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## Climate Emergency and Transformation of Rural Areas: Eruption of ecological critiques and justifications in social conflicts in the São Paulo countryside

### *Emergência climática e a metamorfose do campo: eclosão de críticas e justificações de ordem ecológica em conflitos sociais no campo paulista*

José Caio Quadrado ALVES<sup>1\*</sup>, Leila da Costa FERREIRA<sup>2</sup>

<sup>1</sup> University of São Paulo (USP), Piracicaba, SP, Brazil

<sup>2</sup> State University of Campinas (Unicamp), Campinas, SP, Brazil.

\* Contact email: [jcaioesalq@usp.br](mailto:jcaioesalq@usp.br)

Article received on October 17, 2022, final version accepted on July 9, 2023, and published on March 15, 2024.

**ABSTRACT:** In the last few decades, the worsening of the global climate crisis has constituted new challenges for environmental and social sciences, especially in the mobilization of theoretical-methodological approaches capable of explaining the socioecological complexity of the problem. The current study comprises an effort in this sense, guided by the following question: “How do climate emergencies affect the social and political order in modernity in times of climate emergency or global risk society?”. The objective is to explain how the new socioecological issues have impacted the disputes around the Agrarian Reform in the country. For this purpose, a case study was carried out in the Mário Lago settlement, Ribeirão Preto/SP, whose justification is based on defense of the environment, especially on protecting the waters of the Guarani Aquifer. In addition to that, the sociology of justifications and the sociology of metamorphoses were adopted as theoretical assumptions. For composition of the data corpuses, 16 interviews were carried out in the life report model, with actors involved in the socioecological valuation of the settlement, as well as the monitoring of disputes in local public arenas. The strategies for the production of diverse veracity evidence that provides the basis for the discourses justifying the ecological option mobilized by the MST were also analyzed. It is concluded that the socioecological principles have been consolidated as a new functionality of Agriculture, representing a significant social and political force in disputes around the Agrarian Reform, considering the case of the state of São Paulo in particular.

**Keywords:** climate emergencies; global risk society; socioenvironmental justice; agrarian reform; sustainable agriculture.

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**RESUMO:**

Nas últimas décadas, o agravamento da crise climática global tem constituído novos desafios às ciências ambientais e sociais, especialmente na mobilização de abordagens teórico-metodológicas capazes de explicar a complexidade socioecológica do problema. O presente estudo compreende um esforço nesse sentido, orientado pelo seguinte questionamento: “Como as emergências climáticas afetam o ordenamento social e político na modernidade em tempos de emergência climática ou da sociedade de risco global?”. O objetivo é explicar como as novas questões socioecológicas têm impactado as disputas em torno da reforma agrária no país. Com este propósito, realizou-se um estudo de caso no assentamento Mário Lago, em Ribeirão Preto /SP, cuja justificativa é fundamentada na defesa do meio ambiente, em especial na proteção das águas do Aquífero Guarani. Além disso, foram adotados como pressupostos teóricos a sociologia das justificações e a sociologia das metamorfoses. Para composição dos corpos de dados, foram realizadas 16 entrevistas no modelo relato de vida, com atores envolvidos na valoração socioecológica do assentamento, assim como o acompanhamento de disputas em arenas públicas locais. Também foram analisadas as estratégias para a produção de provas de veracidade que proporcionam embasamento aos discursos justificativos da opção ecológica mobilizados pelo MST. Conclui-se que os princípios socioecológicos têm se consolidado como uma nova funcionalidade da agricultura, representando uma força social e política significativa em disputas em torno da reforma agrária, considerando em particular o caso do estado de São Paulo.

*Palavras-chave:* emergência climática; sociedade de risco global; justiça socioambiental; reforma agrária; agricultura sustentável.

## 1. Introduction

In the last few decades, climate change has manifested itself in an increasingly intense way, with occurrences of heat waves, floods, droughts, sea level rise, and ocean acidification. Such phenomena are closely related to anthropogenic activities, which are responsible for the high rates of Greenhouse Gas (GHG) emissions - including industry, energy, agriculture and changes in land and forest use and occupation, for example - which compromise global climate balance (Angelo & Rittl, 2019). In addition to that, the new global crisis is not merely a result of extreme weather phenomena, but also of social recognition of the risks associated with human activities (Beck, 2018). In other words, the criticism is directed at the modernity model based on fierce and unlimited growth, but which depends on finite resources and on an ecological system that is sensitive to change. The risks generated, unintentionally, by the success of the Capitalist industrial

proposal are beginning to permeate the everyday life of modern societies in a more comprehensive manner, regardless of their geographical location, whether on the peripheries or at the core of the Capitalist system, thus configuring the *global risk society* (Ibid.).

Faced with contradictions, capitalists join efforts to influence the different techno-scientific sectors, in order to produce solutions with technological and mercantile bases. Modern Agriculture, one of the main responsible for climate change (Angelo & Rittl, 2019), seeks ways to adapt by developing tools to predict the impacts of climate change on agro-industrial systems (Zullo & Koga-Vicente, 2016), for example. Since the 1980s, it has been possible to notice, even in Latin America, a notorious growth of private sector investments to finance research studies of this nature (Ibid.). Following Beck's terms (2018, p. 85), such proposals are based on the “new technological deterministic optimism, shaped by a healthy ignorance of the impossible”.

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That is, “faith in progress” is the illusion of believing “in the potential capacity of human beings and their institutions to solve the problems of existence with increasing precision and efficiency” (Idem).

The current study proposes to follow a different path. It is not only about explaining the effects of human action on the environment or proposing technology-based solutions. The first question here is to ask “how do ecological problems enable social transformations?”.

“What can we do about climate change?” This is a conventional question formulated by scientists, politicians and environmental activists in search of solutions to the problem, although this proves to be disappointing. In contrast, the second formulation (based on metamorphosis) proposes the sociological and analytical question: “What does climate change do to us, and how does it alter the society and politics order?” (Ibid., p. 55).

According to Pierre Muller (2018), in order to deal with the evils caused in modern societies, such as unemployment, violence and environmental destruction, new sectors devoted to the inspection, regulation and resolution of issues were created. This phenomenon characterizes the emergence of *self-centered societies* (Ibid.). For Beck (2018), the creative forces capable of presenting new normative horizons in the face of the evils or side effects of Developmentalism are not only in repairing catastrophes that have already taken place, but in confronting the *risks* of future catastrophes. In this context, in the global risk society, social conflicts do not originate only from the unequal distribution of goods or production means, but from the unequal distribution of goods and harms, that is, from the risks associated with anthropogenic actions

(Idem, 2018). This represents the metamorphosis from class struggle to risky class struggle (Ibid.), hence the name “risk society” and not “catastrophe society” (Ibid.).

In times of global climate emergency, it is no longer possible to interpret social conflicts only from the perspective of risk-free class struggle. The last IPCC report from 2021, which for the first time in history established relationships between socio-economic variables and climate change, presented data that contribute to this argument. The report pointed out that the richest 10% of the world's population is responsible for 49% of the GHG emissions, whereas the poorest 50% of the world's population is responsible for only 10% of those emissions. In addition to that, the poorest 50% represent the communities most vulnerable and exposed to the climate change risks.

Climate change represents a significant social transformation force in our time, questioning the future of the current Capitalist model. In this sense, the *anthropological shock* caused by the confrontation of global climate risks inaugurates the “emancipatory catastrophism” process. In other words, old truths no longer sustainable in the face of the probabilities of global catastrophes. In addition, previously hidden perspectives and meanings are revealed, generating new normative horizons in the face of catastrophe risks (Beck, 2018). This implies a *reassessment of values* and the emergence of new moral conceptions in response to new crises and contradictions.

Therefore, the ecological problem presents potential for metamorphosis, something never before seen or thought of and that cannot be circumvented or ignored (Ibid.). In other words, these are not changes or even revolutions that question

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only inequality in the distribution of goods and rights – Socialism and Feminism, for example – or critiques that can be incorporated into more domesticated Capitalist models with social welfare measures. The climate crisis represents the decay of old truths, the questioning of the methodology of nation-states, and the rise of the Cosmopolitan methodology. That is, it is a time when the “Declaration of Independence has to be metamorphosed into the Declaration of Interdependence: cooperate or die!” (Beck, 2018, p. 57)

According to Muller (2018), public policies are social constructions, politically disputed and decisive for orientation and management of the various sectors. The cognitive frameworks that structure public policies are, in turn, the perception of the world about a given situation.

Developing a public policy means, first, building a representation, an image of the reality on which one wants to intervene. In reference to this cognitive image, the actors organize their perception of the problem, confront their solutions and define their proposals for action. This world view is the reference of a policy (Ibid., p. 54).

