

The use of conflict mediation by the Sergipe River Basin Committee as a tool for implementing decentralised water resource management

Vanessa Gomes de Araújo

Programa de Pós-graduação em Desenvolvimento e Meio Ambiente,
Universidade Federal de Sergipe,
São Cristóvão, Sergipe, Brasil.

Gregorio Guirado Faccioli

Departamento de Engenharia Agrícola,
Universidade Federal de Sergipe,
São Cristóvão, Sergipe, Brasil.

Raimundo Rodrigues Gomes Filho

Departamento de Engenharia Agrícola,
Universidade Federal de Sergipe,
São Cristóvão, Sergipe, Brasil.

Anderson de Almeida Santos

Programa de Pós-graduação em Recursos Hídricos,
Universidade Federal de Sergipe,
São Cristóvão, Sergipe, Brasil.

Juan Mariano Camarillo Naranjo

Departamento de Geografía Física y Analisis Geográfico Regional,
Universidad de Sevilla, Sevilla, España

Clayton Moura de Carvalho

Instituto Federal de Educação, Ciência e Tecnologia Baiano,
Serrinha, Bahia, Brasil.

Rodrigo Couto Santos

Faculdade de Ciências Agrárias,
Universidade Federal da Grande Dourados
Dourados, Mato Grosso do Sul, Brasil.

Abstract

Parallel to the growing demand for multiple uses of water, conflicts between its users appear, contributing to the increase in the number of cases submitted to the Judiciary. This study aimed at

analyzing the existence of mediation as a method of resolving possible conflicts related to water resources in the Sergipe River Basin. The qualitative approach research was developed based on a bibliographic survey, by means of consultations with books, pertinent legislation, articles in scientific and non-scientific journals and, documental, through the analysis of the minutes of the meetings of the Sergipe River Basin Committee, its Internal Regulations and the Climatological Report that analyses the rainfall variability by regions in Sergipe, from 2000 to 2017. The results revealed that despite moving towards recognizing mediation as a method for resolving conflicts, the Committee faced several difficulties in carrying out decentralized management of water resources, especially with regard to the resolution of water disputes. Possible solutions to some of the problems faced by the Committee can be pointed out, such as training its members in water resource management and conflict management, in addition to making them aware of participating frequently in Committee meetings and also stimulating the participation of the population in these meetings.

Keywords: sustainability; water management; extrajudicial methods.

1. Introduction

Currently, the water crisis is becoming more and more present in the world scenario. The complexity of the hydroelectric crisis has been aggravated as there are real difficulties of availability and increase of demand respectively (Leroux, Martin and Zheng 2018).

In parallel with population growth and the consequent increase in economic activities, several countries are moving rapidly towards conditions of water unavailability or are already facing some hindrance, caused by water scarcity, so that they can develop economically, this due to the anthropogenic pressure to which water resources are being subjected.

The increase in water demand as a result of the various methods of using water resources, such as human supply, irrigation, aquaculture, agriculture, recreation, tourism and industrial supply, lead to the emergence of conflicts between users, thus raising the level of complexity of management problems, making it necessary to emerge or improve new techniques for solving these conflicts.

Brazil is not free to face problems of crisis and water scarcity facing a scenario of high demand, despite occupying a privileged position in relation to other countries in relation to its water availability (Borba and Bayer 2015).

More specifically in the Northeast region of the country, in addition to its edafoclimatic characteristics, the water crisis results mainly from the highly predatory intervention in the use of this finite natural good. In Sergipe, the situation does not differ, because despite having its eight hydrographic basins, the Sergipe state already presents regions where the unavailability of water, with commitment in quantity and quality, especially in the most urbanized hydrographic basins, is present, a crucial factor for the emergence of water disputes by its users.

The way found to manage this competition and provide greater equity in access to water was the creation of rules and instruments for managing water resources that institutionalize them, as well as the creation of the local decision-making body, in this case the River Basin Committees. In this regard, Law 9.433/97,

which is responsible for establishing the National Water Resources Policy, has as one of its bases that water is a public good, endowed with economic value, whose priority uses are human and animal consumption and whose management must take the watershed as a territorial unit. Law 9.433/97 allowed the river basins, in the form of management units, to be established on a case-by-case basis, giving them the possibility to conform to the specificities of the local problem. Even so, many of the conflicts generated by the multiple uses of water end up being directed to the judicial spheres.

