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**Occupy Climate
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FORMAS



Between agroecology and agrarian change: an agroecological farm in central Chaco (Argentina)

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Regarding Environmental Justice and Agroecology

This paper engages in a dialogue with the theoretical framework proposed by Martínez-Alier, which "entails understanding that human economy is a subsystem of a broader physical system" (2008: 12, own translation). Specifically, the emphasis is placed on the environmental justice component of his thesis, as it presents a counterargument to the top-down agribusiness approach to land management. This perspective diverges from mainstream topics such as the concept of "sustainability" (see Martínez-Alier, 2008: 13, 2016: 98) and proves valuable in comprehending certain initiatives that, characteristic of the so-called "Global South," manifest even in cases where resource mobilization within a community is scarce.

Environmental justice movements constitute one of the streams of environmentalism(s) described by Martínez-Alier (2016). While this may not always encompass the environmentalism of the poor, it is indeed true that a correlation exists between both expressions (Martínez-Alier, 2008). It is noteworthy that in the Global South, such manifestations exhibit distinct characteristics from those observed in countries of the Northern Hemisphere. For instance, there is a significant influence of the agricultural sector and a connection with the constraints imposed on traditional forms of agriculture within this context.

The progression of agrarian capitalism or "agrarian change" (Berstein, 2012) has led to the disappearance of a considerable number of small-scale producers and native species from local landscapes. It is the capitalist agrarian framework, not agriculture per se, that depletes the land and disrupts the ecosystem. In this context, among the expressions that counteract the primary manifestations of this issue, agroecology must be situated.

Certain experts have highlighted the potential for integrating agroecology into the broader global environmental justice movement (see Martinez-Alier, 2016: 100). In more specific terms, Rosset and Altieri offer the following definition:

Agroecology is variously known as the science that studies and attempts to explain the functioning of agroecosystems, primarily concerned with biological, biophysical, ecological, social, cultural, economic, and political mechanisms, functions, relationships, and design; as a set of practices that permit farming more sustainably, without using dangerous chemicals; and as a movement that seeks to make farming more ecologically sustainable and more socially just. (Rosset & Altieri, 2021: 1)

Where is this grassroots initiative implemented? Who are the promoters? Who are the beneficiaries?

The studied initiative is implemented in South America, an area in which, as pointed out by Martinez-Alier;

in recent years, modern agriculture and the overall current economy have been criticized because they entail the consumption of fossil fuels, environmental contamination, and a greater loss of biodiversity compared to traditional agriculture and preindustrial economies [...] In countries with a significant presence of rural communities, the ecological critique of modern agriculture currently converges into the Via Campesina movement. (Martinez-Alier, 2008: 24, own translation)

The above discussion helps to comprehend certain characteristics of environmentalism in the South American segment of the Global South. The case under examination, in particular, occurs in an Argentine locality within the Chaco, a vast plain that stretches across parts of Bolivia, Argentina, Paraguay, and Brazil, where temperatures in the summer exceed 40°C, while in winter they can drop below 0°C. Its predominant vegetation cover is xerophytic forest (Maldonado & Hohne, 2006), although the implementation of the agribusiness model has caused various disruptions in the ecosystem due to the expansion of

cattle and soy farming, which have led to the deforestation of thousands of hectares and consequent destruction of the existing ecosystem landscape.



Image 1: Location of the South American Chaco, Avellaneda & Kremer (2016)

This initiative of experimentation, production, demonstration, and agroecological education, called "Faro Agroecológico La Arboleda" is promoted by the family of Miguel Gaulisky. It consists of an agroecological farm implemented in the rural area of Villa 213 municipality, a locality of approximately 6,000 inhabitants in the Pirané department of Formosa province, located in northern Argentina.

On this farm, Miguel welcomes students and small-scale producers to teach them the process of integration of fruit production, the preservation, recovery, and conservation of soils in the area, the use of the woods, and the native species. In this regard, the main beneficiaries are small-scale farmers, children, and young people from different parts of the continent who learn elements related to agroecology and climate field mitigation, which they can apply and adapt to their agricultural productions.

How does this initiative engage with climate? Does it tackle mitigation, adaptation, both, or other dimensions of climate change?

