Grosso do Sul and the state of Tocantins, the western part of

Minas Gerais and Bahia, the southern part of Maranhão and Piauí, and small parts of São Paulo and Paraná. Historically, cattle ranching is a major cause of savanna conversion to cropland, with an approximate total of 150 million acres (60 million ha) converted to date. Although the Cerrado was once thought to be unsuitable for agriculture, new technologies and techniques have allowed it to spread rapidly over the past forty years. Since 2000, soybeans, along with other crops such as corn, cotton, and sugarcane, have expanded over large areas.

Territorial Transformations

The territorial transformations, the profound changes in land use, and, in a broader sense, the variations promoted in the environment of the Southern Cone were not homogeneous, nor did they occur synchronously. Although nation-states in alliance with economic elites functioned as the epicenter of land use changes, such changes may have been slow in certain regions due to topography, climate, and infrastructure, among other aspects.

In the 1950s, itinerant cattle ranching continued to play an important role in integrating the region into the global economy, although to a lesser extent than the old connection between the gaucho mission ranches and the Sorocaba cattle fairs during the nineteenth century. Due to the precariousness of the roads, among other factors, mules traveled large territorial extensions on more recently opened roads between forests and fields, together with the muleteer trade of products from a given region –such as yerba mate– or even mule troops who were dedicated to agricultural work or human transportation. The route traced by the muleteer trade in its initial phase connected Colonia de Sacramento (present-day Uruguay) with the consumer center of cattle and mules in the southeastern region of Brazil, through the "camino de Viamão." Advancing in the twentieth century, the cattle *tropeo* (droving) connected the geography of the fields. Faced with the forests, the strategy consisted of creating roads that reached new fields as soon as possible, whose native pastures served as a base for the feeding of the cattle thinned by the days of travel. With the experiences of introducing exotic species, however, those of African origin predominated in the large territorial extensions of the time (da Silva, Brandt, and Carvalho 2016: 288). In 1950, instead, *tropeirismo* – based on a journey spanning months and reaching over 2,000 kilometers – gave way to movements of relatively small troops of mule, as already mentioned, as well as pigs (da Silva, Brandt, and Carvalho 2016: 276). This historical modification of tropeirismo is more or less linked to the incentives of Euro-descendant colonization – initiated in the southern states of Brazil during the nineteenth century (for example, with the German and Italian colonies in Serra Gaúcha and Santa Catarina). This option of settling a white peasantry in the region, based on small property and family labor, fostered a relatively new eco-

nomic dynamic in the limits of the current southern border region of the country, which connects the northwestern region of Rio Grande do Sul, western Santa Catarina, and the western/southwestern region of Paraná (Radin 2009). The promotion of this colonization system by state governments intensified after the resolution of the Cuestión de Palmas or Missiones, a conflict between Brazil and Argentina over disputed territory that today encompasses all of western Santa Catarina and part of (south)western Paraná. Subsequently, when in 1917 the states of Paraná and Santa Catarina signed an agreement on the territorial limits belonging to each unit of the federation, the small nuclei or villages created by the passage of cattle troops gradually became small municipalities or districts, occupied by a diversity of settlers of German, Italian, or Polish origin, who joined the "Brazilians" or caboclos and, to a lesser extent, the Indigenous people in the process of compulsory *aldeamento* (building and organization of settlements) (Werlang 2006).

