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FROM FIGHTING AGAINST DROUGHTS TO COEXISTING WITH THE SEMIARID

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ABSTRACT
The Brazilian Semiarid Region has a predominant physical condition with low rainfall, shallow soils and few perennial springs, which makes it difficult to access water and consequently agricultural production. To mitigate this situation, several water storage strategies were implemented by public and private initiatives, without, however, guaranteeing universal access to it. Hence, this work aims to analyze the paradigmatic transition from actions to combat droughts to those aimed at living with the Semiarid Region. For this, a bibliographic review is used as a methodology, as well as consultations with official government documents available on their websites. The text presents the role of civil society in the gestation of coexistence strategies with the Semiarid Region as opposed to policies to combat droughts implemented by state agencies and discusses the implementation of public policies aimed at the region. The results indicate that the social technologies of coexistence with the Semiarid Region promoted greater autonomy in the management of water resources and better quality of life of sertanejos and sertanejas in the Brazilian Semiarid Region.
Keywords: State; Social Movements; Coexistence; Semiarid; Public policies.

RESUMO
O Semiárido brasileiro apresenta um quadro físico predominante com baixas precipitações, solos rasos e poucos mananciais perenes, o que dificulta o acesso à água e consequentemente a produção agrícola. Para amenizar esse quadro, diversas estratégias de armazenamento de água foram implementadas por iniciativas públicas e privadas, sem, contudo, garantir o acesso universal a ela. Frente a isso, este trabalho tem como objetivo central analisar a transição paradigmática das ações direcionadas ao combate às secas para aquelas voltadas à convivência com o Semiárido. Para isso, utiliza-se como metodologia a revisão bibliográfica, bem como consultas a documentos governamentais oficiais disponibilizados em seus sítios eletrônicos. O texto apresenta a atuação da sociedade civil na gestação de estratégias de convivência com o Semiárido em oposição às políticas de combate às secas implementadas por agências estatais e discute a implantação de políticas públicas voltadas para a região. Os resultados apontam que as tecnologias sociais de convivência com o Semiárido promoveram maior autonomia na gestão dos recursos hídricos e melhor qualidade de vida de sertanejos e sertanejas no Semiárido brasileiro.
Palavras-Chave: Estado; Movimentos Sociais; Convivência; Semiárido; Políticas públicas.

INTRODUCTION

The Brazilian Semiarid Region has an extension of 1,128,697 km² and a population of almost 28 million inhabitants distributed in 1,262 municipalities, according to its current delimitation (SUDENE, 2018). Compared to other semiarid areas of the planet, the Brazilian Semiarid Region has a high population density of 24.7 inhabitants/km. In the countryside, a large part of this population lives in poverty, which over the years has been aggravated by land concentration, natural limitations to produce and the political system of domination, based on clientelism.

The new delimitation of the Brazilian Semiarid Region, elaborated by the Superintendence for the Development of the Northeast (SUDENE) in 2017, is composed of municipalities from all states of the Northeast region of Brazil, in addition to municipalities in the state of Minas Gerais. The municipalities that are part of the Semiarid meet at least one of the following criteria: Average annual rainfall equal to or less than 800 mm; Aridity Index of *Thornthwaite* equal to or less than 0.50; Daily percentage of water deficit equal to or greater than 60%, considering all days of the year (SUDENE, 2018).

It is worth remembering that the municipalities of the Brazilian Semiarid Region have access to differentiated benefits and public policies. For instance, half of the investments of the Northeast Financing Constitutional Fund (FNE) are destined to the municipalities of that region. Additionally, the Northeast Development Fund (FDNE) has the Semiarid as one of its priority areas for the distribution of resources to infrastructure projects, public services and productive enterprises. These municipalities also have priorities in the development of actions to coexist with the drought, as well as access to differentiated credits. Therefore, it is necessary to highlight that the regionalization of this space is based on natural criteria, however, it is part of administrative criteria regarding the implementation of state public policies.

One of the most striking characteristics of the physical picture of the Semiarid is the drought phenomenon. That is, the irregularity in rainfall distribution combined with high evaporation. This is not a matter of lack of water, as rainfall reaches reasonable averages of up to 800 mm per year. However, rainfall is concentrated in the summer months, with little or no precipitation occurring in the other months of the year. Periodically there are great droughts, which are characterized by a succession of years of low rainfall, which drastically affects the living conditions of the local population, especially the population of the field, which sees reduced possibilities of planting, feeding the animals and itself.

