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Politicization of Water: Is Water Marketization a Solution for Ground Water Issue in Semarang?

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Abstract

This study intends to provide light on the subject of groundwater governance in Semarang City, Central Java, Indonesia. This article has sought to address two questions ; Questioning he provision of water among local government and also questioning whether water marketization is one of the fittest solution for ground water issues or an instrument to serve certain interest ?. The politicization of water refers to the ways in which issues related to water resources, access, management, and distribution become intertwined with political agendas, power struggles, and decision-making processes. Water marketization and politicization are two important and interconnected concepts related to the management and governance of water resources. The main finding of this research is that water marketization is being projected as the main remedy for ground water or land subsidence issue. The provision of water as a commodity is one of the political agenda that is framed through ground water issues at Semarang. While, local government keep pursuing this agenda, this research found out that water marketization is just oversimplified solution for ground water issue at Semarang.

INTRODUCTION

This paper tries to analyze the solution for ground water issues at Semarang by formulating water marketization through PDAM. The major objective of this study is to examine local government viewpoints and offer a critical analysis of how marketization or co-commodification of water is being proposed as a remedy for the groundwater problem. It had been argued by Semarang local government that the expanding of PDAM subscribers is a matter of the utmost importance. In the water sector, the strategy of water marketization through the increasing number of PDAM subscriber has recently been introduced as an answer to the challenges of groundwater issue at Semarang. One of the largest cities in Indonesia, Semarang, is currently experiencing extensive ground subsidence as a result of the area's alluvial soil composition and the weight of the city's structures. The extraction of groundwater eliminates this situation. According to Marfai's research, land subsidence is a problem that is becoming worse quickly. By 2020, it is expected that 27.5 hectares will be 1.5–2.0 m below sea level (Marfai et al., 2007). Water issues that the city has experienced in the past include drought, land subsidence, landslides, water pollution, and floods; all of these issues are predicted to get worse in the future. Many scientists contend that natural elements like alluvial land and its low-lying position have become the primary cause of such problems.

According to the majority of studies, Semarang has exploited groundwater excessively since it is regarded as a simple and affordable choice (Raksha, 2020).One of the researchers at Delft claims that the groundwater is heavily relied upon by the locals.The amount of groundwater needed to supply their daily demands is 79,7%.48,6% of those individuals use deep groundwater or artesianwells, whereas 31,1% use shallow groundwater (Batubara, 2020). Groundwater resources are taken out for human needs such as irrigation, industrial production, and providing water to rural and urban residents (Dobbin, 2020). People in the area, from the poor to large corporations, continue to rely on ground water in significant numbers.

People in the area, from the poor to large corporations, continue to rely on ground water in significant numbers. More than 60% of the population relies on groundwater for their water needs, with industrial regions being the most prevalent. Three major industrial zones can be found in Semarang: the Candi, Mangkang, and Terboyo regions (Bappeda, 2020). The busiest industrial zones in Semarang City are three of them, and they likely use the ground water as well. 87% of the factories in those industrial zones use deep wells to obtain groundwater. One of the Bappeda planology employees, Mr. Kemal, went on to say that some of

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the deep wells are truly illegal and hidden from government view. These excessive uses of groundwater particularly those without legal permit would definitely exacerbate the land subsidence at Semarang. Therefore, water governance at Semarang could not be separated from the groundwater issue.

Water governance refers to the processes through which institutions, actors, and societies broadly decide on how water is to be used, by whom, and under what circumstances (Zwarteveen et al., 2017). According to Bakker, water governance is the range of political, organizational and administrative processes through which communities articulate their interests, their input is absorbed, decisions are made and implemented (Bakker, 2003).This research provides illustrative examples that the current power structures play a role in determining interests in the water governance. The local government promotes the use of water surface in its regulations to reduce the usage of groundwater. The Department of Energy and Mineral Resources at Central Java Province (ESDM Central Java), the Public Water Provider (PDAM Moedal Tirta Semarang), the Directorate General of Water Resources, particularly Pamali Juwana River Basin (BBWS Pamali Juwana), and Local District Planning (Bappeda Semarang) are the actors referred to as local government in this study.

