

GLOBAL SOCIAL JUSTICE CONFERENCE 2021

Theme: "Bridging Theory and Practice to Empowering and Culminating Social Justice towards COVID-19 Ramification"

10 – 11 June 2021

MANAGEMENT OF INDONESIA'S POTABLE WATER IN URBAN AREAS: PROGRESS AND PROSPECTS FOR SOCIAL EQUITY

Astrid Meilasari-Sugiana, PhD^{1,2}
Sandra Madonna, MT²
Dian Putri, MA²

¹ School of Government and Public Policy, Sentul, West Java, Indonesia

² Universitas Bakrie, Jakarta, Indonesia

astrid.sugiana@sgpp.ac.id

astrid.sugiana@bakrie.ac.id

Abstract

In the last ten years, the Government of Indonesia has not made significant progress in improving the extent and quality of potable water provision. Sustained funding for construction and maintenance has become a major problem due to low pricing and the liabilities of water enterprises. Nationally allocated funding is scarcely enough for adequate service coverage, with the Indonesian government having to rely on foreign loans for maintenance and development. Short political tenure, rent-seeking behaviour and putting on a good spin in government-led construction schemes are part of the problems relating to bureaucracy. Alternative funding schemes are needed, including funding from public-private partnerships and cross subsidy between consumer groups. Moreover, there is the need for water enterprises to be market oriented and receptive to market demands. Entrepreneurial mindset, service-oriented reasoning and whole life-cycle approach are important to adopt in the construction, operation and finance of potable water provisions.

Introduction/Background

A nation of 270 million people, 65% of Indonesia's population live in lowland coastal cities where access to sanitation and potable water facilities have direct and profound impacts on the health and welfare of the urban population. Water and sanitation showcase the lifestyle of the people, while extending and improving access to those facilities become the hallmark of the government's seriousness in eradicating poverty and safeguarding its citizens. Many of the government's programs for poverty reduction encompass securing infrastructure for sanitation and

GLOBAL SOCIAL JUSTICE CONFERENCE 2021

Theme: "Bridging Theory and Practice to Empowering and Culminating Social Justice towards COVID-19 Ramification"

10 – 11 June 2021

potable water provisions. Population growth, rapid urbanization and uncontrolled urban sprawls within the city and along the fringe all contribute to the massive need for potable water and sanitation facilities. Burgeoning population growth that are highly concentrated within densely populated urban areas have also led to the disruption of local ecological systems, hence compromising surface and groundwater availability in terms of quality and quantity. Incapable of meeting rising public demands, the national and provincial government opted for public-private partnerships with lenders and the private sectors to consolidate funding and seek innovations in the construction and provision of services relating to potable water supply and sanitation. Reasons for the inability to meet public demands include technical and/or construction issues, institutional challenges, policy and regulatory issues, law enforcement problems, funding and public finance and a lack of commitment from local government, the private sector and the public for public-private partnerships in water and sanitation provision.

A factor relating to equity involves the distribution of potable water at an affordable price that is cost-effective to water companies. Since the late 1970s, the Government of Indonesia has developed a pipe system for the provision of potable water within the sectoral lines and across jurisdictions and government levels. The provisioning of potable water is encompassed within the 2018 Millennium Development Goals or MDGs, with its target of decreasing the number of populations without access to potable and safe drinking water by half. Hence, the Government of Indonesia expects 70% of Indonesia's population in 2018 to have access to potable and safe drinking water through the serviced and government endorsed water pipe system or through private and communal wells. Through the Mid Development Plan 2015-2020, the Government of Indonesia opted 60% of the total population to have access to piped water system. In urban areas the government opted for 76% of the population to have access to piped water system and 45% in rural areas. In 2005, only 23% of the total population or 47 million lives have access to piped water system. In 2009 the government has succeeded in extending its piped water services to 26% of the country's total population, with an increase of 44% in urban areas and 12% in rural areas.

Throughout the years 2014-2018, the government has implemented initiatives to hasten the progress for innovations in piped water services, including the plan to install 15 million new connections by 2018, the provisioning of innovation funds for pipe construction at the regency and municipal levels, the provisioning of special funds or *Dana Alokasi Khusus* to construct new pipelines in rural areas, the disbursement of grants and incentives to government owned water corporations to subsidize new connections for low income families in urban and rural areas. In addition, there have also been programs to improve the finance of dwindling state-owned water enterprises in the form of technical, financial and managerial assistance.

Still other programs include the restructuring of debts and liabilities of state-owned water enterprises and the provision of loans for investment and construction of infrastructure from state-owned banks with subsidized interests. National Decree No 7/2004 promulgated in 2004 governs the use and management of the country's water resources and regulates the development of potable water provisioning. As a follow-up to the above, in 2006 the Government of Indonesia, along with the Ministry of Public Works, developed the National Policy and National Strategy for the Provision of Potable Water, which later became the Ministry of Public Works' Regulation No 20/2006, reflecting the stakeholders' interests in the provisioning of potable water within the

GLOBAL SOCIAL JUSTICE CONFERENCE 2021

Theme: "Bridging Theory and Practice to Empowering and Culminating Social Justice towards COVID-19 Ramification"

10 – 11 June 2021

national, provincial and regency/municipal levels. The above also functions as an umbrella and benchmark for guiding the planning, design, monitoring, evaluation and development of policies and practice related to water provisioning within the national and sub-national levels. The ministries, government departments, state-owned enterprises, private sector partners, as well as the public are mandated to follow the consensus stipulated in the Ministry of Public Works' Regulation No 2/2006. The above regulation details the government's targets as well as the government's strategic plans as endorsed by the country's constitution, government regulations and development goals.