In view of this, the Brazilian State, at all levels of government, historically guided its actions in the Semiarid Region with strategies to combat drought with a focus on the construction of large dams and assistance in localized periods. Nevertheless, in the early 1990s, the discussion about living with the Semiarid Region began to be guided by Non-Governmental Organizations, churches and rural workers' unions, tensioning government institutions to adopt new strategies on the public policy agenda for the region years later.

Hence, this work aims to analyze the paradigmatic transition from actions to combat droughts to those aimed at living with the Semiarid Region. For this, a bibliographic review is used as a methodology, as well as consultations with official government documents available on their websites. The text presents the role of civil society in the gestation of coexistence strategies with the Semiarid Region as opposed to policies to combat droughts implemented by state agencies and discusses the implementation of public policies aimed at the region.

Networked organizations for coexisting with the Semiarid

The performance of the Brazilian State in the Semiarid was always directed by actions that aimed, at least in theory, to combat droughts. From the Imperial period until the creation of SUDENE in 1959, one cannot speak of planned action in terms of economic policy and public policies for the region (JESUS, 2012). Regarding droughts, the actions of the State, at various levels of government, began with the removal of the plagued from the countryside, taking them to the cities and, later, involving them in the construction of dams. During almost the entire twentieth century, the discourse to combat droughts materialized in irrigation works, in the construction of roads and mainly in the construction of large dams, mostly located on private properties. To a large extent, these works were implemented by the National Department Against Water Drought (DNOCS) and the Institute of Sugar and Alcohol (IAA).

Parallel to the State's actions to combat drought, social movements, associations of rural workers, pastoral workers, NGOs of various types were developing experiences, seeking new ways of acting. Movements to propose coexistence with the Semiarid are strengthened based on the banner of “alternative agriculture” and agroecology, which gained momentum in the 1990s. In this context, the discussion grows in popular organizations in the Semiarid region and even in the State itself, such as in the Brazilian Agricultural Research Company (Embrapa), for example.

Not only was the debate about coexistence fruitful in this period. Many agroecological experiences adapted to the Semiarid have been put into practice by these movements. Many of these alternatives have been tried and improved by social organizations in partnership with rural populations. Most of these organizations would join, in the late 1990s, to form the Brazilian Semiarid Articulation (ASA), such as the Sabiá Center, the Program for the Application of Appropriate Technologies to Communities (PATAC), the Brazilian Caritas, the Movement of Community Organization (MOC) and the Regional Institute of Appropriate Agriculture (IRPAA).

Social movements and rural workers' organizations operating in the Semiarid have built up a public political debate over the years. The most emblematic of the actions carried out by these organizations was the occupation of SUDENE, on March 16, 1993, due to the drought of 1992/1993. Called by the Confederation of Agricultural Workers (CONTAG), the movement demanded measures in relation to drought and permanent policies of coexistence with the Semiarid.

This mobilization was the beginning of the constitution of collective spaces on the theme in the Semiarid Region, such as the Dry Forum in Pernambuco; the Articulation in the Paraíba Semiarid Region; the Forum for Life in the Semiarid Region in Ceará and Piauí; the Forcampo in Rio Grande do Norte and other networks of debates (ASSIS, 2009, p. 24). At this moment, social organizations gain visibility and legitimacy in the discussion of coexistence with the Semiarid Region. Parallel to the discussions and the publicization of the debates, the construction of the plate cisterns is gaining space as an alternative for storing water for human consumption and as an effective action in improving the living conditions of the sertanejo people. This movement culminated in the seminar “Permanent Actions for the Development of the Brazilian Semiarid”, held

on SUDENE's premises, between May 10 and 13, 1993, with the participation of 112 entities (DUQUE, 2009).

As a result of the seminar, there was the creation of the "Northeast Forum" which set out to develop a program of permanent actions that valued peasant agriculture and alternative practices of coexistence with drought. The government response came, between 1993 and 1994, with the creation of the "Arid Project: a proposal for sustainable development for the Northeast". However, little was accomplished and in the drought of 1998-1999, there were findings that once again the action of the State would not solve the problems. According to Silva, the government actions in that drought could be considered a synthesis of how the State behaved throughout the twentieth century, in the face of drought occurrences in the Semiarid:

> The late reaction pressured by local governments, the risks of loss of control of the situation and the pressure of public opinion; the delay in the implementation of emergency actions, when the severity of the problems was advanced; and the allocation of resources, soon after the most serious period of the drought, characterizing a discontinuity of actions (SILVA, 2008. p. 73).

