

Community Participation in The Development of Clean Water Infrastructure in Maholo Village, East Lore District Poso Regency

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Keywords	Abstract
Community Participation; Clean Water Infrastructure; Planning; Implementation; Utilization of Outcomes	The availability of clean water is a basic need that has a direct impact on the quality of life of rural communities. However, the development of clean water infrastructure in Maholo Village, East Lore District, Poso Regency, still faces challenges, particularly regarding suboptimal community involvement and the slow response of officers in handling field issues. This study aims to analyze community participation in the development of clean water infrastructure in Maholo Village by referring to the three stages of participation according to Cohen and Uphoff (1979): planning, implementation, and utilization of results. This research employs a qualitative method with a descriptive approach and is based on the theory of community participation by Cohen and Uphoff (1979), which includes planning, implementation, and utilization. The informants consist of five individuals: the Village Head, the Head of the Village Consultative Body (BPD), a clean water officer, a community leader, and a water user. Data were collected through interviews, observation, and documentation. The results show that community participation remains suboptimal and tends to be passive. In the planning stage, community involvement is still limited. In the implementation stage, participation remains low. Meanwhile, in the utilization stage, the community has benefited from the existing infrastructure; however, there are still complaints regarding service quality, particularly the slow response of officers in handling damages and water distribution disruptions. In conclusion, community participation needs to be improved, particularly in the planning and implementation stages, as well as through enhancing service quality. Therefore, it is necessary to strengthen communication, transparency, and responsiveness between the village government and the community to support the sustainability of clean water infrastructure management.

INTRODUCTION

The availability of clean water is a basic need that has a direct impact on the quality of life of the community, especially in rural areas (Bazaanah & Mothapo, 2024; Sharma et al., 2024). Schouten and Moriarty (2003) explained that well-managed clean water services are an important part of supporting the health and quality of life of rural communities. However, the reality on the ground shows that equitable access to clean water is still a real challenge, especially in remote villages far from urban centers. On a national scale, data (Central Statistics Agency, 2023) noted that households' access to decent drinking water sources has reached 91.72 percent, a promising figure, although it leaves 8.28 percent of households that have not been adequately served, and most of this group is actually in remote rural areas.

Law Number 6 of 2014 concerning Villages emphasizes that villages have the authority to regulate and take care of the interests of the local community, including in terms of managing basic infrastructure such as clean water (Indonesia, 2014). In addition, Law Number 32 of 2004

concerning Regional Government also emphasizes that the provision of basic services to the community, including clean water, is the responsibility of local governments (Indonesia, 2004). Prior to the intervention through the Community-Based Drinking Water and Sanitation Provision Program (PAMSIMAS), the condition of clean water infrastructure in Maholo Village, East Lore District, Poso Regency, was still very limited. The existing pipeline network is minimal, the distribution system has not been managed properly, and the available supporting facilities are far from adequate. As a result, the flow of water is unstable and the distribution is uneven, some residents have to rely on injection wells, natural springs, and even directly take water from the river to meet their daily needs.

The presence of the PAMSIMAS Program in 2023 brings quite significant changes. The number of village water service customers increased significantly to reach 233 households. The village government implements a pipanization program sourced from Village Funds worth Rp90,631,500, while the local government contributes through the improvement of intakes financed by the Poso Regency APBD in the range of Rp200 million to Rp250 million. The investment shows the commitment of the village government and local governments in improving access to clean water services. However, physical investment alone is not enough to ensure that services run optimally. Based on the results of the research, there are still two RTs that have not received clean water services equally. This condition is not solely due to network limitations, but also influenced by the performance of management officers who are not optimal in ensuring that distribution runs evenly and is responsive to residents' complaints. I Waris et al. (2024) found that the success of policy implementation at the local level is highly dependent on the capacity of implementers and the effectiveness of management in the field, a finding that is highly relevant to the conditions that occur in Maholo Village.

In terms of regulations, the development of clean water infrastructure in Maholo Village actually has a fairly strong foothold. This program has been planned in the Maholo Village Medium-Term Development Plan (RPJMDes) document for 2022–2029 as part of efforts to improve basic services. Furthermore, the village government has also established the Village Regulation on Clean Water Management in 2023 which regulates the governance of clean water services in a more structured manner. The existence of this regulation shows that there is seriousness at the village level to strengthen the governance aspect, not just build physical infrastructure. But behind all these efforts, there are social problems that are no less important to pay attention to. In daily practice, the people of Maholo Village are subject to a monthly water fee of Rp15,000 which is allocated for infrastructure operations and maintenance. The problem is when these contributions begin to be considered by some residents as a substitute for physical involvement. The spirit of mutual cooperation that was once an important social capital in maintaining public facilities is now slowly fading. This condition has a real impact on the decline in the collective participation of the community in maintaining clean water infrastructure that has been built together.

