

Mediation of Socioenvironmental Conflict in Macrodrainage Works: The Experience of the Municipal Government of Guarujá, São Paulo State, Brazil

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SUMMARY

Urban growth has been correlated with substantial changes in land use, triggering socio-environmental conflicts. In Brazil, the lack of a tradition in mediating socio-environmental conflicts is evident through numerous lawsuits that often take years to reach a resolution. This study emphasized the actions taken by the Municipal Government of Guarujá (PMG) in 2022 as a tool for resolving socio-environmental conflicts without resorting to litigation. The research focused on the specific case of a macro-drainage project in the Santo Antônio neighborhood, which involved the relocation of 29 families from their homes with equivalent compensation guided by a Terms of Conduct Adjustment (TAC). This qualitative study was grounded in document analysis, a systematic literature review, and interviews with stakeholders. The study aimed to analyze how mediation techniques could contribute to resolving socio-environmental conflicts between public infrastructure projects and the local population. The research findings indicated that the PMG's initiatives were essential in creating a mediation space where, through dialogue, officials involved in the relocation process addressed the families' concerns, even amending clauses within the Comparative Data Market Method for Urban Areas, used for compensation payments, in accordance with legal instruments. This initiative led all the families involved to adhere to the negotiated terms, avoiding litigation and facilitating the project's realization.

KEYWORDS: Socio-Environmental Conflict. Mediation. Expropriation/Compensation.

1 INTRODUCTION

Socio-environmental conflicts are complex and multifaceted phenomena that result from tensions between different social actors that dispute the access and use of natural resources. These conflicts have become increasingly relevant in the Brazilian and global context since the intensification of economic activities associated with the exploitation of natural resources has generated significant socio-environmental impacts, which directly affect local populations, their ways of life, and their well-being (ARANHA et al., 2021).

The study of socio-environmental conflicts has important implications for the field of scientific research since it allows both a deeper understanding of the social and environmental dynamics that occur in certain territories and the understanding of the strategies adopted by the different actors to deal with these issues. In this regard, the analysis of socio-environmental conflicts can contribute to the advancement of scientific knowledge about environmental management and sustainable development, allowing the identification of good practices and innovative strategies that can be replicated in other contexts (OLIVEIRA; RIBEIRO et al., 2021; PRIEBBERNOW, 2022).

According to Azkarraga (2008), socio-environmental conflict refers to a certain situation in which there is an opposing valuation by the different social actors in relation to the environment, considering that both involved have different ways and capacities to intervene in the decision.

In Brazil, the management of socio-environmental conflicts still relies heavily on legal instruments, which results in the accumulation of cases in the judicial system. However, in the sphere of environmental policy, there is a strong tendency to establish tripartite mechanisms involving State, Market, and Society, for which the keywords are: partnership and negotiation (BREDARIOL, 2004).

On this aspect, Watanabe and Lagresta (2007) reflect on the judges' position, which they call a "culture of sentencing", stressing that it is consolidated in a frightening way. The

authors, therefore, recognize that the judges prefer to pass judgment rather than try to reconcile the parties to obtain friendly solutions to the conflicts.

As a cause of irregular occupations, vectors of different origins can be identified, such as social and economic aspects that cause and deepen social inequalities; socio-spatial segregation; and the absence or deficiency of public policies aimed at housing production for the low-income population. Referring to the absence, not only reflects the impoverishment of the Brazilian urban population but also highlights the very way in which urban spaces are structured (BALTRUSSIS, 2004).

Law No. 13.465 (2017), which establishes rural and urban land regularization, represents a legal framework for land regulation in Brazil and seeks to enable the recognition of possession and ownership through a series of legal, urban, environmental, and social actions aimed at formalizing irregular occupations in an organized and structured city, with the right to grant land title, (MONTEIRO et al., 2019).

When the government is interested in using an area, even if it meets the requirements of the Land Regularization Law, it may do so by making a prior declaration of public utility and need or social interest. It should be noted that all assets may be expropriated by the Federal Government, by the States, Municipalities, Federal Districts, and Territories, upon justification of the public interest. In this way, it can be understood that expropriation is the prevalence of public interest over the private interest, to fulfill the social function of the asset in question (CARVALHO, 2018).