The environmentalism of this initiative presents elements of the mantra of Environmental Justice and the Environmentalism of the Poor (Martinez-Alier, 2016). In the region, various droughts have strongly affected the ecosystem in the last decade, impacting the population unequally and primarily affecting small-scale farmers. The necessity for survival makes the impoverished population aware of the need to conserve resources. This proposal aims to mitigate climate change by promoting family farming with an agroecological approach, focusing on local markets.

In his exploitation of 48 hectares, half of them are preserved as native woods while the rest is used for ecological production. The 24 hectares of native forest - both natural and planted - serve as a habitat for over 150 species of birds and other wildlife. Additionally, timber is harvested and cattle (20 heads) are raised in a silvopastoral system using natural forage. The farm also has a henhouse with 100 laying hens. The remaining 24 hectares are used for fruit and vegetable production with agroecological criteria (see Juárez, 2022).



Image 2: Distribution of space in La Arboleda, Juárez (2022)

What are the main objectives? What are the main values?

Juárez (2022) explains the main objectives of agroecological projects this way:

The experience aims to confront the challenges posed by deforestation in the Chaco forest, the expansion of the agribusiness-linked agricultural frontier, and the production of commodities [...] to raise visibility and educate farmers and technicians about agroecological production. Expand the agricultural activities of families in the participating communities. (Juárez, 2022, par. 19)

In turn, its managers set the objective of disseminating the agroecological approach, through visits, workshops, and camps. Miguel says that their values are closely tied to environmental care, education, and a sense of community: "We are focusing heavily on education so that you can gain knowledge and skills and also be able to stay in your fields" (Fontagro, par. 14, own translation). It is worth noting that the property has a camping area, a residential and lodging area, and a classroom area.

What is the timeline? Are there already visible effects?

Until the mid-1990s, Miguel was dedicated to cotton cultivation, which was the predominant crop in the Chaco region at that time but was in a state of decline in the Villa 213 area, leading to a significant disappearance of agricultural farms (Kazmer, Guillen & Sapkus, 2010; Guillen, Kazmer & Sapkus, 2012). This situation marked the beginning of the first of the two phases of this experience (see Juárez, 2022), which took place between 1994 and 2003. During this time, the Gauliski family shifted towards agroecological production after Miguel's stay at the Bio Bio Education and Technology Center (CET-Chile) facilitated by the Catholic NGO, Institute of Popular Culture (INCUPO).

In 1996, Miguel developed a management plan for the native forest combined with vegetable plots, fruit trees, livestock, farm animals, and exotic tree species, with the collaboration of technicians from INCUPO and support from the Organization of American States (OAS) and the national government (Juárez, 2022). Furthermore, in 1999, he began working in coordination with the Instituto Nacional de Tecnología Agropecuaria (INTA) (Fontagro, 2022), the main institution dedicated to agricultural topics in the country.

In the second phase, from 2004 to the present, the farm transformed into a "beacon" and was equipped with the necessary infrastructure to receive and accommodate visitors through various experiential training activities. Since then, "La Arboleda" has been the venue for a diverse range of activities, including talks-workshops, conferences, educational-environmental camps, and rural agrotourism, among others.

In the province where Villa 213 is located, there is no established environmental movement with a significant trajectory, as it is seen as a subsidiary issue within the broader framework of peasant demands. In this sense, it's worth highlighting the various ways in which an environmentalism of the poor could become evident, even in the absence of a formal environmental justice movement. It has been pointed out that: "In the province of Formosa, besides the actions of state organizations such as INTA, the Agroecological Beacon [La Arboleda], and the actions of INCUPO, *they are the only ones working strongly from this perspective*" (Juárez, 2022, own translation and emphasis). Given this context, the mere promotion of environmental issues can be seen as a visible effect.

Who are the actors involved? What are their backgrounds?

The actors involved in this experience include, first and foremost, the owner of the farm, Mr. Miguel Gauliski, his son, and his close collaborators who are responsible for the daily management of the production. They also receive support from volunteers, including technicians from public organizations and university students, who engage with "La Arboleda" to learn about the experience and study the production model (Juárez, 2022). In addition to these individuals, there are over a thousand visitors per year, including students, researchers, tourists, and farmers, among others.

Additionally, some actors participate in the experience as facilitators - for example, municipal officials or representatives from the provincial education department or forest organizations - who are involved in organizing visits and workshops. Others contribute their knowledge as advisors and/or trainers, such as personnel from INTA, the Servicio Nacional de Sanidad Animal (SENASA), and various provincial government departments. The farm has a demonstration plot for the Fontagro project, a joint program of the Inter-American Development Bank (IDB) and the Inter-American Institute for Cooperation

on Agriculture (IICA), which implements integrated pest management (IPM) and disease control through prevention and the elimination of diseased plants (Peralta & Giancola, 2019; Fontagro, 2022).

