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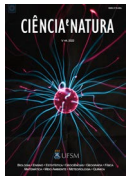

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Environment

Dialogues among *stakeholders* of sugar-energy sector: an analysis of the institutional environment with sights to the social and environment factors

Diálogos entre *stakeholders* do setor sucroenergético: análise do ambiente institucional perante os fatores sociais e ambientais

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ABSTRACT

Brazilian sugar-energy sector has being defended as a sustainable alternative, as well as innovator for the energy matrix of the country. The sector is not only dependent on the innovative capacities of individual firms and the state policies, but on the interaction among the other stakeholders involved. It is about a descriptive and exploratory research of qualitative nature. The objective was to analyze how the dialogues among stakeholders occur, concerning social and environmental factors, in the institutional environment of the sugar-energy sector, in Mato Grosso do Sul. Interviews with six stakeholders linked to the sugar-energy sector were performed, besides a documentary analysis. Category content analysis was applied. It was evidenced that stakeholders make use of dialogue approaches as a strategic tool to identify the needs of improvements on sugar-energy sector before the institutional changes, making possible the integration among the different links of the sugar-energy sector to ease the conflicts of interests. The development of the sector is based on sustainable practices. The results highlight that the dialogue approach generates effective results, which propitiate more local sustainable development, encouraging the ecobusiness.

Keywords: Agribusiness; Sustainability; Pressure groups; Institutional arrangement; Advanced technologies; Bioenergy.

Resumo

O setor sucroenergético brasileiro visto como uma alternativa sustentável e, inovadora para a matriz energética do país, não é somente dependente das capacidades inovadoras das firmas individuais e das políticas de Estado, mas também da interação entre os demais *Stakeholders* envolvidos. Assim sendo, este estudo teve como objetivo analisar como ocorrem os diálogos entre os *Stakeholders,* em relação aos fatores sociais e ambientais, no ambiente institucional, do setor sucroenergético, em Mato Grosso do Sul. Trata-se de uma pesquisa de natureza qualitativa e caracterizada como descritiva e exploratória, sendo realizado levantamento bibliográfico, análise documental e entrevistas semiestruturadas. Os dados foram analisados pela técnica análise de categoria de conteúdo. A partir dos resultados da pesquisa foi possível identificar que o desenvolvimento do setor, por meio dos diálogos, está baseado nas práticas sustentáveis. Constatou-se que a abordagem do diálogo gera resultados efetivos, o qual propicia o desenvolvimento local mais sustentável, fomentando o econegócio.

Palavras-chave: Agronegócio Sustentável; Grupos de pressão; Arranjo institucional

1 INTRODUCTION

Throughout the history of the human society, diverse types of knowledge had been generated: the characterized knowledge of common sense, as well as those structuralized scientifically. From the half of century XX, the scientific knowledge started to recognize and to postulate on the exhaustability of the natural resources, just as to rethink on new sustainable power resources, which are necessary to attend the complex human needs, moving thus the global economies.

The interventions motivated by environmental concerns of diverse stakeholders, these defining as individuals or groups who affect or are affected by the organizations objectives, had propitiated various actions in the organizational, legislative, policy and civil areas. In such perspective, Azevedo *et al.* (2012) salient that diverse stakeholders of the agribusiness present interests, values, distinct cultures in relation to environmental changes, being thus, it is necessary to use dialogues and negotiation among the parties to be solved. From this interaction among stakeholders, it becomes strategic the analysis of the dialogues among them, once it allows a former analysis, that is, before conjecturing in strategy, it is focused on the origin of the problem, permitting to know the description and interests of participant Stakeholders on the subject in question. And it is also

turned toward development of alternatives which attend the interest of the involved (THE AZEVEDO *et al.* 2012).

The sustainability issues are addressed as second public interest; therefore the market and the society adopt sustainable practices through the institutional changes, that means, to readjust the rules of the game, so that through regulations and sanctions, the actions based on sustainability are encouraged (MAZURKIEWICZ (2005). In such context, the contemporary society strongly pressures for the energy systems are not only renewed, but sustainable. This requirement started to be stronger, in 1980s, when as defined by the Brundtland Comission, it is expected that the energy systems are capable to answer the necessities of the current generations without compromising the future ones, attending the social, environmental and economic balance, as well as the poorest people needs (UNITED NATIONS, 2007).

From 1970s, through the introduction of the Brazilian National Fuel Alcohol Program - PROÁLCOOL, the ethanol produced from sugarcane, started to compose the energy matrix in Brazil and, since then it is being seen as alternative fuel energy and also cleaner, in the world (BRAZIL, 2012). However, to compose the energy matrix, there is a strong pressure for this biofuel adapt to the forms of production which esteem sustainability, based on the economic, social and environmental tripod (UNICA, 2016).