Law 3.870, of September 25, 1997, which provides for the State Water Resources Policy and the State Water Resources Management System, in its article 35, item III, provides that the State Water Resources Council, an organ of coordination, inspection and collective deliberation and normative of the State Water Resources Management System, has, among others, the power to arbitrate, in the last administrative instance, the existing conflicts between watershed and water users.

Also, with regard to the arbitration of conflicts related to water resources, item II of article 39 of Law 3.870, of September 25, 1997, states that it is the responsibility of the Hydrographic Basin Committees, consultative and deliberative bodies, at the level of hydrographic basins, to arbitrate, in the first administrative instance, conflicts related to water resources.

The Hydrographic Basin Committee, composed of several representative segments of various categories of society, such as representatives of public authorities, users and civil society entities linked to water resources, has full legitimacy to act, in a collegial manner, in the management of the waters present within its area of competence. With this multisectoral coverage, favourable conditions are created for the watershed Committee to influence public policies in the sector and negotiate water use conflicts in a democratic manner (Sergipe 2002).

Following the same heterogeneous pattern in its formation, the Sergipe River Basin Committee was instituted by State Decree No. 20.778, of June 21, 2002 and, according to Article 4 of its Internal Regulations, the Committee is composed of eight representatives from the public authorities, eight representatives from the Water Users segment and eight representatives from the Civil Society segment (Sergipe 2002).

The State Water Resources Policy, established by Law no. 3,870 of September 25, 1997, provides for integrated, decentralized and participatory management, with the River Basin Committees and Water Resource Councils as bodies of relevant importance with regard to water management.

Although Brazil has a large *acquis* of material and procedural legislation on water resource management and the judicial means of resolving its controversies, the Judiciary faces difficulties in effectively resolving water disputes.

The Judiciary has been demanded as a result of the most varied types of conflicts and most of the time without the parties having previously tried to resolve the conflict without state interference, which generates a deficient and obstructed performance. These obstacles can arise from the large number of cases that make the decision-making process time-consuming, as well as from the large number of jurisdictional procedures or even the high economic cost of the proceedings. Thus, the affirmed crisis of the Judiciary precludes the rapid resolution of conflicts (Yarshell 2004).

The slowness of the Judiciary in responding to the judicial demand is also a reason for the use of alternative methods of conflict resolution, since time is a great enemy of the effectiveness of the

peacemaker function, considering that the permanence of undefined conflicting situations is a factor of personal anguish and unhappiness (Cintra et al. 2009).

In this context, it is important to use alternative means of conflict resolution so that the parties involved in the dispute can participate in the decision-making process and, in the end, are satisfied, and with the conflict, in fact, resolved. In this way, the use of conflict mediation strengthens practices that value a new way of managing the use of water resources, thus hindering the unrestrained increase of controversies in multiple water uses.

What should be sought is the guarantee of effective access to justice, where it is possible to guarantee the right claimed, a material right, substantial, effectively realized and not only the guarantee of a formal right, that established in legislation (Câmara 2006).

Thus, the objective of the present work was to analyze the existence of mediation as a method of resolving possible conflicts related to water resources in the Sergipe River Basin, since it is a method that can speed up the resolution of these conflicts, since the problem is solved in the first administrative instance, under the jurisdiction of the Hydrographic Basin Committees and there will be no need to resort to legal actions, generally time-consuming, to resolve these types of processes and, with this, greater protection of water resources can be achieved. Furthermore, it aimed at identifying possible conflicts related to water resources in the Sergipe River Basin in the years 2003, 2004, 2012, 2013, 2014, 2015, 2016 and 2017 and to verify the use of Mediation as a technique for solving conflicts related to water resources by the Sergipe River Basin Committee.

