



Micro Governance in Collaborative Networks: an application in partnership with a Agroecological Farmers Association

Gesinaldo Ataíde Cândido

Universidade Federal de Campina Grande – Campina Grande – PB – Brazil
ORCID: <https://orcid.org/0000-0002-3112-0254>

Renata Rodrigues de Medeiros Pontes

Universidade Federal de Campina Grande – Campina Grande – PB – Brazil
ORCID: <https://orcid.org/0000-0003-1092-0209>

Ana Maria Vicente da Silva

Universidade Federal da Paraíba – João Pessoa – PB – Brazil
ORCID: <https://orcid.org/0000-0002-6032-7342>

Abstract

Discussions involving governance within inter-organizational networks have been gaining more and more importance in recent years. Despite the efforts directed towards this topic, there are still specific gaps regarding the understanding of how governance can be operationalized and improved in order to offer efficient contributions on the daily activities that network leaders need to carry out to promote a collaborative environment. From this, the objective of the article is to analyze the forms of operationalization of governance that occurred in the Association of Agroecological Farmers of Várzea Paraibana (ECOVÁRZEA) and its forms of contributions to cooperation practices and better functioning of its governance. In methodological terms, this is a single case study, with a qualitative approach, using the content analysis technique, based on a set of predefined categories by Wegner and Vershoore Filho (2021), with the means of collecting data: conducting interviews, accessing secondary data and non-participant observation. Such data were analyzed with the support of the QSR NVIVO 11 software. The results indicate that the governance functions and practices performed by the Association's leaders positively influence the generation of governance results, given that, when relating the prominent functions of the network, with the practices according to agreement and engagement, there is evidence of strong predispositions to building and maintaining a collaborative environment, strengthening trust and relationships between members.

Keywords: Networks. Governance. Collaborative Environment.

Micro Governança em Redes Colaborativas: uma aplicação junto a uma Associação de Agricultores Agroecológicos

Resumo

As discussões que envolvem a governança no âmbito das redes Inter organizacionais vêm adquirindo cada vez mais importância nos últimos anos. Apesar dos esforços direcionados

para esse tema, ainda há lacunas específicas sobre a compreensão de como a governança pode ser operacionalizada e aprimorada de maneira a oferecer contribuições eficientes sobre as atividades cotidianas que os líderes da rede precisam realizar para promover um ambiente colaborativo. A partir disto, o objetivo do artigo é analisar as formas de operacionalização da governança ocorrida na Associação dos Agricultores Agroecológicos da várzea Paraibana (ECOVÁRZEA) e as suas formas de contribuições para práticas de cooperação e melhor forma de funcionamento da sua governança. Em termos metodológicos, trata-se de um estudo de caso único, com abordagem qualitativa, utilizando a técnica de análise de conteúdo, a partir de um conjunto de categorias pré-definidas por Wegner e Vershoore Filho (2021), tendo como formas de coleta dos dados: a realização de entrevistas, o acesso a dados secundários e a observação não participante. Tais dados foram analisados com suporte do software QSR NVIVO 11. Os resultados apontam que as funções e práticas de governança desempenhadas pelas lideranças da Associação influenciam positivamente a geração de resultados de governança, dado que, ao relacionar as funções proeminentes da rede, com as práticas de acordo e engajamento, evidencia-se fortes predisposições a construção e manutenção de um ambiente de colaboração, fortalecendo a confiança e os relacionamentos entre os membros. **Palavras-chave:** Redes. Governança. Ambiente Colaborativo.

Microgovernanza en redes colaborativas: un análisis en la Asociación de Agricultores Agroecológicos

Resumen

Las discusiones que involucran la gobernanza dentro de las redes interorganizacionales han ido ganando cada vez más importancia en los últimos años. A pesar de los esfuerzos dirigidos hacia este tema, aún existen vacíos específicos en cuanto a la comprensión de cómo se puede operacionalizar y mejorar la gobernanza para ofrecer contribuciones eficientes sobre las actividades diarias que los líderes de la red deben realizar para promover un entorno colaborativo. A partir de eso, el objetivo del artículo es analizar las formas de operacionalización de la gobernanza que se dieron en la Asociación de Agricultores Agroecológicos de Várzea Paraibana (ECOVÁRZEA) y sus formas de aportes a las prácticas de cooperación y mejor funcionamiento de su gobernanza. En términos metodológicos, se trata de un estudio de caso único, con abordaje cualitativo, utilizando la técnica de análisis de contenido, a partir de un conjunto de categorías predefinidas por Wegner y Vershoore Filho (2021), con los medios de recolección de datos: realización de entrevistas, acceso a datos y observación no participante. Dichos datos fueron analizados con el apoyo del software QSR NVIVO 11. Los resultados indican que las funciones y prácticas de gobernanza realizadas por los líderes de la Asociación influyen positivamente en la generación de resultados de gobernanza, dado que, al relacionar las funciones destacadas de la red, con las prácticas de acuerdo y compromiso, se evidencia una fuerte predisposición a construir y mantener un ambiente colaborativo, fortaleciendo la confianza y las relaciones entre los miembros.

Palabras clave: Redes. Gobernanza. Entorno colaborativo.

1 Introduction

The discussions around governance in the sphere of the inter organizational networks have increased in the last years, as a result of the complexity in the ambient of business and management, just as in the difficulties to align actions between the involved organizations. This way, Gobbi et al. (2005) say that the part governance takes consists in the answer given by the organizational networks in face of the high complexity, uncertainty in regards to demands, and the frequency in which the

exchanges happen. As such, the interactions and exchanges between members work as a coordination mechanism.

Regarding the governance mechanisms and their respective levels of efficacy, Wegner, Durayski and Verschoore Filho (2017) point to the necessity of creating spaces where members can get involved in the strategic decisions, guaranteeing that the decisions are considered coherent and are effectively established, seeing that the centralization of decisions should be accompanied with the maintenance of the ways of participating in strategic discussions.

Smith (2020), voices that collaborative networks are set up by a group of two or more independent organizations, that gather by way of collective practices in regards to decision making, looking to reach a specific goal, in consideration of the necessities and needs of constant interaction that foster, as well as promote, trust and reciprocity. In this context, the author highlights four determinants of network efficacy, being them the structure, leadership, functions and the context in which the network is inserted.

The structure surrounding governance in collaborative networks is the result of a negotiation process between its participants, tolerance to the individuality of each member being necessary, but still considering the benefits of taking part in the cooperation and, with that, reaching their individual goals (WEGNER; PADULA, 2011). Seeing that the growth strategies need to be accompanied by changes in the governance's structure, so that the network may keep itself competitive and can sustain its growth.

Storey et al. (2018) point that is through the network governance that its participants compromise to generate the results to which the network was created, through a structure designed to the share capital and relational growth, necessary to the network's maintenance and strengthening. Furthermore, the authors address that the plural form of the governance mechanisms' perspective may be used together to promote the network and aggregate value, mainly from the supposition that the mechanisms work in different ways and have different benefits in which they act as complements, considering both the negative and positive aspects.