In this context, considering the influence of climate risks on global risk societies, concern for the natural world gains ground in the political and social order. This is true not only in the production of new references, but also enabling the reinterpretation of old policies and norms. The references that constitute public policies can be treated through four levels of perception of the world:

a) The values, which represent “what is desirable and what should be rejected”;

b) The norms, which “define the differences between the perceived and desired realities”;

c) Algorithms, which “are causal relations that express a theory of action. They can be advertised in the form ‘if...then’: ‘if the government reduces corporate taxes, then they will be more competitive’, for example”; and

d) Images, which “are cognitive shortcuts that make sense immediately: ‘the dynamic and modern young farmer’, ‘the president who visits a school or hospital’, ‘American troops toppling the dictator's statue’, for example” (Ibid., p. 56). These sectoral frameworks are closely related to the *global frameworks*, such as the yearnings for a more sustainable modernity, for example.

In addition to that, in a context of growing networks of interdependence and pacified spaces (Elias, 1994), acquiring global proportions today, the struggle of risk classes occurs in terms of the legitimacy of actions. That is, in the dispute over the frameworks that guide public policies and constitute the borders of the different sectors. Thus, the study of argumentative conflicts around public policies is extremely relevant. It is important to analyze the forms of reasoning, legitimation and dispute of the frameworks. In this sense, the sociology of justifications presents itself as a relevant theoretical-methodological approach for the analysis of discursive conflicts in pacified situations (Boltanski & Thévenot, 2006), where words weight more than swords (Elias, 1994).

This approach consists in analyzing the social actors' ability to abstract themselves from personal or particular causes and mobilize criticism and justifications based on generalizations that, in turn, are based on different common conceptions of justice (Boltanski & Thévenot, 2006). Thus, the legitimacy

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of a justification, as well as the orientation to engage in a given action, is conditioned by its scope in relation to the interests of a collective group in a given situation (Ibid.).

Scenarios with the imperative of justification are created when criticism is operated with the purpose of confronting actions or stances, either individual or collective, which deviate from a given moral structure (Werneck, 2012). In order to defend their legitimacy, the social actors confronted must then produce justifications based on common good principles. This is the establishment of *justification regimes* or *justice regimes* (Ibid.). According to Boltanski (2012), engagement regimes are like grammars of the social world, situations and contexts that understand and demand a given order of action.

When particularly considering the *justice regime*, criticism and justification should be interpreted as moral devices to which all members of a society resort to value or question certain actions. Thus, criticism is used with the purpose of defending a given common moral conception that, in turn, must be consistent with the *moral* and *naturalness* senses in force in a given historical period and political/cultural context of a society (Boltanski & Thévenot, 2006).

It is important to emphasize that, for the sociology of justifications, it is not a universal moral structure, as frequently defined by political philosophy, nor an infinite plurality of common frameworks, which would make it extremely difficult to produce explanations about social order without resorting to explanations based on power

and domination relations (Ibid.). In reality, it is a limited plurality of common frameworks of justice, as the common equivalence principles must be understood from different situations and not from different groups in societies in a state of modernity. Thus, “the different equivalence principles are formally incompatible with each other, as each of them is recognized in the situation for which validity is established as universal” (Idem, 1999, p. 362). It is in this sense that the *moral* and *naturalness* senses are constituted; in other words, the social actors should be aware of the different conceptions of justice that make up social reality and interpret situations in a manner consistent with their nature (Ibid.). Individuals who do not have these two *senses* will be, in some way, invalidated by the other members of society (Ibid.).

The different orders of justices that make up the *moral sense* are called *cités*<sup>1</sup>. By specifically addressing modern society, Boltanski and Thévenot (2006) were able to identify some of the main *cités* that shape social reality in contemporary times. To do this, they analyzed three different data *corpuses*: first,

- a) Arguments collected through situations with the imperative of justification; secondly,
- b) Political philosophy works consistent with the common good principles, capable of systematizing a given principle of justice; finally,
- c) Manuals of good conduct in social spaces, works that seek to condition people's self-control based on the principles of a given *cit*é. Table 1 presents the *cités* in an organized way.

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<sup>1</sup> The word *cit*é can be translated into English as city. It alludes to the polis, ancient Greek cities where Western philosophy and the discussion of morality were primarily fostered.

It is important to note that the *cités* identified are not necessarily the only ones existing in modern societies. After all, they are born and structured according to the historical process and can be identified in different situations. An example of this is the *ecological cité*, which we will discuss later.

In addition to that, in “The New Spirit of Capitalism”, Boltanski and Chiapello (2020) use the theory of the sociology of justifications to explain how Capitalism can be understood in different historical stages. In other words, periods in which it is necessary to incorporate certain criticisms based

on principles of justice, thus ensuring maintenance of Capitalist ideology. On the other hand, these criticisms also act as containments of the ferocity of Capitalism, enabling labor laws and social inclusion practices, for example.

Capitalist ideology also sought new alternatives with the potential to legitimize engagement in Capitalism. Then, a new *ideology emerged that justifies the engagement in Capitalism*, called *cité by projects*. This conception of justice is based on the principles of *activity, projects, expansion of the network, and proliferation of links* (Ibid.). In the

TABLE 1 – Cités of societies in a modernity situation.

|                                    | Cité                                |  |                                  |                      |                                      |                                    |
|------------------------------------|-------------------------------------|--|----------------------------------|----------------------|--------------------------------------|------------------------------------|
|                                    | Inspired                            | Domestic   | Civic                            | Opinion              | Merchantile                          | Industrial                         |
| Inspired work                      | The City of God, by Saint Augustine | Politics extracted from the Sacred Scripture, by Bossuet | The Social Contract, by Rousseau | Leviathan, by Hobbes | The Wealth of Nations, by Adam Smith | Saint Simon’s Work                 |
| Evaluation modality (grandeur)     | Grace, nonconformity, creativity    | Esteem, reputation                                       | Collective interest              | Notoriety            | Price                                | Productivity and efficiency        |
| Format of the relevant information | Emotional                           | Oral, exemplary, anecdotic                               | Formal, oficial                  | Semiotic             | Monetary                             | Measurable: criteria, statistics   |
| Elementary relationship            | Passion                             | Trust  | Solidarity                       | Recognition          | Exchanges                            | Functional connections             |
| Human qualification                | Creativity, ingenuousness           | Authority  | Equality                         | Fame                 | Desire, purchase power               | Professional competence, expertise |

TRANSLATION: Werneck (2012).  
 SOURCE: Boltanski & Thévenot (1999).



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sociology of metamorphoses, it could be described as the “new technological deterministic optimism” (Beck, 2018). In other words, a conception based on technological development and the valuation of those capable of participating in the network.

On the other hand, the current scenario of global climate crisis also raises the emergence of a *cit  * based on defense of the environment. To investigate this new conception of justice, Lamont & Th  venot (2000) conducted two comparative studies, analyzing socioenvironmental conflicts in the United States and France. These situations involve actors who use argumentative discourses centered on the ecological option<sup>2</sup> – such as preservation of biodiversity, protection of future generations and contact with nature, among others. These papers evidenced the emergence of a new order of magnitude, called *ecological cit  * or *green cit  * (Ibid.).

In addition to *cit  s*, metaphysical ideas and conceptions, the sociology of justifications deals with the *worlds of justice*, that is, spaces inhabited by things and beings corresponding to *cit  s* (Werneck, 2012). In other words, the “worlds of justice” are constituted by the principles of grandeur and its veracity evidence, things capable of mediating discourses with reality. It is also through this diverse evidence that the actors are oriented in the social reality, thus understanding the nature of the various situations (Ibid.). In addition to that, as they are intermediate to the principles of magnitude, the *pieces of evidence* may be coherent in certain arguments and inconsistent in others. For example, how relevant would an increase in GDP or a record soybean crop be to environmental issues?

In the global risk society, the world of ecological justice acquires social and political relevance to face the other worlds. In the Brazilian case, *preservation of the environment*, one of the three constitutional principles of the social function of the land, gained more prominence in a global climate emergency context. The situation is no longer limited to local and regional interests, but rather to global longings for a more sustainable humanity. Thus, criticisms and justifications based on *preservation of the environment* have provided greater legal and social support to the ecological arguments, especially affecting the legitimation bases of the *anti-ecological agriculture* or production models based on *latifundia* and the application of technologies that are harmful to the environment and health. In other words, ecological morality presents ways to delegitimize the practices promoted by the *modern patriciate* (Ribeiro, 2017) or agribusiness, enabling the advancement of an agroecological agenda in the land and agricultural sectors.

To answer the question: How does the global climate emergency affect disputes over land reform policy?, we carried out a case study on the socioecological conflicts around the M  rio Lago settlement, located in outcrop areas of the Guarani Aquifer in the municipality of Ribeir  o Preto/SP. In this case, the claims promoted by the Landless Workers Movement (*Movimento dos Trabalhadores Sem Terra*, MST) obtained social and legal support for conservation, housing and agricultural production through agroecological alternatives in the then Fazenda da Barra. We found that the emergence of values associated with climate emergencies raised

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<sup>2</sup> It is important to note that this is not a socioenvironmental or ecological conflict if there are no groups with arguments that claim to defend the environment.