Local governments promote purchasing water from the primary water supplier or PDAM Moedal Tirta Semarang, whose source of water originates from water surface areas such river basins. The interplay of those institutions generate political, organizational and administrative activity through which the policy making is processed. At the global level, water shortage or water crisis becomes a main reason to justify the water-trade policy. However, in this case there is a prominent arguments that frequently justified the commoditization of water which is the emerging of environmental crisis namely sinking city or land subsidence. This research argues that the majority of local governments encourage the use of water surface notably by being a PDAM costumer to avoid the sinking city. Apparently there is a depoliticized of water governance in solving land subsidies.

There is a growing perspective among stakeholders that try to remove political consideration and interest from the poors by giving one size fits all solution namely - buying water instead of taking out water from the well. The excessive use of ground water issue is indeed very damaging and need to be taken care off in accordance to the perspective of scientist (expert in geology, hydrology etc). Nevertheless, by depoliticizing this issue, the poor's interests remain unaddressed and the voice of some people remain unheard. The main goal of this research is to unpack the perspectives of local government and provide a critical thinking on how water comodification or marketization is being constructed as a solution to the ground water issue. Finally, this research tend to answer two questions : How water is being perceived by local government at Semarang ?, Is Water Marketization a Solution for Ground Water Issue in Semarang?

METHODS

This study employed a qualitative method aiming to explain a phenomenon of groundwater governance by questioning whether water marketization is a remedy for the problem of ground water or if it mostly to serves the interest of local players ?. The goal of using qualitative methods is to delve into the nuances, meanings, and contexts that cannot be easily quantified. A thorough interview was done by the researcher with local officials in the relevant areas. The term "local government" in this study refers to the Ministry of Public Works and Housing's Pamali Juwana River Basin (BBWS Pamali Juwana), the Department of Energy and Mineral Resources at Central Java Province (ESDM Central Java), the Public Water Provider (PDAM Moedal Tirta Semarang), and Local District Planning (Bappeda Semarang). The researcher employed "snowballing" technique to obtain a variety of information from one important source to another and connecting dots for a meaningful information. The study is carried out by doing a lot of fieldwork.

This research tend to find a meaningful pattern between local govenent's perspective and water governance particularly how the government manage groundwater issue. Many researchers conduct research on the area of water privatization by raising up the issue of water scarcity. However, this research highlights more on the way local government manage groundwater as the most prominent issue in Semarang. The interplay of local government's role in this issue shows that water marketization is needed to preserve the water as natural resource. Therefore, to avoid the excessive use of groundwater, society is being directed to buy water from water service provider specifically from public water provider or Perusahaaan Air Minum Daerah (PDAM Semarang) .

Data analysis in this study is carried out by using interpretative methods where all of the statements ,stories, field finding are being interpreted throroughly. This research also try to interpret the interaction among those stakeholders. This interaction may consist of written, verbal and gesture communication. The secondary data are obtained through literature studies on journal articles, books, mass media articles, and government report, including official reports and press releases related to water governance and water privatization. After data collection , the author organise each piece of data to construct an explanation on how Government actors perceiving water as comercial goods. The perspective of government actors in pereceiving water is manifested in the local water governance-in this case, Semarang Water Governance.

Results and Discussion

Water governance includes a wide range of considerations over how the circulation of water is animated by formal institutional structures as well as everyday negotiations, contestations, and conciliations between actors (Wilson et al., 2019). This research try to analyze what are the consequences of the particular way of thinking or values about water and how are the rules being constructed

in the water governance?. This research further seeks who is being silenced , marginalized and excluded from water access as the result of depoliticized of water governance in Semarang. The first section is going to discuss the role of government actors that is involved in Semarang water governance, how they give value to water and the politicization of water among local administrations. The second part is questioning whether water commodification through SPAM Semarang Barat project is the best solution for land subsidence issue ?.

Water Provision and Politicization of Water among Local Administration

The politicisation of water is the process by which political considerations, interests, and conflicts are entwined with administration, control, and access to water resources. Water is a precious and finite resource that is necessary for ecosystems, agriculture, industry, and human survival. Because of this, problems with water availability, distribution, quality, and management sometimes result in intricate political arguments and power battles. The politicisation of water has several major components, including water distribution, conflict over water, perspectives over water and control over water. However, this research tends to focus more on how local government / local administration try to frame water both as a commodity and a solution for groundwater issue namely land subsidence.

