

# The Institutional Design Of The Governance Of Waste Water Domoestik Case Study Of Regional Water Company Tirtaweing The City Of Bandung

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## **Abstract**

*The research aims to study about the design of the institutional governance of domestic waste water, case study of regional water company Tirtawening city Bandung. The approach of research used in this study is using a qualitative descriptive approach, the Technique of data collection is done through observation, interview, document study to gather information related to the management of domestic waste water in the regional water company Tirtawening city Bandung. The results of research on the institutional design of the governance of domestic waste water regional water company Tirtawening city Bandung current needs to be done strengthening institutional governance is better again, so that the strategy adopted is through the institutional arrangement in the form of restructuring the organization to pay attention to organizational culture, leadership and structure of a slender, flexible, responsive, and efficient.*

**Keywords:** *Institutional design, Governance and Domestic waste water.*

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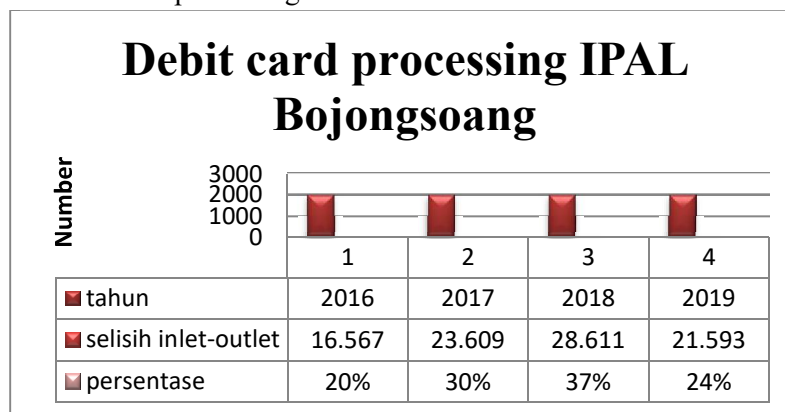
## **I. INTRODUCTION**

The environment is a source of very important for the survival of humans and other organisms in the face of the earth. The process of human life from time to time will have an impact on the pollution and destruction of the environment from the activities of man and also the natural processes that have a negative impact either directly for the sustainability of human life and other living creatures, which resulted in a decrease in the quality of the environment. In fact the environmental pollution is often caused by human activities, although the activities of nature is also not uncommon cause damage to the environment (Saile, 2003). The results of the exiles the Activities carried out so-called human waste. The density of the urban population that is higher with the household waste or domestic high and not processed, of course, potentially resulting in damage to the environment is greater than the waste industry. Domestic waste water is waste water that comes from activities of daily living humans associated with the use of water (Permen LH No. 68 Year 2016). Domestic waste is currently a problem for a number of major cities are densely populated, such as Jakarta, Surabaya, similarly, in the City of Bandung. The raw waste water quality is the size of the limits or levels of pollutant elements and / or the amount of pollutant elements that ditenggang its presence in the waste water will be disposed of or released into the water sources of a business and or activities. (Permen LH No. 68 Year 2016). With regard to wastewater management in Indonesia, there are currently 412 TAPS and there are only 4 (four) PDAM in Indonesia who manage drinking water, as well as water waste that one of them is the PDAM Tirtawening city Bandung,

Policies for handling waste water, in particular the domestic waste water is regulated by the Regulation of the Minister of public works and Public Housing No. 04/PRT/M/2017 2017 about the Organization of the System of Management of Domestic Waste Water. As for the management of domestic waste water in the City of Bandung is set in the Regional Regulation No. 15 of 2009 on Regional Water Company Tirtawening Bandung, and change to the Local Regulations of the City of Bandung No. 04 of 2014 on the amendment to the Regulation of the City of Bandung No. 15 of 2009 On Regional Water Company Tirtawening City of Bandung. PDAM

Tirtawening City of Bandung as Badan Usaha Milik Daerah (BUMD) is an institution of the organizers in addition to drinking water services, also provide services of domestic waste water in the City of Bandung. Until December 2019, the number of customers domestic waste water PDAM Tirtawening, either through piping (off-site system) and through the suction septic Tank (on-site system) as much as 160.843 Connection, (BPAL: 2019). In its development, aspects of the environment which is owned by the City of Bandung reap the unfavorable impact, impact, such as the occurrence of urbanization continues to increase, the concentration of the population at a point location, the emergence of slum housing with sanitary quality less good as the limited drinking water, the arrangement of the support and treatment of domestic waste water is not maximized. It is necessary governance of domestic waste water either through institutional strengthening and the role of leadership and organizational culture that supports the company area.