Despite the efforts directed to this subject, there are still knowledge gaps about network governance, mainly regarding the comprehension of how the governance modes can be operationalized and improved, in a way that offers efficient contributions to the network's leaders in relation to the daily tasks necessary to promote a collaborative space. In this context, Wegner and Verschoore Filho (2021) propose a framework that encompasses the micro governance in collaborative networks, assuming that the functions and practices realized by leading work networks promote the cooperation between the network's members. The structure proposed by the author has 17 categories of analysis, separated as such: contextual factor, functions, practices and governance results. The main difference between governance and micro governance refers to the fact that when the first has a bias more directed towards the aspect of external relations in the network, the second one focuses on internal aspects.

In this study, it was used the analysis of Ecovárzea's (Agroecological Farmers Association of the Várzea Paraibana) governance, which is justified for being a network that has great ties to many social and institutional actors, as well as being a network gifted with successful experiences in collegiate management. Ecovárzea

had the start of its activities in 2005, with support from the Pastoral Commission of the Earth, which is composed of small producers that live in settlements in the Zona da Mata Paraibana. The network's participants are producers of chicken meat, fruits and vegetables, cultivated under agroecological bases and have their products collectively commercialized in agro ecological markets that exist in the region.

In this context, this study has the objective to analyze the forms in which the operationalization of the governance in Ecovárzea happened and its ways of contribution to the cooperation practices together with the generation of positive results in the governance. In methodological terms, this is a single case study, with a qualitative approach, utilizing the technique of content analysis from the predefined categories by Wagner and Vershoore Filho (2021), with the following forms of data collection: the conduction of interviews, the access to secondary data and the non-participant observation. That data was analyzed with the support of the QSR NVIVO 11 software to explore and comprehend the data in a dynamic and visual manner.

The challenge and importance of exploring the subject of governance in networks is reported in the need of revisions, in regards to the specific gaps pointed by Wegner and Verschoore (2021). They say that its forms of application need to be improved, in a way that offers contributions to the developed activities in the network that are aimed at the creation of a more collaborative space. For the purposes of this research, “inter organizational networks” and “collaborative networks” are considered equivalent, as pointed out by Castro and Gonçalves (2014).

Beyond these introductory aspects, this study exposes the theoretical foundations, the contents related to the subject of governance in collaborative networks, as well as the knowledge increase in the dimensions and categories utilized. After that, its presented the methodological proceedings utilized to the gathering, treating and analysis of the data. In the following item, the results and discussions are presented. Lastly, it presented the final considerations, as well as the limitations and suggestions to future works.

2 Theoretical Foundation

2.1 Governance in Collaborative Networks

Governance is understood as the set of articulation mechanisms between many members that are unified in search of achieving their objectives together. According to Castro and Gonçalves (2014), the governance is concerned with the coordination and activity integration that need to be managed to reach predetermined objectives.

Through a literature review, Moreira and De Sá Freire (2020) observed that to guarantee the effectiveness of the governance and, consequently, the network's learning process, leading the network to evolve from a stage of information exchange to a more advanced one of inter organizational network learning, where the members learn through and in the network. In this case, the authors point to a dynamic and attentive governance to the necessities of the network to keep the adequate mechanisms in regards to the context and the interests of its stakeholders, capable of permeating all of the internal and external actors of the network in a way that all the participants reach their objectives.

In the field of inter organizational networks, governance has been studied as a structure which aims to align the actions of autonomous entities, to the establishment of order between the behavior of the individuals and the organizations. This way, the idea of a “network” widely utilized in the studies of governance, speaks about the organizational and intra-organizational arrangements, if set up as an answer to the environment, characterized by bureaucratic and hierarchical structures, with the need of having more flexible elements to coordinate and control (GOBBI et al., 2005).

To Provan and Kenis (2008), governance in networks would be a process that involves the directing of collaboration structures to the allocation of resources, coordinate actions and control joint actions in the network as a whole. That way, the networks are formed by the necessity of collaboration between the organizations, institutions or individuals to reach specific objectives that they wouldn't be able to reach alone (HUANG; CHEN; YI, 2020).

In this respect, Bretas et al., (2020) claims that the inter organizational networks present some fundamental characteristics, with emphasis to the participation in the same sector or business, the existence of particular historicities and their own structures, with the fact that even when compromised to collaborate with one another, the participant networks do not lose their autonomy as an organization. Governance in networks comes up as an alternative of these networks' management from mechanisms of exchange between its members. The management of these relations would be the function of governance in inter organizational or collaborative networks (CASTRO; GONÇALVES, 2014). In short, governance would be an answer to inter organizational networks, in how to deal with the high complexity environment marked by the specificities of the human assets by the complexity of tasks, the demand uncertainty and the frequency in which the exchanges happen (GOBBI et al., 2005).

To Wegner and Padula (2011), the network's size is a decisive factor, because as the network grows, the necessity to structure a coordination environment between many assets without them losing their collaborative character grows proportionally. In this context, the authors point out that managing small networks is a low complexity task, seeing that the decisions can be managed and the activities controlled via the interaction between its own associates through mutual agreements. In the case of the great networks, there is a high level of complexity in regards to the lack of enough incentives to motivate the collaboration of the individuals, in a manner that allows the generation of positive results to the network.

Governance can be structured observing the objectives of the inter organizational network and, by consequence, the strategies (BRETAS et. Al., 2020). In this aspect, a governance that allows the maintenance of the collaborative characteristics of the network, them being different from the ones in organizations that are structured as franchises and branches, is made necessary. Furthermore, the authors highlight the government's direction as a strategy in the field of inter organizational networks, once that, as a network, the organizations plot strategies to reach objectives.

Cardoso, Casarotto Filho and Marcon (2020) address significant particulars, management tools and common aspects to the organizational strategies in analyzing flexible networks in the field of organic agriculture with small farmers, seeing that in

acting individually, the small farmer is more vulnerable to socioeconomic impasses. In this context, it's considered that the performance in the network can provide many benefits, such as support to solve everyday business problems, the possibility to share knowledge and to develop social characteristics that are the result of the participative process.

Establishing a strategy leads to the creation of a structure that directs the reach of individual and collective objectives. Therefore, the significant changes to the environment can lead to proactive or reactive changes of the network, in strategic terms and, by consequence, to changes in its structure (WEGNER; PADULA, 2011). In this context, it can be stated that not only the radical changes in the network's structure can change the previously established strategy.

As a way of better understanding the elements that compose Governance in the scope of inter organizational networks, many authors have proposed structures, models and governance analysis systems. Provan and Kenis (2008) proposed an analysis structure that was traditionally studied in literature and named Governance Modes, in which the authors establish types of network regulation: Shared Governance; Leader Organizational Model and Administrative Network Organization.

