

SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE ADAPTATION: A CASE STUDY ABOUT STRATEGIC PLANNING AND CHALLENGES IN A FAMILY FARMERS COOPERATIVE

DESENVOLVIMENTO SUSTENTÁVEL E ADAPTAÇÃO ÀS MUDANÇAS CLIMÁTICAS: UM ESTUDO DE CASO SOBRE PLANEJAMENTO ESTRATÉGICO E DESAFIOS EM UMA COOPERATIVA DE AGRICULTORES FAMILIARES

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ABSTRACT

Considering the dynamics inserted in the socioeconomic context and its results, which rapidly challenge socio-environmental debates, promoting reflections that make sustainable development anable, proposals that indicate climate adaptations echo as themes of great relevance. Thus, thinking about parameters to weave reflections on climate adaptation emerges as a pillar for sustainable development, inserting it in certain contexts, in this work, specifically in the strategic planning of cooperatives. In this sense, this study aims to analyze the obstacles to the implementation of the strategic planning of a family farming cooperative in the municipality of São Ludgero. The obstacles found for this planning decline the prospects for improvements in climate adaptation, highlighting the relevance of proposing strategic plans with a greater proportion, striving for the dissemination and propagation of Sustainable Development. The qualitative research approach was chosen as a methodological strategy, with descriptive characteristics, based on a case study. Among the main results, from the literature review, the theme proved to be very relevant to contribute to climate adaptation. Nevertheless, from the field perspectives, it was found that there are obstacles to be faced by the cooperative in the implementation of strategic planning, including: 1) a lack of trained people to update, monitor and support cooperative members, 2) difficulties in obtaining the necessary documentation to participate in larger bids, 3) lack of information among members of the cooperative. Based on the research evidence it is possible to conclude that although the presented obstacles compromise the future activities of this cooperative, they are likely to be overcome, and these should be components of the Strategic Planning itself.

KEYWORDS:

Sustainable Development; Climate Change Adaptation; Family Farming; Sustainable Development Goals; Cooperatives.

RESUMO

Considerando as dinâmicas inseridas no contexto socioeconômico e seus resultados, que rapidamente desafiam os debates socioambientais, promovendo reflexões que viabilizem o desenvolvimento sustentável, propostas que indicam adaptações climáticas ecoam como temas de grande relevância. Assim, pensar em parâmetros para tecer reflexões sobre adaptação ao clima surge como pilar para o desenvolvimento sustentável, inserindo-o em determinados contextos, neste trabalho, especificamente no planejamento estratégico das cooperativas. Nesse sentido, este estudo tem como objetivo analisar os entraves para a implantação do planejamento estratégico de uma cooperativa de agricultura familiar no município de São Ludgero. Os entraves encontrados para esse planejamento diminuem as perspectivas de melhorias na adaptação ao clima, destacando a relevância de propor planos estratégicos com maior proporção, primando pela disseminação e propagação do Desenvolvimento Sustentável. Como estratégia metodológica, optou-se pela abordagem qualitativa da pesquisa, com características descritivas, a partir de um estudo de caso. Entre os principais resultados, a partir da revisão de literatura, o tema mostrou-se muito relevante para contribuir com a adaptação ao clima. Apesar disso, nas perspectivas de campo, verificou-se que existem obstáculos a serem enfrentados pela cooperativa na implementação do planejamento estratégico, entre eles: 1) falta de pessoas capacitadas para atualizar, acompanhar e apoiar os cooperados, 2) dificuldades na obtenção da documentação necessária para participar de licitações maiores, 3) falta de informação entre os cooperados. Com base nas evidências da pesquisa é possível concluir que embora os obstáculos apresentados comprometam as atividades futuras desta cooperativa, são passíveis de serem superados, e estes devem ser componentes do próprio Planejamento Estratégico.

PALAVRAS-CHAVE:

Desenvolvimento Sustentável; Adaptação às Mudanças Climáticas; Agricultura Familiar; Metas de Desenvolvimento Sustentável; Cooperativas.



1. INTRODUCTION

The rapid global industrialization of recent decades and its effects on climate change, has emerged from a socio-economic context to fulfill the expectation of achieving Social Development Goals. As a result, sustainable processes of industrialization have become the focus of several social organizations to transition towards models, that enable sustainable practices (WAMSLER, et al., 2021).

Thus, these organizations have been seeking strategies to consolidate in the market in which they operate, developing approaches that could be adaptable, for more enterprises to achieve the desired results (OLIVEIRA, 2011). If properly conducted by business management, they have the possibility of becoming mechanisms with marketing actions in the promotion of businesses that meet Sustainable Development. (FERNES; AMAESHI, 2021)

Among tactics that are significant for sustainable development, some proposals may contribute to climate adaptation and according to Obermaier and Rosa (2013), the relevance of family farming as a strategy for climate adaptation is of paramount importance.

The latter was highlighted in a groundbreaking study by Rockstrom et al. (2009), on planetary boundaries and opportunities for humanity to operate within these physical constraints, while avoiding reaching tipping points, which could jeopardize permanently, the restoration of planetary homeostasis. The authors highlight that only within safe operating spaces, the “planetary borders” concepts propose ideas for governance and management that could sustain economic growth while mitigating inequalities and environmental imbalance. Subsequently, many other studies were developed with this scope (WAMSLER, at al., 2021; KHANAL, et a.l, 2021; FAWZY, et al. 2021).

A recent study by Bouman et al. (2020) shared similar opinions and drew attention to the concern about climate change that can motivate people to support climate policies and change personal behavior to minimize natural disasters as a result of climate change. On the other hand, research by Kahn et al. (2021) warned about the negative effects of climate change on economic growth, enterprises, productivity, and workers’ income at various levels of severity worldwide.

Agriculture has not been immune from economic crises and in Brazil during the 60s, 70s, and 80s, there was only modest Government incentive, coupled with a lack of public policies in support of small, family farmers, which caused the demise of a majority of these smallholders, who sold their land, left the countryside and moved to the cities in search of a better life and employment. (OBERMAIER; ROSA, 2013).

However, since 1990, due to farmers' organizations and their pressure upon the government assisted in a ‘Renaissance’ of family farming, that began to gain

visibility in Brazil where public policies were enacted to spur the agricultural sector, while encouraging farmers to stay on the farms. Through establishing cooperatives, especially those working with small landholders, more opportunities became available to growers to market their crops and/or purchase production inputs at more competitive prices. (OBERMAIER; ROSA, 2013).