The mediation of socio-environmental conflicts is a process that involves the action of an impartial and qualified third party to assist the actors involved in reaching an agreement that meets their interests. The technique is based on communication and negotiation and aims to build consensual and lasting solutions for the parties involved (RIBEIRO et al., 2022).

On the other hand, the negotiation of socio-environmental conflicts is a process in which the parties involved in a conflict work together to find a solution that meets their interests and also the interests of the environment and the community. This tool is generally used in conflicts related to land use, urban development, environmental protection, extraction of natural resources, and other issues that directly affect local communities and the environment (MAIA et al., 2021).

Based on dialogue and mediation between the different actors involved, it is possible to seek solutions that take into account the needs and expectations of the local community, as well as the environmental aspects involved in the process. In addition, mediation can promote the active participation of the population in building solutions and stimulate the consolidation of citizenship and democracy (FREITAS et al., 2022).

From this perspective, there is a situation experienced by some families in the city of Guarujá -SP in 2022, which the conflict generated because the PMG requested the eviction of housing in a public area, to enable macro-drainage works (LEÃO, 2015). Mediation was seen as an alternative to the litigation of conflicts since it allowed the parties involved to work together to find solutions that met their interests and also the interests of the community and the environment (RIBEIRO et al., 2021).

Thus, the main objective of this research was to analyze the actions taken by the PMG, in the context of the macro-drainage works in the Santo Antônio neighborhood, which were favorable to the mediation of this socio-environmental conflict.

The content produced in this research is expected to make significant contributions to decision-making by public managers when faced with similar problems. Differently, social value can be attributed to the contribution offered to citizens, both as members who participate in popular councils and their collective or individual political participation. In addition, it can serve as a source of inspiration for the confrontation and struggle of people in situations of vulnerability, in issues related to the lack of adequate housing, since the social problem of housing shortages prevents the realization of fundamental human rights.

2 METHODOLOGY

This is qualitative research, exploratory in terms of purpose, and constituted a unique case study with documentary research, supported by a theoretical framework and with interviews with the parties involved (YIN, 2010).

To achieve the main objective of the research, efforts were made to identify the measures and actions adopted by the Government, devoid of judicial intervention, in the period from 2020 to 2022, aimed at mitigating the problems emerging from these conflicts, through the use of mediation techniques.

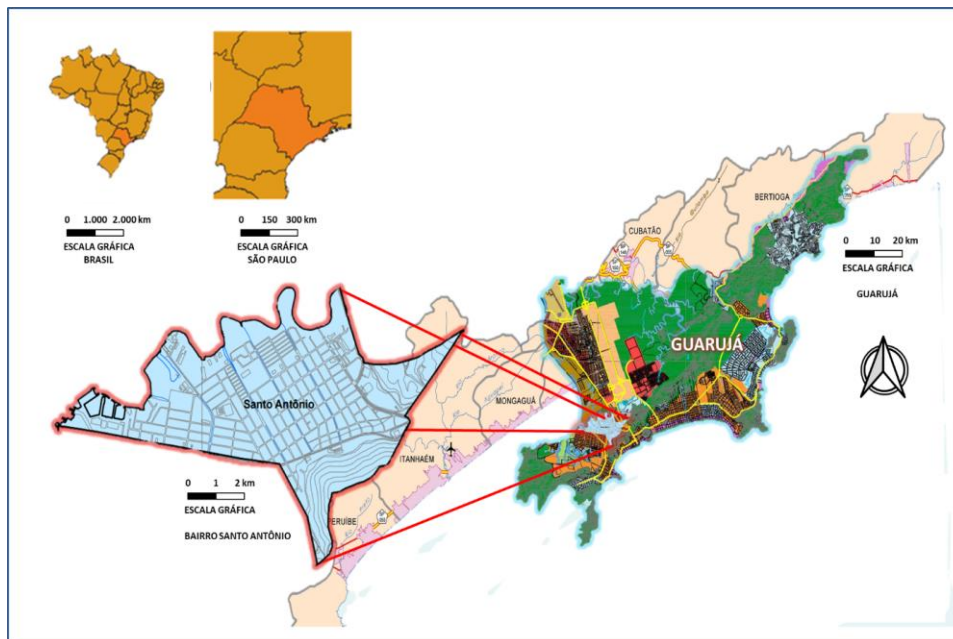
2.1 Study Area

The place where the case study took place is the city of Guarujá, which is located on the North Coast of the state of São Paulo (Figure 1), 82 km from the capital of São Paulo. Geographically, starting in 1996, it became one of the nine cities that form the Baixada Santista, the others being: Cubatão, Bertioga, Itanhaém, Mongaguá, Peruíbe, Praia Grande, Santos, and São Vicente. Previously, it was part of the Baixada Paulista.

