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POPULATION PARTICIPATION IN DECISION-MAKING ON RURAL WATER SUPPLY: CASE STUDIES OF THE DISTRICTS OF BOANE AND MANHIÇA

PARTICIPAÇÃO DA POPULAÇÃO NA TOMADA DE DECISÕES SOBRE ABASTECIMENTO DE ÁGUA RURAL: CASOS DE ESTUDO DOS DISTRITOS DE BOANE E MANHIÇA

PARTICIPACIÓN DE LA POBLACIÓN EN LA TOMA DE DECISIONES SOBRE EL ABASTECIMIENTO DE AGUA RURAL: ESTUDIOS DE CASO DE LOS DISTRITOS DE BOANE Y MANHIÇA

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ABSTRACT

The present article was elaborated with the objective of analysing the participation of the population in the decision-making process about rural water supply in Mozambique, specifically in Maputo Province, Boane and Manhiça districts. Such analysis was carried out in the light of phenomenological theory, complemented by the spider web model for the analysis of the level of community participation. Regarding to data collection, three techniques were applied, namely documental research, semi-structured interviews and focus group. In this process, the data of 20 semi-structured interviews and 12 focus groups were collected. In the analysis carried out, it was verified that the relatively weak implementation of community inclusion mechanisms by government entities has been leading to a low level of community participation, worsened by the population high rate of illiteracy and their lack perception of the necessity of complying with monthly contribution. Thus, it was concluded that in order to increase the level of community participation and, consequently, improve the access to rural drinking water, it is necessary to fully implement the community inclusion mechanisms embodied on PRONASAR Program by including these aspects as priorities in the next five-year.

Keywords: Participation. Decision-Making and Rural Water Supply.

RESUMO

O presente artigo foi elaborado com o objectivo de analisar a participação da população na tomada de decisões sobre abastecimento de água rural em Moçambique especificamente na Província de Maputo, nos distritos de Boane e Manhiça. Tal análise foi feita à luz da teoria fenomenológica, complementada pelo modelo de teia de aranha para análise do nível de participação comunitária. Para a recolha de dados, aplicou-se três técnicas, nomeadamente, técnicas de pesquisa documental, entrevistas semiestruturadas e de grupos focais. Neste processo, foram recolhidas 20 entrevistas semiestruturadas e 12 de grupos focais. Na análise feita, verificou-se que a relativa fraca implementação de mecanismos de inclusão comunitária por parte das entidades

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governamentais tem estado a conduzir ao baixo nível de participação comunitária no abastecimento de água rural, agravado pelo alto nível de analfabetismo da população e também a falta de percepção da necessidade de contribuições mensais. Desta forma, conclui-se que para aumentar o nível de participação comunitária e, consequentemente, melhorar os níveis de acesso à água rural, é necessário implementar na integra os mecanismos de inclusão comunitária patentes à nível do Programa PRONASAR através da inclusão destes aspectos como sendo prioritários nos próximos quinquénios.

Palavras-chave: Participação. Tomada de Decisões e Gestão de Água Rural.

RESUMEN

Este artículo tiene como objetivo analizar la participación comunitaria en la toma de decisiones sobre el abastecimiento de agua rural en Mozambique, específicamente en la provincia de Maputo, en los distritos de Boane y Manhiça. Este análisis se realizó utilizando la teoría fenomenológica, complementada con el modelo de telaraña para analizar el nivel de participación comunitaria. Se aplicaron tres técnicas de recolección de datos: investigación documental, entrevistas semiestructuradas y grupos focales. Se recopilaron veinte entrevistas semiestructuradas y doce entrevistas de grupos focales. El análisis reveló que la implementación relativamente débil de los mecanismos de inclusión comunitaria por parte de las entidades gubernamentales ha llevado a bajos niveles de participación comunitaria en el abastecimiento de agua rural, exacerbados por la alta tasa de analfabetismo de la población y la falta de conciencia sobre la necesidad de contribuciones mensuales. Por lo tanto, se concluye que para aumentar el nivel de participación comunitaria y, en consecuencia, mejorar los niveles de acceso al agua rural, es necesario implementar plenamente los mecanismos de inclusión comunitaria presentes a nivel del Programa PRONASAR, incluyendo estos aspectos como prioridades en los próximos cinco años.

Palabras clave: Participación. Toma de Decisiones y Gestión del Agua Rural.

1 INTRODUCTION

The objective of this study is to analyze the participation of the population in decision-making on rural water supply in the districts of Boane and Manhiça. In order to bring to light the real problems experienced by local communities regarding the management of water sources and their contribution to decision-making for the management of these services in rural areas.