Several studies have documented the importance of strategic planning for the management of companies, for the management of cooperatives, including cooperative members, also called associates; as well as for the management of various institutions, mainly through actions that enable processes related to the minimization of climate change (OBERMAIER; ROSA, 2013; SILVA, et al., 2021).

It has been demonstrated that family farming cooperatives bring new opportunities for farmers and artisans, making cooperatives a type of organization that promotes an integration of forces and collaboration among its affiliate, to achieve benefits and improve life, work conditions, and adequate economy for all cooperatives members (SILVA; SILVA, 2020).

From the above, it is highlighted that the choice of the cooperative assessed was based on the use of the convenience sampling methodology, since the authors were able to follow the entire process of formation of the cooperative selected called *Cooperação* (MARTINS; THEÓPHILO, 2018).

Given the current scenario of global socioeconomic, environmental and political crises, several initiatives in the field of science have been explored as a way to seek the consolidation of development processes that are economically efficient, socially fair, equitable, and environmentally sustainable (FERRAZ, 2019). The cooperative chosen as the object of study meets this perspective.

The development strategy through cooperatives is used all over the world, based on the territory's vocation, the involvement of people in the community, and the common interest. In this sense, there is a special case, studied by Moon and Lee (2020) in the village of Gihogwe, Rwanda, with the implementation of the Rice Project, Cattle Bank, and the Implementation of Improved Banana Project, from 2011 to 2016 for income generation associated with sustainable development. The study shows the crises and challenges faced by the cooperative in its project and the strategies adopted. Empowerment and autonomy are two competencies sought by the cooperative to obtain support from public policies for local development.

Sarachaga (2020) highlights that local governments in several countries are concerned about the rural exodus, as jobs are more available in urban centers in search of work and income opportunities. In this sense, the study criticizes the little involvement of local and regional authorities in the scarcity of resources and sustainability in

economic activities, especially regarding the SDGs. This study proposes a strategy for sustainable agricultural production, assesses the contribution of the Cantabrian Rural Development Program, and proposes multisectoral practices to revitalize rural areas in the region.

In this direction, we understand that a study on a cooperative of rural producers in southern Brazil strategic planning, in which strategic actions and economic activities meet the concerns about climate change and sustainable development, may be relevant and contribute to a greater understanding of the role of landscape management in the local territory.

1.1 Purpose Of The Study And Objectives

The purpose of this research was to analyze the contributions to climate change adaptation based on an analysis of obstacles to the implementation of strategic planning of a family farming cooperative, the *Cooperação*, in the municipality of São Ludgero, in the Amurel region of Brazil.

The Amurel region, including the micro-region of Vale do Braço do Norte, is the territory considered in this study. There were 363.565 inhabitants in 2017; a GDP of R\$ 9.1 billion in 2015; 21.673 companies and 93.124 jobs in 2016; the average salary was R\$ 1.935 in 2016, with men earning R\$ 2,137 and women R\$ 1.696. The region's main economic activity is in the tertiary sector, namely commerce (11.6%) and services (32.6%), which together represent 48.20% of economic activities; the industry comes next with 22,8% (SEBRAE, 2018).

It is a territory that This region has a strong entrepreneurial culture for innovation and development, where the exclusion of significant population segments was minimized by income transfer policies. These support the most vulnerable sectors of society yet, they require strategies capable of identifying and generating potential and vocations for territorial development and structuring the mechanisms and processes through which the autonomy of subjects, groups and communities may develop as a distinctive and effective expression of citizenship (VOLPATO; DUARTE, 2017).

On the other hand, economic segments composed especially of micro and small companies that constitute the vocation of that microregion are challenged to innovate to become competitive in an increasingly broader, interconnected scenario; as well as the consolidation of technologies, ecosystems and processes for expanding the portfolio of products and services that meet the demand that is renewed every day. Undertaking and innovating in these areas acquire the same relevance (DEGEN, 2017; GEM, 2021).

The cooperative assessed herein seeks sustainable development through collaborative, strategic actions, to alleviate the negative economic externalities of the production sector in which it operates. Therefore, as a

research strategy, the "*Cooperação*" cooperative was chosen as the focus of the study.

In this connection, the assumption of sustainable local development is based on the strengthening of the community. To that effect, the process is dynamic with the formation of cooperation networks and the enhancement of synergies, competencies, and collective efficiency. The gains are social, economic and, above all, foster territorial identity, with value creation and enhancement of essential skills in the different production chains.

Thus, the relevance of this study is the coverage, of the potential contributions both to the members of the cooperative assessed, as well as to other cooperatives, researchers and other people who wish to set up and/or run cooperatives and wish to analyze the main obstacles they may face. In addition, this study helps new research related to the theme.

We believe that it is important to discuss sustainable development and climate adaptation in global terms and, subsequently, cooperativism in Brazil and the role of cooperatives in local markets. In this section, we briefly discuss organizations' strategic planning (SARACHAGA, 2020).

The study contributes in practical terms to demonstrate how strategic planning as a management tool can be decisive in the construction and consolidation of organizational practices that meet responsible management and decisively influence climate change. The research also presents academic contributions, as it allows generating reflections on the findings that indicate a direct implication of strategic action in the segment of activity and the external environment, as well as strengthening theoretical postulates about climate change, especially in agribusiness activity, which is one of the economic activities that have the most impact on the environment. The research corroborates with similar studies and, mainly, on the role of managers in productive decision-making and the possible mitigation of environmental impacts.

2. THEORETICAL-CONCEPTUAL ASPECTS

In this section, we believe that it is important to discuss sustainable development and climate adaptation in global terms and, subsequently, cooperativism in Brazil and the role of cooperatives in local markets. Finally, we present a brief discussion on strategic planning for organizations.

2.1 Sustainable development and climate change adaptations

Sustainable development is a concept that was officially created in 1972 at the United Nations Conference on Human Environment in Stockholm. After stating that environmental preservation is the responsibility of all countries, a declaration on the environment and development was issued, containing 26 principles (SANTOS; WEBER,

2020). This concept was created to discuss environmental preservation, and natural resources and ensure that these resources do not run out in the future.

According to the Relatório Brundt in Comissão Mundial Sobre Meio Ambiente e Desenvolvimento (CMSMAD, BRUNDTL REPORT AND WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, 1988, p. 49), sustainable development must be understood as:

A transformation process in which the exploitation of resources, the direction of investments, the guidance on technological development and institutional change be harmonized and reinforce the present and future potential of growth, to meet human needs and aspirations.