In the 1970s and 1980s, the city grew uncontrollably and the entire waterfront was occupied by various subdivisions and buildings, largely as a result of the construction of the Piaçaguera-Guarujá Highway in 1971, connecting the island directly to Via Anchieta and a lesser extent to the new Rio-Santos and Mogi-Bertioga highways. This led to an explosion in tourism and migration to the island. As a result, environmental quality was affected by water pollution and the occupation of sensitive areas such as hills, slopes, and mangroves.

In 1955, the Santo Antônio neighborhood in Guarujá was established (Figure 1), recognized as one of the oldest in the city, originally an area of coastal forest and mangroves, which expanded to the banks of the Santo Amaro River. The neighborhood has been suffering from flooding problems for decades, and in addition to this, it is affected by the influence of the tide. Therefore, flood phenomena are recurrent, even on non-rainy days.

Figure 1 - geographical location of the city of Guarujá, state of São Paulo, Brazil.



Source: Adapted from <http://www.sp-turismo.com/mapas/baixada-santista.htm>, (2023)

2.2 Data Collection and Analysis

For the case study, the following documentary sources were consulted: **I.** Financing term; **II.** Administrative contracts - social work; **III.** Social Technical Project; **IV.** Administrative contract - housing appraisals; **V.** Administrative proceedings of compensated families; **VI.** Public Civil Action (ACP).

The documents were requested through a “request for full access authorization”, addressed to the Department of Housing (SEHAB) of the PMG, through a protocol adopted in its guidelines.

After that, information was collected about families relevant to the research, such as addresses, property area, period of residence, and compensation amounts. The information obtained was stored in a database, and specific software was used for data processing.

To present the results, tables were prepared that made it possible to obtain socioeconomic data, income, and age group of those responsible for the families, as well as the amounts of initial and final compensation after negotiations.

The institutions involved in the conflict were identified through a documentary search of the administrative files of the 29 families compensated.

To analyze the challenges and benefits of adopting the conflict mediation technique, interviews were conducted with all public officials involved in mediating the conflict, and with all compensated families. From the existing documentation and the structured questionnaires, the information was extracted and the results were organized in tables.

Through the documentary analysis provided by SEHAB, it was possible to verify the measures adopted to address the problems related to the conflicting cases of families that did not agree with the amounts of compensation offered.

In this regard, it should be noted that 02 families requested that the size of their property be revised, as they had commercial establishments (a marble shop and a bar), that had not been counted in the built area. SEHAB verified the legality of the action and asked the company responsible for drafting the reports to survey the built area of the businesses and include them in the report. However, this inclusion was limited to 250 m², considering the requirements allowed for compensation purposes by Law 13.465/2017.

Other families also requested a new assessment, considering that after the first assessment (2021) they made improvements to their homes. Based on this, the company hired by PMG returned to the premises and found that there had indeed been improvements to the properties. As a solution, the “K” depreciation factor was revised - Ross-Heidecke Depreciation Factor, which establishes depreciation factors considering the state of conservation of the property.

In the Ross-Heidecke method, the useful life of the property is taken into account, which is influenced by the type of material used in the construction. The value of the land, on the other hand, is considered immune to depreciation, since it does not deteriorate over time. Construction, in turn, depreciates over time, considering the age of the property and its general condition (OLIVEIRA, 2019).

To carry out the calculations, the company responsible for the assessment used a mathematical equation with multiple parameters and variables. This equation was based on the Comparative Market Data Method for urban areas, as established by ABNT 14.653-2 (Equation 1). In this case, the assessment was specific to mixed-use buildings with both residential and commercial use.

$$V_e = A \times C \times (1 - K) \quad \text{(Equation 1)}$$

Where:

V_e = Building Value

A = Built area of the property

C = Cost of m² of built area, provided by the Construction Industry Union of the State of São Paulo - SINDUSCON/SP.

K = Depreciation Factor (Ross-Heidecke)

As such, families that made improvements to their properties obtained an additional advantage in the compensation calculations, since the depreciation factor was reduced, increasing the amount of compensation. Table 1 shows the initial average amounts of compensation presented to families in March 2021.