For Macedo (2007), the ethanol produced from sugarcane has the capacity to reduce the emissions of GHG. In face of this and following the arguments of BNDES (2008, p. 181) it can be considered that:

> As a result of the high photosynthetic performance observed in the production of sugarcane and the efficient process for its conversion into biofuel, the use of bioethanol obtained from this raw material allows for reducing, in such important form, the GHG emissions, when compared with the use of fossil fuel (gasoline), for same final useful effect in vehicles.

For the Brazilian National Agency of Petroleum, Natural Gas and Biofuels - ANP (2016), ethanol exists in two versions: hydrous ethanol and anhydrous ethanol.

They differentiate in the water content and the way how they are used as fuels. Anhydrous ethanol is used as an additive in gasoline C. It is a result of the mixture between gasoline A (pure) and anhydrous, that represents 25% of the composition. On the other hand, hydrous ethanol is produced for being used directly by auto machine vehicles (BIOSUL, 2016).

Concerning the expansion of the sector in Brazil, it is important to point out that the sugarcane cultivation is predominant in the State of São Paulo. However, the production of sugarcane in the country has, currently, the central-west region, as focused area of expansion, after the consolidation in the regions northeast and southeastern. Between 2000 and 2014, the number of sugar and ethanol mills grew more than double in the States of Goiás and Mato Grosso do Sul, with more than 40 mills built in the State (PROCANA, 2013).

Since then, Brazilian sugar-energy sector has being defended as a sustainable alternative, as well as innovative for the energy matrix of the country. From the process most innovative of the ethanol production, an increasing scale of cogeneration of electric energy is verified. Such combinations had favored positively the generation of job and income in the agricultural sector, against the production of biofuels (GOLDEMBERG, 2007).

However, still being evidenced the good environmental performance, highlighted by its ethanol production and consumption; the byproducts of sugarcane are not free of some criticism in relation to the potential adverse impacts, which can be caused by a massive and/or disordered expansion (SCHLESSINGER *et al.*, 2008; Searchinger; Heimlich, 2015).

That being so, the potential impacts to the environment and the social welfare of the sugarcane cultivations surroundings of the alcohol mills have induced some questionings on its sustainability that, according to Alvares and Mota (2010) are so evidenced by the sector. In this context, it was noticed that along the development of the sugar-energy sector, the environmental and social factors has

been remarkable in discussions concerning the tripod of sustainability, for ethical and moral questions.

The objective was to analyze how the dialogues among stakeholders occur, concerning social and environmental factors, in the institutional environment of the sugar-energy sector, in Mato Grosso do Sul (MS).

Based on the presented discussions, it was sought to analyze environmental and social sustainable practices, therefore they are of common interest among Stakeholders involved. The current scenario demands a more competitive position from the market, but also, a more cooperative behavior among stakeholders. For Vinha (2010), a new model of management must prevail ahead of the pressure of stakeholders, seeking environmental and social sustainability. Thus, recognizing the value of the dialogue among Stakeholders is essential for the new model of management (ALMEIDA, 2002).

2 THEORETICAL FOUNDATIONS

2.1 Dialogues among Stakeholders

Ahead of social pressures, that are increasingly presents due to globalization once it facilitates the access to information and technologies, the managers had changed the enterprise conception and performance, from a purely economic entity to a “network of relations between the company and its stakeholders” (ROCK; GOLDSCHMIDT, 2010, p. 15).

Stakeholders had been first appraised by Freeman (1984) as individuals or organizations that affect or are affected by the objectives, being able to create consensuses or conflicts. Corroborating with the concept, Browie (1988) and Freeman and Reed (1983) define stakeholders as groups or individuals who influence the company survival. In this context, Freeman and Evan (1990), Hill and

Jones (1992) and Cornell and Shapiro (1987) consider stakeholders as contractors or participants in exchange relations.

The importance of stakeholders for the organizations is widely recognized in the market, since their identification allows to greater efficiency for carrying out the goals of the companies (FREEMAN, Wicks and Parmar, 2004). The proper definition of 'Stakeholders' highlights its importance for the businesses strategy.

In the case of the sugar-energy sector, in Brazil, and specifically in this study, MS, the importance of identifying stakeholders is not different. However, when identifying these actors, it is possible to see how complex is the environment in which they are inserted, therefore some forces act as consensual form and others intervene in opposing way, conducting thus to a conflictive relation among stakeholders (BERMAN *et al.*, 1999).

From this perspective, the pressure of the groups of Stakeholders in order to meet their different interests carries out an important influence in the direction of implementation of managers strategies to serve the interested parties, without harming the functioning of the firm (HART; Sharma, 2004; Porter; Kramer, 2011). The reflections done allow to point as conciliation strategy among the interests of stakeholders of the sugar-energy sector, the approach of the dialogues among stakeholders.