2. Methodology

The research was carried out in the Sergipe River Basin, located in the northeastern region of the state of Sergipe, arranged in the geographic coordinates quadrant with latitudes 10°08'00" and 11°04'00" S, and longitudes 36°50'00" and 37°50'00" W, and has an area of 3,753.81 km², involving the State of Bahia. The State of Sergipe comprises an area of 3,672.62 km², corresponding to 16.70% of the Sergipe territory (Sergipe 2010; Aguiar Netto and Moura Junior 2011).

This watershed covers the municipalities of Riachuelo, Malhador, Laranjeiras, Nossa Senhora Aparecida, Moita Bonita, Nossa Senhora do Socorro, São Miguel do Aleixo, Santa Rosa de Lima totally inserted in the Watershed and the municipalities of Aracaju, Barra dos Coqueiros, Areia Branca, Carira, Feira Nova, Divina Pastora, Frei Paulo, Ribeirópolis, Graccho Cardoso, Rosário do Catete, Itabaiana, Santo Amaro das Brotas, Itaporanga D'Ajuda, São Cristóvão, Nossa Senhora da Glória, Siriri and Nossa Senhora das Dores, partially inserted in the Watershed (Sergipe 2010).

The watershed has been undergoing an intense urbanization process and this is due in large part to the insertion of the capital of the state of Sergipe in the watershed, as well as the intense trade and large number of industries surrounding the Aracaju region, including the municipalities of São Cristóvão and Nossa Senhora do Socorro (Sergipe 2002).

In order to discuss the various interests focused on the multiple uses of water, the Sergipe River Basin Committee was created by State Decree 20.778, of June 21, 2002, which, according to art. 5 of this decree, must be integrated by 3 (three) sectors, represented by the public power, users and civil society

entities linked to water resources, adding a total of 48 (forty eight) members (Sergipe 2002), and one of its main attributions is to act in the first administrative instance in the resolution of conflicts related to water resources.

The temporal delimitation of the study was made after analysis of the Climate Report from 2000 to 2017, which demonstrated the variability of rainfall by regions in Sergipe. The report was made available by the Secretary of State for Urban Development and Sustainability, through the Center for Weather and Climate Analysis and Forecasting, Meteorology and Climate Change. Thus, the temporal delimitation of the study was comprised of the years 2003, 2004, 2012, 2013, 2014, 2015, 2016 and 2017, since in the years 2003, 2012, 2014 and 2016 the pluviometric indexes of the Coastal, Agreste and Sertão regions of the State of Sergipe, were negative, besides presenting a water deficit (Costa 2017) and the year following each year with a registered water deficiency was the period established for the possible conflicts related to water resources to come to the knowledge of the Sergipe River Basin Committee.

In order to identify possible conflicts related to water resources in the Sergipe River Basin during the delimited study period, the board of the respective river basin committee was requested to make available the minutes of the ordinary and extraordinary meetings. The minutes were also analyzed with the objective of verifying if there was the use of Mediation as a technique for resolving conflicts related to water resources by the Sergipe River Basin Committee.

The methodology used for the elaboration of this work was of an applied nature, since it intended to provide knowledge that could be used in practice and could also be directed to the resolution of specific issues (Lakatos and Marconi 2011).

In order to achieve the established objectives, the qualitative method was used, since it does not emphasize the enumeration or quantification of the data found, but it evidences the relevance of the information that is extracted through the critical analysis of the documents used in the research (Lakatos and Marconi 2011).

As for the procedure, the research was documentary, since several sources were used such as the minutes of the meetings of the Sergipe River Basin Committee, its Internal Regulations and the Climate Report that analyzed the variability of rainfall by regions in Sergipe from 2000 to 2017 (Lakatos and Marconi 2011).

The research was bibliographic, as it allowed obtaining various information and data found in numerous publications, in order to collaborate in the construction of the theoretical reference that refers to the object of study presented in this research (Gil 2010).

3. Results and discussion

The minutes number of meetings recorded in 2003, 2004, 2012, 2013, 2014, 2015, 2016 and 2017 was 26 (twenty-six) ordinary meetings, 6 (six) extraordinary meetings and 1 (one) thematic meeting (Figure 1).

