

Article

Formulation of Public Policies: Governance Reasons for the Low Efficiency in the Brasília Solar Program

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ABSTRACT

In this article, the authors investigated the governance involved in the formulation process of the Brasília Solar Program (PBS). The PBS engaged forty entities in a partnership for the generation and use of photovoltaic solar energy in Brasília. The methodology involved the use of document techniques and semi-structured interviews conducted between 2017 and 2018. The study revealed that the number of entities participating in the formulation of the PBS was lower than expected, which can be attributed to the centralized decision arrangements and to low autonomy. The actors involved demonstrated homogeneity in the interpretation of the objectives and in the justifications of the program. The PBS adopted unilateral monitoring mechanisms that hindered the participation of the actors and was not able to provide channels for the resolution of conflicts and for the application of penalties for free rides.

Keywords: formulation of policies; governance; ostrom governance; Brasília solar program

RESUMO

Neste artigo os autores investigaram a governança no processo de formulação do Programa Brasília Solar (PBS). O PBS engajou quarenta entidades, numa parceria em prol da geração e do uso de energia solar fotovoltaica em Brasília. A metodologia envolveu o uso de técnicas documentais e de entrevistas semiestruturadas, realizadas entre 2017 e 2018. O estudo revelou que o número de entidades participantes na formulação do PBS foi menor do que o esperado, o que pode ser atribuído a arranjos de decisão centralizados e de baixa autonomia. Os atores envolvidos demonstraram homogeneidade na interpretação dos objetivos e nas justificativas do programa. O PBS adotou mecanismos de monitoramento unilateral que dificultaram a adesão dos atores e não foi capaz de proporcionar canais de resolução de conflitos e aplicação de penalidades aos caronas.

Palavras - chave: formulação de políticas; governança; ostrom governança; programa Brasília solar.



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1. Introduction

Throughout its history, Brazil has specialized in producing electricity by exploiting its generous water resources in a run-of-the-river movement (Burrier 2016). This context directed the characteristics of its electrical matrix for the generation of energy from hydroelectric plants (Empresa de Pesquisa Energética 2017).

If on the one hand, hydroelectric power plants have long ensured the country's electricity supply and almost universalized the service throughout the country, on the other hand, this practice has been increasingly questioned due to its severe socio-environmental impact, its cost, and its fragility in the context of climate change (Callegari et al. 2018). In the medium- and long-term future, it is reasonable to assume that water sources will not be the stable, safe, strategic, and guaranteed option for providing electricity required by the country (Schaeffer et al. 2012), at least not with the emphasis that it always had on our electricity matrix.

The Federal District understands this risk and is acting to mitigate it by legislating policies that encourage the use of renewable energies that would help reduce the dependence on hydroelectric plants and on thermal power plants (Distrito Federal 2012). The realization of this policy occurred with the Brasília Solar Program (Programa Brasília Solar - PBS). The PBS was formulated with the intention of encouraging the generation and use of photovoltaic solar energy in public buildings in Brasília, promoting sustainable energy generation, and projecting the theme of climate change into the local public agenda. The first articulations around the PBS occurred in 2015, when the Secretariat of Environment of the Federal District (Secretaria de Meio Ambiente do Distrito Federal - SEMA/DF) established the Brasília Solar Working Group (Grupo de Trabalho Brasília Solar - GTBS). The GTBS took up the responsibility of promoting the collective implementation of the PBS by leading and encouraging forty entities of different profiles to work in partnership to stimulate the production and use of photovoltaic solar energy (Distrito Federal 2016).

The debate on the public provision of electric energy has been treated in the literature under different theoretical approaches (Koberle et al. 2018; Naus et al. 2015; Abers & Keck 2009). For the purposes of this analysis, the public policy approach was adopted, more specifically, the governance approach (Araral & Wang 2013; Lam 2011; Ostrom 2003). This theoretical-methodological option was based on the multifaceted, complex, and plural nature of Brazil's electric energy policy, whose implementation demands the involvement and representation of different sectors of civil society. In this context, although there is a formal coordination of the policy by the government representatives, the relations of interdependence, exchanges, and sharing of resources between the participating actors are translated into interactions that are determinant for understanding the directions taken in the process of policy formulations (Fischer 2017; Bevir & Rhodes 2016).