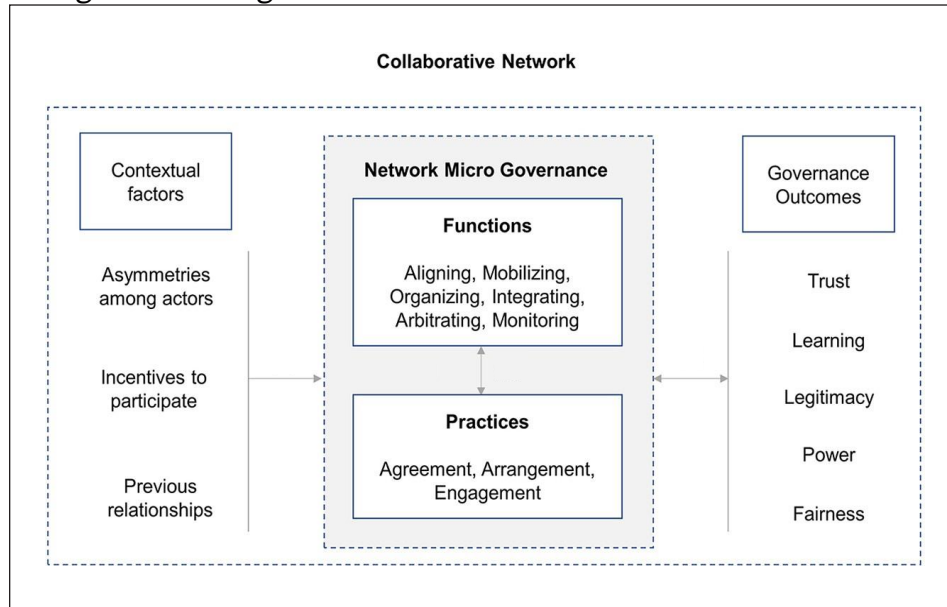
Albers (2010) defines governance in collaborative networks as a “set of informal arrangements used to manage, organize and regulate an alliance”, the author defends that to understand this type of governance it would be a system, in which organizations interact, to that he points mechanisms that influence the progress of the network, them being: Decision Centralization, the Formalization of Actions, the Specialization of the Governance.

Despite the directed efforts, there are still specific gaps about network governance in what refers to the manner in which the modes of governance can be operated and improved, in a way that offers efficient contributions to the everyday activities that contribute to the construction of a collaborative environment. In this perspective, Wegner and Verschoore Filho (2021) advocate that there is still a scarcity of studies in the literature that aim to make an analysis of the elements that compose micro governance in collaborative networks. According to the authors, the previous worries were made in the scope of a more global analysis of governance, being necessary to understand that elements are part of the governance's structures, elements that many times are in the entanglements of actions and network interactions.

2.2 Micro Governance in Collaborative Networks

That said, the authors put themselves to develop a plethora of studies as a way to validate their model named micro governance in collaborative networks, in their many network contexts, to understand which aspects of governance they have in common. For that, they proposed a series of qualitative studies, case studies, to add to the research. The qualitative research allows for a better understanding of the object of study, to what the authors propose that, from the moment they have the intention of looking at the networks thoroughly, they made the following structure, presented in the figure.

Figure 1: Micro governance in collaborative networks framework



Source: Wegner and Verschoore Filho (2021)

Initially, the authors advocate that in their analysis structure of micro governance in collaborative networks, the networks' leaders take part in many functions to manage the collaborative networks, them being the functions of align, mobilize, organize, integrate, arbitrate and monitor. Align refers to the alignment of interests between the participants by the perspective of the leaders. Next, the mobilize function, which refers to the stimulus that the network's members receive to execute their activities. Organize refers to the organization of physical, human, economical, technological and legal resources that promote the development of the network related to the organization level. Integrate is about the integration of participants and their resources, by way of knowledge, plans and activities sharing, pulling new members, as well as the use of those members' talents. Arbitrate looks to complement the previous function, once that there are frequent conflicts in the networks that require negotiation and deliberation, this way its expected that the leaders react and look to solve those problems. Lastly, the monitoring function concerns the monitoring of the participants' actions and the results achieved.

These functions are essential to the daily actions execution, however, according to the authors, they are supported by collaborative governance practices that are necessary to deal with the complexities of a network, this way, these practices are subdivided in Agreements, Arrangements and Engagement. The agreement practices are executed by the leaders when selecting and integrating partners, also in the facilitation of the alignment to the members' objectives. The arrangement practices refer to the actions that are taken to reach an agreement between the network participants and facilitate the activities coordination. The practices of engagement are the ones who look to connect the networks members, strengthening their trust between themselves.

Even though the functions and governance practices influence the governance results, there are other elements that can change those results and that many times they are not under the leaders control, but need to be managed by them, they are contextual factors. Consonant to that, Wegner and Verschoore Filho (2021)

present three starting conditions that influence the collaboration and relation dynamics, them being the asymmetry in which are the existing differences between the network's members in terms of resources, knowledge and power, considering the existence of a few members that have a low capacity of taking part in similar conditions to the rest. The second category refers to the incentives and restrictions of member participation, seeing the time and resources required for the collaboration. Lastly, the previous relations, related to the previous cooperation or conflict historic between the network's members, in which they can significantly affect the collaboration and its respective results.

The sum of all those actions impact either positively or negatively the progress of the governance. Going from the understanding that the governance's functions and practices performed by the network's leaders influence the generation of governance results, in which these results are: trust, legitimacy, apprenticeship, power and justice. The category trust consists in the stimulus to communicate and the necessary connections to promote the member collaboration and integration. The legitimacy category indicates if a governance is adequate to the purpose of its members. The apprenticeship category talks about the governance's evolution with time and the benefits of experiences shared amongst the members. Power is related to the capacity in which the members can influence the actions to reach collective objectives. Finally, there is justice, which refers to the adequate distribution of the benefits provided by the network.

In analyzing the framework proposed by the authors, it is paramount to emphasize the importance of the figure and role of the leader in all those steps, from the contextual factor to the results. In this case, the leader's function is primordial to the mobilization as well as the motivation of the other social actors involved, directly or indirectly, with the network, which facilitates the process of network governance. The figure of the "leader" is linked to the people and organizations that have more influence. In some networks, they can be a group of organization representatives, in others, a person, the organization itself, etc.

The referential here allowed the contextualization of the research's thematic scope, enabling to infer that the micro governance's attainment and its implications is reflected directly in the creation of a favorable environment to cooperation and enhancement of governance results. It also presented the structure analysis used for theoretical basis and empirical application. In this manner, in the next item will be presented the methodological procedures to reach the proposed objective.

3 Methodological Procedures

The following research utilized the qualitative methodological approach and in terms of procedures, it is categorized as a case study. In this study, it was chosen the analysis of Ecovárzea's (Agroecological Farmers Association of the Várzea Paraibana) governance, which is justified for being a network that has great ties to many social and institutional actors, as well as being a network gifted with successful experiences in collegiate management. The tool used to obtain information and collect data consisted in conducting semi structured interviews, as well as the application of the non participant observation, in which the researcher takes the role of external observer, not interacting directly with the observed object.

The research's universe is composed of 43 (forty three) farmers that make up the Association. In this case, being a very homogeneous population, a not probabilistic sample was used intentionally. 6 (six) participants from the settlement Padre Gino were selected, localized in Sapé-PB, with the criterion that the ones interviewed had a more effective participation in the association, them being 6 representative associates, 1 coordinator, 1 ex-coordinator, 1 Board representative and 3 associate members.

The interviews were conducted between July and September 2020, while visiting the properties of some of the network's members, utilizing an adapted version of the semistructured interview script. After the application and transcription of the interviews, it was utilized as a content analysis technique, which looked to correlate what the interviewed said with the dimension definitions and categories related to the level of micro governance in collaborative networks. The content analysis of the present study, that has the data from the conducted interviews, based on the semistructured script, follows the application steps of this method according to Bardin (2016), they are: a) pre-analysis; b) material exploration; and c) result processing.