Regarding the definition of Sustainable Development, it is inferred from Marques, Santos and Aragão (2020, p. 17) that it is "very complex and controversial, considering that its implementation requires an essential process of change in the way we evaluate reality, in the means of co-existence, production, consumption and, consequently, in management". It is also true that it includes the political, economic, ecological, sociological, spatial and cultural aspects, which must be unveiled to define the objectives to be achieved and the path that must be followed, toward sustainability (MARQUES; SANTOS; ARAGÃO, 2020).

Thus, sustainability involves three dimensions; they are the pillars that support it, namely the social, environmental and economic dimensions (BOCA SANTA et al., 2021). With actions in each dimension, the social part involves the human part of the company, both in the community in which it operates and in the well-being of employees and their families in matters related to health, education and leisure (SANTOS; WEBER, 2020). In the environmental domain, everything related to the environment and the proper form of use and replacement of these natural resources, to mitigate the impacts generated by their use; finally, in the economic domain, issues related to the distribution and consumption of goods, considering the social and environmental pillars (SANTOS; WEBER, 2020).

For Eyerkauffer et al. (2020), Sustainable Development is the harmonious progress between the use of territory and the well-being of the population. Sustainable Development seeks to improve the quality of life of current and future generations, through the conservation and protection of natural resources, combined with economic and productive activities.

Therefore, sustainable development seeks to maintain human production and reproduction and human activities, ensuring a satisfactory relationship between man and the environment, so that future generations can enjoy the same resources that we have today in our environment (FIORILLO, 2012). A similar study on future generations being able to enjoy natural resources was addressed by Sarachaga (2020).

Based on the meanings and concepts described

above, it is noteworthy that among the perspectives of Sustainable Development, strategies for climate change adaptation stand as a topic of great relevance. In this perspective, Fawzy et al. (2020, p. 2090) emphasize that "based on the current state of climate emergency, the immediate development of viable mitigation and adaptation mechanisms is of the utmost importance".

Wamsler et al. (2020) agree with these reflections, pointing out that, in addition to the problem of climate adaptation, major financial and human resources investments are necessary and, concomitantly, the development of capacity for personal development and systems integration in perspectives to promote and disseminate Sustainable Development.

In the study of Khanal et al. (2021), the authors investigate the extent to which smallholder adaptations to climate change have the potential to contribute to the UN's sustainable development goals without poverty (SDG 1) and zero hunger (SDG 2). In this direction, the study measures the impact of such adaptations on food production using data from a survey conducted on a farm in Nepal. The results demonstrate that farmers who followed the research lines and those who adopted the adaptations obtained higher levels of productivity and technical efficiency in food production compared to those who did not adopt productive practices with food adaptations to climate change. The research had 704 direct observations in the field of agricultural production, of which 263 were farmers adopting sustainable practices and 170 non-adopters. All were interviewed to find out about production and climate change perceptions. Data indicate that, on average, adopters are 11% more efficient than non-adopters. There is still a significant potential to improve agricultural productivity if smallholders can adapt to the impacts posed by climate change, contributing decisively to reduce hunger in the world.

Antwi-Agyei and Nyantakyi-Frimpong (2021, p. 1) studied 555 households located in six communities in three districts in northeastern Ghana:

The results indicated that small farmers were employing a series of practices to face the threats posed by climate change. Key adaptation practices have included planting drought-tolerant crop varieties, using indigenous knowledge, irrigation intensification, migration, planting schedule adjustment, crop diversification, mixed farming and sustainable land management practices. Rather, short-term coping practices reported by study participants included selling non-agricultural assets, supplementing agriculture with non-agricultural jobs, selling livestock, wage labor, burning charcoal, and reliance on social networks. The results also revealed that barriers to adapting to climate change and coping practices differed by gender.

The authors further point out that "Climate change and Ghana's agricultural policies must prioritize

smallholder adaptations to deal with the threats posed by climate change". The study's findings further indicate that "climate change and Ghana's agricultural policies must prioritize smallholder adaptations to deal with the threats posed by climate change".

The realities addressed by the surveys highlighted above reveal a growing concern about farmers' productive activities with climate change and sustainable development, especially the agricultural activities of small rural producers who are the livelihood of poor families around the world. There is a trend of concern with the environment around the world, but poor countries are in the initial stage of this process; however, there are signs of greater awareness due to gains in productivity and efficiency with the adoption of sustainable actions and practices. In this direction, this study is in line with similar studies on rural production organized in the form of a cooperative that plans its actions in line with sustainable development.

In the same line of sustainable competitive strategies, there is La Vía Campesina an international movement that helps small family producers in search of the green revolution, with small-scale production, food quality, ecologically sustainable and economically viable, allowing or supporting countless rural families. (LA VÍA CAMPESINA, 2021).

Thus, it depends that Sustainable Development as an objective and as a reality seeks social improvement, and in this connection, promoting strategies for climate adaptation becomes a necessary reality.

2.2 Family farming cooperative

Due to the globalization of economies and technologies, organizations seek to direct their investments towards the cheapest and low-cost forms of labor, making the price of products and services competitive in the market, so corporations look for places where taxation is lower and labor cost is lower. Thus, new forms of labor contracts were developed, without employment relationships, as is the case of work contracted through cooperatives (MARTINS, 2013; SILVA et al., 2020).

"Cooperatives are societies of persons, with their legal form and nature, of a civil nature, not subject to bankruptcy, constituted to provide services to members" (BRASIL, 1971) with national policy and legal regime established by Law No. 5764/1971. Family farming in Brazil has a relevant role in the production of basic food products for Brazilians, we can mention rice, beans, corn, cassava, vegetables and small animals (CASTRO; RESENDE; PIRES, 2014; SILVA et al., 2020).

Income is one of the great challenges of family farming in terms of demand for products and their quantity. Many families end up abandoning rural areas because they have no guarantee that their products will be purchased. Lack of investments in productive infrastructure,

processing, storage, transport and prices. There is also a lack of access to public services in the rural environment, such as health, education, social security and public transport, causing people to leave the countryside (SILVA et al., 2020).

Family farming in Brazil has a relevant role both in food production and in generating income and jobs in rural areas, making it a reducer of rural exodus. In most cases, farmers have little education, a factor that limits the diversity of cultivated products, taking advantage of the land and available labor to increase income. Despite their importance, these farmers have historically received little support from the government, from access to land to the commercialization of production, being neglected by the government in the modernization of Brazilian agriculture after World War II (CASTRO; RESENDE; PIRES, 2014).

For the sale of products on the domestic market, farmers resort to cooperatives; cooperatives have both an economic and social function for producers. They serve as a company that provides services and seeks better alternatives for its members. They make it possible for the production of small farmers to be sold; in addition cooperatives ensure the purchase by farmers of raw materials, inputs and supplies at more advantageous prices for planting. According to Pinho (2004), cooperatives work so that a better relationship is established between the cooperative members, as well as acting externally, contributing to the defense of citizenship, community and the environment.