Experience shows that in practice, sustainability often leads to trade-offs in favour of economic goals at the expense of social inclusion (Gupta, Pouw, & Ros-Tonen, 2015). Sustainability approaches of the large development institutions have been critiqued for reconciling economic growth with environmental preservation and ignoring social inequalities (Atkisson, 2013). Inequities in access are grounded in conditions of deep ecological vulnerability. in order to call attention to the importance of ecological sustainability in meeting targets related to equity of access(Kooy et al., 2018). The dominant global neo-liberal hegemony of water marketization – as opposed to water as a human right – remains largely unchallenged and state-centric (Bakker, 2013). Some argue that water needs to be seen as a part of human right. Therefore, water should be left in a public domain to guarantee citizens' basic right to water. The others see water as a scarce resource and rivalries so that people need to pay. The pro-privatization group introduces a calamitous logic of the market into water management that led to the water commoditization and left the vulnerable with inadequate access of water (Swyngedouw, 2004).

Finding of this research shows that the major provision of Semarang local government is seeing water as a commodity to avoid moral hazard and environmental degradation. Apparently, there was a growing narrative that is politicized by the local government to market the water. Since commoditizing water is the major objective, it can be viewed as a competing good that is extremely limited. The local government narrative demonstrates that there is a trade-off between preserving the environment (which prevents land subsidence) and considering water to be a public good that the neighbourhood should be free to use. This research involving at least 7 interviewees from different institution at Semarang water governance : PSDA-ESDM, PDAM, Pamali Juwana River Basin and Bappeda Semarang. This section elaborates the perspectives and how water is being politicized among local administration. This section emphasizes on how the local government actors especially PDAM gives value to water. Ground water quality and quantity is deteriorating in the area due to over abstraction, increasing sea level, and water pollution. Yet there is an increasing reliance on groundwater in Semarang (ESDM, 2020).

ESDM is the institution under Ministry of Energy and Mineral Resources who has in charge in ground water area, spesifically in monitoring ground water extraction and artetis well. Hence ESDM is the main agency that in in charge of groundwater management policies for Semarang and Central Java in the wider context (Raksha, 2020). Ministerial Regulation under the ESDM ministry regulates the groundwater zoning system into three different zones, red zone for damaged area, yellow zone for critical area and blue zone for safe area. The red zone is where groundwater abstraction is not allowed (ESDM,2020). In order to call attention to the importance of ecological sustainabilty, ESDM encourage local residents not to use ground water by strengthening the legal permits in drilling especially at the coastal area. There has been a socialization to Semarang residents about the risk of water abstraction to the threaten of sinking city. "We do socialization and give education to the students and local residents at northern part of Semarang about the prohibition of drilling well in that area. All of the northern part of Semarang is red zones area" (PSDA-ESDM. 2020). "The expansion of PDAM service area will help our job to manage this ground water issue, we do hope SPAM Semarang Barat Project will be finish soon and people can enjoy water from Jatibarang Dam" (PSDA-ESDM, 2020)

According to PSDA-ESDM, there are two type of ground water well: first is the artetis well and second is the digging well (sumur gali). Digging well refers to the domestic well that commonly used by household. "The depth of domestic well is approximately 10 metres to 20 metres but it can't be more than 30M . The ones that need ESDM permits are artetis well not domestic well. Artetis well can reach up to 100 metres and this is going to exacarbated the land condition" (ESDM, 2020). Artetis wells are mostly used for commercial units such as industries, Hotels and Water Service Provider. The legal permits to drilling artetis well more than 100 metres should be completed with at least three requirements AMDAL or Environmental Impact Assesment , certification of drill installation and the drillers itself must have specific certificate to prove their expertise (PSDA-ESDM). The domestic water From the regulatory framework, there are clear and specific requirements to give a drilling license. Anyhow, the monitoring function had not been clearly explained. The most important information from this interview section is that drilling license must be prioritize to public unit including local water service provider (PDAM). There are more privileges for public units especially PDAM to get the permits. The statement of PSDA-ESDM had been confirmed by the director of PDAM. From this information, we can see that PDAM also rely on the ground water resources. Thus, these two institutions interconnected by the ground water policy.

