

# Collaborative Governance in Creating a Lifestyle of People who Care about Hygienic Drinking Water and Sanitation

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#### ABSTRACT

The purpose of this study is to outline the pattern of cooperation carried out by actors of interest in creating a healthy lifestyle of people who care about the consumption of clean and hygienic drinking water and the use of proper sanitation. Access, facilities, quality, quantity, and contingency are urgently needed to help improve people's quality of life. Descriptive qualitative research with an in-depth interview model was conducted to 15 respondents to outline problems in the research. Among them are three people civil servant Magelang, two people PDAM, four people from private CSR-CSR, and five community leaders. The study results are: The government, through PDAM, has facilitated more than 80% of iron water that is suitable for consumption and use in daily activities. The government continues to improve services from the structure of quality, quantity, and contingency of clean water and sanitation, provide subsidies to the poor, freedom for houses of worship, and light payments to the community. Second, there is no concern from companies are built only as an initial prerequisite, so such facilities are not evaluated and treated. On the other hand, efforts made in the form of socialization and education are often ignored by the community for inadequate costs, facilities, and administration. The companion has difficulty in providing an understanding of the benefits to the community to the use of clean water.

Keywords: Collaborative Governance, Hygienic, Sanitation

# **1. INTRODUCTION**

Clean water and sanitation are the leading indicators in assessing the quality of life of healthy, clean, and productive people in urban and rural areas [1] The construction of facilities and the provision of clean water and sanitation services is a challenge for interested actors to provide these facilities, especially since this need is the most urgent need for every country [2]. Significant investments are needed to provide and relocate clean water and sanitation systems, especially for developing countries, low-income countries, and small areas where the welfare of the people is still minimal or classified as poor [3]. In general, they receive less support for infrastructure investment than large cities and capital cities [4]. Meeting these needs means developing safe, affordable, functional, and sustainable systems in the long term. Such conditions require a better understanding of the dysfunctions, discontinuities, and inequalities in current models of sanitation provision. Indonesia is a country that reflects problems with access, quality, quantity, and continuity in clean water and sanitation; currently, 25 million people in Indonesia do not use clean sanitation; they switch to using fields, bushes, forests, ditches, roads, rivers or open spaces. Others [5]. As a result, some people use wastewater, causing the spread of diseases much faster, such as diarrhea and cholera.

Based on data from the Central Statistics Agency in 2019, a quarter of all children under 5 in Indonesia suffer from diarrhea. Another factor that causes the non-fulfilment of services and cleans water and sanitation

provision is the quality and low socio-economic conditions in Magelang-Central Java, most of which are rural areas surrounded by hills, mountains, and natural conditions. Even though they live side by side with nature, the main problem with this area is that the service and provision of drinking water and clean water only reaches 80% quality [6]. Furthermore, related to the use of sanitation, the number of the ward that uses Community Based Total Sanitation (STBM) is only 17% of the total 17 wards in Magelang city, in addition to that, only 77.81% of households have access to proper and sustainable sanitation[7]. Based on the data description, the facilities and capacity to provide access to clean water and sanitation are not optimal and must be improved. On the other hand, an effort is needed to encourage the community to be more concerned in improving the quality of life, especially in having private sanitation/one house one sanitation.

The point of view regarding the fulfilment of the need for the community's quality of life is the main priority of interest actors, especially with the support from the involvement of private actors, community leaders to encourage the acceleration of the provision and service of clean water and sanitation. The importance of clean water, drinking water, and sanitation for the community encourage interest actors to be more concerned and active in creating arrangements with a comprehensive, collaborative system that includes sustainable characteristics that will encourage this acceleration. Moreover, this can encourage the creation of increased welfare and public health and maintain an environment that is more friendly than human waste[8].

From a policy and management perspective, it is crucial to know the factors and impacts if the government ignores the problem of clean water, drinking water, and sanitation. Moreover, general policies have been implemented, namely low tariffs and cross-subsidies for low-income people and free of charge for places of worship. On the other hand, this effort cannot be carried out without other actors, especially if there is no encouragement from the surrounding community to renovate and restore the structure of their pattern of life to improve the quality of life through the consumption of clean, hygienic water and proper sanitation.

