

Original Article

## Collaborative governance in the implementation and maintenance of wind farms in the state of Ceará

A governança colaborativa na implantação e manutenção de parques eólicos no estado do Ceará

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### Abstract

**Objective:** To analyze how Collaborative Governance [GC] manifests itself in the implementation and maintenance of wind farms, from the community's perspective.

**Design/methodology/approach:** Qualitative research, with the object of the research being the "local communities" in the cities of Icarai de Amontada, Trairi and São Gonçalo do Amarante, located in the state of Ceará, in wind energy enterprises". To analyze and interpret the in-depth interviews, the Content Analysis [AC] was chosen, with Atlas TI as a support tool.

**Results:** The results demonstrate that energy distribution needs to be seen as a collective good and the relationship between the company and the community should be based on GC, where public and private agents work collectively and collaboratively, in addition to the need for a social license to operate [LSO] for projects that have an impact on community life as a result of such governance. In the initial conditions of the collaborative process, there was a sense of trust at the beginning of the establishment of the wind farms that was not sustained during maintenance. It also shows the importance of a face-to-face communication, since the community's most important resource and source of income is at stake: the land.

**Originality/value:** This research is notable for its contribution and originality in exploring the theoretical constructs of Collaborative Governance and its practice in the construction of company-community relationships in wind farms from the community's perspective.

**Keywords:** Collaboration; Confidence; Community; Collaborative governance

### Resumo

**Objetivo:** Analisar como a Governança Colaborativa [GC] se manifesta na implantação e manutenção de parques eólicos, sob o olhar da comunidade.

**Design/metodologia/abordagem:** Pesquisa de natureza qualitativa, sendo o objeto de pesquisa as "comunidades locais" das cidades de Icarai de Amontada, Trairi, São Gonçalo do Amarante, no Ceará, em

empreendimentos de energia eólica". Para a análise e interpretação das entrevistas em profundidade, optou-se pela Análise de Conteúdo com suporte do Atlas ti.

**Resultados:** Os resultados evidenciam que a distribuição de energia precisa ser vista como um bem coletivo e o relacionamento entre empresa e comunidade deve ser fundamentado na GC, onde os atores públicos e privados trabalhem de maneira coletiva e colaborativa, além da necessidade de haver a Licença Social para Operar [LSO] de empreendimentos que impactam a vida em comunidade sendo fruto dessa governança. Constata-se que o fórum para discussão do processo de colaboração entre empresas proprietárias de parques eólicos e comunidade normalmente era iniciado pela prefeitura. Nas condições iniciais do processo colaborativo percebe-se uma confiança no início da implantação dos parques eólicos que não se mantém na manutenção. Evidencia-se ainda, a relevância da comunicação dialogada face a face, por estar em jogo o recurso mais importante da comunidade e fonte geradora de renda: a terra.

**Originalidade/valor:** Esta pesquisa se destaca pela contribuição e ineditismo em explorar os construtos teóricos acerca da Governança Colaborativa e sua prática na construção de relacionamentos entre empresa e comunidade em parques eólicos sob o olhar da comunidade.

**Palavras-chave:** Colaboração; Confiança; Comunidade; Governança colaborativa

## 1 INTRODUCTION

The demographic explosion, the increase in urban violence, the environmental disasters, the large-scale industrial production and the unbridled consumption at the beginning of the 21st century have raised concerns and expectations among citizens, consumers, companies, public institutions and investors about the impact of economic development and the sustainability of the planet.

Human intervention in the environment has had negative external effects for a long time. The ability to utilize and manipulate the environment has increased with the scientific progress of humanity, as has the rate at which human beings are capable of harming and deteriorating their living environment (Antunes, 2009). Externality is when the behavior of one economic agent affects the well-being of another for the better or worse, meaning that a given agent is imposing an externality, positive or negative, on the person affected (Eaton & Eaton, 1999).

It is evident that the establishment of projects inevitably disrupts the social life of the local community. The disorganized implementation of wind farms in the Brazilian Northeast causes damage, for example, indicating the importance of prior analysis of construction and more efficient planning in the placement of these

enterprises (Meireles, 2011). According to the author, the socio-environmental impacts of implementing wind farms are related to the privatization of long stretches of the coastline, between coastal communities and the beach strip, making it difficult or even preventing free access to environmental systems of ancestral usufruct.

All this scenario has brought changes in terms of strategic business management, which migrates from development through the exclusive use of revenues and expenses maximization, generating increasing earnings, to models that conciliate the economic, social and environmental dimensions. In this regard, companies are expanding their economic and legal responsibilities to ethical, moral, social and environmental ones, bringing the network of relationships between stakeholders associated to business into the center of management (Ashely, 2005).

From this, there is a need for companies to be thinking about the basis on which they establish relations with groups interested in their business, especially the communities surrounding their placements (Figueiredo & França, 2010). In the face of a productive context that creates impacts, it emerges a need for a new relation between the public and private sectors and society, where management must be done through agreements, agreements and public participation, generating Collaborative Governance [GC] (Ansell & Gash, 2008).

GC is disseminated as a way of governance in which collaboration is the main process of engagement between organizations, whether public and/or private. Conducting a Collaborative Governance model mainly involves balancing the different interests of the agents involved (Bodin, 2017).