Through the documentary analysis of administrative processes, it was found that those families, whose homes were valued at up to R\$ 50,000.00, had modest houses built with mixed materials of masonry and wood. According to Table 1, this represented 09 families (31%). The properties valued above that amount were built exclusively in masonry.

Table 1 - Initial compensation amounts calculated according to equation 01, before some families contested them.

Initial Compensation Value (R\$)	Number of families
<50000	9
50000-100000	15
100000-150000	3
150000-200000	1
200000-250000	1
Overall total	29

Source: Author, (2023)

However, the initial proposal (Table 1) was not considered satisfactory for the 09 families, as they claimed that with the amounts they would receive in compensation, it would not be possible to purchase another house in a formal area. In addition, it should also be noted that negotiations with families were paralyzed for a period of approximately one year, as a result of the COVID-19 Pandemic.

As an alternative and to facilitate negotiations, SEHAB, legally supported, asked the company responsible for drafting the reports to update the amounts for the year 2022, given the gap during the period. Thus, the value of m², in March 2021 according to the São Paulo Civil Construction Union (Sinduscon, 2022), was R\$ 1,556.33; and in March 2022 it was R\$ 1,727.75; in other words, there was an increase of 11%.

After the reviews, it was found that the most representative increases occurred in the cases of two families that owned businesses and two more families that improved their housing. Finally, monetary adjustment was carried out equally for the 29 families. The property has increased in value for some families: in March 2021, only 01 family would receive the amount between R\$ 200,000.00 and R\$ 250,000.00. After negotiations, 04 families started to receive amounts above this amount.

3 RESULTS AND DISCUSSION

3.1 Documentary analysis

Based on the documentary research of the administrative processes, it was possible to proceed with the identification and detailed description of each content. Documentary analysis revealed that in these processes, there was a reproduction of some documents and the personalization of others, systematically and coherently, favoring the understanding and effectiveness of the analysis.

It should be noted that the identification of the conflict occurred after the first call, when the families were notified of the compensation amounts (Table 1), given the refusal of some to acknowledge the process.

Regarding the analysis, it was found that all families met the legal requirements of Law 13.465/2017, such as the period of residence, the built area, and the non-ownership of other real estate in their respective names, and an investigation was carried out into the CPF of the person responsible for the family at the Guarujá Real Estate Registry Office, under the terms of SEHAB, 2022.

It was found that there was a time-lapse in negotiations with families between 2021 and 2022, and it can be deduced that it was a consequence of the COVID-19 pandemic. After this period, negotiations with families resumed, and the compensation amounts were updated for “everyone” considering the gap in the amount of m² between March 2021 and March 2022, as already mentioned.

It was found that the intervention in question played a crucial role in resolving the conflict, since, among the 29 families impacted, 14 initially rejected the amounts proposed for compensation, of which 09 later accepted the conditions offered, with the updates. However, 05 families continued to resist, with their interests being represented by lawyers.

After the mediation of the PMG with the families that had legal advice, 02 gave up the lawyer's services. It is recorded that the families' demands were met, such as the inclusion of their commercial activities (marble shop and bar) in the built area of the affected properties, as well as the revision of the property depreciation percentage for those who carried out improvements after the initial assessment (Equation 1).

The documentary analysis - described in Figure 2 - reveals that the proper instruction of a process by the public authorities is of paramount importance to ensure the transparency and legality of its actions. When a process is properly instructed, all its phases are properly documented and the information is recorded in a precise and concise manner. This practice enables the preparation of a complete and reliable record of all activities triggered within the framework of said process (KOHAMA, 2000).

Figure 2 - List of documents found in the administrative processes of the 29 families compensated.

