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# Institutional Capacity Assessment for Water Provision in Jakarta, Indonesia

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## Abstract:

Water is an essential common good to which everyone should have equal access to survive. In many developing metropolitan cities such as Jakarta, however, the poorer households are still suffering from the lack of clean water access into their house or neighbourhood while trying to survive in the growing urban society. Local communities are blaming the public authorities for their incapability to provide for the local population's basic needs by instead, profiting private sectors for their urban water monopoly. This 'protest' has led to a possible shift of water management from being private-led to public-led in Jakarta. Many studies find that while institutions might have the capability to solve the problem, they might not necessarily have the capacity to do so. This scenario is especially true in developing countries where public institutions are not as stable to operate properly. Therefore, it is in the interest of this study to find the capacity in Jakarta's institution to provide equal access to water and how different actors are involved with one another in the decision-making process in water governance. By adapting Institutional Analysis and Development (IAD) Framework, this study aims to draw a clear map to find the feasibility for public sectors in Jakarta to operate water management properly to provide equal water access for the local population. Furthermore, this study also aims to understand the existence and the impact of power imbalance or power dominance in the decision-making process for water provision.

Key words: Institutional capacity, water governance, Institutional Analysis and Development Framework, decision-making process, patterns of power

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*“The earth and water and natural resources contained therein are controlled by the state and used for the greatest prosperity of the people”.*  
(Article 33 (3) of the 1945 Constitution of the Republic of Indonesia)

## 1. Introduction to the Research

### 1.1. Research Background

Water is one of the most essential ecosystem services for every living thing. The efficiency of water management depends on the quality conditions of the water source used, whether it is coming from the surface and/or groundwater, and how it is used for society. Up to 2025, around 2.7 billion people, or 30.33% of the world’s population will lack clean water, including Indonesia (Pradafitri & Moersidik, 2019). Jakarta is the capital megacity of Indonesia that is home to over 10 million people, which also means that Jakarta has to provide equal distribution access to clean water to its population that keeps increasing significantly each year. One of the main problems concerning water management in a megacity such as Jakarta can be defined as inequality in water distribution (from its quality, quantity, and also continuity). Access to clean water can be obtained through different mediums in Jakarta such as groundwater, surface water, piped water network (that flows from West Java Region), and package (or bottled) water for drinking water. In other cities in Indonesia such as Bandung, water can also be obtained by redirecting spring water to different households (Nastiti, A. *et al.*, 2017)

According to a study by Furlong and Kooy (2017), “2/3 of the water consumption (in Jakarta) is extracted from groundwater (and the rest) through piped water systems, which draws on surface water sources beyond the boundary. Also, less than 60% of the megacity is covered by piped water infrastructure, while centralized sewage collection and treatment reaches only 2% of the population (mostly in Central Jakarta)”. This signifies that while centralized infrastructure such as piped water infrastructure exists, water access in Jakarta mainly, and in the majority, came from groundwater (through legal and illegal dug wells or pumping from an unconfined aquifer or confined aquifer). This common practice of having access to urban water applies from low-income households to middle-high income households. The reason for this failure by the government to provide equal distribution of clean water access to every household can be explained by the result of a “natural monopoly” of water privatization. When water should have been a common good, therefore making the people as the priority “clients”, it has become more or less an economic good that would benefit and prioritize more “profitable clients”. As a consequence, “to the city’s poorest residents, living on the most marginalized land, they experience higher exposure to flooding, have access to poorer quality water, and are less able to invest in household water treatment technologies” (Furlong and Kooy, 2017).

Water privatization in Jakarta has been set since 1998 when negotiation was made between the government officials with public-owned water company: PAM Jaya, and 2 private companies: France’s Suez (now known as PAM Lyonnaise Jaya (PALYJA) and UK’s RWE Thames (now known as PT Aetra), taking the Western and Eastern Sectors of Jakarta respectively under 25- year concession contract. In 1998, the assets of PAM Jaya, including the network and treatment plants and equipment, were transferred to the private operators on the understanding that they would be returned to PAM Jaya at the end of the concession period on 1 February 2023 (PALYJA, 2005). This contract was first based on negotiations rather than open competitive bidding. Therefore, it shows that even from the start, the project already suffered from “birth defects” such as a lack of transparency (Leong, 2015). In the initial contract, the negotiation aims to provide the city to achieve 98% coverage by the end of 2023, however, in 2017 PAM Jaya reported that only 60% of Jakarta households had access to tap

water. The remaining 40% possibly rely on groundwater and this explains why Jakarta is one of the world's fastest sinking cities. This water coverage goal has also now changed to 82% by 2023 and 100% by 2030.

Many academic literatures already point out that this failure can be explained by governance failure to effectively manage urban water management, where causes are ranging from: the bad starting point of this negotiation that was set during the Asian Financial Crisis in 1997, which leads to a block tariff situation, then the absence of an independent regulator at the beginning of negotiation to evaluate the agreement of water management between PAM Jaya and the two private companies, and the absence of concrete and sufficient law to regulate water resources in Indonesia and also the performance of private companies that leads to the situation of a natural monopoly, or neo-liberalization of nature in Jakarta. (Bakker, K. *et al.* (2008); Hadipuro, (2016)). Therefore, this management failure is impacting the marginalized local population of Jakarta that is still suffering from certain political decisions made by the people in charge of Jakarta's urban water management.

Since 2012, several civil society organizations have formed a coalition to file a petition to the Supreme Court to revise the negotiation with the 2 private companies that manage the urban water of Jakarta, and to annul the Water Resources Law No.7 year 2004 that was deemed to benefit and even encourage the privatization of water in Jakarta even further. The growing sentiment towards the anti-privatization of water in Jakarta had pushed the government to agree on terminating the contract before the previously set contract until 2023, and in 2017, the Supreme Court agreed to the petitioners. As a result, in 2017, one of the private companies PT Thames had sold their stock to another privately-owned company, however Indonesian, which is PT Aetra Air Jakarta. However, in 2018, the Supreme Court revised its decision and annul the judicial review decision that had been granted previously in 2017, on the basis that the petition made by civil society groups had no legal basis to be taken to the court in the first place. This appeal was made by the Indonesian government as an attempt to strategically prepare for a transition plan to fulfil the water coverage target, still with the help from private sectors, until the end of the contract in 2023 rather than brutally terminating the contract midway and avoid paying for compensations. Meanwhile, since 2014, the government has already started to consider making a plan to take back the water utilities under public ownership (Mungkasa, 2006; Hadipuro, 2016; Leong, C., 2015). However, despite this narrative to take back water utilities under public management, the government has still not come clean about their detailed plan to achieve this goal and how to detach themselves from the dependence on private sectors.

## 1.2. Problem Statement

According to Greiner (2020), water utility systems would be more effectively managed and extended under private ownership than they might be under public ownership models. However, privatisation appears to be inadequate and often counterproductive in addressing the issue of water provision especially in developing countries (see e.g. Bakker, 2003; Budds & McGranahan, 2003). Common pool resources such as water should be treated as goods that must be protected by the public institutions to ensure their ongoing availability and viability for all stakeholders. The role of public institutions, in this case, is crucial in assuring that water is a public good, thus making the people the main reason for water provision, not the market. However, Greiner (2020) also states that to ensure the long-term viability of common-pool resources, proponents of market environmentalism hold that the state's role in environmental management must be eliminated and replaced by the private sector. In practice, however, this strategy cannot succeed because of poor design and political opportunism that led to a fairly high rate of failure in such efforts. Also according to Grenier (2020), many governments,

especially in developing countries, agreed to transfer ownership rights for water to private forms because of several reasons: geopolitical stage, neoliberal ethnic (economic liberalism, rapid resource privatization, market deregulation), IMF and World Bank that would make development loans contingent upon their adoption, and structural adjustment programs (SAPS) where any nation hoping to get a dime from the global community would need to implement them.

In the case of Jakarta, privatization of its water utility has not brought Jakarta any closer to the promises of higher efficiency, increased investments, and better services. Leong et al. (2018) define three sets of interest that exist in water privatization in developing countries: the need for investments by the government, the need for water as a social service by the residents, and the private sector's need for credible commitment by the government in honouring the contract. These interests could be effective if there are macroeconomic stability, and quality of regulation and governance in the determinants of PPP (Sharma, 2012). Sharma also argues that in developing countries, very often gaps exist between what the governments can afford and what people need. These gaps are explained by Greiner (2020) where the privatisation of water utility systems has been presented as a solution to the global water access crisis for decades. However, this strategy is far from capable of meeting such a daunting challenge. And this has led to an apparent retraction in the practice of privatisation. The issue of governance is the key factor in this case which can be seen from the issue of corruption (a symptom of failed governance), which can have a significant negative impact on returns to infrastructure investment (Kenny, 2006). This argument shows that rather than blaming the PPP strategy on the failure of water provision, it is the responsibility of the government to have the capacity to effectively manage PPP. Sharma (2012) argues that the success of PPP projects depends critically on the regulatory environment in the country, which in turn is determined by the quality of institutions, in which developing countries are often lacking. Therefore institutional capacity must have political stability and quality of regulation and governance as a strong foundation before choosing to do PPP. What is happening in Jakarta thus translates this ineffective collaboration between the public and private sectors through the scheme of PPP.

Ineffective collaboration between the public and private sectors in water management is mainly related to the decision-making process among them (see e.g. Ameyaw & Chan, 2015; Li et al. 2021). According to Arts and Goverde (2006), governance capacity is neither determined by institutions or by agencies. Governance capacity is the result of efforts of public and private stakeholders, being embedded in institutions with formal and informal rules of the game, dependent upon the availability of resources and the presence of different discourses. However, economic managerial criteria are often not only used as a means to improve government but also as a goal of the government in itself. This could be the start of the conflict in the decision-making process for water provision because actors involved have different objectives and values in managing water provision. Bakker (2008) has shown that in the context of Indonesia, water is being used as both public good but also economic good, therefore while every citizen has the right to water, water should also bring profit to the government and by consequence, those who can afford it are becoming the 'priority clients' as they are the ones who bring profit to the water market. In his study, Bakker (2008) also argued that 'governance failure' occurs when institutional dimensions of water management and decision-making do not effectively take into account the needs of poor households, creating disincentives for the water supply utility to connect poor households and/or for poor households to connect to the network" and that decision-making structures and related institutions may contain systematic biases against poor households despite, for example, officially stated pro-poor policies, and independent of the ownership status (public or private) of the water supply network and its manager. Paralleling this argument with Arts & Goverde (2006)'s study, the issue of ineffective water provision in Indonesia is centred in the decision-making process for water coverage that is benefiting the people who can afford water, and

consequently, the poorer households in Jakarta still lack access to water. Bakker (2008) also states that governance failure should be the focus of policy makers and that development policies that support alternatives should be based on sound governance principles such as equitable access, transparency, and public health protection.

As stated previously, both the role of public and private sectors should be treated as equally important in the decision-making process for water provision. According to Hadipuro (2010), there should be either stronger regulations that control private sectors, or a stronger public institution to meet the demand for water supply. The decision-making process for water provision is therefore an important arena for actors in water management to exercise their political objectives and interest in the use of water and who should benefit more from it. In this context, power-play comes as a tool to steer the direction in the decision-making process for water provision, whether the priority is to fulfil the full coverage goal or the priority is to gain profit from it or both.

The ineffective decision-making process in the collaboration between public and private sectors is often influenced by asymmetric power play between actors involved in the decision-making process. According to Rahayu (2019), in developing countries, there is a strong influence of institutional legacies and political fragmentation, in which stakeholders are neither fully rational nor strategic in pursuing their goals within public sector networks. In steering the governance process, stakeholders may be driven by a strong local ego, as well as the logic of appropriateness. Subsequently, any analysis of stakeholders' capacity should be expressed through the institutions and the social relations among the actors involved. In that sense, informality and power relations among groups are important (Senol, 2013). Rahayu (2019) further explained that the improvement of capacity for public institutions (in collaboration) should be focused on the capacity to boost innovation and pursue new policy agendas. In doing so, the three determinants are knowledge capital (knowledge exchanges as a learning process), relational capital (interactions generated in the collaborative process) and mobilisation capacity (selection and identification of issues and its mobilisation techniques between key agents). So far, current literature is focusing only on analysing the knowledge capital and mobilisation capacity in Jakarta's water provision (see e.g. Novianty, 2015; Rahayu, Woltjer, & Firman, 2019), but there is not enough analysis on the relational capital aspect, nor power relations in the decision-making process for water provision that is equally important to improve institutional capacity for urban water governance, especially in the case of Jakarta.

The governance of water is characterized by interconnected and overlapping political, social, and legal structures as sites for the contestation and reproduction of power (Zeitoun and Allan 2008). Brisbois (2016)'s analysis revealed that many authors of studies relating to collaborative approaches to water governance are addressing power-related concerns in their work, and are aware of the importance of power for these processes. However, many authors are not explicitly identifying the relationships between different types of power (such as instrumental power, structural power and discursive power). Kashwan, MacLean and García-López (2019) underline that power asymmetry is located exclusively in social and political arenas. Furthermore, inequalities inherent to social and political hierarchies as well as power asymmetries within 'local communities' influence institutional design and outcomes, and thus, institutions are inseparable from power relations. And according to them, because of the lack of studies related to power relations, economic actors and institutions of markets remain innocent of the power asymmetries that are linked to processes of exclusion, elite capture, and clientelism in politics and society. Concerning the management of water provision, asymmetric power relations between actors in the decision-making process could therefore

be one of the main issues that still need to be solved, or at least to be understood better, to improve institutional capacity for water provision.

Related to Jakarta's water provision problem, there is not enough study that links the decision-making process and power relations between public and private sectors. Furthermore, given the context that the agreement is coming to an end, and that there is not yet a transparent plan of the extent on how the public institutions will take over Jakarta's water management fully under public-led, it is important to have a good understanding of the on-going dynamic in the decision-making process for water provision in Jakarta through an analysis of power relations between different actors involved in it. While many studies already focus on finding the causes of the failure in water provision and how it fails, this research focuses on explaining the bridge that connects the causes and the outcomes of the problem to identify the extent of Jakarta's institutional capacity.

### 1.3. Research Objective and Research Question(s)

Based on the aforementioned problem statement, this research aims at explaining the decision making process, as an important aspect of the institutional capacity in implementing the PPP, in water provision in Jakarta concerning the power relation between public authorities and the private sector.

Following these aims, the main research question of this research is identified:

***To what extent is the decision making process in water provision in Jakarta influenced by the power relation between public authorities and the private sector?***

In order to answer this question, several sub-questions are defined:

1. How are the public authorities in Jakarta currently managing the urban water provision in their area?
2. How does the decision making process between different actors for water governance take place in Jakarta?
3. How balanced is the power relation between different actors in the decision making process for water governance in Jakarta?

### 1.4. Scientific and Societal Relevance of the Proposed Research

#### 1.4.1 Scientific Relevance

As stated previously in the problem statement, the failure in water provision in developing countries is mainly caused by institutional capacity problems in collaborating effectively with private sectors through the schemes of PPP. Given the fact that there is an ineffective collaboration issue between the public and private sectors related to water management, this issue mainly takes place in the decision-making process that is ineffective thus resulting in the failure for water provision. This is especially true in the case of developing countries where water is managed through PPP without macroeconomic stability and an effective regulatory environment (Sharma, 2012) and supporting pro-poor policies (Bakker, 2008). Therefore, the poorer households are the ones who suffer the most from the consequences made in the decision-making process. The ineffective decision-making process in the collaboration between public and private sectors is thus often influenced by asymmetric power play between actors involved in the decision-making process. Actors involved have different objectives and interests that often are inherited from previous institutional legacies and political fragmentation

(Rahayu, 2019), therefore power play and social relations among actors involved are often not synchronized and thus making the decision-making process ineffective. Furthermore, a study of the collaboration process between public and private sectors often evoke power-related concerns without specifically highlighting how power relations affect collaboration (Brisbois, 2016) or vice-versa.

In this research, it is in our interest to have a better understanding of the dynamics in the decision-making process that can be revealed through power relations between actors involved in the process. By doing so, this research could expand the understanding of power relations in water management from the perspective of studies by Brisbois (2016), as well as Kashwan, MacLean and García-López (2019) by providing empirical evidence on the context of water provision in Jakarta. The case of Jakarta is particularly interesting to be discussed by analyzing power relations in the decision-making process for water provision because the contract between the public and private sectors is an ongoing process that is coming to an end in a few years. Because of this time limitation, and the fact that there is not yet transparent information about the transition plan from private-led to public-led management, room for analysis is more open for discussion.

#### 1.4.2 Societal Relevance

By analyzing the decision-making process through the angle of power relations, this research will contribute to the understanding of the capacity to which the public institutions could manage water provision under public-led management. The key issue that triggers this research lies in the fact that unequal distribution of water access impacts the poorer households in Jakarta the most. This is not fair from their perspective because water should be “used for the greatest prosperity of the people” (Article 33 (3) of the 1945 Constitution of the Republic of Indonesia). However, because water is treated as both the public good and economic good, a dilemma occurs when the public should have the right to water, but they also need to pay for water because water is one of the economic resources of the country. In the case of Jakarta, around 60% of the population have the access to water and the rest are dependent on other mediums to get access to water, often through illegal groundwater extractions, which leads to the problem of rapid land subsidence in Jakarta. Water system privatisation has been riddled with difficulties of inequality and unaffordability and privatisation could limit access to community water systems (Grenier, 2020). Therefore, from the societal relevance of this study, this research could contribute to the solution-making analysis to make water distribution equal for every household in Jakarta. By taking the analysis angle from the perspective of water governance, this research could help to understand the relational issues between actors in charge of water management so that the general public will have a better understanding of the complexity of water management in Jakarta.

