



## *The Management of Water Crisis Issue in Local Water Supply Utility of Sleman*

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### **Abstract**

This study aims to analyze the management of water crisis issues in PDAM (Local Water Supply Utility) Sleman. This study employed qualitative methods and the samples were taken through purposive sampling. The types of data in this study were primary and secondary data gathered through interviews, observations, and documentation. Data analysis technique was conducted by transcription, reduction, presentation, and conclusion. Meanwhile, the validity of the data was using source triangulation. The results of this study indicate that costumers report complaints to PDAM Sleman by visiting directly to the office or through social media such as Twitter, Instagram, and Website. Based on these customer complaints, PDAM Sleman managed the crisis issues. Management of handling the crisis issues were executed through four stages, i.e. identification, analysis, isolation, and strategy selection. Crisis identification was carried out by the service department based on the complaint book at the office and on social media. The results of the crisis identification uncovered three main problems, i.e. water off, unclean water, and increase of water use every month. Of the three main problems, a priority scale was made based on the most urgent handling such as complaints of water off. The PDAM Sleman took actions such as site surveys to see field conditions and handle the complaints. Complaints were handled by contacting the nearest unit from the customer so that the complaint can be handled quickly.

**Keywords:** Customer Complaint; Management Issues Crisis; Water



## Manajemen Isu Krisis Air Bersih di Perusahaan Daerah Air Minum (PDAM) Sleman

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### Abstrak

Penelitian ini bertujuan untuk menganalisis pengelolaan masalah krisis air bersih di PDAM (Perusahaan Daerah Air Minum) Sleman. Penelitian ini menggunakan metode kualitatif dan sampel diambil secara *purposive sampling*. Jenis data dalam penelitian ini adalah data primer dan sekunder yang dikumpulkan melalui wawancara, observasi, dan dokumentasi. Teknik analisis data dilakukan dengan cara transkripsi, reduksi, penyajian, dan kesimpulan. Sementara itu, keabsahan data menggunakan triangulasi sumber. Hasil penelitian ini menunjukkan bahwa pelanggan melaporkan keluhan kepada PDAM Sleman dengan cara datang langsung ke kantor atau melalui media sosial seperti Twitter, Instagram, dan Website. Berdasarkan keluhan pelanggan tersebut, PDAM Sleman melakukan manajemen penanganan krisis. Manajemen penanganan isu krisis dilakukan melalui empat tahap, yaitu identifikasi, analisis, isolasi, dan pemilihan strategi. Identifikasi krisis dilakukan oleh bagian pelayanan berdasarkan buku pengaduan yang ada di kantor dan media sosial. Hasil dari identifikasi krisis menemukan tiga masalah utama, yaitu air mati, air tidak bersih, dan pemakaian air yang terus meningkat setiap bulannya. Dari ketiga masalah utama tersebut, dibuat skala prioritas berdasarkan penanganan yang paling mendesak seperti keluhan air mati. PDAM Sleman melakukan tindakan seperti survei lapangan untuk melihat kondisi lapangan dan menangani keluhan tersebut. Keluhan ditangani dengan menghubungi unit terdekat dari pelanggan sehingga keluhan dapat ditangani dengan cepat.

**Kata Kunci:** Air; Komplain Pelanggan; Manajemen Isu Krisis

## Introduction

Water becomes the main necessity for all forms of life such as plants, animals, and humans. For humans, water becomes an absolute necessity because almost all of its activities require water. Therefore, the availability of sufficient and quality water for humans (communities) must be guaranteed so that it does not have difficulty meeting its needs at all times. In connection with this, the government has drawn up policies on Environmental Health Quality Standards and Health Requirements contained in Government Regulation No. 66 of 2014. Articles 8 and 9 of Government Regulation No. 66 of 2014 mention water is one of the important environmental media to pay attention to quality standards and health requirements for drinking water needs, hygiene, and sanitation needs, as well as for swimming pools, *solus per aqua*, and public baths. Especially the standard quality of drinking water consists of physical, biological, chemical, and radioactive elements. Physical elements include smell, color, total dissolved solids, turbidity, taste, and temperature. Biological elements are related to the maximum allowed microbiological levels for the total bacteria *Koliform*, and *Escherichia Coli*. Chemical elements are associated with the maximum permissible levels for at least organic matter, organic matter, pesticides, disinfectants, and by-products.