The foreign literature, especially the North American, European and Australian literature, shows a form of governance, Collaborative Governance, which has been adopted in natural resource management (Santos, 2015) and is still an innovative sector undergoing vast growth (Emerson et al., 2012). The concept of GC has been increasingly discussed in international literature (Bryson et al., 2014), although studies on GC in Brazil are still incipient (Sant'Anna et al., 2016; Tonelli et al., 2018).

In order to meet the challenges of Collaborative Governance, there is a growing need for enterprises to receive a Social License to Operate [LSO]. The LSO refers to the intangible, the tacit part of the contract made with the society or social group, which allows an extraction or processing operation to start and continue with its operations (Franks & Cohen, 2012; Gunningham et al., 2004). The LSO emerged from the concept of governance and its granting is based on the construction and progress of Social Capital (Deboni, 2013; Santiago, 2016).

Based on the context of concession and maintenance of the SLO, the environmental and social issues are not just the responsibility of the State, and an interrelationship is expected between the public and private sectors as well as society, where management is done through participation and agreement, generating Collaborative Governance and empowering of social capital (Deboni, 2013; Santiago, 2016). This strengthening reduces the social and political risks of enterprises and operations, creating prospects for autonomous and sustained development for society (Deboni, 2013).

In this context, the Collaborative Governance process in the implementation and maintenance of wind farms was chosen as the unit of analysis. Wind energy is considered to be clean, renewable, abundant, one of the most promising sources of energy and available almost everywhere (Ramos & Seidler, 2011). The energy generated by wind is one of the most attractive for Brazil. Nevertheless, it causes socio-environmental impacts, which need to be managed through mitigation solutions that minimize the effects on ecosystems and people.

In terms of space, this research focused on the state of Ceará. The location was chosen due to the representativeness of the state in the production of wind energy in the country. Ceará is one of the five states with the largest wind power generation in 2020 (Abeeólica, 2020).

Accordingly, the research was built around the following question: how does Collaborative Governance [GC] manifest itself in the implementation and maintenance of wind farms? To answer this inquiry, the aim of this article is to analyze how

Collaborative Governance [CG] manifests itself in the implementation and maintenance of wind farms, from the community's perspective.

The structure of the article consists of six sections: the first constitutes the introduction with the presentation of the studying; the second discusses the literature review on Collaborative Governance, concepts, contexts, presentation of research on the subject and its relation with the LSO; the third describes the Collaborative Governance model of Ansell and Gash (2008) as well as the definition of its variables; the fourth has the specifications of the methodology used to conduct the research; the fifth consists of the presentation of the results and discussions of the research; and the sixth discusses the final considerations, as well as the limitations and directions for future research.

## **2 COLLABORATIVE GOVERNANCE [CG]**

Generally viewed, governance can be seen as a complex decision-making process that anticipates and goes beyond government, where the boundaries between and within the public and private sectors become more permeable and less defined (Stoker, 1998). The governance is a participatory process involving different forms of partnership. It is noted that governance is a term that can be interpreted as the management of relations.

Governance is a concept with several meanings. In the area of public administration, it has been discussed as a concept of corporative governance, local governance, network governance and public governance (Abbud et al., 2016). According to the authors, based on the attribute of collaboration as essential to public governance systems, there has been a recent interest in international literature around the concept of Collaborative Governance.

According to Abbud et al. (2016), international studies have been produced about public space conservation, water governance and watershed and environmental management based on Collaborative Governance. The authors state that this interest

can also be observed in the national literature with studies identifying the environmental conflicts associated with depollution, in the execution of urban interventions in the city of Natal/RN and the establishment of Technology Parks in the state of Minas Gerais, seeking to identify how Collaborative Governance manifests itself in the initiatives.

An important discussion regarding more collaborative governance is the position of the main actors in the public domain, which does not always mean the government, but transparent public instances (forums, councils, etc.) in which the government (not necessarily local) has relevance. In this regard, collaboration implies two-way communication and influence between institutions and stakeholders, as well as the opportunity for them to talk to each other, being multilateral and deliberative (Ansell & Gash, 2008).

The major research projects in the international literature on Collaborative Governance prioritize the identification and empowerment of collaborative elements. Some of these elements are: interdependence between agents; building trust and the ways to reach agreements; raising understanding of common goals; establishing inclusive deliberative procedures, and others (Ansell & Gash, 2008; Emerson et al., 2012).

Collaborative Governance is a governmental arrangement where one or more public bodies engage non-state stakeholders in a formal, consensus-oriented, deliberative decision-making process that aims to make or implement public policy or administer public programs or assets (Ansell & Gash, 2008). According to the authors, Collaborative Governance is an evolution of public governance and requires participants to be directly included in the decision-making process.

The Collaborative Governance approach presents itself as a way of governing that results from an interaction between a variety of agents working in a partnership to achieve a shared administration. This approach is increasingly situated in a context where relationships between the state, society and the market are more interconnected in order to reach a collective result (Abbud et al., 2016).

Collaborative Governance is a form of governing in which public and private agents work collectively, in different ways, using particular processes, to establish laws and rules to provide public goods (Ansell & Gash, 2008). The local governance process within the LSO concept is related to the development of collaborative arrangements that involve companies, the government, the local population and community organizations (Santiago, 2016).

In this scenario of collaborative arrangements, the local government has a fundamental leadership role in creating the conditions for community engagement in discussions (Pattenden et al., 2011). The authors emphasize that the purpose of developing local governance is to build alliances and provide space for dialogue on the social, environmental and economic impacts and benefits generated by the company, as well as the possibility of creating local alliances, cross-sector collaborations and public-private interactions.