In search of a better adequacy with the changes of scenarios, the organizations are seeking coherent mechanisms and procedures with the new society demands, that are focused on social and environmental matters, and for this, a wide dialogue with stakeholders becomes necessary (TEIXEIRA, 2013).

The approach of dialogues, that presents itself as an instrument of a paradigm come from conflicts of relationships models among partnerships and contributions in the corporate environments, is well accepted as a strategy to solve the discords at issue (CRANE; LIVESEY, 2003).

For Andriof (2001), dialogue among stakeholders defines itself in terms of a conversation between the companies and the interested parties, in which the

information and the acquired knowledge are exchanged. The dialogue must be a process of two ways, where the interested parties are not only consulted or listened, but also answered (GAO; ZHANG, 2001). Dialogues with Stakeholders contribute, considerably, for view changes, commitments, attitudes and behaviors, that modify the philosophies and, consequently, the rules of the organizations or what Stakeholders pressure or represents (AZEVEDO, 2010).

Still according to author, the use of the Theory of Dialogues analyzes the knowledge of the areas of interests and conflicts among Stakeholders, such as: i) to reveal areas that are lacking of solutions; ii) to identify priority areas for stakeholders; iii) to make possible new models of relationships and decision-makings on the priorities; iv) to focus on insights of subjects and problems.

In relation to the theory of the dialogues, Welp *et al*. (2006) argue that for the solution of complex problems, such as, the climate change or the biodiversity loss, analyzing them only under only one monodiscipline approach is not enough. It is necessary that the scientific and academic research take into consideration the knowledge is out the scientific sphere, seeking the collaboration of several stakeholders, as for example, the research institutes, the agents who act in the industrial sector, as well as in other segments of the private sector. Even so, the dialogues between stakeholders are of high relevance, equally for the science.

The debates on the social and environmental sustainability have been widely carried out among stakeholders of the entire world. Sustainable dialogue is explained by Saunders (1996), as an interactive and systematic process, supported throughout the time to transform relationships of essential changes into the society. It is based on dynamism among Stakeholders, in the search of the origin of the problem to decide which are the changes needed to solve the dilemma.

For Azevedo (2012) the climate changes provide the approach on the impacts of the agricultural production, stimulated by the increasing world-wide demand for foods and renewal energy resources, what demands new behaviors on how to produce in compliance with the criteria and sustainable standards.

In the sugar-energy sector, the use of the dialogues among stakeholders allows a former analysis. Before thinking about strategy, it turns to the focus of the problem, making possible to know the interest and the description of participant stakeholders and at the same time, to look at the development of alternatives. In this approach, the power becomes more balanced or distributed, moreover propitiating legitimacy, negotiation of conflicts, confidence and creation of institutional norms (AZEVEDO, 2010).

2.2 New institutional economy and institutional changes

The economic process occurs in the social structuring, molded by cultural and historical forces (GOULART *et al.,* 2005). In order to live in society, Hodgson (2000) points that the individuals not only create the institutions, but they end up being essentially influenced by them because they take part of their choices.

The new institutional economy possesses this adjective because it succeeds the old institutionalism. The new institutionalism economists try to explain the sprouting of the Institutions from the actions and reactions of the individuals, in one given society (HODGSON, 1988).

North (2006, p. 3) claims that "the institutions are the rules of the game of a society". They are the Institutions that establish the limits for the human beings interactions and actions, by means of formal and informal rules. The formal rules, also conceived as formal coercions, are constituted by laws, norms and regulations, typically written. The informal rules are established by the traditions, conventions, behavior codes, values, symbols, customs, taboos, amongst other social and communitarian beliefs, typically not written.

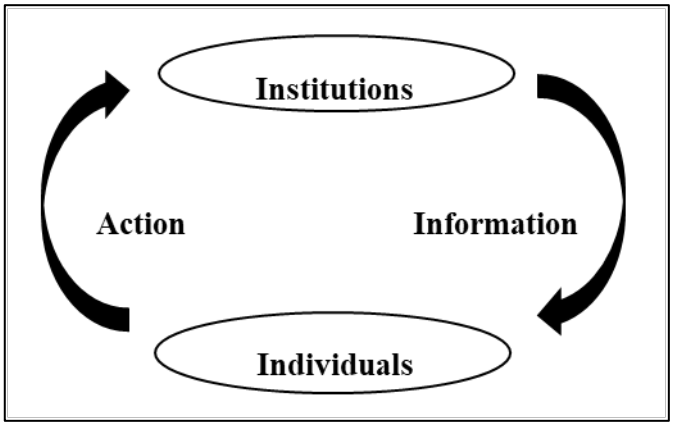
If the institutions are the rules of the game, the organizations are the players. The organizations are composed by groups of individuals dedicated to some activity executed with determined end. The institutional context imposes

limitations that define the set of chances; and, therefore, the type of organizations that will be created (North, 2006).