In developing countries, and in particular in sub-Saharan Africa, public sector reform programmes have been initiated as a result of pressure from the international community, Ayee (2008). After independence, African countries in the process of building developmental states were soon confronted with the decline in the capacity for effective political regulation and provision of public services, Forquilha (2013). Therefore, reforms were implemented with the aim of increasing access to services, increasing delivery efficiency and improving the overall quality of services. In most of Africa, reforms have included devolving public authority, resources and management to local governments, instigating public-private partnerships and involving different stakeholders, including civil society, NGOs and donors, The World Bank (2004).

From the literature consulted, countries such as Brazil regarding decentralization focused on improving services through the participation of the population in decision-making. Roy (1996) states that in seeking community participation in the process of local development, it is necessary for mayors to change the view that they decide everything, and to consider that they are also actors in this process and will share decision-making with other individuals and organizations. For Roy (1996), each actor has a group of values that will support his judgment, with regard to the intensity and solution of a problem, taking into account his objectives, interests and aspirations.

However, in Mozambique the discourse on which public services become more effective with the implementation of reforms in the sector, particularly focused on the decentralization process, still has considerable gaps, in addition to being marked by a logic of recentralization, solidified in the State's control over the process of constituting local councils and in the reduction of the latter into mere instances of consultation without any deliberative character, Forquilha & Orre (2012) cited in Weimar (2012).

The idea of gradualism (without a defined timetable) of the decentralization process in the country has gaps, due to the fact that it leaves out a large majority of the population and a large part of the resources that would allow some autonomy to the

municipalities and also because the administrative division goes only up to the administrative post[3] and does not contemplate the communities or involve the traditional authorities in the administrative structure, Faria and Chichava (1999). These factors have somehow contributed to an inefficient management of water services at the rural level, Nhacudime (2016).

The rural water sector has been building new water sources, but there are still major challenges associated with the maintenance of these infrastructures, the studies carried out by INE and IOF 2014/2015, combined with previous studies (2007 census, IOF 2008/2009 and IDS 2011) showed that there was a trend towards degradation in the level of improved services in rural water supply. By 2018, only 23.9% of the population had access to water from dispersed sources, contradicting the investment efforts that the sector made from 2010 to 2015 where 14,546 sources were built/rehabilitated and there were a total of 26,174 operational sources, serving 37% of the population in 2015, DNAAS (2021). In 2022, access levels improved compared to 2018, with a total of 49% of the population having access to rural water, and despite this improvement, the level of access to drinking water is still below the targets set for the 2015 MDGs.

Factors such as the poor sustainability of the infrastructures associated with the unavailability of spare parts, lack of training of the craftsmen and low level of post-construction technical support of the fountains, without ignoring the fact that apparently the fountains are concentrated in the same places or are in very dispersed settlements thus serving an average population of 160 people as opposed to the 300 people used in the planning, has been contributing to the degradation of these MOPHRH services (2018).

Associated with these factors, the population faces difficulties in their daily lives such as the poor accountability of the committees in relation to the use of funds, the lack of information about the district's water resources and planning of sustainable water management projects and also the low awareness of the beneficiaries of the sense of belonging of the sources since they are considered the property of the State, facts that lead to low community participation in water supply at the rural level, Frenque (2002).

This discussion is extremely important because it leads this research to explore how the management of these services has been done taking into account the participation of the population in decision-making. Therefore, the study sought to answer

[3] The Administrative post is the lowest echelon in the current administrative structure in Mozambique.

the following questions: How is the concept of participation conceived and translated locally? What mechanisms are used for community inclusion in water management? What factors restrict the effective participation of the population in the management of services?

2 METHODOLOGY

This article presents a chapter of the PhD Thesis entitled: **"Participation of the population in decision-making on rural water supply"** This was an exploratory and descriptive research with the aim of analyzing the process of participation of the population in decision-making on rural water supply in the communities under study. As a procedure for the analysis of empirical data, the qualitative approach was adapted. The phenomenological method was also applied to understand what is brought as a problem or not a problem and that affects the participation of the population in decision-making and the spider web model (Spider Diagram) to analyze the level of participation of the population taking into account the strategies designed in PRONASAR. For data collection, the techniques of documentary research, semi-structured interviews, focus groups and non-participant observation were applied.

With regard to the documentary research technique, the main document that guided the analysis was PRONASAR I of 2010 and II of 2019 (National Program for Water Supply and Rural Sanitation), which is a program designed specifically for the operationalization and implementation of the Strategic Plan for Water Supply and Rural Sanitation (PESA-ASR) for 2006-2015, the Strategic Pillars of the Water and Sanitation sector under the Five-Year Plan (2010-2014), and the Human Capital pillar of the Action Plan for the Reduction of Absolute Poverty II (2004-2011) (PARPA II). PRONASAR foresees all actions related to the participation of the population and its involvement in rural water supply, including the participation of Non-Governmental Organizations and the private sector, and it was from this document that the analysis of what is considered problematic or not problematic in the communities and that affects the level of participation of the population in decision-making for the management of these services was made.