## 2. Literature Review and Theoretical Framework

### 2.1. Critical Review of the Academic Literature

This section will discuss relevant terms such as water governance, collaborative planning, institutional capacity for water provision, as well as the role of power in collaborative planning for urban water management.

#### 2.1.1 Water Governance

With the raising issues of water scarcity in the world related to climate change, some parts of the world suffered from a long period of drought and others suffered from a continuous and severe level of flooding. In addition to problems related to water security, the demand for water access in cities has also been increasing throughout the years because the population living in cities also keeps increasing each year. Especially in developing countries, the economic growth is increasing significantly and the general population has to adapt quickly to the changing urban landscape, leaving those who are unable to do so to become marginalized in the society. Water scarcity in urban areas has become a major challenge for governments in developing countries to handle because while they can find technical solutions to the problems, however, their capacity for maintenance for infrastructures related to urban water stays stagnant or worse, obsolete. This unsustainable solution solely creates a cycle of reliance on technological advancement without addressing all other existing issues in every level of water governance. It is therefore essential to implement governance frameworks that can help cities to adapt to changing circumstances while maintaining their central role in local, national, and global contexts. (OECD, 2019)

According to the OECD (Oriana, 2019), water governance is defined as “the set of administrative systems, with a core focus on formal institutions (laws, official policies) and informal institutions (power relations and practices) as well as organizational structures and their efficiency”. Within this, 3 levels of governance are identified: Hierarchical (top-down approach and centralized by public authorities), market, and network governance. However, since governance models are hybrid, therefore actors at different scales adapt their rules over time according to the problems they are addressing and also on political willingness (Chen, 2011).

In a study by Oriana (2019), OECD developed 12 principles on Water Governance in which governance should contribute to the implementation of policy goals (effectiveness), at the lowest possible cost to society (efficiency), while ensuring inclusiveness of stakeholders (trust and engagement). These 3 core elements are completed by 12 principles refer to the water policy cycle (Figure 1).



Figure 1: Set of principles for water governance

Source: The Organisation for Economic Co-operation and Development (OECD) Principles on Water Governance. Source: OECD (2015), OECD Principles on Water Governance

These principles are central to assess the effectiveness of water governance and in addition to that, a framework has been developed to evaluate it which includes: (i) an assessment of the key factors affecting the effectiveness of urban water governance; (ii) mapping of the roles and responsibilities at different levels of government; (iii) an appraisal of the main multi-level governance gaps to urban water management; and (iv) a focus on the policy responses to mitigate fragmentation and to foster integrated urban water management in cities and water their hinterlands (Oriana, 2019). This framework identifies the *what* (policy framework), the *who* (institutions in charge), and the *how* (coordination for water policies) in the water governance within the spectrum explained in the 12 principles of water governance. Furthermore, by combining these principles with Baker's (2008) criteria of dimension for water governance, principles can be more classified in a more detailed way (Table 1):

Dimension/principles	Effectiveness	Efficiency	Trust & Engagement
Administration	Policy coherence	Regulatory frameworks	Monitoring & evaluation
Delivery	Appropriate scales within basin systems	Innovation	Trade-offs across users, rural and urban areas, and generations (continuity)
Financial & Economic Management	Clear roles and responsibilities	Financing	Stakeholder engagement
Political Oversight	Capacity	Data & information	Integrity and Transparency

Table 1: set of principles for water governance and its dimension (OECD, 2013; Baker, 2009)

Within this modified set of principles, the key public actors involved are central government and local government. The central government is being responsible for policy-making and regulatory functions whereas the local government is responsible for the operator role in water functions (therefore implementing policies). According to Oriana (2019), the weakness of sub-national governments (therefore local government) when it comes to solving water governance issues is mainly related to their lack of capacity to solve them. By comparing this statement with the modified set of principles for water governance, we can identify that this capacity issue is therefore related to the effectiveness of political choices. Meanwhile, according to a study by Franks (1999), we must distinguish capacity and capability in water governance in which capability refers to the knowledge, skills, and attitudes of the individuals, separately or as a group, and their competence to undertake the responsibilities assigned to them, whereas capacity refers to the overall ability of the individual or group to perform the responsibilities in reality. Franks (1999) further argued that in developing countries, the government might, indeed, have the capability to solve water governance issues (therefore technical solutions) however the issue lies within the capacity of governance itself (thus political choices).

To address this further, we will elaborate on collaborative management as the common political choice for urban water governance, especially in developing countries where a set of actors that are responsible for solving urban-water-related issues are not limited to public authorities or the local government.

### 2.1.2 Collaborative Decision-Making and Institutional Capacity

Collaborative decision-making process often focuses on crafting formal or informal policy solutions (Brisbois, 2019) with a set of actors (stakeholders), in which each actor has interests to maximize their resources, that is structured by the manipulation of this resource flow and the performance criteria attached to them (Healey, 1998). Because of this, the controller of water resources has conflicting and multiple roles in licensing, regulating, and monitoring of the resource (Ananda, 2013) in which, in this case, impacts the effectiveness of urban water management. According to Ananda (2013), institutional reforms in water governance must focus on the type of power and authority and tasks assigned to each level of the nested decision hierarchy, and this hypothesis is supported by Oriana (2019) where the government's capacity for problem-solving in water governance must be addressed from the lowest hierarchy of governance. When this problem is being addressed, mutual trust between stakeholders and the value of the community is crucial for its effectiveness. These stakeholders involve collaboration between local government, private institutions, and the participation of civil society in the decision-making for the political direction of water governance.

The concept of collaborative management lies in the contribution to building an institutional capacity focused on enhancing the ability of place-focused stakeholders to improve their power to "make a difference" to the qualities of their place (Healey, 1998). However, because of the different values that stakeholders define as to what "makes a difference", the question of power imbalance in collaborative planning emerges during recent years. The different degree of power between stakeholders has only been critically analyzed and developed recently by power scholars such as Lukes (2005), Brisbois, et al., (2016), Kashwan, et al., (2016) in order to identify how power influences the decision-making process as a result of collaborative planning. This concept of power will be elaborated further in section 2.1.4.

To promote a successful collaboration, certain organizational capacity must already be in place in a given community (Ananda, 2013). This capacity constitutes different political

decisions to achieve the desired outcome of a certain agenda or policy. The decisions made at each level of the institutional hierarchy are bound by the institutional rule set of the preceding level. Therefore actors are interdependent on one another to form effective collaborative water governance. In order to assess the performance of each actor, a set of rules for deliberation adapted from Ostrom, et al., (1986) is being identified (Figure 2):

Rule type	Description
Position rules	Define the set of distinct positions held by participants
Scope rules	Set of outcomes that may be affected by and costs assigned to these outcomes
Authority rules	Set of actions assigned to a position (e.g. the action each participant is authorized to take)
Information rules	Channels of communication among participants and the form in which communication will take place
Boundary rules	How participants are selected to hold positions and how they leave these positions
Aggregation rules	Decision functions to be used at particular decision points
Payoff rules	How benefits and costs are to be distributed to participants in different positions

Figure 2: Rules sets for deliberation (adapted from Ostrom, 1986; Kiser and Ostrom 1982)

These rules include position rules, scope rules, authority rules, boundary rules, aggregation rules, and payoff rules. This set of rules, if being identified for each actor nested within the urban water governance, will determine the degree of power dominance. By identifying the power dominance in urban water governance, we could identify the political choice for urban water management and how actors are being set in that framework. Furthermore, because the capacity of the government to solve urban water-related issues are being questioned earlier, we could also identify to which extend this capacity is limited to each actor involved.

Building up capacity should itself be the target of public policy (Wilson, 1997), and should combine democracy and efficiency in a new way (Healey, 1998). Following that, at the next level of the institutional hierarchy, the factual information and opinions held by various interested parties (actors) may shape the policy (Ananda, 2019). Policy-making is, therefore, influenced by a different set of actors involved in the collaborative planning setting and is being enabled by institutions in charge. For this reason, it is important to develop institutional capacity for urban water management that is willing to improve its effectiveness.

### 2.1.3 Institutional Capacity for Urban Water Management

Several studies show that the definition of institutional capacity is rather vague and hasn't been yet established commonly for it to be tailored to different circumstances within different countries. However, capacity can be defined as the ability to perform functions, solve problems and set and achieve objectives (Fukuda-Parr et al., 2002) and with the knowledge for the future (Guy, 2009), while institutional capacity represents a broader "enabling environment" which forms the basis upon which individuals and organizations interact (Stéphane et al., 2003). In our study, this capacity will refer to capacity building in which it aims to increase the flexibility of institutions and society to adapt to changing circumstances (Hamdy, et al., 1998).

As previously stated, while the capability or technical solutions might exist in developing countries in order to solve urban water management issues, relying on this alone cannot provide an equally distributed water supply and proper environmental sanitation in the society.

In fact, in developing countries, experience shows that institutional weakness and malfunctions are a major cause of ineffective and unsustainable water services (Hamdy, 1998). To address this issue, Hamdy (1998) identifies three basic elements of capacity building: (i) creating an enabling environment with appropriate policy and legal frameworks; (ii) institutional development including community participation and; (iii) human Resources Development (HRD) and strengthening of managerial systems. Therefore, institutional capacity depends crucially on the enabling environment and on the legislative financial framework within which it is situated.

According to Hamdy (2009), institutional evolution in many countries has not kept pace with the new impositions on their resources. Institutional changes often have been reactions to narrow concerns and thus, the capacity to address these changes is “weak” in developing countries. He further explained that the legislation is inherently incomplete as the formal institutions established by law are always supplemented by informal institutions that can either complement the functions of institutions (such as water use associations) or compete with them. This weakness is the result of an unsettled power dominance in the collaborative planning of urban water management, to which, according to Oriana (2019), the accomplishment of capacity-building depends on the political will to develop its institutional capacity. Meanwhile, if the gap between the existing capacity and capacity that is required is too large for a particular policy option, it could become virtually impossible for a country to abide by what it has committed to do, either domestically or internationally (Stéphane W, 2003). Therefore institutional capacity building needs to be addressed on a smaller scale such as city-specific or region-specific rather than nationwide.

According to the OECD, institutional capacity is defined in 3 levels: the individual, the organization, and the broader context (which includes a network of organizations, public governance, and society) (Figure 4). The individual is the core of the capacity, where it relies on skills and performance. The organization refers to management capacity to which capacity development at this level is crucial because it develops a greater understanding of the motivation for both public and private organizations as well as their intentions for policy effectiveness and performance. In the third level, national systems refer to networking capacity that ensures the stability of institutional framework and the effectiveness of the public sector as a whole to create management based on policy integration and public participation (thus managing horizontal issues). Then public governance refers to the regulatory framework itself, as well as the public sector setting that determines the effectiveness of the role of the public sector in fulfilling its main functions. At this level, the political economy, the citizens’ democratic rights as one of the stakeholders, the quality of the civil service, and the rule of law that respects the citizens are crucial elements to develop institutional capacity. Lastly, society refers to social norms, values, and practices a more common understanding.

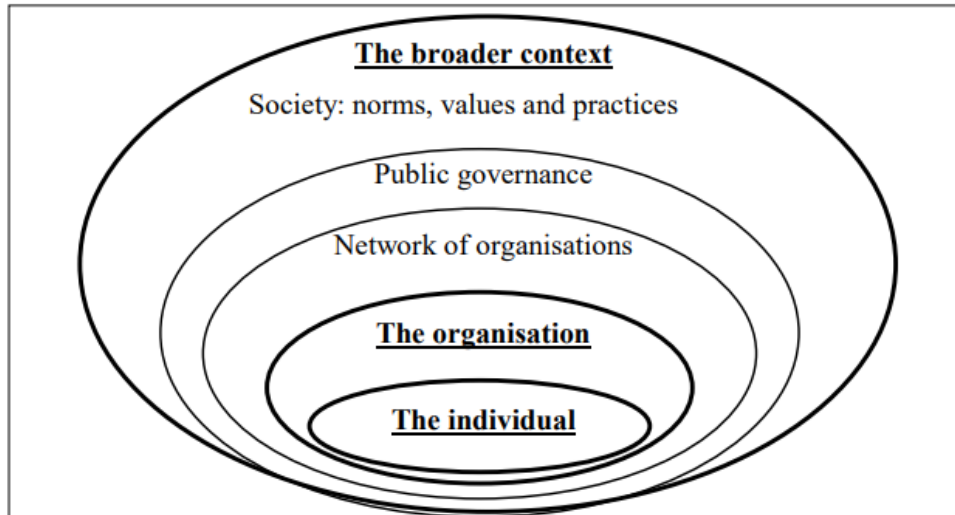


Figure 3: Levels of institutional capacity  
 Source: OECD (2003): adapted from Segnestam & al., 2002

In our study, we will specifically look at the institutional capacity from the level of the organization, as well as a network of organization and public governance to draw the framework of institutional capacity for urban water management in Jakarta.

#### 2.1.4 The Role of Power in Collaborative Decision Making for Urban Water Management

According to a study by Brisbois et al. (2019), significant power imbalances can constrain the creation, adoption, and implementation of socially and environmentally desirable policies. Therefore, to build an effective institutional capacity for water governance, the role and the scope of power between stakeholders during the decision-making process should be analyzed. As previously stated, water governance is commonly operated through a collaborative process where public institutions, private actors, and civil society are included to decide a certain political agenda. Governments play important roles in the initiation of collaboration, the provision of institutional and financial support, and the implementation of developed policies (Gunningham, 2009; Koontz et al., 2004). They need contributions from private actors and civil society in order to execute their agenda. However, The governance of water is characterized by interconnected and overlapping political, social, and legal structures as sites for the contestation and reproduction of power (Zeitoun and Allan 2008). There exist 'power asymmetries' (Kashwan, MacLean and García-López, 2019) between actors that are leaning towards neoliberalism where, not only it is the consequence of collaborative planning, but neo-liberalization becomes a state logic rather than an actual policy choice that continually strengthening the power of corporate sectors (Cadhil, 2014). As a consequence, there is no substantive attention to other types of institutions or to equity and sustainability-related outcomes because the focus has been on 'rule of law', private property rights, and pro-market reforms (Kashwan, MacLean, and García-López, 2019).

According to Kashwan, MacLean, and García-López, (2019), power is rarely equal between actors in the water governance, inequalities inherent to social and political hierarchies as well as power asymmetries within 'local communities' influence institutional design and outcomes. Power asymmetry is located exclusively in social and political arenas. Economic actors and institutions of markets remain innocent of the power asymmetries that are linked to processes of exclusion, elite capture, and clientelism in politics and society (Kashwan, MacLean, and García-López, 2019). According to Brisbois and de Loë (2016), the potentially significant

benefits from the collaboration were not fully realized because of actions and control by the state. Therefore understanding power is central to understanding the political process and its consequences for society (Haugaard and Clegg, 2009), as well as understanding which actor prevails in a certain political agenda and how power constrains opportunities or creates new opportunities in the governance of urban water.

The study of 'power asymmetries' in collaborative governance has only been discussed and developed amongst power scholars in recent years. Therefore, there is not yet a concrete concept or theory to determine the assessment of it. However, Lukes' (2005) analysis of power is used often by power scholars as a parameter to evaluate power-related concerns in the collaborative approaches. According to his study, power can be categorized into three types: firstly, instrumental power reveals the possession of resources that are useful in shaping policy outcomes in competition with others. Instrumental power is definite, visible, and shows clear cause-effect relationships. Secondly, structural power reveals the ability to shape policy agendas. This type of power can be either visible or hidden because decisions are influenced by the social structures within which they are embedded. Thirdly, discursive power is the most non-apparent type of power because it represents the ability to manipulate by controlling over knowledge production and technology in order to align societal values with the goals of those with power over institutions. Furthermore, to complete Lukes' (2005) framework of power, a study by Howlett and Ramesh's (1995) reveals five stage policy cycle model that can analyze the actions and motivations of the state relative to collaboration through a power lens: agenda-setting (which policy cycle model or how the agenda is set), policy development (which potential solutions or policy options are fleshed out), policy action (where a particular course of action, or inaction, is selected from the range of options), policy implementation and lastly, policy evaluation.

Meanwhile, it is important to note that there is not yet a standard approach for addressing power in collaborative approaches to water governance (Brisbois and de Loë, 2016). However, Kashwan, MacLean, and García-López (2019) argue that institutional analysis must broaden its lens to consider multiple dimensions of power in order to generate more systematic evaluations of development. Therefore, an analysis of power asymmetries are complementary but a necessary tool to assess the effectiveness of institutional capacity for water governance.

## 2.2 Conceptual Frameworks

In our study, we will use the Institutional Analysis and Development (IAD) framework that is developed by Ostrom (1999) and her colleagues to understand how institutions operate and change over time. In our study, this IAD framework will be modified according to our intended research in the context of urban water provision. The dimensions within the IAD framework identify the factors and variables within a foundational structure of logical relationships. According to Ostrom (1999), institutions are human-constructed constraints or opportunities within which individual choices take place and which shape the consequences of their choices. And governance is a process by which the repertoire of rules, norms, and strategies that guide behavior within a given realm of policy interactions are formed, applied, interpreted, and reformed. Institutions and governance are the key elements in the development of the IAD framework as it explains the interactions between each actor and the results of their actions and their positioning within the rules-in-use.