Ground water become the most salient issue in Semarang, the growing narratives from government actors are "stop using ground water and being a subscriber of Perusahaan Daerah Air Minum (PDAM) instead". PDAM is the local water service provider that is responsible to distribute clean water for society. However, even though PDAM is a public unit, it doesn't treats water as a public good. Accroding to Inge Kaul, the characteristic of public good is non-excludable and non-rivalries. However, publicness and privateness are two social construction in seein the domain of a certain goods (Kaul, 2013). Another common assumption is that public goods are financed by the public treasury for the common merits. There is a growing debate in envisioning water between PDAM as a government institution with civil society and Non Governmental Organization such as AMRTA and Kruha. PDAM insisted to normalize water marketization or water comodification due to its scarcity. "Not all water resources are allowed or enabled to use due to some reasons. Without giving a price to the water, people will definitely committed to moral hazard. They can extract water as they pleased and dont even bother about preserving or conserving water sustainability" (Director of PDAM Semarang). "Furthermore, we can not provide the infrastructures such as water pipe alone. There is no possible way to finance PDAM by public treasury only" (Investment Department), 2020).

According to PDAM, the involvement of private sectors improve management of the institution in the more effective and efficient way. It is rather difficult to get total funding from either local government or national government. Building and maintaining water infrastructure are very costly, almost all PDAM in Indonesia had been received external funding such as from World Bank. The most prominent issue is Non Revenue Water (NRW) or mostly known as the total loss of PDAM water due to the leak of pipe. PDAM argued that the durabilty of pipe depend on its price, using cheap pipe is prone to the risk of total loss water. It is not only building cost that is expensive, maintaning and recovering cost also very expensive. Therefore, PDAM argue that they need to collab with private sectors to build more units, expand its coverage area and fulfill the needs of society. The target of coverage area is 100 percent which means all Semarang residents expected to be a PDAM subscriber and no longer rely on ground water. However, the target will be too irrational without external funding and government support. In order to realize the target PDAM nowadays working on the mega project of water pipe installation at Western Part of Semarang (SPAM Semarang Barat Project).

The researcher interviewed Head Deapartment of PDAM Investment Project to dig out information related to SPAM Semarang Barat. The financing of SPAM Semarang Barat relies on the Public Private Partnership or Kerjasama Pemerintah dengan Badan Usaha (KPBU). This project will cover service area for 3 districs :Kecamatan Semarang Barat, Kecamatan Tugu, Kecamatan Ngaliyan and 31 subdistricts. The major investor in SPAM Semarang Barat is Moya Group who wins the tender to get a concession from PDAM. Moya group is a consortium companies consisted of Aetra Group , Palyja and Medco. Lately, there is also announcement that Salim Group shared placement holding in Moya Group (Tirto Id, 2020). The concession that is given by PDAM to Moya Group is in the scheme of Build Operate Transfer (BOT). By using BOT scheme, Moya Group has an authority to construct, finance, manage and operate SPAM Semarang Barat for a certain periode in this case 25 years. After 25 years, the project is returned to the public entity that originally granted the concession of BOT. However, in that one mega project there are various models of finance for different areas. The picture below is a visual explanation about service area under this new water project. Greenfield service area would be financed, built and operated solely by the government. Semi-greenfield service area will be financed by local government and Moya Group. Meanwhile, brownfield is an area where the installation project is fully funded by Moya Group.

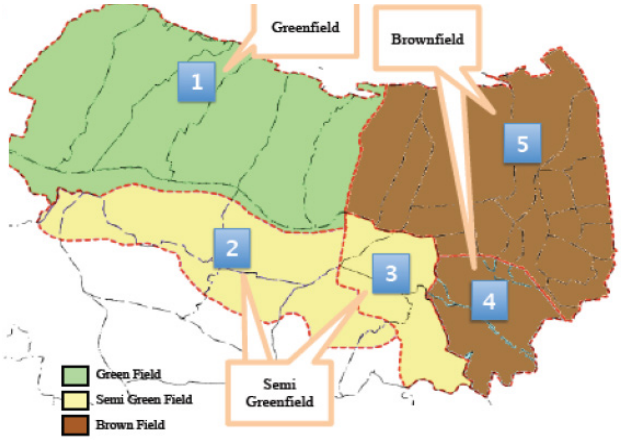

Figure 1. Funding Scheme on Service Area
Source : PDAM Moedal Tirta Semarang Jawa Tengah, 2021

The contract between PDAM and PT Air Semarang Barat / Moya group is considered as the most visible investment project that can increase the service coverage and finally reduce the use of ground water (Director of PDAM). However, the researcher argue that this concession has a big consequence for PDAM Moedal Tirta Semarang. Under this contract PDAM need to sell minimum 1000 liter water per second or 1000 lps. Under this contract, PDAM needs to reach certain selling project. Even though PDAM cannot sell all 1000 lps waters , PDAM still need to pay the cost of 1000 lps to Moya Group. Not to mention the debts and its fine that need to be paid by PDAM Moedal Tirta. This case is not only happen in Moedal Tirta Semarang , there are many PDAM in Indonesia face the similar issue and even at the worse financial condition.