In turn, the organizations are formed by groups of individuals agglutinated with the intention to reach certain objectives. The organizations include: a) politicians bodies (political parties, municipal, Senate and regulatory bodies); b) economic bodies (companies, syndicates, cooperatives, etc); c) social bodies (churches, clubs, sporting associations); e d) educative bodies (schools, universities, etc.) (North 1993).

Ahead of these conceptual agreements, it can be understood that once created, the Institutions exercise influences on the individuals, stimulating, still more, their action on the Institutions. Figure 1 shows the scheme of these interactions.

Figure 1 - Interaction between individuals and institutions in the new institutional economy



Source: Hodgson (1998, p. 176)

In Figure 1, it is possible to understand the flow of forces derived from the institutions, i.e., the established rules of the game, which become references to a rational individual behavior model, delineating the not intentional consequences in relation to the human interactions. Thus being, one perceives that the institutions seek to schematize the exchange of the information and the interaction of the individual agents to regularize the environment.

In the agreement of Coase (1937) and Nelson (1995) the institutions are social structures that have certain mobility, since being influenced by the environment where they are inserted. There are regulatory, cultural and normative elements that legitimize them and are associated to various activities and productive resources of the firms (WILLIAMSON, 1981).

Concerning this, Farina (2000) explains that the institutional environment is composed by the legal system, the politic system, the regulations, the traditions, the customs, the macroeconomic policies and finally by the sectorial and public policies. The basic contribution of institutional environment is the establishment of the relation between the institutions and the economic development.

Once understood what are institutions, it becomes though necessary to understand the concept of institutional changes, as acts that modify the institutional environment, through the modifications of the rules of the game (North, 2006). Thus being, due to globalization, where the society charges for sustainable managements of the companies, either private or public, the necessity of institutional changes urges. As Espino (2000, p. 156),

> Institutional change has as objective to define new rights, to reduce the transaction costs, to mitigate the problems of information (opportunism) and the organizational restructuring. The exchange process is mediated by a politic process that has two faces: the learning and the internationalization of new institutions and its functioning and manuscript. These complex interactions determine the level of economic performance.

The institutional changes can result in obtaining respect, empathy and acceptance among Stakeholders or to find resistances by the involved actors. When acceptance among Stakeholders occurs, face to the institutional changes, it makes possible having benefits for reaching the interests of the determined groups (LOPES, 2007).

In this sense, for Godoy (2007), new models of collective decision intensify the possibilities of some actors to have greater power of conduction development policies and decrease it from others. In contrast, when the organizational changes intensify the resistances, these forces stimulate divergences among stakeholders,

being able to generate conflicts, that can provide severe crises, in view of that the organizations and its rules had been created previously for serving distinct objectives (AGUIRRE, 2005).

3 RESEARCH METHOD

This research is characterized as descriptive and exploratory in qualitative and applied nature. The data collection occurred by means of primary and secondary sources. The primary sources had been gotten by means of semi structuralized interview while the secondary, with documentary analysis, which allowed the survey of the available data in the official electronic pages of the searched organizations. Thirty questions, opened and closed, had been constructed taking as reference the literature.

The subjects of this research, stakeholders previously identified for participating in it, are those who interact in the institutional environment of the sugar-energy sector of MS, as well as who experience it, thus they provide the institutional changes occurred in the sector and who participates in a primary form in the rules of the game. They were: association, industry, public official and organization, institute of research and technology, and federation. In spite of more five organizations to have been invited, only six were available to participate in this research and they are identified hereafter as R1 to R6.

For the collection of primary data, the script of semi structuralized questions was applied, from October, 2016 until January, 2017, as showed in Picture 1.

Picture 1 - Identification of the Subjects of the Research (Stakeholders)

Identification of the Stakeholders as Respondent in Chapter 5	Instrument of Data Collection	Duration of the Interview
R-1	Face-to-face Interview	2h52min
R-2	Face-to-face Interview	57min
R-3	Form (e-mail)	-
R-4	Virtual Interview (Skype)	26 min
R-5	Form (E-mail)	-
R-6	Form (E-mail)	-

Source: Research Data (2017).

The treatment of the collected data contemplated the technique of content analysis, thematic category, which is the treatment by means of operations of dismemberment of the text in units, in categories according to analogical regroupings (BARDIN, 2000, p. 153).

In order to fortify this understanding on the categorization in the analysis, categories and subcategories had been created, as Picture 2 simplifies.