"La Arboleda" receives support from the Ministry of Production and Environment of the province and the Municipality of Villa 213, whose logos can be seen as the main sign of the establishment.

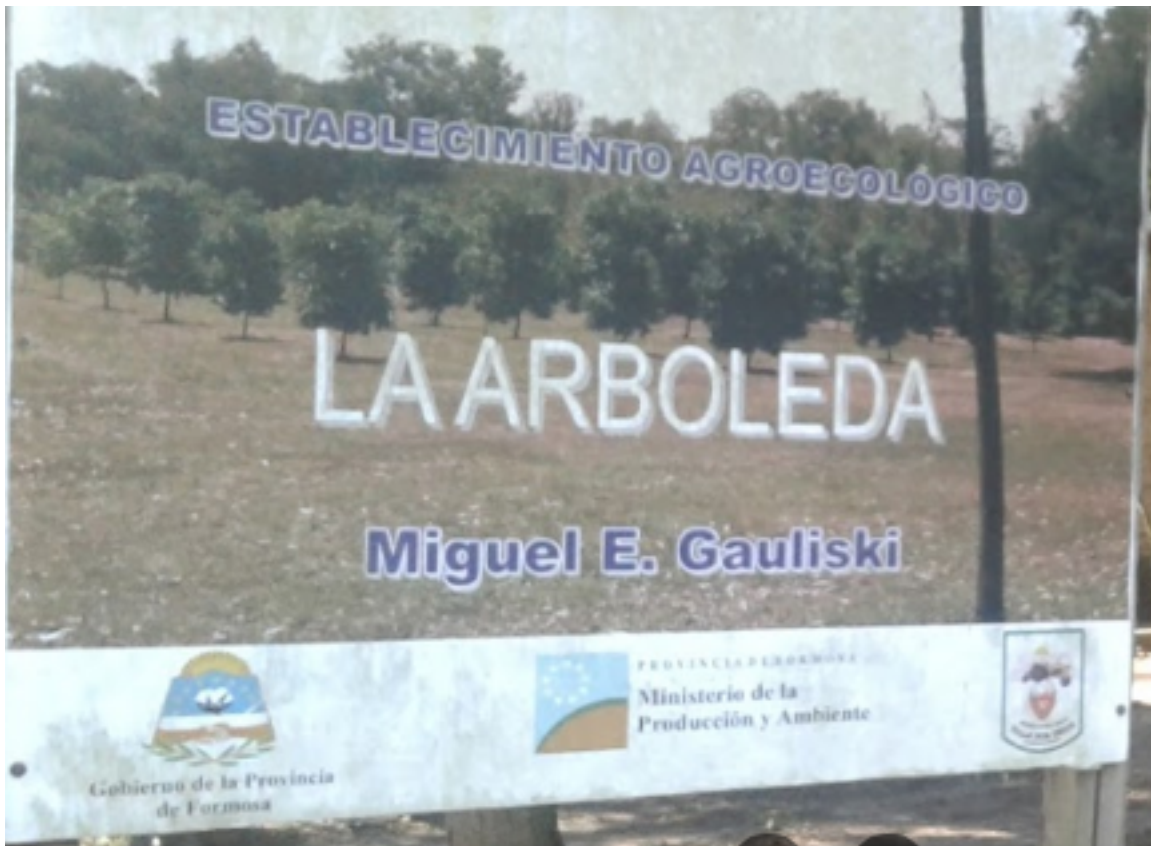


Image 3: Main sign of La Arboleda

Nevertheless, a broader perspective on the socio-economic significance of "La Arboleda" should entail contributions to stakeholder engagement policies, local government initiatives, and civil society organizations. This is especially important through measures that promote ecosystem governance, inclusivity, income generation, and prevention of outward migration trends, even when the capitalist agrarian conception disputes any form of community organization.

Which limits does it encounter?