Faced with the new frustrations, in 1999, during the Third Session of the Conference of the Parties of the United Nations Convention to Combat Desertification (COP3), held in Recife, between November 15 and 26, representatives of the Social Movements, NGOs and religious entities - as usual at UN Conferences - formed a "parallel forum" to the governmental space to reflect on the reality of the Semiarid and propose effective intervention actions.

In that space, in addition to the exchange of experiences on the coexistence with drought, discussions on the need for a more permanent articulation of popular social organizations in the Brazilian Semiarid Region advanced. As a result of this debate, the Brazilian Semiarid Articulation (ASA) emerged, gathering several organizations from various states, some of them with a lot of experience in the debate and in the actions implemented in the region.

Taking advantage of the moment of convergence of ideas, the great political visibility and the context of the great drought that remained, the Declaration of the Semiarid is launched with the objective of giving greater prominence to the theme of coexistence. This document presents proposals based on two premises: the sustainable use of resources in the Semiarid and the breaking of the monopoly on access to water and land in the region. The Semiarid Declaration functions as a manifesto for the constitution of the Brazilian Semiarid Articulation (ASA) that was consolidated in February 2000, when it launched its Charter of Principles, in Igarassu, Pernambuco (ASA, 1999; 2000).

As early as the first meetings, ASA proposed the universalization of access to water for drinking and cooking. The conclusion was that it would take a quarter of the two billion reais to be spent on the policy of combating drought, between June 1998 and December 1999, to universalize access to water to about six million people.

Currently, more than 3,000 entities from the most diverse segments, such as Catholic and evangelical churches, development NGOs and environmentalists, associations of rural and urban workers, community associations, unions and federations of rural

workers, are part of ASA. Despite gaining body only in 2000, the articulation brought together experiences that were already being developed in several parts of the Brazilian Semiarid Region.

> The first initiatives took place in the field of water resources: collecting and storing rainwater. The promoters of these first actions criticized that traditional model, concentrator of wealth; in the case of water policy, the construction of imposing constructions – large dams on large properties – and for the poor living in the countryside, distribution of water by water-tanker (DUQUE, 2009. p. 308).

The beginning of the experiments occurred with the construction of cisterns made possible by a community fund called "Solidarity Revolving Fund", where each family contributed monthly with an amount that would be reversed in the construction of cisterns, initially community, until a cistern was built for each family. These funds are based on the traditions of cooperation and solidarity characteristic of peasant communities. “More than a mini credit, the revolving fund allows the peasant to decide freely on the use of resources, without having to go through the bank bureaucracy, without accepting ‘packages’ generally inappropriate to their logic”, says Duque (2009, p. 312).

Several projects were carried out by ASA during these years. The most important of these is the “One Million Cisterns” project, known as P1MC. This project aims to build one million cisterns for families in the Brazilian Semiarid Region, ensuring that rural populations have access to quality water. It essentially consists of capturing rainwater through the roof of houses and storing it in 16,000-litre cisterns. This water is used by the family to drink and cook.

The experience of building cisterns on a larger scale originated in the municipality of Campo Alegre de Lourdes, Bahia, in the early 1990s. According to Malvezzi (2007), pastoral workers and trade union organizations sought alternatives to alleviate the lack of water in rural communities of this municipality in periods of drought. After visiting an experience of the NGO Caatinga, in the municipality of Ouricuri, Pernambuco, they decided to implant 50 cisterns to experience the effectiveness of the method. They had financial support from Oxfam, a British charity agency. Faced with the proven effectiveness, in 1997, the diocese of Juazeiro, in partnership with the Union of Rural Workers, took over a diocesan project, whose mobilization involved several NGOs, unions and parishes and raised R$600,000.00 through the program "Adopt a cistern: until 2004, no family without water".

The alternative of plate tanks was gaining ground in several states of the Brazilian Semiarid Region, not as an end in itself, but as the beginning of a great process of social mobilization. Ensuring drinking and cooking water was the first step to be taken to improve the quality of life of the sertaneja population. In the communities contemplated, this simple social technology has contributed, over the years, to the reduction of diseases caused by the ingestion of poor-quality water, such as fever and diarrhea (JESUS, 2021).