Therefore, this study aims to describe the concept of governance in creating a lifestyle for people who care

about clean water, drinking water, and sanitation. The focus of this study lies in the collaborative governance that has taken place and will be implemented and the efforts of the actors in improving the standard of living and welfare of the community. This research was conducted in the Magelang City, Central Java, a strategic area around the mountains with natural conditions that are still good to improve the community's quality of life.

#### 2. METHOD

Collaborative governance is an essential strategy in providing good sanitation facilities as research by N et al. recommends Bandung to expand the collaboration of private, civil and public actors, to apply network governance and decentralized management approach that focuses on increasing implementation capacity, better monitoring, co-creation and, exploration of support options better finances. Meanwhile, the implementation strategy and finance are the first efforts that must improve the sanitation and water sector [9].

To find out collaborative governance in creating a lifestyle of people who care about clean water, drinking water and sanitation in Magelang City. This study uses a qualitative method. This method is appropriate with the consideration that researchers continue to focus on efforts to study the meaning conveyed by participants regarding the problem or research issue and the complex picture of a problem or issue [10]. Data was collected through indepth interviews with three (3) public servants at the Magelang City Government, two (2) people from the Regional Drinking Water Company (PDAM), four (4) people from private CSR and five (5) community leaders. In-depth interviews provide open and focused information because they are conducted individually on respondents. Cineros, conducted a qualitative technique to study how collaborative water governance initiatives in Ecuador responded to the introduction of new regulations for stakeholder participation in watershed councils.

# **3. RESULT AND DISCUSSION**

This paper focuses on the collaborative process in creating community hygiene behaviour. The components of the collaborative process as mentioned by Ansel and Gash [11] include:



#### Figure 1 Component [11]

# 3.1. Face to face dialogue

Successful collaboration in water and energy management requires a community/community-based collaborative approach as an effort to overcome institutional, governance, technical and cultural barriers[12]. Water user communities who are united in maintaining the quality and quantity of water resources will minimize the vulnerability of water sources [13]

Water resource conflicts can arise because of the lack of coherence of regulatory instruments in the current government regime, and acceptable management procedures of consumptive and contemporary water use that are interrelated in seven areas: irrigation, industry, and recreation. water usage; reservoir water level for flood control and hydroelectric power generation; waste water and lagoon management; fish farming operations; and regional water development projects. Building the initial dialogue of a program requires the formation of trust between actors [14]. The actors formed in the collaboration pattern of the clean water and sanitation program in Magelang City are as follows.

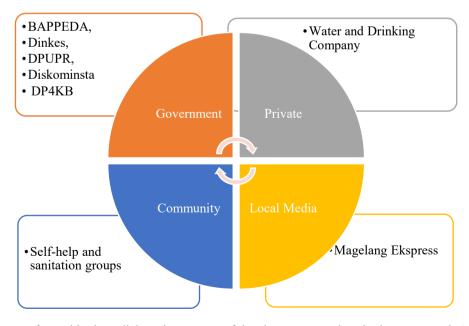


Figure 2 The actors formed in the collaboration pattern of the clean water and sanitation program in Magelang City

The collaboration pattern in the picture above shows that the collaboration pattern formed leads to a state centric model. The state centric model provides space for the government's role as the main actor both in managing conflict, reaching consensus, determining program initiation and implementation [15]. The interaction pattern is carried out with a formal concept initiated by the local government by providing program socialization, and the interaction pattern is established informally until the formation of a self-help community and sanitation in the Magelang City.

# 3.2. Trust Building

The collaborative governance approach is a relevant step developed to unite the concept between government, private and society to give birth to trust. Trust among stakeholders is an important factor in the implementation of collaborative water governance[11], [16], [17]. A sense of trust has been built between the collaborative actors. This belief appears in the creation of a lifestyle of people who care about hygienic drinking water and sanitation.

This trust will create a liaison structure between the actors, thereby supporting cooperation and coordination [18]. For this reason, a Communication Forum for Drinking Water, Sanitation and Hygiene Behavior in Magelang City was formed which was coordinated by the Department of Housing and Settlement Areas. This forum has been able to increase community participation in realizing a quality community life in the water and sanitation sector. The government has also built good communication from all stakeholders (pentahelix namely Government, Society, Academics, Mass Media, Entrepreneurs).