In the IAD framework, exogenous variables (which includes biophysical conditions, attributes of community, rules in use) are external factors that determine the action situations in the action arena. Within this dimension, we identify biophysical conditions as water resource management, attributes community as local government and socio-economic partnership, and rules-in-use as enabling policy or policy strategy. In the second dimension, the action arena is the most crucial part in evaluating institutional capacity for water provision as it represents

the interactions between two important factors that are action situation and participants or actors. In our study, the action situation will represent the decision-making process for water provision, and actors represent how the “players” are working with one another in this action arena. The result of this action arena will reveal patterns of interaction as well as outcomes in the delivery of water provision. In our study, patterns of interaction will reveal the patterns of power that might influence a modification in the action arena as well as the effectivity in the outcome. Furthermore, there also exists evaluative criteria within the framework in order to evaluate the interactions and the outcomes of the action arena, that might re-influence a modified action situation as well as exogenous variables over time, thus creating a cycle of the policy-making process (Figure 5). In this study research, we will be focusing on analyzing the action arena as well as the patterns of power in order to assess the different factors behind the decision-making process for urban water provision, as well as identifying the power imbalance between the actors.

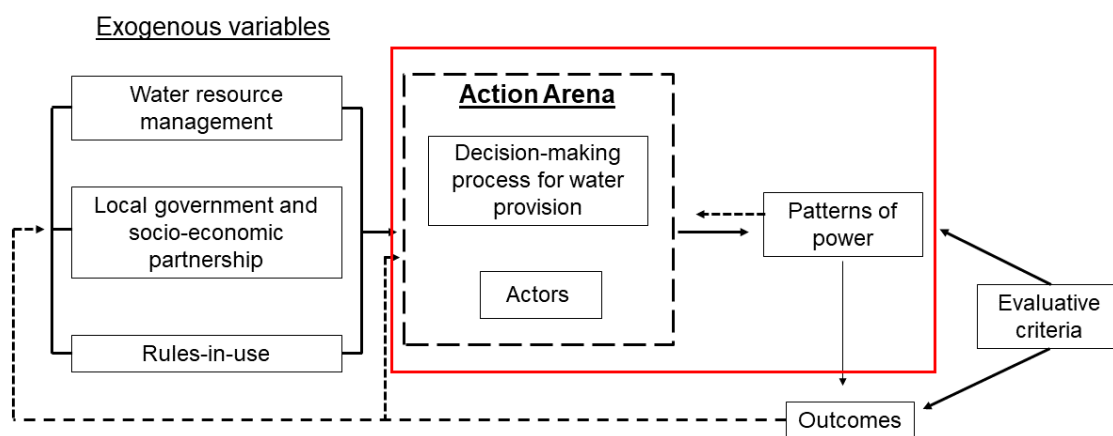


Figure 4: Conceptual Framework

### 2.3 Operationalization of Conceptual Concepts

In order to assess the action arena and to identify the patterns of power for institutional capacity in water provision, we will use different criteria to further identify each dimension within the action situation, actors, and patterns of power (Table 2).

Action situation relates to the decision-making process of water provision. Following Ostrom’s (1999) criteria, there are seven variables that determine where water partnership operates and how the financial and economic management are being operated. These variables include: set of participants, positions filled by participants, set of allowable actions and linkage to outcomes, level of control, available information, and lastly, the cost and benefit. To complete Ostrom’s (1999) variables, Howlett and Ramesh’s (1995) policy cycle could be useful to identify the power aspect that is embedded in the policy cycle. This cycle includes agenda setting, policy development, policy selection, policy implementation, and policy evaluation.

Within the actor arena, we can use Amanda’s (2013) rules of engagement to identify their power positioning within the water governance. These rules are position rules/scope of rules, boundary rules, authority rules, aggregation rules/payoff rules, and information rules (Amanda, 2013).

Lastly, in the patterns of power, we will first use Lukes’ (2005) type of power to reveal which type of power is/are present in the decision-making process (instrumental power, structural power, discursive power). And then a set of criteria by Brisbois et al., (2019) will identify the

power dominance between actors involved, that are: the ability to prevail in decisions, despite opposition, which certain issues are excluded from making agendas, a manifestation of the conscious & unconscious actions, and decision 'non-decisions, of many individuals over time (transparency). Furthermore, to examine the interactions between the action arena and patterns of power, we will use the combination of a set of dimensions by Baker (2009) and principles for water governance by OECD (2013) (Table 1).

	Study Case	Evaluation Criteria	Description
	<b>Action Arena</b>		
1	Decision-making process for water provision	Ostrom's (1999) variables:	
		1. Set of participants	Who are the actors involved during the decision-making process
		2. Positions filled by participants	What are the roles of these actors by definition
		3. Set of allowable actions & linkage to outcomes	How actors influence the decision-making process
		4. Potential outcomes	What are the agenda set and the aim of the outcome
		5. Level of control	How is the agenda being controlled to reach the aim of outcome
		6. Available information	How transparent information is being circulated among actors
		7. The cost and benefits	How financial matters influence the agenda
		Howlett and Ramesh's (1995) policy cycle:	
		1. Agenda Setting	How the problem is defined and the agenda is set
		2. Policy Development	What are potential solutions or policy options, and how they are fleshed out
		3. Policy Selection	A particular course of action, or inaction, is selected from the range of options
		4. Policy Implementation	
		5. Policy Evaluation	
2	Actors	Rules of Engagement: (Ananda, J. and Proctor, W., 2013)	
		1. Position rules	Define the set of distinct positions held by participants
		2. Scope of rules	Set of outcomes that may be affected by and costs assigned to these outcomes
		3. Authority rules	Set of actions assigned to a position
		4. Information rules	Channels of communication among participants and the form in which communication will take place
		5. Boundary rules	How participants are selected to hold positions and how they leave the positions
		6. Aggregation rules	Decision functions to be used at particular decision points
		7. Payoff rules	How benefits and costs are to be distributed to participants in different positions

<b>Patterns of power</b>		
	Types of power in collaborative planning: (Lukes, 2005)	
	1. Instrumental Power	Possessions of resources, definite visible cause-effect relationships
	2. Structural Power	The ability to shape policy agendas and influence of social structures in the decision-making
	3. Discursive Power	The ability to manipulate the wants and desires of others (control over knowledge production and technology to align societal values with the goals of those with power over these institutions)
	Dimension of power imbalance: (Brisbois et al., 2019)	
	1. Ability to prevail in decisions, despite opposition	
	2. Which certain issues are excluded from making agendas	
	3. Manifestation of the conscious and unconscious actions, and decision 'non-decisions, of many individuals over time (transparency)	

Table 2: Assessment criteria for action arena and patterns of power

### 3. Methodology

#### 3.1. Research Strategy

This study is using an explanatory method by gathering information from different academic literature related to institutional capacity for water provision in developing countries, specifically in Jakarta, and using a deductive approach to make a hypothesis. Deductive research is the preferable option to inductive research for our study because by deducting the analysis, we could focus on finding the key issues in our problem. Then, this study will use a qualitative method in order to gather valid data to verify the information that is gathered from the literature studies. The qualitative method is used to have a better understanding of the external variables that might not appear in literature research or policy documents. This study also lies within the paradigm of post-positivism as it is trying to seek an alternative from the existing reality of Jakarta’s urban water management. Therefore even though this research is explanatory, the post-positivism paradigm allows us to explore the possibility of external factors that could exist in the problem. The focus of this study is mainly based on the institutional perspective side of the water management, therefore other factors will not be discussed explicitly outside the realm of the decision-making process in institutional capacity. The outcome hoped from this study is to find an alternative solution to improve Jakarta’s institutional capacity building.

The reason to choose these approaches lies in the fact that Indonesian public data is rather hard to gather and not as reliable, therefore we choose to gather information not only from the official government data but also from academic literature and interviews in order to have verified information. Therefore, in order to draw the ‘map’ of institutional capacity for water management in Jakarta, many literature studies must be analyzed and then compared with the ongoing situation in reality. In addition, because of the COVID-19 pandemic, it is hard to gather information directly or by having an internship in Jakarta. Therefore, only online alternatives to conduct research can be conducted within this period.

#### 3.2. Research Design

Based on the strategy, the following workflow method will be used to answer our research question (Figure 5):

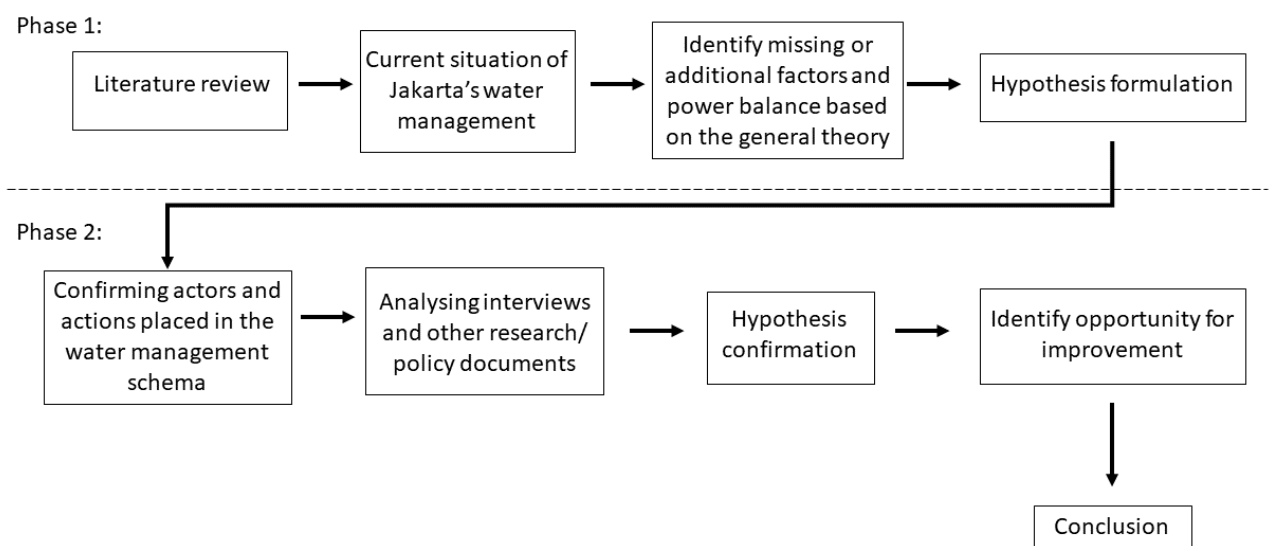


Figure 5: Research workflow

In phase 1 of the research, the literature review, from the general knowledge to the specific case of Jakarta, will be the first foundation to deepen our knowledge of the problem. Then we will describe the current situation of Jakarta's water management according to literature and based on that knowledge, we will identify the missing or additional factors, as well as the power balance in the decision-making process for water provision. Finally, we should have hypothesis formulation by the end of phase 1, which will be in chapter 4.

In phase 2, we will begin confirming actors and actions placed in the water management schemes in Jakarta's case study, which will be based on our data collection. By doing so, we will analyze interviews and policy documents in chapter 5 and by chapter 6, we will have a hypothesis confirmation. Finally, in chapter 6, we will identify the opportunity for improvement as well as conclude our research.

### 3.2.1 Research Materials

The data that will be used as the main research material for this thesis are adapted from the assessment criteria for the action arena and patterns of power explained in chapter 2.3. These data are specified in the operationalization scheme provided in table 3 which will also be served as the "pathway" to answer our research problems. Furthermore, based on these indicators, we will formulate several questions for each indicator to be asked to the respondents (annexe 1).

Concept		Variable	Indicators
Action Arena	Decision-making process	Set of participants	Actors involved
		Positions of participants	Participants' role
		Set of allowable actions and linkage to outcomes	Accessibility to the decision-making process
			The clear boundary of position/role
		Potential outcomes	The setting for policy agenda
		Level of control	Policy development
			Policy selection
		Available information	Transparency between actors
		The cost and benefits	Investment choices
	Actors	Position rules	Ability to make player changes
		Scope of rules	Power limitation
		Information rules	Information accuracy
		Boundary rules	Credibility
		Aggregation rules	Civilian involvement
Payoff rules		Consequences of failure	
	Choice rules	Importance of partnership with private sectors	
Patterns of Power		Ability to prevail in decisions, despite opposition	Stable flow of operation

		Which certain issues are excluded from making agendas	Obstacles of target achievement
		Manifestation of the conscious and unconscious actions, and decision 'non-decisions, of many individuals over time	Solidity/steadiness of the goal

Table 3: Operationalization scheme

### 3.2.2 Data Collection

Taking the case study of Jakarta's water management, it will be interesting to analyze a changing or unchanging set of actors involved and the power play in the decision-making process for Jakarta's water provision. As stated earlier in chapter 1.1, the contract between the main actors involved in the decision-making process for water provision in Jakarta is about to end in 2023. PT PALYJA and PT Aetra as the current private operator and facilitator for managing water provision-related infrastructure will need to transfer all their competence to PAM Jaya, a public company that now operates as the supervisor for the two private companies and the business manager for water management in Jakarta.

The main stakeholders of this research would then be: PAM Jaya (as the supervisor and the public company that manages the water provision in Jakarta), then PT PALYJA and PT Aetra (as the two private companies that operate the management under the partnership agreement with PAM Jaya). In our research, we have a key respondent from PAM Jaya to answer our questions regarding the water provision decision-making process in Jakarta. Although we couldn't get a respondent from the private sectors' side, PAM Jaya's perspective on the decision-making process could be enough to describe the process because they are the key stakeholder. Additional policy documents such as the annual reports from the private sectors' side will also be used to complete the analysis.

Outside the main stakeholders, there is the Regulatory Body for Drinking Water Service of Jakarta (BRPAM) that has the role of supervising the partnership agreement or the contract between the main stakeholders, as well as mediating the main stakeholders in case of disputes. It is important in our research to have a perspective outside the main stakeholders' side to analyze the bigger picture of the problem. Therefore in this research, we managed to have a respondent from a key person of the Regulatory Body (BR) to enrich our analysis.

Finally, other than the institutions that work on the field of water management in Jakarta, a perspective from an expert, that is an academic, and also a perspective from an NGO representative will be needed in our research to have a bigger understanding of the reality between the decision-making process and the delivery of service. Therefore, in our research, we have 1 respondent from a university that specialized in the study of water management in Indonesia, as well as 1 respondent from the coordinator of NGO. It is also important to note that this NGO is a powerful representative of the people because they were one of the NGOs who had brought the petition against Indonesia to demand people's rights to water back in 2012 (see chapter 1.1). Therefore even though these two respondents are not involved directly in the decision-making process for water provision in Jakarta, they could also answer our questions based on their analysis and data of observation. Below is the list of respondents of our research.

<b>Actor/role</b>	<b>Institution</b>	<b>Number of respondents</b>
Public sector, President Director	PAM Jaya	1
Head of Regulatory Body	Regulatory Body for Drinking Water Service of Jakarta (BRPAM)	1
NGO, Coordinator at the national level	KRuHA (the people's coalition for the rights to water) / (Koalisi Rakyat untuk Hak Asasi Air)	1
Expert, University lecturer	Soegijapranata Catholic University (UNIKA)	1

Table 4: List of respondents

Our data collection will be gathered from interviews conducted with the respondents. Their answers will fill the table of operationalization in Chapter 3.2.1. We realized that the number of the respondent is quite low since it is not easy to approach them since the issue is apparently is still considered as sensitive (because the contract with PT PALYJA and PT Aetra will end soon) and also because of the Covid-19 regulation to limit mobilities. Therefore, additional policy documents from the national level to the organizational level, as well as academic literature and press releases will complete the table of operationalization as a confirmation of statements made by respondents.

### 3.2.3 Data Analysis

The data collected from interviews will be analyzed by using "Atlas.ti". Atlas.ti is a "software to used mostly, but not exclusively, in qualitative research or qualitative data analysis" (Friese, 2019). It is used by coding method to analyze specific terms or contexts that we are looking for in transcribed interviews. The different codes detected from transcription interviews will be grouped as a unique set of indicators that fills the operationalization schemes. However, the Atlas.ti used in this research will be a web version, therefore there will be some limitations to the analysis. Furthermore, a triangulation process will be further conducted using literature and policy documents to confirm, and to complete the operationalization schemes, as well as to detect the irregularity or the regularity of the answers made by respondents. Finally, we will have a regulatory analysis as we will analyze official documents from the reliable sectors involved in the study case.

### 3.3. Validity and Reliability of the Research

By establishing a conceptual framework and through an operationalization scheme, our research can have internal validity because our data collection and research will have a specific focus to answer our research problem. Our research will also have an external validity as we will do a cross-check between academic papers, collected data, and interviews and how they correlate with one another in order to have solid facts that translate to broader and more general findings that could be present in other case studies outside our research. Finally, this research can also have reliability because the data collection is varied from different institutions, local organizations, academic papers, and press releases in order to have an understanding that the information given by respondents is true. In case of any

unmatching data found during our research, it will be mentioned in the analysis part of this stud

## 4. Water Governance in Jakarta: in brief

### 4.1 Urban Water Management in Jakarta

Water in Jakarta can be obtained through several mediums. For more than 60% of the population, water is obtained through groundwater extraction that causes the increasing speed of land subsidence in Jakarta, as well as contributing to saltwater intrusion, shallow groundwater salinization, and flooding in the northern coastal area of the city (Furlong, K. and Kooy, M., 2017). Meanwhile, piped water is also not evenly distributed throughout the megacity as the poor households, which are mainly located in North Jakarta, still lack access to clean water, which then causes the reliance on illegal groundwater extraction through digging wells. Furlong and Kooy (2017) pointed out in their study that most residents in Jakarta have never relied solely upon, or even primarily on the piped water system to meet their water needs. This is because, for both the middle-upper class households and middle-low households, water is more accessible through groundwater extractions, whether it is legal or illegal (depending on their capability to afford clean water).