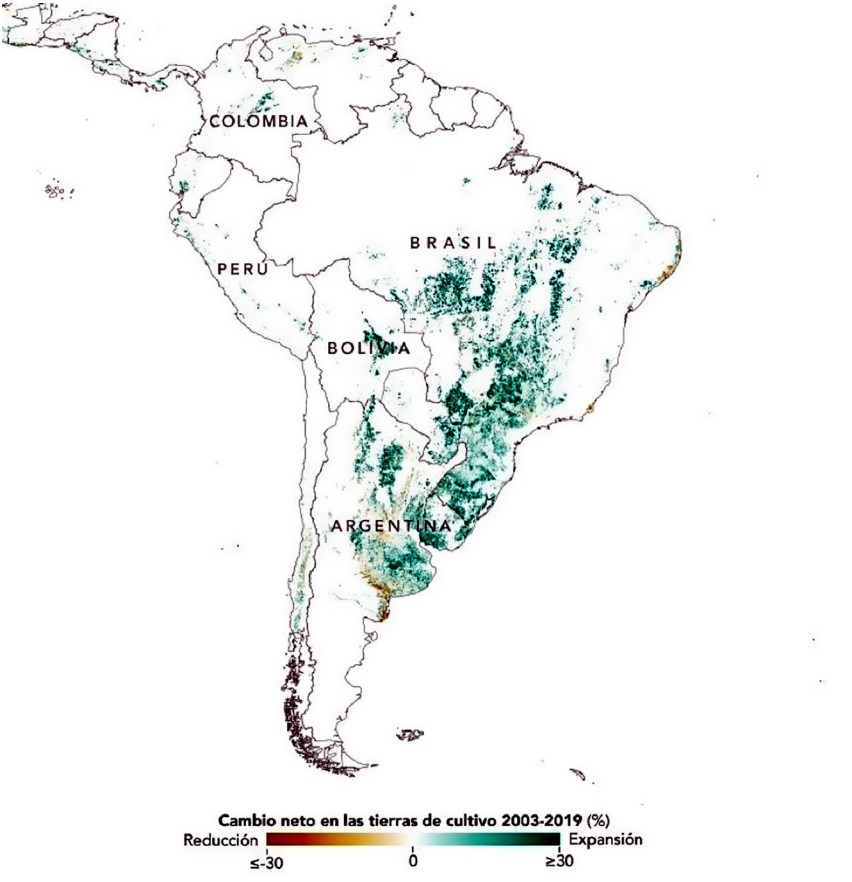
Thus, the political events that helped to define the boundaries favored the internal migration of Euro-descendants who, in turn, implemented an agro-industrial dynamic that can be observed especially in originally forested regions. The (mis)encounter between this new peasantry of European origin and the forests was, to a certain extent, mediated by mestizo groups such as the caboclos and, to a lesser extent, Indigenous peoples, the historical inhabitants of this border region. For example, the pigs raised by the caboclos – loose, feeding on seasonal fruits such as pine nuts or gabiroba – were gradually incorporated into the economic activities of the Italian descendants, who initially negotiated the purchase of herds of the animal from the caboclo breeders to supply the then incipient agro-industrial production of items such as salami or lard. The caboclos, in turn, were incorporated into certain historical economic activities such as the harvesting and processing of yerba mate or the timber industry (Valentini 1999). In a way, the settlement of caboclo populations historically followed the watersheds and the availability of the *Ilex paraguariensis* plant, practicing seasonal work from Paraguay and Northern Argentina to the three southern states of Brazil and part of Uruguay. Endemic to this region, this plant, whose crushed leaves give rise to the commercialized yerba mate, benefited ecologically from the forest dynamics of the region. Large trees such as the araucaria protected the *Ilex paraguariensis* from direct heat and thus preserved its leaves in a way that guaranteed good amounts of caffeine, among other properties. After World War II, however, stimulated by the growth of international trade and the emergence of the "yerba mate barons" – especially in Paraná –, herbariums related to the plantation model spread and, therefore, they were disconnected from the ecology of the araucaria forest and more linked to scientific and technological research laboratories. Wild yerba mate, whose ecological dynamic is not based in human interference like the plantation, remained as a place of ethical trade, drawing generations of caboclos for the "*yerbatera* struggle" – the confrontation with adverse forest conditions, seasonal encampments, and precarious conditions for workers (Renk 2006).

Livestock, especially important for the Southern Cone economy, began to share part of its vast territory with agricultural plantations previously relegated to second place, a change that was mainly due to the importance of grains and oilseeds in the international market after World War II. Gradually, these crops came to invade and intensify mechanized plantations in biodiversity hotspots such as the Gran Chaco plains, the Chiquitano forest in Bolivia, the Uruguayan Campos, and the Argentinean pampa. For example, the Argentine pampas play an important role in the country's soybean narrative, with a 1,500-fold increase between 1970 and 2021. In Argentina, different agricultural programs were developed, such as the Experimental Station of Córdoba, where experiments were carried out with soybean cultivation, working jointly with Brazilian farmers. The current scenario of soybean monoculture only began in the 1970s, with the progressive introduction of genetically modified soybeans and, later, during the 1990s, of transgenic crops (da Silva and de Majo 2022).

Soybean cultivation has become a common feature of the region, as not only has there been a process of expansion, but also soybean yields per hectare have undergone significant intensification, evidenced by the dramatic growth in yields between 1970 and 2021, from 1.2 to 2.5 metric tons per hectare, respectively. As a result of this expansion and intensification, the pampas have undergone a process of agrarian conversion in which other historical forms of land use and native ecosystems have been subsumed by the logic of soybean production. This agricultural reconversion is facilitated by the arrival of the soybean technology package, an input- and capital-intensive form of production centered on Monsanto's patented Roundup Ready transgenic soybean, which has become hegemonic in Argentina: since its introduction, the adoption rate has been practically 100 percent. The package is designed to control weed populations through the use of glyphosate (Roundup is its commercial name) and no-tillage cultivation; it is also argued that it improves soil health and increases productivity because it does not disturb topsoil (Mejia 2022: 186). Since 1996, when glyphosate-resistant transgenic soybeans were launched on the Argentine market, the popularity of this oilseed has grown exponentially, replacing other local crops such as sunflower and even the pampas in other regions of the country. Since 1961, cereals and oilseeds have always represented between 88 percent and 95 percent of the country's total cultivated area (Muzlera 2022). In Paraguay, the first generations of Brazilian migrants are linked to the expansion of cereals and, especially, soybeans, as they helped produce 1 million tons of grain in 1989, the same year that dictator Alfredo Stroessner was deposed. In 2008, Paraguay cultivated around 6 million tons on more than 3 million hectares. Currently, this figure has reached 10.2 million tons per year. The so-called "soybeanization," in this sense, can be represented through how soybeans have been mediating economic, political, and ecological relations in this region in recent decades: for example, in an Argentine agricultural region near Buenos Aires, soybeans accounted for 89 percent of the area devoted to agriculture

between 2013 and 2014. Similar agricultural patterns are observed in Uruguay and Bolivia, where soybean production is expanding rapidly. In Uruguay, soybean plantations have reached one million hectares since 2000, replacing the original fields (da Silva and de Majo 2022).

Fig 1: Soybean Planting in South America



Source: Ciencia NASA (2022).