Documents	Description of the documents found in the administrative files
Socioeconomic survey/social report	A social report prepared by Social Workers from a company contracted by PMG was identified. The report contained the identification of the resident and their family composition and socioeconomic data. It was found that family income varied from one minimum wage to three minimum wages.
Proof of address	Proof of address was attached in the name of the owner, most of them from the electric utility company. Even though the area was informal, it was found that families owned company electricity meters.
Copy of NIS	Copy of the NIS (Social Identification Number) proving the registration of family members in the Unified Registry and, therefore, their eligibility for social programs and benefits that use the system as a foundation.
Technical assessment report	It was found that the technical assessment reports for the properties were prepared by a company hired by the City Hall. It was found that they were prepared in compliance with the technical and ethical standards established by the Regional Engineering and Agronomy Council (CREA). The applied methodology was in compliance with ABNT 14.653-2, through the comparison of Market Data for Urban areas. The amount of m ² used was based on the improvement cost of SINDUSCON/SP (2021), and the values were determined using the cost method using the table “Ross-Heidecke For Real Estate Depreciation”.
1st official call	A copy of a communication was found in the Municipal Official Gazette, asking families to come to City Hall on a pre-established day and time. There was a demonstration in the proceedings stating that the resident attended and was aware of the information. It was found that in this call, some families refused to sign, and the reason was informed in the process, such as low price, request for review, etc.
Term of consent	In the process, there was a consent form that the resident signed in agreement with the proposed amount. It was found that the objective was to formalize the agreement between the parties involved in the mediation.
Revised technical report	It was verified that the reports of all families had their values updated from 2021 to 2022. In 3 cases, an increase in area was found, as two bars and a marble shop were incorporated into the built area in the assessment, which was not initially included. It should be noted that even with this increase, it did not exceed the 250 m ² established by law.
2nd official call	It was found that there was a second call from families who did not agree with the amounts presented in the first call, following the same criteria for individualized service on a pre-established day and time.
Official letter addressed to CEF	The records include a letter forwarding the final reports for approval and request the release of funds, to the address of the Caixa Econômica Federal, through SEHAB. It should be noted that this action was due to the funds coming from financing with the federal government, under the management of the CEF.
Copy of an email from CEF addressed to PMG	An e-mail from CEF was verified through CE GIGOV/ST 1540/22 - CF 0505867-89/2018 - Guarujá/SP - Sanitation for All - Announcing the 9th disbursement, informing the release of funds for payment of compensation, on 14/07/2022.
Copy of the TAC	A copy of the Terms of Conduct Adjustment with the São Paulo Public Prosecutor's Office (MP/SP), signed on 21/07/2022 between the PMG and the MP/SP, was included in all cases.
Payment receipts	A copy of the receipts for the compensation payments made by the PMG's Finance Department was verified in a specific account in the name of each resident.
Report/demolition	A report from the Infrastructure and Works Department - SEINFRA, and photos of the houses demolished in 2022 were verified.

Source: Author, (2023)

The proper instruction of a process is of special importance in the context of public administration, especially since it allows an in-depth analysis of the case in question and, based on information documented in a precise and organized manner, facilitates decision-making by the competent authorities. This aspect is of particular relevance, given the need to assess the facts, identify responsibilities, and adopt appropriate measures to solve the problem.

It should also be noted that the correct instruction of a process not only contributes to the implementation of government actions in compliance with the legislation but also ensures the protection of citizens' rights, in full compliance with the provisions of Federal Law No. 13.709 (2018). The attachment of essential documents to the process is essential to prove the legality of the actions, avoiding possible questions from the supervisory agencies.

Finally, the correct instruction of a process also contributes to accountability to society. With all the steps documented and recorded, it is possible to guarantee the transparency of government activities and allow citizens to monitor and oversee their actions mainly based on the use of a public asset.

Given these observations, in the summary of the negotiations concluded with the families, the amounts of compensation offered after the negotiations to vacate the area were sufficient for the acceptance of the vast majority of families. In this case, 15 families did not contest at any time, 09 accepted after updating the amounts, and 05 accepted after negotiations, totaling the 29 families involved in the case study.

3.2 Identification of the institutions involved in the conflict

It was verified, based on the analysis of the documents existing in the administrative processes, that the institutions that participated in the conflict were the PMG itself and the MP/SP.

The MP/SP acted in the case, based on an existing ACP against the city, which was transformed into a TAC, as a strategy for complying with obligations in the form of compensation for damages, where the PMG was granted a period of 03 months, after the approval of the TAC, to compensate the families, remove them and demolish the buildings.

There is no evidence of direct action by the MP/SP in mediating the conflict, but it can be said that the TAC contributed to the resolution of the conflict because it expedited the process, without the need for a lengthy court decision, which would have negative consequences.