Although the study used primary and secondary data, most of the information was obtained from the population of the communities under analysis, from the chairs of the

water committees to the beneficiaries of the hand pumps. For this reason, we opted for the use of semi-structured interviews, focus groups and non-participant observation.

Non-probabilistic sampling by quotas was applied in the research. The technique of non-probabilistic quota sampling consists of selecting a sample from a subgroup of the population according to the characteristics of the individuals. The basis for delimiting the subgroups can be found in properties such as sex, age or social class, and the intention of the sample is to include similar proportions of people with the same characteristics, Gil (2008).

Quota sampling was applied in this research because the use of quotas does not allow overrepresentation, since this technique helps the researcher to study a population using specific quotas, in addition to being a quick and easy sampling process. In this research, women and men aged 10 to 24 years, 25 to 49 years and 50 years and above in the districts of Boane and Manhiça were interviewed using quotas.

Quota sampling was also applied in focus group interviews. In this technique, focus groups were created composed of 6 members (women and men) aged 10 to 24 years, 25 to 49 years and 50 years and above in each district.

In terms of composition, 2 focus groups of women aged 10 to 24 years, 2 focus groups of women aged 25 to 49 years and 2 focus groups of women aged 50 years and above, totaling 6 focus groups of women in the two districts (3 in Boane and 3 in Manhiça). 6 focus groups of men were also composed, 2 focus groups of men aged 10 to 24 years, 2 focus groups of men aged 25 to 49 years and 2 focus groups of men aged 50 years and older.

Thus, in this research 32 interviews were conducted, 20 semi-structured interviews and 12 focus groups in order to analyze what is considered as problematic or non-problematic, which affects the participation of the population in decision-making about rural water supply, seeking to analyze from the actions designed in PRONASAR the reality experienced by the population.

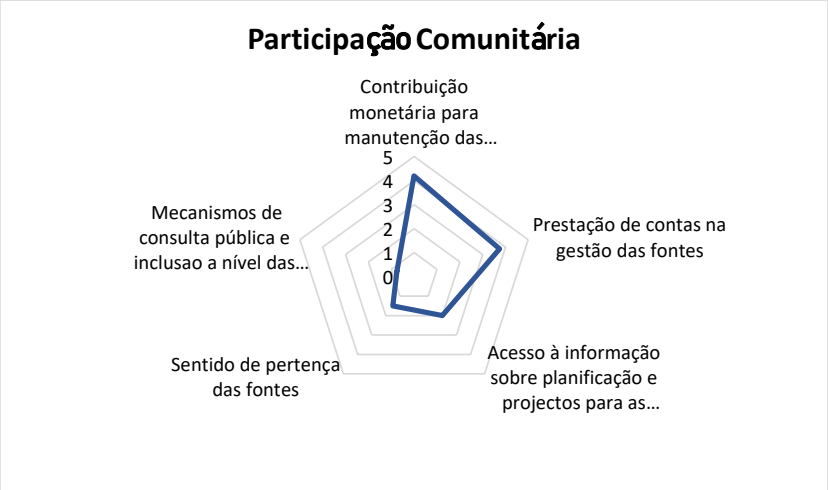
Thus, taking into account the mechanisms of participation designed in PRONASAR, the mechanisms analyzed by Frenque 2002 and the grouping of the data obtained, the following themes were brought for analysis: monetary contribution for the maintenance of sources, accountability in the management of sources, access to information on planning and projects for communities, sense of belonging of sources and also mechanisms of community inclusion.

2.1 DATA PRESENTATION

In this sub-point, the research data is presented, collected through semi-structured interviews and focus groups in the population of the communities under analysis. The categorization of the interviews was made according to the content analysis of Bardin (1997) in Pineda (2013). Each category had questions to which the answers were placed in themes according to the mechanism of participation to be analyzed.

Table 1

Spider diagram illustrating the level of participation of the population in each identified theme



Monetary contribution to maintain sources

Regarding the monetary contribution for the maintenance of sources, it was found that 100% of the interviewees in both districts answered that contributions are made monthly for this purpose. In Boane contributions of 20 Meticais have been made and in Manhiça 10 Meticais.

Regarding the person from the community appointed to manage the money resulting from the contributions, in Boane 91% answered that this management has been done by the president of the water committee and in Manhiça 100% answered that the management has been done by the treasurer of the Committee.

When there is a breakdown at the source, in Boane 67% of the population answered that they use the value of the monthly contributions to repair the source and 25% answered that a one-off contribution is made for repair and in Manhiça, there is an opposite scenario, with 86% of the population answering that when there is a breakdown,

a one-off contribution is made for its repair and 14% answered that the value of the monthly contributions is used.

Accountability in the management of sources

Regarding the existence or not of a person responsible for the management of the fountain, in Boane, 64% answered that it was the responsibility of the School, since the fountain under analysis was inside the Primary School of Estevel and 9% answered that it was the responsibility of the secretary of the Neighborhood, in Manhiça, 71% of the population answered that it is the responsibility of the head of the block and 29% that it is the responsibility of the water committee.