The historical transformations in the interior of the Brazilian territory accelerated in several aspects after World War II – but in a heterogeneous manner, without homogeneously impacting the various regions. Thus, the degree of regional insertion in the production and consumption patterns that produced the global phenomenon of the Anthropocene can be analyzed on the basis of the elements intro-

duced or the processes that intensified these transformations. In the southern border region of Brazil, for example, one of the initial political strategies to integrate the region into the national economy was to create new municipalities from the old territories (Nodari 2012). In this part of southern Brazil, the development strategy of the governments of Rio Grande do Sul, Paraná, and Santa Catarina created an agricultural corridor along the borders with Argentina (Muraro 2016: 274), characterized by small and relatively nonurban municipalities, organized around regional poles such as Passo Fundo, Erechim (RS), Chapecó, Concórdia, and Joaçaba (SC), and Francisco Beltrão, Pato Branco, and Cascavel (PR). With the exception of Passo Fundo, the other municipalities were considered migratory frontiers; Brazilian state and national development plans have reinforced some of the local characteristics as a way of complementing the regional economy and contrasting the regions. In this sense, agriculture and extractivism forged regional images such as the "land of soybeans" in Santa Rosa (RS) or the "granary of Santa Catarina" in the western part of Santa Catarina. Thus, with timid urbanization process until at least the 1980s, agriculture and extractivism fostered a great acceleration in the region (Muraro 2016: 274).

Exemplifying this issue, meat packing plants – like the yerba mate factories, although to a lesser extent – promoted changes in the technological base and demanded changes in the regional infrastructure (Bavaresco 2003). In this new model, which emerged from the development plans drawn up at the national level during the 1970s by the civil-military dictatorship, the regions closest to the borders with Argentina, Uruguay, and Paraguay established themselves as leaders in the production of pork, poultry, and grains. While the regions closest to the coast were conceived as industrial, textile, mineral extraction or service poles in general, the capitalization of agricultural production intensified socio-environmental changes to an extent never before experienced. The small plants producing meat and lard, created in the 1930s and 1940s, later received government financial support and began to organize the region's productive structure. Meat processing companies, cooperatives, and agribusinesses, under brand names such as Seara, Perdigão, Sadia, or Chapecó, incorporated the region's small meat processors and, especially from the end of the 1970s, intensified the agricultural modernization relationship through strategies such as *Fomento* (Development) and *Integração* (Integration) (Bavaresco 2003). Both programs envisaged that the companies would provide swine, poultry, or grain matrices, technical assistance, and purchasing for the entire production; in this way, the farmer "integrated" into the system had to adapt to the technical and technological precepts put forward by the agribusinesses. In general terms, this meant, in addition to the alienation between small producers and companies, a significant impact on production, consumption, and, finally, the waste resulting from the process (Campos 1987).

Within two decades, livestock and the planting of creole seeds cultivated during the period known as the Great Acceleration were marginalized (Marconi 2013: 184) and in their place emerged hybrid corn, as well as wheat and soybeans adapted to the climatic conditions of the region. While the 1970s represented a turning point between traditional production and agricultural modernization, the following decades saw the intensification of land and water use through the clearing of forests, first, to increase the area of plantations and, second, to make way for the construction of dams. In this new dynamic, agribusiness established a process of circulation of exotic elements historically inserted in this territory: the planting of grains such as corn and soybeans and the growing production of poultry and pigs; in turn, up until the late 1990s, most of the waste from pig was dumped in the rivers of the region, contaminating a large part of the basin that shared space with pig farming. Similarly, slaughterhouses demanded a considerable increase in water use by incorporating techniques in accordance with sanitary standards and increasing the number of slaughter plants – conquering an important part of the European and Asian markets from the 1990s onwards. As small towns grew into medium-sized cities, the demand for highways and airports signaled the insertion of these once small agribusinesses into the global marketplace: transnational corporate giants such as BrFood and Bunge, for example, incorporated the slaughter plants and brands that emerged in this region. In the extreme south of the Brazilian border with Argentina and Uruguay, plantations advanced to a lesser extent than pastures: in the transition areas between the Atlantic Forest biome and the pampas, fertilization practices in soils naturally infertile for large-scale agriculture gave rise to corn, soybean, and wheat for the domestic market and, still in the 1950s, for export – in addition to horticulture, more recently. However, the modernization of pastures and livestock herds dominated and, to some extent, accelerated the circulation of elements characteristic of the Anthropocene. The regions of Campanha, Sul, and Fronteira Oeste, therefore, have larger farms, which specialize in cattle raising and rice cultivation. In Rio Grande do Sul, properties of more than 1,000 hectares account for only 0.6 percent of all agricultural companies, but control 27.2 percent of the agricultural area (Feix, Leusin, and Agranonik 2016: 7).

While the regions bordering Uruguay and Argentina were dominated by meat processing plants, plantations and pastures – alternating between large and small properties–, another dynamic of environmental and economic integration incorporated, to a certain extent, the interior of the state of São Paulo, the north and west of Paraná, as well as Goiás and Mato Grosso. An industrialization impulse initiated by the coffee cultivation in the interior of São Paulo influenced the construction of railroads that integrated Goiás with the southeast of Brazil at the beginning of the twentieth century; coffee plantations, in turn, extrapolated the territory of São Paulo towards the north of Paraná – finding, as in the pampas, an agrarian structure based on medium and large properties. In the northern and central re-

gions of Paraná, therefore, coffee, wheat, and soybean production has predominated in recent decades, with the support of state and national agricultural research institutions, such as the soybean division of EMBRAPA (*Empresa Brasileira de Pesquisa Agropecuária*). Finally, another dynamic – originating in the interior of São Paulo – integrated the interior regions of Brazil into the Anthropocene: sugarcane production. Taking advantage of the industrial structure of coffee – and at certain moments, of the decline of grain –, producers of European descent, such as the Biaggi family, invested in sugarcane mills and improved the varieties cultivated. In the 1970s and 1980s, the civil-military dictatorship favored the region through economic incentives originated in the Proalcool program, aimed at the biofuel production. Despite being plant products and not fossil fuels, this industry promoted a great transformation in the regional landscape by increasing the infrastructure for the production and distribution of products, in addition to the pollution of rivers (Eaglin 2022).