The cooperative society has specific characteristics that differentiate it from other societies, such as: a society of people whose main objective is the provision of services. Transfer of stock to third parties, outside the company, even if by inheritance, is not allowed, through the assembly of founders or by public deed, and its Articles of Incorporation must be filed with the Board of Trade and published, among other requirements (SANTOS; GOUVEIA; VIEIRA, 2012).

Costa, Junior and Silva (2015) highlight the difference between corporations and cooperatives. Corporations do have not much interest in the people who will integrate it. In contrast, in cooperatives, partnerships, the relationship between the company and its partners is extremely important, as well as the interest of the associate's participation and the administrative and operational capacity. The cooperative is a facilitator for the cooperative members' activities, and the operations carried out by the cooperative are considered as a transfer of goods. The study by Silva et al. (2020) corroborates the main results of the above study.

2.3 Brief aspects of Strategic Planning

Strategic planning is a method by which a set of techniques are established and several organizational strategies are developed to assess the risks and uncertainties that

organizations will possibly have to face along the way. Its objective is to establish the desired market position by the organization, and verify the possibility of achieving it, always aiming at increasing profits (OLIVEIRA, 2011; KOTLER, 2021).

When strategies are defined by a company, they show the alternatives with which the company will compete, that is, what the company is willing to do or not so that it can achieve its goal. In this connection, when companies gain competitiveness from their formulated strategies, we can say that they are successful companies (HITT; IRELAND; HOSKISSON, 2008; KOTLER (2021).

According to Porter (1992, p. 28), strategy can be understood as:

A company's strategic action is to set up a competitive and sustainable position that is difficult to mimic. To that effect, the organization must define a product or service offer, which can be determined by a lower cost or by a differentiated value for the customer.

Regarding Planning, it is about formulating objectives and actions for future decisions. Planning determines in advance what goals are to be achieved and what to do to achieve them. Strategic planning is the function within the organization that bears the highest responsibility among the different hierarchical levels (LIMA, 2018). Therefore "planning helps to transform intended strategies into realized strategies, allowing taking the first step that leads to their implementation" (MINTZBERG; QUINN, 2001, p. 258).

For Nakagawa (1993), strategic planning is composed of planned actions based on the current situation of companies, compared with past performance and with future effects, and it is the current decisions and actions that will yield the most likely scenarios for the future. In this perspective, "the planning process has two purposes: making realistic as well as timely decisions" (ANSOFF; MCDONNELL, 1993, p. 509).

Thus, Strategic Planning can be understood as "an administrative technique that, through the analysis of an organization's environment, creates the consistency of its opportunities and threats in the organization's environment" (FISCHIMANN; ALMEIDA, 2009, p. 27). Indeed, Strategic Planning addresses global, broad, generic and long-term issues, as its outcome is in the future. The company's main objectives and the strategies that must be adopted to reach the outlined objectives must be selected, as well as the definition of the sources of funds that will be used (AMBRÓSIO, 1999). A complementary view is seen in the studies of Zaias (2021) and Kotler (2021).

However, strategic planning will only be successful if it incorporates its management plans and actions; strategic planning must be carried out continuously, as it is necessary to recognize the activities that are contained in the planning and create conditions for these to be

best implemented in the company (MARQUES; SANTOS; ARAGÃO, 2020). Therefore, it must be built in a clear and well-designed way so that the cooperative members, employees and all the people involved can implement and continue in search of the cooperative's success, both in the present and in the future, thinking in the long term (ROSSÉS et al., 2018).

It is understood together with Oliveira (2003, p. 47) that "strategic planning is the administrative process that provides methodological support to establish the best direction to be followed by the company, acting in an innovative and differentiated manner". However, Luecke (2009, p. 23) emphasizes that "it is essential that external and internal factors be considered because they shed light to the world in which the company or unit operates, allowing better planning for the desired future". In an evolution of such studies, Kotler (2021) points out the importance of studying internal and external environments to understand the competitive strategies that will guide business planning.

In an earlier perspective, in 1981 Ansoff (1990) realized that for-profit organizations have to start caring about the environment, creating the Ansoff Matrix. Ansoff's (1990, p. 95) definition of strategy: "one of several sets of decision rules to guide the behavior of an organization", demonstrates this positivist cause and effect relationship, where the "set of decision rules" will have the effect of guiding the "behavior of an organization". In a complementary study, Zaias (2021) brings a perspective on the consolidation of sustainable strategies in the paper industry in the state of Paraná.

This matrix has two dimensions, product and market and on these dimensions four more possible strategies according to Kotler and Armstrong (1995), as shown in Figure 01.

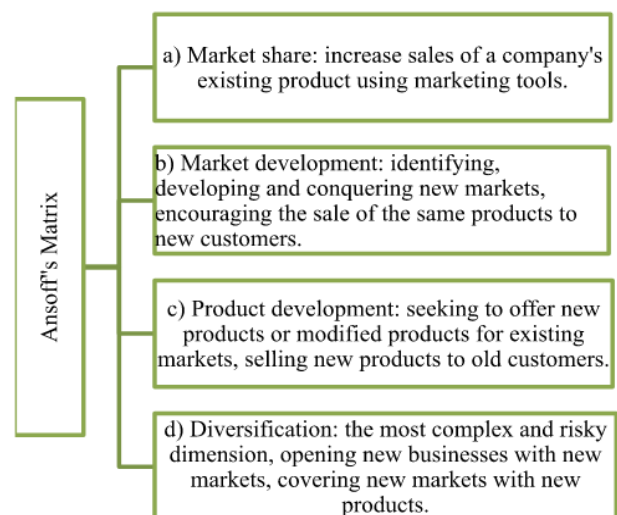


Figure 01: Strategic dimensions model
Source: Modified from Kotler & Armstrong (1995).

Following, is the detailing of the research system.

the cooperative's partners who are Epagri researchers (Agricultural Research and Rural Extension Company of Santa Catarina, public agency) and Uniagro technicians (Work Cooperative of Agricultural Science Professionals), as well as several conversations with the cooperative's president, specifically about the cooperative's performance in sustainable productive activities and the concern with actions and their impacts on climate change.

3.3 Data collection instruments

3.3.1 The interviewees

Nine interviews were carried out with members of the studied cooperative, six rural producers associated with the cooperative (five women and one man), two managers and the president of the cooperative. The sample was intentional, chosen for convenience. The interviewees have been working in the cooperative for at least 5 years and the managers have higher and postgraduate education and the rural producers have completed high school.