"La Arboleda" receives various benefits by collaborating with organizations such as INCUPO, INTA - of which Mr. Gauliski is a member of the Local Advisory Council -, OAS, provincial government agencies, municipalities in the area - Villa Dos Trece and Mayor Villafañe -, producer associations, universities in the country – Universidad Nacional de Lomas de Zamora and Universidad Nacional de La Plata -, the Environmental Education and Agroecology Program of the Environmental Education Coordination Unit of the National Secretariat of Environment and Sustainable Development, secondary schools, among others (Juárez, 2022).

The necessity of governments to rely on the money from primary exports to sustain their policies for poverty alleviation has been pointed out as a constraint to the environmentalism of the poor (Martinez-Alier, 2016: 99). In this regard, it is important to note that governments, in one way or another, tend to employ certain mechanisms of institutionalization for civil initiatives, as seen in cases like La Arboleda. Therefore, expanding this experiment or further connecting it with larger organizations could potentially entail placing it under bodies that could alter its objectives and restrict its autonomy.

Indeed, operating as an Agroecological Beacon would require a certain level of coordination with other actors for its implementation, to attract a wider audience, and to achieve greater dissemination of the activities. This includes accessing various subsidies and human resources.

It has been noted that, in general, governments feel uncomfortable with initiatives that “explicitly opposes dispossession of land, forests, mineral resources, and water by governments or business corporations, fighting against the inroads of the generalized market system and the growth of social metabolism” (Martinez-Alier, 2016: 99). Therefore, it is worth questioning the existence of "top-down pressures" (Lapegna, 2019: 171-181) in these relationships aimed at influencing certain practices and discourses. In other words, the

collaboration with numerous entities could potentially limit Miguel's autonomy to maintain the benefits of these relationships.

Furthermore, it has been noted that;

There have been and continue to be public policies for agroecological-based family farming [...] but the scale and penetration are still limited in the Argentine Gran Chaco region. Formal education and extension practices in agroecology are still closely tied to an academic and paternalistic perspective, and the Beacon has not yet positioned itself as a tool to expand knowledge boundaries by integrating family farmers. The agricultural frontier continues to expand in the Chaco, driven by the technological package of commodity agribusiness [...] the scientific and technological system primarily serves extensive agribusiness interests (Juárez, 2022).

Are any shortcomings or critical points visible? What other problematic issues can arise from its implementation?

As mentioned, it is relevant to examine the farm management's margins of autonomy. Furthermore, the limits of agroecology as an alternative to agribusiness continue to be a subject of debate, at least in the Global South (see Lapegna, 2019, Pons Cortès, 2022). The transformations in social relations of production and the concentration of capital within the prevailing accumulation regime continue the process of decomposition of the subaltern layers of the rural and agricultural world in the region (Azcuy Ameghino, 2021; Sapkus, Vázquez, & Telesca, 2021; Sapkus, 2022).

Furthermore, a challenge for La Arboleda is to establish a process of political autonomy that, through the production of knowledge and practices, politicizes the socio-environmental conflict to question the Capitalocene in terms of the capitalist accumulation processes that oppress the social, ecological, and biological reproduction of the communities and territories in question.

How would it be potentially replicable in other settings?

The studied case can be understood in dialogue with various local expressions throughout the region within the global environmental justice movement. Within the region, there are

different environmental activist spaces, such as Brazil's landless workers' movement MST. However, it's likely that the enumerated challenges also arise in other areas. While there might be other governments or regional policies that could increase the likelihood of success or expansion, the truth is that its tangible implementation reveals significant limitations (Martinez-Alier, 2008, 2016).

Despite everything, it is true that the concept of an "Agroecological Beacon" already has instances in various countries, including Chile, Spain, and Colombia. In this sense, it can be confidently stated that the experience is potentially replicable in other spaces.

Is this initiative conducive to broader changes?

This initiative was institutionalized through various legal instruments that accredited it before state authorities, which can serve as a precedent for future experiences and contribute to introducing environmental issues into public discourse. However, considering its limitations and the current course of the Capitalocene in the region, it would be speculative to claim that it leads to broader changes.

Conclusion

This paper has revolved around the concept of environmental justice through a case study situated in the South American region of the Global South, primarily involving the agricultural sector. In this context, agroecology has been perceived as a form of expression linked to the environmentalism of the poor and the environmental justice movement. The analyzed experience demonstrates significant continuity, and within its context, the mere promotion of environmental issues can be perceived as a noticeable outcome. Nevertheless, the relationship with the State strains its autonomy and poses challenges for further engagement in environmental advocacy.

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