



Participatory management assessment in State Parks open for public visits in the state of Minas Gerais

Avaliação da gestão participativa nos Parques Estaduais abertos à visitação pública no estado de Minas Gerais

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ABSTRACT: Assessing and understanding participation effectiveness is fundamental to promote management excellence in a Conservation Unit. The central topic of this study is the Advisory Councils of State Parks open to public visits in Minas Gerais, and was written after applying a questionnaire that allowed making a participatory management self-perception diagnosis based on understanding the technically-defined duties for these councilors, as established in Federal Decree No. 4,340/2002. Through its autarchic body, *Instituto Estadual de Florestas*, the state of Minas Gerais is responsible for administering 42 Parks, 11 of which are the basis of this study for being considered open to the public and having adequate infrastructures to welcome and serve visitors. In this research, the councilors' strengths, difficulties, shortcomings and understanding in the “institutional”, “individual” and “functional” dimensions are evaluated through an adaptation of the technique called “*Medición de la efectividad del Manejo de Áreas Protegidas*”, conceived by Cifuentes, Izurieta and De Faria (2000). 127 participation instances were obtained from an overall scenario of 229 councilors. The results evidence predominance of the male gender (68%), urban areas residents (83%) and individuals with graduate studies (55%). Regarding the “institutional” and “functional” dimensions, the majority (56%) is not clear about the reasons for creating the Park in which they are advisory members. Unawareness is also verified in the fact that only 8% understand the reasons for the Conservation Unit to exist. Considering the methodology used, effectiveness of the Parks was assessed as with more than 50% of their councilors participating in this research, and their participation effectiveness was considered satisfactory. However, the

need for continuous actions is reinforced as a motivating factor for greater involvement of the counselors and local communities in management of the Parks, fundamental to achieving their main creation objectives.

Keywords: conservation unit; social participation; governance; effectiveness.

RESUMO:

A avaliação e a compreensão da efetividade da participação são fundamentais na promoção da excelência da gestão de uma Unidade de Conservação. Este estudo tem como tema central os Conselhos Consultivos dos Parques Estaduais abertos à visitação pública em Minas Gerais, e foi escrito após a aplicação de um questionário que permitiu realizar um diagnóstico de autopercepção da gestão participativa sobre o entendimento dos deveres tecnicamente definidos para esses conselheiros, estabelecidos no Decreto Federal 4.340/2002. O Estado de Minas Gerais, por meio de sua autarquia, o Instituto Estadual de Florestas, é responsável pela administração de 42 Parques, sendo 11 a base desse estudo por serem considerados abertos à visitação pública, possuindo infraestrutura adequada de recebimento e atendimento ao visitante. Nessa pesquisa avalia-se as potencialidades, dificuldades, carências e entendimentos dos conselheiros nas dimensões da institucionalidade, individualidade e funcionalidade por meio de uma adaptação da técnica denominada *Medición de la efectividad del Manejo de Areas Protegidas*, idealizada por Cifuentes, Izurieta e De Faria (2000). Foram obtidas, 127 participações, em um cenário total de 229 conselheiros. Os resultados evidenciaram a dominância do gênero masculino (68%), residentes em zonas urbanas (83%) e pós-graduados (55%). Nas dimensões institucional e funcional, a maior parte (56%) não possui clareza sobre os motivos da criação do Parque em que é membro conselheiro. Desconhecimento também em que, somente 8% compreendem os motivos da existência da unidade de conservação. Considerando-se a metodologia utilizada, avaliou-se a efetividade dos Parques com índice superior a 50% de seus conselheiros participando dessa pesquisa, e sua efetividade de participação foi considerada satisfatória. Entretanto, reforça-se a necessidade de ações contínuas como fator motivador para um maior envolvimento dos conselheiros e das comunidades locais na gestão dos Parques, fundamentais para que se alcancem seus principais objetivos de criação.

Palavras-chave: unidade de conservação; participação social; governança; efetividade.

1. Introduction

The central topic of this research is the Advisory Councils from the State parks open for public visits in Minas Gerais, by applying a digital questionnaire that allowed making a management self-perception diagnosis analyzing the counselors' strengths, difficulties, shortcomings and understanding in the “institutional”, “individual” and “functional” dimensions by means of an adaptation of the technique called *Medición de la efectividad del Manejo de Áreas Protegidas (Effectiveness Assessment in the Management of Protected Areas)*, conceived by Cifuentes et al. (2000).

As an important protection mechanism in Conservation Units (CUs), social participation, which

is officially represented by their Councils, enables involvement of the local communities in their management and should be increasingly encouraged and valued in these protected areas because it enables greater assertiveness in the decisions and articulation between government and society, thus becoming a space for power redistribution and improvement of the decisions and debates for the sake of the territory (Bezerra, 2018).

The National Conservation Unit System (*Sistema Nacional de Unidades de Conservação*, SNUC), created by Federal Law No. 9,985 and dated July 19th, 2000 (BRAZIL, 2002), established the preservation devices and regulated sustainable use of various Brazilian areas with relevant natural characteristics, in addition to regulating management

of the different types of Conservation Units in the country. In addition to the guidelines for participatory management in these areas, it standardized the classification according to international criteria and defined the “parks” as places intended for preserving representative areas of the natural ecosystems with ecological value and scenic beauty, habitats to diverse fauna and flora species and with sites of scientific, educational, recreational, historical, cultural, touristic, landscaping and spiritual relevance.