The interviews followed an interview script with 11 open (semi-structured) questions designed to identify obstacles to strategic planning. Each interview lasted approximately 30 minutes and was fully transcribed so that the interviewees' statements were analyzed. Martins and Theóphilo (2018) suggested that interview questions must be asked with clarity and convey trust to avoid interruptions, or anything that could get in the way and influence the subject's responses.

3.3.2 Documentary analysis

In addition to the interview research technique, the document analysis research technique was used.

For document analysis, records, legislation, newspaper articles, publications about the cooperative and reports provided by the studied institution were used.

3.3.3 Participant research

A third research technique used was the technique of participant observation with the report of observations made by one of the authors of this study who is also the manager of the cooperative and who participated in events, meetings and seminars at the cooperative during the year 2021 and made the records of your observations, photos, informal conversations in the form of field notes. This research technique was used to identify the role of the cooperative in sustainable development and monitoring climate change.

The field diary was written with impressions and observations made during the research as a result of participant observation and conversations with the cooperative's directors: observations on the assemblies, on the climate of trust, friendship, cooperation, concern for environmental issues (use of pesticides, recycling of materials, organic products [adopted by some rural producers], conscious use of water, energy and inputs, negotiation of products

by the cooperative, fluctuation in market prices, stock of inputs, rural extension, importance from the cooperative to the members, from the respect of the community to the cooperative, etc.

Also some questions about the difficulties and obstacles of the long-term strategy and the implementation of strategic planning in the management of cooperation and rural properties.

3.3.4 Data analysis

Data analysis used a combined choice of data analysis techniques, namely: content analysis for the analysis of the interviews (BARDIN, 2016), document analysis for the reports and legislation on the cooperative, participant analysis with field observations at meetings and events of the cooperative and, finally, analysis of similar studies (SAUNDERS; LEWIS; THORNHILL, 2009).

For the analysis of the interviews, the premises of Bardin (2016) were used, including the identified nine categories. In this step, the categories were identified by the number of importance, that is, by the number of occurrences of information in the interviewees' speeches. The sentences in keywords that became categories were reduced.

For the documental analysis, the objective was to identify the relevant information that demonstrates the relevance of strategic planning for the construction of sustainable organizational practices and denotes responsible and concerned management with climate change.

Finally, in the analysis of field notes that were generated from the participant research, including records, photos, media material, etc., the focus was also on relating the role of the cooperative in mitigating climate change and managing development sustainable.

4. RESULTS AND DISCUSSION

In this section, the main outcome of the case study performed is presented and discussed. It starts with the presentation of the cooperative, then the interviewees' perception and, finally, the main obstacles identified in the implementation of the strategic planning in the cooperative assessed.

4.1 São Ludgero municipality family farming cooperative: analysis of interviews

According to the interviewees, that is, family farmers, the cooperative Cooperação from São Ludgero had been selling their products for many years through open markets in the municipality and dreamed of setting up a cooperative. This is because, to be able to deliver their products for use in municipal school lunches, they were required to be associated with a cooperative, but since a local cooperative was not available, they resorted to other cooperatives, in neighboring municipalities.

For these reasons they understood the need to have a cooperative in their municipality. Thus, on May 9, 2013, they founded the *Cooperação*, the São Ludgero cooperative of family farmers and artisans, a limited liability company, headquartered in Rua Padre Roher, 190, Centro - São Ludgero - SC. The area of activity comprises the State of Santa Catarina, with admission priority into the cooperative to São Ludgero family farmers.

The objective of the cooperative is to act in the field of agriculture, agribusiness, handicrafts and solidarity economy, with the purpose of marketing fruits, vegetables, handicrafts, bakery and confectionery products, while allowing its members to perform their professional activity and providing an improvement in their economic and financial situation, through cooperative initiatives.

The *Cooperação* engages 21 families residing in the municipality of São Ludgero, it is a social movement that gave rise to groups of women farmers and artisans within the cooperative, who are seeking to expand the market opportunities for their products.

4.2 Interviews: the cooperative members' perception of strategic planning

The interviews were conducted with 9 (nine) members of the cooperative; among those interviewed are the cooperative members, board members and the employee of the cooperative surveyed who was randomly selected. The interviews were held in March 2021 at the Colonial Products Fair, a point of sale where members of the cooperative sell products and which they visit frequently. At this point of sale, we were able to talk to the *Cooperação* cooperative members and conduct the interview for the study of the *Cooperação* cooperative.

The current cooperative with the following productive activities in different areas of food, including horticultural products, animal production, bakery, grains, dairy etc.

The cooperative's commercial activity field was classified as food and horticultural products, which are products from vegetable gardens, orchards, chicken farms and baked food that are delivered for consumption, most often for school lunches in the municipality and the State. The cooperative's total production in 2021 was 24,520 kg and the forecast for 2022 is a production of 26,210 kg.

Respondents stated that the cooperative *Cooperação* has strategic planning, but it needs to be put into practice. "The cooperative has had strategic planning since 2016, but they reported that it was created in 2016, but that it was not finalized and some adjustments are still needed to put it into practice" (Interviewee 6, 2021). As a result of the presentations made, Table 01 below shows those responsible for preparing the strategic planning in the cooperative assessed.

Interviewee	Strategic planning, the cooperative sector responsible for preparing the aforementioned document
1	Uniagro technician with cooperative members
2	Uniagro technician with cooperative members
3	Uniagro technician with cooperative members, in partnership with Epagri
4	Cooperative member
5	Cooperative member
6	Uniagro technician with cooperative members, in partnership with Epagri
7	Uniagro technician with cooperative members, in partnership with Epagri
8	Food sector professional
9	Uniagro technician with cooperative members, in partnership with Epagri

Table 01: Responsible for strategic planning in the cooperative

Source: Prepared by the authors based on interviews with members of the cooperative assessed (2021).

The cooperative's strategic planning was set up in 2016 through an Epagri (Agricultural Research and Rural Extension Company of Santa Catarina, a public agency) project with the help of a technician from Uniagro (Work Cooperative of Agricultural Science Professionals) who came to carry out this cooperative monitoring work. During this period, the cooperative's Strategic Planning was developed through discussions with the board and cooperative members.

To verify the perceptions of the cooperative managers about the cooperative's strategic planning and directions, the answers are presented in Table 02, considering the category of strategic planning.