Finally, regions such as the south of Goiás, the northwest of São Paulo, and the east of Mato Grosso synthesize, in a certain way, the dynamics of economic insertion of the interior of the country in the national and international agendas of the post-1945 period. In the transition region between the Atlantic Forest and the Cerrados, soils considered naturally infertile influenced the low economic value attributed to these properties until at least the 1970s. At the same time, technological innovations in agricultural fertilization, research on pastures developed by EMBRAPA, and the transfer of the federal capital from Rio de Janeiro to Brasilia stimulated the opening of an agricultural and livestock frontier in the center-west of the country that, in a way, synthesized dynamics historically constructed in the south and southeast regions. In other words, based on a large property structure, the civil-military dictatorship initiated a process of attracting settlers of neo-European origin from the southern border of Brazil, while at the same time establishing new agreements for migration and Japanese immigration aimed at agricultural technification in the Cerrado regions of Goiás and Minas Gerais. Thus, during the 1970s and 1980s, programs such as *Polo-centro* attracted Japanese-Brazilian emigrants settled in the states of Paraná and São Paulo, while receiving assistance from Japanese and Brazilian technicians. From Mato Grosso and Mato Grosso do Sul, pastures and cattle herds advanced, expanding the territory dominated by breeds such as the zebu; finally, a large number of emigrants from the south exchanged their small properties for medium and large farms in the center-west of the country and, together with farmers from São Paulo and Minas Gerais, established an agro-export economic dynamic.

Therefore, the Brazilian part of the Southern Cone played a key role as a provider of natural and human resources for other countries/regions to build these patterns. In addition to the examples already mentioned, regions of Paraguay and Bolivia were dominated by Brazilian farmers, mainly soybean farmers and cattle ranchers – the "*brasiguayos*" in Paraguay. It is also worth mentioning as an example the cen-

ter-west of Brazil, more specifically the Cerrados region, which has developed a dynamic similar to that of other Brazilian regions, although with environmental and social singularities.

Finally, the role of these regions in the formulation and/or absorption of ideologies and thought patterns that build an anthropocenic culture can be explained by some data: in the southwestern region of Paraná, for example, each municipality has between 1,001 and 3,000 rural properties – representing 25 percent of the state's dairy production. Adding the various regions of Paraná, a total of 14.7 million hectares were used for agriculture in 2017 (Rossi 2021). For its part, in 2006, Rio Grande do Sul already occupied more than 20 million hectares, with 45 percent of the established area occupied by pasture – and 34 percent by permanent or seasonal crops (Feix, Leusin, and Agranonik 2016: 7). Therefore, the southern states of Brazil, together with Mato Grosso, are among the largest grain producers in the country: Mato Grosso (92.3 million tons per year), Paraná (44 million), Rio Grande do Sul (37.4 million), and Goiás (31.5 million) (Secretariat of Agriculture, Livestock and Supply 2023).

This drive for agricultural production, on the other hand, plays a central role in deforestation: according to the Mapbiomas report (2022), 97 percent of the loss of native vegetation recorded in 2021 was caused by the industrial agricultural model – generically referred to as agribusiness in Brazil – while urban expansion and mining occupy the rest of the statistics (Pajolla 2022). In fact, agribusiness was responsible for 97 percent of deforestation in Brazil in 2021. The agribusiness complex, consequently, contributed 72 percent of Brazil's greenhouse gas emissions in 2019. Although a large part of these figures – deforestation and gas emissions – are concentrated in the Amazon and Cerrado biomes, agricultural production in the interior of Brazil is interconnected from south to north – in the sertões. Due to this, a certain culture of the Anthropocene is shared among companies, governments, and civil society, whether in the promotion of an advance of industrial agriculture or in the promotion of alternative models.

In the Argentine case, the process of territorial transformation, land use, and expansion of agricultural frontiers has been a dynamic movement driven by favorable market conditions and the availability of suitable and cheap land.

Until the 1930s, the expansion of agriculture focused on the broadening of agricultural frontiers through the occupation of new land. Thirty percent of the total area dedicated to agriculture and livestock was located in the humid pampas. After almost three decades of agricultural stagnation from the 1960s onwards, expansion took place at the expense of land used for extensive cattle raising, and in recent years, agriculture has grown to occupy more than 50 percent of the productive surface of the humid pampas (Rabinovich and Torres 2004). This substitution dismantled an important share of the cattle raising infrastructure in *Núcleo Maicero* (an area of almost 5 million fertile hectares, which was the epicenter of the development of

agriculture in the modern period). Agriculturalization was first consolidated in the humid pampas, and from the 1970s onwards, this process also began to be implemented in other eco-regions of the country. Capital, production technologies, part of the beef production, and the grain and forage seed farms were transferred there (Morello 2005; Zarrilli 2010).