The SNUC also established that any and all CUs from the “Park” category should have an advisory counselor to be presided by its managing body, assembled by public and civil society representatives. Decree No. 4.340 of 2002 (BRAZIL, 2002) regulates Councils, highlighting the counselors' functions and the importance of their participation as a way to democratize the public territory, allowing greater assertiveness levels in the decisions and articulation between government and society.

The effectiveness of a group is the result of a wide range of variables, with the types of tasks that are developed, knowledge about the duties, environmental factors, and even the group's psychosocial traits among the main ones. Prestes et al. (2018) present effectiveness as a complex construction action that, among other things, is related to the assessment of the extent to which an organization adequately fulfills its mission, reaches its major objectives and adapts to new and constant changes in the environment. Thus, assessing the effectiveness of Conservation Units and of the systems involving their management becomes increasingly important, as it eases identifying the threats, problems and mainly the difficulties, leading to the definition of proper measures to be adopted in their resolution.

Kinouchi et al. (2012) assert the importance of effectiveness in management processes, which seek to indicate actions that should be developed and that come to meet the administration needs, so that they allow their objectives to be reached. The contributions, which can be due to effectiveness assessment methods, impose challenges, mainly in public management regarding how to incorporate them into the plans and in the way to make decisions. This promotes the sequence of a management cycle that, in fact, is focused on the particularities and based on the indicators for effectiveness.

In this context, assessments are probably the main managerial tools in an organization to determine the effectiveness of a group. To achieve its goals, an organization needs to schedule ways to measure its administrative performance with precision. Dutra & Ensslin (2005) understand that assessing organizational performance consists in assigning value to what an organization considers important given its strategic objectives, which characterizes that, at the performance level, the organization itself seeks to promote improvement actions.

Having opened new channels for the participation of society with the State changed the relationships between both actors. This fact took place more intensely from the 1988 Federal Constitution and, consequently, the actions and manifestations shifted from a reactive and responsive State stance to a more participatory one, increasing the options and possibilities to solve situations aimed at the collective, in addition to expanding legitimacy (Abrahão & Asmus, 2017).

The concept of Environmental Governance defined by Teixeira (2019) highlights the importance of the institutions' involvement, allowing participatory management, with collective and discussed

upon decisions for the sake of common good. Ideal governance ensures balance between the parties (civil society and public institutions) and strengthens the decisions, as it awakens responsibility among the actors (Schacht et al., 2015).

According to Abrahão & Asmus (2017), most of the CUs in Brazil have governance problems related to the absence of instruments assisting the legal and political basis, such as territorial ordering, the existence of a management plan, an explicit buffer zone, an active managing Council and funding regularization, among others. Greater participation of the Councils contributes to reducing the difficulties inherent to managing the protected territory, democratizing their decisions and mainly strengthening local knowledge, thus contributing for the participation of various society segments and making them be listened to in managing the protected area (Araujo, 2012; Ribeiro et al., 2010).

The State Forest Institute (*Instituto Estadual de Florestas*, IEF) is the Minas Gerais government autarchic body linked to the Environment and Sustainable Development State Department (*Secretaria de Estado de Meio Ambiente e Desenvolvimento Sustentável*, SEMAD), responsible for administering the State Conservation Units. The Parks considered open for public visits are those that have a system for visitor control and physical structures implemented, such as a support place for researchers, a visitors' center, a caretaker's office and lodging. They are distributed across the main regions of the state and mainly encompass the *Mata Atlântica* and *Cerrado* biomes, in addition to protecting lake caves and systems.

The aspects from the “institutional”, “individual” and “functional” dimensions exert impacts on the management exercised by a Council and on

the involvement of the local communities with the protected territory, which almost always have some conflict (Schacht *et al.*, 2015). Consequently, the objective of this research is to analyze the effectiveness of the Advisory Councils from State Parks open for public visits in Minas Gerais by making a participatory management self-perception diagnosis, considering understanding of the technically defined and self-perceived duties for control and improvement purposes.

2. Methodology

This research was developed in 2019 and allowed assessing in a general way the effectiveness of participatory management in the State Parks open for public visits in Minas Gerais, resorting to a qualification matrix that classifies participation effectiveness based on the values obtained into five management levels (Table 1).

The state of Minas Gerais is responsible for managing 42 Parks, 11 of which are considered as open for public visits (IEF, 2019). All counselors from the 11 parks under study received the questionnaire in digital format through a link forwarded via email, which was obtained directly from the management of each Park researched. In the answers obtained, no identification was requested from the counselors for them not to feel inhibited in including their responses.

Along the questionnaire, these counselors also had their sociodemographic profile characterized in terms of gender, area of residence and schooling, contributing to better identifying the profile of this category.