Is water commodification through SPAM Semarang Barat is the fittest solution for Land Subsidence Issue ?

This part is going to discuss the oversimplified paradigm in Semarang water governance. The local government seeing land subsidence issue mainly as the consequence of ground water exploitative. Therefore, the best solution is to divert the society from a ground water consumer into a surface water consumer (Bappeda, 2020). "Ground water is much cheaper, but if Semarang residents (particularly resi-

dents at coastal area and northern part of Semarang) keep extracting water from ground water source, Semarang will be sinking soon" (Interview with Department Research and Water Resources of Bappeda Semarang).

According to Bappeda , the biggest problem of spatial arrangement in Semarang is land subsidence that causes regularly flooding (rob). This issue makes spatial arrangement more complex compared to other cities (Interview with Department Research and Water Resources). There is a growing paradigm that argue ground water extraction (whatever it forms or specs) causing moral hazards in society. Even though zoning criteria at Semarang has been clearly stated at ESDM regulatory framework, many still ignore the facts that it is only red zone that is prohibited and yellow criteria is allowed for domestic well only (no more than 30 metre). The new project of SPAM Semarang Barat has been overly claimed as a solution to ground water issue. It is not only PDAM who claimed such thing, the ministry of public works and ellite politics frame this project as an instrument to reduce ground water usage.

Hendy as the Major of Semarang stated that SPAM Semarang Barat is designed by government to supply water to a wider community. The operation of the drinking water treatment system will have an impact on the fulfillment of clean water needs for about 60,000 families in Semarang City (IDN Times,2021). By doing so, the ground water user will be decreased in number and the land subsidence issue could be well-managed (Tribun Jateng,2020). Under Ministry of Public Works, the reservoirs of this project will be build on 4 location at western part of Semarang : Resevoir Manyaran 1, Reservoir Manyaran 2 , Reservoir Desel and Reservoir Bambankerep (PT ASB, 2021).

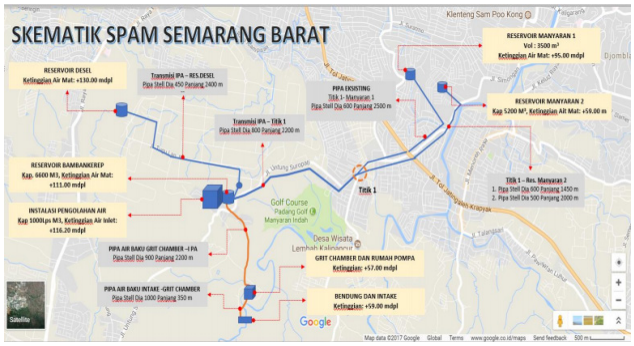

Figure 2. Map of Reservoir at SPAM Semarang Barat
Source : PT Air Semarang Barat (PT ASB) & PDAM

This project involving Balai Besar Wilayah Sungai (BBWS Pemali Juwana) under Ministry of Public Works, Ministry of Finance, BAPPEDA Semarang, PDAM Moedal Tirta Semarang, Provincial Government and PT Air Semarang Barat (PT ASB) under Moya Group.

This project used national budget (APBN), local budget (APBD) and private budget (Badan Usaha Penerus / PT ASB). PT ASB under moya group holds the biggest proportion in project funding 91,124% . Thus, PT ASB has a greatest authority in water management including to determine the price. Though of PDAM Moedal Tirta claimed that cross subsidized method has been implemented thoroughly to assure the right of the poors, PDAM cannot guarantee the stability of water price. Up to now, PDAM Moedal Tirta always meet the selling target that makes its water price is relatively stable. However, if the selling target is missed, PDAM needs to re-adjust the water price for consumers. Most likely PDAM will charge more for per litre water or service costs in order to meet the balance of payment.