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socioecological aspects hitherto marginalized in local issues, favoring arguments of expropriation of the farm for Agrarian Reform purposes. This is a case that provides support for the *metamorphosis* thesis (Beck, 2018), the transition from social conflicts to socioecological ones, from class struggle to risky class struggle in the countryside.

## 2. Methodology

Between April 3<sup>rd</sup> and 28<sup>th</sup>, 2022, sixteen interviews were conducted based on the *life report* model (Alberti, 2013). Of the 16 interlocutors, with the exception of the former prosecutor, all live and/or work in Agroforestry projects at the Mário Lago settlement: twelve have been settled for more than 5 years; two have been camped in the settlement for more than 5 years – they do not have agricultural lots, but they were welcomed by the local MST organization and allocated to available areas; one acts as an Agroforestry technician in projects at the Mário Lago settlement since 2018; and a former prosecutor who was directly involved in the expropriation process of the then Fazenda da Barra.

In many cases, participation of these same interlocutors was also observed in discussions at the different local political arenas: meetings of municipal councils and public hearings focusing on the Mário Lago settlement. We established a time frame from 2003 (the period in which the MST claims in the municipality began) to 2022. From March 2021 to December 2023, an extensive bibliographic review of scientific studies and analysis of official documents dealing with the socioenvironmental quality case was carried out in the Ribeirão Preto region.

## 3. From social conflicts to socioecological ones

This case study deals with the Mário Lago settlement, coordinated by the Landless Workers Movement (MST) and located in Ribeirão Preto/SP. Choice of the study object is justified by the socioeconomic and environmental characteristics that predominate in the region, constituting a favorable scenario for anti-ecological practices and, paradoxically, also for the valuation of socioecological proposals in responses to climate risks. In this sense, together with INCRA and the Prosecutor's Office (PO), the MST was able to legitimize the Agrarian Reform in the municipality as a response to the environmental risks generated by the sugar-alcohol sector. This constitutes an evident case of socioecological conflict and, therefore, one of the most interesting scenarios for the study of the *metamorphosis of the countryside*. Thus, some considerations about the socioeconomic and environmental processes that constituted this scenario favorable to the metamorphosis of social reality are necessary.

During the 1960s, a period of reorganization of the *patriciate* (landowners) under a repressive military regime (Ribeiro, 2015), the country underwent an intense land concentration process, resulting in the largest rural exodus in its history. In less than two decades, the mostly rural population became mostly urban, migrating to large cities in search of jobs in industry (Cubas, 2017). This phenomenon was particularly intense in the state of São Paulo, which became the destination of much of the migratory mass (Ibid.).

This urbanization and land concentration process was made possible by the incorporation



of new technological packages in agriculture, as well as by the subsidy and unconditional political favoring of the federal government to managerial and intensive agriculture (Ibid.). In other words, it represented a new opportunity for the expansion of *latifundia* and the unrestricted suppression of the natural vegetation existing at the time. We will call this process, characterized by emptying of the countryside and intense environmental destruction, *silencing of the countryside*.

It is important to note that, in the 1960s, the climate emergency was not yet a consolidated agenda or treated seriously in international politics, especially in the agricultural sector. On the contrary, the period was marked by national and international efforts to boost the modernization of intensive agriculture, based on the belief that humanity had finally surpassed the growth limits imposed by nature (Moruzzi Marques & Gebrim Doria, 2021). At that time, the municipality of Ribeirão Preto was extremely benefited by the policy of encouraging the production of alternative energy sources, such as PROÁLCOOL, a program that lasted until the 2000s and was later replaced by other subsidy sources from the government.

Nowadays, Ribeirão Preto is one of the largest urban centers in the state of São Paulo, with much of its economy centered on the commercial activities of the sugar and alcohol sector (IBGE, 2010). Between 1962 and 2000, this niche underwent an intense expansion, driven by the incorporation of new technological packages and public investments (Cubas, 2017), which resulted in the destruction of 6,703.42 hectares (67.0342 km<sup>2</sup>) of the municipality's natural vegetation, corresponding to a 70.09% reduction of the existing vegetation at the time (Henriques, 2003). In the 2000s, sugarcane already

occupied 59.75% of the total territory of Ribeirão Preto (Figure 1), with the rural area almost entirely occupied by large agro-industrial sugarcane farms (Ibid.). This expansion took place mainly in the eastern zone, resulting in the felling of the Cerradão formation forests located in outcrop areas of the Guarani Aquifer (Ibid.). Figures 2 and 3 show the areas suppressed during this period and the current environmental macro-zoning of the municipality, which is an effort to protect the outcrop areas of the Aquifer in particular.

In addition to that, agro-industrial sugarcane mills, responsible for *silencing the countryside* in the region between 1960 and the 2000s, are closely integrated into the international market (Cubas, 2017). This means that the various economic actors have an interest in defending these *latifundia*. In addition, the sugar-alcohol sector maintains close relations with politics at the national level, with large civil society representatives who, in turn, through political lobbying, present their demands to the Pensar Agro Institute and the Parliamentary Front for Agribusiness (*Frente Parlamentar do Agronegócio*, FPA), in charge of drafting and approving law bills favorable to agribusiness in the National Congress (Ibid.).

Between 1990 and 2000, the MST went through a process of discussion and reformulation of the agricultural production model, abandoning the form of Agricultural Cooperatives, extremely dependent on tools and inputs originating from the Green Revolution – transgenic seeds, chemical fertilizers and pesticides – and officially transitioning to agroecological practices (Borsato & Carmo, 2013). Organic food production and defense of the environment have become central issues of the movement (Ibid.). Thus, social conflicts in the countryside, which have

traditionally been based only on productive and social issues, have also come to mean socioecological disputes. Since then, the *latifundia* have been confronted with the agroecological counterpoint of rural social movements, especially the MST.

During this period, the country's environmental institutions, initially created as a form of national commitment to mitigating global climate risks, first recognized by the United Nations (UN) at the Stockholm Conference in 1972, reached some degree of maturity. This advance was possible, in large part, due to the new opportunities for civil society

participation after the end of the military dictatorship and the establishment of the 1988 Constitution (Ferreira & Tavolaro, 2008). In this context, it is evident that the global climate crisis has influenced Brazil's social and political order. Not by chance, the principle of *preserving the environment*, hitherto ignored or neglected, gained new developments in disputes related to the agricultural and land sectors. As Brazil became integrated into the *global risk society*, ecological issues began to occupy a larger space and acquired increasing importance, as well as arguments based on *ecological grandeur* principles

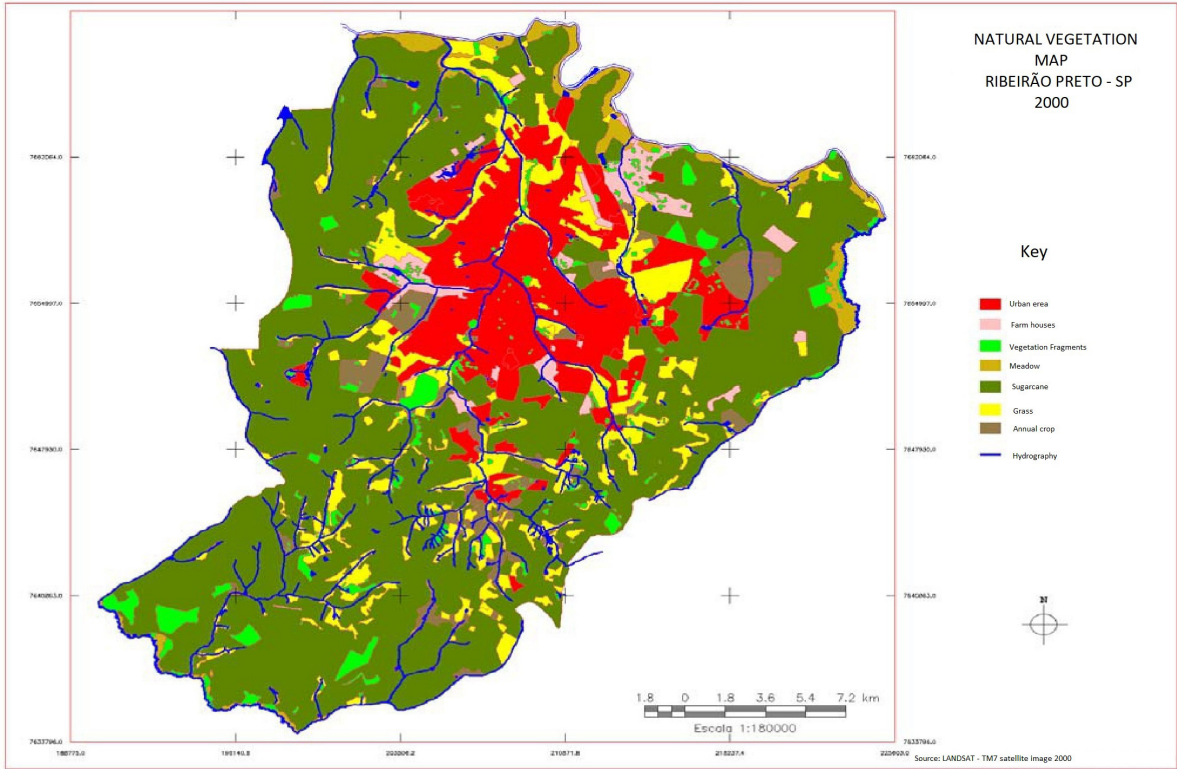


FIGURE 1 – Map of the Municipality of Ribeirão Preto/SP in 2000, indicating land use and occupation. The areas occupied by sugarcane (dark green) and the urban spot (red) stand out.