When identifying the self-assessments by gender and based on the paper by Carvalho et al. (2014),

it is identified that the social construction of sexual division establishes practical structures and conceptions that differentiate the world view. The counselors' city of residence was also surveyed, adopting rural and urban areas as options. Based on the Parks' location context, all this information is of major relevance for raising questions about the spatial dynamics in the territories researched. In relation to schooling, surveying it offers diverse and important information to understand the participation dynamics, representativeness, debates and dialogs within the subject matters and complexities inherent to Conservation Units.

The variables defined in the effectiveness assessment questionnaire reached the main duties or knowledge that counselor need to be effective in participation and management of the Parks, according to a psychometric scale (Likert). The duties considered were those established for counselors in Decree No. 4,340 dated August 22nd, 2002, which regulates the articles in the SNUC Law and that are related to management of Conservation Units, in the light of social participation, the difficulties, the understanding and the limitations of this participation, in order to define the questions of the questionnaire proposed, representing an adaptation of the methodology proposed by Cifuentes et al. (2000).

A total of 20 objectives questions were proposed with the same answer options, characterized according to the “individual”, “functional” and “institutional” dimensions. The answer options for each question were the same and each one corresponded to scores from 1 to 5. At the end, the scores were added up and a Total Score (TS) was obtained. This TS was divided by the number of counselors participating in the research in each

Park, thus obtaining a value corresponding to the Effectiveness Ratio (EfR). Based on Table 1, this EfR value classified each counselor's participation effectiveness

In each questionnaire, the options for the questions presented were as follows:

- 1 – Never.
- 2 – Rarely.
- 3 – Sometimes.
- 4 – Frequently.
- 5 – Always.

The individual matrix sought to show self-judgment about the each counselor's way of acting; the functional matrix dealt with understanding the duties within the Council; and the institutional matrix assessed comprehension about the Council's operation and the way in which they feel as participants.

According to the IEF (2019), the 11 State Parks considered open for public visits in Minas Gerais are the following: Ibitipoca, Rio Doce, Sumidouro, Mata do Limoeiro, Rio Preto, Lapa Grande, Pau Furado, Serra do Brigadeiro, Serra do Rola Moça, Itacolomi and Nova Baden. Figure 1 presents these Parks distributed in the Minas Gerais map, as well as the location of this state in the Brazilian territory.

In the State Parks whose counselors' participation reached at least 50%, it was possible to assess participatory management effectiveness using the methodology proposed.

50% was defined as the legal cutoff percentage from the assumption that the Councils have the indication of being equal between civil society and public organization.

TABLE 1 – Classification of the Advisory Councils used to define their participation effectiveness in the State Parks from Minas Gerais, Brazil.

| EFFECTIVENESS RATIO VALUE | PARTICIPATION CLASSIFIED AS |
|---------------------------|---|
| From 0 to 35 | Not satisfactory: The Council does not take part in the decisions and actions inherent to the Park. The counselors' knowledge about their functions is limited or nonexistent. There is no communication and the decisions are (mostly) imposed. It is a “Paper Council”; in other words, it only exists out of legal obligation. |
| From 36 to 50 | Barely satisfactory: Centralized administration, with scarce local participation. The Council is not active and knows little about its role for management. The managerial body fails to support participation and the Council does not get involved in the decisions. |
| From 51 to 75 | Somewhat satisfactory: Minimum understanding about their counseling role. They understand the importance of the Park but fail to use their information in environmental preservation and protection. They show average participation in the activities. Communication difficulties between the managerial body and the Council members. |
| From 76 to 90 | Satisfactory: Management is participatory and the counselors understand their role. The activities developed include participation of most of the counselors that show interest in understanding the projects and difficulties inherent to the Conservation Unit. The counselors know the Park's inclusion region and understand the reasons for its creation. |
| From 91 to 100 | Extremely satisfactory: The Council is active and mobilized. It proposes and performs relevant actions of interest for protecting the territory. Communication is through modern means. The local members and counselors took part in creating the norms and regulations. |

SOURCE: adapted from Cifuentes *et al.*

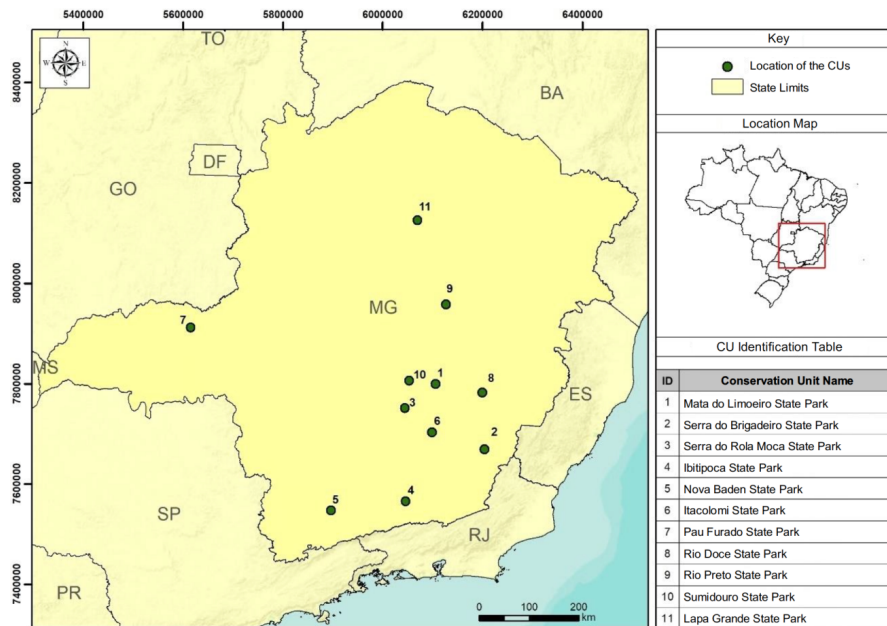


FIGURE 1 – State Parks open for public visits in 2019 distributed in the Minas Gerais map, Brazil.