Despite GTBS's potential to promote the speed and growth necessary to implement the program in discussion, structures with this format may present challenges related to divergent interests, inconsistency of objectives, communication failures, distorted supervision, and fragmented coordination, which are elements constituting an important field of study for understanding the process of formulating public policies.

In this sense, the authors sought to answer the research question that guided the study: What are the characteristics of governance established for the coordination of the various actors involved in the formulation of the Brasília Solar Program? They assumed the general objective of analyzing the governance in the PBS formulation process implemented in Brasília/Federal District/Brazil. Besides the general objective, the specific aggregated objectives were (i) to map the main actors involved and their understandings about the program and (ii) to analyze the mechanisms for monitoring, conflict resolution, and sanctions instituted for the PBS.

The work was structured in six sections, including the introduction. The next section presents the literature review, followed by the presentation and contextualization of the PBS and the methodological paths adopted by the work, followed by the results and discussions and the final considerations.

2. Public Policy and Governance

Public policies can be defined as government decisions carried out collectively, politically, and institutionally to resolve problems of public interest (Peters & Zittoun 2016). Theorists in this area usually study public policies from the temporal/sequential perspective of processes or stages, although there are many criticisms regarding such a perspective (Kingdon 2014; Weible & Sabatier 2017). The



set of processes is called a public policy cycle and it is integrated by schedule creation, formulation, implementation, and evaluation (Howlett et al. 2013).

The formulation of public policies refers to the design of the policy, that is, to the definition of the elements of operationalization, whether instrumental or symbolic (Capella 2018; Zittoun 2014). At this stage, decision-makers define the course of action by outlining objectives, goals, lines of action, instruments, and mechanisms that establish possible solutions to a previously recognized public problem. Thus, the structures, processes, actors, and alternatives responsible for resolving public problems take shape.

In addition to the definitions above, formulation of policies happens after investigating the influence of the various actors,¹ their ideas, their interests, and their institutions, collectively constituted, which direct their behavior in moments of decision making and in choices among available alternatives (Weible & Sabatier 2017; Ostrom 1986). In this sense, studies on governance tend to be added to the research on formulation of policies (Araral & Amri 2016).

For the purposes of this work, governance is understood as the ability of actors to manage their resources through institutional conditions to make them more effective, efficient, and stable over time, thus avoiding their exhaustion (McGinnis 2011). The resources that are being addressed in the article are related to “social capital,” which involves individual and collective decisions regarding the establishment of norms of trust and reciprocity in the governance of the processes of formulation of policies. Thus, they are understood as common resources (Dolsak & Ostrom 2003).

In this theoretical perspective, the concept of governance is connected to the appreciation of institutional elements and to the concept of institution itself (Ostrom 2005; Ostrom 2010). The theoretical institutional outline contemplates several currents that see institutions as inducers of behavior and frames the studies of governance proposed by the work in a group of institutionalists known as *Rational Choice* (Shepsle 2006; Slaev & Collier 2018).

In this sense, institutions are considered rules in use and can be defined as a “set of working rules that are used to determine who is eligible to take decisions in a given arena, what actions are allowed or not, what rules will be used, what procedures will be followed, and what compensations should be given to individuals” (Ostrom 2003, p. 51).

In this perspective, the analysis of institutions involves understanding the rules followed by actors working in a group to justify and explain their actions to others in the group. Institutions act as the main guiding instrument of repetitive and structured interactions between actors (Ostrom et al. 1994). Therefore, producing positive results in governance is directly related to the capacity of the actors to organize and modify the institutions that govern their behaviors.

The systematization of several empirical cases that began in the 1980s (Panel 1986) provided to governance studies an elaborate set of rules, known as the *main design*, which helped in the understanding of successful cases in the collective organization of actors (Wall 2014). In general terms, the *main design* is configured by:

- *Well-defined boundaries*: a clear and precise definition of the actors involved and of the institutional environment in which these actors will operate;
- *Coherence between the rules of appropriation and provision for local conditions*: a definition of rules for the context in which they will be applied, since the established norms reflect the specific characteristics and particularities of each case;
- *Collective decision-making arrangements*: an implementation of the rules and the power for them to be modified by the actors who are directly affected by them, a condition that tends to generate a greater collective commitment, when compared to situations in which the rules are established by external agents;
- *Monitoring*: creation of a set of mechanisms to monitor the quality of the resources and of the activities of the collectively engaged actors;

¹Actors are individuals or organizations that possess critical resources of political, economic, ideological, organizational, or social power in a given reality or context. Their use in the article will accompany the understanding of Ostrom (2003). In parts of the article, the word actor is used as a synonym to the word “entity.”