Chart 1: Content analysis stages

Stage	Proceedings	Objective
Pre-analysis	“Fluctuating” read of the 6 conducted interviews	Analysis organization
Material exploration	<p>Step 1 - Dimensions and categories defining:</p> <p>D1-Contextual Factors: Asymmetry, Previous relations, Incentives or restrictions.</p> <p>D2-Governance Functions: Align, Integrate, Organize, Monitor and Mobilize.</p> <p>D3-Governance Practices: Agreements, Arrangements and Engagement.</p> <p>D4-Governance Results: Trust, Legitimacy, Apprenticeship, Power and Internal Justice.</p> <p>Step 2 - Codification Process:</p> <p>Identification of registration units</p>	Intention, classification and aggregation of the interview parts according to the categories of analysis
Results processing	Relevant information highlight Inferential interpretations	Critical analysis

Source: Adapted from Bardin (2016)

Along with that, the qualitative analysis software QSR NVIVO 11 was used in the material exploration step as an auxiliary tool of content analysis, which allows to organize, explore and comprehend the collected data in a dynamic way utilizing visual features and also facilitates the operational procedures of this technique. After importing the interviews transcriptions to the software, the material exploration step started, taking account of each dimension and its respective categories, in a way that each analysis dimension is represented by a “knot”, that was named and described, and the categories were disposed in hierarchic order to each corresponding dimension, allowing the manual codification of the collected data.

After the codification process, it was possible to generate structures such as graphics and word clouds, that represent in visual terms the quantitative parts and frequencies of words related to each category, also counting with the Jaccard Coefficient utilized in the constructions of cluster graphics, that is made according to the following parameter: the closer to 1, closer the two sets of analysis are; and the closer to 0, more different. In the treatment phase, each category was analyzed based on the assumption that the theoretical approach utilized, inferences being made from the collected data, that the inferences allowed to identify the perception of each interviewee, being it positive or negative to each category in relation to the studied association's micro governance.

4 Results and Discussions

Ecovárzea (Agroecological Farmers Association of the Várzea Paraibana) had the start of its activities in 2005, with support from the Pastoral Commission of the Earth, which is composed of small producers that live in settlements in the Zona da Mata do Estado da Paraíba Norte e Sul, specifically in the municipalities of Sapé, João Pessoa, Conde and Cruz do Espírito Santo, where the associations headquarter is found. There are 30 linked properties, 43 associates, involving around 150 persons, directly and indirectly, in the production process and in the commercialization of the products. This way, the network's participants look to better their living conditions in the countryside through the increase of productivity in their properties while they also collaborate with the preservation of the environment. It's an association with a statute and monthly ordinary meetings.

The network's participants are producers of chicken meat, fruits and vegetables, cultivated under agroecological bases and have their products collectively commercialized in agro ecological markets that exist in the region. In its statutes, the network is constituted as "an organization with principles of education, integration and solidary economical cooperation", in which the farming families don't use pesticides and or chemical fertilizers to the growth of their products, bringing quality of life and use of environmental resources to their livelihood.

According to the make available informations in the networks Dossier, that presents the Association's diagnostic from the start of 2020, the greater amount of those members work in settlements (58%), in plots of land from their parents or family (28%), considering that 9% do not have any land and only 5% work in private lands. The employed labor is predominantly familiar, although in some specific situations they make use of temporary contract labor to assist in the field (ECOVÁRZEA, 2020).

The network participants cultivate their products based on the agroecological perspective, taking into consideration a great variety of vegetables (lettuce, coriander, tomato, cabbage, broccoli, string beans, onion, carrot, chard, parsley, beetroot, peppers, cucumber, arugula, pumpkin, eggplant), fruits (acerola, banana, green coconut, papaya, passion fruit, watermelon, mango and sapodilla), vegetables and tubers (sweet potatoe, yam, cassava and green bean). There are also associates that work with the beneficitation of those products, making gum, tapioca, cakes, candy, breads and jams.

Beyond that, the network has many assets, such as vehicles (two trucks and one bus) and equipment to help in the cultivation and commercialization of the products (brush cutters, water tanks, chainsaw and tents) that were acquired with time and that are also an extra source of income, seeing that when they are not being utilized, the trucks and bus are rented and the profit converted to the Association.

4.1 Contextual factors

The previous relationship between the association's farmers is marked by the difficulty to commercialize their products. Even though they grow their own products, the farmers had no conditions to sell them in a direct manner, making them dependent on free traders. This way, the members started from a common context, the difficulty to commercialize their products in a more direct way, in which some already live close to one another or had friendship bonds. In this context, stands out that the collaboration history intensified between the members in favor of the first steps necessary to the construction of the market-place, as is pointed out bellow:

Because in truth, everything started in the context of the Fight for the Earth, with the follow-up from CPT and all, that was it, then we got our rights to the land in 97 (...) in this process of searching and formation, we would create a market-place and commercialize our products, there i was looking at Dona Helena passing with her goat farming, then I got interested in the subject (...) we went to Mangabeira, where the priest there gave us a space and all, in the church, to put the tents, but before that we planned to buy the tents, gowns and caps. (Interviewee 3)

At the start it was very important, this part where we had to keep ourselves together to make it happen, because me myself didn't know what to do anymore to better our situation here, there was the land, my potatoes and the entire crop, but it seemed that I didn't yield anything, couldn't see things get better (...) and then everyone started showing solidarity and helping each other (...) and at the end everyone wins. (Interviewee 5)

From the frequency of the terms “we...” and “..we went...” in the words of the interviewed, its evident that the relationship between the members is based in cooperation, a characteristic that is intensified insofar as the objective of providing the structure to start the activities is reached.

In what the asymmetry refers to, the interviewed claim that there are differences, mostly in was refers to the levels of adherence to the agroecological context, in the matter of resources and knowledge that everyone possess, also in the divergence of opinions and interests between the association's participants, as is highlighted in the following excerpts:

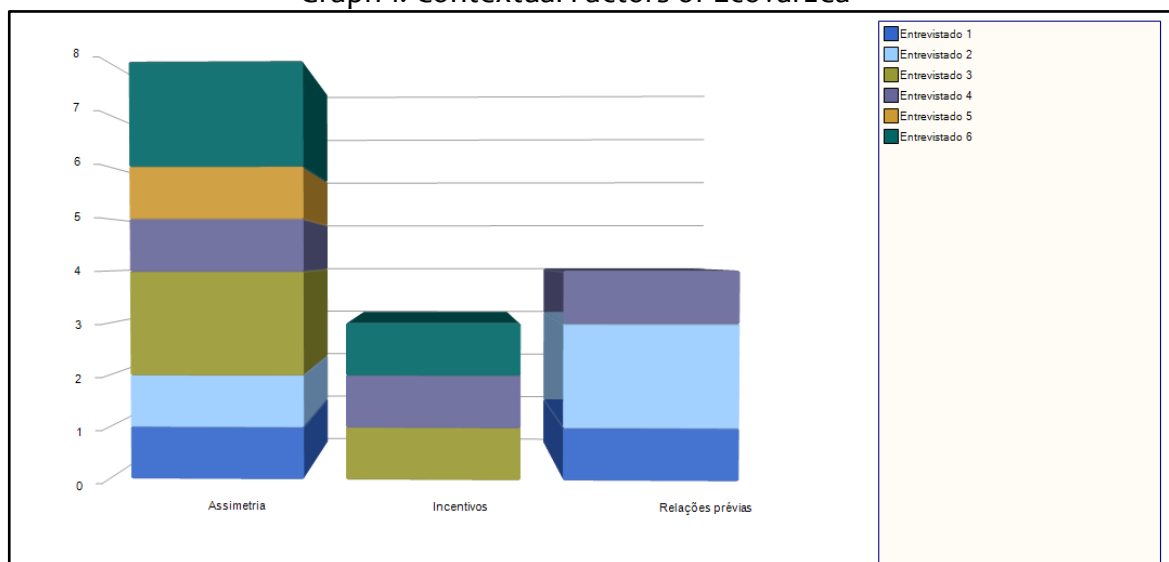
So in that sense we have many internal differences, you know, because every head is a world, every head has its own thoughts, and then not everyone is in this egalitarian context of the process to have this agroecological vision of the economical context, right, of the ecological conscience (...) but there is a sector, a context that is really good in the process that everyone start to think in this collective discussion, right, that is created, and felt in the agroecological context, if there are goals, criteria (...) but then we keep helping each other, we learn with each other. (Interviewee 3)