In a theoretical framework, meaningful village development cannot only rely on the availability of physical facilities. Siagian (2012) explained that development is an effort to improve the capabilities of a system so that it can run more effectively and efficiently. Todaro and Smith (2011) expand on this view by asserting that true development encompasses dimensions of social change and improved quality of life, not just physical growth. Bryant and White (1982) added that the success of village development is highly dependent on the ability

of the government and the community to build sincere and sustainable cooperation. Community participation is the key to ensuring that development runs according to needs and is able to survive in the long term. Cohen and Uphoff (1979) explained that participation includes community involvement starting from the decision-making stage, program implementation, to the utilization of results. Keith Davis (1957) views participation as a person's mental, emotional, and physical involvement in a collective activity that encourages a tangible contribution to the achievement of a common goal. Ndraha (1990) complements this notion by seeing participation as a form of real public support for government programs either through thoughts, energy, and direct actions in the field.

From the perspective of government science, Osborne (2010) emphasizes that modern public services no longer place the public as a party that only receives policies, but as actors who take part in the service process itself. This view is in line with the concept of New Public Service initiated (Denhardt and Denhardt, 2003), which places the community as a partner of the government not as a policy object, but as a subject who has rights and responsibilities in the implementation of public services. Unfortunately, the gap between the concept of ideal participation and the practice that occurs in Maholo Village is still quite wide. In reality, community participation is more focused on the service utilization aspect, while involvement in maintenance and a sense of collective responsibility are not balanced. When the community only plays the role of passive users of existing facilities, the sustainability of the infrastructure that has been built becomes vulnerable to depend entirely on the capacity of the government and officials, without being supported by real citizen participation.

Various previous studies have examined similar problems from various perspectives. (Amijaya et al., 2024) found that community participation in village infrastructure development is greatly influenced by the communication patterns built between the government and residents. (B Jafar et al., 2021) emphasized that active community involvement is the main requirement for the sustainability of public service-based village programs. (Bahri and Amijaya, 2024) reinforce these findings by showing that inclusive communication between local governments and communities is a critical factor in driving the success of development programs. (Irfat et al., 2025) added that good program governance requires the collective participation of the community in maintaining the sustainability of programs that are already running. In addition to the participation factor, the responsiveness of officers in handling complaints is also an important variable that affects the dynamics of community involvement. (Pageno, 2024) concluded that the speed and accuracy of the response of the authorities greatly determine the quality of public services felt by the community. (B Jafar et al., 2021) reinforced these findings through their research at the Talise Health Center, where the speed of handling complaints was proven to have a direct impact on public trust in service managers. In the context of Maholo Village, the slow response of clean water officers when there is a network disruption or residents' complaints has also strengthened the negative perception of the community and weakened the spirit to be involved in infrastructure maintenance.

Although various studies have examined community participation in infrastructure development, there are still some unmet gaps. Existing research is generally still general and has not specifically analyzed community participation in the three stages of clean water infrastructure development comprehensively. In addition, there are still few studies that examine the dynamics of community participation in post-conflict areas such as Poso Regency.

This research offers novelty through the analysis of community participation in the development of clean water infrastructure by referring to the three stages of participation according to Cohen and Uphoff (1979), namely planning, implementation, and utilization of results, which was carried out in Maholo Village, East Lore District, Poso Regency.

Based on the description above, this study was conducted to analyze in depth how community participation in the development of clean water infrastructure in Maholo Village, East Lore District, Poso Regency, by referring to the three stages of participation according to Cohen and Uphoff (1979), namely planning, implementation, and utilization of results. This research is expected to provide both theoretical and practical benefits. Theoretically, this research enriches scientific treasures in the field of public administration and village development, especially in understanding the dynamics of community participation in basic infrastructure development. Practically, this research is useful for the village government in improving community participation strategies, for the community as a reflection material to increase active involvement, and for future researchers as a reference for developing similar research in different regions.