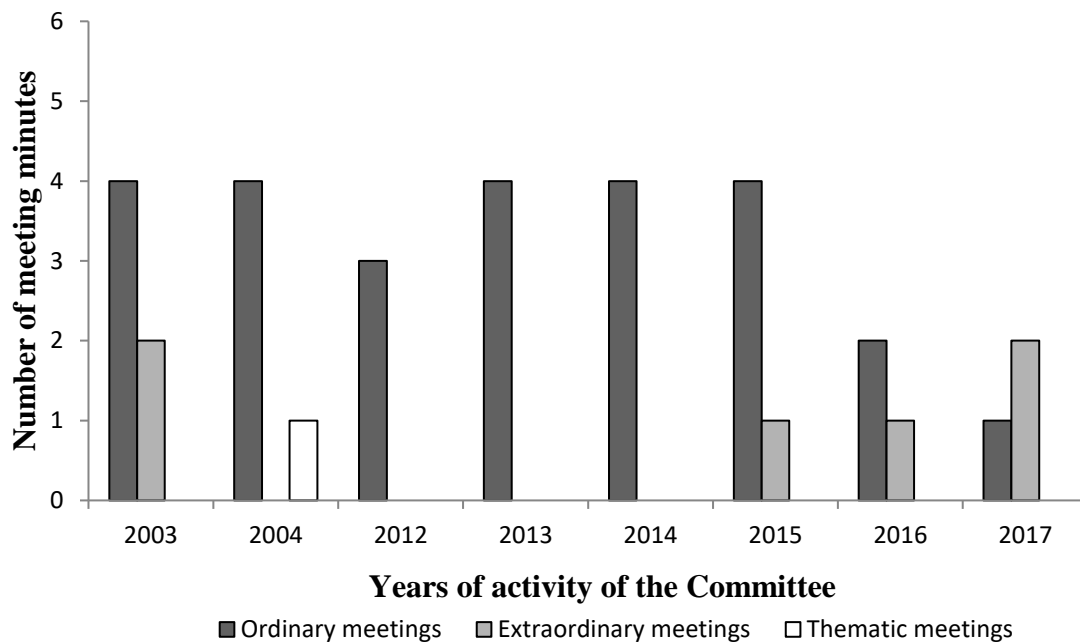


Figure 1. Number of minutes of ordinary, extraordinary and thematic meetings held by the Sergipe River Basin Committee in 2003, 2004, 2012, 2013, 2014, 2015, 2016 and 2017.

It was observed that the number of ordinary meetings in the years 2012, 2016 and 2017 was below the number established in Art. 38, item I of the Internal Rules of Procedure of the Committee, since they must meet ordinarily four (4) times a year. The number of ordinary meetings provided for in Article 38, subsection I of the Internal Rules of Procedure of the Sergipe River Basin Committee was reached in 2003, 2004, 2013, 2014 and 2015.

Only two ordinary meetings were held in 2016 and only one ordinary meeting in 2017, this fact that can cooperate significantly in the absence of denunciations, as well as possible discussions and resolutions of conflicts that may be occurring within the watershed.

Costa et al. (2011), studying the sub-basin of the Poxim River, identified the occurrence of environmental impacts resulting from anthropic actions in areas with riparian forest, deposition of garbage on the river banks, dumping of domestic and industrial effluents, as well as agricultural activities, proving the existence of actions that negatively impact the environment within the Sergipe River Basin. According to Figueiredo and Maroti (2011), there is a greater chance of conflicts related to water resources in the Sergipe River Basin, because the city of Aracaju, capital of the state, is inserted in the watershed.

It should be noted that in 2003, four ordinary meetings and two extraordinary meetings were held, totaling six (6) meetings throughout the year and representing the largest number of meetings held in all the years under review. In 2016 and 2017, as previously stated, the number of meetings was reduced to two ordinary meetings and one extraordinary meeting in 2016 and one ordinary meeting and two extraordinary meetings in 2017.

This difference between the number of meetings that took place in the years mentioned may be related to the difficulties faced by the different management of the Committee. Porto and Porto (2008) reported that there are difficulties in implementing decentralized and shared management in the committees and these

difficulties vary according to the articulations among the various sectors related to water resources.