SOURCE: Henriques (2003).

became part of argumentative strategies in social and legal disputes.

#### 4. The struggle for the Agrarian Reform in defense of the environment

In the 1990s, with the creation of the Ribeirão Preto Prosecutor's Office for the Environment and Land Conflicts, actions were taken mainly to combat the burning of sugarcane straw and the exploitation

of child labor and women, as well as to combat unhealthy conditions in workers' transportation (Goulart, 1998). The action strategy adopted by the Prosecutor's Office (PO) was based on three legal and social support pillars, which were fundamental for the success of its actions, namely:

1) Mobilization of scientific studies to substantiate the criticisms and accusations presented. That is, they sought to support the arguments with *verifiable and coherent evidence*;

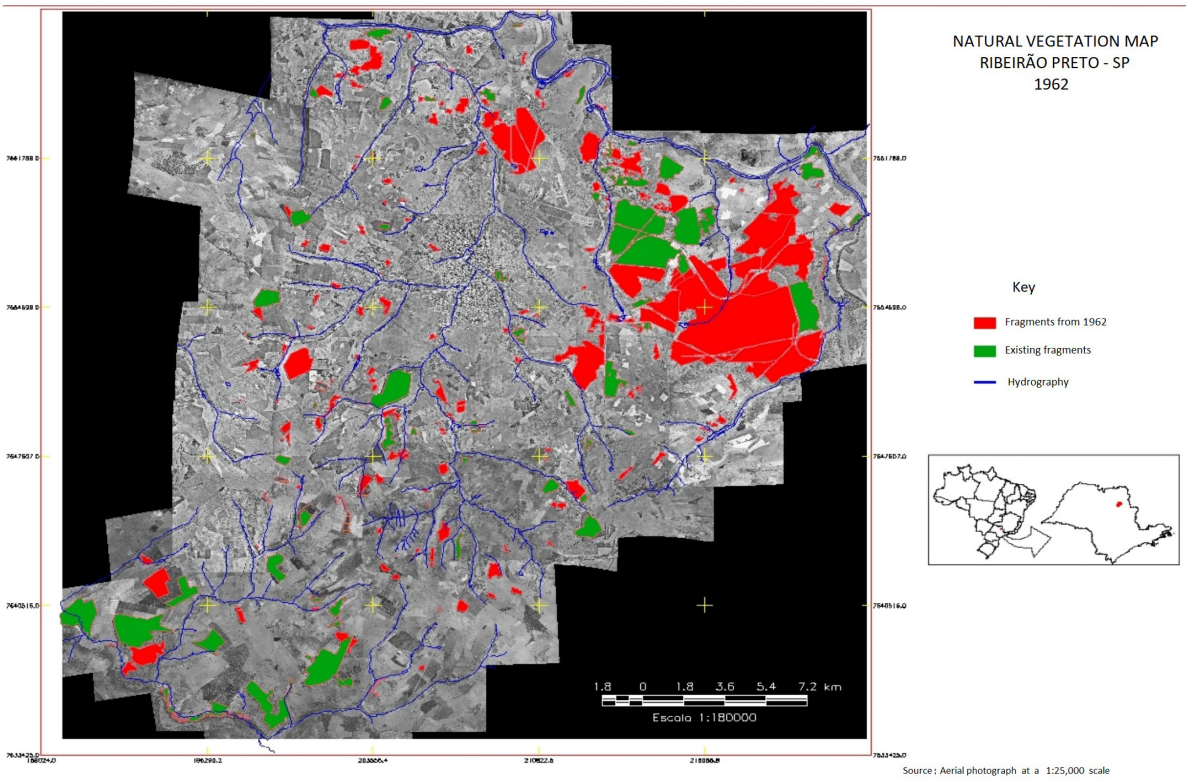


FIGURE 2 – Photographic mosaic of the municipality of Ribeirão Preto/SP, showing the natural vegetation existing in 1962. The sections in green indicate fragments that still exist, either wholly or partially, whereas red indicates areas that have been deforested.  
SOURCE: Henriques (2003).

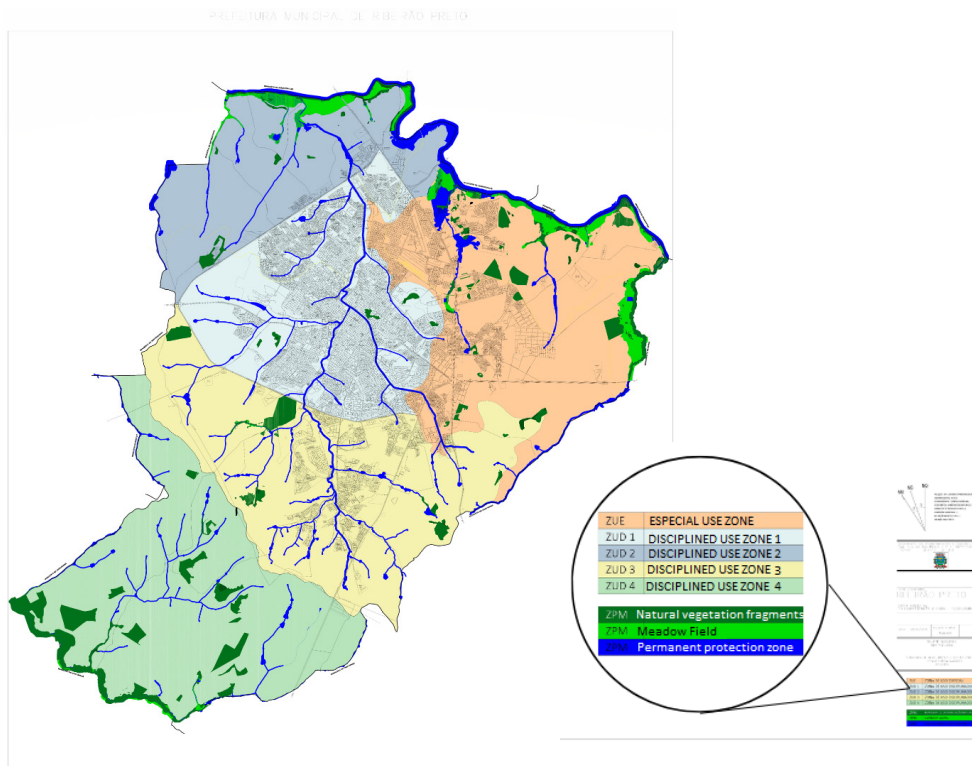


FIGURE 3 – Ribeirão Preto/SP Environmental Charter (2018); with emphasis on the areas of the special use zone (Zonas de Uso Especial, ZUEs) to protect the Aquifer.

SOURCE: Ribeirão Preto (2018).

2) Carrying out work to raise awareness and discuss the problems with the affected communities. This stage was essential to avoid conflicts between the PO and vulnerable groups. In certain cases, such as the prohibition of child labor, awareness raising was particularly relevant, considering that some unpopular measures required community understanding and support;

3) Dissemination of complaints and discussion of problems through lectures, radios, newspapers and other press platforms.

These three pillars perceptibly express the dynamics of a *justification regime* adopted by the Ribeirão Preto PO, even characterizing an action methodology (Idem, 2013). At the time, the agency's performance produced significant results in the adequacy of transportation means for workers, a reduction in child labor and mechanization in the sugarcane harvest, which contributed to reducing fire incidents. However, it is important to note that these achievements did not represent the effective resolution of social and ecological conflicts in the region. In the words of the then prosecutor:



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**Prosecutor:** *We were victorious in the sugarcane issue, in these specific matters we engage in, but we are sugarcoating it. If we eliminate burning, they resort to mechanization, which in turn leads to another type of environmental degradation, which is soil compaction. We ensure better conditions for workers, but they will become unemployed due to mechanization. We remove children and adolescents, but exploitation of the work of men and women [...] So, what we are doing, we are making a bad thing a bit nicer. Because we are not going to the fundamental issue. Because the pattern of agricultural production based on monoculture, land concentration and, of course, labor exploitation is, in its nature, because it cannot be different, socially unsustainable and environmentally unsustainable [...] So, where we need to focus is on the root of the problem, which is the agricultural production pattern. We have to think about the struggle for the Agrarian Reform* (interview with the prosecutor held on April 15<sup>th</sup>, 2022).