Despite these important transformations, the pampas region continues to be the productive center of the country. However, these transformations are also having a particular impact on other regions, especially in the Chaco, where a notable increase in agricultural and livestock activities is expected, both due to the productive potential of the land and to significantly lower land prices. As a result, profound and problematic changes are taking place in this space, affecting various areas and sectors. In the natural landscape, deforested areas are increasing as a consequence of the forceful advance of the agricultural frontier. In the agricultural landscape, there has been a sharp decrease in the area dedicated to cotton cultivation and an increase in the predominance of soybeans. Concerning livestock, there has been a strong increase in cultivated pastures, especially in large plots. The structure of land use is changing, with large and medium-sized farms replacing the former colonies of small producers. In general, there is also a sharp decline in the rural population, as soybeans require less labor than cotton. This is causing a massive exodus of the rural population to the poverty belts of large cities (Zarrilli 2020).

In this context, Argentina's total agricultural production quadrupled in almost three decades, representing an annual increase of approximately 2.5 percent. Increased productivity and technological change played a fundamental role in the growth of Argentine agriculture. This starts the above-mentioned agriculturization process, which is defined as the sustained and continuous use of land for agriculture instead of livestock or a mixed practice. It is also associated in the pampean region with the introduction of technological changes, livestock intensification (*feetloods*), expansion of the agricultural frontier into extra-pampean regions, a conflictive relationship with sustainability, and a permanent propensity to monoculture-oriented production, mainly soybeans or the wheat-soybean combination (Zarrilli 2020).

One of the substantial qualitative changes in this context is that the axis of farming is not centered on land ownership, but on the capacity of the producer-entrepreneur to organize and coordinate a network of contracts. Even in the cases of producers who own the land they work, the usual economic and financial strategy is that of a businessman who organizes contracts or a planting pool (*pool de siembra*) linked to various markets: capital markets, for financing land for leasing; and service markets, in which contractors are the bidders. This strategy has favored the combination of land tenure systems that tend to increase the area worked without necessarily increasing the scale of land ownership. Although the area planted with soybeans has been widely dispersed, the Parque Chaqueño eco-region is where its

explosive expansion has been recorded. The marked differential in land value is a consequence of the above, in addition to the biotechnological advances that make it possible to expand cultivation over new areas (Merenson 2009). This soybean complex has as its constituent elements the use of improved seeds, agrochemicals, and machinery with high operational capacity, as well as the continuous adoption of transgenic crops. More than 150,000 small and medium-sized producers have disappeared in little more than a decade, as they were unable to "adapt" to this macroeconomic situation with high taxes, high input costs, and dependence on international prices, all variables beyond their control. Nearly 400,000 people who depended on agriculture, not only for food but to keep their cultural identity alive, have migrated to large cities or remain in poverty on their own farms (Zarrilli 2010: 153).

In many cases, the fall in profitability and indebtedness led to the transfer of land to new economic players in agriculture: domestic and foreign investment funds, planting pools, and large transnational companies, which saw in Argentina's "industrial agriculture" an economic space in which it was possible to carry out profitable, secure, and short-term business. Given these economic actors' priority for short-term economic profitability, as well as the impact of their practices on natural resources, the development of an extractive type of agriculture in Argentina has been exacerbated. A system of "agriculture without farmers" (Pengue 2000) has developed, where short-term profitability and irrational use of resources are superimposed on sustainable use. One of its main consequences has been the concentration of land in an increasingly smaller number of companies and the growing importance of foreign capital. Economic concentration has also led to large vertically integrated monopolies (input supply, production, distribution, and processing) dominating the production scene, relegating producers to less profitable or riskier positions (Zarrilli 2010).

In addition to the loss of natural habitats, the explosive growth of soybean cultivation in Argentina has had other severe socioeconomic consequences. Food and dairy production for the domestic market plummeted, while agrochemical use, human poisoning, and water contamination increased. The combination of economic crisis and expulsion of small farmers and rural workers resulting from mechanized soybean planting has diminished food sovereignty and increased poverty and hunger (Maarten Dros 2004).

The socio-ecological differences between the humid pampa and the extra-pampean regions (northwest and northeast of Argentina) mean that the agricultural development model presents peculiarities for the latter that should be highlighted and that "pampeanization" is explicitly used to refer to an agriculturization based on the indiscriminate export of the pampean production model to extra-pampean regions. The main effects of Argentine agriculture on the environment include soil degradation, agrochemical contamination, deforestation, loss of biodiversity, greenhouse

gas emissions, and problems derived from the use of fresh water (Zarrilli 2020). This accelerated advance of agriculturalization occurs not only at the expense of other crops, but also through the clearing and elimination of forests that support a traditional timber economy. Ecosystem degradation is much more marked in these areas than in the pampas. These dynamics lead to the displacement of small farmers and the Indigenous population that lives in the forest with the resources it provides.

In the case of Chile, the main transformations in land use occur in the space associated with forestry production. The timber industry grew considerably in the 1950s, but was still focused on the local market. From the mid-1960s until 1973, the state timber industry expanded. Under the military-neoliberal dictatorship, the timber industry became a central pillar of the Chilean economy. Plantations were managed as monocultures. In October 1974, the dictatorship issued Decree 701, according to which the state would subsidize 75 percent of the costs for reforestation with fast-growing exotic species (mainly pine and eucalyptus). It is estimated that plantations of exotic species financed by Decree 701 caused at least 63 percent of natural forest loss in the period between 1985–1994 – corresponding to approximately 140,000 hectares (Kaltmeier 2022: 210).