The standard of drinking water quality is important to be considered to be safe for consumption by the community. However, nowadays achieving standard drinking water quality is not an easy thing because of the construction of infrastructure facilities that cause the reduction of green land that turns into buildings or roads, climate change factors, and so on. The Ministry of Environment of the Republic of Indonesia defines climate change as changing the physical condition of the Earth's atmosphere. Climate change can be caused by human (anthropogenic) activities that drive increased *Greenhouse Gas* (GHG) emissions such as *CO<sub>2</sub>*, *Methane (CH<sub>4</sub>)*, *CO<sub>2</sub>*, *NO<sub>2</sub>*, and *CFCs* (*chlorofluorocarbons*) global warming has been going on for almost 100 years (Poppy, 2016). Climate change causes faster evaporation or evaporation so it can have an impact on the amount of groundwater discharge continues to decrease. The continued decrease in groundwater discharge can have an impact on the water crisis in the long run.

The World Water Forum in The Hague in March 2000 predicted Indonesia to be one of the countries that will experience a water crisis in 2025. The cause of the water crisis in Indonesia is a weakness in water management. One of them is the inefficient use of water such as opening the water faucet without turning it off after using and affecting the increasing degree of water scarcity. While population growth accompanied by a lifestyle that increasingly demands excessive water use is increasingly adding pressure on water quality (Renggani, 2020).

The signs of the water crisis that will be felt by the State of Indonesia in 2025 have begun to feel like, news of the water crisis that occurred in Sleman Regency. The water crisis due to hotel and mall business as published in the *tirto.id* news containing complaints from PDAM Sleman customers about the flow of water being disrupted for days due to the high intensity of water usage. Sleman Regency will also experience a water crisis in 2030 if there is no effort to conserve water and a lack of public awareness of water use. This is as expressed by Dwi Nurwanto as President Director of PDAM Sleman:

"... Now the water supply 526 L<sup>3</sup>, we continue to discharge that we produce 480L/second the number of our customers 40rb, meaning customers 40rb need 400L/second. We still have 80L in terms of production capacity, but if we relax not build prevention efforts it's certain we're having a water crisis. Development in the Sleman region is rapid and the lack of plants is a contributing factor to the crisis..." (Dwi Nurwanta, 13 July 2021).

Based on this information, anticipatory measures should be taken by PDAM Sleman Regency. This is important because Sleman Regency is very large and has a population of almost one-third of the total population of the Yogyakarta Special Region. The area of Sleman Regency is 57,482 ha or 574.82 Km<sup>2</sup> or about 18% of the area of Yogyakarta Special Region Province, with the furthest distance north-south 32 Km, east-west 35 Km. Administratively consists of 17 subdistricts, 86 villages, and 1,212 hamlets ([www.slemankab.go.id](http://www.slemankab.go.id)).

Sleman Regency according to statistics data in 2020 has a population of 1,180,479 people ([slemankab.bps.go.id](http://slemankab.bps.go.id)). Of the total population, according to the data of PDAM Sleman 2020, write down the number of people who subscribe to PDAM Sleman reached 28% or 330,534 of the total population in Sleman Regency. PDAM Sleman clean water providers are located in 17 units, namely Sleman, Tridadi, Mlati, Nogotirto, Sidomoyo, Gamping, Godean, Tambakrejo, Pakemturi, Ngaglik, Ngemplak, Bimomartani, Minomartani, Condongcatur, Depok, Kalasan, and Prambanan. In addition to households, PDAM Sleman also provides clean water for various agencies, offices, companies, hospitality, schools or teachers, and so on. According to Sleman district statistics, there are 41 campuses, 363 hotels, 338 malls/shopping centers, and 86,052,000.00 ha of residential/residential land area ([www.slemankab.bps.go.id](http://www.slemankab.bps.go.id))

Clean water service becomes the obligation of PDAM under the Regional Owned Enterprises (BUMD). PDAM Sleman which is engaged under BUMD must improve the best service for all customers so that the community's clean water needs can be met. This is as stated in Article 33 of the 1945 Constitution paragraph (3) which reads "The earth and water and natural wealth contained therein are controlled by the state and used for the greatest prosperity of the people".

In carrying out its basic duties, PDAM Sleman was not separated from complaints or complaints from customers. The high use of clean water by households and agencies, offices, companies, hospitality, schools, or universities sometimes causes a very small flow of water even to the point of not flowing, murky water, some wells become dry and polluted with *E coli bacteria* and so on. Customer complaints are not only through offline services, but many customers submit complaints online through social media such as twitter, instagram, and websites.

PDAM Sleman continues to strive to respond to any complaints received. This is important as one of the efforts to manage the water crisis issue. With proper handling of the water crisis issue, it will minimize the occurrence of protests or even demonstrations from customers. Therefore, it is important to know the management of water crisis issues that have been and are being conducted by PDAM Sleman.

## Method

This study uses qualitative methods. Qualitative research is a research method based on post positivism philosophy, used to research on the natural condition of data analysis is inductive or qualitative and qualitative research results emphasize the meaning of generalization (Sugiyono, 2017). The research was located in PDAM Sleman and was conducted from March to July 2021. Data collection techniques using interviews, observations, and documentation. To produce accurate information on the technique of determining research informants using purposive sampling techniques, namely data source informant retrieval techniques based on certain considerations related to the case studies studied and the objectives of researchers (Sugiyono, 2016).