PDAM Tirtawening city Bandung as Badan Usaha Milik Daerah (BUMD) is an institution of the organizers in addition to drinking water services, also provide services of domestic waste water in the City of Bandung. Empirical facts at this time that the management of waste water which are in institutional PDAM Tirtawening city Bandung, the less optimal it is based on the results of observation of the researcher. These issues arise because in institutional governance PDAM Tirtawening Bandung City is still dominated at the service of drinking water while the management of domestic waste water, less is an important concern in institutional governance in PDAM Tirtawening city Bandung. While the fact shows that business opportunities waste water management domesik in the City of Bandung is very large if professionally managed, however, when this growth is mediocre. The issue with regard to the management of waste water based on the results of previous studies showed that also experienced problems with regard to the management of waste water, such as the City of Yogyakarta, especially in the riverbank area Code is not running optimally, Artini. (2015), also with regard kualitas Human resources manager, Nurhidayat (2018), silting IPAL Samina., et. Al (2013). Based on the understanding of the need for a governance of domestic waste water that is professional and correct. Current conditions show the management of domestic waste water in PDAM Tirtawening city Bandung, in particular for the management of centralized wastewater (piping) processed in a Wastewater Treatment plant (WWTP) Bojongsoang with the discharge water outlet averaged 67.344 cubic meters per day (BPAL: 2019). this can be seen in the table below: debit card processing



Source : BPAL, 2019

**Table 1.** Debit Processing IPAL Bojongsoang

Based on the above table need to be done the design of the governance of domestic waste water in the City of Bandung in the future so that management of domestic waste water can be better addressed again, as well as make a positive contribution to the government of the City of Bandung. Thus based on the above phenomenon can be interpreted that when this is necessary the design of the governance of domestic waste water in the city of bandung through the institutional arrangement. Based on the results of observations on the management of domestic waste water in the TAPS Tirtaweing the City of Bandung which has not been effective because of the high market demand while low growth, although there is a stable income, and based on points of strategy of

institutional development then as the effort that strategies for the management of domestic waste water in PDAM Tirtawening City of Bandung, run effective it required an effort of the independence of the institution in the management of domestic waste water in the City of Bandung. understanding institutional derived from the word agency, according to nurholis (2005) institutions is a structured process that people use to organize their activities. Of the two opinions can be disimpulkan that the institution is a process or system that is used by people to achieve the goals expected of such people. Institutional quality that is expected in the future are slim, flat/flat and can be adapted with the development environment. According to Tjokroaminoto (2004) there is some shift in paradigm where the participation of the community formerly mostly done by means of mobilization, shifting the role of government as an agent of development into participation, up in the era of good governance is now more known as a relationship based on partnership (the partnership). Thus institutional governance self be a major concern in the management of domestic waste water in the City of Bandung.

## **II. RESEARCH METHOD**

In this study, the object of research is concerned with the design of the governance of domestic waste water with a case study in PDAM Tirtawening city of Bandung. As for the subjects in this study is the Regional Water Company (PDAM) City of Bandung as the executor of the activities of the management of domestic waste water in the City of Bandung. Approach the research used a qualitative descriptive approach. The data collection techniques used in this research is using a semi structured interview, documentation study and observation, to the technique of the analysis of the data using triangulation of sources, which will support provide an explanation of the design of governance in domestic wastewater are designed in accordance with the needs in the future in the City of Bandung.