The forestry industry established itself as one of the country's main export activities, after mining (Aylwin et al. 2013). In the period between 1990–1996, timber exports accounted for 12 percent of total exports. The counter-agrarian reform of the Pinochet dictatorship led to extreme oligarchization, so that only two groups – the Angelini Group with the Arauco company and, far behind, the Matte Group with Mininco – controlled the entire timber sector, from plantations to lumber and pulp mills. (Kaltmeier 2022: 212–3; Godoy Pichón 2017: 10).

Therefore, its profile is that of a conventional extractive industry, where the presence of the state in the distributive process or at the capital level is minimal. These companies are located mainly in the center and south of the country, a geographical area that coincides with the ancestral territories belonging to the Mapuche communities (Mondaca 2013). In this sense, a large proportion of the lands usurped from these communities became the property of forestry companies during the Pinochet dictatorship. In geographic terms, the VIII Region has the highest concentration of exotic species plantations in the country. On the other hand, the forestry sector has been widely resisted by local communities due to the socio-environmental problems it creates. In terms of surface area, the total national territory (75,658,443 hectares) is broken down into three levels for the forestry sector: the greatest extension is concentrated in protected wild areas (19.5 percent), then in native forests (18.9 percent), and, finally, in planted forests (3.2 percent).

The Biobío region has 926,530 hectares of introduced forests, the largest area in the country. As a result, this region is the only area in the country where the number of plantations exceeds the amount of native forest. In comparative terms, the next regions in terms of exotic plantations areAraucanía (483,482 hectares), Maule

(448,513 hectares), O'Higgins (127,306 hectares), and Los Ríos (186,883 hectares). In the analysis of planted area per year, by region, the Biobío region also leads the country (47,245 hectares per year). Followed by it are the regions of Maule (17,553), Araucanía (17,553), and Los Ríos (6,508) (Godoy Pichón 2017).

Looking at the national figures, there has been a trend towards native forest replacement that was encouraged especially during the government of Sebastián Piñera (2010–2014). In this regard, it should be noted that under current Chilean legislation the forest is perceived as a market good, equivalent to any other consumer product.

Therefore, the industry's profile is that of a conventional type of extractive industry, where the presence of the state in the distributive process or at the capital level is minimal. These companies are located mainly in the center-south of the country, a geographical space that coincides in part with the Wallmapu of the Mapuche people (Mondaco 2013). During Pinochet's agrarian counter-reform, Mapuche lands were usurped by forestry companies, causing serious socio-environmental and territorial conflicts. The forestry sector has a tendency towards concentration, benefiting large landowners to the detriment of small landowners. It also tends to appropriate usurped lands that have not been returned to the communities by the companies as a whole. In addition, monocultures have a profound ecological impact on communities. They consume surface water and also absorb groundwater. As a consequence, vital water stops reaching the communities; streams dry up, crops are lost, and farmers are forced to walk miles to fetch potable water. At the same time, timber plantations produce hardly any organic material to fertilize the soil, causing it to degenerate. Shrubs do not grow in the plantations, which accelerates soil degradation and has a negative impact on water retention. The massive use of agrochemicals in monoculture timber plantations leads to the disappearance of local flora and fauna. Aerial spraying also affects Mapuche crops and causes health problems in the communities. After a few years, the soils of pine and eucalyptus plantations reaches such a degree of acidification, oligotrophy, erosion, desertification, and water depletion that their productive use is no longer possible (Kaltmeier 2022: 213–4). In recent years, forest fires have also increased in intensity and quantity. The state's response to this situation has been, on the one hand, the promotion of a developmentalist model, incentivizing entrepreneurship and productive transformation to silviculture in the Mapuche communities, and on the other hand, the adoption of repressive policies and the criminalization of social protest, independent of the government in office (Kaltmeier 2022).

In the case of Uruguay, important territorial transformations have been taking place in rural areas for at least four decades. The traditional production system in the country, which combines extensive mixed livestock farming with extensive agriculture for the production of food and raw materials to supply the domestic market and produce stock for export, has been transformed. The neoliberal economic policy

promoted by successive governments has deepened the agro-export model based on specific items required by the international market. Thus, three monocultures have developed in the territory and are the most dynamic items in the primary sector of the economy: forestry, soybeans, and rice.

In the process of anthropocenic transformation of Uruguay in the context of the Great Acceleration, extensive cattle industry and the main traditional cereal crops, aimed at satisfying domestic demand and producing stock for export, were progressively displaced territorially by new crops: fast-growing forestry crops, transgenic crops (soybean and corn), and the expansion of the agricultural rice frontier. The increase in the area devoted to these crops has had – and continues to have – a strong impact on the transformation of the Uruguayan agrarian landscape (Gautreau 2014).

Towards the end of the 1980s, rural land use began to change as large areas traditionally used for livestock production were converted to forest. Silviculture is seen as a highly dynamic, state-driven, and strongly concentrated economic activity in terms of business. Most of the soils used in this way (72 percent of the total forested area) had a low productivity index in meat and wool and, for this reason, were considered a priority for forestry due to a law promoting the sector (Achkar, Domínguez, and Pesce 2006).