METHOD

This research uses a qualitative descriptive method, which is an approach that aims to understand social phenomena in depth based on real conditions in the field. Sugiyono (2020) explained that qualitative research allows researchers to explore the meaning behind a phenomenon regardless of the context in which it occurs.

The research was carried out in Maholo Village, East Lore District, Poso Regency. The selection of this location is based on the consideration that the village has an active clean water infrastructure development program and involves the community in its various stages, so it is relevant to be studied more deeply.

The research informants consisted of five people who were selected purposively, namely the Village Head, the Chairman of BPD, clean water management officers, community leaders, and service users. They were chosen because they have direct involvement and real knowledge about the condition of clean water infrastructure and the dynamics of community participation in the village.

Data collection was carried out in three ways: field observation to see the condition of infrastructure and community involvement patterns, in-depth interviews to explore the forms of participation that occurred, and documentation in the form of clean water customer data, piping program documents, and budget RAB as supporting data.

Data analysis refers to the Miles, Huberman, and Saldaña (2014) model, which includes four stages: data collection, data condensation, data presentation, and conclusion drawn. This process is carried out systematically so that research findings can accurately represent the conditions of community participation.

RESULT AND DISCUSSION

Community Participation in the Planning Stage

The involvement of the Maholo Village community in the planning stage can be seen from their presence in the Village Deliberation forum (Musdes) which discussed the development of clean water infrastructure. In the forum, the village government provided space

for the community to convey their needs and problems, especially related to the uneven distribution of water in several RT areas. This condition indicates the existence of a form of community participation at the decision-making stage as described by (Cohen and Uphoff, 1979), where the community is given the opportunity to be involved in the development program planning process.

In general, the community already knows about the development plan because information is conveyed openly through village deliberations. However, although many people attended the forum, not all actively expressed opinions or proposals. Only a small percentage of residents are really directly involved by providing input related to the expansion of the pipeline network and clean water distribution.

This situation shows that public participation in the planning stage still tends to be passive. Community presence does indicate involvement, but according to (Cohen and Uphoff, 1979), participation in planning is not only measured by physical presence, but also the extent to which the community influences the direction of decisions taken in development programs.

Community Participation in the Implementation Stage

At the implementation stage, the involvement of the Maholo Village community can be seen in the form of personnel assistance in the installation of pipeline networks and material transportation. The 2023 piping program, which is sourced from the Village Fund of IDR 90,631,500, is a form of clean water infrastructure development that directly involves the community. In addition, the local government also supports through improving the intake in the PAMSIMAS Program.

This form of involvement shows the existence of community participation at the implementation stage as stated (Cohen and Uphoff, 1979), namely community involvement in running the program through personnel contributions and direct support in the field. However, community participation in this stage has not taken place comprehensively because citizen involvement only appears in certain activities that require a lot of energy.

Some people also still have the view that the management of clean water infrastructure is the responsibility of the village government and the management officer. In fact, the monthly contribution payment of IDR 15,000 is often considered sufficient as a form of contribution to the program. This condition causes the spirit of community mutual cooperation to begin to decrease and active involvement in the implementation has not been optimal.

Community Participation in the Utilization of Results

Community participation in the stage of utilizing the results can be seen from the use of clean water services by 233 customers spread across various areas of Maholo Village. The community feels the direct benefits of the existence of a clean water network, especially in meeting daily needs such as cooking, bathing, washing, and supporting small businesses in the community.

According to (Cohen and Uphoff, 1979), the use of results is a form of community participation in enjoying and maintaining the sustainability of the development results that have been implemented. In the context of Maholo Village, the community has taken advantage of the available clean water facilities, but involvement in maintaining the sustainability of these facilities is still low.

This can be seen from the low awareness of the public to participate in maintaining the clean water network and the still delay in payment of contributions. Most people are also more

dependent on officers when there is a network breakdown without any direct involvement in the maintenance process. This condition shows that community participation at the stage of utilization of results is still more dominant as service users than as parties responsible for the sustainability of clean water infrastructure.

Community Participation in the Planning Stage

Cohen and Uphoff (1979) explain that participation in the planning stage is related to community involvement in the decision-making process before the development program is implemented. In the context of the development of clean water infrastructure in Maholo Village, this involvement can be seen through the presence of the community in the Village Deliberation forum (Musdes) which discusses the needs and development of clean water networks.