In 1999, the MST arrived in Ribeirão Preto establishing alliances with unions, representatives of the Catholic Church and local environmental NGOs (Iha, 2017). This approach was through events organized by the Archdiocese of Ribeirão Preto, where the dialogues between the Prosecutor's Office for the Environment and Land Conflicts and the MST were initiated. From these conversations, discussions arose around proposals for an Agrarian Reform that also took into account environmental preservation, as an alternative to the modern *latifundium* model.

The following year, a property in the eastern part of the municipality, called Fazenda da Barra and which already had a long history of environmental violations, was again investigated due to suspected irregular practices. The investigation was led by the Ribeirão Preto Prosecutor's Office for the Environment and Land Conflicts in conjunction

with agencies such as the State Department for the Protection of Natural Resources (*Departamento Estadual de Proteção dos Recursos Naturais*, DPRN), the Brazilian Institute of Environment and Renewable Natural Resources (*Instituto Brasileiro de Meio Ambiente e dos Recursos Naturais Renováveis*, IBAMA) and the Water and Electricity Department (*Departamento de Água e Energia Elétrica*, DAEE).

The reports resulting from this investigation pointed out several irregularities of this property, which was partially abandoned and with unproductivity signs. In addition to that, there were serious environmental problems, such as unauthorized suppression of natural vegetation and risks of contamination of water bodies, especially the Guarani Aquifer. The reports revealed high groundwater contamination risks and estimated an environmental liability of more than seven billion reais (Aguiar, 2011; Freitas, 2018). In Figure 4, it is possible to observe the extent of deforested areas in Fazenda da Barra.

As a result of the investigations, together with INCRA, the Prosecutor's Office filed an expropriation request for the purposes of the Agrarian Reform of the then Fazenda da Barra. The main argument consisted of non-compliance with the principle of *preserving the environment*, characterizing the property as irregular in constitutional precepts. In 2003, the MST initiated protests and occupations to exert pressure on the government to expropriate the farm (Aguiar, 2011). The banners raised in this movement were defense of the Guarani Aquifer and opposition to anti-ecological practices, such as the use of transgenic seeds and pesticides (State of São Paulo, September 13<sup>th</sup>, 2003). In December 2004, the Fazenda da Barra expropriation decree was



FIGURE 4 – Fazenda da Barra before and after degradation. The photograph on the left shows Fazenda da Barra in 1984 with preserved areas (300 ha) and, the one on the right, with vegetation cover loss in 2000.

SOURCE: Hashimoto Iha (2017).

signed by then President Luiz Inácio Lula da Silva. However, the case was pending in court between 2004 and 2008, a period described as pre-settlement.

During this period, dissent arose among the camped families who were about to acquire their piece of land. These families began to question the MST political organization (norms or rules), especially the obligation to participate in meetings and vigils. Some families left the MST and joined the Landless People's Liberation Movement (*Movimento de Libertação dos Sem Terra*, MLST), forming the Santos Dias camp. Shortly after, the Santos Dias camp also faced dissent, resulting in the formation of two new white flag camps<sup>3</sup>: Índio Galdino (44 families) and Luíza Marri (59 families). Currently, the Santos Dias settlement has 154 families and the Mário Lago settlement has 264 families (Ibid.).

It is noteworthy that the families who migrated to the MLST or to white flag camps mostly consisted

of groups of urban origin, which generated some difficulties adapting to the way of life in the settlement and the MST proposals (Borelli Filho, 2009).

Only at the end of 2008, the court finally authorized INCRA to start its activities in the settlement. Seeking to meet the proposal for an environmentally correct settlement, the Conduct Adjustment Agreement (*Termo de Ajuste de Conduta*, TAC) was signed between INCRA, the Prosecutor's Office and the settled families. This agreement established the commitment to restore Permanent Preservation Areas (PPAs) and the requirement that 35% of the total area be allocated for Legal Reserves (LRs), with 15% for collective use. The settlement, which housed different political currents in the same area, was classified in the Sustainable Development Project category, becoming known as *PDS da Barra* (Barra SDP) (Gonçalves & Scopinho, 2010). Figure 5 shows the settlement plan in 2016, with

<sup>3</sup> They are not coordinated by any social movement.



some implementation experiences of Agroforestry Systems (AFSs) and highlighting the reserve areas and forest fragments, as well as the territory of the Mário Lago settlement.

5. *Sowing ecological grandeur in the Mário Lago settlement*

Starting in 2012, some of the Mário Lago settlement members began a series of efforts to study and promote Agroforestry management practices. The main objective was to implement Agroforestry Systems (AFSs) in collective reserve

areas, thus advancing the commitments signed in the TAC (Iha, 2017).

Through the Dom Hélder Câmara Training Center, an MST association that operates throughout the state of São Paulo, part of the settled families had the opportunity to participate in projects financed by state and private companies, such as Petrobras. This external support allowed them to begin learning and adopting Agroforestry techniques, as provided for in the TAC, even without INCRA's participation in the process.

It is important to highlight that the need to seek external funding sources was mainly due to abandonment by INCRA and the federal gover-

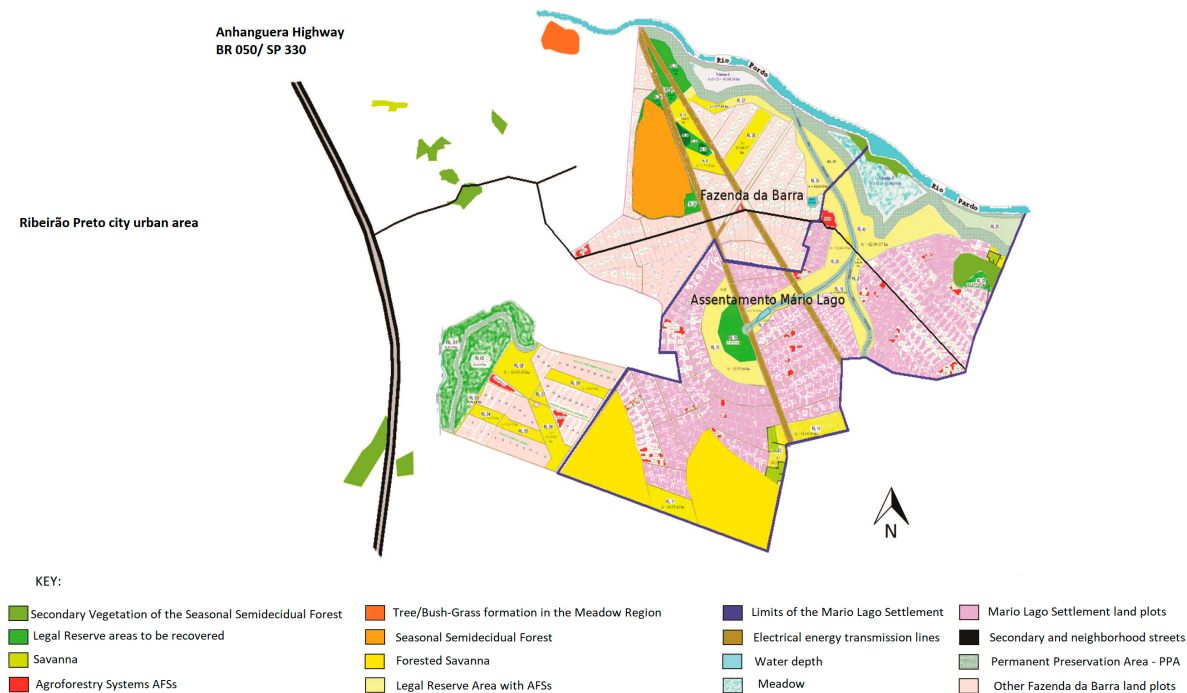


FIGURE 5 – Mário Lago Settlement Plan; with emphasis on the areas with forest fragments and Agroforestry System.  
SOURCE: Machado & Bizzo (2016).

nment, which ignored the commitments made in structuring the settlement. Not enough efforts were made for the acquisition and distribution of native tree seedlings, the provision of qualified technical assistance with agroecological or agroforestry knowledge in adequate quantity to serve the settlers. In addition to that, sufficient water resources were

also not provided to meet the families' basic needs and allow planting in reserve areas.