SOURCE: the authors, 2019.

This research was approved by the Ethics Committee under opinion No. 3,626,763 dated 10/07/2019 and issued by the Southern Minas Gerais Teaching and research Foundation (*Fundação de Ensino e Pesquisa do Sul de Minas Gerais*, FE-PESMIG).

3. Data analysis and discussion of the results

According to the IEF, the state of Minas Gerais had 42 State Parks in 2018, in a scenario with 229 counselors. Of this total, 55.45% answered the questionnaire proposed, that is to say, 127 counselors.

3.1. Sociodemographic characterization of the counselors

The dialog modalities within a Council are important for not to always play an inclusive role, never exclusive. The aspects of gender, place of residence and schooling level were researched in terms of the sociodemographic characterization of the Councils under study.

Carvalho et al. (2014) define the concept of gender identity as the way in which a person, throughout their physical and psychological developments and based on the most diverse experiences, constitutes themselves as a man or as a woman, in stages that are not sequential, continuous or equal and which are also not concluded at the end of a life phase.

Regarding the research results in terms of gender, three answer options were offered to the counselors participating in the study, namely: “Male”, “Female” and “I prefer not to answer”. Most

of the participants indicated belonging to the male gender, representing 68%. In turn, the respondents that self-identified as female represented slightly more than one-fourth in the Councils' composition: 31%. One counselor chose not to answer the question. This information is intriguing and can lead to a reflection on the reasons that led to choose the “I prefer not to answer” option.

Araruna (2017) asserts that this disparity is a major challenge faced by institutions since, historically, it is a cultural characteristic of the Brazilian society in which women are still seen as responsible for the household environment and men are more representative in the public context. Seeking greater female presence in these aspects is fundamental to enrich the debates, contributing more amplitude in terms of viewpoints.

Gender equality is considered a priority by the WHO in the search for fairer and more developed societies, mainly in public spaces. Initiatives such as the Global Pact and the Female Empowerment Principles stimulate greater female participation in leadership roles. In this sense, offering support to encourage gender diversity in Councils acts as a two-way path with the principles defined by Human Rights, such as respect for public employees among others.

In the individualized analysis of the parks presented in Figure 2 below, it was verified that only the Sumidouro park presented more female counselors and that the Nova Badem SP has the same number of men and women in the composition of its Council, among the respondents. In turn, the Pau Furado SP only contributed two counselors participating in this research, reason why it does not have expressive representation in the total number of counselors.

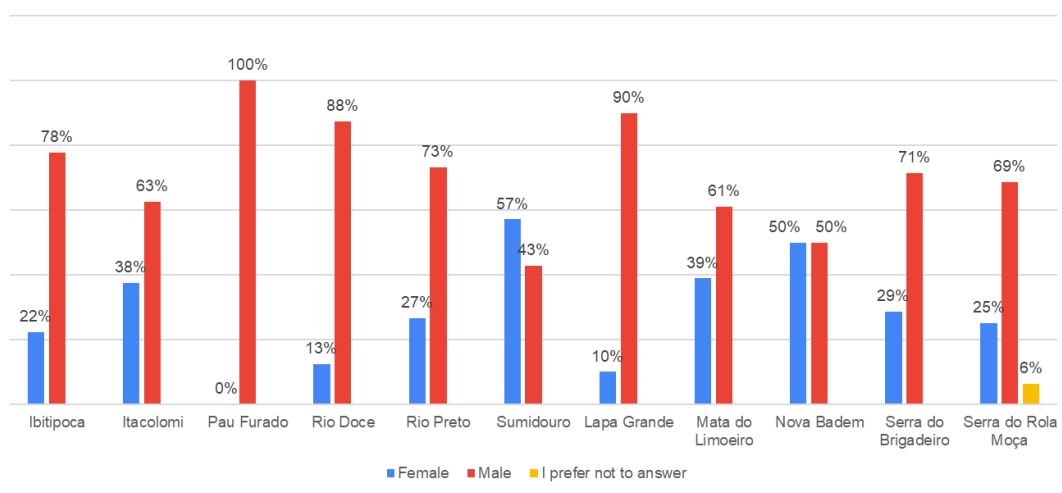


FIGURE 2 – Gender distribution corresponding to the counselors from the State Parks open to public visits in Minas Gerais, Brazil, during 2019, based on the total counselors participating in this research.

SOURCE: the authors, 2020.

Two answer options were offered for the “place of residence” aspect: Rural area and Urban area. The results pointed out that 83% and 17% of the counselors live in urban and rural areas, respectively.