Informants who provide information are Dwi Nurwanta, S.E., M.M. (Director of PDAM Sleman) and Sugiyono, S.E. (Head of Public Relations Of PDAM Sleman). This study uses inductive data analysis techniques. Inductive data analysis is the withdrawal of conclusions from specific facts found while in the field, then drawing conclusions in general. The steps used to analyze data according to (Miles and Huberman, 1992) from this study are collection, transcription, reduction, presentation, and conclusion-making. While the validation of data in this study uses source triangulation that uses several sources to check the data that has been obtained. Validation of important data is done as a process of researchers testing the credibility and correctness of the data that has been obtained (Sugiyono, 2017).

## **Result and Discussion**

PDAM Sleman is located at Jl. Parasamya No.18, Beran Lor, Tridadi, Kec. Sleman, Sleman Regency, Special Region of Yogyakarta. The system of providing drinking water facilities in Sleman district began in 1974 with the construction of infrastructure and infrastructure by the Ministry of Public Works (now the Ministry of Public Works) for the provision of a clean water piping system. This system serves to serve the needs of clean water, especially for the community. The Central Government through state budget funds has been carrying out clean water projects in Sleman Regency starting in fiscal year 1978. Furthermore, based on the Letter of the Minister of Public Works No.124/KPTS/CK/1981 dated December 14, 1981, the Regional Drinking Water Management Agency (BPAM) of Level II Sleman Regency was established as the manager of the drinking water system. In accordance with its urgency, the existence of the Sleman District Drinking Water Management Agency is expected to increase in number. In 1988, the Ministry of Public Works approved the transfer of BPAM status to PDAM.

Based on Sleman District Regulation No. 5 of 1990, since November 2, 1992, BPAM changed its status to a Local Water Supply Utility (PDAM). With the continued development of the company, the Sleman Regency Government demanded that PDAM be managed more professionally with the issuance of Sleman District Regulation No. 10 of 2010 concerning Sleman Water District Company. According to the Regulation, PDAM Sleman Regency is a company engaged in the provision of clean water for the community, whose purpose of establishment is to improve the standard of living of the community and as one of the original sources of income of the region.

As a professionally managed company, PDAM Sleman has a vision, mission, and goals to be achieved. The vision of PDAM Sleman is to become a healthy, independent, and reliable drinking water company. While the mission is:

1. Providing clean water needs for the people of Sleman Regency that meet the standards of quantity, quality, and continuity (K3).
2. Improving the regional economy, through increasing the Regional Native Income (PAD) from clean water services.

The mission is an explanation of the business options that will be run by the company in the future. The mission formulated by PDAM Sleman Management has been in line with the purpose and purpose of the establishment of the company as stated in Local Regulation No.10/2010 Sleman Regency. The purpose of the establishment of PDAM Sleman is to encourage the improvement of public health and regional economic growth. While the purpose of the establishment of PDAM Sleman is to improve the standard of living of the community and as one of the original sources of income of the region. The function of the

Regional Drinking Water Company (PDAM) Sleman Regency as a service institution for the provision of clean water, namely:

1. Clean water providers
2. Clean water suppliers
3. Regional sources of income

#### Management Analysis of Water Crisis Issue Handling at PDAM Sleman

One of the characteristics of the crisis is the shock. issues are developments usually within the public arena if they continue to significantly affect the operations or long-term interests of the organization. It can be said that the issue is the starting point for conflict if it is not managed properly (Roro,2018). Strong pressure when resolving crises is part of crisis management. To resolve the crisis, PDAM Sleman responded by taking intervention measures in crisis situations aimed at ending the crisis. PDAM Sleman determines the following crisis management measures (1) Identification of Crisis, (2) Crisis Analysis, (3) Crisis Isolation, and (4) Strategy Options.

Identification in the case of PDAM Sleman, conducting research on the crisis that occurred, both internally and externally. Internal research starts from collecting information from related sections, especially in the service section that handles complaints both online (social media) and offline. While research from external media (print and electronic).

“... for now PDAM public relations department serves some complaints, especially the service and information section, when there is a light complaint can be immediately resolved in the information section, but if it has been a rather serious problem continued to the service section. PDAM Sleman also facilitates offline complaints to come directly to the office or through social media there is already an admin from the public relations department. Every day there are always reports of complaints coming in, and we as people who serve the community should be able to receive complaints wisely and handle complaints efficiently in order to create customer satisfaction...”(Dwi Nurwanta, July 13, 2021)

Analysis of the crisis in PDAM Sleman was conducted from the first time about customer complaints of frequent dead water and small streams so the crisis developed with the help of social media and other media. The data that has been obtained is then analyzed and studied one by one starting from the cause, the running time of the case, and the state of the crisis, in other words at this stage of analysis is made chronological crisis. Chronologically this crisis can facilitate public relations in devising a strategy that will be used next to decide who is able to overcome the crisis.