The difference we see right in the opinions, the perception really, that each one has an interest, an objective, right, there are even some that always do everything they can to win, but not everyone... There are some that are more experienced, they know more about finding ways of not using pesticides, others search the Internet, to learn more, because we don't know everything really. (Interviewee 1)

Well, each one is each one, there is the matter of agroecology, that ones like more and others less... There are coworkers that have more important roles in the association, or one that has a greater knowledge about the earth, who took a course, but in the end everyone helps each other. (Interviewee 2)

Moreover, the power differences as a result of the hierarchic divisions stand out, in which some opinion conflicts involving the matter of occupation of a position naturally occur, but the opinions of all are taken into consideration, always looking for a certain balance. It's valid to say that such differences are put in favor of the apprenticeship of all the members.

Graph 1: Contextual Factors of Ecovárzea



Source: Survey Data (2020)

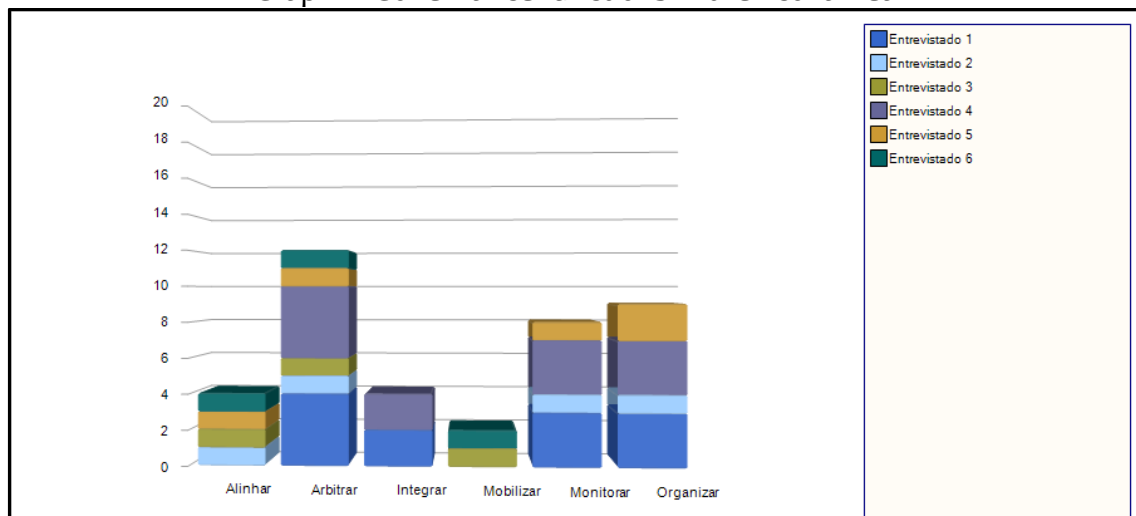
The graph above shows the relation between the variables in this dimension (axis y) with the quantity of lines and positioning said by the interviewed that showed themselves to be positive and adherent to the respective concepts (axis x), being each interviewee represented by a color. This way, it is noted that between this dimension's categories, the asymmetry was present in the lines of each interviewee, with emphasis to the adherence to the agroecological context, next to the category of previous relations and incentives that influence more strongly the network's structure and behavior. Furthermore, it was possible to identify the most frequent words that the interviewed related to the contextual factors, they are: "agroecology", "commercialization", "economic", "earth" and "CPT" which represents the supporting organization to the creation and development of the association.

In this context, it's possible to say that the contextual factors which define the previous history of the participants are grounded in the fight for the land, in the collaboration to reach a common purpose, which is intensified in the process of enabling and structuring the network, strengthening collaboration. With the same approach of Storey et al (2018), in which it is highlighted that the good performance of the network's members is related to the interactive history, shared sense of purpose, respect and commitment between the many participants.

4.2 network governance

The network governance is carried out through an executive coordination, a coordinator and a deputy, a secretary and a treasurer, a fiscal council with three partners and an ethics council also composed of three people, in which all are elected at a general meeting. The specific meetings take place before the general meeting, only with the coordination to discuss the problems and thus focus on the most urgent issues. Besides the internal organization, regularly there is a group meeting in João Pessoa composed of the coordinators of all the fairs held in the coastal and floodplain regions. In this manner, the contents of the interviews conducted and their connection between the definitions of each function contributed to construct the graph below.

Graph 2: Governance functions in the Ecovárzea



Source: Research data (2020)

The graph above highlights the connection between the numbers of excerpts that presented a positive perspective in the interviewees' statements (x-axis) for each governance function (Y-axis), and each interviewee is represented by a color. Therefore, the arbitrate function stands out as the most preponderant among all functions, followed by organizing and monitoring. In addition, it was possible to identify the most frequent words that the interviewees used to refer to the functions of governance, and the most emphasized words were “discussion”, “technician”, “informs”, “visit” and “assistance”. Also, it can be seen that each of these words is influenced by the prominent functions carried out in the network, presenting a positive perspective of the execution of each governance function.

In this regard, when analyzing the arbitrate category, it is noticed that this is the prominent one among the six governance functions, given that the interviewees positioning converged that the conflicts and disagreements are immediately solved all based on dialogue, and in some cases, the issue is taken to the assembly so that it is analyzed and discussed widely, looking for better solutions. The interviewees highlight in the excerpts below:

We got the solution right there. An assembly is held, a schedule is made and we discuss the matter (...) so, not always everyone will be satisfied, sometimes it ends up in a conflict, not only for issues about the fair, but for personal issues as well. Meanwhile, we look for a way so it doesn't impact the progress of the fair (...) some people chose to do the collective process, which was the creation of a website, and some people who didn't want, who didn't accept totally are selling the production outside without telling us. (Interviewee 1)

Of course, sometimes we do have some conflicts, either because of some opinion that we don't agree, or some personal issues between the participants, but whenever we meet, we talk and try to come to terms. (Interviewee 2)

Even though there are divergences of opinions and interests between participants, the coordination intends to use these points in favor of the development of the association, as a tool, being able to provide various benefits and internal advances to the network. With regard to the monitoring function, it can be seen that it is carried out together with the technical assistance. It is in charge of monitoring, evaluating and diagnosing each of the properties to verify whether there has been progress in the agroecology process, if the owners are in accordance with the strict criteria established, and if they are fulfilling the responsibilities assumed and deliberated in the monthly meetings; so then, they make plans and lead the participants, as well as presents the excerpts below:

The technicians were making plans for our association, you know, but the pandemic made it difficult. The technicians still inspect the entire process, they visit every part and make a diagnosis for all of them and then present it. (Interviewee 3)

In these assemblies or even after the fairs, we talk about many things, talk about the things that need to be fulfilled, and they are always accompanying us. (Interviewee 2)

In this sense, it is evident that there is a monitoring of the commitment and contribution that each participant dedicates to achieve the objectives of the organization, through the technician's support, who also acts in the process of the network integration. The use of knowledge and resources of the network concerns the sharing of information and various forms of the application of agroecology, that is, alternative paths for participants who are in the adaptation process. The selection of new members is a meticulous process, in which the adoption of agroecology is a main requirement, and it works along with the accompaniment of the technician for visits, evaluations and diagnoses, to assign to the property its corresponding level of agroecology.