Picture 2 - Categories and Subcategories

Categories	Subcategories
Characteristics of the subjects of the research, representative of the sugar-energy sector of MS.	Social and economic data of the interviewed, objectives and representativity of the involved organizations in the sugar-energy sector.
Characteristics of the dialogues among stakeholders of MS.	Communication aspects, partnerships, interaction, commitments, attitudes and group behaviors.
Characteristics of the institutional environment of the sugar-energy sector of MS.	Level of stability or conflict between the agents who lead the organizations of influence over the sector.
Characteristics of the institutional changes in the sugar-energy sector of MS.	Development of the sector in MS.

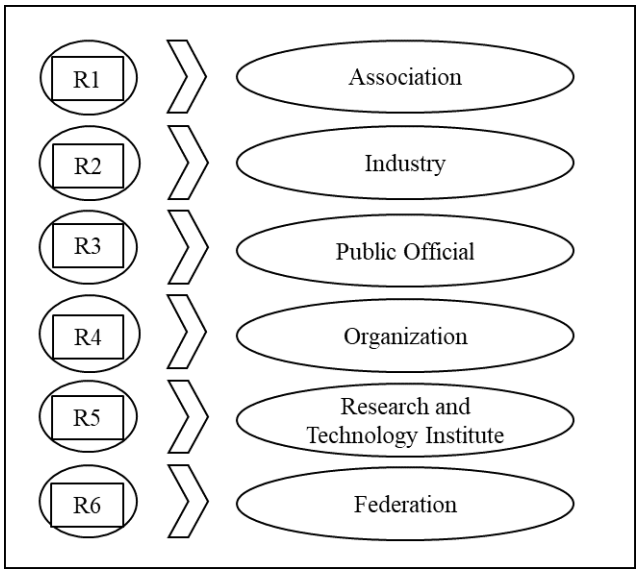
Source: Based on Alves *et al.* (2015)

4 RESULTS

4.1 Participant Characteristics

The participants of the data collection are people linked to the management area of the searched organizations, already identified as stakeholders. They are decision makers, with a relative power of pressure and who also receive pressures from the institutional environment. The respondents are between the age group from 40 to 60 years-old, all with higher levels of education. They act participating in the sector, on average since more than 10 years. The following Figure 1 presents stakeholders respondents of the research

Figure 2 – Identification of the stakeholders



Source: Elaborated by the authors (2017)

As seen in Figure 2, the participants answer for diverse types of organizations, namely: associations representatives, who protect the interests of the planters, employees and industrials of the sugar-energy sector; mills leaders, producers of sugar, ethanol and bio-energy; public official; planters of sugarcane representatives of the center-south of the country; Research and Technology Institute; and Producers and Agricultural Workers Foundation of MS.

The strategic actions of the organizations represented by stakeholders are aimed to the cooperation, since the interest of each stakeholder, are served. The interests go since representing the sugar-energy sector, not only in the institutional environment of MS, but, overall, representing the interests of each stakeholder in several levels of the sector in the national scope. Picture 3 presents the objectives of each organization:

Picture 3 - Objectives of the organizations

Stakeholders	Objectives of the Organizations
R1	To represent the sugar-energy sector
R2	To lead the sugar-alcohol/sugar-energy market
R3	To manage governmental actions based on sustainable actions
R4	To organize the category of cane sugar producers of the Center-South region of Brazil
R5	To develop cutting-edge technologies to improve the efficiency of the productive chain of cut cattle
R6	To promote the development of the agribusiness of MS

Source: Elaborated for the authors (2017)

The evidences described below are in agreement with Espino (2000) and Teixeira (2013). The organizations aim at, simultaneously, the economic wealth and the search of more sustainable regions; that is, they seek a possible harmony among the interests of the groups of power and those of other social forces, making possible to the market creates a new organizational value, a sustainable value.

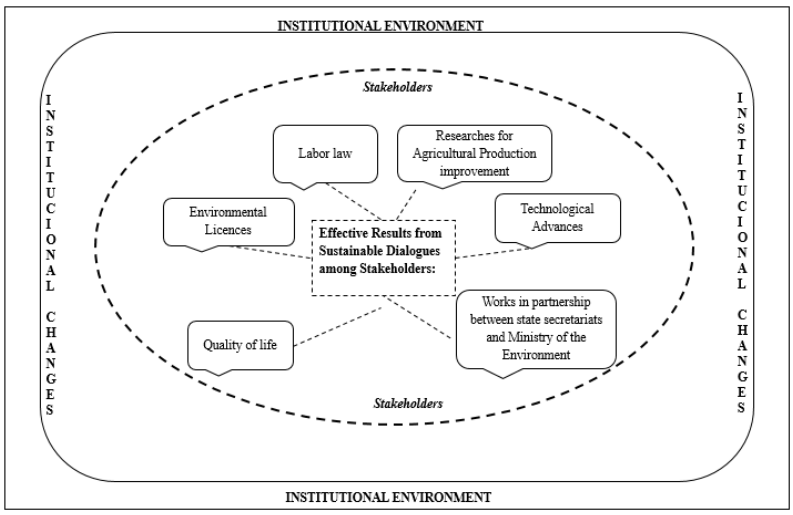
4.2 Characteristics of the Dialogues among stakeholders