Table 2 shows the Agroforestry programs developed by the MST as of 2012. The first four projects culminated in the creation of an Agroforestry cooperative called “*Comuna da Terra*”, which more consistently brought together families interested in the use of Agroforestry Systems (AFSs). Some

TABLE 2 – Agroforestry programs.

| Programs  | Period    | Funding sources  | Results   |
|---|-----------|--|---|
| Agroflorestar   | 2012-2013 | Petrobras Socioeniromental Program   | 40 agroforest hectares in LR areas  |
| Agroflorestar II  | 2014-2015 | Petrobras Socioenvironmental Program   | 500 m <sup>2</sup> of agroforest in 80 land plots, nearly 4 hectares                  |
| Candeia: agrofloresta iluminando a vida e os caminhos para o renascer das águas do Aquífero Guarani | 2013-2015 | Brazilian Biodiversity Fund ( <i>Fundo Brasileiro para a Biodiversidade</i> , FUNBIO)  | Agroforestry equipment and training   |
| Renascer das Águas do Aquífero Guarani  | 2013-2015 | World Bank, Sustainable Rural Development Project – Microbaciais II, of the São Paulo State Environment Department ( <i>Secretaria de Meio-Ambiente do Estado de São Paulo</i> , SAMA) | Agroforestry equipment and training and implementation of commercialization systems   |
| Terra Mãe   | 2018-2019 | Banco do Brasil  | Training in AFS planning for 180 participants and improvements in 36 areas with AFSs  |
| Nova Era  | 2021-     | Nova Era Institute   | 10 hectares with AFS and improvement of areas in the settled participants' land plots |

SOURCE: Iha (2017); Freitas (2018); Zonetti (2019). Organization by the author.

of the settlers who participated and/or still participate in these programs do not work exclusively in Agroforestry cooperatives. Through the projects, a group was assembled and, in some cases, even a *community* of settlers, which led to the construction of common knowledge and perceptions related to agricultural activity. This union has resulted in the production of much of the *authenticity evidence* that underlies the agroecological proposal of the settlement.

The current study gathered a large number of reports that express the different paths taken by settlers and campers in the Mário Lago settlement, especially of actors who are part of the *Agroforestry community*. It is observed that different social and socioenvironmental events influence the process of building motivations and arguments mobilized to justify engagement in the Agrarian Reform and/or in Agroforestry practices. In this sense, the life story interview model (Alberti, 2013) allowed distinguishing the interviewees' justifications and motivations at three different moments: before settling ( $t^1$ )<sup>4</sup>, during ( $t^2$ ) and future pretensions ( $t^3$ ). In other words, the interviewees (settled and camped) reported experiences, motivations and justifications related to these periods, presenting similarities and differences among the Agroforestry workers themselves.

To highlight and compare the differences and similarities between interlocutors, and thus allow an adequate sociological analysis of the motivations

and justifications<sup>5</sup>, the social actors were divided into three major groups:

a) *Rural Origin* (RO): individuals who have had a healthy or pleasant experience with the agricultural practice and rural life in the past, even if briefly;

b) *Urban Origin* (UO): interlocutors who had never had contact with agriculture before the MST;

c) *Urban/Rural Origin* (URO): those who had a life divided between work in rural areas, such as in large agribusinesses, for example, and temporary jobs in the city.

It is important to emphasize that these classifications are not always able to describe reality in full, with frequent overlapping. For example, an individual from the RO group, for different reasons, may start to work in large agro-industrial sugarcane mills and approaches the social reality of a URO. On the other hand, these categorizations help understand the processes that constituted the motivations of the main actors responsible for the constant legitimization of the Mário Lago settlement, especially considering its foundation based on ecological grandeur principles.

Based on the reports collected, it is possible to establish a relationship between the various experiences and the presence of arguments based on the principles of justice of the *ecological cité*, especially after contact with the MST. These experiences contribute to the emergence of motivations

<sup>4</sup> The  $t^1$ ,  $t^2$  and  $t^3$  markers represent the periods in which motivations and justifications were used. Throughout the text, these markers will be used to assist in reading and understanding the reports.

<sup>5</sup> The principles of magnitude mobilized will be indicated by the following acronyms: Domestic(D); Civic(C); Industrial(I); Mercantile(M); Opinion(O); Inspired(A), and Ecological(E). In the arguments, the criticism forms of a given *cité* are also indicated by the sign of greater and lesser magnitude (>), E>I, for example, as well as of compromise between *cités* by the sign (/), E/D, for example.

that justify engagement in what we call *ecologism* in this context. The ideology in question is constituted by perceptions and practices based on ecological moral principles, which recognize and defend the intrinsic value of nature. In addition to that, it can be interpreted as the formation of affective bonds with the land, allowing the emergence of a kind of *land ethics* (Leopold, 1970).

Arguments such as “recovery and preservation of nature and life” <sup>(E)</sup> or “taking care of the land” <sup>(E)</sup> are mobilized in greater quantity by the interlocutors when they seek to justify the engagement in Agroforestry practices <sup>(12)</sup> after settling in an MST settlement. In the case of the RO people, the interlocutors reported certain “familiarity” with the Agroforestry proposal, as their past experiences do not differ from the ideas proposed. The agricultural vocation and/or the desire to return to life in the countryside and contact with nature <sup>(E)</sup> are expressed by the RO people as the main motivations for joining the MST <sup>(11)</sup>.

**RO<sup>1</sup>:** *It wasn't a different idea for me. I can explain... Man himself ended the forest and, as a result, the water supply is gradually diminishing <sup>(E>M)</sup>. There's no shadow, there's nothing. So we already had this idea, to plant trees. All of us, from the MST, already had this desire to do it, because we have to plant [trees] <sup>(C/E)</sup> (interview held on April 12<sup>th</sup>, 2022).*

Subsequently, RO<sup>2</sup> also addresses the similarities between the Agroforestry proposal and their past experiences, but mentions other aspects. **Prosecutor:** *Did you use to plant in a monoculture system? Like planting coffee, for example?*

**RO<sup>2</sup>:** *No, we planted rice, beans, corn, for us to consume and to sell. It was a lot, agriculture that produced a lot. I remember when I was a child, my father stocked a lot of beans, corn, rice and other things. There was abundance of all types of products <sup>(1)</sup>. It was a kind of Agroforestry system, now I realize. We planted everything in consortium, we never did monocultures of any product <sup>(E>1)</sup> [...] In the case here [Mário Lago settlement], due to the small size of the lots, of approximately 1.5 hectares, Agroforestry ends up being the only economically viable production alternative <sup>(1/M)</sup>. In addition to that, when it comes to preservation here [Eastern Zone of Ribeirão Preto], with the Guarani Aquifer, recharge of the Aquifer, there's a whole demand from this region that requires a type of agriculture that is only sustainable to do this way [Agroforestry] <sup>(E)</sup>. It's not possible to continue doing what has always been done here with monocultures. Monocultures such as coffee and sugarcane are responsible for degrading the environment and, when I arrived here, it was totally degraded, it was sugarcane everywhere <sup>(E>1)</sup> (interview held on April 5<sup>th</sup>, 2022).*

In this sense, RO people have experiences that, even in the past, can be recognized and valued by the world of ecological justice. This is how traditional communities, in many cases, are associated with the ecological grandeur principles<sup>6</sup>.

On the other hand, the UO people had no agricultural experiences and the URO individuals reported to a large extent cases that were antagonistic to ecological agriculture, that is, they used techniques and inputs from conventional agriculture. Thus, when it comes to engagement in the MST <sup>(11)</sup>, domestic and civic justifications stand out among UO and URO people, such as “esteem and care for the family” <sup>(D)</sup> and “commitment to collective good”

<sup>6</sup> In some cases, experiences and knowledge of traditional communities can be strongly related to the preservation of biomes (Diegues, 2001), serving as paths, even if not their initial purpose, for legitimation and aggrandizement of these groups in socioecological conflicts.

<sup>(C)</sup>. When issues related to agroforestry management and investment in AFSs <sup>(t2)</sup> and <sup>(t3)</sup> are addressed, the interlocutors present more domestic, commercial and industrial justifications in their commitment to the search for ecological justice. For example, they mention “increased productivity, family income and agrobiodiversity” <sup>(I/M/E)</sup> and “production of healthy food for the family” <sup>(E/D)</sup>.

**UO<sup>1</sup>:** <sup>(t1)</sup> *My mother, like my father, also wanted to live in the countryside. I went to help her <sup>(D)</sup> and not just by my will [...] So much that I didn't set up a shack for myself [at first], I only set up hers* (interview held on April 6<sup>th</sup>, 2022).

The response of another UO person is reported below, when asked about the motivations for joining Agroforestry.

**UO<sup>2</sup>:** <sup>(t2)</sup> *We see a lot, a lot of cancer due to pesticides. So I was always very afraid, very afraid, and after I had my children, it got worse<sup>(D)</sup>. So I don't use pesticides, because what gives me satisfaction is to see my grandson and granddaughter arrive in that jabuticaba tree there, grab the jabuticaba and eat it <sup>(E/D)</sup> [...] so if there was any poison there, I wouldn't have this tranquility [...] if there was poison, I'd never let them eat it <sup>(E/D)</sup>* (interview held on April 7<sup>th</sup>, 2022).

Like the UO people, the Urban Rural Origin subjects rarely expressed affective memories about life in the countryside during periods prior to their experience with the MST.