It is quite organized because it needs the approval, (...) you have to be into the agroecology process, if you are a beginner or in a transition, you got the technical support; we have to be together if it is approved by the assembly (...) we have internal referrals and the historic of visits with technicians so they can check how the production is and how it can be improved, right (...) about the evaluation process in number or in grade (...) in the agroecological context, the technician inspected the whole process, visited every part to make a diagnosis for all of them and then presented it, telling us who was in 5, 4 to 10 in the process. (Interviewee 3)

In my case, for example, they came with a technician to take a look at my land to check if everything was in accordance with agroecology, with no pesticides. I do everything as my father taught me, you know, using the resources that we have and that the land itself offers us (...) they asked me some questions about how I managed to avoid the pests, and also, to see if it works out, they decide everything together with the others. (Interviewee 6)

Therefore, it is evident that the process of selecting and integrating new participants counts not only with the decision between technicians and management but also with the opinion of the other participants in this process, it presents collaborative attitudes in the network. With regard to the mobilize function, it is pointed out that it works, but requires some improvements, as expressed by the interviewee below.

It still has a lot to improve, because we take some things to the assembly (...) but some of these starts, and after a while, they are left behind. Like, in the pandemic everything was suspended, so we could see the precariousness of the dissemination of the fairs on social networks, the part of communication with the public is aware of it. People come to us at the fair, but in this situation, we had to find some way to go to the customers not only through the fair, you see, before we had even talked about it, a technician also joined to make the posts, but it was only for a while, soon he dropped it, after all, he has his obligations. (Interviewee 1)

About the meetings and assemblies, individual and collective goals and objectives are established, which sometimes are not accomplished, presenting some flaws in their execution. The alignment of interests of the network is done through conversations and discussions carried out at monthly meetings, in which an issue is presented in the meeting and they try to come to terms, so that the objectives and goals of each participant are achieved. Thus, each of them is considered responsible for the production, following the pre-established rules, with emphasis on the non-use of pesticides, aiming at environmental preservation, the rule to actively participate in meetings and assemblies, and especially, respect among participants.

So, it works based on discussion, each one shows their point of view, what they want to reach, and in this way, we always try to come to an agreement, so that we can develop together. Of course, some of them will not be totally satisfied, but that's the way that works best. (Interviewee 1) Almost every month we held an assembly, but because of the pandemic it wasn't possible, so we just gather everyone to talk about how things are doing, and how can we improve it. (Interviewee 2)

The organizing function is carried out jointly with the technical assistance, and may occur in two ways, through monthly meetings and/or meetings after the fair, about emerging issues. In these assemblies are presented the problems and difficulties of the participants in the organization, their plans, objectives and responsibilities of each one and the importance of following the internal regulations. In the meetings that take place shortly after the end of the fair, the most emerging difficulties are shared and the solutions are defined collectively.

After each fair, the coordination has the assistance from technicians to organize financial matters, to distribute the production so that the products offered are diversified, thereby better satisfying the customers needs, and also to the construction and maintenance of the website and social networks for the association. In addition, the organization of human resources occurs directly between coordinators and members, through conversations and discussions.

4.3 Network governance practices

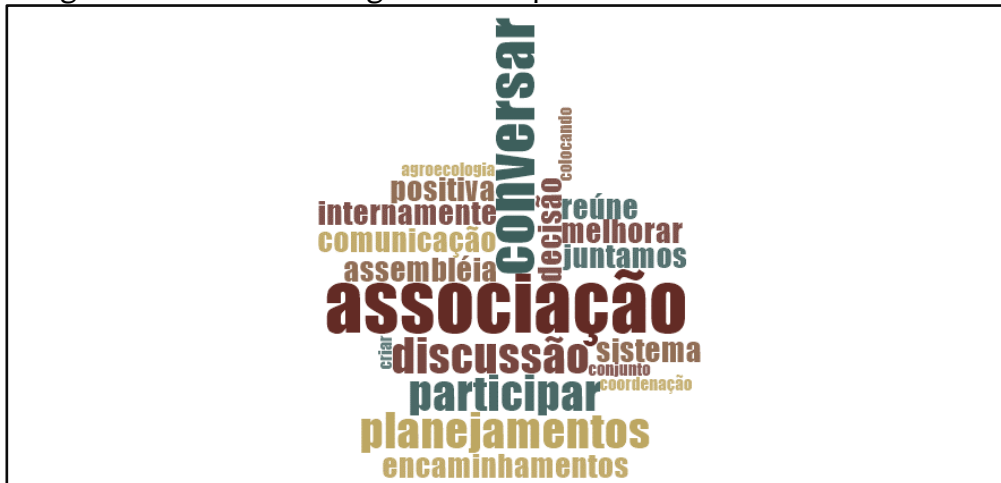
The practices for the governance in the approached Network, presented three categories, agreement, arrangement and engagement. From this, we highlight the practice according to the most evidenced in the speech of the interviewees, which is based on communication between the participants and the Coordination of the network, since those in managerial positions are willing to listen and discuss the proposals openly, seeking to align the interest and objectives of all participants, as presented in the excerpt below:

We have to be together, if it is approved by the assembly... so there is a whole internal discussion on expanding, and even technicians were making plans for our association. (Interviewee 3)

In terms of discussions, communication is one of the basic elements of the network, in order to align the individual objectives of the participants with the network objectives, and so generating mutual benefits. An efficient execution of this first practice, directly impacts the practice of arrangement, that is, the decision-making process, which is carried out jointly through the assemblies, intending to gather good opinions and new ideas to optimize the operation of the fair. As such, a consensus among participants and good communication makes the network coordination activities easier.

The practice of engagement is evidenced in the monthly assemblies, in which participants have lunch together and pray according to their beliefs, and among other gatherings that takes place after the fair, the members and also the technician share of practices and discussion about improvements, fostering collaboration, since they share knowledges about agroecology, strengthening trust and relationships among members. One of the interviewees highlights: *“we help each other, so we learn from each other.”*

Figure 2: word cloud for governance practices in the Ecovárzea



Source: Research data (2020)

According to the figure above, among the 20 most frequent words mentioned by interviewees about the practices of governance in the network, the following stand out: “talk”, “Assembly”, “participate”, “planning” and “discussion”, evidencing direct relations with the practice of agreement and engagement. In this context, it can be seen that throughout the interviews, the occurrence of conversations and meetings are frequently reported, and they result in the strengthening of relationships and trust between the participants, stimulating even more collaboration in the network.