In this minute participation of rural area residents in the Councils, the difficulties of participation through “organized society are considered, that is to say, by means of institutions, NGOs and associations, among others, as it is through them that positions are held in the Conservation Unit Councils.

Guaranteeing process that enable participation, especially from those with socioenvironmental vulnerabilities, is fundamental to have a Council with diversity in terms of groups and people. Therefore, when planning and performing actions, which in this process includes the Council assembling stages, it is necessary to consider the existing inequalities, with the following among them: infrastructure, commuting possibilities, access to information, structural support and even mastery of scientific

and bureaucratic language appropriated by many public managers.

This aspect is fundamental in the theme of Conservation Units located in rural settings, as such communities have the possibility of closely monitoring the protected area everyday routine, mainly in terms of its external threats.

Figure 3 presents the schooling levels of the counselors participating in this research. It is noted that 55% of them have graduate studies, which represents most of the research participants. Another significant aspect is that 27% of them have finished their undergraduate studies. If we add up the graduate and undergraduate numbers, we have a total of 82%.

It is noted that education is a citizenship training channel that enables involvement based on empowerment training components. However, attention should be paid for the significant presence of scholars in the Councils to enable position desig-

nations within the managing forum with mastery of the technical language and, thus, disfavoring other segments that have difficulties or limited knowledge to express themselves technically.

In the sense of academic training, education is linked to citizenship, as it enables putting creativity into practice by means of aspects connected to technical training. However, the concentration of counselors with high schooling levels can suggest that only those with better schooling reach democratic spaces. Therefore, it becomes necessary for counselors to be related to the Conservation Unit and to its creation purposes.

3.2. Participatory assessment of the Councils

The questionnaire sent to the counselors was divided into three dimensions (individual, functional and institutional), which allowed analyzing varied aspects of how participatory management

and performance of the Councils themselves are understood. Table 2 below shows the distribution of the answer percentages, based on each questions within the dimensions proposed.

In the “individual” dimension, knowledge about the region where the Park is located is important to understand the territory, the impacts and the threats it is or might be under. The results of the first question showed that slightly more than half (52%) of the counselors admits “always” knowing the region where their Park is located. It is noted that including communities from the area in CU management contributes to this indicator, as they have more knowledge about the territory and other aspects linked to the region. However, greater incentives are still required for new environmental policies that favor participation of the local residents in the Conservation Units to be devised and fostered, mainly by those who know the territory.

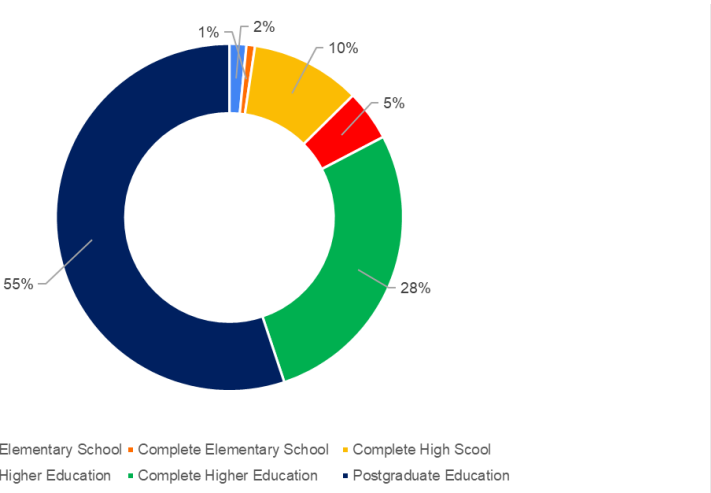


FIGURE 3 – Schooling corresponding to the counselors from the State Parks open to public visits in Minas Gerais, Brazil, during 2019, based on the total counselors participating in this research.

SOURCE: the authors, 2020.

TABLE 2 – Answer percentages in the dimensions proposed for the effectiveness analysis of the Councils corresponding to the State Parks open to public visits in Minas Gerais, 2019.