## **III. RESULTS AND DISCUSSION**

### **1. Governance policy Domestic Waste Water in the City of Bandung**

In the implementation of the program of Domestic Wastewater management in the City of Bandung until the year 2020 has been implemented in accordance with the program that has been planned, the achievements of the program Management of Domestic Waste Water in the City of Bandung, as follows:

#### **a. Optimization Of The Existing Network**

The efforts of the implementation of the management of domestic waste water in PDAM Bandung related to the Optimization of the Existing Network efforts of three activities, the first is an Up-dating and Mapping of the Customer Data and the Infrastructure of the Existing. Mapping the customer and waste water infrastructure in Geographic Information Systems (GIS) began with the creation of the application database infrastructure and customer waste water. There are 2 (two) way of inputting in this application, namely the input map network derived from the hardcopy to program Quantum GIS (Spatial Data) and the input tabular data (textual). Making this application aims to digital mapping waste water infrastructure and customer so as to facilitate the data management infrastructure and customer waste water.

#### **b. Optimization and Development of Waste Water Treatment System**

Efforts to optimize WWTP conducted by PDAM Tirtawening city Bandung is the optimization of IPAL Bojongsoang done through coordination with the Ministry of PUPR Directorate of PPLP in the form of the preparation of the Feasibility Study the Development of Wastewater Management System (SPAL) for the Greater Bandung, given the location of the IPAL Bojongsoang located in Bandung Regency. In general IPAL Bojongsoang can still operate and function in wastewater treatment. But physically pond construction and mechanical and electrical equipment has undergone many changes so the impact to the weaker performance of the processing system IPAL

### **c. Development Of A Network Of Waste Water Piping**

In the framework of the Development of a Network of Waste Water Piping conducted by PDAM Tirtawening City of Bandung the first is the Installation of Trunksewer. Mounting pipe trunk sewer during the period from 2016 -2019 has not been done because quite a large investment while the company's budget is not yet available so that the implementation of the program will be submitted for funding to the central government. As for the development of the second network is the Installation of the Pipeline Lateral. Over a period of years 2017-2019 has made Investment in Infrastructure for Waste Water Piping in several locations on a limited basis due to limited investment budget. As for the effort pengembangan network the third is the Addition of a Wastewater Connection (SAL) as much as 35.775 SR.

### **d. The increase in the sister Services in place.**

The efforts made in terms of the Improvement of Service Systems, On-Site, there are two efforts that the first Optimization of the regular desludging Service (L2T2). Attempts optimize a program L2T2 one of them by making Information System Waste Water Tank which aims to accelerate the process of administration, data processing becomes more efficient, the search data is faster because the data is stored in digital form also displays a report with a variety of different perspectives. With this application, monitoring and control of the acceptance of the operation of the suction tank of stool can also be done more accurately

### **e. Increase The Income Of The Waste Water Non Account Of The Drinking Water**

With regard to efforts to Increase the Income of the Waste Water Non Account of the Drinking Water there are three things which are done of the first Refinement of the Regulatory Aspects. As for the second step is the Application of Information Technology. In addition, through efforts to improve the Aspects of regulation, increased acceptance of the sector of waste water are also using information technology is to build applications Information Systems Services & Payment Waste Water which is equipped with the Module of Marketing & Service Supervision. Furthermore, in an effort to increase the the third step is the Utilization of the Land & Processed IPAL Bojongsoang. Efforts to increase the receipt of the utilization of land and processed IPAL Bojongsoang planned to involve the participation of the private sector through cooperation, business to Business (B to B) as a strategy for financing the investment

### **f. Improve the Organization, Management and Human resources Capacity**

In improving the organization, management and Human resources capacity in PDAM Bandung made two important agenda that the first is an Increase in the Capacity of Human resources. In improving the organization, management and Human resources capacity, the second is the Revision of the Layout. In the layout of the first one done is the Revision of the Regulation of Waste Water. As for the layout of the third is the Making of the Contract of Subscription. For the orderly administration in the service and customer management waste water group commerce, carried out the preparation and signing of the subscription contract governing the rights & obligations of the customer and TAPS.