- *Gradual sanctions*: the development of instruments of repression for actors who violate the rules, based on the context and severity of violation;
- *Mechanisms of conflict resolution*: the creation of formal or informal structures with the objective of solving problems in the interpretation of the rules and in the relationship between the actors involved;
- *Minimum recognition of organizational rights*: the establishment of internal rules, produced by the actors themselves and recognized by external authorities, in a move of consent and approval;
- *Alignment and intersectoral articulation*: the production of coordination mechanisms capable of involving different actors operating at multiple levels and at distinct decision centers.

Therefore, the institutional elements and debates allowed governance to enter the field of formulation of public policies (Araral & Amri 2016) and be considered a model of analysis of public policies focused on the formulation of policies (Birkland 2015; Weible & Sabatier 2017). In the case analyzed in this article, constituent elements of the *main design* were observed in the governance environment produced in the Brasília Solar Program to verify coordination among the different actors involved in the program. The next section will therefore outline the general PBS parameters.

3. Contextualization and Presentation of the Brasília Solar Program

The context of the proposal of the Brasília Solar Program (PBS) involves two technical facts concerning electricity supply in the Federal District.

The first is that most of the energy consumed in the Federal District is generated by hydroelectric plants that are located very far from the capital - 800 km or more. The Furnas hydroelectric plant (MG) contributes to 80% of this supply, while the Itaipu (PR) provides the remaining 20% (Secretaria de Estado do Meio Ambiente do Distrito Federal 2016). Electricity generation through rivers, which is common in the country (Empresa de Pesquisa Energética 2017), generates losses in the transmission and distribution of energy, besides making consumer regions susceptible to climatic disturbances that occur close to the generating sources (Sin Chan et al. 2014) with significant socioenvironmental impacts, as previously mentioned. In the Federal District, the electricity bills increased by an average of 15% in the last two years, driven by the country's water crisis and the use of thermoelectric plants to generate energy (Metrópolis 2018). The impact of this electricity model is seen in the consumer inflation rates and the district government accounts, since public buildings - hospitals and schools - are the largest energy consumers in the country's capital.

The second important technical fact to contextualize the PBS formulation is the capacity of the Federal district to generate photovoltaic energy. The Federal District has a solar irradiation level above the national average, besides factors driving electrical production by photons such as adequate average temperature, low humidity, and low rainfall index. Its potential in this field is one of the best in the Brazilian territory. Thus, the installation of photovoltaic panels on the roofs of three administrative regions of the Federal District - Plano Piloto, Lago Sul, and Lago Norte - would help produce sufficient energy to supply the entire territory of the capital, the country's third largest metropolis with more than three million inhabitants (WWF-Brasil 2016).

From this perspective, the Government of the Federal District presented the Brasília Solar Program (PBS) established by Decree nº 37.717/2016 for the use of solar radiation in the capital as one of the instruments and alternatives for tackling the national electricity crisis. The PBS had six objectives: (i) to promote the implementation of solar energy production systems; (ii) to promote the installation of solar energy production systems in public buildings such as schools, universities, and hospitals; (iii) to encourage the establishment of photovoltaic panel manufacturers; (iv) to produce a favorable environment for the creation and establishment of companies providing installation and maintenance services of solar energy production systems; (v) to promote the qualification and training of human resources to act in all areas of solar energy production; (vi) to attract investments and cooperation for the transfer of competitive technologies for solar energy in the Federal District (Distrito Federal 2016).

The referred decree pronounces that the operationalization of the PBS, that is, the choice of structures, processes, and actors, would be the responsibility of the Working Group of the Brasília Solar Program (GTBS). It is therefore the GTBS's responsibility to elaborate on the proposals and to direct the actions for implementing the program. The GTBS comprises representatives of the State Secretariat for the Environment, the State Secretariat for the Chief of Staff, Institutional and Social Relations; the State Secretariat for



Planning, Budget and Management; the State Secretariat for Education; the State Secretariat for Culture; the State Secretariat for Territory and Housing Management; the State Secretariat for Public Security and Social Peace; the State Secretariat for Health; the State Secretariat for Economy and Sustainable Development; the State Secretariat for Labor, Social Development, Women, Racial Equality and Human Rights; the Energy Company of Brasília; and the Brasília Environmental Institute (Distrito Federal 2016).