According to Ansell and Gashell (2008), Collaborative Governance is also called the new governance, and focuses on preponderant factors that include face-to-face interaction, building trust, as well as developing commitment and shared knowledge. In Collaborative Governance, the state no longer overrides other public partners as a coordinator and regulator, but instead enters at the same level as one of the partners in a collaborative structure and construction of public policies (Abbud et al., 2016).

Emerson et al. (2012) incorporates the idea of multipartner governance into the concept of Collaborative Governance, which means partnership between the state, the private sector, the civil society and the community. The Collaborative Governance is a microsociology part of public governance that is concerned about how collaboration occurs, by studying the structures and processes that involve an arrangement composed of several social agents, who articulate strategies with the intention of achieving a public purpose (Ansell & Gash, 2008; Emerson et al., 2012). Microsociology is one of the main areas of interest in sociology and is focused on the nature of human social interactions on a daily basis.



Referring to a public purpose, the art. 21, XII, b, and the art. 22, IV of the 1988 Constitution of the Federative Republic of Brazil establish that the Union has the exclusive competence to explore and legislate about “energy services and placements [...]” (Brasil, 1988). To ratify this, the interpretation of the constitutional instrument (art. 21, item XII, b) must be broad, and according to this, public electricity services include all the activities necessary for the exploitation, distribution and transmission of electricity, regardless of the source and which additionally fulfill a common purpose (Rolim, 2002, p. 157).

The LSO for wind farms, through community involvement, is in line with the dissemination of what are known as forms of “governance”, in which the voices of communities affected by extractivist industries are given a greater influence in decision-making on the industry’s development and in political processes (Prno & Slocombe, 2012).

It is also notable that Social License is continuous and begins with social legitimacy, based on the formal and informal rules of the community - legal, social and cultural. These standards are the “rules of the game”, so candidates for the social license must know and understand the community’s standards and be able to work with them (Bunnell, 2013). The social license will not be granted if the proposal to use the land is not considered socially legitimate.

According to Gaviria (2015), the concept of LSO, similarly to “governance”, emerged under the influence of the World Bank. In this regard, it is clear that the notion of “social license” is related to the “governance” notion, since in the social license, mining companies, for example, require, as much as their legal license, a “social license” to operate originating from the result of the work performed in the process of consultation, participation and dialogue between the mining company, the local community and the government at a local, regional or national level (World Bank, 1992).



Assuming that Collaborative Governance models are applicable to decision-making in the design, placement and maintenance of wind energy projects, the Ansell and Gash (2008) model was used in the research, which will be explained below.

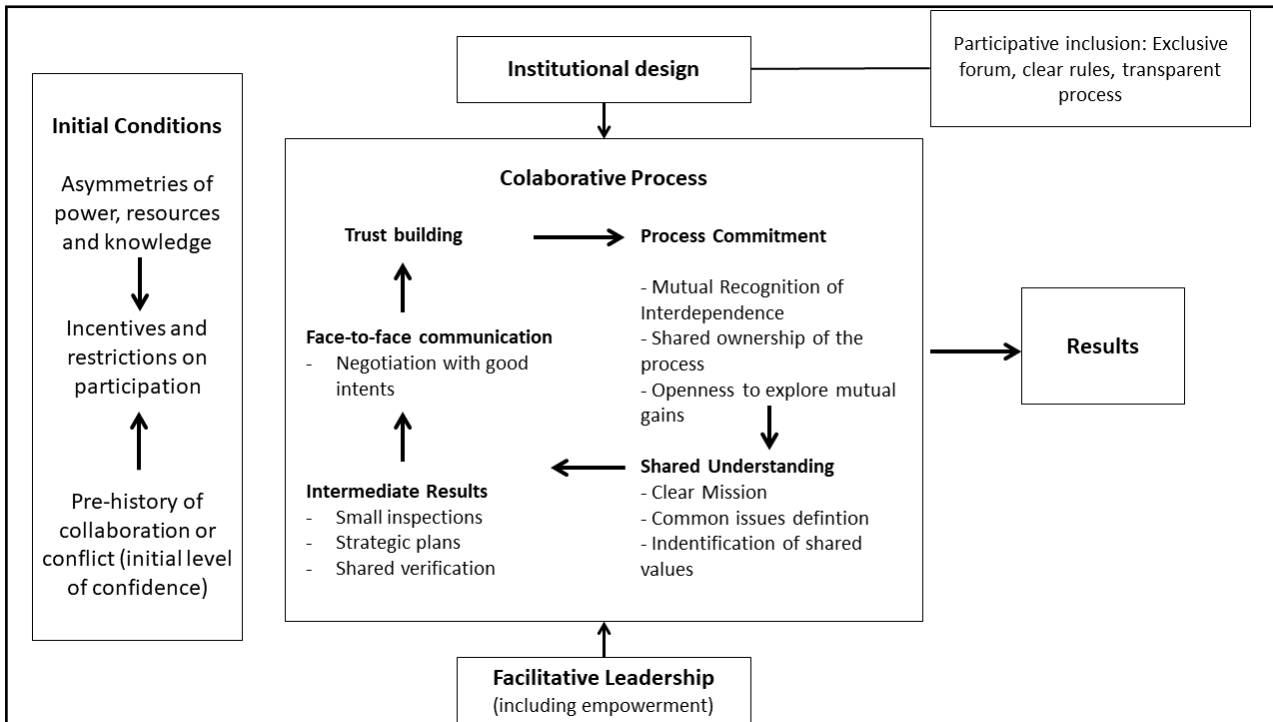
### **3 COLLABORATIVE GOVERNANCE MODEL BY ANSELL AND GASH (2008)**