Through the analysis related to the conflicts that were reported and recorded in the minutes of the Sergipe River Basin Committee meetings, no records of conflicts were found through the minutes of the meetings held in 2003. However, at the ordinary meeting held on May 8, 2003, in the city of Malhador/SE, the presentation of the Project Recovery of the Cajueiro dos Veados Stream was made, demonstrating the concern with the maintenance of water production in the Basin. Although there is no report of conflict in these minutes, according to Hora (2004), since 1996, some farmers had already reported the existence of environmental problems related to soil handling for agricultural activities in the area of the Cajueiro dos Veados Stream, located in the city of Malhador/SE, which caused a situation of environmental degradation that generates damage both to agricultural activity and to the water quality of that spring.

Still in the year 2003 it was identified in the minutes of the extraordinary meeting, occurred on June 09, 2003, in Aracaju/SE, the proposal of a member of the Committee to be created an organ with the objective to leave the Committee apt to the management of conflict.

The need and importance of training Committee members for conflict management was demonstrated, a fact that is confirmed in the environmental perception study conducted by Figueiredo and Maroti (2011) with the Sergipe River Basin Committee from 2008 to 2010, where the need was identified for continuous technical training and educational work in order to improve the training of its members to ensure that its members know the issues necessary for their deliberations.

Analyzing the minutes of the ordinary meeting held on April 13, 2004, in the city of Aracaju, Sergipe, it was observed that there was the presentation of a report with statements and photos explaining the environmental situation of the Rivers Sal and Cotinguiba, both affluents of the River Sergipe and, among the problems presented, were highlighted as more worrying, the pollution of Rio do Sal with the undue occupation of its banks with the construction of housing, in addition to silting up and pollution generated by domestic dumping directly into the river by the population, as well as industrial dumping from the Pinheiro Plant and the Santista Textile Factory. It was also highlighted that this report would be a denunciation report and that it should be accepted and given the necessary guidelines to solve the problem.

According to the Qualitative Diagnosis of Integrated Urban Water Management in the Metropolitan Region of Aracaju, the Sergipe River Basin contains areas of 26 municipalities, including the municipalities of Aracaju, Barra dos Coqueiros, Nossa Senhora do Socorro and São Cristóvão, which make up the metropolitan region of Aracaju and, because of this, has a significant demographic density in urban areas and, consequently, concentrates several problems related to water resources in the state of Sergipe (Sergipe 2010).

Analyzing the Minutes of the ordinary meeting held on March 27, 2012, in the city of Carira / SE, it was found that a representative of the Agricultural Development Company of Sergipe made an explanation about the River Sergipe, showing photos that portray the worrying situation that is the River Sergipe in this municipality, aggravated mainly by extensive corn plantations, indiscriminate use of pesticides and chemical inputs. The fact mentioned in these minutes was emphasized by the work developed by Araújo et al (2016), where it was evidenced the increase in corn production of approximately 5000% between 2003 and 2013 in the municipality of Carira, Sergipe.

From the analysis of the minutes of the meetings that took place throughout 2013, no records of conflicts related to water resources were identified.

At the regular meeting held on October 14, 2014, in the city of Aracaju/SE, a representative of the Superintendency of Water Resources, in her presentation, spoke about the formation of watershed committees and demanded that their main function was to resolve conflicts arising from water use.

It is possible to notice through the register above that the Sergipe River Basin Committee, despite having attribution for the resolution of conflicts related to water resources, has not focused its actions to fulfill this function. Gutiérrez (2006) also understands that the main function of the Committees is to At the ordinary meeting that took place on June 16, 2015, in the city of Itaporanga D'Ajuda/SE, a participant of the meeting explained about the volume of water existing in Brazil and in several regions of the state of Sergipe and informed that the population needs to do something to reduce conflicts and increase harmonious coexistence, given the increasing decrease in the volume of water offered and population growth. faced by the Committees, such as the difficulty of recognition and legitimacy by the public authorities of the decisions issued, in addition to the technical limitations that hinder decision-making on certain matters.