At the same time, since the end of the twentieth century, another form of agricultural production has introduced changes in the space traditionally occupied by cereal production. With the introduction of agroindustrial soybean cultivation on a large geographic scale, large extensions of soybeans have been planted on the west coast of Uruguay in areas with highly productive agricultural soils. These plantations and forest plantations with fast-growing species (especially eucalyptus and pine), both new production systems in Uruguay, are causing profound socioecological and economic changes both in the new growing areas and in the surrounding urban and rural areas (Achkar, Domínguez, and Pesce 2006).

Similarly, the expansion of the agricultural frontier in the border regions of Brazil associated with rice production has transformed the landscape and land use. One can speak of the extension of the distinctive rice basin located on the east coast of Uruguay, towards the center and north of the country, delimiting in this way three rice regions. The transfer of agricultural technology originating in Brazil and the foreignization of land are reflections of these regions' dependence on the Brazilian market, which imports 80 percent of rice production (Achkar Domínguez, and Pesce 2006).

The expansion of the agricultural frontier in the context of the Great Acceleration – with its consequent processes of deforestation, desertification, and loss of biodiversity – also meant the aggravation of socio-environmental conflicts, especially affecting the most disadvantaged social sectors.

In this sense, Paraguay is another example of the process of anthropocenic transformation of the Southern Cone. In the case of Paraguay, the power of agribusiness

has led to the ousting of a democratic government. Having seen the soybean expansion process in the Brazilian-Argentine space, the similarity in behavior of the crop expansion model in Paraguay to those previously mentioned can be noted.

At the beginning of this century, soybean already occupied 44 percent of the cultivated land in Paraguay. As in the case of Argentina and Brazil, this expansion was supported by high international oilseed prices, and by 2004, the area planted with soybeans reached almost two million hectares, much more than half of the area cultivated in Paraguay, representing 2 percent of the world crop. The annual growth of the area under cultivation was higher than 8.5 percent per year and, as in the case of Chaco, occurred at the expense of the peasant economy. Associated with a deforestation process and chaos in Paraguay, this episode was to the general benefit of large Brazilian producers (Fogel and Riquelme 2005). These three departments – Alto Paraná, Itapúa, and Canindeyú – accounted for 84 percent of the area under soybean cultivation and 83 percent of Paraguayan production as a whole, but represent no more than 11 percent of the area of Paraguayan national territory. In 2002, the estimated growth of the oilseed crop area was close to 130 percent compared to 1991, reaching 1,282,855 hectares (Fogel 2018).

The consequences of this process of crop diffusion, with the matrix of industrial agriculture, produced strong impacts on land use in Paraguay. These consisted – among others – in the massive destruction of the scarce remaining native forests and the elimination of numerous areas of peasant production as well as land for cattle raising. Similarly, in the evaluation of the environmental impact of deforestation, the loss of biodiversity should be highlighted, due to the irreversible reduction and deterioration of valuable plant and animal species every year (Fogel and Riquelme 2005). This socio-environmental transformation mechanism produced profound changes, with an intense reorganization of the territory, altering pre-existing economic relations.

As in Argentina, both the new productive dynamics linked almost exclusively to transgenic soybeans and the new survival strategies developed by the expelled peasants in the Paraguayan soy model took place in the context of new socio-economic relations and networks of relations in the territory. In Paraguay, as in the Chaco, small producers and peasants linked to traditional agriculture were displaced to other (often urban) spaces and in many cases became an impetus for social movements that lead new forms of socio-environmental conflicts (Fogel and Riquelme 2005).

As Fogel and Riquelme point out, soybean production in Paraguay was incorporated into the world market through a productive framework associated with an enclave model, which, as in the twentieth century, was associated with forest extraction and occupied available land, affecting the peasant system and production for the domestic market. In addition to the decomposition of this traditional economy, there is the destruction of the productive capacity of the land, the environmental

impact and the scarce occupation generated, and a loss of sovereignty vis-à-vis the dominant transnational groups (Fogel and Riquelme 2005).

The "Soybean Republic:" an Example of Territorial Metabolism

A transformational process that marks an excellent example of the Southern Cone as a unit of analysis is given by the integrating role played in the region by its historical character as a supplier of primary goods, which in recent decades has increased notably through the expansion of industrial agriculture. This activity has meant the disappearance of a significant portion of the forest cover that was a determining factor in the functioning of ecosystems and hydrology. These features constitute what some analysts have called the "Soybean Republic," a huge agrarian front encompassing five nation-states, a voracious green spot of the most important monoculture in the region. This phenomenon of intensive agriculture is probably one of the most significant changes in the basin in its environmental history.

Although soybean cultivation has been developing since the 1980s, it is in the first decade of the twenty-first century that its spatial growth became notable and impressive. Brazil increased its soybean area by 70 percent, Argentina by 120 percent, Bolivia by 66 percent, and Paraguay by 125 percent. These increases are the result of both land use change expressed in the replacement of other crops and livestock and the annexation of land that was not previously used for agriculture, provoking enormous environmental problems across the border region (Zuberman 2014: 21).

Throughout the Southern Cone, there has been striking deforestation due to the agro-boom of the last decades. According to FAO data (2005), Argentina lost 150,000 hectares per year between 1990 and 2005, Bolivia 270,000, Paraguay 179,000, and Brazil almost 3 million hectares. In Paraguay, of the 8,000,000 hectares that the Alto Paraná Atlantic Forest had in its eastern region before the introduction of industrial agriculture, today only 700,000 hectares remain. This deforestation is taking place in ecosystems of great importance for the region and the world. As a result, valuable environmental services are being lost. Environmental problems such as water and wind erosion have occurred on a large scale. The water cycle, especially in the extensive wetlands of the Guaraní aquifer, has been profoundly altered.