The literature on Collaborative Governance has tried to establish frameworks or models to associate concepts that are linked to the collaborative decision-making process and enable an analytical understanding of the event. Among the models that have been developed, this article is based on the model by Ansell and Gash (2008), according to which the main elements related to the collaborative process and its outcomes are: the initial conditions for collaboration, composed by incentives and restrictions on the engagement of the agents; the institutional design; the role of leadership; and the building of trust.

Ansell and Gash's (2008) model was built on the basis of a meta-analysis involving 137 case studies of collaborative processes recorded in the literature. Having analyzed the cases of GC in a range of mostly North American public sectors, the authors developed a common model of GC. They report that they were often surprised by the complexity of the collaborative process and that the variables and causal relations had proliferated beyond what was expected. However, they realized that the model could be useful for policy-makers and professionals. In most of the case studies, the authors attempted to understand the conditions under which interested parties were acting in a collaborative way.

The Figure 1 summarizes the Collaborative Governance model proposed by Ansell and Gash (2008). This model provides a visual representation of the main conclusions found in the cases studied.

Figure 1 – Collaborative governance model



Source: Ansell and Gash (2008, p. 550)

Ansell and Gash (2008) identified four macro-factors that indicate the results of a collaborative process, which are: initial conditions, institutional layout, facilitative leadership and the collaborative process itself. The macro-factor “initial conditions” refers to the level of trust between the public participants, the level of conflict and the lack of equal knowledge, resources and empowerment prior to the start of the process; “institutional design” is related to the regulations that guide the collaborative process; “facilitating leadership” means the role of one of the public participants as a mediator of the negotiation tables; lastly, the “collaborative process” itself is defined as interactive and non-linear, represented as a cycle in the diagram (Ansell & Gash, 2008).

Ansell and Gash’s model (2008) is composed by four major variables or macro-factors, which in some cases are divided into smaller variables. As the variables are evaluated and the collaboration process improves, some contingency propositions are put forward, as outlined below:

Initial conditions: the basic levels of confidence, conflict and Social Capital are defined and are divided into three other variables - the (i) asymmetries between the stakeholders' resources and power, the (ii) incentives or restrictions for participation in the partnership and the (iii) pre-history of conflict or collaboration between the stakeholders. The asymmetric variables between resources, empowerment and pre-history of conflict or cooperation outline the incentives and restrictions that facilitate or discourage the process of collaboration between stakeholders. Analyzing these variables together enables an understanding of the incentives and limitations that encourage stakeholders to form a partnership (Ansell & Gash, 2008);

Facilitative leadership: this has a fundamental contribution in terms of the integrity of the agreement-building process and encouraging stakeholders to commit themselves to collaboration. According to Ansell and Gash (2008), leadership is essential for the creation and maintenance of clear standards, building trust, facilitating discussion and exploring reciprocal benefits, and leadership varies according to the collaboration context. The role of leadership is important in the entire collaboration process (Emerson et al., 2012)

Institutional design: the basic rules, deadlines, participation, accountability and transparency are defined, which are fundamental elements for the legitimization of the collaboration process. The participation refers to the selection and inclusion of stakeholders who will deliberately participate in the collaboration process, accordingly providing an opportunity to give voice to multiple perspectives and different interests (Ansell & Gash, 2008). This amount of information will contribute to more assertive, sensible decision-making in agreement with the collective interest (Emerson et al., 2012);

Collaborative process: a non-linear interaction cycle, an interactive process that involves other variables: the (i) face-to-face communication between the stakeholders of the partnership, which stimulates the (ii) building of trust between the parties and the development of a commitment to the process, through a reciprocal recognition of the interdependence between the parties, the sharing of responsibilities in the collaboration process and openness to explore mutual benefits; which promote the (iii)

shared understanding of what can be achieved collectively (Ansell & Gash, 2008). Trust has a major impact on the collaborative process, as it generates mutual understanding, which consequently creates legitimacy and finally commitment (Emerson et al., 2012).

In summary, Ansell and Gash (2008) highlighted three central contingencies suggested by the analysis of the empirical results: time (relevant as the literature indicates that Collaborative Governance is a long process), confidence and interdependence (referring to the particular interest in participating and being committed to collaborating). In this regard, when considering the possibility of embracing a collaborative strategy, each of these three central contingencies must be taken into consideration.

When we bring the Collaborative Governance approach to the elements of the relationship between companies and communities, the relation of trust is the essence of collaboration, but Ansell and Gash (2008) point out that if the prehistory of collaboration is characterized by conflict, there is a lack of trust between the stakeholders of the partnership and the possibility of manipulation by competitors. Emerson et al. (2012) argue that trust generates mutual comprehension, enabling internal legitimacy and, consequently, commitment to the collaboration process

It is important to remind ourselves that the collaborative process, according to Ansell and Gash (2008), is manifested as a cycle of communication, trust, understanding and getting results. Regarding the power, Ansell and Gash (2008) emphasize that the structure of collaboration can influence the imbalances of power and resources. Imbalances of power are usually frequent in collaboration between parties. Although there are attempts and strategies to try to balance power, issues such as influence, capabilities, resources and status are difficult to balance and imply an imbalance of power between stakeholders.