Regarding the responsibility for the management of money, in Boane 91% answered that it is the responsibility of the chairman of the water committee, 9% answered that they do not know who is responsible and in Manhiça 100% of the population answered that it is the responsibility of the treasurer.

Access to information on planning and projects for communities

Regarding knowledge of the Government's plans for the communities under analysis, 91% of respondents in Boane say they do not know about the Government's plans and 71% of respondents in Manhiça also say they do not know about the Government's plans.

When asked if they have had any support from the Government through the SDPI, when they have any concerns about water, 55% say they have spoken to the neighborhood secretary and 36% say they have received a visit from the Municipality's employees for this purpose. In Manhiça, 43% say that they have communicated to the head of the block, but that they also do not know who to communicate to since the secretaries of the neighborhoods that are also chiefs are already of advanced age.

Regarding the need for more sources, 73% of respondents in Boane say they do not know how to proceed when there is a need for this and 18% say they inform the neighborhood secretary. In Manhiça, 100% of the respondents say they do not know how to proceed when there is a need for a new source of water.

Sense of belonging of the sources

Regarding the existence of entities that help communities solve their problems, 73% of the population in Boane states that they are not aware of the existence of these entities and 27% claims to be the Municipality. In Manhiça 100% of the population claims to be unaware of any entity that helps solve problems.

Regarding the importance of these institutions, in Boane 91% of the population did not answer a question and 9% said that the Municipality has given its support but needs to improve. However, in Manhiça 100% he has no opinion on the issue.

Regarding the placement of protection at the fountain, 82% of the population in Boane say that the president of the Committee has been in charge of locking the fountain every day at 5 pm and in Manhiça, 100% say that the padlock is placed on the fountain but is often vandalized by young people from the community, who misuse the water and put dirt in the pipe of the hand pump.

Regarding what can be improved for water supply, 82% of the population in Boane say that piped water services could be improved. And in Manhiça, 57% of the population says that Manual Pumps could be increased and 47% that water could be channeled.

Public consultation mechanisms and community inclusion

Regarding participation in the Local Advisory Councils, 100% of the population in Boane as well as in Manhiça, states that they do not participate in these councils and that only the secretary of the neighborhood has this privilege.

2.2 DATA ANALYSIS

In this chapter, content analysis techniques were used for the processing of data from the interviews, with the purpose of inferring in a controlled way the messages transmitted by the interviewees regarding the issues under analysis. This technique allowed to unveil hidden messages that can show antecedents or consequences of an action or reflect opinions, judgments or positions, Bardin (1997) in Pineda (2013).

Considering the amount of data collected, for the specific article, interviews were collected with the beneficiaries of water supply services at the level of the communities under analysis and also at the level of the relevant actors belonging to institutions responsible for rural water supply, a coding was created that allows to easily identify which district the interviewee belongs to, their number and area of operation, community/locality.

Table 2

Summary of the nomenclature used for the coding of the interviews

Tipo de Roteiro utilizado		Tipo de entrevistado	Distrito	Código	Localidade
Boane	Beneficiários	B	B	BB1	W
		B	B	BB2	W
	Grupos Focais	GFM	B	GFMB1	W
		GFH	B	GFHB2	W
	Gestores (Secretários de Bairros, Presidentes de comités de água, Chefes de SDPI's, Gestores Municipais, ONG's)	GL	B	GLB1	W
		G	B	GB1	VB
Manhiça	Beneficiários	B	M	BM1	M
		B	M	BM2	M
	Grupos Focais	GFM	M	GFMM1	M
		GFH	M	GFHM2	M
	Gestores (Secretários de Bairros, Presidentes de comités de água, Chefes de SDPI's,ONG's, DPOPH, DNAAS)	GL	M	GLM1	M
		G	M	GM2	VM
Maputo		G	MC	GMC1	MC
		G	MP	GMP4	MP

To meet the objective of verifying the level of participation of the population in decision-making, an analysis of the interviews was carried out taking into account the five themes raised through the application of the spider diagram, and the result was ordered as follows: monetary contribution for the maintenance of the sources, accountability in the management of the sources, access to information on planning and projects for communities, sense of ownership of sources and mechanisms for public consultation at community level.

The use of this type of approach allowed to identify in each theme raised the degree of community participation in relation to the issue, and this degree was identified through a numbering of 0-5 points, which can also be translated into percentage counting.

3 RESULTS OF THE ANALYSIS AND DISCUSSION

At this point, the results of the data analysis and the respective discussion are presented according to the starting questions and the objectives of the article. The results presented followed the logic of the themes of the GANT diagram, and the result was ordered as follows: monetary contribution for the maintenance of the sources, accountability in the management of the sources, access to information on planning and projects for the communities, sense of belonging of the sources and mechanisms of public consultation at the community level.