In this regard, it is understood that the action of the MP/SP was very important for maintaining the diffuse rights of the population impacted by the works, and at the same time guaranteeing a fundamental right to housing for the families removed, through equitable justice based on the Rule of Law.

On the other hand, the public administration considered the importance of complying with the proposed TAC not only as a legal obligation but as a necessary opportunity to promote sustainable urban development and carry out macro-drainage works. In this way, guarantees the quality of life of an entire community, without ceasing to serve the affected families, who are duly compensated through indemnities.

3.3 Interview with the public officials involved

Considering, therefore, that traditionally, socio-environmental conflicts result in litigation (RIBEIRO et al., 2021). To assess the level of satisfaction and success in the way that mediation was conducted in the case of the Santo Antônio neighborhood, structured interviews were conducted with the two groups directly involved.

Initially, an interview was conducted with the 05 employees of the PMG directly involved in the negotiations, including 03 Social Workers, 01 Land Regularization Technician, and 01 Administrative Assistant. With this group, the purpose of the interview was to analyze the conflict mediation technique. To this end, an instrument with a semantic differential scale was developed, consisting of two themes: “challenges” and “benefits and efficiency”, totaling 10 structured questions, each with 03 alternative answers.

For the theme “challenges”, 04 questions were prepared (recognized as: 1 to 4), addressing the professionals' experience in dealing with conflicts, the communication process, and negotiation skills, as can be seen in Figure 3.

For the topic “benefits and efficiency”, 06 questions were prepared (recognized as: 5 to 10), addressing mediation techniques, the establishment of trust, and the contribution of other institutions, as presented in Figure 4.

According to the answers verified in Figures 3 and 4, it is suggested that the collaborators had innate abilities to negotiate the conflict in question. Thus, they were successful in applying active listening techniques and individualized negotiation, despite some dialogues having been tumultuous and disjointed. Regarding the difficulties faced in the preliminary negotiations, the officials identified as the main obstacles the amounts of compensation and the short deadline for vacating the area.

In addition, at the beginning of the process, there was a certain discrediting on the part of the families concerning the PMG, since some residents did not believe that the works would actually be carried out. Finally, the employees emphasized that faced with the resistance of some families to cooperate, they decided to ascertain the underlying reasons and design solutions that met their needs, in order to achieve a satisfactory solution for both parties.

Figure 3 - Set of questions to evaluate the topic “challenges”, applied to the group of PMG employees involved in the case of the Santo Antônio neighborhood, in Guarujá — SP, Brazil.

Question	Alternatives			Answers No. Officials			Author's understanding
	A	B	C	A	B	C	
1. Does the city of Guarujá have professionals prepared to deal with socio-environmental conflict?	Yes, there are trained and experienced professionals.	No, but some have already participated in the resolution of the conflict.	There are no trained and experienced conflict resolution professionals.	3	2	0	There was a diffuse understanding among employees on the issue of being prepared to handle the conflict.
2. Was communication with those involved effective in mediating the conflict?	Yes, it was based on active listening, in an individualized way.	Yes, some techniques were applied, however some dialogues were troubled.	No, they were unstructured dialogues.	2	3	0	Communication with those involved could be improved.
3. What do you think made the initial negotiations difficult?	The amount of compensation was very low.	The deadline for families to vacate the area was very short.	Distrust in the PMG, some did not believe that the works would take place.	2	1	2	There were several allegations, which made resolving the conflict more difficult.
4. During the negotiations, when the resident refused to cooperate, what was done to find a solution?	An attempt was made to understand the reasons and to seek a solution that would meet the resident's needs.	An attempt was made to convince him to give in.	It was given up on finding a solution.	5	0	0	The employees had the ability to circumvent the problem properly.

Source: Author, (2023)

Figure 4 - Set of questions to evaluate the topic “benefits and efficiency”, applied to the group of PMG employees involved in the case of the Santo Antônio neighborhood, in Guarujá — SP, Brazil.