Trust building efforts also need to be built on participatory strategies [19]. The Department of Housing and Settlement Areas acts as a coordinator to maximize the coordination function for all stakeholders involved. It also ensures that the program can run on target. The existing building of trust resulted in the commitment of the Magelang City Government to provide services in the drinking water, sanitation and hygiene behaviour sector to the community that were of higher quality and provided impetus for the realization of environmental and sanitation development programs with a 100-0-100 pattern, meaning 100 percent access to clean water, zero percent slum areas, and 100 percent access to sanitation.

# 3.3. Commitment to Process

Commitment to this process implies an acknowledgment of the interdependence of actors, shared ownership of the process as well as openness to explore mutual benefits. As stated by Klijn and Koppenjan [20] that the application of collaborative governance requires complex interactions between a large number of interdependent actors. So that there is a shared awareness not to work alone. This can be seen from the recognition of each actor to work together by dividing tasks and responsibilities and implementing them in creating a lifestyle for people who care about drinking water, hygiene and sanitation.

Each actor has an interdependent role. The Communication Forum for Drinking Water, Sanitation and Hygiene Behaviour in Magelang City is chaired by the Department of Housing and Settlement Areas and the supervisors are the regional secretary and Bappeda. Members consist of the Environment Service, City Health Service, Public Works and Public Housing Service, Information and Statistics Communication Service, DP4 KB, Magelang City PDAM, District Government, Village Government, Local Media (Radio and Newspapers), Community Self-Help Groups for Drinking Water Programs. and Sanitation, Participatory Monitoring and Evaluation Team Participatory Assessment and Community Triggering Team. As Bianchi et al. [21], implementing collaborative governance requires leadership across organizations and a multi-actor environment. To that end, the government is also building partnerships with various parties, namely IUWASH PLUS, City Without Slums (KOTAKU), businesses such as sanitation credit at Bank Magelang, as well as partnerships with various community organizations and with the CSR (Corporate Social Responsibility) Forum.

The government has also coordinated the provision of sanitation infrastructure facilities and increased public awareness simultaneously by dividing the burden according to the role of each Regional Apparatus Organization. In implementing the IUWASH plus program, the Health Office carries out various socialization and triggering programs to communities who still need understanding and assistance. In addition, Diskominsta takes a role in publicity and socialization through radio and social media owned by the Magelang City Government. The Department of Public Works and Public Housing moves the SPALD-T (Domestic-Centralized Wastewater Management System) and SPALD-S (Domestic-Local Wastewater Management System) development programs, House Connections (SR) and improves communal latrines (km/public toilets) using programs from the central, provincial and regional budgets.

Using this strong commitment in designing this interagency collaborative governance network will result in better outputs [22]. This has resulted in an increase in various facilities and infrastructure, primarily to meet the basic needs of the community in the provision of drinking water, sanitation and improvement of hygiene behaviour.

#### 3.4. Shared Understanding

Shared understanding requires a clear vision, common problem definition and identification of common values. A clear shared vision will increase participation in time collaboration [13]. The development of a shared vision requires the important role of each actor in bridging, connecting and maintaining the gates of the entire network [17]. All stakeholders need to carry out social learning which is a shared understanding of complex ecosystems and problems. This allows the development of shared understanding and facilitates competing interests and finding new solutions [19]. Shared motivation and some capacity for collective action are processes that produce more successful outputs [23]. Considering that clean water is a basic need as stated in the SDGs mandate. The urgency of meeting the basic needs of water has become a shared understanding of the stakeholders of the Magelang City government. For the Magelang City itself, the issue of improving the quality of basic services as well as urban planning and environmental health are two strategic issues among several other strategic issues in policy priorities. Meanwhile, IUWASH PLUS is also a strategic partner of the government in increasing access to drinking water and sanitation services as well as improving hygiene behavior for the poor and urban vulnerable groups. USAID IUWASH PLUS encourages the achievement of access to urban sanitation through the concept of safely managed sanitation, namely the stages of sanitation services that ensure that sources of domestic waste pollution are cut off from water bodies/sources. Several priority programs carried out with various parties and also the government show a good mutual understanding. This shows the existence of a clear shared vision and values.

Therefore, there is a priority in realizing a community whose drinking water needs are met with the 4K criteria (Quality, Sustainability, Ease of Access, Affordability). This results in drinking water services until 2020 reaching 96.61% of the total number of households in Magelang City, of which more than 88% have been served through the Piping System by PDAM and the rest have received access but still through non-Piping. Access to sanitation in Magelang City for 2020 has reached 97.8%. and currently access to sanitation is still in the healthy category.