Through the forum, the community was given the opportunity to convey their needs and complaints, especially related to the uneven distribution of water in several RT areas. This shows that the village government has opened up space for community participation in the program planning process. However, community involvement in the forum is still not running optimally because most of the residents only attend as participants in the deliberations without being actively involved in expressing opinions or proposals.

This condition shows that community participation in the planning stage still tends to be passive. In the view (Arnstein, 1969) the ideal participation is not only limited to the presence of the community in the forum, but also the influence of the community on the decisions produced. In this study, the community has indeed been involved in deliberation, but not all of them have the courage and active involvement in the decision-making process.

Bryant and White (1982) explained that the success of village development is greatly influenced by the cooperative relationship between the government and the community. Therefore, planning for clean water development in Maholo Village is not enough to only present the community in deliberation, but also needs to encourage more active involvement so that the community feels that they have a jointly planned program.

These problems show that clean water management is not only related to infrastructure development, but also the quality of services to the community. According to (Dwiyanto, 2005), good public services are characterized by the ability of the government or service managers to meet the needs of the community in a responsive and sustainable manner.

Overall, community participation in the planning stage has been seen through involvement in village deliberation forums. However, this involvement still tends to be passive because some people are only present without actively participating in expressing opinions and making decisions. According to (Cohen and Uphoff, 1979), participation in the planning stage should show community involvement in the development decision-making process

Community Participation in the Implementation Stage

According to (Cohen and Uphoff, 1979), participation in the implementation stage is the involvement of the community in carrying out development programs, either through energy, thoughts, and other forms of contribution. In the context of the development of clean water infrastructure in Maholo Village, community involvement can be seen in the form of manpower assistance in the installation of pipeline networks and material transportation. The presence of the community in these activities shows that the community is not completely separated from the process of implementing clean water development in the village.

The 2023 pipanization program, which is sourced from the Village Fund of IDR 90,631,500, is a form of the village government's efforts to improve clean water infrastructure. In addition, the local government also supports through the improvement of the intake supported by the PAMSIMAS Program with funding from the Poso Regency APBD. This support shows the cooperation between the village government, local government, and the community in supporting the development of clean water services in Maholo Village.

However, public participation in the implementation stage has not taken place comprehensively. Citizen involvement is generally only seen in certain jobs that require a lot of manpower, while other activities are mostly carried out by water management officers and program implementers. This condition shows that community participation is still more dominant in physical involvement and has not been fully accompanied by a sense of collective responsibility for the sustainability of the program.

Keith Davis (1957) emphasized that meaningful participation is not only seen from physical involvement, but also includes mental and emotional involvement in supporting a common goal. In the context of Maholo Village, community involvement has indeed been seen in the process of building a clean water network, but the awareness to take responsibility for maintaining the sustainability of infrastructure is still not optimal. Some people still have the view that the management of clean water infrastructure is entirely the responsibility of the village government and management officers.

In addition, the monthly contribution of Rp15,000 paid by residents is often considered sufficient as a form of contribution to the clean water program. This condition slowly affects the decline of the spirit of community mutual cooperation in supporting the implementation of the program. (Cohen and Uphoff, 1979) explained that community participation in the implementation stage is not only measured by material contributions, but also by the active involvement of the community in supporting the sustainability of development programs.

This condition is in line with the view (Korten, 1987) that the success of development is not only measured by the availability of physical infrastructure, but also by the extent to which the community has a sense of responsibility for the sustainability of these facilities. (Pradana, 2020) also explained that community involvement is an important factor in maintaining the sustainability of public service-based development at the village level. B Jafar et al., (2021) also stated that community involvement in the implementation stage is an important factor that determines the sustainability of village development programs in the long term.

In addition, (Bahri and Amijaya, 2024) emphasized that open and sustainable communication between the government and the community is an important factor in encouraging citizen involvement. In the context of Malolo Village, this shows that increasing the transparency of information related to the implementation of the program is still needed, so that the community not only becomes a beneficiary, but also feels part of the development process itself.

In general, community participation in the implementation stage has been seen through the assistance of personnel in the construction of a clean water network. However, community involvement is still not optimal because some residents still consider the management of clean water infrastructure as the responsibility of the government and management officers. In the view (Cohen and Uphoff, 1979), implementation participation is not only in the form of

physical involvement, but also active community support in the sustainability of development programs.