At the ordinary meeting that took place on June 16, 2015, in the city of Itaporanga D'Ajuda/SE, a participant of the meeting explained about the volume of water existing in Brazil and in several regions of the state of Sergipe and informed that the population needs to do something to reduce conflicts and increase harmonious coexistence, given the increasing decrease in the volume of water offered and population growth.

The increase in consumption of natural resources to supply this demand, especially the use of water, generates a pressure that can lead to immeasurable negative impacts on water resources, such as its scarcity both in quantity and quality available for consumption, a factor that already occurs in several parts of the planet, including Brazil (One and Albuquerque 2018).

At the extraordinary joint meeting with the Watershed Committees of the São Francisco River, the Japarutuba River and the Piauí River, which took place on November 19, 2016, in the city of Aracaju/SE, a representative of the Water Resources Superintendence spoke about the training of Committee members developed by the National Water Agency and what points to work on such as capacity, skills, management, finances, mediation and arbitration of conflicts.

Through the analysis of the minutes in the period delimited in this research, few conflicts were reported and in none of the cases was it reported what would be the referrals given by the committee to these problems. There was also no mention of the use of mediation as a method of resolving conflicts related to water resources recorded in the minutes of the committee meetings. Nevertheless, through the above report, it was possible to perceive that there is recognition by some members of the Committee of the Sergipe River Basin Committee of the need for a more active posture regarding the resolution of conflicts related to water resources in its area of coverage, and also that there is recognition of the possibility of using new methods of conflict resolution, such as conflict mediation, as well as the training of its members to be able to use it.

The use of conflict mediation by the Watershed Committee complies with the principles, objectives and foundations of the National Water Resources Policy, since through it, the management of water resources is able to provide multiple use of water, besides having the watershed as a territorial unit for the implementation of the National Water Resources Policy and the performance of the National Water

Resources Management System, also allowing the management of water resources to be decentralized and have the participation of the Public Authorities, users and communities.

According to Vasconcelos (2008), mediation is a non-hierarchical means of dispute resolution, where two or more people, with the help of a third party, the mediator, who must be impartial, freely chosen or accepted by the parties involved and capable (with the technical competence to do so), narrate the problem, discuss constructively and seek to identify common interests, possibilities and possibly sign an agreement. Law 13.140/2015 provides in the sole paragraph of Article 1st, that "Mediation is considered the technical activity performed by an impartial third party without decision-making power, which, chosen or accepted by the parties, assists and encourages them to identify or develop consensual solutions to the controversy" (Brazil 2015).

Thus, Almeida, Pantoja and Pelajo (2015, p. 282) inform that "the new Civil Procedure Code has kept pace with society's advances and is aligned with the most modern techniques of alternative conflict resolution [...]".

The Watershed Committee can use mediation to carry out its role in the management of conflicts related to water resources, given the advantages offered by this method of conflict resolution. The speed and effectiveness of its results, the reduction of emotional shock and financial expenditure, the preservation of intimacy and secrecy, the simplification of dialogue, the formation of cooperative scenarios, and the improvement of relationships due to the transformation of relationships are among the main advantages of this mechanism (Mendonça 2004).

Letting conflicts related to water resources be resolved or not within the Judiciary may lead to even more serious problems for the environment. Aspects such as the slowness of the decisions made by the Judiciary, either due to the large number of cases submitted to its appreciation, as well as the fact that there is little technical training for the resolution of environmental disputes in this area, besides the difficulty of the parties involved in the conflict to comply with such determinations, since they are imposed decisions, lead to the conclusion that it is necessary for the Hydrographic Basin Committee to act in the resolution of conflicts related to water resources and even if methods are used that make society's participation in decisions about water resources effective.

About the possibility of using self-compositional means in the resolution of environmental conflicts, asserts Figueiredo (2013, p. 153).

"Coexistential justice perfectly adapts to the solution of conflicts in the socio-environmental sphere, whose relations are complex and long-lasting, so that the use of the preventive tools of the controversy proves to be more efficient in meeting the principles of precaution, prevention and intergenerational equity that guide the guardianship of the environment".