Piped water in Jakarta is managed by 3 companies: PT PAM Jaya, PT Aetra Air Jakarta, and PT PALYJA. PAM Jaya is a public water supply company that is appointed by the local government to act as a supervisor for Jakarta's water management. The operators and facilitators are two private companies: PT Aetra Air Jakarta, taking control of the eastern side of Jakarta while PT PALYJA, manages the western side. Under this partnership, Jakarta's water provision is expected to reach 98% of water coverage by 2023 when the 25-year of Public-Private Partnership (PPP) contract is over (this coverage target was set at the beginning of the contract). In 2019 however, PAM Jaya reported that they have covered 62,96% of 75,6% target of water coverage in 2019 (PAM Jaya, 2019). In this latest annual report, PAM Jaya admitted that this number shows that "the state has not yet fulfilled fully to provide citizens' right to access clean water". In addition, many academics and experts point out that this slow progress for full water coverage only shows a sign of governance failure in managing the urban water of Jakarta. The reason for this failure is arguably due to water privatization that has been dominating Jakarta's water governance system since 1998 when the PPP contract was first settled informally.

Meanwhile, PAM Jaya's 2019 annual report also mentioned that the coverage target service by 2023 (when the PPP contract is over) is now at 82% and 100% by 2030. It is clear that the current governor of Jakarta has given a mandate to PAM Jaya to prepare for a transition period when the PPP contract is over, and take over the water management fully under PAM Jaya. And under the Governor's Instruction no. 49 (2021) related to water provision, the task force and masterplan of this transition from PT Aetra and PT PALYJA to PAM Jaya should be completed by December 2021 (INGUB, 2021). With this intention, it is expected that PAM Jaya would have the full capacity to take over the current role of private companies as operators and facilitators for Jakarta's water supply management. And to understand the extend of PAM Jaya's capacity to take over this water supply management from the two private companies, further understanding of Jakarta's water management history needs to be highlighted.

### 4.2 Brief History of Water Provision Agreement for Jakarta

Water privatization in Jakarta and Indonesia can be traced back to 1998 when the 'New Order Government' under Indonesia's second President *Soeharto's* regime collapsed. Before this period, Indonesia was heavily centralized and the local governments had little power to control and manage their regions or cities, including the management for water provision. Therefore engineering work was done by the central level with little or no coordination with the regional government or water users (Schwartz, K. et al., 2010). To build water infrastructure during that transition period, *Sigit Harjojudanto*, one of the sons of *Soeharto* made a partnership with

Thames Water Overseas Ltd (a London based company), and Salim Group (owned by Anthony Salim, Suharto crony) made a partnership with Suez Lyonnaise that is a France based company. These partnerships gave birth to Jakarta's current water management system that is divided into two equal parts for each respective partnership; Thames Water managing East Jakarta and Suez Lyonnaise for West Jakarta (Dodik, 2015). Under a contract that was based on a negotiation that is signed on June 7th, 1995, the assets of PAM Jaya, including the network and treatment plants and equipment, were transferred to the private operators on the understanding that they would be returned to PAM Jaya at the end of the concession period on February 1<sup>st</sup>. 2023 (PALYJA, 2017).

This contract is criticized for many reasons. First, the contract was not in accordance with Article 33 (3) of the 1945 Constitution of the Republic of Indonesia that states: "The earth and water and natural resources contained therein are controlled by the state and used for the greatest prosperity of the people". By transferring the water management to private sectors, State is not the main actor in the water governance, and in consequence, water is used as an economic tool rather than public goods and rights. Secondly, this contract was based on lobbying and negotiations rather than open competitive bidding and by consequence, there was no formal Regulatory Office (RO) at the start of the contract that could supervise and make adjustments during the 25-year contract. Although in 2001, an independent RO was finally set up, the "birth defect" of the contract had major consequences in the shortfall phenomenon of Jakarta's water governance. Thirdly, because water is managed by private sectors, PAM Jaya needs to pay for the "water charge" to the private water companies that are calculated based on the projection of an Internal Rate of Return (IRR) of 22% for the duration of the contract. And to pay this water charge, PAM Jaya collects water tariff which is paid by the consumer. According to a study by Ching Leong, (2015), the tariffs collected were not even sufficient to pay the water charge, partly because of the lack of ability to raise tariff rates, and therefore, the government got deeper and deeper into debt which explains the shortfall phenomenon. He further argues that because of this, most economic benefits were to be reaped by the private operators, while the risks were borne by the government.

The contract was based on a French model, where under traditional French concessions, the state owns these assets, but the private operator manages and has full control over them until the end of the concession period. Modifications can be made to adjust circumstances that can allow private operators to build and finance large infrastructure projects that can be transferred to the state at the end of the concession period. The private sector offers capital and technical know-how, in exchange for the promise of fair returns on investments. And for the public sector, the concessions are an effective way to bring private money into the public sector, together with the capacity to make efficient investment decisions and to develop innovative technological solutions. In line with this strategy for economic growth, World Bank initiated giving financial debt to Indonesia to build its water infrastructure in 1990. Therefore when the deal was sealed in 1998 with private sectors, Indonesia must comply with structural adjustment program of policy, institutional, regulatory, legal, and organizational reforms in the management of water resources and the irrigation sector under World Bank's Water Resources Sector Adjustment Loan (abbreviated as WATSAL). Privatization dictated by international influence during economic crises is the root of water service problems in Indonesia (Dodik, 2015). A lot of privatization happens in the third countries because of the decline in the countries' ability to largely finance the increasing development programs through the public sectors (Nasikun, 2003).

According to a study by Setiadi, W., and Pratiwiningrum, A. Z. (2020), the water tariff in Jakarta is also considered the most expensive one in Southeast Asia. The increasing water tariff is caused by the Automatic Tariff Adjustment Policy, where private sectors determine the water IRR using full cost system recovery. With this strategy, the customers must pay not only the production costs but also all private company expenses, including profits. Because the water

tariff in Jakarta continuously became more expensive and burdened the citizens, they sued and asked the water tariff in Jakarta to be decreased. In 2004, the Government of Indonesia issued Law No. 7 of 2004 on Water Resources which was more “market-friendly” compared to the old law: Law No. 11 of 1974. This new Water Resources law was intended to change the focus from new development of facilities to management of existing facilities, and from specific users to management of the whole cycle, therefore making the main focus is on existing facilities. The government is changing from the provider to the facilitator (Schwartz, K. et al., 2010). Hadipuro, W., et al., (2014) argue in their study that “though water is managed by a private actor with a profit motive, it does not necessarily mean that water is managed as a commodity-based on market mechanisms. And when water is managed by public actors it does not imply that it is managed without any profit motive”. As the Law No. 7 of 2004 was issued, massive opposition from civil society groups was raised because according to several key water NGOs: Indonesian Forum for Environment (Walhi), the People Coalition for the Right to Water (KRuHA), and the Jakarta Water Consumers Community (Kompakta), this new law only encourages water privatization even further by reforming substantial policy in water management from government control to private-led management, which would result in the impossibility to get out from the debt and leads to the continuous increase of water tariff. The major consequence of this law would fall on the hands of the poorer households of Jakarta that cannot afford clean water and do not have the access to clean water as the water coverage issues are also not be solved with this new law. Dodik S. (2015) stated in his study that after privatization, water management problems grow larger and complex.

Civil Society groups such as Walhi, KRuHA, and Kompakta then filed a lawsuit to demand an annulment of this law, as well as a contract termination for PPP with PALYJA and PT Aetra, and in 2017, the lawsuit was granted by the Supreme Court. In 2018 however, this lawsuit was revised by the Supreme Court because of an appeal made by the Indonesian Government, on the basis that the civil lawsuit had no legal standing in the first place, and they asked for a more strategical transition planning after the end of the contract in 2023 rather than abruptly terminating it. Since then, however, there were not many significant changes in the water management of Jakarta. The water coverage is now targeted to 82% of coverage by 2023, then 100% in 2030. The IRR has been lowered on the eastern side of Jakarta to 15,8%, and on the west side, the IRR is still at 22%. The citizens also still have to pay for a rather expensive water tariff, and water coverage is still at 62,96% in 2019 (PALYJA, 2019), which is far from the target by 2023. Meanwhile, in 2008, Lyonnaise des Eaux from Suez Group alongside PT. Garuda Dipta Semesta and Salim Group that manage the western side of Jakarta’s water changed the name to PT. PAM Lyonnaise Jaya (PALYJA). And on the East, Thames Water, which is in a joint venture with PT. Kekarpola Plastindo changed name into PT Aetra Air Jakarta. Setiadi, W. and Pratiwiningrum, A. Z. (2020) reported that PT PALYJA only covered 60.27% and PT. Aetra also covered only 60.38% of water coverage in Jakarta.

## 5. Analysis

In order to assess the decision-making process in institutional capacity, interactions between the action arena and patterns of power were analysed by looking at indicator frequencies (or code frequencies) mentioned by interviewees.

In the action arena, two important determinants of variables are *decision-making* and *actors*. Within decision-making variables, indicators are involved actor, participants' role, accessibility to decision-making, the clear boundary of position/role, the setting for policy agenda, policy selection, transparency between actors, and investment choices. Within the variables of actors, the indicators are an ability to make player changes, power limitation, the importance of partnership with private sectors, information accuracy, credibility, civilian involvement, and failure consequences.

In the patterns of power variable, indicators are *a stable flow of operation*, *the obstacle of target achievement*, and *solidity or steadiness of the goal*.

The level of frequency in the detected indicators will be used to identify the main problem in the passage of interactions between the action arena and patterns of power. As described in Chapter 2.2, the action arena and patterns of interactions influence one another, and therefore, this interaction is also analysed.

### 5.1 Decision-making Process

According to all respondents, PAM Jaya, PT Aetra, and PALYJA are the main actors in terms of operationalization for water provision in Jakarta. However, because they are bound by 25-years of an exclusive contract, they have to make frequent adjustments in order to reach targets. These adjustments depend on several factors: availability of resources, government policies, financial resources, and political will.

For the availability of resources, it is the responsibility of the central government, through the Ministry of Public Works and Housing, abbreviated as *Kemen PUPR*, that has an important role in supplying raw water. This raw water is very determinant for water coverage in Jakarta as 80% of water is coming from outside Jakarta: from Jatiluhur Dam in West Java and from 13 rivers that are connected to neighbouring cities, which are cross-provinces. *Kemen PUPR* has the power to allocate how much water can come to Jakarta and how water is distributed across provinces. It is also important to note that each province has its own water company that acts as a local operator like PAM Jaya. Therefore, *Kemen PUPR*, which is a public authority on the national level is very important for water provision in Jakarta. In fact, "The state guarantees the people's right to water to meet their daily needs for minimum essentials for a healthy and clean life with sufficient quantity, good quality, safe, maintained sustainability, and affordability" (UU Rep. Indonesia No. 17/2019).

Between the Central Government and the Provincial Government, the Water Resources Agency of Jakarta (Dinas SDA) has the authority to make use of the raw water supply that is coming in and out of Jakarta. The water supply for drinking water in Jakarta is, therefore, firstly based on the calculations and plans made by Dinas SDA. On the provincial level then, the government of Jakarta, with the governor as the head, has the role to make policies and mandates to make the managerial plan in order to distribute water in Jakarta. Their decisions are crucial for the operators (PAM Jaya, PALYJA, and Aetra) because they are the ones who generate the political directions for water management in Jakarta. Other than making policies,

they are also important in terms of distributing financial resources to the operators. Through the People's Representative Council of Regional Government (DPRD), financial resources are managed to make necessary investments and to make subsidies if the operators are in short of financial capacity to operate. The government of Jakarta is also responsible for making sure that necessary infrastructures are built to fulfil Jakarta citizens' basic rights to water. Meanwhile, the succession for water coverage in Jakarta also depends heavily on the political will on the national level and also on the local level. This willingness can accelerate the problem-solving strategies in case of failures.

On the operator level, PAM Jaya is the public operator that obeys the command coming from the provincial or local government. They generate the business plan for water coverage and have the most responsibility for the succession of water distribution to every household in Jakarta. They also make strategies with private partners (PT Aetra and PALYJA) in order to effectively manage water distribution in terms of technical targets and coverage targets. This strategy was what was leading to the creation of the exclusive contract that bound PAM Jaya, PT Aetra, and PALYJA from 1998 until 2023. The private partners, in this case, act as operators to ensure that the targets are met. They have the responsibility to report to PAM Jaya, that is their supervisor, for any progress and difficulties in distributing water to the people. They have the technical know-how and operate depending on the investment plans given to them by PAM Jaya.

Outside water management-related actors, there is also Regulatory Office (Badan Regulator or BR), an independent actor that was established in 2001 to supervise the contract between PAM Jaya, Aetra, and PALYJA. They act as a mediator in case of a dispute, and have the authority, according to the contract, to make policy suggestions in order to settle the disputes. BR is especially important at the end of the contract period because they help the operators to prepare for transition scenarios, alongside PAM Jaya, after the end of the contract. Academics are also important actors that are present in the water management of Jakarta. Although they are not as visible, they can act as an external consultant to give a second opinion based on scientific researches and case studies to every level of government.

Lastly, civil society groups or NGOs are also present in the water management of Jakarta. Not only do they act as water consumers or water users, but they are also the ones who are the most impacted by all the decisions made at the top-level management. These groups have the right to demand basic human needs according to Indonesian Law in case that they feel neglected by the government. Regardless of the institutional designs and politics, civil society groups have the role to voice the people's concerns related to the need for water. The civil lawsuit attempt that ended in 2017 was apparent proof of the people's power to demand their rights to the government.

A complete list of the representative Codes for Indicator "Actors Involved" and "Participants' role" as explained above can be seen in table 5.

Indicator	Expert	NGO	PAM Jaya	Regulatory Office (BR)	Policy document	Literature
(1) Actors Involved	<p>-The Governor of Jakarta, Jakarta Parliaments, and Central Government (Department of Finance, The Department of Public Works), and NGOs</p> <p>- The Jakarta inhabitants can play a very important role in the decision-making process</p>	<p>-PAM Jaya is not important because they don't have political capacity. Political decisions are in the hands of the governor, which what happens now is between the central government and the provincial government they are not open about the need for water</p> <p>- The people should be the most important actor</p> <p>- What is missing is the contribution from Universities. They only serve governors'</p>	<p>-PAM Jaya is the supervisor, which means that from plan development for coverage to where and how they (private sectors) should report to us</p> <p>- Private partners, PAM Jaya, Provincial Government, People's Representative Council of Regional Government (DPRD) (for financing), Water Resources Agency of Jakarta (Dinas SDA), Ministry of Public Works and Housing (Kemen PUPR)</p> <p>- We are hoping that academics</p>	<p>-Regulatory Office (BR) is an independent institution that has the role to keep the balance of interests: between the people to institutions and between different institutions related to water provision</p> <p>- Raw water is the responsibility of the Central Government (Kemen PUPR). Then Provincial Government, local government, PAM Jaya, PALYJA, and Petra</p> <p>- Civil Society is always being</p>	<p>-(PerGub provinsi DKI Jakarta No.118/2011: Article 1, paragraph 6, 9 and 10):</p> <p>(6) Drinking water company called PAM Jaya is a state-owned water company (BUMD) in the provincial area (DKI Jakarta) that has the right to manage drinking water management in that area.</p> <p>(9) Private partners are PT Aetra and PT Palyja or in other names after some modifications of the two names or after a replacement (of the company), in the partnership agreement are the second party.</p> <p>(10) All parties involved in the</p>	

		<p>policies and markets.</p> <p>- The governor has an exclusive law (about the most powerful actor)</p>	<p>can play a more significant role (in contributing to the decision-making process)</p>	<p>involved in the decision-making process. Such as in the context of RPJMD</p> <p>- Academics are always being involved in the decision-making process. But to what extent are they being involved? That depends on who is managing</p>	<p>partnership agreement are PAM Jaya as the primary party, and private sectors are the secondary party.</p> <p>- (PerGub Propinsi DKI Jakarta No.118/2011): Article 13, paragraph 1): Special committee, experts, as well as consultants are one workgroup, every expert and consultant appointed are to advise Regulatory Body (Badan Regulator or BR) about problem-solving for a particular problem such as drinking water tariff, implementation of IRR for respective clients and other problems that arise during partnership agreement (Chapter 2, Article 2, paragraph 1): BR is an independent and professional body that is outside</p>	
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					<p>of the influence as well as authority from other parties, including parties from the partnership agreement.</p> <p>- (Undang-Undang Republik Indonesia No. 17/2019): Chapter 4, article 1): The Central Government and/or the Regional Government is given the task and authority to regulate and manage water resources.</p> <p>(Article 19 paragraph 2): Water Resources Manager as referred to in paragraph (1) may be in the form of a technical implementation from ministry/regional unit, or from state-owned enterprises/regional-owned enterprises in the field of Water Resources Management.</p> <p>(Chapter 7, article 54, paragraph 4): Central Government, Local</p>	
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					Government, Water Resource Manager, legal entities, organizations, institutions, and individuals are responsible for ensuring the accuracy, truth, and timeliness of the information be delivered	
(2) Participants' role	<ul style="list-style-type: none"> <li>-The provincial government should play a more active role by taking back the role to PAM Jaya to supply water to Jakarta inhabitants and allocating its budget to expand the coverage</li> <li>- PAM Jaya plays only as passive partners for the PALYJA and Aetra</li> <li>- I see no role of public authorities to provide water</li> </ul>	<ul style="list-style-type: none"> <li>-The political decisions are in the hands of the Governor</li> <li>- NGOs role is hoping to make resonation between the people and the government</li> <li>- NGOs are only present in the negotiation approach, but they are not representative</li> </ul>	<ul style="list-style-type: none"> <li>-Their role (private institutions) are to handle full operation and maintenance for all Jakarta, in exception of Kepulauan Seribu</li> <li>- Provincial Government (Pemprov) must provide the financing aspects related to rights to water access. This is where the role of the Water Resources Agency of Jakarta (Dinas</li> </ul>	<ul style="list-style-type: none"> <li>-BR is being involved because of the contract with private sectors, (we) exist as independent to defend people's interest</li> <li>- There is raw water that is the responsibility of Kemen PUPR</li> <li>- Every document related to policy-making is studied with the help of experts. For example affordability studies, surveys, we</li> </ul>	<ul style="list-style-type: none"> <li>-(Undang-Undang Republik Indonesia No. 17/2019): Chapter 1, article 1, paragraph 21): Water resources manager is an institution that is given duties and responsibilities by the Central Government or Local Government in Water Resources Management for water provisions according to the laws and regulations.</li> <li>(article 3 b): to ensure the sustainability of the</li> </ul>	