Agro-industrial land use is also causing a process of decline in faunal biodiversity that is modifying important ecological processes and whose consequences could span evolutionary periods of several million years. In the Argentine Chaco alone, 97 tetrapod vertebrates have disappeared, almost all due to habitat loss (Zuberman 2014: 25).

Due to the expansion of soybean, there have been drastic reductions in the area of native forests in Brazil, Argentina, and Paraguay, a process that accelerated towards the end of the century. The exposure and use of soil for industrial agricul-

ture has provoked soil compaction and erosion. In particular, water erosion has increased. As surface runoff has accelerated, less rain seeps into the groundwater and runoff peaks increase in a shorter period of time. This is accompanied by increased sedimentation in rivers, which impairs their navigability. In addition, the siltation (accumulation of sediment) of reservoirs has gone up measurably, leading to a reduction in their energy potential.

The enormous increase in production generated by the process of diffusion of industrial agriculture model in the La Plata Basin is a clear example of an intensive process of historical-environmental transformation that eludes national borders and covers, in this case, a large part of the Basin that is used here as a unit of analysis. Industrial agriculture as the predominant agricultural production model is characterized by a large-scale production structure, high energy and chemical input costs, a focus on the export of commodities, and relatively low employment generation. This implies that, in these areas where land clearing and agriculture are spreading, the use of all types of biocides is increasing.

Conclusion

The Southern Cone region is different from other regions in Latin America that are characterized by the strong presence of a particular biome – as in the case of the Amazon region in relation to its huge forest complex or the Brazilian coast in relation to the Atlantic Forest. The Southern Cone, on the other hand, presents a considerable diversity of ecological landscapes.

The diversity of the Southern Cone has stimulated the establishment of different types of socioeconomic life and different levels of entry into the Anthropocene world. The acidic soils of the greater Cerrado region, for example, in addition to its remoteness from the coast, discouraged export-scale agricultural activities. Small-scale agriculture for local consumption or livestock farming for trade on a regional scale were possible activities in the context of interaction with the biophysical world. However, it is important to remember that this interaction is not static, as new factors have appeared over time, such as technological changes. EMBRAPA's research, created in 1973, found technical means to open the Cerrado to large-scale agriculture, turning the center-west of South America into one of the great agribusiness frontiers of the contemporary world. It should also be remembered that technological transformations always have environmental costs.

The Southern Cone is home to ecologically complex biomes. The Atlantic Forest, for example, is characterized by a variety of forest ecosystems within its bounds. It also has some non-forest landscapes (such as restingas and altitude fields). However, the historical development of the Brazilian coast has been marked by the omnipresence of the rainforest, through economic activities such as monoculture plantations

for export or logging for infrastructure. Even the mining methods implemented in the region were defined by the abundant use of wood from the forests in the creation of an infrastructure for surface gold mining (Dean 1995).

Nevertheless, it is not just a matter of considering environmental factors. Political and geopolitical factors are important in the system of interactions that define the forms of occupation and exploitation of resources in the different regions. The Brazilian part of the pampas, for example, was far from the centers of political and economic power in Brazil (established in the southeast of the country). The Argentine pampa, on the other hand, was in the geopolitical sphere of Buenos Aires, having suffered a much more intense economic occupation.

In any case, some parts of the Southern Cone entered the universe of the urban-industrial world and the international market earlier. Various regions, especially in Argentina, were earlier and more intense in their appropriation of the new technical means that emerged in the context of the industrial revolutions – such as railroads and refrigerated ships –, participating more directly in the process that led to the Anthropocene's formation. In contrast, other areas established less intense economies, focusing production more on the local and regional market. This movement brought about important environmental transformations, such as deforestation in the mountains of Rio Grande do Sul, driven by waves of German and Italian immigrants. However, nothing is comparable to what has been happening in the context of the Great Acceleration. The Southern Cone has become one of the hot spots of the Anthropocene. Its primary production has become essential for the production of grains and minerals that are bulk commodities on the international market. On the other hand, the growth of large and medium-sized cities in the region – whether national or regional political centers – is seen in the market for industrial goods, in addition to their own manufacturing, which fully inserts this South American space into the universe of production and consumption patterns of the Anthropocene. The future of the Southern Cone, therefore, can no longer be thought of only in terms of South America. It is a macro-region that – in a socioeconomically and ecologically diverse way – has become "planetarized" and important for the debate on the very future of an increasingly globalized humanity that is pushing the limits of planet Earth.

Changes in land use patterns, based on regional dynamics or economic insertion in the export market, have given rise to conflicts that still persist. The expulsion of native peoples and their descendants has been observed in all regions of the Southern Cone; some intensified with the Great Acceleration which, on the other hand, also deepened forms of peasant and Indigenous resistance, as in the case of the Kaingangs in Rio Grande do Sul and Santa Catarina or of the Mapuche and their historical resistance against the actions of the Argentine and Chilean states. With the emergence of national or regional peasant movements, land use from a capitalist and export perspective began to be questioned; therefore, the Southern Cone is

also a region of alternative land use, with experiences of linking social and academic actors in the proposal of more sustainable models of territorial use.

Translation by Eric Rummelhoff and revised by Luisa Raquel Ellermeier.

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