Interviewee	Opinion of the cooperative's managers and members on the cooperative's strategic planning and directions
	Yes, to define the future of business.
2	Yes, to define the future of business.
3	Yes, to achieve the goals.
4	Yes, to plan activities.
5	Yes, to keep organized.
6	Yes, we can reach our goals.
7	Yes, to achieve the goals.
8	Yes, to achieve the goals.
9	Yes, to keep organized.

Table 02: Cooperative managers' opinion on the cooperative's strategic planning and directions (Category 1 strategic planning)

Source: Prepared by the authors based on interviews with members of the cooperative assessed (2021).

Regarding the existence of strategic planning, all respondents stated that it is essential to define the future of the cooperative, as well as to plan activities, maintain the organization and achieve the goals they desire for the institution both in day-to-day activities and future activities. This category appeared in nine interviews, therefore, in the total number of respondents.

In the table below, the difficulties in following the cooperative's strategic planning are highlighted.

Interviewee	Associates follow what is defined in that document and if not, what are the difficulties encountered
1	Not followed, lack of interest and assistance.
2	Not followed, lack of interest, and poorly finished.
3	Not followed, lack of documentation for sales.
4	Not followed, just daily routines.
5	Not followed, lack of documentation for sales.
6	Not followed, lack of interest from members.
7	Not followed, lack of assistance.
8	Not followed, lack of interest from members.
9	Not followed, lack of interest, assistance and documentation for sales.

Table 03: Difficulties in implementing strategic planning (Category 2)

Source: Prepared by the authors based on interviews with members of the cooperative assessed (2021).

The cooperative's strategic planning set up in 2016 is not effective. A few reasons were pointed out for this document not being effectively put into practice in the cooperative; lack of time to put it into practice, lack of interest from members, lack of assistance and lack of trained people to work with the Cooperative members on this planning and mainly pointed out the selling difficulty because of the documentation, preventing members to plan future activities. Likewise, the first category identified in the speeches of the interviews, this category also appeared in nine interviews, therefore, in the total number of interviewees.

Regarding question five of the interview script: if there is a strategic plan (Category 3), do associates follow what is defined in that document? If not, what difficulties did you encounter? The testimonies indicate that despite this document having been created in 2016, when asked how often this document was evaluated by the cooperative members, they all answered "infrequently", as it was reviewed a few times during the year and became outdated since its development. To answer questions and to seek any information, they contact directly with the cooperative board. This category appears many times in the speeches of all interviewees.

Rosses et. al (2018) carried out a study on strategic planning in an agricultural cooperative, where, after interviewing the cooperative members, they concluded that the cooperative had objectives and that everyone was aware of the strategies needed to achieve them. However,

abe action plan, they were divided between those who knew fully and those who knew partially, although there is a process of monitoring the cooperative on the implementation of strategic actions.

When asked how the cooperative's activities were organized, if they had any planning or if planning was carried out according to customer demand/needs (question six), all respondents stated they followed a plan. (Category 4 - organization of activities - It is repeated numerous times in the speeches, demonstrating that the interviewees know that there is an action plan and that the activities follow this plan.).

The cooperative's activities follow a plan, also known as a schedule, as the activities occur mostly through bidding, where to compete you can already see the entire amount of products that will be delivered, should the cooperative win (Interviewee 3):

"Planning follows, as the sale is carried out through bids that when closed with the cooperative, the delivery schedules of the number of products in the already defined period is issued; the monthly schedules are distributed to the cooperative members who deliver the products on the requested date, allowing as soon as they plan all the preparation and logistics of the products".

The other interviewees present a similar answer, that at the beginning, after the elaboration of the strategic planning, there was more frequency in the revision of the objectives and goals, and that the Pandemic significantly hampered these meetings to discuss the cooperative's directions.

Regarding question seven about the cooperative's activities, do they follow any planning or are they demand/need activities? All interviewees stated that the cooperative's activities follow the plan. The highlight for Interviewee 3:

"Follows a plan, as the sale is carried out through bids that, when closed with the cooperative, it already receives the delivery schedules of the number of products in the period already defined, passes the monthly schedules to the cooperative members who deliver on the requested date, thus allowing them to plan all the preparation and logistics of the products".

However, in question eight, in the answers, the stumbling blocks to implementing strategic planning stand out, as shown in Table 04.

Due to the above, it appears that among the main obstacles faced by the cooperative to put strategic planning into practice are the lack of support and people trained to update, monitor and support cooperative members, but there is also a lack of interest from the cooperative members themselves to seek more information about the cooperative's activities. It was selected as a category due to the strong evidence in the number of repetitions and mentions of the category by respondents.

Interviewee	Obstacles to implementing strategic planning in the cooperative
1	Lack of support, trained people and interest of members.
2	Lack of interest from members.
3	Lack of support, trained people and interest of members.
4	Lack of required documentation.
5	Lack of necessary documentation and who delivers the products.
6	Lack of support, trained people, the interest of members and documentation.
7	Lack of support and interest from members.
8	Lack of support and interest from members.
9	Lack of support, trained people, the interest of members and documentation.

Table 04: Obstacles to implementing strategic planning (Category 5)

Source: Prepared by the authors based on a interviews with members of the cooperative assessed (2021).

They also face difficulty in obtaining the necessary documentation to participate in larger bids, as they lack one of the main documents required for cooperatives to compete, the DAP (Declaration of Aptitude to Pronaf), consequently reducing the cooperative's sales and revenue to help continue their activities (Interviewee 9):

“There is a lack of people who provide support as we had at the beginning to assemble the planning, as well as a lack of interest from some cooperative members who wait for the board to solve everyone's problem; they are just waiting for the delivery schedules; we also have the lack of documentation, the DAPs, which many of the cooperative members no longer fit with their specifications, making it difficult for the cooperative to plan something in the future”

The evaluated cooperative *Cooperação*, is a food cooperative, where like-minded people come together to sell food. The cooperative brings opportunities to enter markets where individual members would not be able to compete due to a lack of documentation, to participate in bids. However, the data collected in the interviews show that the cooperative's activities are hampered by the lack of some documents. Table 04 characterizes Cooperation and demonstrates the main obstacles to the implementation of Strategic Planning. Absence of a document was mentioned a lot that generated a category - Category 6.

About question nine, indeed, when asked whether all members were active in the cooperative, the responses indicated that not all of them are active. Regarding the cooperative members, it was found that there are inactive members, due to a lack of documentation (DAPs - DAP (Declaration of Aptitude to Pronaf). [Pronaf - National Program for Strengthening Family Agriculture]; that prevent them from competing in the bids as cooperative members.