As for the communication factor, Ansell and Gash (2008) argue that this is a necessary condition for a collaborative process focused on agreement, since collaborative governance is built through face-to-face interaction among stakeholders. It is through this informal method of communication that trust, mutual understanding

and commitment to the process are built. A background of conflict in the relationship usually affects the level of confidence and communication. To overcome differences, trust has to be built. When the level of trust is low, a mediator may be needed to bring harmonious resolution to the conflicts (Santos, 2015). Antagonistic situations between the parties is a failure factor for starting a collaboration process, unless there is a high degree of interdependence between the parties or action is taken to correct the low level of trust (Ansell & Gash, 2008).

Another aspect raised by Ansell and Gash (2008) is that leadership is fundamental to creating and maintaining clear rules, building trust, facilitating dialog and exploring mutual benefits, and they attribute the functions of mediation and facilitation to the leadership. According to the authors, it is possible to have collaborative governance processes without “leadership”, but the overwhelming majority of experiences reveal the importance of the existence of a facilitator leader who creates the conditions for stakeholders to be able to meet and who guides the process and the search for agreements.

Given all this, it can be seen that, according to Ansell and Gash (2008), GC is a process that involves a series of non-linear stages of interaction between agents, in the attempt to achieve common objectives that are shared between the public and private sectors.

In summary, the search for more sustainable development of extractive industries requires a transition to new governance models, which are essential for creating a balance of power between interested parties and receiving the LSO (Prno, 2014). Encouraging Collaborative Governance arrangements is essential for the granting of an LSO (Santiago, 2016).

## **4 METHODOLOGY**

This article was developed using qualitative research. The investigated phenomenon was the “Collaborative Governance”. The object of this research is “the local communities where wind energy projects are located”.

In studies about the relation between company and community in stakeholder theory (TS), the concept of community can be classified as community of place, community of interest, virtual advocacy groups or community of practice (Dunham et al., 2006). The community of place, within the TS, is usually known as a local community (Kao & Cruz, 2015). It is defined as a social unit that shares something in common and the population lives physically close to the company's operations (Dunham et al., 2006). To this end, the object of this research are the local communities located in the cities of Icaraí de Amontada, São Gonçalo and Trairi, in the state of Ceará, represented by their residents, that is, people participating in the communities located around the wind energy farms that are the focus of this research.

In order to achieve the objective of analyzing the constitution of Collaborative Governance in the establishment and management of wind farms in the state of Ceará, based on the community's perception, a series of categories of analysis were initially developed. The classification consists of a process of reducing the text to meaningful words and expressions (Minayo et al., 2009). The authors complement that the category refers to a concept that includes elements or aspects with common characteristics or that relate to each other. For Bardin (2011), the categories must have a few qualities such as: reciprocal exclusion - each element can only exist in one category; homogeneous - in order to define a category, there needs to be only one dimension in the analysis. These categories guided the construction of the data collecting instrument for the field research, the interview script.

This interview script was previously tested with two university professors who have degrees and masters in business administration and who teach RSC and Organizational Strategy courses, in order to verify the suitability of the interview questions, the language used and the time required to go through all the questions in the survey. The area of the field research was limited to the study of communities in the cities of Icaraí de Amontada, São Gonçalo do Amarante and Trairi.

The qualitative research does not depend on a numerical criteria to ensure its representativity; in fact, the question that should be asked is “which social individuals have the most significant connection to the issue being discussed?” (Minayo et al., 2009). For this purpose, a limited group of participants was chosen, given that in this type of research, the number of interviews is decided on the basis of theoretical saturation of the subject. A total of nineteen in-depth interviews were conducted until the “theoretical saturation” was reached. Table 1 shows the profile of the interviewees:

Table 1 – Summary of the interviewees’ characteristic

(Continued)

<b>Interview</b>	<b>Municipality</b>	<b>Occupation</b>	<b>Age</b>	<b>Education</b>	<b>Belongs to the Residents’ Association</b>
E1	Icaraí de Amontada	Merchant	37 years old	High school	no
E2	Icaraí de Amontada	School coordinator	32 years old	Postgraduate	no
E3	Icaraí de Amontada	Student	22 years old	Incomplete University Education	no
E4	Icaraí de Amontada	Merchant	36 years old	Fundamental	no
E5	Icaraí de Amontada	Professor	33 years old	Postgraduate studies	no
E6	Icaraí de Amontada	Professor	32 years old	Graduation	no
E7	Icaraí de Amontada	Professor	26 years old	Graduation	no
E8	Icaraí de Amontada	Farmer	51 years old	High school	yes
E9	Trairi	School coordinator	46 years old	Postgraduate studies	no
E10	Trairi	Hotel chambermaid	35 years old	High school	no
E11	Trairi	School Coord.	44 years old	Postgraduate studies	no
E12	Trairi	Professor	41 years old	graduation	yes



Table 1 – Summary of the interviewees' characteristic

(Conclusion)

<b>Interview</b>	<b>Municipality</b>	<b>Occupation</b>	<b>Age</b>	<b>Education</b>	<b>Belongs to the Residents' Association</b>
E13	São Gonçalo	School coordinator	42 years old	Postgraduate studies	no
E14	São Gonçalo	ONG Coordination	43 years old	Postgraduate	yes
E15	Trairi	Professor	Not informed	Graduation	no
E16	Trairi	Professor	32 years old	Graduation	no
E17	Trairi	Wind farm guard	35 years old	High school	no
E18	Trairi	Merchant	40 years	High school	no
E19	Trairi	Professor	Not informed	Graduation	yes

Source: Research data (2018)

According to Bardin (2011), the purpose of content analysis is to analyze what has been said in research, constructing and presenting conceptions around a study object. The author believes that this research technique is structured in three phases: 1) pre-analysis; 2) material exploration, categorization or codification; 3) results treatment, inferences and interpretation.