3.1 MONETARY CONTRIBUTION TO MAINTAIN SOURCES

Regarding the monetary contribution to the maintenance of water sources, part of the population of the districts under analysis is aware of the need to contribute monthly to the maintenance of the sources. During each month, it was stipulated that the first week is for the monthly contributions to be made by the community member population and by all those who benefit from the water source. However, according to interviewee GLB2, when the stipulated week arrives for carrying out the charges, few members of the community go to the source in search of water, taking into account that the charges are made at the location of the fountain by the president or treasurer of the water committee.

In the two communities under study, both presidents of the water committees carry out monthly control of the contributions that are made by their members, allowing it to be known who the debtors are. However, for the case of the population that lives very far away and that seeks water from the sources under analysis, it was explained that they have had the habit of avoiding monthly contributions.

The behavior of not contributing monthly to the maintenance of the sources is a challenge for those who manage them, since for each general average there is a need for punctual charges for its repair.

[… when the fountain breaks down, we meet and check if the amount of the monthly contribution is sufficient to cover the expenses for repair, which may include the purchase of damaged parts, travel and food for the person who goes to Maputo to buy these parts and the amount to pay to those who will repair the fountain (which is often higher than the other expenses). When the amount we have accumulated from the monthly charges is not enough, we make contributions until it is enough...] (GFHM interviewee, 08/27/2022)

When there is a breakdown at the source, in Boane 67% of the population answered that they use the value of the monthly contributions to repair the source and 25% answered that a one-off contribution is made for repair and in Manhiça, there is an opposite scenario, with 86% of the population answering that when there is a breakdown, a one-off contribution is made for its repair and 14% answered that the value of the monthly contributions is used.

This inequality in terms of the need for one-off contributions for the maintenance of sources is explained, on the one hand, by the fact that in Manhiça the value of contributions is only 10 Mt, unlike in Boane, which is 20 Mt, and also by the fact that the

mechanism of charging the fee of 500 Mt per month for residents who are building masonry houses has not been adapted in Bairro 2000. On the other hand, this inequality can be explained by the behaviour of the treasurers/chairmen of the water committees at district level. In Manhiça, during the collection of interviews, we found that the reports that were passed on to us reflected a very recent past of a harmful management that the population of the 2000 neighborhood had experienced and little was reported about the new management, despite the scenario having improved in relation to the accountability of the value of the existing monthly contributions.

3.2 ACCOUNTABILITY IN THE MANAGEMENT OF SOURCES

Accountability in the management of water sources in the districts under study is assigned to the chairs of the water committees and their treasurers, who are required to periodically report on the needs for cleaning, maintenance and monthly contribution to community members.

In Manhiça, in the 2000 neighborhood, the population reported that that year was the first in which they had the experience of having an account of the funds of their contribution (the existing amount and also the destination of such amount) since in the past such a situation did not occur. The researcher attended one of the accountability meetings after the change of the water committee in the 2000 neighborhood. At that meeting, the amount that had been collected throughout the year and the amount needed to purchase parts for preventive maintenance of the two sources at the neighborhood level were announced. According to the reports, this situation had never been experienced before, since no one knew what was done with the value of the contributions and whenever there was a breakdown, the population was again obliged to contribute in a specific way to repair the source.

[..."The money is managed by a member of the committee, but we don't know who that person is. It was decided that one should not know or inform who is the person who takes the money to prevent people from going after the person to borrow money. We have already had problems with the management of money by the members of the old commissions, they took part of the amount to buy "chivotxongua" dry drinks. And when the fountain broke down, the money saved was not enough to repair it, so they said that we had to contribute to the repair of the fountain, and when we asked why the money saved over the years was not enough to repair the fountain, they said that we had to

forget the past and focus on the present, And the present was the state of breakdown of the source, so we had to contribute. The current committee has managed the money in a better way, we have never had problems of this nature, of inappropriate use of the money from contributions, when we need the money for something that concerns the source, the committee makes it available...] GFHM2 Interview, 27/08/2022)

In the neighborhood in question, the amount of the contribution was previously managed by the former president of the water committee, who is also part of the "Madodas" [4]of the regulated. A fact that also inhibited the demand for accountability by the community, as it was a high individuality in the eyes of the community.

Such situations, reported in the sense of mistrust towards the former members of the water committee, were not verified at the level of the Wakombo community in Boane. In this community, the mechanisms for managing the sources through the water committees, monthly contributions and one-off contributions when there is a general average of the source are also instituted.

However, what differentiates it from the 2000 neighborhood in Manhiça is the value of its contribution, which is 20 Mt monthly and 500 Mt when the community member is building a masonry house. These aspects collaborate to increase the value of the contributions, avoiding having to always resort to the community whenever there is a breakdown or need for maintenance of the sources, not to mention the fact that the population of Boane, despite being the one that most suffers from the lack of water due to the hydrogeological conditions of the soil (salubrious water), this population is better educated than the population of neighborhood 2000 in Manhiça.