Community Participation in the Utilization of Results

According to (Cohen and Uphoff, 1979), participation in the stage of utilization of results is related to the involvement of the community in enjoying, utilizing, and maintaining the results of the development that has been implemented. In the context of this research, the people of Maholo Village have benefited from the existence of clean water infrastructure, especially in meeting daily needs such as cooking, bathing, washing, and supporting the community's small business activities.

The existence of clean water services has a considerable impact on the community because it facilitates access to basic needs that were previously difficult to obtain evenly. The clean water infrastructure that has been built also helps communities reduce their dependence on natural water sources such as rivers and springs that were previously used to meet their daily needs.

Community participation in the stage of utilizing the results can be seen from the use of clean water services by 233 customers spread across various areas of Maholo Village. This shows that the community has taken advantage of the results of development carried out by the village government and local governments. In the view (Cohen and Uphoff, 1979), the utilization of results is one of the important indicators in seeing the extent to which development can be felt directly by the community as beneficiaries.

However, community participation in the stage of utilization of the results is still not fully optimal. Some people still have low awareness in maintaining and maintaining the available clean water facilities. When there is a network breakdown or water distribution disruption, the community tends to be completely dependent on the management officer without any direct involvement in the maintenance process.

In addition, the delay in payment of contributions is also an obstacle that affects the sustainability of clean water service operations in Maholo Village. This condition shows that the community still plays a more role as service users than as parties who are responsible for the sustainability of the infrastructure that has been built. Ericson (1976) explained that participation in the utilization of results is not only related to enjoying the results of development, but also concerns public awareness to maintain the sustainability of facilities that are used together.

This condition is in line with the view of Irfat et al. (2025) who explain that the sustainability of a development program is greatly influenced by the involvement of the community in maintaining the results of the development. Pageno (2024) also emphasized that service quality and officer responsiveness are important factors in building public trust in public services. In the context of Maholo Village, the slow response of officers in handling community complaints also affects the low level of community involvement in maintaining the sustainability of clean water services. In the context of Maholo Village, the slow response of officers in handling community complaints also affects the low level of community involvement in maintaining the sustainability of clean water services.

(B Jafar et al., (2021) also explained that the quality of service and the speed of handling complaints have an influence on the level of public trust in public service managers. Meanwhile, I Waris et al. (2024) emphasized that the effectiveness of policy management at

the local level is highly dependent on the capacity of implementers in the field. Therefore, improving the quality of management and strengthening cooperation between the community and service managers is important to maintain the sustainability of clean water infrastructure in Malolo Village.

Overall, the people of Maholo Village have benefited from the existence of clean water infrastructure in meeting their daily needs. However, public awareness to participate in maintaining and maintaining the facilities that have been built still needs to be increased so that the sustainability of clean water services can continue to be maintained. According to (Cohen and Uphoff, 1979), participation in the stage of utilization of results is related to the involvement of the community in utilizing and maintaining the results of development that has been implemented.

CONCLUSION

Community participation in the development of clean water infrastructure in Maholo Village, East Lore District, Poso Regency, has not been running optimally in the three stages studied. At the planning stage, the community has been involved through village deliberative forums, but most residents still tend to passively attend the forum without taking an active role in decision-making. At the implementation stage, the village government and local governments have provided real support through the Village Fund pipanization program and the improvement of PAPAMSIMAS intake. Some residents also contributed through manpower assistance. However, there are still many who view infrastructure management as the government's full responsibility, so the spirit of mutual cooperation and active involvement of residents has not been fully realized. At the stage of utilizing the results, the community has already felt the benefits of the existence of a clean water network. However, awareness to maintain and maintain facilities is still low. Late payment of contributions and low responsiveness of management officers are also factors that weaken the sustainability of services. Based on these findings, it is recommended that the village government strengthen communication and transparency with the community through regular and inclusive deliberation forums, as well as enhance the responsiveness of clean water officers in handling damage and distribution complaints to improve service quality. Community members are encouraged to increase their active involvement in both the planning and implementation stages, moving beyond passive participation to take collective responsibility in maintaining and preserving clean water infrastructure. Clean water management officers should improve their responsiveness to community complaints and ensure timely maintenance and repair of infrastructure. For future researchers, it is recommended to conduct comparative studies on community participation in clean water infrastructure development across different villages, as well as to examine the effectiveness of various participation strategies in fostering community ownership and ensuring the long-term sustainability of village public services.

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