The AC was performed with the support of the software Atlas (Archiv fuer Technik Lebenswelt und Alltagssprache) ti (Text Interpretation), version 8. The use of this software allows the categories to be constructed for analysis, providing insights throughout the entire research (Bandeira-de-Mello & Cunha, 2003). The Atlas.ti is a tool that supports the process a qualitative data analysis (Melo, 2013). The Atlas.ti software helped to arrange relevant interview excerpts in order to identify patterns or repetitions of interest regarding the research and, in particular, the grouping of ideas for the formation of families of codes and relationship networks.

## 5 ANALYSIS AND RESULTS DISCUSSIONS

This article sought to understand how Collaborative Governance manifests itself in the implementation and maintenance of wind farms, from the perspective of the community. The research was based on the Collaborative Governance Model of Ansell and Gash (2008), from the perspective of the theoretical framework of the social license in order to operate. The outcomes and the consequent discussions about the collected data are the result of the CA being applied on the primary collected data, with the assistance of the Atlas.ti software. The purpose of this software is to develop theory and generate networks from Atlas.ti (Bandeira-de-Mello & Cunha, 2003).

The Content Analysis of the Collaborative Governance category using Atlas.ti showed the level of groundedness and theoretical density of this category and its subcategories, the final result is shown in Figure 2.

Figure 2 – Collaborative governance category and its subcategories

Name	Grounded	Density	Groups
Facilitative leadership	26		7 Collaborative governance
Initial conditions	20		2 Collaborative governance
Collaborative process	18		6 Collaborative governance
Institutional design	10		3 Collaborative governance

Source: Prepared by the authors with support from Atlas.ti (Show codes in group Governança Colaborativa), (2018)

The analysis under Collaborative Governance shows that the most significant categories in the interviews were the following in succession: leadership facilitation, initial conditions, collaborative process and institutional design. It can be seen that all the codes that constitute the Collaborative Governance construct were grounded in different levels.

The leadership facilitation category has the greatest level of complexity, as this category is connected to seven other different categories, while the collaborative process is related to six other codes. Initial conditions, even though there are more

mentions in the interviewees' excerpts, have a weak connection with the other codes. Institutional design is related to three different codes.

With regard to the AC, the empirical results show that the management process needs to be based on the collaborative governance, during the implementation and maintenance phases of wind farms, in order to achieve a good relationship between the company and the community. It also shows that the local community's concession for a social license to operate wind energy projects must be the outcome of good collaborative governance practices. The empirical results show that energy, as a collective good, needs to be managed in such a way that public and private agents work in a collective and collaborative way.

The text segments also revealed that the forum for discussing the collaborative process between the companies that own the wind farms and the community was usually initiated by the town hall. Under the initial conditions of the collaborative process, there was a sense of trust at the start of the wind farm implementation process, but during the implementation and maintenance of the project, this trust is weakened by unkept promises and the occurrence of issues, mainly as a result of negative socio-environmental impacts.

As trust weakens and community expectations are not met, conflict situations arise. In the narratives presented in table 2, we can clearly see expressions that denote a conflict situation: "clash", "the company had a broken relationship", "the natives knocked down the towers", "they went to the dunes with placards". Another characteristic of the initial conditions is the asymmetry of power.

With the deterioration of trust and the communities' expectations not being met, conflict situations arise. In the narratives presented in the table 2, we can clearly see expressions that denote a conflict situation: "clash", "the company had a broken relation", "the natives knocked down the towers", "they went to the dunes with posters". Another characteristic of the initial conditions is the asymmetry of power.

In the field research, there was a significant amount of power held by the

company over the government (public licensing bodies and the town hall). On the other hand, the community has power over the company when it is united through representations (residents' associations).

These imbalances of power can threaten collaboration and cause a feeling of mistrust, as well as the manipulation of the Collaborative Governance process by stronger stakeholders (Ansell & Gash, 2008). In the initial conditions, conflict discourages cooperation and collaboration between stakeholders, but it is important to note that power imbalances are common in intersectoral collaboration. This can be seen in the text segments (Table 2) with an evident influence by the company over the government (city hall and public licensing and inspection organizations).