	<p>for Jakarta inhabitants</p> <ul style="list-style-type: none"> <li>- The Jakarta inhabitants can play a very important role in the decision-making process</li> <li>- Experts should work hand in hand with NGOs and grassroots movements. To make sure that water is a part of human right</li> </ul>		<p>SDA) is to allocate the water to Jakarta.</p> <ul style="list-style-type: none"> <li>- Related to the tariff, it is the responsibility of Pemprov, will they have a shortfall or not. The private sectors only enter when there are investments</li> <li>- Private sectors only follow the regulations from the government as well as PAM Jaya</li> <li>- In the governments' decisions, PAM Jaya advises alongside Dinas SDA</li> </ul>	<p>always involve experts.</p> <ul style="list-style-type: none"> <li>- They (PAM Jaya, PALYJA, and Aetra) are working according to their job desks written in the contract. It's a part of the regulation</li> <li>- The Decision-making process is in the area of the public (institutions), the private sectors are only operators. (...) They obey the setup (from public institutions).</li> <li>- PAM Jaya is a sub-system in the water provision scheme. The Decision-making process is outside PAM Jaya's control. For example raw water, fundings, etc</li> </ul>	<p>availability of water and water sources to provide equitable benefits to the community.</p> <ul style="list-style-type: none"> <li>- (Undang-Undang Republik Indonesia No. 17/2019 Article 10 b, c, g, h, k): The Central Government is tasked with drawing up the patterns, arranging Water Resources Management Plans for transnational river basins, trans-provincial river basins, and national strategic river basins, including groundwater basins in those river basins;</li> </ul> <p>To develop and manage drinking water supply system cross-provincial and drinking water supply systems for the national strategic interest. (as well as) to ensure the supply of</p>	
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					<p>raw water that meets the quality and minimal daily basic needs of the community in cross-country river areas, cross-provincial river areas, and strategic river areas national;</p> <p>To provide technical assistance and technical guidance in the Management of Water Resources to the Local Government of province and regency/municipal government;</p> <p>(Article 11, paragraph I): To establish national policies and strategies in the implementation of the Drinking Water Supply System</p> <p>- (Undang-Undang Republik Indonesia No. 17/2019, article 13, paragraph a, g, I, k): The provincial government is</p>	
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					<p>tasked with formulating provincial water resources management policies based on national water resources policies by taking into account the interests of the surrounding provinces;</p> <p>(they must) ensure the supply of raw water meets the quality for the minimum daily basic needs of the community in the cross-regency/municipal river area;</p> <p>To develop and manage the Drinking Water Supply System across districts/cities;</p> <p>provide technical assistance and technical guidance in Management of Water Resources to</p>	
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					<p>the Local Government of regency/city;</p> <p>-----</p> <p>- (Undang-Undang Republik Indonesia No. 17/2019, Chapter 5, article 39, paragraph 1): Central Government and/or Local Government according to their authority formulate a Pattern for the Management of Water Resources for the implementation of Water Resources Management that can provide significant benefits as much as possible for the benefit of society.</p> <p>-----</p> <p>- PAM JAYA as a Jakarta local-owned company in line with regional government regulations (Perda)</p>	
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					<p>number 13 year 1991, has been mandated to conduct all businesses directly related to healthy water supply and distribution in DKI Jakarta. (PAM Jaya, 2019)</p> <p>PALYJA is in charge of water services in the Western Part of Jakarta based on a delegation from Perusahaan Daerah Air Minum Daerah Khusus Ibukota Jakarta ("PAM Jaya") through a Cooperation Agreement for improving clean water supply and services to the communities in the Western Part of Jakarta. (PALYJA, 2017)</p> <p>Aetra is responsible for managing, operating, maintaining, and investing to</p>	
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					<p>optimize, add and improve clean water services in its operational area, namely to the east of Ciliwung River, which covers parts of North Jakarta, parts of Central Jakarta, and the entire East Jakarta area (Aetra, 2018)</p> <p>-----</p> <p>-(Undang-Undang Republik Indonesia No. 17/2019, chapter 11, article 63 paragraph 1, 2): The people (communities) have the same opportunity to participate in Water Resources Management. (...) to channel aspirations, thoughts, and community interest in Water Resource Management.</p>	
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Table 5: Representative Codes for Indicator “Actors Involved” and “Participants’ role”

Next, we look at the indicators of “Accessibility to decision-making process”, “Clear boundary of positions/positions of role” and “ the setting for policy agenda”. Accessibility to the decision-making process and clear boundary of position or role are indicators of the variable “set of allowable actions and linkage to outcomes”. The setting for the policy agenda reveals the “potential outcomes” variable. These two variables translate to the ability of participants or actors in the decision-making process to set operational targets and how to achieve them. On the expert and NGOs side, it seems as if “privatization” is the main issue for the water coverage problem in Jakarta. They are aware of PAM Jaya’s limited capacity to solve the problem solely by their own power, but they also emphasize the fact that privatization, which is the main “villain” according to them, happens in Jakarta because of a political choice by the Indonesian government. The expert even argued that the current law even encourages water privatization: “With the new law (omnibus law), the opportunity to continue the partnership is very big. There might be a possibility the domestic private partner will take over the PALYJA role”.

On the other hand, PAM Jaya and BR are emphasizing the fact that PAM Jaya has been operating according to the proper rules and regulations, which are also written clearly in law No.17/2019 related to water resource management. However, at the same time, the regulations themselves have been the main issue that limits PAM Jaya from achieving the target for water coverage as well as the problem of lowering the water tariff that has been burdened to the people living in Jakarta. Because of the exclusive partnership contract with private sectors, PAM Jaya must constantly adjust their business plans without being able to solve the core issue of water provision problems that are raw water resources availability or continuity and the limited fundings. Even the BR’s role is limited according to the contract’s regulations even though they have the public as their main interest because they can only act as mediators within the boundaries written in the partnership agreement. Meanwhile, partnerships with private sectors according to PAM Jaya’s representative was necessary as a way for the public sectors to cover their limit in providing water access to the people of Jakarta.

From both sides, it seems that there are two sides of the coin: one is focusing on the agenda to solve the expensive water tariff problem (as well as finding the cause behind it) and the other is focusing on the agenda to fulfil the full water coverage target according to the contract. Schwartz, et.al (2019) argues that organizations in the water sector are ‘top-heavy’. And because the provincial governments were granted a dual status as autonomous regions and as representatives of the central government in the regions, (it has) has led to confusion because the provincial governments have a hierarchical status as well as an autonomous status (Rahayu, 2019). In Jakarta’s case, this confusion is what started the non-synergy between the water management from upstream to downstream.

A complete overview of the indicators “Accessibility to decision-making process”, “Clear boundary of positions/positions of role” and “ the setting for policy agenda” from the interviews are provided in table 6.

Indicator	Expert	NGO	PAM Jaya	Regulatory Office (BR)	Policy document	Literature
(3) Accessibility to the decision-making process	<p>PAM Jaya does not have enough power unless the provincial government has a political will to push PAM Jaya's private partners to achieve what they have agreed stipulated in the cooperation agreement between PAM Jaya and the two private partners</p> <p>-(Experts have access) Through the People's Coalition for the Right to Water (NGO)</p> <p>- Until now, the public can't get the new cooperation agreement. If we do not know the exact agreement, how come we can check that their performance is in accordance with the target</p>	<p>-NGOs are only present in the negotiation approach, but they are not representative</p> <p>- Even BR that is supposed to be a mediator doesn't have the full authority because their authority is restricted in the contract, whereas they are an agent that is outside the contract (independent)</p>	<p>Raw water supply becomes very relevant for Jakarta because of our high dependency (on it), especially at this moment. This is the role of Dinas SDA to allocate the water resources to Jakarta</p> <p>- For operation and maintenance, there are three aspects: business process, human resources, and technology. We possess all of it (have the control for it)</p> <p>-For annual projects, we come back to the problem that the water often doesn't come (to Jakarta), so we can't force to provide coverage. So if in the mid-way, the target isn't achieved, we have</p>	<p>BR is being involved because of the contract with private sectors, (we) exist as independent to defend people's interest</p> <p>- The operators (PAM Jaya, PALYJA, and Aetra) depend on the owner (the governor). They have the role to meet the target, therefore the responsibility is in the owner (the governor).</p>		<p>Organizations in the water sector are 'top-heavy'. The reason for the low level of recruitment is that recruitment of staff by water organizations in the public sector has to be approved by the central or provincial governments and these agencies only allow the water organizations to recruit a small percentage of what they request. it is likely that the water organizations, which currently incorporate a large number of specialists, will increasingly become organizations of 'generalists' who will out-contract specialist activities to the private sector, as the</p>

	mentioned in the agreement.		to make adjustments			organizations themselves will no longer have the capacity to undertake these tasks. (Schwartz, et.al, 2019)
(4) The clear boundary of positions/positions of role	<p>-No equal roles and influence since the private partners are backed up by the Jakarta Province Government</p> <p>-I see no role of public authorities to provide water for Jakarta inhabitants</p> <p>- We cannot expect the public authorities will play as a watchdog because they are the ones which invite the private partners to participate in the system</p>	<p>-It is not clear who is the regulator and who is the owner</p> <p>- Legality doesn't matter in Indonesia, everything can be settled through political decisions</p> <p>-</p>	<p>-(Roles) are according to the job desk. It is crystal clear. PAM Jaya has the role of providing access to drinking water, Dinas SDA supply the raw water so that we can process and distribute it, Pemprov provide financial resources if needed when PAM Jaya can't afford it as well as giving subsidies</p> <p>- This is not a separated process, from upstream to downstream. So if the upstream doesn't work then the downstream will suffer</p> <p>- Their reports (private partners) are clear. By</p>	<p>-Private sectors' involvement is only temporary (25 years). When it's done, everything must be handed back to the public. The tariff is also determined by the public sectors, and the return (IRR) is written in the contract. (...) from regulation wise, roles are very clear.</p> <p>- This is a form of multistakeholder because it has to do with the inefficiency of water catchment and how it is not being managed properly</p>	<p>-At the moment PAM JAYA has been collaborating with two private partnerships and it will end by January year 2022. In the eastern part of Jakarta, PAM JAYA collaborated with PT Aetra Air Jakarta (Aetra) and with PT PAM Lyonnaise Jaya (Palyja) for the western part of Jakarta. This concession concept partnership should need transformation to guarantee service access on drinking clean water can be accomplished. DKI Jakarta's governor has taken a policy to take over water supply system management</p>	<p>The provincial governments were granted a dual status as autonomous regions and as representatives of the central government in the regions. The dual status has led to confusion because the provincial governments have a hierarchical status as well as an autonomous status. For natural resources like water, the provincial authority would take responsibility for distributing state funding, while regencies and municipalities take on more applied tasks related to the use of natural resources and</p>

			<p>regulation, they must do what the contract says (sale, production, loss, investment). We have all these reports. We also have divisions to check the validity and sufficiency of their reports.</p> <p>-</p>		<p>in Jakarta through civil dispute. (PAM Jaya, 2019)</p> <p>(PerGub provinsi DKI Jakarta No.118/2011, Chapter 1, article 10, 11): All parties involved in the partnership agreement are PAM Jaya as the primary party, and private sectors are the secondary party. The partnership agreement is an agreement of partnership and the changes as well as supporting agreements in the matter of water provision, between PAM Jaya and private the sectors</p> <p>- (PerGub Propinsi DKI Jakarta No.118/2011, Chapter 2, article 2, paragraph 1, 2, 3): BR is an independent and professional body that is outside of the influence as</p>	<p>licensing. (Rahayu, et.al, 2019)</p>
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					<p>well as authority from other parties, including parties from the partnership agreement. By function, BR can give decisions in the form of regulation and mediation towards problems related to the management of water provision in the Area (DKI Jakarta), with the basis of transparency principle and professionalism. Decisions by BR are binding and obligatory to be applied by the parties but are still under the mechanism of conflict mediation as mentioned in chapter 45 of the partnership agreement.</p> <p>-(Undang-Undang Republik Indonesia No. 17/2019, Chapter 3, article 6): The state guarantees the</p>	
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					people's right to water to meet their daily needs for minimum essentials for a healthy and clean life with sufficient quantity, good quality, safe, maintained sustainability, and affordability.	
(5) The setting for policy agenda	<p>-The role of experts in the making of policy agenda related to Jakarta's water provision? Very limited.</p> <p>- The Jakarta Province has financial capabilities and the piped-water business is a simple business for PAM Jaya which has a very long experience in this business.</p> <p>- With the new law (omnibus law), the opportunity to continue the partnership is very big. There might be a possibility the domestic private</p>	<p>-Water should've been a social investment, by (making IRR) full cost recovery, that is commercialization.</p> <p>- Our main problem is in macro-level politics because water is seen as an economic asset/source of economic income. That influences everything because the narrative of "humanizing human" become irrelevant.</p> <p>- PAM Jaya is locked in the law. They are forced to function socially by 100% but they also</p>	<p>-In 2009, BPKP recommended lowering the IRR, We then made a negotiation with private partners, and we agreed upon reviewing IRR and the investment plans</p> <p>- There used to be 5 years of re-basing (of agreement) to set the technical target for service. Now there is a fundamental change: the operation is based on operational excellent (and no longer based on cost recovery)</p> <p>- The governor's point is to give</p>	<p>-Between the master plan and Detailed Engineering Design (DED), it can take up to 5 years. This long period could be regulated legally (laws, governor's mandates, etc). Therefore master plan must be regulated. And this is where our weakness is.</p> <p>- We have 8 strategic issues in the context of the end of that contract. We have informed these issues PAM Jaya and they also have formed a transformation team to prepare for</p>	<p>-Governor order PAM JAYA to take technical steps to guarantee concession take over to PAM JAYA runs smoothly and services access acceleration on drinking clean water can be realized. (PAM Jaya, 2019)</p> <p>- Stipulation of the Governor's Task Force Decree and the transitional master plan for clean water management to PAM Jaya by December 2021. (InGub 49/2021, no.13)</p>	

	<p>partner will take over the PALLYJA role.</p> <p>- They play the same role of making money and 'saving' the provincial government budget for expanding the service. PAM Jaya and the provincial government even agreed to the policy of the private partners to use a water meter to supply the poor. Water meter means that the investment for infrastructure is born by the poor inhabitants and that the tariff for the poor is higher because of the block tariff.</p>	<p>have to make a profit by 100%.</p> <p>- Everything depends on the political leadership</p>	<p>drinking water access as soon as possible for the citizens of Jakarta. (...) of whom will manage (after the contract), we must see how is the opportunity model based on multi-criteria decision-making, whichever is the fastest way to expand the coverage.</p> <p>- We have targets and what/how to do (it). But we must find the right strategic financing. We are now doing intense discussions with the provincial government and the central government to deliver initiatives on what and how to do.</p> <p>- Drinking water is a basic service and in the public area. It means that the public has the authority and the responsibility, but they also have</p>	<p>the end of the contract.</p>	<p>-Jakarta governor's mandate is clear that PAM JAYA should meet the 82% coverage service target by 2023 and 100% by 2030 (PAM Jaya, 2019)</p>	
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			limits such as fundings, expertise, and technologies. This is where we involve the private sector.			
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Table 6: Representative Codes for Indicator “Accessibility to decision-making process”, “Clear boundary of positions/positions of role” and “ the setting for policy agenda”

Lastly, we look at the indicators of Policy Agenda, Policy Selection, Transparency between actors, and Investment Choices. The indicators of policy agenda and policy selection reveal the level of control in the decision-making process. Transparency between actors then reveals available information and investment choices reveal the cost and benefits. These variables are being grouped in this analysis because it is a part of the operationalization aspect in the decision-making. From all respondents, it is clear that the major issue in the goal for water coverage in Jakarta is the financial aspects of it. PAM Jaya depends on the higher-up level of public sectors' financial resources to operate properly, especially around the time that the contract is coming to an end. The financial capacity inside PAM Jaya is not enough to push the agenda forward, in addition to the obligatory for them to pay for IRR of 15,8% to Aetra and 22% to PAM Jaya. The expert and the NGO representative argue that the government voluntarily gives room for private sectors to make money in the water management of Jakarta instead of trying to solve the problems. PAM Jaya and BR also explained that strategies have been made to adjust to the situations, however, they are 'locked in the contract agreement's obligatory regulations and PAM Jaya is heavily dependent on the government's political decision. Meanwhile, what is interesting in this part of the decision-making process is the transparency indicator. The expert's and NGOs opinion regarding the existence of transparency is completely the opposite of what PAM Jaya's representative's statement is. The expert and the NGO representative argue that there is no element of transparency in the decision-making process for water provision whereas, on PAM Jaya's side, it does exist. BR's argument could perhaps explain this opposite opinion by saying that, "Transparency is important. But in Indonesia, there is often a misunderstanding. Transparency is not equal openness. Therefore not all data must be shared". This signifies that the general public's protest for PAM Jaya, PALYJA, and Aetra's for not being transparent makes sense because these actors are in the process of making transitional strategies towards the end of the contract. As mentioned many times in Table 6, PAM Jaya is making many adjustments to the current conditions of water management in Jakarta, and because they are bound by the exclusive contract, detailed planning is not being shared with the public. The public's untrusting sentiment towards public institutions' capacity to solve water coverage issues is also justified with the rejection of the Civil lawsuit's decisions in 2018 that they have already won previously in 2017 (Direktori Putusan Mahkamah Agung Republik Indonesia (2018)).