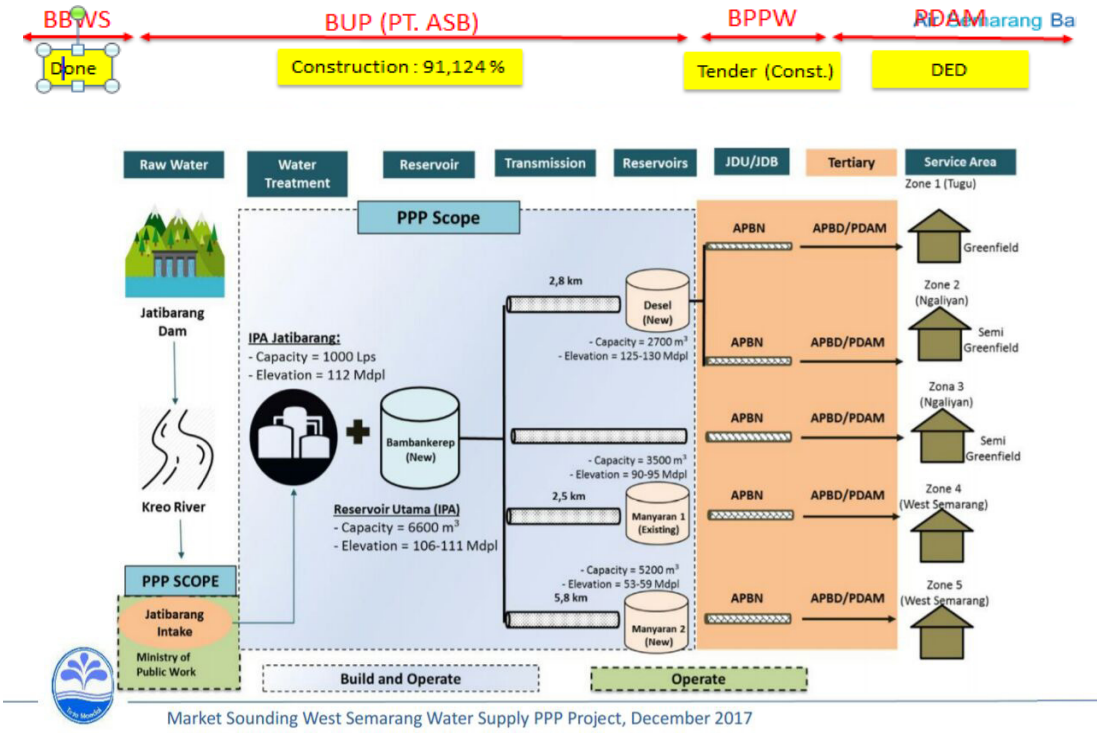

Figure 3. The Public-Private Partnership

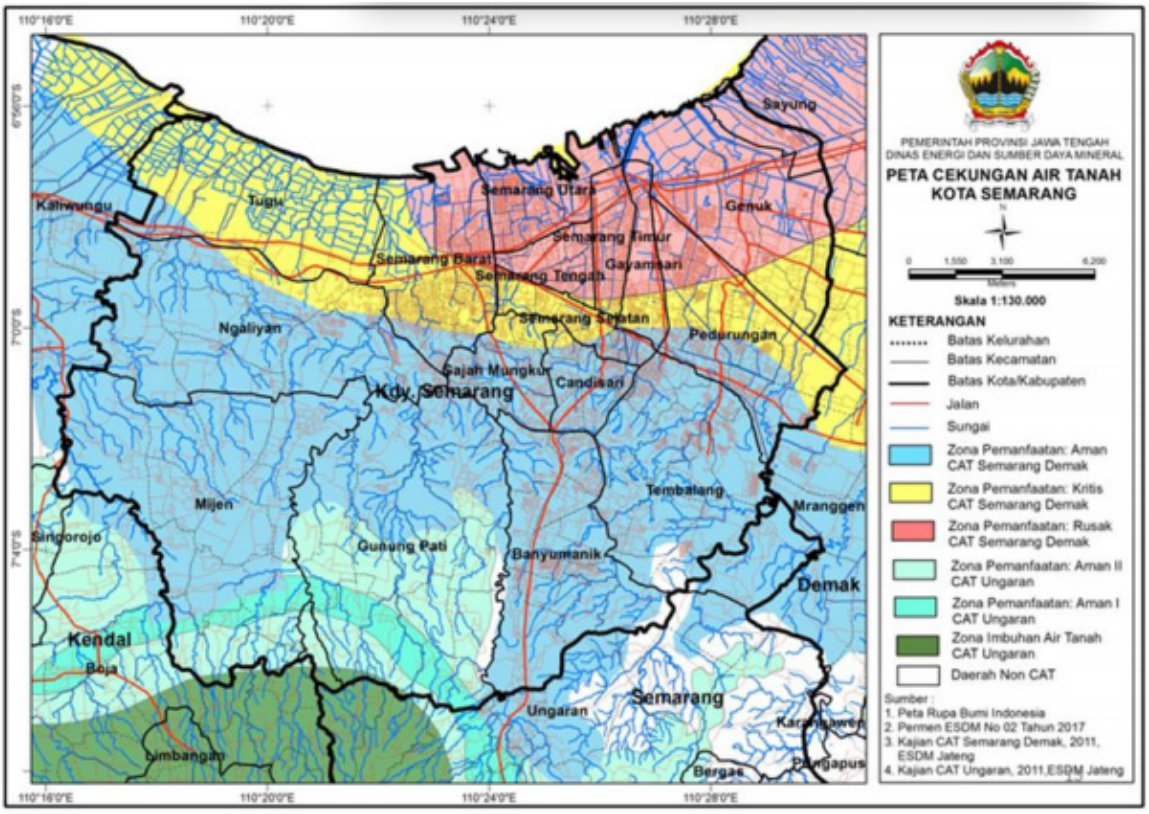

Figure 4. Groundwater Utilization Zone Map
Source: ESDM main office

This research argue that water marketization is not the fittest solution to manage ground water issue at Semarang. The project of SPAM Semarang Barat might increase the subscriber of PDAM. However, it doesn't neccessarily solve the ground water issue due to some reasons. First the target of SPAM Semarang Barat is residents at West Semarang District, Mijen District, Tugu District and Ngaliyan District (PDAM Moedal Tirta, 2020). By expanding service coverage to those district, PDAM believe that there will be more households and industries stop using ground water. However, none of those districts belong to the red zone of ground water abtsraction. Only Tugu District that can be considered in an alarming rate due to the existence of industrial areas such Tugu Industrial Area and Kusuma Wijaya Industrial Area.

Second reason is PDAM targeted household users instead of industrial users. Meanwhile, it is industrial area that has the greatest damaging power. Therefore, To abstract groundwater for industrial use there is a requirement to apply for a permit for abstraction to ESDM. As stated in Article 2 of the Central Java Provincial Act No. 6/2002 "it is not necessary for those who use groundwater for drinking and domestic usage at a consumption of less than 100 m3 per month, or less than a two inch diameter pipe for their groundwater wells, to ask for a groundwater extraction permit". In a nutshell the domestic well of household users are not the culprit in this ground water issue. Yet, the growing narratives among elite politic and government actors are pointing out all of the ground water extraction is damaging and should be stopped as if household users are committed to moral hazzard by relying on ground water.

There is no further consideration on how people can afford to buy water from PDAM. The perspective of water as public good that should be enjoyed by many apparently less populer among local government at Semarang. Water marketization through SPAM Semarang Barat has put water as a commodity. Some environmental expert even claimed that water cannot be treated as a public good since collective use can harm water source. The delegation of public services has been justified through arguments, such as the superior performance of the private sector and the failure of the public sector to provide adequate services (Heller, 2020). In this case, those who has capital power has no issue at all to support government program in reducing ground water usage at Semarang. However, there are some group of people that has no better alternative than using ground water or even rely on potable water for their daily needs.

> *We are witnessing something unprecedented: Water no longer lows downhill. It lows towards money (Robert F. Kennedy Jr.).*

The quote made by Kennedy Jr is a sarcasm critique toward the implementation of water governance worlwide that creates unequal distribution of water. Low-income residents consume on average 100 litres of water per day per capita, while high-income neighborhoods show a daily per-capita consumption of up to 800 litres (Baker, 2010). The rising proportion of people without water services is correlated with the growing number of privatization in developing countries (Baker, 2010). Water quality is not the problem for Indonesia, the problem rather rests with how it is distributed, stored, and piped (Asian Water Development Outlook, 2013).