4.4 governance outcomes

The results acquired through the functions and practices of governance presented characteristics related to the categories explored in literature. Regarding the aspects of power and internal Justice, the favorable relations of the internal environment for collaboration among the participants stand out. From the differences between participants, it is possible to share knowledge and obtain several learnings to the development of the association as a whole. In this sense, the interviewees reinforce throughout the questions, positive perceptions of justice in the network management practices, as stated by Storey et al. (2018), perceptions of justice must overcome any perceptions of imprisonment or coercive control that recognition may suggest.

There are rules about respecting each other. Obviously, when we mention the economic and financial process, in this area there is a person who stands out to have a greater visibility, who often thinks only to get the financial return, got it? They only produce and commercialize, and don't discuss other issues. An example of agroecology in the people lives, its larger implementation (...) the internal discussion was formed through the solidarity economy, and this improved and helped many people to maintain this management. (Interviewee 3)

Therefore, the power and internal Justice are directly related to agroecology, such as the benefits the network provides for its members, their adherence to solidarity economy, it all plays an essential role in the development of a collaborative

environment. The trust among the members of the network is mentioned by the interviewees as something present in interpersonal relations, reflecting in the collaboration between participants, as well as in the good communication between the leaders of the network and their respective members.

It will depend a lot on each person, who seeks this, each peasant is slowly adapting to this process, we discuss the issues and people concern about the process, making others get adapted and seeking more engagement. (Interviewee 3)

Our communication works fine. We have moments during and after the fair, right, and there are also assemblies that we meet to talk about some topic, so, before making any decision, we take it as a subject to discuss in the assembly so that everyone knows about what's happening and what we're doing. (Interviewee 1)

For this reason, it is evident that the trust in the network is directly related to the collaboration; it was built through communication, during the meetings and assemblies, making clear all their goals and objectives. As stated by Cardoso, Casarotto Filho and Marcon (2020), the decision-making tools in networks composed of small farmers, are applied in a participatory management, and therefore, follows organizational levels in line with the interest and extent of the subject. In this context, trust directly impacts the legitimacy of the network, in which it acts directly in the decision-making process, given that the activities provide autonomy of the members in agroecological activities, as well as one of the interviewees said:

About autonomy, when maintaining a varied production and making its commercialization, it strengthens and gives sustainability to families and people have autonomy to live, because they produce and sell (...) we work with openness, we discuss the main issues and receive some informations (...) we work seriously in the process and handle it in the best possible way, but it is not easy. (Interviewee 3)

It shows that internal legitimacy is being successfully executed, in terms of credibility among its members and is closely associated with their rules and managerial practices. In addition, it is noticeable that during the entire process of formation and structuring of the association, studies were made about cooperativism and associationism to better understand its operation, in which such knowledge was achieved and developed by its participation. Moreover, the knowledge acquired regarding alternative paths of agroecology were also included. Hence, learning happens through an exchange of ideas and experiences between members, and this helps new members to adapt to the context of agroecology.

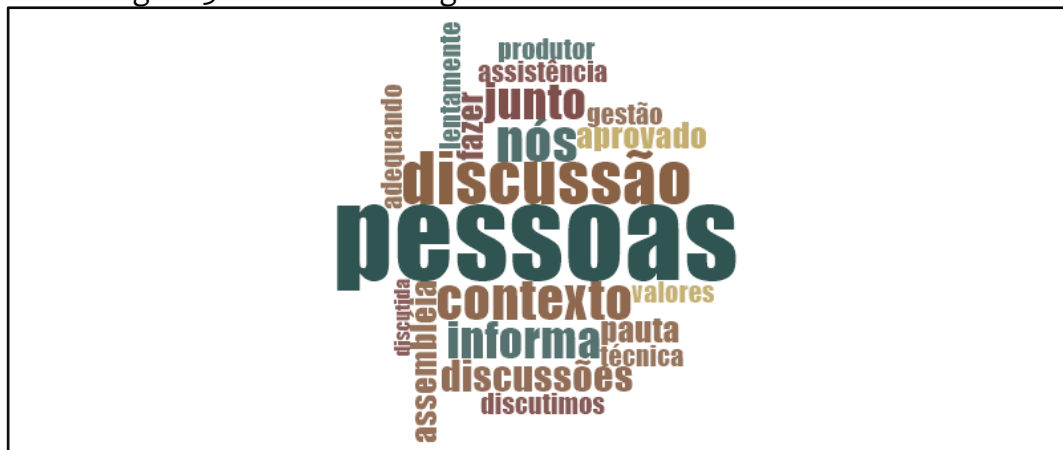
About the incentive to understand more about agroecology, there was a time when we even tried to make our own seeds, without pesticides, you know, because buying them in the market is very expensive, and I can look for and find ways to do these things. (Interviewee 1)

The learning we had was precisely to know how to maintain the quality of things, without the pesticide, to do things in a natural way (...) some things we used to throw in the bush without knowing that it would help the plantation. (Interviewee 4)

Notice that learning is directly linked to the concepts and practices of agroecology. While looking for knowledge related to the area, a large part comes from the experiences shared by the participants, which evolve over time so that the properties reach higher levels of agroecology.

Thus, the contents of the interviews, and the respective relations between the definitions of each category of governance results, allowed the identification of some keywords that stood out in the network, as evidenced in the figure below.

Figure 3: word cloud for governance outcomes in the Ecovárzea



Source: Research data (2020)

From the figure above, among the most cited words in the speeches of the interviewees in relation to the results of governance and their respective categories are “people”, “discussion”, “we”, “together” and “context”. Thus, it is evident the incorporation of joint work between coordination and members, reflecting the aspect of humanization in the process, also corresponding to practices and concepts of agroecology, and especially to network management.

When analyzing the contextual factors together with the functions and practices performed by the network, one realizes the importance of a good relationship between participants, marked by the struggle for the lands and also by the joint efforts for the consolidation of the network, which strengthen collaboration and trust between participants. The table below is an analysis made in Nvivo 11 software, which intermediate all the categories among themselves in order to present an assessment of the levels of similarity between the selected categories, using the coefficient of *Jaccard*.

Table 1: Coding Similarity Between Contextual Factors, Governance Functions and Practices

Node A	Node B	Jaccard's coefficient
We\\Governance Functions\\Arbitrate	We\\ Governance Practices\\Agreement	1
We\\ Contextual Factors\\Asymmetry	We\\ Governance Practices\\Agreement	1
We\\ Contextual Factors\\Asymmetry	We\\Governance Functions\\Arbitrate	1
We\\ Governance Practices\\Engagement	We\\ Governance Practices\\Arrangement	1
We\\Governance Functions\\Mobilize	We\\Contextual Factors\\Incentives	1
We\\Governance Functions\\Organize	We\\Governance Functions\\Monitor	1
We\\Contextual Factors\\Previous relationships	We\\Governance Functions\\Integrate	1
We\\Governance Functions\\Align	We\\ Governance Practices\\Agreement	0,666667
We\\Governance Functions\\Arbitrate	We\\Governance Functions\\Align	0,666667
We\\ Contextual Factors\\Asymmetry	We\\Governance Functions\\Align	0,666667
We\\Governance Functions\\Monitor	We\\ Governance Practices\\Agreement	0,666667
We\\Governance Functions\\Monitor	We\\Governance Functions\\Arbitrate	0,666667
We\\Governance Functions\\Monitor	We\\ Contextual Factors\\Asymmetry	0,666667
We\\Governance Functions\\Organize	We\\ Governance Practices\\Agreement	0,666667
We\\Governance Functions\\Organize	We\\Governance Functions\\Arbitrate	0,666667
We\\Governance Functions\\Organize	We\\ Contextual Factors\\Asymmetry	0,666667