The coordination of the GTBS is carried out by the representative of the State Secretariat for the Environment, who bears the responsibility for convening members of civil society organizations, class associations, and notorious people as part of the group. Currently, 20% of the GTBS is composed of representatives from civil society and the academia; 35% of representatives are from companies and institutes, and 45% belong to the government, making it a total of forty entities officially involved in its formulation (Secretaria de Estado do Meio Ambiente do Distrito Federal 2016).

The next section will detail the research methodology.

4. Methodology

This research is classified as a qualitative case study (Silva 2018; Gerring 2006). The methodology for field data collection included strategies of document analysis and interviews with key actors of the GTBS. These were conducted between 2017 and 2018.

For the document analysis, the record of three meetings of the GTBS were used [there were five meetings until the collection of field material, but only three had records], the attendance lists of these meetings, the PBS draft Decree n° 37.717/2016 that established the program, as well as reports published in news portals having a wide circulation [focused on *Correio Brasiliense*, *Jornal de Brasília*, and *Portal G1*]. In addition to the document analysis, five key actors from the following entities were interviewed [interviewee 1: State Secretary for the Environment of the Federal District; interviewee 2: University of Brasília; interviewee 3: civil society; interviewee 4: voluntary sector; and interviewee 5: private sector]. They were selected by the snowball and exhaustion technique. All interviews were conducted in Brasília, recorded, and transcribed immediately after the interview process. The transcribed material was made available to the interviewees so that they could validate, insert, or modify their desired parts.

These data were analyzed by interpreting the contents (Bardin 2011). The contents of the interviews and the documents were categorized as per the first six criteria described in the governance theory, which are (i) well-defined boundaries; (ii) coherence between local rules and conditions; (iii) collective decision-making arrangements; (iv) monitoring; (v) sanctions; and (vi) conflict resolution mechanisms. The results and discussions are presented in the next section.

5. Results and Discussion

This section presents and discusses the results of this study within the scope of the proposed research objectives, which were directed to the process of formulating the PBS, to the understanding of the main actors about the program, and to the mechanisms of monitoring, conflict resolution, and sanctions adopted in the PBS.

The presentation of the results and the discussion of the theme are organized according to the following points: (i) definition of the actors involved and understanding of the objective and justification of the PBS in reference to the first three items of the *main design*; and (ii) monitoring, mechanisms of conflict resolution, and sanctions, in reference to the other three *main design* items selected as the object of analysis.

5.1. Definition of the actors involved and understanding of the objective and justification:

In general, we noticed that the PBS has a significant number of actors (entities) acting officially in favor of its formulation and a much smaller number willing to collaborate more directly and frequently in the daily activities of the program. Effective contributions to the PBS were made more incisively by the University of Brasília (UnB), the Brazilian Solar Energy Association (Associação Brasileira de Energia Solar Fotovoltaica – ABSOLAR), the NGO WWF-Brazil, and the State Secretariat for the Environment itself (SEMA), together with the partnerships that it was able to make inside and outside the district government (Interview 4). Other actors participated in a timely manner, based on the request for some type of specific demand, such as the case of the Brasília Bank (Banco de



Brasília, BRB), representatives of training centers, entities that presented successful cases in the production of photovoltaic energy, and non-governmental organizations with expertise in renewable energy.

The interviews and minutes showed that the GTBS meetings, in the beginning of its activities in 2015, were carried out with a broad participation of civil society, the voluntary sector, and local companies interested in the program, in the results and impacts to be generated by the decisions taken collectively. The minutes identified meetings with an attendance of up to one hundred people, many of whom were not part of the group of forty entities that constitute the GTBS. Part of this participation derived from the vision of the district managers, when they understood that the participation of civil society actors is an important mechanism for the efficiency of the PBS and that there would be no conditions for the materialization of the proposals without a collective engagement (Interview 1).

Even so, social participation started to reduce throughout the existence of the program, with meetings gradually being conducted with a reduced number of participants, reaching less than thirty people registered in the minutes. This number, added to the profile analysis of the participants, demonstrates that the group of forty entities that constitute the PBS dissipated over time, and no more than six actors were left responsible for performing tasks and suggesting ways to achieve the program.