Regarding question 10, However, they reported that not all cooperative members who are officially active

participate in the cooperative activities; the respondents mentioned that they have problems concerning the commitment on the part of some members who miss meetings where important matters are defined for the continuity of the institution and wait for the directions of the board (Interviewee 1). Active cooperative members (Category 7) appeared six times in the interviewees' speeches.

As to the decision-making process, it is inferred from Bertuolo and Minciotti (2019) that in the development of products in organizations with multiple interests, where the decision-making and development process are not formalized, the phases and stages happen in an unstructured way, according to the market demand. Product development is not part of strategic planning and the product's success or not depends on sales. Therefore, the lack of a model to follow makes the process lengthy, as decisions are taken at the pace of the events and there is no routine standardization.

From the perspective of the Cooperative assessed, below is a description of how the cooperative meeting strategies are defined, question 11, according to Table 05.

Interviewee	The setting of cooperative strategies and schedule
1	Monthly meetings, because of the pandemic, are now in small groups.
2	Monthly meetings, because of the pandemic, are now in small groups.
3	Monthly meetings, because of the pandemic, are now in the WhatsApp group.
4	Monthly meetings, because of the pandemic, are now in the WhatsApp group.
5	Monthly meetings, because of the pandemic, are now in small groups.
6	Monthly meetings, because of the pandemic, are now in small groups.
7	Monthly meetings, because of the pandemic, are now in the WhatsApp group.
8	Today, planning strategies are no longer defined, only monthly routines.
9	Monthly meetings, because of the pandemic, are now in the WhatsApp group.

Table 05: Setting of cooperative strategies

Source: Prepared by the authors based on interviews with members of the cooperative assessed (2021).

From Table 05, it can be seen that the cooperative's activities were defined with the agenda in monthly meetings at its headquarters (Colonial Products Fair); however, due to the COVID-19 pandemic in 2020, actions and definitions started to be defined, for the most part, in a WhatsApp group, or on certain occasions with serious matters on the agenda and meetings held in small groups (Interviewee 2). Category 8 - frequency of meetings between cooperative members, appeared in all interviews.

Thus, starting from the year 2020, the year of the COVID-19 outbreak, decisions are taken as they arise and by the members who are interested in the issues, as even in 2021 it is not possible to return with the schedule of monthly meetings due to the pandemic, that requires

physical distancing, especially because many of the cooperative members are in the risk groups.

Thus, with this study of the cooperative *Cooperação*, we found out that management does not follow a plan, but rather makes decisions as issues arise. The cooperative members report the importance of planning, but they are not participatory and active. Board members mentioned the difficulty of some associates in attending meetings, their lack of interest or just individual rather than collective interests in sales.

Therefore, it appears that not only the cooperative assessed, but other cooperatives face obstacles to putting the strategic planning into practice and making the members follow the cooperative principles, which is to join efforts to achieve a common goal. Category 9 - collective effort appears numerous times and is a central issue among respondents.

4.3 Participant observation (field notes): events, meetings, seminars

In participant observation, where the employee, who is also one of the authors of the research, participated in meetings, assemblies, and events... and made numerous notes in the field diary. In addition to these techniques, we opted for informal conversations with the cooperative's management on the issue of sustainable development and the actions adopted by the cooperative in the search to minimize the action of agribusiness in climate change.

During the course of the research, the importance of the cooperative in raising awareness of the sustainable management of agribusiness activities in the region was observed, therefore, the scope of the research was expanded to associate the cooperative's activities with climate change, since we noticed evidence of the performance of the cooperative and the culture of the region in this direction.

Cooperativism has become a local development strategy in developing countries, especially in the agribusiness area, as is the case in the region studied. It is a territory of predominantly German and Italian colonization, with strong industrial potential and also with a vocation for agribusiness. Strategic planning has been a practice that assists cooperatives in choosing competitive strategies that benefit all cooperative members/associates in the best practices within rural properties and the sale and distribution of products. Even more so when the strategies adopted are by the precepts of sustainability and respect for the environment.

An informal interview with the Epagri researcher and cooperative partner - Teresinha Baldo Volpato, highlights the work in sustainability: aspects of sustainability evidenced by the cooperative's partners that involve issues in the economic, social and environmental areas.

Social Area: Effective participation of women, young people and the elderly in the entire production process, that is, from production at home to the arrival of the product at the consumer's home through commercialization at the cooperative or fair; Full emphasis and absolute priority for Cooperation without product competition between families; single box with closing of sales and payment to members the following week, remembering that this box is closed by a farmer who is a member of the cooperative; the sale of the products is done collectively, all the associates participate in the commercialization, allowing the producer to know his client and to know how to explain his production; Union in the search for subsidies for improvements; Self-Management and self-esteem of the participants; Dialogue and conflict management; Rural/urban and producer/consumer interaction is strengthened; Rescue and appreciation of local know-how; Valuing and rescuing ancestral recipes; Formation of networks with local and regional tourist enterprises; Group with municipal recognition; Young people involved with the accounting and administrative management of the cooperative;

Economic Area: Marketing three times a week (In the beginning it was only part-time); 5% of sales is collected for point-of-sale maintenance, acquisition of labels and daily remuneration for those who work during the week in marketing; Considerable income for the families involved.

Environmental Area: Food production without pesticides; Analysis of potability of water in producing Units and their families; All Units have a domestic effluent treatment system (grease box, pit, filter and banana tree circle) and are part of the São Ludgero 100% urban and rural treated sanitary sewage project; Orchard implantation in APP areas; Collection and separation of solid waste in production units; organic transformed into compost for the vegetable gardens and orchards, recyclables sent for selective collection); The group uses paper bags for deliveries and special gifts; It encourages customers to use BEG bags to carry their purchases.

4.4 Document analysis

Several investigations have been carried out on strategic planning in cooperatives showing how strategic planning is an important management tool for both companies and cooperatives. For example, a study carried out by Büttenbender et al. (2017) emphasized the importance of strategic planning in cooperatives since they are collective organizations and do not focus exclusively on capital, but on human beings. Cooperatives should use the planning tool to define priorities and align the collective to the management stages. Also according to the authors, having the intention to achieve a common goal, these cooperative individuals seek the feasibility of actions and resolutions of issues, using the collective that allows social integration.

From the above, associating practical perspectives with

theoretical discussions, it is inferred from Büttenbender et al. (2017) the importance of the relationship of cooperative members and their active participation in the strengthening and growth of the cooperative, whether in the management of the cooperative or the development of activities. The authors also point out that by using direct democracy, the cooperative allows members to have active participation in decisions, but often elected positions are based on capitalist models, leaving aside the cooperative principles.