An overview of the indicators Policy Agenda, Policy Selection, Transparency between actors, and Investment Choices are provided in the table below.

Indicator	Expert	NGO	PAM Jaya	Regulatory Office (BR)	Policy document	Literature
(6) Policy Development	<p>-structural adjustment in the management is needed, especially to be more transparent and give more room for public participation.</p> <p>- The evaluation criteria are good but without any pressing role to the two private partners to meet all the targets mention in the cooperation agreement, there will be no guarantee that full water provision will be achieved.</p> <p>-</p>	<p>-There is not yet a realistic scenario (related to developing plans for taking over water management under public-led management).</p> <p>-(Their evaluation) is based on profit. The concept scheme is self-financing</p> <p>- Privatization is designed and fabricated voluntarily. It was designed that the water supply should be limited and the demand should be high.</p> <p>-</p>	<p>-On the east side, a new agreement called master-agreement results in the lowering IRR from 22% to 15,8. The scheme is no longer based on cost recovery or cost-reimbursable but operational excellent</p> <p>- Our need for investments to reach 82% (of water coverage) by 2023 is very high. But in the financial projections, towards the end of the agreement, that investment portion is no longer enough to reach the annual target. On top of that, our agreement is exclusive, so our partners for water provisions are only those 2.</p> <p>-(...) especially during the pandemic, fiscal capacity from the provincial government</p>	<p>-(with PALYJA, related to disagreement to lower the IRR) We are now in the phase of dispute on the senior manager level. On this level, all parties agreed that an international consultant will be appointed to re-calculate the modeling that will be agreed upon by all parties, as well as becoming the basis of the negotiation agreement.</p> <p>- In this situation, everything must be regulated in the master plan for drinking water provision, and the distribution of roles must be clear</p> <p>- They (PAM Jaya) don't have a choice. But there is a time limit. And they also</p>	<p>In 2019, PAM JAYA has done organizational transformation to conduct this great effort. The supervision function that has been done so far, is inadequate to manage SPAM. PAM JAYA which has transformed into expanding organization operates and maintains SPAM in Jakarta. Organization instrument needed has transformed significantly, human resource competence change and business process are also shifting. This transformation, for sure, requires support from all stakeholders for PAM JAYA to be</p>	

			<p>experience a great shrinkage compared to the normal situation.</p> <p>-It is a matter of top-level management: they can't orchestrate their resources properly. But if we are talking about an operation, I am sure the people (working for water coverage) have always been the same</p> <p>- The biggest component is that infrastructures are based on investments. The commitment to provide basic infrastructures is what the public sectors or the government should have.</p> <p>- 5 considerations to think about 1, how long should we consider choosing the strategic private partners. 2, how much are the risks if we are handling everything by ourselves or if by doing partnerships. 3, how to consider different factors for a smooth transition. 4,</p>	<p>have a transformation team to head into that direction (taking over water management under PAM Jaya). At the moment, PAM Jaya is pushing the preparation in the context of the end of the contract.</p>	<p>able to carry out this big task. The final goal to achieve in the future is the company will be more healthy, in terms of financially and operationally. (PAM Jaya, 2019)</p> <p>To improve customer service standards, an investment of IDR +21 billion for the development of the Muara Baru Project network has been completed in 2017 and has been able to supply tens of thousands of customers. Meanwhile, the IDR 21.1 billion Kuningan Project which began operating in 2017 has increased the amount of water supply for the area. The total investment made by PALYJA until 2017 has amounted to IDR 2.1 trillion. (PALYJA, 2017)</p>	
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			<p>how much are the number of upfront investments, that is in the long run. and 5, what is the bottom line for PAM Jaya. These are recommendations that we gave to the provincial government to be discussed after the agreement ended</p>		<p>Aetra's effort to provide a reliable water supply for customers is one of manifestation Aetra's commitment to improving services in its operational area. Aetra always implements the latest innovations to provide the best service for the community and customers. The construction of the Sunter Booster Pump &amp; Reservoir is also part of the Aetra Master Plan with a pumping capacity of 800 litres/second and reservoir capacity of 2,500 m3 and is located on an area of 1,600 m2. This large capacity reservoir is also one of the first in the Indonesian water supply industry (Aetra, 2018)</p>	
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					<p>(Undang-Undang Republik Indonesia No. 17/2019, Chapter 5, article 39, paragraph 1, 2, 3): Central Government and/or Local Government according to their authority formulate a Pattern for the Management of Water Resources for the implementation of Water Resources Management that can provide significant benefits as much as possible for the benefit of society. The Pattern for Water Resources Management as referred to in paragraph (1) is structured based on the Regional Rivers with the principle of intersectoral integration and between regions and the relationship between the use of Surface Water and Groundwater. (...)</p>	
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					as a reference to implementation for Water Resources Management in the long-term.	
(7) policy selection	<p>-There are two reasons. First, one of the important people of Aetra is Sandiaga Uno which used to be the Vice Governor of Jakarta. Second, the policy at the national level is giving more room for private sector participation in the Indonesian economy</p> <p>- they (private sectors) do not invest as they should do in the capital expenditure target to expand the coverage</p> <p>- we cannot expect that public authorities will play the role they should play because they are the ones which</p>	<p>-We have filed a judicial review for UU 7/2014 because of water liberalization. At the time, the government needed to spend their budget, they lobbied DPR to push the law, which was granted quickly, despite the protest.</p> <p>- The asset is made from the contract, from the government's supporting maker. If later (after the end of the agreement) the public takes over, but the function is still commercial, then what's the difference? That is still commercialization. Only the actors will change but the practice is still the same, or it can be worse because it's</p>	<p>Basically, water infrastructures should've been the government's responsibility, right? (...) Water provision is the obligation of the country. Therefore, the politics below (if it is being done correctly) will head in the direction of these basic rights as well. If (what has been done) is not enough, then we make a partnership agreement with the private sector.</p> <p>- The government took alternative initiatives such as a water kiosk, master meter. This is dilemmatic of basic service</p> <p>-Strategic initiatives 1: to add water volume that enters Jakarta and/or make qualified water in Jakarta. 2: how to distribute them to the people. But there is also</p>	<p>They adjust the targets every 5 years. It is all written in the contract and everything is connected. PAM Jaya will also contribute if the contract target is not met.</p>	<p>Jakarta mostly depends on water supply from the outskirts and surrounding area. Around 81% water supply comes from the Juanda Jatiluhur reservoir. While the rest, 14% water purchased from Tangerang regency water company and 5% comes from rivers in Jakarta. During 2019 PAM JAYA has accelerated services and access to clean water for Jakarta residence. They are: Construction of pipe network SPAM Hutan Kota, Clean water service in Kepulauan Seribu, Instalment of drinking water fountain,</p>	<p>the contract provides for a "water charge" to be paid to the water companies by PAM Jaya with an expected Internal Rate of Return (IRR) of 22% for the duration of the contract. PAM Jaya in turn was supposed to have paid for this water charge from the water tariff which is paid by the consumer. The tariffs collected were not sufficient to pay the water charge, partly because of the difficulties of raising tariff rates, thus causing a bloc tariff situation. The result is that the government got deeper and deeper into debt. PAM Jaya was squeezed on both sides— unable to increase</p>

	<p>invite the private sector to participate in the drinking water supply</p> <p>- PAM Jaya and the provincial government even agreed to the policy of the private partners to use a water meter to supply the poor. Water meter means that the investment for infrastructure is born by the poor inhabitants and that the tariff for the poor is higher because of the block tariff.</p>	<p>more secretive and disclosed.</p> <p>-</p>	<p>prioritization for the people who don't have alternatives to get drinking water, and for the people living in West and North Jakarta because they can't extract groundwater anymore</p> <p>- With the proper policies, it can push, or it can delay (the water coverage goal). For now, the (local government's) concern to provide basic rights is high. So choosing the priority to provide access for drinking water is increasing</p>		<p>Construction of communal SPAM Communal and water kiosk (PAM Jaya, 2019)</p> <p>The success of the Company in posting an encouraging performance in 2018 is attributable to the Company's strategy. The strategic policy implemented by the Company is to maintain the growth in the number of new customers in areas where the water supply is sufficient and to supply water for Primary Cells (PCs). The Company also developed a strategy for reducing NRW, both by maintaining supply and by working on lead-measure, or by measuring things that have a significant impact on achieving targets, to reduce</p>	<p>tariffs on the one hand while having to make grossly increased payments to the private operators on the other. (Leong C, 2015)</p>
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					<p>NRW, such as restoring water meters, house connections, and securing water meters by installing elbow, rehabilitating pipes and decommissioning double pipe, to maintain the quality of water distribution. (Aetra, 2018)</p> <p>- The expansion of clean water distribution services was also recorded with a total population of 2.7 million. These achievements were supported by an increase in water production and the application of technology to conduct strict supervision in the water supply network. The application of MBBR (Moving Bed Biological Reactor) technology at Cilandak WTP</p>	
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					<p>throughout 2017 has recorded an increase in the amount of water production in the WTP reaching 12,509,147 m3, an increase of 388,169 m3 from the previous year. To improve customer service standards, an investment of IDR +21 billion for the development of the Muara Baru Project network has been completed in 2017 and has been able to supply tens of thousands of customers. Meanwhile, the IDR 21.1 billion Kuningan Project which began operating in 2017 has increased the amount of water supply for the area. The total investment made by PALYJA until 2017 has amounted to IDR 2.1 trillion. (PALYJA, 2017)</p>	
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					<p>-To answer the challenge, PAM JAYA has determined 4 strategic initiatives to make sure or to guarantee all these things come true:</p> <ol style="list-style-type: none"> <li>1. Increment water material supply;</li> <li>2. Decreasing water loss level;</li> <li>3. To construct a distribution network in the the area where residents do not get access of clean water;</li> <li>4. Educational program for the community to alter the usage of deep underground water to pipe drinking water and save water consumption.</li> </ol> <p>(PAM Jaya, 2019)</p>	
	<p>-Until now, the public can't get the new cooperation agreement. If we do not know the exact agreement, how come we can</p>	<p>-Information is very disclosed, and the secrecy is increasing</p> <p>- PAM Jaya is a BUMD (Regional Owned Enterprise),</p>	<p>(Transparency between actors) is clear. Nothing is hidden. But sometimes, when we ask for more, they tend to look at the agreement and ask for</p>	<p>Transparency is important. But in Indonesia, there is often a misunderstanding. Transparency is not equal openness. Therefore not all</p>	<p>(Undang-Undang Republik Indonesia No. 17/2019, Chapter 7, article 54, paragraph 4): Central Government, Local</p>	<p>capacities for regional governance remain disjointed and politically discrete. There is a strong reliance on local histories of</p>

<p>(8) Transparency Between Actors</p>	<p>check that their performance is in accordance with the target mentioned in the agreement</p> <p>-(Transparency is) Very important, the public should know the details of the target and the performance of the private actors.</p> <p>- The key is on the transparency of the cooperation agreement and the results of the audit made by BPKP (the internal auditor office) (should be) announced publicly.</p>	<p>so there must be a public openness</p>	<p>a justification of why we need it. Although over time, this affects our needs as well.</p> <p>- Transparency is important to make decisions so that we can know how much is the production cost.</p>	<p>data must be shared.</p> <p>- General qualifications are opened, but the detailed qualifications are not opened and the public doesn't need to know</p>	<p>Government, Water Resource Managers, legal entities, organizations, institutions, and individuals are responsible for ensuring the accuracy, truth, and timeliness of the information be delivered.</p>	<p>agreement-making and traditional patron-client relationships. Natural resources like water are essentially used as a natural capital base for negotiating regional coordination. (Rahayu et. al, 2019)</p> <p>- More than a year after the announcement at City Hall, Jakarta's residents remain in the dark about the progress of the public takeover, sparking outcry from civil society groups that are demanding greater transparency. They (civil society groups) also demanded that the policymaking process concerning the city's tap water be "transparent, participative and non-discriminative". (The Jakarta Post, 2020)</p>
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<p>(9) Investment choices</p>	<p>- piped-water business is a simple business for PAM Jaya which has a very long experience in this business</p> <p>- No cost and benefit analysis was made before the cooperation agreement was signed. However, compared to the initial 22% internal rate of return, nowadays the cost and benefit are better since the current internal rate of return is only 15%</p> <p>- they do not invest as what they should do in the capital expenditure target to expand the coverage</p> <p>- PAM Jaya and the provincial government even agreed to the policy of the private partners to use a water meter</p>	<p>The fiscal capacity of Jakarta's government can't make additional investments for the need for water coverage. This should be referred to as DPRD</p>	<p>- The problem is the no-alignment between the need for investments in the agreement and what is being versed in the financial projections.</p> <p>- The need for infrastructures is very huge, and if (the cost) is to be borne by the people then, of course, it wouldn't be affordable</p> <p>- We need so many investments, our internal resources are not enough to cover it all (to lower Non-Revenue Water (NRW), to meet water coverage target, to prepare for the transition). (...) We need to find the right strategic financing</p> <p>- In the agreement, there are rules for sanctions: technical target, coverage target, and quality. But the situation has changed in the last 5 years because it (the agreement) is coming to an end, the</p>	<p>On the east side, there was an amendment for economic re-opener. That is re-adjustment for targets, lowering investors' profits, lowering IRR until the end of the contract. Therefore contractual-wise, it is relatively safe.</p> <p>- Related to costs and benefits, the public sectors mechanism is too unnecessarily complicated, and the public's flexibility is also not present. And that has become the operational dilemma.</p> <p>- The tariff is not increased for 10 years because the governor did not dare to increase it. Logically, if they don't want to raise the tariff, then they should subsidy. In this case, they don't</p>	<p>(Undang-Undang Republik Indonesia No. 17/2019, Chapter 9, article 57, paragraph 1, 2, 3): Funding for Water Resources Management is determined based on the real needs of Water Resource Management. Funding management as referred to in paragraph (1) is carried out by taking into account the linkage of upstream and downstream watersheds and the functions in the area. Funding for Water Resources Management can be sourced from State Revenue and Expenditure Budget, Regional Revenue and Expenditure Budget; and/or other legitimate sources following the laws and regulations.</p>	
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	<p>to supply the poor. Water meter means that the investment for infrastructure is born by the poor inhabitants and that the tariff for the poor is higher because of the block tariff.</p>		<p>investment versed is becoming not enough With the pandemic, refocusing is happening. Therefore what has been being committed at the beginning must be changed because the provincial government's fiscal capacity is becoming insufficient</p>		<p>(paragraph 7, 8): Water Resources Infrastructure provision can be done through funding cooperation with private business entities or other state governments. The funding cooperation as referred to in paragraph (7) does not include cooperation in the implementation of Water Resources Operation and Maintenance activities</p> <p>- The main company's problems and obstacles nowadays are on clean water deficit of around 4 m3 per second, limited water availability, and some areas where residents do not get access to clean water, especially in the western and northern part of Jakarta. It includes</p>	
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					<p>a resident of Rusunawa or flat and other MBR. High water loss levels (42,62%), the usage of deep underground water, and the long-term process of registration also become other company's difficulties. Another obstacle faced by the company is insufficient capital to invest. Regarding a good company's financial restructuring with positive equity, however, it will make it easier for the company to get other loan sources from a commercial institution such as banking. To accelerate service coverage, the company still needs huge investment. It should need alternative solutions such as funding from local</p>	
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					bonds, partnerships with private companies, local capital insertion, soft loans from donor institutions, and from financial institutions (it could be bank or non-bank). (PAM Jaya, 2019)	
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Table 7: Representative Codes for Policy Agenda, Policy Selection, Transparency between actors and Investment Choices

In the decision-making process, we can see the result of code frequencies that the three most frequent codes are participants' role, the setting for policy agenda, and investment choices (see figure 6). These codes signify that the variables of actors' position, financial resources, and policy design are important factors that can influence every decision in the action arena. This then translates to the reality of problems in Jakarta's water management where actors involved often don't have a significant power to solve the problems (here, actors are PAM Jaya, PALYJA, and Aetra as operators). The reason for this is because, firstly, they are dependent on financial resources that are versed by the local government to support the areas that are not covered. Regarding this issue, PAM Jaya stated that "the need for infrastructure is massive, and if it is being left to the water users/consumers, then it will not be affordable for them. There will be a gap. And according to regulations, this gap should have been fulfilled by the local government or the central government". The BR supported this argument by saying that "the investment is far from enough. The government didn't invest enough throughout the contract period and as a consequence, at the end of the contract, everything is being accumulated. Not only this investment should be used for expanding water coverage service, but also to maintain the existing facilities. And that is a lot of homework".