Problems that occur with not achieving 100% sanitation access are still related to technical, cost/financing capabilities and public awareness. Of the 97.8% figure, almost all of them have private access. including the processing of the waste, either through Individual SPALD/Domestic Wastewater Management System or SPALDT/ Centralized Domestic Wastewater Management System (integrated for 50-70 families) or SPALD S (local for 4-5 families). For those who are still sharing using communal latrines (Km/public toilets) no more than 2%. From about 2% of the people who have access to sanitation services, they still use sharing or shared services (km/public toilets), apart from the limited land area for their house, it is also due to the limited cost for development with an independent concept. In general, this communal condition still needs

attention even though it is quite feasible to use. indeed, there are some whose condition is not good / unhealthy.

# 3.5. Intermediate Outcomes

Intermediate outcomes are more directed at achieving measurable and concrete goals [24]. The pattern of achievement in the intermediate range determines the level of success and sustainability of the collaboration pattern between stakeholders [11]. The government's strategy is to coordinate the provision of sanitation infrastructure and increase public awareness, to support the achievement of successful access to clean water and sanitation in Magelang City. The collaboration, which was held in the program for the availability of drinking water, sanitation and hygiene in the Magelang City, was more directed at the form of a collaborative state centric model [15] as evidence in the implementation of the IUWASH plus Program, the Health Office carried out various socialization and triggering programs to communities who were still requires understanding and assistance. The Magelang City Communication and Information Office takes a role in the publication of activities and outreach. Socialization through radio and social media owned by the Magelang City Government. From the side of the Public Works and Public Housing Service, it moves the SPALD-T and SPALD-S development programs, House Connections (SR) and improves communal latrines (km/public toilets) using the central, provincial and regional budgets.

The benefits of collaborating that occur provide more space to complement limited resources, both human and financial. Human resource management, in terms of quantity, has been fulfilled because several collaborating parties have divided their respective responsibilities and carried out these tasks in accordance with their responsibilities. The involvement of good actors from the Magelang City Government, the Communication Forum for Drinking Water, Sanitation and Hygiene Behaviour, Magelang City, Local Media (Radio and Newspapers), Community Self-Help Groups for the Drinking Water and Sanitation Program in overseeing the form of the program will determine the sustainability of the program itself, so that a series of processes collaboration must be mutually integrated.

# 4. CONCLUSION

The collaboration that is built with a state centric model provides a fairly large proportion to the Government from program initiation, program coordination, implementation to program evaluation. The contributions of actors other than the government from the face-to-face dialogue stage, trust building, commitment to process, shared understanding, and immediate outcome were actually involved but were very minimal. A balanced contribution between actors will make a major contribution to the sustainability of the program so that achieving 100% access is not difficult to achieve in the future.

In the collaborative government process, a Two-Way Communications process is needed, which is a process of mutual communication between governments to public behaviour both within and outside the organization. This is done to achieve a specific organization's goals[25]. Sanitation and hygienic behaviour program campaign activities are needed sustainably to achieve the goal of 100% access to sanitation in Magelang City.

# REFERENCES

- K. Andersson, S. Dickin, and A. Rosemarin, "Towards 'sustainable' sanitation: Challenges and opportunities in urban areas," *Sustain.*, vol. 8, no. 12, 2016.
- [2] G. Howard *et al.*, "The how tough is WASH framework for assessing the climate resilience of water and sanitation," *npj Clean Water*, vol. 4, no. 1, 2021.
- [3] A. Nandi, I. Megiddo, A. Ashok, A. Verma, and R. Laxminarayan, "Reduced burden of childhood diarrheal diseases through increased access to water and sanitation in India: A modeling analysis," *Soc. Sci. Med.*, vol. 180, pp. 181–192, 2017.
- [4] A. Komarulzaman, J. Smits, and E. de Jong, "Clean water, sanitation and diarrhoea in Indonesia: Effects of household and community factors," *Glob. Public Health*, vol. 12, no. 9, pp. 1141–1155, 2017.
- [5] C. S. Kwami, S. Godfrey, H. Gavilan, M. Lakhanpaul, and P. Parikh, "Water, sanitation, and hygiene: Linkages with stunting in rural Ethiopia," *Int. J. Environ. Res. Public Health*, vol. 16, no. 20, 2019.
- [6] Fany Rachma, "Capaian Layanan Air Minum Kabupaten Magelang Lebih Dari 80 Persen," *Berita Magelang.id*, 2019.
- [7] B. K. Magelang, "Kota Magelang," pp. 7–12, 2021.
- [8] D. Als *et al.*, "Delivering water, sanitation and hygiene interventions to women and children in conflict settings: A systematic review," *BMJ Glob. Heal.*, vol. 5, pp. 1–12, 2020.
- [9] L. Pories, C. Fonseca, and V. Delmon, "Mobilising finance for WASH: Getting the foundations right," *Water (Switzerland)*, vol. 11, no. 11, pp. 1–22, 2019.
- [10] john w Creswell, Research Design Qualitative, Quantitative, an Mixed Methods Approaches. 1375.
- [11] C. Ansell and A. Gash, "Collaborative