When being asked about the existence of experiences exchanges among research agencies, public agencies and research institutes for the sector development, 100% of the respondents had affirmed that it exists. According to R1, there are interinstitutional projects carried out by Embrapa and State University of

Mato Grosso do Sul, which promotes the integration among stakeholders. The respondents R5 and R6 report that meetings by means of forums, thematic meetings, seminaries and congresses are promoted. It is also distinguished the of integration meetings promoted by similar entities, that provides debates among stakeholders on to the sugar-energy sector (R2 and R3). As it is explained by Crane and Livesey (2003), the dialogues are considered as a strategy that promotes partnerships and contributions in corporate environments. Concerning the regularity of these meetings, they occur monthly and bimonthly for two of them, and for three cases, biannually. The meetings occur with this frequency to argue diverse subjects of interests of the groups of power belonging to the sector. The regularity of the meetings is changeable; therefore it depends on the urgency of the subject. However there are also internal meetings, among employees of the organizations (R1).

All the respondents had been unanimous in conceiving and defending that there are real results from the dialogues, among them, which had stimulated for the adaptation to the institutional changes, in relation to the social and environmental factors, such as Figure 3 demonstrates.

Figure 3 – Effective results of the dialogues between stakeholders



Source: Research Data (2017)

Ahead of what was showed, it is possible to notice that in order to getting efficient results in the adaptation of the institutional changes, the dialogues are used by these groups of interests, as a strategic tool. As already explained for Azevedo (2010), the dialogues among Stakeholders collaborate for changes of view, commitments, attitudes and behaviors, in search of new chances, through the exchange of experiences, what as a consequence, modify the rules of the game of the institutional environment of the sector.

For four of them, the dialogues are appropriate, since they are objective, focused on seeking solutions for improvements in the sector and, that allows technology and knowledge transference. However, the dialogues are not yet entirely appropriate in terms of integration among the participants, as presented for two of the respondents.

No matter how hard the conflicts of interests are evidenced during the dialogues, all the respondents recognize that the dialogues are important, therefore tend to promote mutual respect between the participants and give base to create sustainable solutions. In common agreement, they also recognize the existence of differentiated levels of communications, but that they propitiate reasonable negotiations, without any confrontation.

Thus being, the results confirm the statement of Long and Arnold (1995) on the approach of the as emergent strategy in the organizations, which allows that the conflicts of interests between Stakeholders can be solved by an interactive and collaborative form (CHENEY; DIONISOPOLOUS, 1989).

Regarding the actions that are being developed for the improvement of sustainable practices of the sugar-energy sector of MS, in relation to social and environmental factors, the results are presented in Picture 4

Picture 4 - Actions developed for the improvement of sustainable practices

Interviewed	Social Actions	Environmental Actions
R1	Nursery, Schools, educational actions for the worker and his family by means of the availability of resources.	Garbage dump, in case of the local community is not being served by the municipal public power.
R2	Communitarian actions, with the local city hall, with schools, quilombola communities and local social diagnosis and professional qualification programs.	Attendance to the supervisory and control agencies. The respect to the norms and legal requirements of the environmental supervisory agencies
R3	Induction of the investment overflow for the community in the surroundings of the enterprise.	Decree nº 5,025, of 2004, where it institutes the Program of Incentive to the Alternative Sources of Electric Power (PROINFA). The other one is that we are revising and improving the Licensing Guide
R4	Not answered.	Not answered.
R5	Improvements in the conditions of agricultural and quilombola communities, through the reduction of the environmental pollution and indirect jobs generation.	Improvement of the exploitation and use of its by-products as vinasse, dry biomas and filter cake. They contribute for reducing fertilizers and insecticides use; generating electric energy and ethanol, reduction in the fertilizer use, respectively.
R6	On behalf of FAMASUL, in partnership with SENAR-MS, it is offered to the sugar-energy sector several courses, as NR-31, interpersonal relations, family and quality of life, besides the professionalizing courses of machine operation, implements and equipment.	On behalf of FAMASUL, in partnership with SENAR-MS, it is offered to the sugar-energy sector several courses, horse fly handling, environmental education in the field and solid waste handling in the rural property.

Source: Elaborated by the authors (2017)

In Picture 4, it is evident that five organizations possesses actions focused on local communities, such as schools, professionalizing courses, improvements in the quality of life, contributing directly in relation to the social matters. Concerning the environmental factors, the public official seeks an improvement of the licensing guide, and four of the respondents had demonstrated concern about serving to the supervisory agencies.