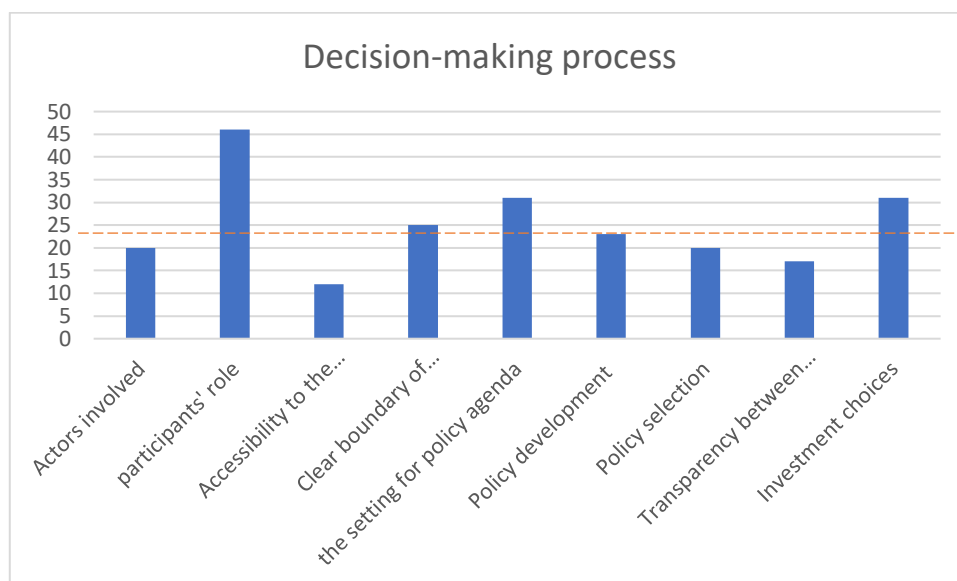


Figure 6: Decision-making process code frequencies

Secondly, actors are working within the boundary and trajectory created by supporting policies. Without the supporting policy agenda to achieve the target, actors can't act on their own to solve problems. Quoting from an expert's interview response, "PAM Jaya does not have enough power unless the provincial government has a political will to push PAM Jaya's private partners to achieve what they have agreed stipulated in the cooperation agreement between PAM Jaya and the two private partners". This argument is also confirmed by an NGO representative that "PAM Jaya is locked by the law. They are forced to function socially by 100% (to deliver the people's need for water), but they must also create profit from business 100%". PAM Jaya's representative then further stated that, "A legal certainty will influence the government, the direction to private partners, as well as to PAM Jaya".

## 5.2 Actors

According to respondents, actors present in the action arena are heavily dependent on external factors to have the proper capacity to operate. These external factors are mostly the political willingness from the government to help the operators operate. For PAM Jaya especially, while indeed they have the means to operate (business process, human resources, and technology), without supporting policies, they cannot make significant changes and provide water coverage. In addition to that, they are bound by the contract with private partners and can't find alternatives without the agreement with the government. For the expert and NGOs, it seems clear that public participation or the public's concerns regarding this matter is not at the forefront of the agenda. The operators are still planning the operations strategically while staying cornered by the contract. Indeed, there is no alignment between targets and the financial resources in the orchestra of water management in Jakarta.

A complete overview of indicators related to the concept of actors' interactions is provided in the table below.

Indicator	Expert	NGO	PAM Jaya	Regulatory Office (BR)	Policy document	Literature
<p>(1) Ability to make player changes</p>	<p>-private sectors: the policy at the national level is giving more room for private sector participation in the Indonesian economy.</p> <p>- public: Not at all (don't have the ability), even the court decision to annul the agreement failed</p> <p>- experts: Grass root movement through political contract PAM Jaya: There might be a possibility the domestic private partner will take over the PALYJA role</p>	<p>PAM Jaya: they should (be able to make changes). That's our only hope.</p>		<p>-Everything is set in the contract: what are the roles of the Regulatory Body. We only supervise the contract, and they can do the contract, whether they fulfil their duty or not. When they have disputes, we settle them.</p> <p>- If we are talking about water provision, it is the Governor's responsibility. PAM Jaya, PALYJA, and Aetra are only decision-makers at the operator level.</p>		

<p>(2) Power limitation</p>	<p>-PAM Jaya does not have enough power unless the provincial government has a political will to push PAM Jaya's private partners to achieve what they have agreed stipulated in the cooperation agreement between PAM Jaya and the two private partners</p> <p>- No room for public participation. See the results of the civil lawsuit to annul the agreement.</p>	<p>-our capability to analyze the dynamics in the contract is limited, including our academics.</p> <p>- people have to pay an expensive service fee to become (water) consumer</p> <p>- we are only present in the negotiation, but we are not the representative.</p>	<p>On the macro level, there are a lot of things to be fixed. The fact that it is an agreement contract, and we are a part of the agreed parties, then we must obey (the regulations in the contract).</p> <p>- If only from PAM Jaya, it won't be sufficient. There needs to be strategic financing in the future if the provincial government is willing to invest.</p> <p>- The need for infrastructures is very huge, and if (the cost) is to be borne by the people then, of course, it wouldn't be affordable</p> <p>- We need so many investments, our</p>	<p>-The operators are dependent on the owner (the government), they are only working to meet the target? But the responsibility is in the hands of the Governor.</p> <p>- There needs to be a Regulatory Office at the national level. Kemen PUPR is not quite a regulator, they are decision-makers</p>	<p>-To accelerate service coverage, the company still needs huge investment. It should need alternative solutions such as funding from local bonds, partnerships with private companies, local capital insertion, soft loans from donor institutions, and from financial institutions (it could be bank or non-bank. (PAM Jaya, 2019)</p> <p>- The challenges faced by the Company in 2018 include, among other things, insufficient raw water and installed capacity of the Water Treatment Plant (IPA) that has reached the maximum. Those challenges rendered the Company unable to expand its</p>	<p>-Governance processes for upstream-downstream coordination also show limited integration between water and the broader range of related land-use and urbanization activities. (Rahayu et. al, 2019)</p> <p>- When, or if, PAM Jaya eventually regains full control of water management, it would inherit a dilapidated system and need to install expensive new pipelines and go the extra mile for targeted coverage (The Jakarta Post, 2019)</p>
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			<p>internal resources are not enough to cover it all (to lower Non-Revenue Water (NRW), to meet water coverage target, to prepare for the transition). (...) We need to find the right strategic financing</p>		<p>business promptly despite the large demand for piped water in DKI Jakarta. (Aetra, 2018)</p> <p>- The Board of Commissioners understands the changes in government regulations regarding the drinking water supply system. Active discussions with PAM JAYA and the DKI Jakarta Government continue to be conducted by the Board of Directors. During this process, the Board of Commissioners continues to encourage the Board of Directors to remain committed to providing the best service in the provision of water for the people in West Jakarta by</p>	
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					upholding good corporate governance, business ethics, and compliance. (PALYJA, 2017)	
(3) Information accuracy	It is quite clear, however, it is not audited and we cannot check whether it is in accordance with the target stipulated in the agreement	Information is very disclosed, and the secrecy is increasing	We monitor them monthly (private sectors): their target achievement, their obstacles. That is frequent	We monitor them monthly (private sectors): their target achievement, their obstacles. That is frequent		
(4) Credibility	<p>-I see no role of public authorities to provide water for Jakarta inhabitants</p> <p>- The key is on the transparency of the cooperation agreement and the results of the audit made by BPKP (the internal auditor office) made to the public</p>	If we are talking about the business process itself, the people in PAM Jaya have always been the same. Some people working in PAM Jaya also work or worked for private institutions. So when the agreement ended, it's going to be the same people who work on the operational level.	On the capacity side, we have it all: the business process, the human resources, and the technology	We are only involved as a mediator of disputes		capacities for regional governance remain disjointed and politically discrete. There is a strong reliance on local histories of agreement-making and traditional patron-client relationships. Natural resources like water are essentially used as a natural capital base for negotiating regional coordination. (Rahayu et. al, 2019)

<p>(5) Civilian involvement</p>	<p>-The room for them to participate in the decision-making process is also very limited due to the democratic system which is represented by parliament members.</p> <p>- To make sure that water is a part of human right</p> <p>- Until now, the public can't get the new cooperation agreement. If we do not know the exact agreement, how come we can check that their performance is in accordance with the target mentioned in the agreement</p>	<p>-we hope that we can make a resonance between the people and the government</p> <p>- External communication is necessary, that's our role: to protest</p>	<p>-(the civilian participation's presence): Not for the matter of investments</p> <p>- but public communication is always happening such as consultations with the public, NGOs, academics. There is a process of public consultation in the making for policy agenda.</p>	<p>-Civil Society needs to be included in the decision-making process. For example in the context of RPJMD, APB.</p> <p>-Drinking water is a basic service in the public's area. It means that the public (sectors) has the responsibility and the authority, however, they have limits such as funds, expertise, and technology. This is where they add private sectors to the system.</p>	<p>(Undang-Undang Republik Indonesia No. 17/2019, Chapter 10, article 1, paragraph a, e, f, h): In implementing Water Resources Management, society has the right to: gain access to utilize Water Resources, obtain information related to Water Resources Management, express an opinion on the Water Resources Management Plan that has been announced within a certain period with local conditions, file a lawsuit to the court against various problems related to Water Resources that adverse people's life.</p> <p>(Chapter 11, article 63,</p>	
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					paragraph 1, 2): People have the same opportunity to participate in Water Resources Management. (...) to channel aspirations, thoughts, and community interest in Water Resource Management.	
(6) Consequences of failure	<p>- The time is very limited and that they do not have any good intention to meet the full coverage.</p> <p>- It is now 2021 and no private companies want to invest which they cannot get the returns. It is quite impossible in two years to get the returns from the investment for piping and water treatment plant. The payback period for this kind of investment is more than 25 years</p>	-This is not a water crisis, but a crisis in the water management system in general, and this should be the responsibility of the country.	<p>-when they (private sectors) are not being effective in the operational process, then the risks are on them</p> <p>-They haven't reached 15,8% as of now, what is happening, therefore, PAM Jaya and Pemprov will not give them top up to get 15,8%</p>	The government takes alternative initiatives such as water kiosks and master meters. This is a basic service dilemmatic issue.		The takeover process has dragged on due to the lack of guidance the city administration has provided to PAM Jaya since last year, which resulted in a "loss of momentum" in regaining public control of water management when the COVID-19 outbreak hit. (The Jakarta Post, 2020)

<p>(7) Importance of partnership with private partners</p>	<p>- the private partners are backed up by the Jakarta Province Government.</p> <p>-The public sectors (should be the most important actor). However, it does not happen in reality</p>	<p>Privatization is designed and fabricated voluntarily. It was designed that the water supply should be limited and the demand should be high.</p>	<p>-Private sectors are only following regulations set by the local government as well as PAM Jaya</p> <p>-By exclusive clause, PAM Jaya can't make an agreement with other private partners (besides PALYJA and Aetra) as long as the contract is still ongoing.</p>	<p>-Private sectors are not equal privatization. This is a PPP. Unfortunately, the interpretation in Indonesia is often wrong. Privatization means that the owner of the assets would be the private sector. (...) Whereas the partnership with PALYJA and Aetra is only temporary (25 years).</p> <p>- They are only the operators of the contract by PAM Jaya. When they fail to meet the target, there will be sanctions, and they must pay for it.</p>	<p>(Undang-Undang Republik Indonesia No. 17/2019, Chapter 9, article 57, paragraph 7, 8): Water Resources Infrastructure provision can be done through funding cooperation with private business entities or other state governments. The funding cooperation as referred to in paragraph (7) does not include cooperation in the implementation of Water Resources Operation and Maintenance activities</p>	<p>Literature study on the impacts of inviting the private sector to manage urban water supply shows that there are many problems arise: access of the poor, tariff control and regulation, cherry-picking phenomenon, corruption, environmental degradation, and the problem on the relationship with multilateral agencies such as the IMF, the World Bank, and The Asian Development Bank (Hadipuro, 2007)</p>
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Table 8: Representative Codes for Actors

We also conducted the frequency analysis in Atlas.ti for the codes related to the actors' interaction which results is provided in table 7. As can be seen from this table, it is clear that every actor in water management has a big power limitation in the action arena. This power limitation is the main cause of the lack of capacity to solve problems. Actors are depended on one another to achieve water coverage. Kemen PUPR is often unaware or remains indifferent to the managerial problems and therefore unaware of the need for huge investments in the field to operate effectively throughout all parts of Jakarta. The local government is dependent on Kemen PUPR because of the raw water resources, but they are also not involved directly on-field and often, investments calculated by them are not enough to cover all the expenses. PAM Jaya is bound by the contract and is limited to being the middle actor between public institutions and private operators. They are not powerful enough to change policies but they have the biggest responsibility on their shoulder for water provision in Jakarta. PAM Jaya is mostly dependent on financial resources distributed to them by the Dinas SDA. Regulatory Body (BR) is limited to supervising the contract and the targets, therefore they cannot regulate the top-level water management problems. Civil society can only ask for their rights and can't change the management system. According to BR representative's interview in the Jakarta Post (2020), "The takeover process has dragged on due to the lack of guidance the city administration has provided to PAM Jaya since last year, which resulted in a "loss of momentum" in regaining public control of water management when the COVID-19 outbreak hit". Because of this, the water provision financial problems had even further accumulated at the end of the contract.

Quoting from the president director of PAM Jaya's statement, "In fact, this is not a separated process: from upstream to downstream. If the upstream doesn't work, then the downstream will also suffer". The next question would now be; how to effectively manage power limitation? The head of BR stated, "the orchestra between all stakeholders is not in sync. Because infrastructure for drinking water is a long-term infrastructure, therefore, it should be locked in the law. (...) the head of the government changes every 5 years, so to make the decisions more sustainable, a law is needed to tie different actors that come into a position of power so that they can head in the same direction. What is happening now is that these actors have a different scale of interests".

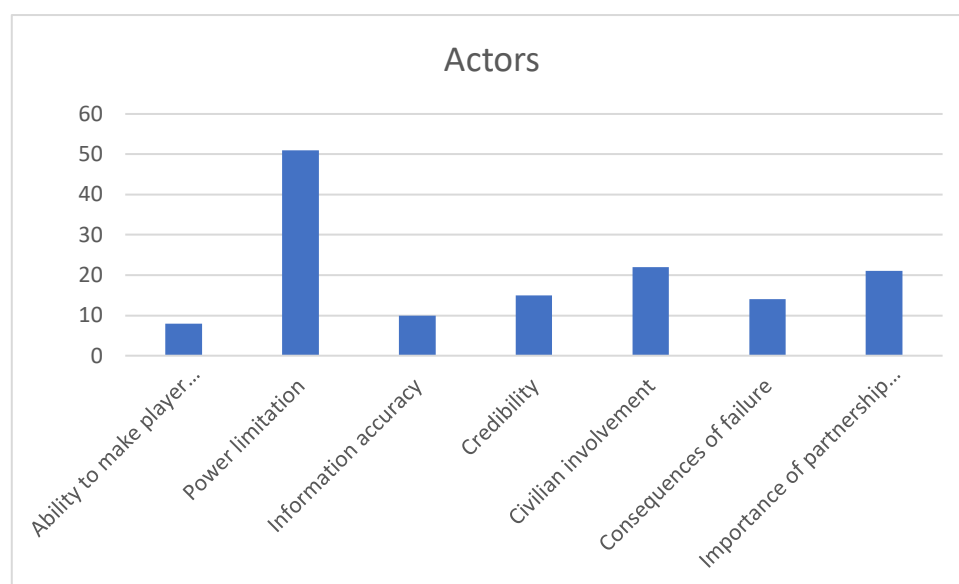


Figure 7: Actors code frequencies

In the action arena, four indicators in Jakarta's water management are being mentioned the most by respondents are, therefore: participants' role, the setting for policy agenda, investment choices, and power limitation. These indicators are always being mentioned throughout interviews, which signifies their importance in the decision-making process for water management in Jakarta. Participants' role is related to positions of participants, the setting for policy agenda is related to potential outcomes, investment choices are related to the cost and benefits and power limitation is related to the scope of rules. From these four variables, positions of participants and scope of rules are highlighting the actors' aspect in the action arena. Cost and benefits and potential outcomes highlight the tool to achieve the goal of water provision, which are financial resources and policy. As a result, actors' position in the decision-making process, financial resources, and policy designs are the main influence that can steer the action arena.

### 5.3. Patterns of Power

Decisions made in the action arena will influence the patterns of power in the water governance, and power relations might also re-influence back to the action arena to make adjustments. From Figure 9, obstacles of target achievement are an indicator that is being mentioned by interviewees the most out of all other indicators. Obstacles of target achievement highlight the variable of "which certain issues are excluded from making agendas". This means that there are apparent issues in the making of agendas for water provision, which leads to obstacles of target achievement that are borne by operators (PAM Jaya, PALYJA, and Aetra). Issues detected are non-alignment of technical target and investment needs, limited water resources, bad spatial planning, contract time-limit, lack of law or regulation, selective service coverage, lack of awareness on the depth of problems, and lack of political will to solve all these issues.