Table 2 – Representative text segments on the theme of Collaborative Governance  
(Continued)

SCT	Text Segments
Conditions Initials	<p><b>1:13</b> [...] because in the beginning the <b>whole community trusted</b> what the company said.</p> <p>12.13 If you don't <b>want to be questioned and start a fight</b>, you have to respect these people, because today they have access to this information.</p> <p>16.1 The company had a <b>broken relationship</b> with the people here in Flexeiras.</p> <p><b>19:7</b> [...] natives <b>knocked down their towers, there was conflict</b>, police came, there <b>were</b> almost deaths.</p> <p><b>20:2</b> The only thing I know is that I <b>took part in a movement there, closing the street</b>, because they had promised to pave it and they didn't do it.</p> <p><b>15:1</b> There was a community movement, a protest, <b>they went to the dunes with posters</b>, they formed movements in the square, they went to the forum. There was a <b>lot of conflict</b>.</p>
Collaborative Design	<p>1.15 <b>The conversation was much more through the town hall.</b> The town hall used to send someone to talk to us when there was a meeting.</p> <p><b>13:22 When</b> there were meetings, someone from the town hall would speak and then the company, but it was all very quick. <b>Things weren't very clear.</b> It should be a forum with multiple voices, everyone being heard. [...] There need to be discussion forums in which the government, the company and representatives of the residents take part. <b>The whole society should be heard. [...] There must be transparency in the processes</b>, making the <b>beginning, middle and end</b> clear. There must be channels for dialog and not just channels for information. And this way everything is resolved.</p> <p>14:15 One should start, <b>whether it's the town hall, a company or even the community</b>, but normally the town hall should lead the meeting, as it represents the rights of the people. The residents' association is also a good place to ask people to collaborate.</p>

Table 2 – Representative text segments on the theme of Collaborative Governance

(Conclusion)

SCT	Text Segments
Facilitative Leadership	<p><b>1:41</b> Such a business should be better <b>thought out by the rulers</b> {...].</p> <p><b>2:20</b> They <b>came with the education department</b>, it was a joint action between the company and the town hall [...]. <b>The town hall should take the lead in promoting dialog</b> between the company and the community. Create forums to discuss problems and needs.</p> <p><b>5:21</b> There should be a conversation from man to man, in other words, from people of the land to people of the land, and <b>the bodies and the town hall should be the ones to do this</b>, they are the people of our city. Perhaps this conversation could take place with the association, they participate a lot. [...] <b>We trust the residents' association</b>, the companies should work more closely with them.</p> <p><b>8:15</b> <b>There has to be leadership from someone, if there isn't from the town hall there has to be from the people.</b> After all, our lives and our land are at stake.</p> <p><b>11:2</b> We had already foreseen this beforehand, because our <b>association is very active</b> and we already knew what would happen when the parks were set up.</p> <p><b>16:5</b> <b>The town hall was supposed to be on the side of the people</b>, we elected the town hall, but they don't go to the <b>people</b> who have the power, the money.</p> <p><b>14:17</b> [...] <b>there should be a more participatory management of the town hall</b>, there should be greater closeness, with more channels of listening and participation for the people of the community.</p>
Collaborative Process	<p><b>1:17</b>[...] the community had <b>to be consulted, it had to take part in choosing the site.</b> [...] there should be meetings with the participation of the people, the schools, the town hall, the residents' association, the fishermen and the company, <b>everyone talking [...], a different kind of installation.</b></p> <p>Last year, the <b>company sent a team to listen to the community, so that we could assess the company's performance and their wishes.</b> What happened was that the community came, people complained and the company agreed to come a second time [...].</p> <p><b>3:13</b> [...] <b>the best thing would have been if we had participated, if they had hired or called people from our community to tell us what we needed and what could be done to improve our lives a little. Today the community sees that they should participate more directly.</b></p> <p><b>5:29</b> <b>Both the company and the community can have the common goal of living well together, collaborating, living in harmony and helping each other.</b></p> <p><b>8:6</b> After the company was set up, an engineer came at the time [...], came to communicate and get to know the community. She asked us to help with the installation and we asked her too. At the <b>time, we suggested a bread factory</b>, but she said it would be too expensive, so she said there was no way. She said she'd leave something in place, but little things that weren't too expensive. The community school was given uniforms by the company at the time.</p> <p><b>13.38</b> People <b>need to feel part of the construction process to be willing to collaborate</b>, they need to trust the company, but this will only happen if the process is done differently from what has happened.</p> <p><b>14:13</b> Here we have the <b>feeling that we can collaborate with the companies, we're used to going to meetings, debating, explaining our needs, we feel like we're participating, but that's not the case with the companies that are part of the port of Pecém. There is a predisposition in our community to participate, to collaborate [...].</b></p> <p><b>19:25</b> I think there should be hearings, <b>not just one, but several hearings, to</b> really discuss it with the community to see what kind of impact it's going to have, where it's going to be installed.</p>

Source: Prepared by the authors based on survey data (2018)

The Institutional Design is related to the regulations that regulate the collaborative process (participatory inclusion, exclusive forum, ground rules, deadlines, responsibility and transparency). These are the essential elements for giving legitimacy to the collaborative process. The text segments demonstrate that there were exclusive forums initiated by the city hall, but without proper planning, not enough time for discussion, the rules were not clear and there was no clarity or transparency.

The leadership role is relevant at all stages of the collaboration process (Emerson et al., 2012). In facilitative leadership, the town hall's role is highlighted as a good possibility for leading the collaboration process regarding the establishment and maintenance of wind farms. It is reported that the town hall does not exercise leadership as expected by the community, but it should as it represents the interests of the people, the community.

Another facilitating leader highlighted by the interviewees are the residents' associations, and even in text segments there are some expressions validating the facilitating leadership of these community representatives: "we trust the residents' association, the companies should work more closely with them", "our association is very active".