Source: Research data (2020)

From the coding process, that is, the selection of the sections adhering to the categories, it was possible to connect all categories among themselves, putting emphasis on those that have greater similarity. In general, the column "Node A" presents, within the respective dimensions, a set of categories, and it is compared to a second set of categories, entitled "Node B". In this manner, one may identify that the differences between participants have meaningful relations with the use of the arbitrate function and the practice of agreement to govern the network here investigated. In addition, the cluster analysis above shows interesting patterns between the categories of the *framework*. When considering the coefficient interpretation parameter, there are some strong relationships with the coefficient equal to or close to 1, for instance: previous relationships and the integrate function, indicating that the previous relationships networks collaborate for a good integration between participants in their activities; the asymmetry and arbitrate function; and finally, the incentive or restrictions category with the mobilize function.

In this sense, it can be considered that Ecovárzea's governance fits the concepts, dimensions and categories of collaborative governance, since the internal environment of the network promotes collaboration and learning among members, providing significant advances and impacts on the final results. In addition, it is highlighted that communication and collaboration are the basic elements of the studied network, because when relating prominent functions of the network with their way for agreements and engagements, there are predispositions to build and maintain a collaborative environment, strengthening trust and relationships between members.

5 Concluding Remarks

From this research premise, which considers that collaborative micro governance contributes to the generation of positive impacts on the governance final results of Inter-organizational networks, through the influence of contextual factors and previous relationships between those involved, which led to the objective of analyzing the forms of operationalization of governance in the Ecovárzea and its forms of contributions to cooperation practices and to generation of positive results.

Regarding the governance functions, the leaders of the network perform the functions of arbitrating, organizing, monitoring, aligning, integrating and mobilizing, respectively, to govern the Ecovárzea. On the one hand, the arbitrate function is emphasized for its constant coordination in the search for efficient solutions to the conflicts that arise between participants of the network. On the other hand, the low performance of the mobilize function stands out, in which it is necessary to make efforts in the elaboration and execution of measures that stimulate members to put into practice some issues that are deliberate in the assemblies, like sustainability. Since this is a key element that contributes to the consolidation of a cooperative environment, and directly reflects on the gains of those involved.

With regard to governance practices, the network leaders execute agreements, arrangements and engagement practices to govern the Ecovárzea. In this case, the agreements stand out, in which elements of this category were very present in the statements of the interviewees, evidencing the efficiency of communication between participants in the results of governance. Moreover, the practice of engagement also stood out through meetings and assemblies in which leaders make efforts to make it a moment of connection between members of the network.

Regarding to the internal and external contextual factors, they influence the use of governance functions and practices, since the previous history of collaboration among members of the association, which was intensified for the network development, influences the construction of a collaborative environment that is directly related to the prominent functions and practices of the network, collaborating to achieve greater gains.

About the governance results, the category of learning stands out through the constant exchange of ideas and experiences among members, in which the most experienced assist the youngest members about the agroecology.

Based on the obtained results, one can infer that the governance functions and practices performed by the Ecovárzea leaders positively influence the results. Given that, when relating the prominent functions of the network, with the practices of agreement and engagement, there is strong evidence and predispositions to build and maintain a collaborative environment, strengthening trust and relationships among members.

The theoretical contribution of this study goes beyond the knowledge about operationalization of collaborative micro governance in networks of this segment, as well as the managerial contributions, through analyzes, considerations and suggestions raised here, as a guiding instrument in the decision-making process.

Despite the contributions, this research had some limitations due to the Covid-19 pandemic, impairing the conduction of more interviews, which implied a small

sample, and also due to the fact that the research is limited to studying only one case, which does not necessarily reflect the reality of micro governance in a general context. Therefore, we suggest an application of this research with the methodological complementation of quantitative data to correlate the results obtained, as well as the replication of this research with other networks of the same segment in order to make comparative analysis.

REFERENCES

- ALBERS, Sascha. Configurações de sistemas de governança de aliança. **Schmalenbach Business Review**, v. 62, n. 3, pág. 204-233, 2010.
- BARDIN, Laurence. **Análise de conteúdo**. São Paulo: Edições 70, 2016.
- BRETAS, Vanessa Pilla Galetti et al. Modos de governança em redes de franquias internacionalizadas: seleção de parceiros e relacionamentos. **Revista Brasileira de Marketing**, v. 19, n. 1, p. 150-173, 2020.
- CARDOSO, Jaqueline de Fátima; CASAROTTO, Nelson; MARCON, Christian. Small business networks in the field of organic farming: strategies and management tools. **Gestão & Produção**, v. 27, 2020.
- CASTRO, Marcos de; GONÇALVES, Sandro Aparecido. Contexto institucional de referência e governança de redes: estudo em arranjos produtivos locais do estado do Paraná. **Revista de Administração Pública**, v. 48, p. 1281-1304, 2014.
- GOBBI, Beatriz Christo et al. Politizando o conceito de redes organizacionais: uma reflexão teórica da governança como jogo de poder. **Cadernos Ebape. BR**, v. 3, p. 01-16, 2005.
- HUANG, Chen; CHEN, Wenna; YI, Hongtao. Collaborative networks and environmental governance performance: a social influence model. **Public Management Review**, p. 1-22, 2020.
- MOREIRA, Fernanda Kempner; DE SÁ FREIRE, Patricia. Governança de redes interorganizacionais: uma revisão sobre os mecanismos de governança para a aprendizagem. **Revista E-Tech: Tecnologias para Competitividade Industrial-ISSN-1983-1838**, v. 13, n. 1, p. 39-52, 2020.
- PROVAN, Keith G.; KENIS, Patrick. Modos de governança de rede: estrutura, gerenciamento e eficácia. *Journal of Public Administration Research and Theory*, v. 18, n. 2, pág. 229-252, 2008.
- SMITH, Julia Grace. Theoretical advances in our understanding of network effectiveness. **Perspectives on Public Management and Governance**, v. 3, n. 2, p. 167-182, 2020.

STOREY, C. et al. Governing embedded partner networks: Certification and partner communities in the IT sector. **International Journal of Operations and Production Management**, v. 38, n. 9, p. 1709-1734, 2018.

WEGNER, Douglas; DURAYSKI, Juliana; DE SOUZA VERSCHOORE FILHO, Jorge Renato. Governança e eficácia de redes interorganizacionais: Comparação entre iniciativas brasileiras de redes de cooperação. **Desenvolvimento em Questão**, v. 15, n. 41, 2017.

WEGNER, Douglas; PADULA, Antônio Domingos. Estratégias de crescimento e a governança de redes horizontais de empresas: o caso da maior rede cooperativa de varejo de alimentos na Alemanha. **Ciências da Administração**, v. 13, n. 30, p. 220-248, 2011.

WEGNER, Douglas; VERSCHOORE, Jorge. Network Governance in Action: Functions and Practices to Foster Collaborative Environments. **Administration & Society**, p. 00953997211024580, 2021.