Another aspect that may be combined with greater accountability in Boane, resulting in the sustainability of the fountain at the Estevel School than in Manhiça in the 2000 neighborhood, is related to the monthly allowances that are given to the president of the Water Committee, who on a day-to-day basis performs the functions of treasurer and control of cleaning of the fountain, such a practice was not mentioned in Manhiça. The need to provide subsidies was confirmed by Nhaurire (2017), when he stated that the lack of subsidies to the members of the water committees may also lead to the misuse of the money from the contributions by the members of the committee, since when they assume the responsibility of managing the water sources, they do so with the expectation of obtaining some gain.

[4] Madoda – A person grown up and respected within a rural community. An individual who cannot be disrespected.

3.3 ACCESS TO INFORMATION ON PLANNING AND PROJECTS FOR COMMUNITIES

Regarding access to information on planning and projects for the communities under analysis, it was found that the population has no knowledge about these issues, since the secretary of the Neighborhood is the only one who has been participating in meetings with the Municipality or with other bodies, a fact that has been contributing to a low participation of the population in decision-making for the improvement of water supply.

According to PRONASAR II (2019), communities, their leaders, and their Water Committees are expected to: (i) work with district government personnel, NGOs, and others, to plan, implement, maintain, and monitor Water Supply facilities.

However, the relative lack of information about planning and projects for the communities, means that in case of the need to install a new water source, these are installed in places close to the residences of the neighborhood secretaries and not exactly in a place where the radius of coverage would be for a large part of the population, such is the case of the community of Monguine, Barrio 2000. It was verified that there are two fountains in the neighborhood located less than 200 meters from each other and on the other hand there is a population that draws water from one of the fountains and has to travel more than 1 km to access water.

This unequal distribution of sources verified in the 2000 neighborhood could only have been avoided if there was a true sharing of information about the water supply projects for this community and massive participation of the population in order to obtain consensual positions.

This point of view is supported by Kass et al (2001) cited in Lima et al (2006), who state that the success of the participatory process depends on the fulfillment of requirements such as: high level of complicity between the parties involved, organizational culture that values dialogue, availability of financial resources and qualified personnel, clear idea of the information that is intended to be obtained from the population, level of influence of the information obtained in decision-making, impact assessment and quality of the decisions taken. And such requirements are shown to be at a level of relatively low compliance specifically in the community of Monguine, neighborhood 2000.

The above position is also supported by Forquilha & Orre (2012) cited in Weimar (2012), when they state that local advisory councils have been reduced to mere consultation institutions without any deliberative character. In addition, those who participate in the advisory councils are only the secretaries of the neighborhoods/chiefs and the population does not know what is discussed in such meetings because they have never had any feedback, as stated by interviewee no. 31.

[... No, we don't have any information on how to get help from the government. We always do everything at the community level, the connection with the government for the water issue, we don't know. Maybe local leaders know how to contact the government, they just don't say (Interviewed GFHM2, 27/08/2022)

Regarding the number of times in which the population has had some contact or meeting with government entities (Municipality or SDPI), it was found that there is very little or almost non-existent contact between government entities and the population of the localities under analysis, a fact that makes the population, specifically that of Manhiça, feel forgotten by the government (SDPI), As the excerpt below illustrates:

> *[… We can't say anything about it, because we've never been visited by government agents, at least not recently. We think that in part the abandonment of Bairro 2000 is due to confusion in relation to the area of belonging of the Bairro. Because sometimes it seems that we belong to Maluana, sometimes it seems that we belong to the municipality of Manhiça, perhaps this confusion has caused us to be forgotten] (Interviewee GFHM1, 27/08/2022)*

For this specific case, the long stay of the neighborhood secretaries and the advanced age, contributed to less and less contact with government entities, due to the fact that these secretaries were no longer in physical condition to convey the community's concerns to the SDPI or any government entity.

Unlike what happens in Monguine-Barrio 2000, in Estevel-Boane the secretary of the Barrio was elected, he is still young, making there more proactivity and dynamism in the interaction with the population of the locality. However, access to information on planning and projects by the population is also restricted, and only the neighborhood secretary is aware of all actions to improve the water supply planned by the Municipality of Boane.

3.4 SENSE OF BELONGING TO WATER SOURCES BY THE POPULATION OF THE COMMUNITIES

Regarding participation in the care of water sources, the problem is related to the high level of assistance on the part of the population and little sense of belonging when it comes to the installation of new water sources, such as Small Water Supply Systems (PSAA), which are mostly vandalized and ceasing to function in less than a year after installation.