**URO<sup>1</sup>:** *I left northern MG when I still very young, I came to São Paulo at the age of 13. At that time I came to cut sugarcane, but I ended up not liking it very much, so I went after other things [...] at that time it was very precarious to work cutting sugarcane, it*

*was very difficult. I didn't like it at all. I looked for a way to escape this reality.*

**Prosecutor:** *Before working with sugarcane, did you already know how to work with agriculture in your homeland?*

**URO<sup>1</sup>:** *They always worked with the land, but it wasn't family farming. We never had land, so we always worked for others* (interview held on April 11<sup>th</sup>, 2022).

Then, one of the URO<sup>1</sup> reports how he met the Landless Rural Workers Movement (MST) through the recommendation of an acquaintance who had attended the camp. The civic and domestic motivations are central to this interlocutor's arguments.

**URO<sup>1</sup>:** <sup>(t1)</sup> *When the MST arrived in the Ribeirão Preto region, I had a global view, a view of the MST influenced by Rede Globo. So I thought they were troublemakers. That is, I had no interest, not even to know the MST. But I lived in a community and was already doing leadership work, especially in the education field [...] Then I understood politically that I had to make some struggles to try to improve something in the education area <sup>(C)</sup>. I started understanding this after my children started going to school, I started engaging in the issue and to participate <sup>(D/C)</sup> [...] She said “there's a struggle there to find a place for the children at school and I think that you'd help a lot” <sup>(C)</sup>. And because of that I started to come. The first time I came on a Sunday, just to meet, and Monday I was already living in the settlement* (interview held on April 11<sup>th</sup>, 2022).

Of the 14 interviews carried out with settlers and campers, the following distribution was found in the typifications proposed: 6 UOs; 5 ROs; 3 UROs. Although this sample is small in size, it reveals the complexity of the concept of *neorurals*.

Adherence to the MST is not limited to *escaping from precariousness*, but encompasses a series of diverse motivations that gain or lose prominence according to the situational context in which each social actor is inserted. These motivations are incorporated into the Agrarian Reform model proposed by MST, which emerges as an alternative to the adversities produced by the current model of society, especially highlighting the criticisms and justifications of an ecological order (Table 3).

In moments of acute conflict, when there is a need to defend the legitimacy of the settlement before public opinion, arguments are usually structured through compromises between the ecological grandeur principles and the industrial, mercantile, civic or domestic worlds. These justifications are traditionally present in discussions about the Agrarian Reform (Moruzzi Marques, 2021). Such situations occurred mainly in debates in the local political spheres, such as in the discussions around the zoning proposals presented in the municipality's new master plan (2018) and in public policies to promote AFS and fight against food insecurity in the region.

With regard to the diverse *veracity evidence* presented by the MST, despite the emphasis on the environmental agenda, it is mainly based on the various functionalities of Agroforestry. That is, not only the “ecological benefits”<sup>(E)</sup>, but also their “productive potential”<sup>(I)</sup>, “income guarantee”<sup>(M)</sup>, “food security for families”<sup>(D)</sup>, “greater cultural and agricultural diversity”<sup>(A)</sup>, “social equality”<sup>(C)</sup> and “recognition or notability”<sup>(O)</sup>. Thus, the multifunc-

tionality of Agroforestry also express themselves in multiple justifications to value an alternative Agrarian Reform proposal, as well as multiple criticisms of the anti-ecological agricultural model<sup>7</sup>.

The main mechanisms for producing and mobilizing veracity evidence can be observed in some central strategies:

- a) Carrying out Agroforestry projects through public notices;
- b) Direct marketing networks, allowing settlers to demonstrate the multiple functionalities of AFSs by ordering Agroforestry baskets;
- c) Dissemination on social networks of activities and benefits associated with AFSs;
- d) Organic certification through the Social Control Organization (SCO)<sup>8</sup>;
- e) Agricultural and environmental education initiatives, including work, studies and events with students, especially from public universities, on Agroforestry management and its multiple impacts. In addition to that, educational programs, interviews and lectures are held in popular media such as *TV Escola*, *TV Câmara* and *TV Ribeirão Preto*.

The availability of communication spaces, such as local TV channels, for the discussion of Agroecology reflects the current context, which increasingly demands debating sustainable alternatives. Growing awareness about the environmental and social impacts generated by conventional production models has driven the need to explore and promote greener agricultural practices. In Ribeirão

<sup>7</sup> Anti-ecological because it is unsustainable with regard to environmental, social and economic preservation. That is, it is not merely harmful to the environment or to humanity, but to the entire biotic community.

<sup>8</sup> It involves face-to-face visits by consumers to Agroforestry plantations.



TABLE 3 – Main motivations and veracity evidence at different engagement moments for the Agrarian Reform.

| Urban Origin people       |  |  |  |
|---------------------------|--|--|--|
|                           | Before   | During   | After  |
| <b>Justifications</b>     | Domestic and Civic   | Civic/Ecological and Domestic/<br>Ecological   | Civic and Ecological   |
| <b>Arguments</b>          | Escaping from precariousness and family care; Contributing to the community common good.                                   | Contributing to the implementation of the collective commitments signed in the TAC; Producing healthy foods.   | Combating inequalities; Defending nature to preserve common good.  |
| <b>Veracity Evidence</b>  | Sense of greater safety and health for the family; Participation in the collective struggle organized for improvements.    | Recovery of degraded areas by implementing AFS in lots and collective areas; Preservation of natural areas; Commercialization of food with organic certification; Feeling of food security for the family. | Intention to participate in campaigns to donate healthy food products; Investment in Agroforestry projects.            |
| Urban Rural Origin people |  |  |  |
| Period                    | Before   | During   | After  |
| <b>Justifications</b>     | Domestic and Civic   | Industrial/Civic Ecological/Ecological   | Domestic and Ecological  |
| <b>Arguments</b>          | Family care; Contributing to the community common good.  | Producing food without harming nature; Contributing to the implementation of the collective commitments signed in the TAC.   | Transmitting the Agroforestry profession to the next generations; Defending nature to preserve common good.            |
| <b>Veracity Evidence</b>  | Sense of greater safety and health for the family; Participation in the collective struggle organized for improvements.    | Increased productivity with the implementation of AFS; Recovery of degraded areas and implementation of AFS in lots and collective areas; Preservation of natural areas.                                   | Teaching and transmission of agroecological or agroforestry knowledge and values; Investment in Agroforestry projects. |
| Rural Origin people       |  |  |  |
| Period                    | Before   | During   | After  |
| <b>Justifications</b>     | Domestic and Ecological  | Industrial/Ecological<br>Civic/Ecological  | Domestic and Ecological  |
| <b>Arguments</b>          | Escaping from ecological precariousness and family care  | Producing food without harming nature; Contributing to the implementation of the collective commitments signed in the TAC.   | Transmitting the Agroforestry profession to the next generations; Defending nature to preserve common good.            |
| <b>Veracity Evidence</b>  | Greater contact with nature through agroecological-based agriculture; Sense of greater security and health for the family. | Increased productivity with the implementation of AFS; Recovery of degraded areas and implementation of AFS in lots and collective areas; Preservation of natural areas.                                   | Teaching and transmission of agroecological or agroforestry knowledge and values; Investment in Agroforestry projects. |

SOURCE: prepared by the author.

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Preto, appreciation of the Agrarian Reform as an alternative to face sectoral/global climate challenges, such as global warming, the scarcity of water resources and the reduction of agrobiodiversity, is due to the political and cultural efforts promoted by the MST and its collaborators. The MST presents Agroforestry practices as nature-based solutions, providing coherent *veracity evidence* to a wide diversity of orders of magnitude, especially in the ecological sphere.

It is a gigantic commitment of civil society to find socioecological responses based on nature, in the face of the crises and ills caused by the *silencing of the countryside*. As shown throughout the text, the results are profound socioenvironmental changes that advance the *metamorphosis of the countryside* process. This involves the transition from Modern Agriculture to Sustainable Agriculture, from Capitalist Productivism to Ecologism, or even, exemplifying in the materialization of this metamorphosis by the transformation of sugarcane agribusinesses, to Agroforestry Agrarian Reform settlements.

Finally, it is important to note that the Jair Messias Bolsonaro federal government (2019-2022) abandoned important agencies and public policies aimed at the Agrifood sector, resulting in the dismantling of fundamental structures. This scenario forced the MST to seek less far-reaching alternatives to promote Agroforestry and advance the proposals established in the TAC, albeit insufficiently. In this sense, the social and political organization built by the MST families, especially during the camping and pre-settlement periods, that is, the local institutional arrangements, is fundamental in the elaboration of responses to the neglect by the central powers. In the case of Agroforestry projects, it would be impossible to develop AFSs, especially

in reserve areas, without the settlers' collective self-organization. In the words of one of the interlocutors, "there's no Agroforestry without joint efforts". Therefore, the diverse veracity evidence herein presented, especially the elements related to the *ecological cité*, are mainly the result of cooperation between families, whether in preservation or restoration of the environment.