From PAM Jaya's side:

- "The problem is that there is a non-alignment between technical target and investment needs. Jakarta's dependency on water resources from outside Jakarta is very high"

From BR's side:

- "In Jakarta, there are a lot of people occupying illegal lands. Therefore a dilemma occurred in the contract: on one side, the public must be served, but on the other hand, operators can't serve the people who are living on illegal lands".
- "Between the master plan to detailed-engineering design (DED), it can take up to 5 years. The time-span for this masterplan execution should be regulated, whether using the law, presidential decree, or mandates from the governor. The master plan must be regulated. And this is what has been missing in our system".
- "when private sectors serve the public, obviously they will choose those who can afford it. To the poorer residents, the tariff will be subsidized, and they have issues with this (prioritization)".

From an expert's side:

- "the awareness that private actors are only making money from water provision is still low."
- The main problem is that private partners of PAM Jaya do not make enough investment to "expand their coverage level. The time from now on to 2023 is too short to get returns for their investment".

From an NGO representative side:

- "there is a lack of political will to solve the problem".

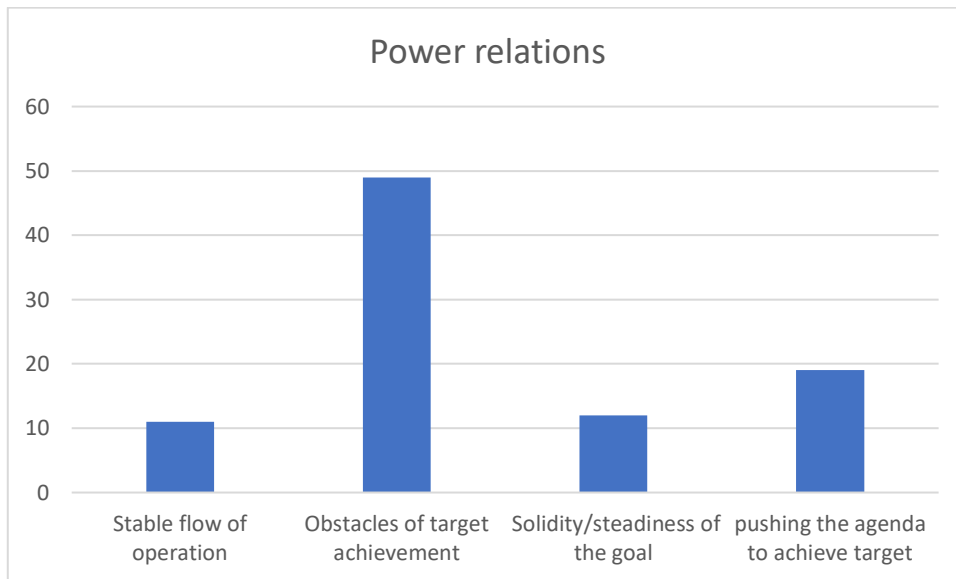


Figure 8: Power Relations Code Frequencies

The second highest indicator that reveals the patterns of power is “pushing agenda to achieve the target”. This indicator is an extra indicator that has been identified as interviews took place. A certain actor can decide to push their agenda, regardless of the obstacles, to achieve the target. And this should reveal their capacity to solve problems or to create problems. In this case, PAM Jaya, PT Aetra, and PALYJA are “cornered” in their contract, therefore can’t control external sources. The private operators can choose to control which users or public they want to cover by not reducing water charges because private operators’ goal is always to make a profit. Therefore, they serve those who can afford the expensive water tariff. PAM Jaya on the other hand also needs to make a profit, but they are a public institution and therefore, the public’s interest comes first to them. In this case, they can use financial sanctions paid by private sectors when they are unable to meet the water coverage target, which they have always paid since the beginning of the contract, as one of the income sources. With the pressure of sanctions, PAM Jaya can exercise its power when the private sectors are not willing to comply with expensive water charges.

Outside the realm of operators, other public institutions (provincial/local government, central government), have the power of controlling policy and managing financial resources as well as water resources. These aspects are, in fact, the exogenous variables (Chapter 2.2), that are supposed to be the basis of decision-making process criteria but are also becoming instruments of power in Jakarta’s case.

#### 5.4. Relations between Action Arena and Patterns of Power

The action arena creates patterns of power and power relations influence the action arena. In the water management of Jakarta, actors that are not operators (PAM Jaya, PALYJA, and Aetra) are being mentioned very frequently by interviewees. This shows the importance of The

central government (through Kemen PUPR), the Provincial Government, the Dinas SDA, The Jakarta's or the local government, the DPRD in the action arena for water provision in Jakarta. Because PAM Jaya, PALYJA, and Aetra are operators that are bound by a contract, therefore they have limited capacities to operate in the action area. As mentioned by the expert, "PAM Jaya does not have enough power, unless the provincial government has a political will to push PAM Jaya's private partners to achieve what they have agreed stipulated in the cooperation agreement between PAM Jaya and the two private partners.". Because of this limit, actors in the action arena should therefore be separated into two categories: operating actors and actors of an enabler (Figure 9).

Operating actors include PAM Jaya, PALYJA, and Aetra that have the main role inside the decision-making process to provide strategies for water provision in Jakarta. Their decisions, however, can't be made without the 'green light' from Actors of enablers (Kemen PUPR, the Provincial Government, the Dinas SDA, The Jakarta's or the local government, the DPRD), because these external actors are also placed inside the Action Arena to influence the decision-making process. As stated by PAM Jaya's representative, "Provincial Government (Pemprov) has the obligation to provide the financing aspects related to rights to water access. This where the role of Water Resources Agency of Jakarta (Dinas SDA) is to allocate the water to Jakarta". The dynamics between these two categories of actors in the action arena, therefore, create patterns of power, that can influence the success of water provision targets in Jakarta. At this level, the public's concerns are becoming the "parameter" of the target-making, but not necessarily because it is an urgent matter to give the people in Jakarta equal access to clean and drinking water. Because patters of power reveal the political aspect in the water governance of Jakarta, it also reveals the instruments of power that re-influence the actors of enablers inside the action arena. The BR's quote sums up this irony: "The main issue is raw water. Regardless of who (are the actors) in play, if there is no raw water, it is useless. These are strategic issues. In the recent years, the government's actions had only started to show up".

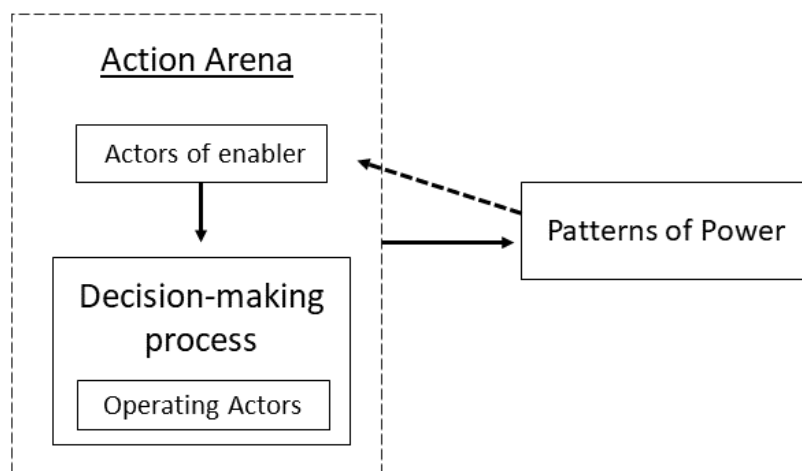


Figure 9: Framework of interactions between action arena and power relations for water management in Jakarta

Actors of enablers are supposed to be in the exogenous variables, but in reality, because operating actors are bonded by a contract, their capacity to solve water coverage problems is not enough, therefore actors of enablers also enter the action arena to give directions. This particular action arena reveals patterns of power for all actors in the action arena through un-synchronized planning and implementation of water coverage. Meanwhile, patterns of power also reveal what are the power instruments that can be used to steer the directions of the

decision-making process to the actors of enablers. Ironically, these power instruments are the same elements of exogenous variables before the action arena that are: water resources and rules-in-use (policy).

## 6. Conclusion

### 6.1. Answering Research Questions

Concerning the first sub-question of our research problem, water provision in Jakarta is currently being managed by different levels of public institutions with a partnership agreement with private operators. Within the public institutions, Kemen PUPRP and Dinas SDA have the role to allocate raw water resources that are coming in and out of Jakarta. They are at the level of the Central Government. Then, Jakarta's Government as the Provincial/local government manages the water that is coming to Jakarta, by making plans to distribute the water through different sectors, including drinking water. At this level, DPRD is also present as the financial sector that has the most important role of allocating budgets as well as giving investments related to water infrastructures. The governor of Jakarta is also a crucial factor in this process because he can make policies to push or not to push the water provision agenda in Jakarta. Political decisions at this level are crucial in the succession of water provision. Then at the operational level, PAM Jaya is the sub-institution of the public authorities that have the responsibility to operate the business plan for water coverage service in Jakarta. In partnership with private partners: PALYJA and Aetra, these three actors are bound in the 25-year contract to provide 82% of water coverage in Jakarta by 2023 (end of the contract) and 100% by 2030.

To answer our second sub-question, the PPP agreement has been both help and an obstacle for water provision in Jakarta. At the beginning of the contract, this partnership was deemed necessary to push the water coverage target (although on the other side of the argument, this incentive was a way to privatize water). Changes and adjustments have been made throughout the years from 1998 until today, and Jakarta's water coverage is still at 64% in 2020, which is far from the target within the time limit. The PPP agreement is an important factor in building the politics of water management in Jakarta, but the public institutions also have a big responsibility to fulfil their duty. The shift from private-led to public-led management is not only possible, but it must happen at all costs. That is because, according to the contract, all the assets must be transferred back in 2023 to PAM Jaya, and PAM Jaya has to be ready to take over the management. This is, however, proven to be difficult for PAM Jaya because they are not the only actor in the arena that can make plans and operate. PAM Jaya depends heavily on the public institutions at all levels, from upstream to downstream to handle this responsibility. The decision-making process for water provision in Jakarta is therefore influenced heavily by the involvement and the degree of power by each actor present in water resource management cross-sectoral and cross-provinces.

Regarding our third sub-question, we found that power asymmetry plays a very important role in making the politics of water governance in Jakarta. The goal is clear, the regulations are present, the role of each actor is rather clear, the limits are apparent, but the power play in the water management of Jakarta can crucially steer the direction of the decision-making process by using policies and water resources as the tools of power.

Finally, based on the three sub-questions, the main question of this research can be answered: ***to what extent is the decision-making process in water provision in Jakarta influenced by the power relation between public authorities and the private sector?***

The issue of Jakarta's water governance is not about their managerial or operational capacity but about their power capacity to push the agenda for water provision. PAM Jaya, who is the most responsible actor for water coverage in Jakarta is only a sub-institution of the public authorities on the provincial level. They have all access to operations and maintenance of

water infrastructures such as business plans, human resources, and technology. The people working for water provision in Jakarta have always been the same people throughout the years, and therefore, any changes in the head of the management wouldn't affect the operational level as much. Because at the start of the contract, PAM Jaya needed support from private sectors to boost water coverage operation, therefore they are bound by a long-termed contract. Regardless of who is/are going to manage water in Jakarta (public or private or both) post the contract period, in 2023, PAM Jaya must be ready to take over all the operations and management that has been done by the private sectors at all costs. PAM Jaya also had already started to make a transition strategy towards the end of the contract in 2023. The main issue for PAM Jaya is that they have to bear a lot of financial responsibilities, especially at the end of the contract, because to the public authorities, they need huge investments to provide infrastructures, and to the private sectors, they have to pay for the promised IRR of 15,8% for Aetra and 22% for PLYJA at the end of the contract. These financial obligations burden PAM Jaya to push the agenda for water provision. And therefore, a push from exogenous actors and additional policy instruments are needed to achieve the water provision goal.

The government of Jakarta in recent years had given additional investments to accelerate water coverage that is outside the calculation in the contract. This is important to support PAM Jaya financially towards full water coverage. With the help of financial strategies and additional policies related to the use of water resource supply for drinking water and policies to regulate actors involved, PAM Jaya can operate in a more sensible way towards the full water coverage goal. Meanwhile, it is now 2021, and PAM Jaya has only managed to cover 64% of water coverage when the goal is 82% by 2023. With this rhythm of operation, it seems that it is going to be hard for the population of Jakarta to get equal access to drinking water soon. In addition to that, the COVID19 pandemic has also completely shifted the government's priority budget towards helping the country.

Lastly, in correlation with chapter 2, this research proved that the theory for institutional capacity that represents a broader enabling environment" which forms the basis upon which individuals and organizations interact is true to Jakarta's case. Also, institutional weakness and malfunctions are indeed a major cause of ineffective and unsustainable water services. Related to power, significant power imbalances can constrain the creation, adoption, and implementation of socially and environmentally desirable policies (Brisbois et al, 2019), which is very apparent in our research. Finally, the argument that the governance of water is characterized by interconnected and overlapping political, social, and legal structures as sites for the contestation and reproduction of power (Zeitoun and Allan 2008) is also true in analyzing the institutional capacity for water provision in Jakarta.

## 6.2. Reflection upon the contribution of the results of the study to current scientific debates

Brisbois (2016) argued in his study that studies relating to collaborative approaches to water governance are addressing power-related concerns and that many power issues reflect conditions external to the collaborative process where these issues can be identified and addressed, although not necessarily resolved, at the collaborative group scale. Reflecting on Jakarta's case study, firstly, the set for collaborative agendas has been identified clearly according to the law and regulations to push the water provision agenda forward. However, the control to shape the agenda in favour of the interest for water provision is not aligned for all actors involved in the decision-making process. Secondly, the financial, technical, and institutional capacities of actors within the decision-making process in the PPP scheme are limited to the binding partnership agreement that limits operators for solving problems at the

end of the contract period. Therefore, the power held by actors situated at the external collaborative process (The Central Government, the Provincial Government) is crucial to steer the political decisions at the decision-making process. Thirdly, knowledge, information, and perspectives that are used and valued for water provision are not aligned for actors because the management for water provision in Jakarta is not synchronized from upstream to downstream, which shouldn't be the case since water management is not a separated process. Fourthly, the prevailing orientation of state bodies or public institutions with final decision-making power has two different sides: prioritizing societal values (to give water access for all people) and/or to pay financial obligations (according to the contract) and making business from water resources. These four concerns are what had revealed the power-play in the decision-making process in Jakarta's case for water provision. This research thus enhances Brisbois (2016)'s study for power-related issues in collaborative management with a specific context of contract binding agreement, thus separating internal (operator) actors and external (exogenous or 'enabler') actors in the decision-making process. Finally, Kashwan et. al (2019) argue that power asymmetry is located exclusively in social and political arenas and that economic actors and institutions of markets remain innocent of the power asymmetries that are linked to processes of exclusion, elite capture, and clientelism in politics and society is proven, through our case study, as one of the core problems that started the tangled issues in the management of water provision in Jakarta.

### 6.3. Recommendation for Policy

The water provision issue in Jakarta proved that there are multi-factors that cause the failure of equal supply for water that is promised by the country. Even though it is rather clear by the regulations who are the actors that are responsible in each sector of the water management, the problem lies in the relational aspect and eventually, power-play between these connected actors, from upstream to downstream. Supporting policies for poorer households to uphold strongly their rights to water are also not enough to balance the business calculation for water resources and this often leads to the dilemma of speeding up the process for water provision.

The main issue of PAM Jaya for managing water in Jakarta and providing full water coverage is related to their power capacity that can't push equal water distribution targets. To solve this problem, perhaps we should look at one of the reasons that the contract made with private sectors had a 'birth defect': a lack of regulator. The Regulatory Body that exists now in Jakarta's water management only has the role of mediator of disputes as well as supervising the contract between operators. By now, we understood that actors involved are multi-stakeholders, and they are connected from the raw water supply until water distribution, therefore this research suggests a separated, national-level regulatory body is needed to assess the synchronicity of operations from upstream to downstream. What is happening now in Jakarta is that not enough water is being delivered to Jakarta but operators are asked to distribute water equally throughout the city. This "non-alignment" of agenda can be prevented if there is a supervisor on the national level, that can synchronize the interdependent actors in the water management of Jakarta. Furthermore, as stated previously, supporting policies and necessary resources (water and financial) are still crucial to provide full water coverage in Jakarta.

### 6.3. Limitation of Research and Recommendation for Future Research

This research only focuses on finding the capacity of public institutions for water provision through the relation between the decision-making process and the patterns of power, therefore it is not in the interest of this study to further analyze the power relations in-depth for water resource management that is coming from outside Jakarta. Further research should analyze

the power relations as well as the water cycle management as a whole that is coming to Jakarta to understand the extent of accessibility to water in the city.

This research is limited by the COVID19 pandemic that makes communications with people who understand the problems in-depth more difficult. Furthermore, because the topic of the research is deemed to be 'sensitive' by the private sectors for the reason of the contract period that is coming to an end, and the water management system in Jakarta is in the *transitional period*, it is hard to get respondents from private sectors, even though we did manage to be in contact with them. This research also does not include the general public as respondents because of the pandemic, therefore making it hard to see the reality of the people most affected by the water provision issues. Instead, interviews with a representative from NGO are hoped to be sufficient to voice the people's concern over the water provision problem. However in the future, when there are no obstacles due to the pandemic, further studies should get more comprehensive insights from, not only private sectors but also from the general public because they are the ones who receive the impacts of decisions made in the decision-making process for coverage service.

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