| DIMENSIONS | 1 | 2 | 3 | 4 | 5 |
|---|----------------|-----------------|--------------------|---------------------|-----------------|
| | (Never) | (Rarely) | (Sometimes) | (Frequently) | (Always) |
| 1. INDIVIDUAL | | | | | |
| 1.1. Do you know the region where the Park is located? | 0% | 2% | 13% | 33% | 52% |
| 1.2. Do you devote at least one weekly hour for your counseling role in the Park? | 4% | 20% | 28% | 30% | 18% |
| 1.3. Do you try to take part in the Park's projects? | 3% | 10% | 33% | 32% | 22% |
| 1.4. Do you feel listened to in the decisions related to the Park? | 3% | 4% | 17% | 36% | 40% |
| 2. FUNCTIONAL | | | | | |
| 2.1. Do you know the reasons that led to creating the Park? | 2% | 6% | 9% | 27% | 56% |
| 2.2. Do the local residents understand the Park's function? | 3% | 20% | 45% | 24% | 8% |
| 2.3. Does the Park fulfill the role for which it was created? | 0% | 3% | 13% | 42% | 42% |
| 2.4. Do you agree with way the Park is managed? | 0% | 7% | 23% | 36% | 34% |
| 2.5. Do the Council meeting agendas contemplate topics that are directly related to management of the Park? | 0% | 3% | 7% | 33% | 57% |
| 2.6. Are you satisfied with the Council performance? | 0% | 3% | 15% | 38% | 41% |
| 2.7. Is the Council listened to in the decisions related to the Park? | 0% | 6% | 16% | 35% | 43% |
| 2.8. Were you able to attend all the Council meetings to which you were invited? | 1% | 4% | 19% | 50% | 26% |
| 2.9. Do you know the Council Internal Regulations? | 5% | 8% | 15% | 38% | 34% |
| 3. INSTITUTIONAL | | | | | |
| 3.1. Are you aware of the reason why the institution appointed you for the Park's Council? | 1% | 1% | 2% | 19% | 77% |
| 3.2. Do you propose actions and projects to improve the Park? | 4% | 10% | 27% | 32% | 27% |
| 3.3. Do you take part in defining the agenda for the Council meetings? | 19% | 16% | 23% | 23% | 19% |
| 3.4. Do you propose actions and projects that foster Environmental Education in the Park? | 6% | 20% | 29% | 28% | 17% |
| 3.5. Do you seek to know about the major difficulties faced by the Park management? | 8% | 10% | 20% | 42% | 20% |
| 3.6. Do you believe that the Council contributes to managing the Park? | 0% | 3% | 12% | 39% | 46% |
| 3.7. Do you consider that each meeting topic is discussed for a suitable period of time, according to its importance? | 1% | 7% | 16% | 46% | 30% |

SOURCE: prepared by the authors, 2020.

In a modern environmental policy, the local actors should be integral components in conservation of the natural resources. In CUs, the concept of participatory management includes the involvement of local residents, whose official participation modality institutionalized by the SNUC is by means of their Councils.

Also regarding the “individual” dimension, it can be seen that the results showed distribution across all the answer options, with no consensus or greater indication in the “Do you devote at least one weekly hour for your counseling role in the Park?” and “Do you try to take part in the Park's projects?” questions, corresponding to the “Always” option.

For the study of Councils to be successful, it is necessary to know all the activities that need to be performed, in addition to clearly identifying their population of interest, performance focus and how their activities can be improved (Silveira et al., 2012). Both to understand their role as counselors and to achieve the goals established in the action plan, time for dedication, monitoring and experiences is required.

The counselors' effective participation by means of a continuous activity is fundamental to understand their role within the Council. Most of the counselors reported feeling listened to in the meetings, with 40% for the “Always” option; in other words, they feel heard in the meetings and, consequently, in the decisions made.

Being listened to does not mean accepting all the group or even the managing body deliberations but a relationship of having been paid attention to in the Council; when a subject matter requested by some counselor is included in the agenda, when interest is shown in solving doubts and when everyone's opinions are recorded in the minutes, even if they

sometimes cause conflicts of ideas and disorder within the Council, etc.

Luchmann & Almeida (2010) assert that it should be guaranteed that all counselors are listened to, even if they do not master the formal or technical language or regardless of any other factor, as local experience and wisdom are elements that certainly turn them into authorities in the most relevant issues for the communities where they live and in their relationship with the Conservation Units in the local and regional scopes.

In the “functional” dimension, the results draw the attention in the question referring to the understanding of the residents close to the Park about its very existence, where 8% indicated the “Always” option. The result is worrisome since, in addition to not understanding their need, Conservation Units are continuous targets of conflicts with the local communities, related to loss of the territory, due to the restriction in use of the natural resources, or even for the impacts it promotes on everyday life. According to Riondet-Costa (2018), it is necessary for the reasons that led to creating the Park to be always present in the Council's discussions and it is important for the local residents to take part in its management, seeking to overcome conflicts, something fundamental for successful territorial management.

Although most of the counselors asserted that they “always” or “frequently” know the internal regulation and that they are satisfied with the Council's performance, the results are far from ideal for this dimension, as almost 30% of the counselors stated that they “rarely” and “sometimes” agree with the way in which the Park is managed. The internal regulation is an important document that translated the structuring degree of a Council and establishes

its main operating rules, negotiation conditions and procedures for decision-making.

The analysis results in the “institutional” dimension indicate that some counselors (2%) also admit that they “never” or “rarely” know the reasons for their designation to the Park's Council. This is a worrisome fact since, although low, such result impairs quality of the debates in the Council meetings. Silveira (2012) asserts that counselors should feel engaged with management, aware that they must act as spokespeople of non-personal interests. On the other hand, the counselors researched seem to clearly recognize the reasons for having been appointed to the role, with 77% of the participants. However, this awareness seems not to be accompanied by proper proposing capacity from the Council members, who thus fail to fulfill their vocation, as 41% of the counselors asserted “never”, “sometimes” or “rarely” having presented projects. This high percentage indicates low innovation capability in the policies based on the Councils, suggesting that participation takes on more reactive than proposing shades.