“... every month we from public relations also conduct evaluations of incoming complaints to find the right way out. Small water even dies at a certain hour later we observe in which unit and the location of the house because the high soil structure sometimes water pressure cannot reach the house let alone in the peak hours of use. We usually coordinate with the production department to discuss water production in units that often experience small water flow or not even out at all...” Dwi Nurwanta, 13 July 2021)

Crisis is a disease, sometimes it can also mean more than just ordinary diseases and infectious diseases. To prevent a widespread crisis should isolation be quarantined. The issue of the water crisis in PDAM Sleman in this stage should be reviewed more deeply from both internal and external in order to find the right strategy.

“... the crisis must be faced by all employees in PDAM Sleman not only in the center but in the units must also anticipate each other. Like small complaints from the community, we must also prioritize what we learn and take action for the convenience of customers and customers satisfied with the service we provide. Moreover, the issue of the water crisis that will be experienced by PDAM Sleman in 2030 is according to our calculations will experience a water crisis, the aspect that affects the crisis there are three, the first yeng rapid development in Sleman, secondly, the rate of population growth, the third human resources, meaning that the community is less concerned with about water conditions. Well here we must have thought of a way out in anticipation of the crisis, we must build the right strategy even though 2030 is still a long time we should not be relaxed and careless ...” (Dwi Nurwanta, 13 July 2021)

Before proceeding to the communication step, analyzing and isolating the crisis is very important to determine the strategy to be used. Such as the issue of the water crisis in PDAM Sleman should be made observations of what actions will be used to be precisely targeted and the crisis can be handled. In this case, the publicist and director use a choice of adaptive strategies that involve adjustments based on new environmental conditions, which are considered to minimize the risks faced. The interaction between sectors can be carried out in several models, one of which is intense with the collaboration of top-down and bottom-up systems as a form of domination (Suherman, et. al, 2021).

“... to minimize the occurrence of crises we always do a deep explanation of what makes customers uncomfortable, not by checking the news or covering like nothing happened. We always provide detailed explanations related to what happens in the office through online and print media so that all customers know and understand. In addition to explaining, we also often conduct casual socialization with residents whose area becomes a large pipeline, such as when creating a new network we also discuss with local residents and some PDAM Sleman employees to negotiate something. So, we can immediately know what the community wants and what strategies we will do to be on target...” (Dwi Nurwanta, 13 July 2021).

## **Conclusion**

Based on the results of the research, it can be concluded that crisis issue management in PDAM Sleman is in accordance with the concept of management with stages in the action plan, namely identification, analysis, isolation, and strategy choices. The action plan for PDAM Sleman is the core of crisis management. Handling the water crisis issue of PDAM Sleman, namely The President Director (Dwi Nurwanta, S.E., M.M). provides detailed explanations to customers spread through online, print, and social media. In addition to providing detailed explanations, PDAM Sleman provides socialization and is active in corporate social responsibility (CSR) programs. Efficient handling of response is also carried out by all employees of PDAM Sleman, especially in the service and information section that receives complaints directly from PDAM Sleman customers. Crisis management can be more maximal, as soon as possible the crisis is immediately managed properly so that the crisis can be resolved immediately, not more widespread and prevent the onset of new crises. The action plan can be further developed for example by creating a Standard Operation Procedure (SOP) for every crisis that occurs and which is likely to happen (expected) so that the action plan is more ready and perfect again in the face of the crisis.

## References

- Central Bureau of Statistics Sleman district. (2021). Number of People in Sleman Regency. Government Regulation of the Republic of Indonesia Number 82 of 2001 concerning Water Quality Court and Pollution Quality Court.
- Poppy, Rejekiningrum. (2016) Groundwater utilization opportunities for water resource sustainability. *Journal of Land Resources* (8), 1-15.
- Renggani, Titik, Association of Drinking Water Companies Throughout Indonesia scope. DIY. hal:5-8.
- Roro, Warathisni Handayani (2018) RSU 'Aisyiyah Ponorogo Issue Management in Facing Complaints Services by the Community.
- Sugiyono. 2017. *Quantitative, Qualitative, R & D*. Bandung: CV Alfabeta.
- Suherman, A., Rosyidi, M. I., & Rasyid, E. (2021). Crisis Communication Model for The Covid-19 Task Force Team of Muhammadiyah in The Epicentrum Region. *Nyimak: Journal of Communication*, 5(2), 167-187.