The organizations, since becoming more competitive in the market, need to meet the society requirements, which currently are pressuring and demanding of

good producing organizations the good practices in sustainability (MAZURKIEWICZ, 2005). In relation to social matters, all the participants agree that they are being developed in MS communitarian actions and with quilombola communities, professional qualification programs, educational actions for the worker and his family, amongst others.

Regarding the environmental issues, although some still judge the sector as a great enemy of the environment, currently, due to the scientific and technological advances, it had improvements on exploitation of sugar cane by-products, as vinasse, dry biomass and filter cake, as remarked by one of the respondents: “These people who before polluted the environment, now contribute for reducing the fertilizers and insecticides use and in the bioenergy generation” (R5).

The found results confirm that the approach of the dialogues, in accordance with Mazurkiewicz (2005) is a basic component of an autoregulatory process, supporting and fortifying the operationalization of the sustainable initiatives, once uprising social and environmental matters, besides politics among Stakeholders.

4.3 Characteristics of the Institutional Changes

The institutional changes for the sugar-energy sector of MS occur because the state is being identified in the national sugar-energy market as the new agricultural border, therefore it provides interesting returns to the investors and to the other economic agents involved, modifying the rules of the game (ESPINO, 2000; NORTH, 2006a). The research participants explain that this phenomenon is occurring due to junction of some factors, such as presented in Picture 5.

Picture 5 - Reasons for MS to be the new agricultural frontier of the sugar-energy sector

Respondents	Reasons for MS to be the new agricultural border of the sugar-energy sector
R1	There was a moment of expansion in the sector in a national level, in the 2000s. Favorable soil and climate conditions to the sugarcane plantation. Capacity of having favorable area structure, with a small number of great properties. There was a coherent vision of the state governments regarding the energy matrix. Necessity of the industrialization process in MS. Very strong agricultural vocation propitiated the investment, also on behalf of state government, in lines of financings and tax policies for the agroindustry (farming, cellulose, agro-energy, soybean improvement, refrigerating industries).
R2	Conditions of the favorable climate and soil for the sugarcane culture and industrialization. The territorial expansion of MS is come close to the one of SP. State with natural vocation for the agricultural businesses.
R3	Growth in recent years diversifying the products and area of main performance. In the last industry data, the sector represented 13% of the gross value of the production of the transformation industry, only being behind of the slaughtering industry.
R4	Package of public politics was institutionalized to promote the development of the sector in MS.
R5	Junction of several factors, however the land value, the possibility to use degraded lands, is the main of them.
R6	Due to the climate and geographic conditions, and the costs of tenant farming.

Source: Research Data (2017)

Ahead of the development of the sugar-energy sector in MS, that seeks to meet the sustainable practices, it was identified the chance to offer a by-product, ethanol, whose use diminishes the GHG emissions in the atmosphere, thus reducing the environmental impacts. Searching for improvement of the institutional environment of the sector, the participants understand that diverse institutional changes throughout the years were carried out, which generate consensuses and conflicts in relation to the actions focused on social and environmental practices.

As showed previously, during the process of data collection, it was sought the deepening on the evidence of the consensuses and/or the existing conflicts in relation to the social and environment factors, as Picture 6.

Picture 6 - Consensuses and/or of the existing conflicts in relation to the social and environmental factors

Continua...

	Consensuses related with environmental factors	**Conflicts related with environmental factors**	**Consensuses related with social factors**	**Conflicts related with social factors**
R1	Not more deforestation for the expansion of sugarcane planting.	Demarcation of State lands destined for the conviviality of the indigenous community.	The market keeps watch, controls and punishes the ones who are not meeting good production practices.	Intellectual dishonesty. Idealization of the things. Sugarcane planting in indigenous lands and this does not exist. The idea which the sector has enslaved and infantile work practices during the plantation and the harvest periods persists.
R2	Legislation that sets out the actions, in the national scope.	There is not any conflict.	There are works directed focused on indigenous ethnic group, when it is next to the community. There are works, however in a not integrated form.	There is not any conflict.
R3	Production of biofuels and the cogeneration of energy can increase the competitiveness of the industrial sector in MS.	Control and mitigation of inherent environmental risks to the production of the sector.	Cares with the development of the community in the enterprises surroundings.	Hiring local labor, but not always it is possible and many technicians come from other states.
R4	BIOSUL represents.	BIOSUL represents.	BIOSUL represents.	BIOSUL represents.