Referring to the proposal of Environmental Education projects by the counselors, most of the answers obtained pointed to the “Sometimes” option, corresponding to 29%. Mendonça & Talbot (2013) justify the absence of action proposals by the counselors as related to a fact that was historically followed-up in Brazil; in other words, CUs were implemented as “Biodiversity islands”, establishing weak communication with the local societies and scarcely relating to or integrating into the regional dynamics.

Many contemporary scholars have as a concept that educational actions do not only take place in formal teaching institutions, that this process is

initiated at birth and that it only ends with death. It is in this context, and in a reality that favors sensitization and reflection by those involved, that it can be considered that there is certain involvement of really popular education. In this case, both students and educators act politically from the beginning to the end of the pedagogical process, with these latter valuing the students' cultural baggage and, based on this knowledge and whenever possible, establish their strategies and methodologies to achieve their objectives.

Only 20% of the counselors report seeking knowledge about the major difficulties faced by the Park management. Faria & Pires (2013) assert that CU managers face daily obstacles in their functions and that participatory management becomes necessary for CUs to be successful and the territories protected, with qualification and training targeted at dealings with people and organizations from the most diverse scopes and interests. Understanding the problems faced in managing a CU emerges as a contribution perspective. Kleba & Comerlatto (2011) define this possibility as a power exercise where managing Councils drive and consolidate themselves in the relations as they deliberate on policies, programs, projects and services.

3.3. *Effectiveness analysis*

Table 3 below presents the number of participating counselors and the percentage representing this number in relation to the total counselor from each Park under study. The effectiveness analysis took as basis the Total Score (TS) arising from adding up the representative values for each answer option marked by the counselors in the questionnaire applied, as well as the Effectiveness Ratio,

which was calculated dividing the Total Score by the number of participating counselors, resulting in a value that was the basis to classify each Council, following the methodological definitions presented in Table 1.

According to Table 3, only the Serra do Rola Moça, Mata do Limoeiro, Nova Baden, Sumidouro, Rio Doce, Rio Preto and Lapa Grande State Parks presented minimum participation of 50% of their counselors, therefore having their classification made.

The Effectiveness Ratio (EfR) analysis allowed seeing that the Councils from the State Parks open for public visits in Minas Gerais presented satisfactory effectiveness (Effectiveness Ratio from 76 to 90), based on the methodology proposed in Table 1. Such classification translates relevant management characteristics, such as the fact of having participatory management and the counselors understanding their role; the actions developed by the Parks also have the participation of most of the

counselors, who show interest in understanding the Conservation Unit difficulties and projects. The active counselors show that they know the Park's inclusion region and understand the reasons that led to its creation.

The parks with less than 50% of their counselors participating in the research did not have their Effectiveness Ratio calculated due to the low participation rate. It is believed that this selection criteria enabled greater reliability and representation of the reality of each Conservation Unit.

Cifuentes et al. (2000) assess the set of actions and elements related to the activities performed by the protected area management as determinant in the result of using this technology, to promote participation of the community in decision-making and management of the protected area and, thus, attain greater effectiveness in their participatory management, mainly by means of a Council that in fact acts for the sake of the CU.

TABLE 3 – Effectiveness analysis of the Councils from the State Parks open for public visits in Minas Gerais, Brazil, in 2019, with the total number of counselors participating in this research, representatives in percentage values related to all counselors from each Park, Total Score (TS), Effectiveness Ratio (EfR) and classification as per the methodology proposed.

| State Parks | Total number of counselors | Percentage (%) of counselors participating in this research | Total Score (TS) | Effectiveness Ratio (EfR) | Classification |
|---------------------|-----------------------------------|--|-------------------------|----------------------------------|-----------------------|
| Ibitipoca | 22 | 40.9 | 786 | > 50% | - |
| Rio Preto | 22 | 68.1 | 1,279 | 85.2 | Satisfactory |
| Sumidouro | 20 | 70 | 1,102 | 78.7 | Satisfactory |
| Rio Doce | 20 | 80 | 1,375 | 85.9 | Satisfactory |
| Serra do Rola Moça | 22 | 72.7 | 1,296 | 81 | Satisfactory |
| Lapa Grande | 20 | 50 | 796 | 79.6 | Satisfactory |
| Mata do Limoeiro | 19 | 94.7 | 1,396 | 77.5 | Satisfactory |
| Serra do Brigadeiro | 24 | 33.3 | 550 | > 50% | - |
| Nova Baden | 20 | 55 | 963 | 87.5 | Satisfactory |
| Pau Furado | 20 | 10 | 158 | > 50% | - |
| Itacolomi | 20 | 40 | 646 | > 50% | - |

SOURCE: prepared by the authors, 2020.

State Parks, object of this research, are considered showcases in the state of Minas Gerais, having the largest physical structures such as caretaker's office, visitors' control, visitors' center, vehicles, number of employees for various functions and management plan, among others. These aspects generate greater visibility and, consequently, better monitoring by society and by the managing body itself. The Advisory Councils from these conservation units seek participation more and were the first ones to be created, generating experience and consolidation in their action plan. It is also noted that these perspectives reflect in problem-solving as funding regularization, support in local income generation, more research studies, existence of projects and programs and local legal instruments that enable better management, among others. Despite presenting satisfactory results, there is some concern with the current situation of the other Conservation Units in the state of Minas Gerais, taking as a reference that the Parks object of this study have the best and largest management structures.