Question	Alternatives			Answers No. Employees			Author's Understanding
	A	B	C	A	B	C	
5. Which of the following best describes the effectiveness of applying the negotiation technique in resolving the conflict?	The parties involved reached a mutually acceptable agreement.	A minority did not consider the agreement acceptable.	The vast majority did not consider the agreement acceptable.	5	0	0	The employees had the ability to negotiate and reach an agreement.
6. Which of the following best describes the approach taken by PMG during the negotiation process?	It emphasized collaboration between the parties involved.	It favored one of the parties involved over the other.	It adopted a repressive stance.	5	0	0	The employees adequately addressed the negotiation process
7. Which of the following best describes the approach taken by PMG during the communication process with families?	It encouraged the free and respectful expression of opinions.	It ignored cultural or linguistic differences.	It had no active role in communication.	5	0	0	The employees adequately addressed the negotiation process
8. What was the role of the PMG during the trust-building process in mediating the conflict?	It was a facilitator in building a relationship of trust.	It failed to establish a relationship of trust in the conflict.	It ignored the trust-building process.	5	0	0	The employees adequately addressed the negotiation process
9. How do you understand that the Terms of Conduct Adjustment (TAC) of the MPF/SP contributed to the resolution of the conflict?	The TAC promoted agility in resolving the conflict.	It allowed affected families to have an active voice in defining reparation measures.	The TAC had no influence on the resolution of the conflict.	4	1	0	The TAC helped speed up the resolution of the conflict, due to the deadline set for compliance.
10. In your opinion, what are the most important steps to resolve a conflict without litigation?	Identify the causes of the conflict.	Listen carefully to the other party involved.	Find solutions that benefit both parties.	1	0	4	The employees adequately addressed the negotiation process

Source: Author, (2023)

3.4 Interview with compensated families

With the purpose of measuring the perception of all compensated families regarding the problems resulting from floods, as well as from the actions undertaken by the PMG, a structured questionnaire was designed, consisting of 07 questions distributed in 02 different sets. The first set (Figure 5) focused on the perception about the clarifications provided by the PMG, presenting 04 structured questions (recognized as: 1 to 4), to which they presented 03 alternative answers.

The second set, in turn, consists of 03 structured questions (recognized as: 5 to 7) and presents 03 alternative answers, it was intended to evaluate how the negotiation process took place and what was the result achieved (Figure 6).

Figure 5 - Set of questions to assess the perception of compensated families regarding the clarifications provided by the PMG.

Question	Alternatives			Answers No. Families			Author's Understanding
	A	B	C	A	B	C	
1. Have you had your property flooded since you took up residence in the Santo Antônio neighborhood?	Yes, several times, in the same year and over the time that I have lived here	Yes, sometimes; in the same year and over time that I have lived here	My property has never been flooded	0	2	24	It appears that where occupations existed, they were not affected by flooding.
2. Do you understand that flooding in the Santo Antônio neighborhood causes the proliferation of diseases such as malaria, hepatitis A, yellow fever, and leptospirosis?	Yes, I have knowledge	Yes, but I'm not aware	I don't understand, I don't know how to answer	21	1	4	It appears that there was a collective understanding of the health problems resulting from the floods
3. Do you understand that in order to carry out the macro-drainage work, it is necessary to remove some housing?	Yes, unfortunately, to carry out the work and put an end to the floods it is necessary to remove some properties	Maybe, but I think they could have removed a smaller amount of properties	They shouldn't remove any property, floods are not a problem	14	2	10	The majority understood that there was a need for the execution of the works
4. Do you think the need to end the floods has been well clarified?	Yes, I received all possible information and I am aware that we need to end the floods	A bit, there were some controversies and I still have doubts	I didn't understand the need, there were a lot of controversies without clarification	15	6	5	It appears that there was an awareness of the need to solve the problems caused by the floods

Source: Author, (2023)

Figure 6 — Set of questions to assess the perception of compensated families regarding negotiations with the PMG.

Question	Alternatives			Answers No. Families			Author's Understanding
	A	B	C	A	B	C	
5. How do you evaluate the City Hall's approach to resolving differences?	In a positive way, I was well cared for and I felt welcomed;	On average, they could have paid more attention	I was disappointed that no claims were accepted	20	4	2	It appears that the approach taken by PMG was positive.
6. Did you have the opportunity to explain your difficulties in vacating the area and were you listened to?	Yes, I was able to explain and was listened to attentively	On average, they didn't pay much attention to me	I was disappointed I couldn't speak	22	4	0	It appears that the approach taken by PMG was positive.
7. In your opinion, was the outcome of the process better for the City Hall, for you, or both parties?	It was good for both parties	It was good just for me	It was good, only for the City Hall	12	0	14	There is a balance, one side understood that it was good only for the PMG, and in contrast, the other says it was good for both parties.