In the specific case of the community of Wakombo, Estevel-Boane, the installed PSAA that operated with solar panels stopped working due to vandalism in less than 6 months after installation as a result of the lack of control by the population. After delivering the same second interviewee GB2 from the municipality, they were sensitized and explained the need to garrison the fountain, however this need was given as being less important. Having seen its importance when the source was left without it in which it was no longer necessary to use the strength of the arm to have water and without the Municipality carrying out the rapid repair of it, because it realized the lack of care for the public good on the part of the population as illustrated in an excerpt from the interview below:

> *[… What is more frequent is vandalization of systems and not breakdown. And this is related to the lack of a sense of belonging, because they don't garnish the sources... It belongs to the government, what belongs to the government has no owner...] (Interviewed GB2, 24/01/2023)*

It was also found that a similar problem is experienced in the district of Manhiça, however, with greater emphasis on manual pumps. Where it was found that all the hand pumps installed and then the protocol of awareness and training of local artisans is not strictly followed, soon after installation the fountains are damaged. This experience was lived by the NGO ONGAWA, which started to include in the installation package of the fountains actions to raise awareness and train local artisans because it noticed that in all the localities through which it had passed the fountains were damaged.

The high level of assistance of the population at the level of the communities under study, translated through the low level of participation in public issues, is also supported by Hassamo (2015) who did a study on community participation in Inharrime, when he states that this behavior of the communities is influenced by the lack of a level of education, lack of trust and mutual cooperation within the communities on the one hand

and on the other by the distance between the communities and their government representatives, specifically district governments which lack the capacity to encourage, value and support community initiatives in the process of improving their quality of life.

Non-governmental organizations

The non-governmental organizations present in the districts, particularly in the District of Manhiça, contribute greatly to the improvement of the levels of access to water at the district level. ONGAWA, a partner organization in the district of Manhiça, since its arrival has rehabilitated and built water supply infrastructures in the village of Manhiça, in the localities of Maluane, Ilha Josina and Calanga, which has contributed to the improvement of the coverage rate.

ONGAWA in the localities where it operated, after noticing that the fountains were damaged after passing through the communities, began to provide technical assistance during the installation of the fountains, training to local artisans after delivery and also monitoring of the installed fountains through the local leaders and water committees created, as provided for in PRONASAR II and confirmed by the interviewee GM2, as excerpted below.

[… the objectives are outlined according to the survey carried out in coordination with the SDPI, in which the most critical location is defined. It was no coincidence that first we were in the village of Manhiça, Maluane and then Josina Island and now in Calanga... We look at sustainability issues of the sources... ONGAWA began to give training in Calanga when it noticed that in the localities through which it passed the springs were spoiled...] (Interviewee GM2, 05/01/2023).

3.5 COMMUNITY INCLUSION MECHANISMS

Creating a favourable environment for water supply

Regarding the creation of a favorable environment for rural water supply through the contracting of PEC zonal activities, it was found that in the district of Manhiça specifically in the locality under study, the presence of local activists, members of the NGO GIOMAT, hired by DNAA's to work in the district in promoting change in water practices, hygiene and sanitation through the involvement of communities for a period of 3 years.

PEC Zonal

The NGO identified in Manhiça was responsible for registering water sources for SINAS (National Water and Sanitation System), revitalizing the sources and water committees, providing training on the maintenance of the sources.

The research team witnessed one of the trainings given to the local artisans of the Bairro de 2000 by animators of the NGO GIOMAT that in addition to training activities for local artisans, the animators have also had the function of training local activists chosen by the communities to assist them in the work carried out in the localities. In the case of the locality of Monguine, when the NGO arrived, 3 local activists were trained, however, due to the search for better working conditions, two of them gave up and until the time of collecting the interviews only one local activist supported the NGO in part of the extension of the locality of Monguine.

The activities of the Zonal PEC have been extremely important not only for the communities that benefit from its services but also for the SDPI, which does not have enough technicians (there are only two technicians) to carry out all the activities necessary for the water supply throughout the district. However, despite the difficulties experienced, the water supply levels in the district are acceptable, due to the hydrogeological characteristics of the soil (good groundwater) combined with the actions of the NGOs GIOMAT and ONGAWA, present in the district, which contributed to a coverage rate of 83% in 2021.

On the other hand, there was an opposite scenario in the locality of Wakombo in Boane. The presence of social area companies has not been recorded in the last 3 years and, according to interviewee BB7, the situation of high rate of inoperability of the sources due to the hydrogeological characteristics of the soil (rocky subsoil and with great depth of the sources) associated with poor maintenance is a major problem for the community. It was found that for the entire length of the district, an average of 42% of the manual pumps are inoperative, contributing to a coverage rate of 58%.