And lastly, the collaborative process identifies a need on the part of the community for face-to-face communication and/or dialog, perhaps due to the fact that their greatest resource, the environment, is at stake, especially as this is a coastline area where tourism is one of the main sources of income. However, there is a clear willingness on the part of the residents to collaborate, even though there has been a history of conflict.

It is important to note that some of the cities included in this research are very close to each other, which helps to spread positive and negative information quickly. We also identified an interdependence between the company and the town hall at the time of the wind farms' placement and a natural interdependence between the residents and their representations.

The following are some important excerpts that suggest actions for a collaborative process between the company and the community:

There should be meetings with the participation of the people, the schools, the town hall, the residents' association, the fishermen and the company, everyone talking about different placements, so that we have a relation based on collaboration, a strong relationship (E\_1).

There could be a committee involving the company, the town hall and representatives of the residents, so that dialogue would be richer, listening to all sides (E\_5).

We are a community that has always had forums for discussion, the participation of all those involved, all the representatives have a voice and the right to vote, we are an enlightened community that talks to its people, that seeks its rights, that goes after talking to the public authorities, that wants to cooperate with the private authorities so that the community can have a better life and the company can also earn in a fair way (E\_12).

The text segments presented above provide an opportunity to analyze the four micro-processes that should be involved in collaboration between companies and communities in wind farms. It describes the initial conditions based on communication and dialogue that motivate the mobilization of all those involved to build common objectives, promoting the development of the collaborative process, and bringing positive results for the parties.

## **6 FINAL CONSIDERATIONS**

This article analyzed the process of establishing a Collaborative Governance model in the implementation and maintenance of wind farms located in the cities of São Gonçalo do Amarante, Trairi and Icaraizinho de Amontada in the state of Ceará. The research supported the theory that the Collaborative Governance model is fundamental for a good relationship between the company and the community. Stakeholders from the communities surrounding the wind energy farms included in this research were interviewed.



The research used the Ansell and Gash (2008) model, in which Collaborative Governance includes four macro-factors: initial conditions; institutional design; collaborative leadership; and collaborative process. During the analysis, it was observed in the communities surveyed that the initial conditions of the collaborative process show an incidence of conflict situations, and even when faced with situations of this type, the community is ready to collaborate. It is recommended that companies should invest in communication in order to reinforce Relational Social Capital. Companies should get more involved in building "Social Capital" that enables communities of interest to exist. In addition, institutional design deals with the guidelines for the collaborative process. The research revealed that in the exclusive forums initiated by the city hall, there was no planning to build more dialogical communication, the regulations were not clear and there was a lack of transparency. These two macro-factors are associated with communication.

The facilitating leadership was indicated by those interviewed as being the residents' associations, community representatives and the town hall, while the macro-factor sees one of the participating publics acting as a mediator at the negotiation tables. In this regard, companies could also assume this function. The findings of the research associate facilitative leadership with responsibility and confidence.

The explored theoretical constructs showed that the collaborative process requires agreement-oriented communication, where each side acts with a shared responsibility. The central idea is that companies managing for sustainability seek to achieve profit by focusing on how to economically exploit others and nature, with mutual synergies and benefits for all stakeholders and nature. It is clear from the empirical research that the process of collaboration is associated to communication and responsibility.

The empirical results showed that the macro-factor initial conditions of Collaborative Governance is initially marked by a feeling of trust, which, over the course of the process, turns into frustration. Another important finding is related to

issues of asymmetrical power, when the company, in the community's perception, has influence over the town hall and the licensing and inspection authorities. Conflicts can also lead to a lack of trust, collaboration and cooperation. There were also reports that the community is able to exercise power over the company when it is united in associations. This proves the assumption that companies affect and are affected by communities, and therefore need to establish relationship management.

Regarding the macro-factors that compose the collaborative process, it can be concluded that, in terms of institutional design, the town hall is responsible for holding exclusive forums, although there is no proper planning for dialog and the ground rules are not precise. In terms of facilitating leadership, the municipal government emerges as the main agent for mediating the collaborative process in the installation and maintenance of wind farms, due to its neutrality. However, the reports indicate that their actions do not meet the community's expectations. Other facilitating leaders mentioned were the residents' associations.

Another significant observation from the research is that the collaborative process exposes the importance of communicating face-to-face, since the community's most important resource and source of income is at stake: the land.

In the context of the establishment and maintenance of wind farms, the importance of Collaborative Governance was noticed, given its nature, which involves the participation of a triple group of authors (government, organizations and society) associated in a complex relation, in order to achieve a public purpose: the generation of alternative energy. In addition, the Collaborative Governance process is part of the LSO context, developing collaborative arrangements between the company, government, local population and community organizations.

In conclusion, energy distribution needs to be seen as a collective good and management needs to be based on Collaborative Governance, in which public and private actors work collectively and collaboratively, and the LSO for projects that have an impact on community life must be the result of this governance.

This research is notable for its contribution and originality in exploring the theoretical constructs of Collaborative Governance and its practice in building relationships between companies and communities in wind farms from the community's perspective. Lastly, we suggest investigating the constitution of Collaborative Governance in the implementation of wind farms in other regions of Brazil and even in other parts of the world for comparative analysis.

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3. Development of theoretical propositions(theoretical work)	√	√
4. Theoretical foundation / Literature review	√	
5. Definition of methodological procedures	√	√
6. Data collection	√	
7. Statistical analysis	√	
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9. Critical revision of the manuscript	√	√
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