## **2. The institutional design of governance in domestic wastewater case study in PDAM tirtawening City of Bandung.**

As for that being a major concern in improving the management of domestic waste water in PDAM Tirtawening city of Bandung is the aspect of institutional development. It is based on the results of the interview which was held on Monday, June 1, 2020, as expressed by Sir Subekti (president Director of PD PAL Jaya DKI Jakarta) that the institutional aspects need to be elaborated more. The need to focus on institutional aspects in create a strategy in this study, also presented by the Mother Triani as the Board of Trustees PDAM Tirtawening City of Bandung. Based on the results of the FGD obtained enter that aspect of the institutional aspect of his key in building domestic waste water management in the City of Bandung.As for the aspects that affect the institutional arrangements of local government according to dawud in sedarmayanti (2006), namely: Aspects of authority, human resources, financial Aspects, technological Aspects, Aspects of the needs of the service, Aspects of the strategic value of the area. To reset back to a system of institutional governance is not a thing that

can be done in an instant without the foundation to the institution of the past. According to Kotter (1997) based on the scope and target market, changes in the organization are divided into several types: Restructuring, Re-engineering, the Preparation of the strategy returns, Acquisitions, Downsizing, Program-program quality, Update the organization's culture. For institutional design in the area there are some things, which should be done through organizational restructuring. As for some consideration of the institutional Domestic Waste Water need to establish institutional and collaborate with PDAM Tirtawening city of Bandung is:

1. The increasing number of population in the City of Bandung and its surroundings, which requires the management of domestic waste water in an effort to maintain public health and repair as well as quality improvement of the environment.
2. Bandung city is a metropolitan city so a lot of the appearance of the building of the commercial that will be constructed like shopping malls, hotels, apartments, restaurants, commercial and other large, where it requires the management of waste water domestic in accordance with the commitment in protecting the environment.
3. The increasing number of managers of the catch fecal private, both located in the City of Bandung and the buffer area of the City of Bandung, as well as dispose of waste water domestic to the Installation of Waste Water Treatment (sewage treatment PLANT) City of Bandung. This will add to the revenue for the company area of the domestic wastewater of the City of Bandung.
4. Not yet optimized the result of the processed waste water in the form of sludge processed and cooperation with the Department of Parks and forestry, both at the City and Province.
5. The processed water in the IPAL Bojongsoang be a concern for the entrepreneurs of the textile Industry needs to improve its water to the dyeing process. The developers have tried to ask to the PDAM Tirtawening City of Bandung to buy the processed water WWTP in order to meet the needs of the production process of the textile factory which is located around the IPAL Bojongsoang.
6. From some of the cities in the vicinity of Bandung Raya, just PDAM Tirtawening City of Bandung who can provide services in the waste water domestic in serving the needs, not only for the community/customers PDAM Tirtawening however also to serve the waste water of existing settlements along the path of waste water piping towards the IPAL Bojongsoang (Kabupaten Bandung).
7. Potential governance of Waste Water Dmestik still open opportunities given in addition to population growth, also the scope of services still continue to grow in line with expectations and targets the central government and the government of the City so that in the year 2024 the whole community in the City of Bandung has enjoyed sanitation safe, where the water waste is managed properly.
8. Through independence in the management of domestic waste water, still requires collaboration with PDAM Tirtawening, given in addition to the implementation success of a company in today's era requires collaboration with various parties (stakeholders) also TAPS still need waste water given in the preparation of the tariff is one of the elements of the preparation of such rates to the presence of maintenance of raw water sources is by working in the governance of domestic waste Water. The governance of waste Water still in need of TAPS, especially in the withdrawal of services of water waste with a fixed join with an account of the TAPS (30% of water rates).
9. Tax rates of waste water is currently being discussed by the ministry of PUPR and BAPPENAS to be able to immediately dhapuskan, given the service of the domestic waste water is a basic service that should be prepared by the government of the City of Bandung.
10. The opportunities for cooperation with donor countries or the developed countries in the management of domestic waste water in the City of Bandung. This assistance is expected in addition can increase the value of the investment for the governance of domestic waste water, can also improve the competence and capability of employees in the management of domestic waste Water.