The social organizations that would come to integrate the ASA later, had been accumulating experience in this type of technology. From these local experiences and

network mobilization comes the idea of building 1 million cisterns in just five years. The goal was virtually unattainable for the desired period, but the ASA mobilizers decided to keep the proposal in the hope that at least part of it would be achieved. From this mobilization emerges the "Social Training and Mobilization Program for Coexistence with the Brazilian Semiarid Region: one million cisterns – P1MC". As the Program was being implemented, the ASA expanded and consolidated.

PUBLIC POLICIES FOR THE SEMIARID IN A NEW GOVERNMENTAL SETTING

It is quite significant that the P1MC began to be negotiated in 1999, in the context of a major drought, in which the State could not guarantee effective actions in solving the problems arising from it. In addition, the social indicators showed a rather serious picture in relation to droughts. In the drought of 1992/1993, about 2.1 million people were enlisted to the emergency fronts of the federal government. During the drought happening at the end of that decade, 3 million basic food baskets were being distributed per month. These factors contributed to the P1MC becoming a public policy of the federal government (ASSIS, 2009).

The findings of ineffectiveness of the program to combat drought - families were thirsty on the edge of the dams, for example -, the high cost of these actions, contrasted with the ASA proposal, which were significantly cheaper and more effective. However, even with the proven effectiveness in the construction of cisterns, the Ministry of the Environment has shown interest in supporting a pilot project and not 1 million cisterns.

The agreement with the Ministry of the Environment was signed in 2000. Despite the initial idea of building 1,000 cisterns, only 500 are built, with the other half of the resources costing the elaboration of the executive project for the P1MC. “Thus, the discussions and mobilizations necessary for this construction are funded within the agreement, also focusing on the communication component” (ASSIS, 2009, p. 36). The ASA is gaining recognition and expanding by aggregating hundreds of organizations in all states. Parallel to this, PIMC's cistern number 0000001 was inaugurated in November 2000, in the Lagoa Grande community, in the municipality of Sobradinho - BA.

> The event is attended by the Minister of the Environment and is covered by a very expressive symbolism. Dona Josefa's family, the first to benefit from the program, had been displaced by the construction of the Sobradinho dam on the São Francisco River. From the original community, where she drank water on the banks of the “Velho Chico”, the farmer was moved to a community with acute [water] scarcity (ASSIS, 2009, p. 38).

Funding for future actions was consolidated through the newly created National Water Agency (Ana). The construction of cisterns was only one element of the mobilization that was sought to be implemented. Over time, it was noted that the most successful strategies were those accompanied by a process of social mobilization that began in the communities. The educational process that accompanied the construction was fundamental to ensure that families understood it as the result of popular mobilization and represented the beginning of the end of clientelism and local political dependence.

In the government of President Luís Inácio Lula da Silva, the Extraordinary Ministry for Combating Hunger and Food Security (MESA) was created and in this context, the issue of the Semiarid Region gained prominence, since many families were starving and ingesting contaminated water in the region. As a result of the joints, the ASA is called to present the Project to the Ministry. In 2003, under the newly created Zero Hunger Program, ASA, the Brazilian Federation of Banks (FEBRABAN) and the Ministry of Social Development (MDS) signed an agreement initially providing for a volume of 32 million reais for the construction of 22,040 cisterns. The One Million Cisterns Program is then consolidated as a public policy on the government agenda.

It should be noted that even with government funding, the Program, at different times, also received resources from entities such as the Ecumenical Coordination of Service (CESE), Cáritas, ABC Paulista Metalworkers Union, OXFAN, Konrad Adenauer Foundation, *Catholic Relief Services* and *Miserior*. The latter, from the beginning, finances the Program through the payment of personnel in the state of Paraíba, according to information from Duque (2011).

With the debate of coexistence with the Semiarid Region, ASA expands the possibilities of intervention in the various spaces that it is gradually conquering. The strategy was not limited to the construction of cisterns, but, from this, motivate deeper changes with the process of formation and social mobilization that began to emerge.

In the meetings, gatherings, in the forums of articulation, in addition to the strategies of construction of cisterns, other experiences started being shared in the field of contextualized education, gender, production, among others. It was the beginning of the debate on agroecology within the ASA.