> *[… there are communities that travel 1km or 1.5km to be able to come here to get water and it is complicated. In these communities there were pumps, but they worked for a short time and then they resorted to these pumps that are here in the lower zone... There was a hole up there, but I think that because of the depth the rods weigh, so the pump was always damaged, they fixed it, it worked for a short time, and then it was damaged and that was what led to the destruction of the piping system, I believe there was a failure in the*
> *drilling the hole, but in addition it also counts the number of rods that went in there, and because there are many rods it ends up weighing more. Those bombs that*

are in the low zone help a little, but the restlessness, the crying, the screaming is greater in the high zone, if you go up a little more and do the interviews at the top in terms of having more bombs you will hear...] (Interviewed BB7, 01/12/2023)

This scenario is part of the mirror of the great challenges that the district faces in view of the sustainability of the sources. The lack of social companies and NGOs in Boane as well as in Manhiça, makes problems such as the training of water committees, awareness of the population to the sense of belonging of the sources, especially PSAA's (very vandalized) and their delegation to private management, constitute great challenges for the district which has influenced the low coverage rate.

4 DISCUSSION OF THE RESULTS

In this section, we discuss the results of the analysis, taking into account the purpose of this article. The objective of this article is to analyze the participation of the population in decision-making on rural water supply in the districts of Boane and Manhiça. In order to bring to light the real problems experienced by local communities regarding the management of water sources and their contribution to decision-making for the management of these services in rural areas. To this end, 32 quota interviews were collected from the beneficiaries of rural water services in the communities under analysis, 20 of which were semi-structured interviews and 12 focus group interviews.

At the end of the data analysis, resulting from the application of different theories, approaches, methods and techniques, it was found that there is a low level of community participation in the management of rural water services at the community level, especially with regard to the low sense of belonging to the sources by the population and the mechanisms of community inclusion.

Taking into account the five mechanisms used to analyze community participation in the communities of Estevel-Wakombo and Monguine-Bairro 2000, namely monetary contribution for the maintenance of sources, accountability in the management of sources, access to information on planning and projects for the communities, sense of belonging of the sources and also mechanisms of community inclusion, it was found that all elements are below level 5 of participation, which means that There is not full participation of the population and 3 of these elements were below level 3, meaning that they are far below the minimum of Community participation.

The first mechanism refers to the level of belonging of the water sources, it should be noted that there is a widespread perception of the population that the water sources (manual pumps, as well as small water systems) installed at the community level belong to the government and not to the communities themselves, a fact that leads to little care for public goods and also the practice of acts of vandalization, especially when it comes to small water supply systems. water to solar panels.

The second mechanism, related to access to information on planning and projects for the communities, it was found that the almost non-existent contact of the population with government entities and the participation restricted only to the secretaries of the neighborhoods in the local advisory councils, means that the population has little knowledge about the government's projects on water supply in their communities, a fact that has led to the benefit of a small elite at the community level, especially the elite made up of the neighborhood secretary and his close associates.

Regarding the third, it refers to the community inclusion mechanisms carried out by companies in the social area (PEC-Zonal), for which it was found that they are present only in the district of Manhiça, where they seek to influence the population regarding the change in behavior on the need to maintain the sources and demonstrate that they have resulted while they are operating in the localities, since, After their withdrawal, such mechanisms cease to have an effect, as the population has tended to return to previous practices.

Finally, regarding the theoretical model, the study is part of the phenomenological analysis through the verification of the participation mechanisms designed in PRONASAR II and mechanisms analyzed by Frenque 2000, the detailed analysis was made through the GANT Diagram (Spider diagram), through which it was possible to determine the levels of participation in each mechanism analyzed.

5 FINAL CONSIDERATIONS

This article sought to analyze the participation of the population in decision-making on rural water supply in the districts of Boane and Manhiça. The analysis was carried out from the point of view of the beneficiaries of the services in both districts.

From the literature consulted, countries such as Brazil regarding decentralization focused on improving services through the participation of the population in decision-making. Roy (1996) cited in Fabio Doniak (2022) states that when seeking community

participation in the local development process, it is necessary for mayors to change the view that they decide everything, and start to consider that they are also actors in this process and will share decision-making with other individuals and organizations. For Roy (1996) cited in Fabio Doniak (2022), each actor has a set of values that will support their judgment, with regard to the intensity and solution of a problem, taking into account their goals, interests, and aspirations.

The relatively low level of community participation in rural water supply has its origin in the low level of education of the population, translated into the lack of perception of the need for monthly contributions when it comes to the population that lives far from the sources, associated with the realization of contributions in low amounts (10Mt), which are not enough to allow routine maintenance without the need for one-off contributions and also the non-payment of monthly fees to the chairman of the Water Committee for activities carried out for the benefit of the community.

This low level of participation is also due to the high level of assistance of the population caused by the existing distance between district/municipal governments and the communities as a result of the relatively weak implementation of community inclusion mechanisms, which has led to privileging interaction only with local leaders, resulting in low care for the public good by the communities.

The analysis carried out has raised many interconnected aspects that have been leading communities to low participation in decision-making about rural water supply. Since aspects related to the necessary strategies to be implemented to reverse the scenarios experienced by the communities were not covered, it is therefore necessary that PRONASAR includes these aspects as being crucial to improve in the next five years or economic years.

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