11. The plan is to orchestrate the formation of Laws domestic waste water management at the central level as efforts to the attention of the central government in completing the improvement of environmental sanitation of basic sanitation became a sanitary safe in accordance with the target of Sustainable Development Goals. (SDG,s)

Thus in the restructuring or institutional change organisasi is necessary so that the design and form of organizational structure that is responsive to the changing needs of the environment, both internal and external. this is in accordance with the theory of systems tend to pay attention to the equilibrium or balance. It means a system (including in this case the organization) without the encouragement of factors internal and external specific, undoubtedly choose not to change and more likely to survive in its original state. Further understanding of the institutional expressed Rustiadi (in Septiningrum, 2010): "Institutional is a Set of rules (rules of the game) and procedures that play a role in setting and allocating resources efficiently and sustainably".Based on the concept of institutional relating to the independence of the institutional and institutional strengthening, if based on the results of research related to the institutional development of the concept would be the basis in establishing a strategy and a model in the institutional development in the management of domestic waste water in PDAM Tirtawening City of Bandung. As for the strategy or institutional design as an alternative in the management of domestic waste water in PDAM Tirtawening City of Bandung, namely the independence of the institutional berupak institutional restructuring in the management of domestic waste water in the City of Bandung, this strongly supports because of the need for wastewater management in the City of Bandung which is better. The concept of restukturisasi according to Bennis and Mische (1995) is as follows:

- 1) The Vision of the brave: this Means that the starting point for the restructuring of the successful is the presence of a courageous view over the future of the organization and a strong desire to manifest into reality.
- 2) Arrangement systematic: Means that the restructuring has the range or the spectrum of a distant and far-reaching implications for the organization and is not restricted only on the issues of the organization, procedure, task activity, function or unit. This vast range characterizes that the restructuring as rearrangement and total transformation designed to achieve outstanding results. This view is intended to all functions of the organization with respect to the performance of the process, and not just on one or more activities.
- 3) The Intent and mandate is clear: it is Intended that the organization should start restructuring with a specific purpose and should be aware that the end result will be a company that is totally different. In addition, the restructuring will also create a new company that requires credentials and continuous support from top management.
- 4) The specific Methodology: it Means that for a restructuring process that covers various aspects, a methodology that is specific is critical. For each leader restructuring and for the employees who implement them, must know exactly what will be done at each step of the process. Without a technique specific, the process of restructuring can end up with a mess that made an impression.
- 5) Effective Leadership and look: it Means that the leaders who carry out the restructuring should have a number of skills and abilities such as creativity, vision, influence, profound knowledge about the business at his company, and good character as well as careful consideration.

If the five elements of the principal have been met and set the restructuring as a strategy that is ready to be implemented, then at the end of this step is expected to be achieved 5 (five) special purpose i.e.:

- a) Increase the productivity of the company
- b) Optimize value for our shareholders
- c) Achieve outstanding results
- d) Consolidate the functions
- e) Eliminating the tiers and unnecessary work. (Bennis and Mische:2000).

Thus didaasarkan over a wide range of the analysis it can be concluded that the restructuring of the

organization to pay attention to organizational culture, leadership and structure of a slender, flexible, responsive, and efficient, will give the design of the institutional governance of domestic waste water in the City of Bandung will be more effective.

#### IV. CONCLUSION

Based on the fact the theoretical and empirical based on the explanation above, the strategies used in the management of domestic waste water in PDAM Tirtawening City of Bandung is through the institutional structuring or restructuring of the organization in the management of waste water in the City of Bandung. The restructuring has five basic elements that must be met, where an activity of transformation can not be said as restructuring if it does not meet one of the main elements. As for 5 of the Restructuring, which are: (1). The vision is bold, (2). Arrangement systematic, (3). Intent and a clear mandate, (4) the specific Methodology, (5). Effective leadership and looks. Through institutional design is then governance in domestic wastewater of the City of Bandung can contribute to a more esbar again for the community. Then the restructuring of the organization that do need to pay attention to aspects of organizational culture, leadership and structure of a slender, flexible, responsive, and efficient.

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