Agroecology is the field of knowledge of a multidisciplinary nature, whose teachings intend to contribute to the construction of ecologically based agricultural styles, taking into account the appropriate agricultural techniques for each agroecosystem and the set of traditional knowledge of the populations living in the field.

The contradictions of the agricultural model based on the generalization of the use of agrochemical inputs, the use of transgenic seeds and the rapid increase in production – the result of the so-called Green Revolution – shows signs of exhaustion, even in the 1970s and, in the following decade, alternatives to this model were tried and disseminated in several countries, including Brazil.

In agroecology, the first principle used is the preservation and expansion of the biodiversity of agroecosystems, causing self-regulation of its components between soil and plants and increasingly reducing dependence on inputs and pesticides that have been proven to compromise soil quality and people's health (RIGOTTO; VASCONCELOS; ROCHA, 2014; BOMBARDI, 2017; HESS; NODARI; LOPES-FERREIRA, 2021).

However, as stated by Altiere (2008), recovering biodiversity is not the only objective of agroecology. No agroecological transition will take place without the preservation of the cultural diversity of the peoples in each of their specificities. In the case of the Brazilian Semiarid Region, although not always using the term agroecology, the initiatives of NGOs in the field of alternative technologies begin to articulate with movements of workers and basic structures of the churches. Still in the mid-1980s, a

growing movement was generated, focused on the construction of a new agricultural model for the region.

> In this general context, agroecology has served as a basis for the construction of a culture of coexistence in the Semiarid Region, enabling the rebirth and rejuvenation of strands of knowledge and technological propositions, which had been reaped by the chemical-mechanical conception, established in universities, research centers, credit institutions and technical assistance and rural extension companies (BARBOSA, 2003, p. 3).

Undoubtedly, the experience of greatest impact on the lives of peasant families was the construction of plate tanks for human consumption. However, agroecological alternatives for production have been gaining ground and showing that, even in a limited way, due to land structure problems, access to agricultural credit, among others, it is possible to produce in the Semiarid Region. Aiming to enable water for food production, ASA created, in 2007, the "A Two-Water Land" Program, which consists of the development of social technologies adapted to capture and store rainwater and floodwater, such as the production cistern, capable of storing 52,000 liters of water, and enable the production of vegetables in the backyards of the houses.

Some production alternatives suitable for the Brazilian Semiarid Region that began to be experienced in the 1980s spread and today, many of them are part of the peasant way of life in this region. Mandala-shaped plantations, underground dams, community seed bank are some of the alternatives that have contributed to the expansion of the process of coexistence with the Semiarid. Over more than two decades, sertanejos and sertanejas of the Brazilian Semiarid Region, organized in associations and movements and articulated by ASA, built 628,416 consumption tanks and 104,113 production tanks, in addition to numerous other social technologies adapted to coexistence with the Semiarid Region and many meetings to promote the exchange of their traditional knowledge.

4. Final Considerations

The coexistence with the Semiarid comes in the opposite direction to the discourse of overcoming and/or combating drought, stating that there is no possibility of combating a natural climatic phenomenon. The appropriate way to solve or alleviate the problems is in the development and democratization of simple social technologies capable of promoting significant changes. The concept of coexistence with the Semiarid Region shows that it is possible to live in places apparently impossible to live and produce. That is why they fight for the guarantee of public policies that meet the needs of the sertaneja population.

Recognizing that access to water is a basic human right that urgently needs to be extended to the entire population, especially to the peasants of the Semiarid Region, the ASA and the organizations integrated with it defend the continuity of the One Million cisterns Project as a policy of democratization of access to quality water for families. The construction of cisterns in the Semiarid Region has been presented as a simple, inexpensive, accessible and dominant alternative for peasant families, in addition to being of proven technical efficiency. It proves to be a form of access to water without

depending on the power of centralization of farmers and local politicians, which historically characterized the clientelism so present in the Brazilian Semiarid Region.

Therefore, the strategies of coexistence with the Semiarid Region, implemented by thousands of rural communities in hundreds of Brazilian municipalities, have minimized the effects of drought and contributed to the permanence of peasants on the land. Valuing traditional experiences and knowledge and proposing modest initiatives, the Articulation in the Semiarid has articulated thousands of peasants, enabling autonomy and dignity.

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