Even with the reduced presence of participating entities, and perhaps for that reason, what was found in the field indicates the existence of a synergy in the understanding of those involved regarding the PBS. As shown in the legislation, the interviewees and the statements recorded in the minutes pointed to a program clearly aimed at encouraging the production and use of photovoltaic solar energy in the Federal District. Terms such as *creating incentives*, *promoting actions*, and *stimulating the use* were constantly noticed in the field work. At the same time, there was an interpretative coherence regarding the justification for the formulation of the PBS. The interviews and minutes demonstrated the clear perception that the program is contextualized in an electric safety environment for the Federal District and in the local capacity to produce photovoltaic energy:

[...] the main focus of the program is to sensitize the population, entrepreneurs, non-governmental organizations and, why not, authorities, to insert this technology (photovoltaic) in the Federal District. There is the issue of the climate crisis that is caused, and I will not get into the controversy, but it is caused by natural actions as well as anthropic actions with emission of greenhouse gases, and so, solar energy comes as a mitigation of this, that is, if we start to produce the energy necessary for our human activities through solar energy, through photons, we will reduce our impact (...) [G]lobal warming is causing, according to studies, a more drastic effect on the climate (...) with the decrease of rainfall and the increase of temperature in a large region of Brazil. See that we are already having problems of water supply (in Brazil) (Interview 1).

The results noticed in the field show some interpretations and relevant theoretical implications. One of the reasons for the apparent dispersion of the PBS actors may be related to how participants are involved in the decision-making process (Interview 3 and 4). The collective decision-making arrangements within the program were constituted in a consultative way, reducing the power of the participants and centralizing the fundamental and therefore deliberative decisions in the SEMA and other district bodies that are inserted in its formulation process. The importance of the participation of civil society actors, who saw themselves as less relevant and less empowered than what they could be, was thus dissipated, leading to the emptying of meetings and of the GTBS as a whole. In this regard, no matter how much the Secretary for the Environment spoke in favor of joint and partnership work (Diálogos Energéticos 2016), what was noticed in the interviews was an attempt of coordination through a more centralized process and with a well-defined command center, leaving few possibilities for collaboration in the collective decision arenas and in the creation of decentralized and polycentric environments.

Collective decision-making arrangements allow greater engagement and cooperation of the actors, when they have equal powers in the decision-making process in a collective action environment (Zeynep & Gokhan 2015) or when they notice that the distribution between costs and benefits of the participation is fair (Hayes & Murtinho 2018). On the contrary, when they observe that the decision-making process is not shared, the actors tend to present a less inclusive, less participative, and less trusting spirit, causing a tendency of the relations to be driven by less efficiency and less ability to solve collective problems (Margerum 2011).



Nevertheless, we can interpret this model of social group management coordinated by the SEMA as a way to seek the best efficiency of the relations and of the collective results, as the district secretary opted for coordination through a “small group,” with the purpose of increasing the individual attraction of each GTBS participant in relation to future benefits (Olson 1965), or imagining that the high costs of participation would produce significant limitations on participatory governance (Freeman & Anderson 2017) or that participation does not necessarily mean the empowerment of the actors (Levine 2017). From this perspective, the logic of collective action used in the decision-making process of the GTBS would be of self-interest and maximization of individual results and, to a lesser extent, a logic that emphasizes reputation, reciprocity, and trust among the actors involved in the program (Capelari et al. 2017; Ostrom & Walker 2003).

The homogeneous interpretation of the rules, as noticed in the interviews, points to the definition of the institutional boundaries in which the actors operate within the PBS. The organization of boundaries is one of the constituent elements of the *main design*, since it collaborates with the delimitation of the actions and with the orientation of the interactions of the actors (Gray 2016; Ostrom 2003). The assimilation of the rules of the game guarantees a more cohesive governance structure, in which the presence of conflicts and free riders is less common, although not absent (Ostrom et al. 1994). Therefore, the fact that the actors involved in the GTBS are aware of the rules that represent the objectives and the reasons for the formulation of the program allows, but does not guarantee, that they overcome collective dilemmas (Hardin 1968) and create an institutional environment in which cooperation and coordination prevail in favor of achieving the common objectives proposed by the PBS.