Governance in Theory and Practice," vol. 18, no. 4, pp. 543–571, 2018.

- [12] M. Jackson, R. A. Stewart, K. S. Fielding, J. Cochrane, and C. D. Beal, "Collaborating for sustainable water and energy management: Assessment and categorisation of indigenous involvement in remote Australian communities," *Sustain.*, vol. 11, no. 2, pp. 1–30, 2019.
- [13] J. S. Chilima, J. Blakley, H. P. Diaz, and L. Bharadwaj, "Understanding water use conflicts to advance collaborative planning: Lessons learned from lake diefenbaker, canada," *Water* (*Switzerland*), vol. 13, no. 13, pp. 1–26, 2021.
- [14] K. Emerson, K. Emerson, and T. Nabatchi, "Evaluating the Productivity of Collaborative Governance Regimes: A Evaluating the Productivity of Collaborative Governance Regimes: A Performance Matrix," no. October, 2015.
- [15] S. E. Clarke, "Local Place-Based Collaborative Governance: Comparing State-Centric and Society-Centered Models," *Urban Aff. Rev.*, vol. 53, no. 3, pp. 578–602, 2017.
- [16] S. Mulyani, R. Dewi, P. Ahsani, and D. N. Wijaya, "Collaborative Governance on Ecotourism: Towards Sustainable Tourism Development," vol. 17, no. 148, pp. 319–334, 2021.
- [17] R. Rojas, G. Bennison, V. Gálvez, E. Claro, and G. Castelblanco, "Advancing Collaborative Water Governance : Unravelling Stakeholders ' Relationships and Influences in Contentious River Basins," *Water*, vol. 12, no. 3316, pp. 1– 25, 2020.
- [18] Ö. Bodin, J. Baird, L. Schultz, R. Plummer, and D. Armitage, "The impacts of trust, cost and risk on collaboration in environmental governance," *People Nat.*, vol. 2, no. 3, pp. 734–749, 2020.
- [19] I. Borowski-Maaser, M. Graversgaard, N. Foster, M. Prutzer, A. H. Roest, and F. Boogaard, "Watercog: Evidence on how the use of tools, knowledge, and process design can improve water co-governance," *Water (Switzerland)*, vol. 13, no. 9, pp. 1–14, 2021.
- [20] E. H. Klijn and J. F. M. Koppenjan, "Public Management and Policy Networks," *Public Manag. An Int. J. Res. Theory*, vol. 2, no. 2, pp. 135–158, 2000.
- [21] C. Bianchi, G. Nasi, and W. C. Rivenbark, "Implementing collaborative governance: models, experiences, and challenges," *Public Manag. Rev.*, vol. 23, no. 11, pp. 1581–1589, 2021.
- [22] R. J. Scott and E. R. K. Merton, "When the going

gets tough, the goal-committed get going: overcoming the transaction costs of inter-agency collaborative governance," *Public Manag. Rev.*, vol. 23, no. 11, pp. 1640–1663, 2021.

- [23] E. Avoyan, "Inside the black box of collaboration: a process-tracing study of collaborative flood risk governance in the Netherlands," *J. Environ. Policy Plan.*, vol. 0, no. 0, pp. 1–15, 2021.
- [24] J. F. Warner, "More sustainable participation?

Multi-Stakeholder Platforms for integrated catchment management," *Int. J. Water Resour. Dev.*, vol. 22, no. 1, pp. 15–35, 2006.

[25] L. H. T. Richard West, Introducing communication theory: analysis and application, 3rd ed. New York: McGraw-Hill, 2007.

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