At the regular meeting held on April 4, 2017, in the city of Aracaju/SE, no reports of conflicts were identified, but one member reported that he feels weakness and difficulty in dealing with some issues, due to the complexity and lack of coexistence with certain situations.

The difficulty of some Committee members in dealing with the conflicting situations arising from the use of water was perceived, even though it is a topic that is hypothetically recurrent in the Committee's

deliberations. This difficulty, according to (Ramos 2005; Leite 2015), proves that although the Committee is seeking new institutional mechanisms, such as new methods of conflict resolution, it still has difficulties in carrying out its activities, which in some cases may be due to the prevalence of decisions determined in favor of the interest of a certain group and specific segments, as well as may be related to the organization of the Committee, lack of knowledge of the information of the Basin itself by the members, lack of resources and qualified members.

The Sergipe River Basin Committee should not allow the perpetuation of attitudes that they propose to modify and innovate. In this sense, the Committee must continuously train its members, avoiding factors such as lack of technical qualification and information about the region that comprises the Watershed to be a decisive factor in the implementation of poor water management.

4. Conclusion

Through the analysis of the minutes of the meetings held in the delimited period, it was noted that there were few complaints about conflicts related to water resources in the Sergipe River Basin region. In most cases, there were no records of conflicts, but vague records of reports of problems occurring in the Basin region such as deforestation, river pollution, discharges of domestic and industrial effluents, which could be confirmed through the search for other studies conducted in the Basin.

Because of this, there is a need for the Committee to re-evaluate the process of drawing up its minutes, since there is an improvement in its preparation with the report of the problems that affect the basin region, it can use it to create an agenda of continuous actions with the objective of dealing with these conflicts, and it can also have control of what is being discussed and rediscussed by its members, in order to identify flaws and, of course, to see which actions are generating positive results for the management of water resources.

It is certain that the degradation of the environment that occurs in the watershed region, added to possible periods of water shortage, contributes to the existence of a series of disputes. The National Water Resources Policy gives the Hydrographic Basin Committee the competence to arbitrate, in the first administrative instance, the conflicts related to water resources and, because of that, it allows the creation of rules and public policies focused on water in a collective way, that is, democratically discussed by all members aiming at the prevention and consequent reduction of conflicts arising from the use of water.

The use of the Watershed as an instrument for managing water resources is advantageous because it brings society closer to the issues related to water resources, allowing the participation of the population in projects and decisions about water, in addition to providing a differentiated view of the environment in order to preserve it. In addition, the Committee can more easily evaluate, since it is restricted to a certain geographical area, what is the potential for development of a certain watershed, proposing the best ways to use the water resources of that location, with the least possible environmental impact, i.e., the use of water resources aiming at sustainability.

After the creation of the National Water Resources Policy there were several advances in water management. This advance, within the Sergipe River Basin Committee, could be identified in the analysis of one of the last minutes object of study, where a member of the Committee mentioned that there would

be training of its members by the National Water Agency, among these training courses, the implementation of conflict mediation.

The use of conflict mediation, a self-composed means of dispute resolution, allows the parties involved in the conflict to have the possibility of re-establishing communication between them and, in the end, obtaining an effectively fair solution. Thus, the agencies and all those involved in the dispute will be able to use it in order to speed up the resolution of these conflicts, since the problem is solved in the first administrative instance, which is under the jurisdiction of the Watershed Committees, and there will be no need to resort to lawsuits, which are generally lengthy, to resolve these types of cases, as well as to reduce the number of conflicts submitted to the Judiciary.

However, for the use of mediation as a method of resolution to be recognized, it is necessary that the Public Authorities and also the members of the Committee act to bring to the knowledge of the population in general the existence of other mechanisms of conflict resolution. Therefore, this role should be developed both at the state level, through the Judiciary itself, and at the non-state level, through the Watershed Committee, and the forms of dispute resolution should complement each other, but always seeking the use of mediation as a first measure.

5. Acknowledgments

Thanks to Sergipe State Research and Technological Innovation Support Foundation - FAPITEC for granting scholarship to the student Vanessa Gomes de Araújo, during the Graduate Program in Development and Environment - PRODEMA/UFS.

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