The actors’ assertive understanding of the rules goes through the accommodation of local needs in the body of the legislation, an element noticed in the PBS creation decree, in reference to the principle of coherence between the rules of appropriation and provision with local conditions proposed by the *main design*. This principle helps in the legitimacy, predictability, and compliance of the rule (Ostrom 2003), which are not different from those involved in the PBS governance and in other practical examples (VOGT et al. 2006; Tucker 2008; Baerlein et al. 2015). The adherence to the rules of the local context in which the actors are inserted implies their ease of acceptance and compliance, reducing the costs of keeping them in use, since they tend to be incorporated into routines and social habits (Ostrom et al. 1994).

5.2. Monitoring, mechanisms of conflict resolution, and sanctions:

The analysis of the mechanisms of monitoring, conflict resolution, and sanctions in the GTBS showed that, while monitoring practices were carried out especially by the public agencies linked to the PBS through the channels of communication and coordination, the mechanisms of conflict resolution and the application of sanctions were not identified as methods of building and maintaining governance among the actors in the group. If on the one hand, the monitoring of the practices and activities attributed to each entity was conducted and, to some extent, evaluated in terms of coherence, quality, and viability of the proposal, then on the other hand, the creation of institutions that mediated or restricted the actions of the free riders was not observed.

The main mean of expression of the monitoring mechanisms of the program was presented together with the channels of communication and the coordination structure implemented in the routine of activities of the GTBS. Communication among the actors was conducted through channels that were very simple but functional. According to the interviews, the materials discussed and presented in the meetings were immediately available on collective and online platforms, with quick access and with relative sharing dynamics. Some meetings of the GTBS were broadcasted in real time so that those participants unable to be present in person could contribute online. In addition to seeking homogeneity and transparency of the information produced and disseminated among the actors, these information transfer platforms allowed the control of the actions of the actors involved in the collective action of monitoring the quality of the dialogue and supervising the delivered products. In this way, the technology involved in the communication channels and in the data availability environment operated as a management platform capable of making available the actors’ routines and of showing their capacity to develop, fulfill, and participate in the assigned activities. This mechanism was exposed by one of the interviewees as follows:

[...] they have an email group; they have now created a WhatsApp group, but they have an email group.

When there are meetings, they invite everyone to the meetings, and they make the minutes of the meeting



and send them by email to everyone; they get everyone's name, email, and cellular phone number from the attendance list and share them with everyone too [...] [T]he presentations that are made at the meetings are also shared [...] so much that when we need to talk to someone from the Secretariat for Education, for example, we take the information on the attendance list of those who attended the meetings. In this point, I think they are very transparent and organized (Interview 2).

The monitoring of the activities of the actors was also linked to the coordination of the activities of the GTBS. Such coordination was carried out mostly by the SEMA, as provided by the PBS creation decree. This coordination included, among other activities, the definition of the tasks included in the program, the distribution of the functions, the organization of the meetings, the search for partnerships, and the receipt, evaluation, and validation of the products. The SEMA facilitative position promoted the monitoring of the functionality of structures and social relationships, since it was responsible for producing a set of rules and for inducing the way in which these rules could be applied in the orientation of relations and activities that were internally incorporated into the GTBS. Reports of the constant presence of the Secretary of the SEMA in the meetings, its position, actions, and mediations demonstrated the leading role and coordination functions that the entity had in conducting the PBS (Interviews 4 and 5). It was, therefore, from this protagonism of the SEMA in the organization and in the directions of the group that the monitoring was established internally in the program.

The presence of mechanisms to monitor the activities of the collectively engaged actors was not accompanied by structures of conflict resolution and sanctions to the GTBS members, although several reports of internal disagreements were presented by the materials collected in the field (Interviews 2, 3, and 4). The main one was in relation to the resistance of the Energy Company of Brasília (Companhia Energética de Brasília, CEB) to the ideal of the decentralized and renewable transmission preached by the PBS that, in its understanding, tends to undermine its performance as the main and only distributor of electric power of the federal capital. Initially, the CEB, which is part of the representatives of the bodies of the Federal District, according to the PBS creation decree, marked its opposition to the program by not making available any representatives to the initial meetings. According to interviews, it was necessary for the Secretary of the SEMA to intervene with the Governor so that the company could make available a representative to participate in the meetings. After the first demonstration of dissatisfaction with the program, the CEB, obliged to participate in the meetings, was acting reluctantly and in many moments with animosity, which are typical characteristics of the free rider profile:

[...] the CEB is, by the way, an interesting chapter, because it has resisted a lot, not even participating in the first meetings. The Secretary had to call the attention of the Governor so that they would participate [...] [T]hey participated grumpily, resisting. Incidentally, they act with a lot of resistance. They are notorious and have a wrong position; they act like this because they think that there will be a change in relation to the issue of the distributor [...] (Interview 3).