Source: Author, (2023)

According to the information presented in Figures 5 and 6, it could be suggested that the negotiation of the conflict between the families compensated by the PMG was successful. In addition, most families also understood the relevance of macro-drainage works to prevent housing flooding and adverse health effects, indicating that communication represented an

essential aspect in resolving the conflict. It should be noted that most of the interviewees assessed that, during the negotiation process, their needs were met, indicating that such conduct was satisfactory, as already evidenced in previous studies (BREDARIOL, 2004; LITTLE, 2001; RIBEIRO et al., 2021).

In contrast to the theory of Little (2001), who argues that it is easier to talk about the treatment of socio-environmental conflicts than to resolve them, the outcome of the case in the Santo Antônio neighborhood shows that, with planning and interest from the public authorities, it is possible to resolve a socio-environmental conflict fairly without having to resort to the courts.

In this regard, and as pointed out by Gondim (2012), the population cannot simply be blamed for the misuse of a public asset, but one must also recognize the omission of the public authorities and the action of institutional agents in controlling a given situation. It is therefore understood that the MP/SP provided subsidies for the mediation of the conflict through the TAC, which allowed the PMG to compensate the families as an equivalent form of compensation.

4 CONCLUSIONS

The purpose of this investigation focused on the analysis of the mediation process of a conflict that resulted in the removal of 29 families (from their homes), who were in an unsuitable area allowing the execution of macro-drainage works. To enable the removal action to take effect, upon compensation, resources were provided to hire companies specialized in property valuation and social work.

It was found that the social work carried out by the PMG played a major role in resolving the conflict, especially by establishing a frequent and direct communication channel with families in the affected area. Thus, it can be seen that the clarifications and efforts to make residents aware of the importance of the work, in different aspects, proved to be an effective strategy to mitigate the negative impacts resulting from removal actions.

Regarding compensation, it was found that the reports were prepared by a specialized company and that the assessments were formally registered by a qualified professional, through the issuance of Technical Responsibility Notes (ART). It was also found that the compensation amounts were calculated according to the improvements made by the families, considering criteria such as the age of the property, built area, as well as other legal provisions. In addition, the methodology adopted was consistent with the legal premises established to achieve this purpose.

It was found that the PMG used multiple methods of communication with the families involved in the conflict, such as the Municipal Official Gazette, an instant messaging application, such as WhatsApp, and personal approaches in the area that would undergo the intervention for the macro-drainage works, in order to ensure that those involved are aware of administrative practices. This approach confirms the relevance of the publicity principle in public administration since it promotes the transparency of the acts performed and constitutes a fundamental dimension of citizenship.

During the investigative process, it became apparent that a phase of negotiations took place between the affected residents and the representatives of the PMG, whose intensity

increased as a result of the disclosure of the financial compensation figures. Given the demands of some families, which were initially not favorable to the amounts offered, it was found that, through constructive dialogues and in-depth debates, Consent Agreements were signed in order to consolidate the consensus obtained. This process attested that the inhabitants were contemplated in their demands and that their needs were taken into account.

During the investigation carried out, it was found that the MP/SP was not directly involved in the socio-environmental conflict. However, it should be noted that the existence of the TAC conferred credibility and transparency to the process and can be considered a relevant self-composition tool in resolving the conflict since it imposed an obligation on the PMG to compensate affected families.

Through the TAC, deadlines and measures were established for the correction of environmental problems, and the obligations of the PMG were defined, thus avoiding the litigation of the conflict. The above-mentioned instrument sought to minimize the environmental impacts resulting from the macro-drainage works and guarantee the repair of the damage caused both to the environment and to the families directly affected. Therefore, the formalization of the TAC represented a relevant self-compositional measure that prevented a possible delay and the impossibility of the works and the litigation of the case.

Through the active participation of all interested parties and the creation of a place for dialogue, mediation can contribute to the identification of relevant issues and the search for innovative and mutually acceptable legal solutions to socio-environmental conflicts. In addition, mediation has the potential to prevent the litigation of the conflict, thus minimizing negative effects for all parties involved.

Based on the findings of this research, it is expected that this study may provide elements for the development of public policies and measures that encourage the use of mediation as an important tool in managing socio-environmental conflicts. With this, it is possible to aim at building more just and sustainable societies, in which differences can be resolved peacefully and collaboratively.

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