Picture 6 - Consensuses and/or of the existing conflicts in relation to the social and environmental factors

Conclusion

	Consensuses related with environmental factors	**Conflicts related with environmental factors**	**Consensuses related with social factors**	**Conflicts related with social factors**
R5	Questionings on emissions and other impacts of a monoculture, it is unanimous that this energy is friendlier with the environment than the other available ones.	Potential ground contamination and hydro collections with inadequate by-product discarding.	Generation of jobs, HDI of the cities which have mills, education and quality of life.	Horse flies impact the quality of life of the cattlemen, mainly of the small milk producers. Competition for the land and, real estate speculation.
R6	Concern on the environmental requirements. New Forest Code, from rural environmental database it becomes easier to identify and to supervise the fulfillment of these requirements.	There is not any conflict.	Attendance of the health requirements and security in the work, as well as for the full attendance of the labor law.	There is not any conflict.

Source: Research Data (2017)

As a result of the consensuses and existing conflicts in relation to the social and environmental factors, it was evidenced by the respondents that there are more consensuses than conflicts. From the answers obtained during the survey, it is clearly seen that the current conflicts are eased and it is because of the meetings carried out in order to promote the dialogues seeking solutions (GASPARATOS *et al.*, 2005; TEIXEIRA, 2013).

5 DISCUSSION

In the light to the showed, it is possible to conclude that there are dialogues among Stakeholders of sugar-energy sector of MS. It was also identified that to the dialogues approach in the institutional environment potentiate the search of consensuses between the participant agents, even though the interests among stakeholders are different. For this, the mutual aid among stakeholders becomes necessary, through logical partnership actions, and here in prominence, the dialogue processes among all the involved segments to the sector.

From the information of stakeholders, it can be affirmed that the dialogues carried out among them allow objective discussions in searching for effective solutions, including the concerns with the environment and social matters, as well as contributing for the aptitude of decisions before institutional changes and, amplify the possibility of opening of new sustainable perspectives for the sugar-energy sector of MS, characterized thus as sustainable dialogues.

The results of the analysis by category and subcategory had allowed verifying that the institutional environment of the sugar-energy sector is still being structuralized. Thus being, conflicts in the rules establishment for the sector are still verified, i.e., in accordance with the participants of the research, are necessary more sustainable dialogues so that the institutional improvement occurs.

However, at the same time, it was possible to identify forces of consensuses, which fortify the actions of who act in the sugar-energy market, what consequently comes fortifying the sector in MS. In this context, one of the positive results of the consensus was that there are sustainable practices of the stakeholders of the sector in MS, regarding social and environmental factors.

6 CONCLUDING REMARKS

It was about a current and relevant subject for the society, enterprise and academic environment, in view of that the sugar-energy sector development is both national and internationally, which had the recognition of new opportunities of sustainable practices that the sector can offer. In this study, the collections and data analyses had been directed to MS, therefore this is being recognized as the new agricultural border for the installation and production of new mills of the sector.

It was evident, by means of the results, that the concerns on the sugar-energy sector development are based on sustainable practices, such as, communitarian actions and also with quilombola communities, professional qualification programs, educational actions for the worker and his family.

In relation to environmental issues, even some still judge the sector as a great enemy of the environment nowadays; the scientific and technological advances had provided improvements in the exploitation of sugarcane by-products. As vinasse, dry biomass and filter cake, these, that before polluted the environment, now contribute for reduction in the use of fertilizers and insecticides and in the generation of bioenergy.

The main results of the analysis had shown that there are dialogues among Stakeholders of the institutional environment of the sector. These not only exist by themselves, but they are being considered for stakeholders participants in the research, as an important tool to arrive the efficient solutions, through the consensuses, exactly ahead of the different interests of the involved agents.

It was evidenced that the dialogues contribute for good social and environmental practices of the sugar-energy sector, by means the needs identification of each region and respect to the norms of protection to natural resources, having as effective result the more sustainable local development of the regions where mills had been installed in MS, that generate job and income

distribution, promoting an improvement in the quality of life of the collaborators, fomenting the ecobusiness. These combined factors, in accordance with Saunders (1996), are closed to what literature flame of sustainable dialogues.

The results of this study demonstrate that concerns about certain sustainable practices are adopted among stakeholders of the sector in the state and the approach of sustainable dialogue is practiced together to promote actions in order to solve these questions and also seek to consensuses between the dilemmas of interests, even though they are diverse, among the agents. It becomes evident, thus, that once negotiating these conflicts, real solutions are generated to this sector, promoting in this manner the institutional environment structuring.

The results of this research had limited to the analysis of the answers, on qualitative nature, of six respondents who represent stakeholders of the sugar-energy sector of the state. It is also possible to emphasize that the process of collection of data by means of face-to-face interviews allowed to get more information for analysis, in relation to the collection made by another manner when sent to the respondents, therefore when interviewed it was possible to understand the discussions, to live deeply how decisions are taken and in what way the agreement is achieved.

For future researches, still in this subject, the use of the quantitative method is suggested, in the sense of measuring statistically the effectiveness of using the approach of sustainable dialogues, with a bigger number of effective respondents.

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