In the context of Semarang City, there are major

reasons why people reluctant to be a subscriber of PDAM or end up being a passive subscriber. The reasons are collected through various informant ranging from Semarang Barat District Government, local residents who dont use PDAM and PDAM itself. The result shows similar pattern of reasoning ; first related to cost and second is related to administration. There is a number of cost component that need to be paid by PDAM subscriber. "Even though the price of per litter water is not that expensive, at the end there are many more components that need to be paid by the subscriber and it costs a lot of money" (Interviewee x). Some others argue that they had a bad experience with PDAM when they were charged more than their usual usage and these subscribers cannot defend themselves because PDAM shows the data from water meter. "We really cannot predict the bill, sometimes it goes normal, sometimes it goes up and we dont know why. Delay in paying will also be given a fine. That makes me worry all the time so it is better for me to use domestic well instead" (Interviewee Y). Meanwhile according to Semarang Barat District Staff, there are so many people reluctant to use PDAM because they cannot afford the registration costs. "Perhaps they dont mind with the water tarriff but the problem is on the registration costs"(Mr. Priyanto Kecamatan Semarang Barat).

The other reason is related to administrative thing where people need to attach several administrative documents such as copy of family card (kartu keluarga), Identity card, electrical bill, building tax payments and legal housing certificate. Many of local residents cannot provide all of those required documents. "Most of them cannot provide the copy of building tax payment and copy of legal housing certificate so they cannot be approved by PDAM" (PDAM, 2020). Not to mention the passive member who used to be an active member but cannot pay the water bills. Costumers who cannot pay the water bills for three months in a row will be automatically terminated from water service. The inactive costumer can activate their membership by paying it bills and fines. For PDAM, disconnection of water services when people cannot pay are common and legal. Clearly there are many conditions that makes people cannot simply become a PDAM customer. If water is conceptualized as a tradable rather than public good, it follows that consumers of water are categorized as customers rather than citizens, who have access to water through their purchase of water as a commodity, rather than the right to a water supply service. (Baker, 2010). Local government is too focusing on ecological sense and neglecting the social issues that might arise. Conservation here is only read in ecological sense and as the prioritization of environmental conservation without involving the social political sense.

CONCLUSION

Interviews with various institution at Semarang draws a conclusion that there is a major provision related to water that is similar among local government at Semarang. Water has been treated as a commodity due to its complex issues sorround it. According to the majority of government, treating water as a public good can create moral hazzard and environmental degradation. In this case, ground water issue is the major concern that become epicentrum of water governance. The worsening condition of land subsidence at the coastal areas makes ground water management cannot be separated from a wider context of water governance in Semarang. Therefore, there is a basic assumption among local government that the expansion of PDAM coverage as a local water service provider is expected to reduce the use of ground water at Semarang and eventually decrease the land subsidence issue. SPAM Semarang Barat is expected to reduce the ground water user by getting more consumers.

Nevertheless, this project relies on a Public-Private Partnership where a handful of private companies holds the majority of contracts, and these companies have been expanding their market share in the domestic water supply sector. Private participation in water management is not a new phenomenon. Developing countries bears witness to repeated shifts between private and public ownership and water governance and this case also common happens to PDAM. This scheme therefore refers to the shift in control from the public to the private sector, through a transfer of ownership or management responsibility for water supply infrastructure during certain periode. Decision making mechanisms are increasingly market oriented or market mimicking that is likely to harm the right of poors to the access of water. This research found that The meaning of water at Semarang seems to be socially-constructed as a commodity good and therefore people need to pay. In this case, buying water from PDAM is being pereceived as a more sustainable way compared to use a ground water. Water as a commodity is being normalized and glorified in order to safe Semarang from ground water issue such as land subsidence. When people switch their water source from ground water well to PDAM is simply considered as a greener action. In this case, environmental degradation is the more salient issue while water access for citizen is less popular. This kind of ideas serve as a further justification for water marketization. It is only one interviewee from government actors came to signify a broader set of sociocultural entitlements that read water as a material emblem of citizenship.

The water governance at Semarang heavily rely on nature scientifically studies. In this respect, the expertise of hydrologists, luvial geomorphologists and geo-hydrologists, is fundamental to any scientific modeling of the water world. Political and Social studies are less discussed in this context and this makes the issue water right is less salient. Thus, we need scientifically-based studies of both the natural and social context to appreciate the complexity of water problems and develop the fittest water governance. Perhaps more importantly, this must involve interdisciplinary initiatives. There is indeed much ado about water governance at Semarang such as generate political will to balancing the environmental sustainability and citizen rights.

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