It is important to highlight the role of cooperatives in the agribusiness sector, helping members to produce and market their products (BERTUOLO; MINCIOTTI, 2019). In the cooperative assessed, the cited authors point out the relationship of the Cooperative members indicating that interests are different according to their role and that they converge towards the individual interest maintaining the relationship with the cooperative only for the profits it can yield (BERTUOLO; MINCIOTTI, 2019).

However, it is essential to highlight the fundamental role Strategic Planning plays in promoting Sustainable Development, based on the concern arising from climate change in the current context (Malekpour et al., 2020). It is with this perspective that social organizations must provide or structure mechanisms for implementing strategic plans, enabling the dissemination and implementation of devices that support climate adaptations for Sustainable Development (MALEKPOUR et al., 2020).

Corroborating what the authors point out, the analysis of the documents researched (provided by the cooperative) demonstrates the institution's concern with the sustainable development of the territory and the social projection of the cooperative members. The documents indicate that there is an effort, even if incipient, to treat production sustainably in economic, social and environmental terms.

Finally, it is noteworthy that the obstacles detected in this study about Planning reduce the prospects for improving climate change adaptation, highlighting the relevance of proposing strategic plans with a greater emphasis on the dissemination of Sustainable Development.

Using the techniques of participant observation and document analysis, it was possible to perceive a concern of the members, as well as of the cooperative management, a real concern with the climate changes perceived in the region, such as dry spells, rainfall, increase in the average temperature, worsening of water quality, etc. Through informal conversations and observations carried out during the survey, a more open talking about the objectives of sustainable development and a real concern with the environment was perceived, both given the survival of economic activity and as a sign of awareness of sustainable production.

In the documental analysis of Volpato and Duarte (2017), it is possible to affirm that, one of the greatest

pieces of evidence of the study is the cooperative members' and managers' sense of collectivism. A confirmation of the existence of an entrepreneurial mentality, in agricultural production cooperatives and a feeling of belonging about the territory.

The cooperative helps people to stay in the countryside, increasing their chances of livelihood in rural activities with support from rural extension and sustainable planting techniques. This strategy meets the worldwide effort in search of green technologies in the field. (LA VÍA CAMPESINA, 2021).

5. CONCLUSIONS

Two outcome cores became evident in this work, 1) theoretical and 2) practical (case study). From the literature review, the theme proved to be very relevant to contribute to climate change adaptation, as the Organizational Strategic Planning proposes, in addition to the management plan, to structure mechanisms that allow predicting of themes that arise as new challenges.

Nevertheless, from the results of the interviews carried out in the field, it was found that there are obstacles to be overcome by cooperatives in the implementation of strategic planning, including: 1) Lack of trained people to update, monitor and support the cooperative members. Also, 2) The lack of interest of the cooperative members themselves in seeking more information about the cooperative's activities, personally attending the meetings and assemblies (before the pandemic).

In addition, another obstacle should be mentioned: 3) difficulties in obtaining the necessary documentation to participate in larger bids, and the lack of support from official entities such as EPAGRI and other programs that brought the training to cooperative members but currently causing them to feel abandoned. And finally, 4) Lack of information among members of the cooperative, regarding government authorizations, such as DAP (Declaration of Aptitude for Pronaf).

Indeed, these barriers prevent the adoption of actions that could initiate a cultural process for changes or improvements in the cooperative, in its role in the developmental context, especially considering sustainable perspectives.

The region where the cooperative operates has been colonized by Italian and German immigrants, where work in the field was the territory's development strategy in the 20th century, however, currently, the region has been transformed, with many micro, small, medium and large industries. The size makes up the business fabric. Even so, agricultural activity is one of the highlights of the economy, with networks of local producers using sustainable management of farming and farming activities. Rural producers through the cooperative were trained to develop their production activities with the least possible damage to the environment, with the correct use of soil, water, and

inputs... In this sense, the cooperative's strategic planning is essential, as it encompasses the planning of the cooperative members' activities.

The documents consulted and also the field notes (participant observation) allow us to understand that the research results allow us to understand strategic planning in rural cooperatives, and the path of actions to be pursued to achieve competitive advantages, based on an advantageous market positioning and supported for sustainable production processes. This is one of the premises of cooperativism foreseen in its mission and performance.

Although the cooperative's obstacles in terms of strategic planning and in terms of sustainability, make it difficult for the institution's future activities, they are likely to be overcome, and should become the object of the Strategic Planning itself. The cooperative's concerns and interests need to be transformed into strategic actions that are in line with world situations on and with the relevant demands for sustainable development. Thus, strategic planning, strategic actions, goals and obstacles affect the routines of both the evaluated cooperative and the agricultural properties managed by the cooperative. The cooperative's primordial cooperation work is highlighted in the organization of farmers' agricultural production in the city of São Ludgero and neighboring municipalities, as well as in the marketing of agricultural products, from the negotiation of market prices, selection of buyers and product shipment.

Finally, it is noteworthy that the present work was limited to reconciling theoretical aspects with the reality experienced by the cooperative assessed, striving to demonstrate how the local level barriers still affect perspective thinking regarding climate change adaptation which is a relevant topic and that deserves attention.

In addition, one of the main limitations is that it is a single case study and the interviews do not include issues related to climate change.

In this sense, it is suggested as future research to expand the study to greater representativeness of the cooperative members, in the form of research for a better understanding of the processes in the rural properties. Also expand the study to other cooperatives in the region.

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COMO CITAR ESTE ARTIGO

JUNGES, Ivone; DIAS, Felipe Teixeira; GUERRA, José Baltazar Salgueirinho Osório De Andrade; FRANÇA, Bruna. Sustainable Development and Climate Change Adaptation: A Case Study About Strategic Planning and Challenges In a Family-Farmers' Cooperative. *MIX Sustentável*, [S.l.], v. 9, n. 1, p. 109-124, dez. 2022. ISSN 24473073. Disponível em: <http://www.nexos.ufsc.br/index.php/mixsustentavel>. Acesso em: [_/_/_](https://doi.org/10.29183/2447-3073.MIX2022.v9.n1.109-124). doi:<https://doi.org/10.29183/2447-3073.MIX2022.v9.n1.109-124>.

SUBMETIDO EM: 27/04/2022

ACEITO EM: 11/11/2022

PUBLICADO EM: 20/12/2022

EDITORES RESPONSÁVEIS: Lisiane Ilha Librelotto e Rachel Faverzani Magnago

Registro da contribuição de autoria:

Taxonomia CRediT (<http://credit.niso.org/>)

Declaração de conflito: nada foi declarado.