## 6. Final considerations

This study was a theoretical and methodological effort with the purpose of presenting a research approach capable of understanding the processes that lead to the *metamorphosis of the world*, especially with regard to social conflicts in the agricultural and land sectors, that is, the *metamorphosis of the countryside*. It is concluded that, through the promotion of Agroecology and/or Agroforestry, the MST plays a significant role in addressing climate emergencies, especially in the social and political spheres, by questioning the sectoral frameworks that guide the country's agricultural and land policies. The movement represents a creative force capable of producing new criticisms of the legitimacy of anti-ecological practices carried out by the *modern patriciate* or agribusiness.

In future research studies, it would be pertinent to explore in greater depth issues closely related to maintenance of the Agroforestry proposal and the arguments that underlie the Agrarian Reform in the region. For example: investigating changes in the political and social order; identifying the main obstacles in the production of broader and more effective institutional arrangements; analyzing to what extent early contact with agricultural practi-

ces, constituting positive affectivities, can influence predisposition to the *ecological cité* principles; and evaluating the impacts of laws aimed at the commercialization of agroecological products from family farming, such as the PAA and PNAE, on the farmers' decision to adhere to the agroecological proposal and even transition to the AFS.

In summary, ecological criticism has enormous potential to transform the political and social order at this historical moment. Global climate risks will not be solved only by containing the ferocity of Capitalism; it is an existential contradiction which the current modernity model and the naive “faith in progress” cannot overcome, only omit and ignore the risks as the crisis worsens. In the case of Brazil, considering the extreme polarization context manifested in the 2022 elections, particularly in the state of São Paulo, an extremely troubled path is projected by increasingly deepening the contradictions denounced by the global risk society.

## Acknowledgments

This study was conducted with the support of the *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* – Brazil (CAPES) – Funding Code 001<sup>9</sup>. It also had the fundamental support of the Graduate Program in Sociology of the Institute of Philosophy and Human Sciences at Unicamp, which made it possible to carry out visits to the Mário Lago settlement.

Our heartfelt thanks to all the agroforesters who generously participated in this study, as well as to the MST regional coordination personnel in São Paulo for their accessibility and welcoming reception.

Finally, we thank the evaluators at the *Desenvolvimento e Meio Ambiente* journal and at the Graduate Program in Environment and Development of *Universidade Federal do Paraná*, for the opportunity to use this space and present our contributions to discussions about the environment and society.

## References

- Aguiar, V. J. *Proposta do Comuna da Terra no Assentamento Mário Lago (PDS Fazenda da Barra) em Ribeirão preto/SP*. Presidente Prudente, Monografia (Faculdade de Ciências e Tecnologia) – Unesp, 2011.
- Alberti, V. *Manual de história oral*. Rio de Janeiro: Editora da FGV, 2013.
- Angelo, C.; Rittl, C. *Análise das emissões brasileiras de gases de efeito estufa e suas implicações para as metas do Brasil (1970-2018)*. Observatório do Clima, 2019. Disponível em: <<https://seeg.eco.br/category/relatorios-analiticos/>>. Acesso em: jun. 2023.
- Beck, U. *A metamorfose do mundo: novos conceitos para uma nova realidade*. Rio de Janeiro: Zahar, 2018.
- Boltanski, L.; Thévenot, L. The sociology of critical capacity. *European journal of social theory*, 2(3), 359-377, 1999.
- Boltanski, L.; Thévenot, L. *On justification: economies of worth*. Princeton University Press, 2006.
- Boltansk, L. *Love and justice as competences*. Cambridge,

<sup>9</sup> This paper refers to the MSc thesis entitled “The Spirit of Ecologism and the Metamorphosis of the Countryside: A study on social conflicts in the countryside in Climate Emergency times”, which in turn is part of the project called “The Climate Change Governance Challenge in Brazil: A multilevel and multiactor analysis (the case of the state of São Paulo)” coordinated by Prof. Dr. Leila da Costa Ferreira and funded by FAPESP between 2020 and 2022 (process number 19/14867-2), culminating in the book called “The Climate Emergency: Multilevel and Multi-Stakeholder Governance in the State of São Paulo”.

UK: Polity Press, 2012.

Boltanski, L.; Chiapello, È. *O novo espírito do capitalismo*. São Paulo: Martins Fontes, 2020.

Borelli Filho, D. *A luta pela posse da terra na região de Ribeirão Preto: o processo de formação e organização do assentamento Mário Lago*. Araraquara/SP, Dissertação (Mestrado em Desenvolvimento Regional e Meio Ambiente) – UNIARA, 2009.

Borsato, R. S.; Carmo, M. S. A Construção do Discurso Agroecológico no Movimento dos Trabalhadores Rurais Sem-Terra (MST). *Revista de Economia e Sociologia Rural*, 51, 645-660, 2013.

Cubas, T. E. A. *O São Paulo Agrário na Era da Globalização*. Presidente Prudente/SP, Tese (Doutorado em Geografia) – Unesp, 2017.

Diegues, A. C. S. *O mito moderno da natureza intocada*. São Paulo: Hucitec, 2001.

Elias, N. *A sociedade dos indivíduos*. Rio de Janeiro: Zahar, 1994.

Ferreira, I.; Tavolaro, S. Environmental concerns in contemporary Brazil: an insight into some theoretical and societal backgrounds (1970s–1990s). *International Journal of Politics, Culture, and Society*, 19, 161-177, 2008.

Freitas, G. B. A. *Construção Social dos Mercados: o Pronaf e a oferta de cestas de alimentos orgânicos agroflorestais no assentamento Mário Lago em Ribeirão Preto/SP*. Araraquara/SP, Dissertação (Mestrado em Ciências e Letras) – Unesp, 2018.

Goulart, M. P. *Ministério Público e democracia: teoria e práxis*. São Paulo: Editora Led, 1998.

Goulart, M. P. *Elementos para uma teoria geral do Ministério Público*. Belo Horizonte: Arraes Editores, 2013.

Gonçalves, J. C.; Scopinho, R. A. Reforma Agrária e Desenvolvimento Sustentável: a difícil construção de um assentamento agroecológico em Ribeirão Pretos-SP. *Retratos de Assentamentos*, 13, 239-262, 2010.

Henriques, O. K. *Caracterização da vegetação natural de Ribeirão Preto, SP*. Ribeirão Preto/SP, Tese (Doutorado em Biologia) – USP, 2003.

IBGE. *Censo demográfico de 2010*. Disponível em: <<https://biblioteca.ibge.gov.br/>>. Acesso em: jun. 2023.

Iha, M. H. *A apropriação da agrofloresta na afirmação da reforma agrária: um estudo sobre o processo de recampesinização no assentamento Mário Lago em Ribeirão Preto/SP*. São Paulo, Tese (Doutorado em Geografia) – USP, 2017.

Lamont, M.; Thévenot, L. *Rethinking comparative cultural sociology: repertoires of evaluation in France and the United States*. Cambridge Press, 2000.

Leopold, A. *A sand county almanac: with essays on conservation from round river*. Oxford University Press, 1970.

Machado, A. M. B.; Bizzo, N. A. *Camponeses da Reforma Agrária e a Floresta: o caso do assentamento Mário Lago, Ribeirão Preto, SP*. Brasília: EMBRAPA, 2016.

Moruzzi Marques, P. E.; Debrim Dória, N. A integração da noção de soberania na concepção predominante de segurança alimentar e nutricional no Brasil. *Raízes: Revista de Ciências Sociais e Econômicas*, 41, 246-261, 2021.

Muller, P. *As políticas públicas*. Niterói/RJ: Editora Eduff, 2018.

Ribeirão Preto. *Processo de revisão do Plano Diretor (2017-2018)*. Disponível em: <<https://www.ribeiraopreto.sp.gov.br/portal/planejamento/plano-diretor-do-municipio>>. Acesso em: maio, 2022.

Ribeiro, D. *O povo brasileiro: a formação e o sentido do Brasil*. São Paulo: Editora Global, 2015.

Ribeiro, D. *América Latina: a pátria grande*. Rio de Janeiro, RJ: Editora Global, 2017.

Werneck, A. *A desculpa: as circunstâncias e a moral das relações sociais*. Rio de Janeiro, RJ: Civilização Brasileira, 2012.

Zonetti, V. M. *O desenvolvimento do projeto Agroflorestar no Assentamento Mário Lago: dos processos de aprendizagem à transformação da atividade*. São Paulo, Tese (Doutorado em Ciências) – USP, 2019.

Zullo Junior, J.; Koga-Vicente, A. Cenário de disponibilidade de terras para expansão canavieira na região centro-sul brasileira em condições de mudanças climáticas. In: Zullo Junior, J.; Pfeiffer, C. C.; Furtado, A. (Orgs.). *Planejamento*

---

*da produção de cana-de-açúcar no contexto das mudanças climáticas globais*. Campinas/SP: Editora da Unicamp, 2016.