Even with the presence of these conflicts among the state bodies themselves, there is no evidence or even reports that there are, even informally, mechanisms for resolving conflicts and applying sanctions to the actors involved with the PBS. What the SEMA proposed to do was to force the presence of the CEB in the meetings and, at the same time, not count on it for the structuring activities of the program. The role of the company was much more reactive and consistent with a profile of apathy and inertia than collaborative and ready to produce mutual gains in collective action. The absence of these mechanisms for the resolution of conflicts and punishment was most clearly felt by the CEB maintaining its behavior throughout the program's trajectory, in which the absence of an efficient incentive structure has led to its remaining in a non-cooperative decision-making position and, therefore, suboptimal.

In the context of the discussions, the field work showed that the monitoring of the activities of the actors involved with the GTBS was operative to the extent that the communication channels and coordination activities of the program served as platforms to control the activities developed in the GTBS. In contrast to what was originally proposed in the *main design* (Ostrom 2003), however, the activity monitoring was not constituted in a collaborative way by the members involved in collective action but was reserved to the coordinating body of the activities of the GTBS, that is, the SEMA. At times when actors make unilateral decisions about how and



how much to invest in monitoring, the theory shows that the investments will not be sufficient (Powers et al. 2018), and therefore, the cooperation within the groups tends to be hindered. In this way, the creation of monitoring arrangements seems to be a collective and collaborative task of second order, which requires the participation of all those involved in order to reduce the perception of the costs of monitoring, as well as achieve a greater compliance with task executions (Tenzing et al. 2018; Ostrom 2003), besides helping to create a feeling, by the entities, of greater efficiency in carrying out the activities (Melville et al. 2017; Burchell et al. 2016).

The absence of conflict resolution mechanisms and of sanctions was apparent in the governance environment of the GTBS. It is probable that this deficiency was an important element to explain the apathetic and reluctant performance of the CEB, in addition to bringing reflections in order to understand the maintenance of the reactive behavior of the company throughout the formulation of the program. It seems like the institutions engendered in the GTBS were not enough to produce incentives that would motivate the CEB concerning a movement toward cooperation. Therefore, the institutional environment led the relations of the two actors - CEB and SEMA - to the Nash equilibrium and to the sub-optimal results in the social game (Axelrod 1984). Theoretically, the application of sanctions and the creation of conflict resolution structures are educational measures to correct the trajectory of certain actions or behaviors that may damage the progress of the program (Ostrom 2003). When implemented, these two mechanisms can direct individual and collective positionings toward a cooperative environment and lower payoffs (Perc 2012; Boyd et al. 2010), while distancing these positionings from the atmosphere of “collective tragedies” (Chaudhary 2015), represented in this case by the poor functioning of the GTBS and, consequently, by the incomplete implementation of the PBS.

6. Final Considerations

In the process of formulating public policies, when choosing the structures, agents, and processes capable of solving public problems, the PBS governance was characterized by openness to the participation of civil society, by coordinating the actions of several actors of different profiles and interests. The governance proposed by the PBS, however, shows signs of being less participatory and inclusive than it needed to be in order to build incentive structures favorable to cooperation. Its centralized format, of low transfer of autonomy to the actors involved and of unilateral creation of ways of group monitoring, caused the emptying of the GTBS and, to a certain extent, the reduction of the legitimacy of the program within the district government. In addition, the PBS was unable to create mechanisms for resolving conflicts and applying sanctions, which led to the maintenance of actors within the group with free-rider profiles, making it difficult to achieve the objective established in the program. Although the actors involved in the governance were fully aware of the objectives and the justification of the PBS, demonstrating homogeneity in their understanding, the absence or misconduct of the other governance criteria analyzed seems to help in the understanding of low efficiency in the formulation of the program until now.

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