The Nova Baden, do Rio Doce and Rio Preto State Parks presented the highest Effectiveness Ratio percentages and are very close to reaching an Excellence result (effectiveness above 90%), as shown in Table 1. The time since creation of the Council can be contributed to these results.

The Rio Doce State Park concentrates the highest Atlantic Forest reserve in Minas Gerais and was the first CU created by the state, with an active Council since 2002. The Rio Preto has a Council since 1999 and is responsible for protecting more than 7,000 hectares of the Cerrado biome in the Minas Gerais Jequitinhonha area, in addition to

being one of the most visited Parks in Minas Gerais (IEF, 2020).

According to Macedo & Drummond (2012), three main factors prevent most of the Councils from reaching extremely satisfactory management, namely: non-participation and lack of knowledge among the local communities in the creation and management processes; non-conclusion of funding regularization; and constant problems related to deforestation, illegal hunting and project proposals.

The Mata do Limoeiro and Sumidouro State Parks presented the lowest Effectiveness Ratio values using the methodology proposed, respectively. Although they are classified as satisfactory participatory management, the value comes from a moderately satisfactory rating (from 50 to 75), as shown in Table 3.

In order to improve management and the participatory assessment classification aspects of a Conservation Unit, Bezerra (2018) highlights the importance of constantly conducting studies aimed at the human dimensions, which, as a component of the environmental issue, raises conservation and its relationships with society to a new level, revealing the need to try to sensitize people and governments towards seeking to create and implement Conservation Units as a strategy that contributes to sustainable development and to protecting biodiversity.

The set of results presented highlights the importance of valuing and training Councils that act on governance, encompassing the reasons to create the CUs and their potentialities linked to the environmental, touristic and educational attributes, acting as a bridge to solve conflicts that threaten biodiversity.

Establishing a consistent social participation mechanism, with well-defined functions and a

consensual schedule is an important duty of the Council. These factors contribute for the Council to be considered satisfactory or extremely satisfactory, thus showing greater effectiveness in the search for concrete results (Macedo & Drummond, 2012).

4. Final considerations

As a public space, a Council should incorporate participation of society as one of its fundamental pillars, not only legally meeting the bureaucratic level requirements. In the political level, it also requires legitimate and organized performance of a wide of range social actors (Limont et al., 2015).

It is important for Councils to have as their norms the way in which their participatory management process and the performance possibilities are conducted. Finally, depending on the way in which they are operationalized, limitations are generated that hinder the counselors' participation and involvement channels.

The adaptation of the methodology created by Cifuentes et al. (2000) is innovating in terms of Conservation Unit Councils. It infers the Counselors' sensitivity and self-knowledge, pointing out difficulties, shortcomings and strengths and generating a quantitative criterion for the variables in the management classification.

More than 20 years after inception of the SNUC and having State Parks with more than 70 years since their creation, results showing greater effectiveness levels were expected, allowing to reach extremely satisfactory performance by the counselors.

The extent to which counselors are unaware of the performance potentialities in benefit of the

protected area was identified, which reflects in understanding their role as counselors. For this reason, it is believed that training options involving the themes of governance, leadership and public management should be seen as fundamental in the Councils' conduction processes, improving communication and affinities with the CU work, in addition to making explicit their performance potential in benefit of a region, both in terms of biodiversity protection and in improving local quality of life and income generation.

The people involved in the participatory management process need to “want” to transform the traditional management reality that is consolidated and which has “non-participation” and “non-sharing of power and responsibilities” as a reference. This transformation demands effort and there is still a long way to go for participatory management to be effectively institutionalized.

It is also important to understand that it is only through democracy that sustainability of the environmental policies will be achieved, mainly by strengthening the dialog and negotiation spaces in the Councils. The directions to build this much desired governance point to management based on significant community participation in the management processes. In this scenario, the CU Councils, legally created and implemented, result in a reduction in the number of conflicts and of local pressures and threats; on the other hand, it allows local inclusion and development mainly by means of the partnerships established by the institutions present in the Councils or even by the mobilization of others through them.

The methodology used to determine the participatory management assessment proved to be a

viable and low-cost tool, easing monitoring of the Council's performance conditions and indicating the main bottleneck to achieve extremely satisfactory management. Thus, the qualitative analysis performed in this research corroborates the results obtained, attesting to the pertinence of the methodology developed to assess participatory management of the State Parks open for public visits in Minas Gerais.

It is concluded that, in the state of Minas Gerais, the path to be followed in order to achieve extremely satisfactory participatory management with the counselors understanding their performance role and generating an extremely satisfactory level lies in further prioritizing inclusion of the local communities in the management of these territories. With already more than 20 years since inception of the SNUC and more than 70 years since the creation of the first State Park in Minas Gerais, the advances might have been greater, despite the satisfactory result obtained in this research.

It is expected that this study may be useful for other managers of protected areas in national and international territories and that its results open up opportunities for new research studies and for improving the projects developed, as well as with the counselors' performance possibilities for the sake of environmental conscience.

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