Methods

Quantitative and qualitative inquiries are adopted to enrich knowledge of the field settings. The research assumes complex interdependence between the researcher and subjects and phenomena being studied. Research informants were selected through purposive sampling and issues which arose were used to determine the research subjects invited for interviews. Data collection was conducted through participant observations, in-depth interviews and the compilation of secondary data in relation to government policies, programs and projects in Jakarta, Indonesia. A pilot study in Jakarta was conducted from January 2021 until April 2021 to acquire connections within the field site and obtain rudimentary data of water governance within government departments and the private sectors in the site. Data collection was conducted in five months from January 2021 until May 2021. Statistics appointments were used, with descriptive statistics being the main quantitative instrument incorporated. Qualitative analysis was conducted using the N-Vivo software and through coding, comparing, highlighting and theorizing. The corporate governance of two private water corporations in Jakarta, namely PT Palyja and PT Aetra were analysed to provide inputs on public-private partnerships and public sector obligation provisions.

The Management of Indonesia's Potable Water: Challenges and Response

The provisioning of Indonesia's potable water is not without challenges. The challenges faced by the Government of Indonesia in the provision of potable water include, but not limited to the following: (1) the extent and quality of potable water services and the financially sound management of water corporations, (2) lack of sustained funding from government and the private sector for the development, operation and maintenance of potable water provisions, (3) institutional and regulatory issues, (4) decreasing quantity and quality of freshwater availability due to population pressures, urban migration and industrial growth devoid of suitable environmental management and environmental protection schemes, (5) lack of public-private partnerships between government, private businesses, the private sectors and civil society, and (6) in the event of partnerships between government and private businesses, conflict of interests and the divergent risk management strategies espoused lead to construction, service, maintenance and environmental issues to emanate and endure with no end in sight.

GLOBAL SOCIAL JUSTICE CONFERENCE 2021

Theme: "Bridging Theory and Practice to Empowering and Culminating Social Justice towards COVID-19 Ramification"

10 – 11 June 2021

Within the last ten years, the Government of Indonesia has not made significant progress in improving the extent and quality of potable water provision vis a vis the country's rapid population increase. Firstly, potable water provision through pipes is solely accessible to the middle and upper classes within Indonesia's urban areas, whereas a very large majority of the low-income population is not served through the pipe system and has to pay substantially for potable water. As well, pathogens and contaminants are also often found in water distributed by water companies and water loss due to pipe leakage and evaporation are very much commonplace. Secondly, sustained funding for construction, maintenance and improved service quality becomes a problem due to low pricing, debts and liabilities of water enterprises, investments relying on foreign loans and grants vis a vis the nationally and regionally allocated and available funding from the Indonesian government. Alternative funding schemes are needed, including funding from public-private partnership schemes as well as funding from cross subsidy schemes from various user and consumer groups. Thirdly, there is the need for water enterprises to be market oriented and receptive to market demands. Essentially, the case for integrating design, construction, finance, operations and maintenance is that private firms can coordinate these activities at a lower cost than can government, and they are better able to respond to economic incentives.

Short political tenure, rent-seeking behaviour and putting on a good spin in government-led construction and project management schemes are part of the problems relating to institutions, bureaucracy and agency. Entrepreneurial mindset, service-oriented reasoning (as opposed to infrastructure based, asset-based and ownership-based thinking), and whole life-cycle approach are important to adopt and implement in construction, maintenance, operation and finance (Sorensen, 2017). Fourth, there needs to be consideration for the preservation of rivers, reservoirs and catchment areas as surface water from these sources become crucial for downstream use in many of Indonesia's lowland coastal cities. Solid umbrella policies, mandates and technical guidelines at the national and subnational levels; effective interagency coordination and cross-jurisdictional authorities; as well as accountability-driven institutions and stern monitoring by the public are required for the preservation of rivers, reservoirs and catchment areas. Fifth, public-private partnerships are unavoidable due to lack of government funding for the construction, operation and maintenance of massive infrastructure facilities vital in sustaining public interests and livelihood. Writing the contract in terms of the flow of services from the infrastructure rather than the process of construction can change the incentive system (Sorensen, 2017). If, for example, the same entity is responsible for both construction and supplying the services, but is remunerated only for the successful provision of services of a suitable quality, it is important for the entity to build the correct facility, get the processes of delivery right, and curtail costs while not sacrificing quality (Sorensen, 2017). Rendering the length of the contract into shorter terms with clear benchmarks, targets, expected standards and monitoring and evaluation methods will also help to alleviate intractable conflicts which can easily spiral amidst differences in perception relating to risk management. Finally, risk management strategies are needed in public-private partnerships.

There is the need to deliver private finance which meets the risk-reward requirements of private financiers and suppliers of risk capital (Sorensen, 2017). First, they spread risks across a number of participants (sponsor, constructor, suppliers and financiers). Second they are mechanisms for monitoring risks, and the explicit incorporation of risk premium by private

GLOBAL SOCIAL JUSTICE CONFERENCE 2021

Theme: "Bridging Theory and Practice to Empowering and Culminating Social Justice towards COVID-19 Ramification"

10 – 11 June 2021

investors aids by making project risks more apparent. Instead of being interested only in the construction contract and the first couple of years of a project, the facilitators are now servicing the asset throughout its life. They have effectively started to become infrastructure services companies, a development which helps to insulate their end results from cyclical construction markets (Sorensen, 2017).

Resolving Challenges in Potable Water Provision

In order to resolve the above challenges, starting in 2005 and through Government Regulation 16/2005, the Government of Indonesia adopt stricter rules in funding state-owned and private water enterprises through the national spending budget. In this regulation, government departments and private sectors working in the provisioning of potable water services will receive funding only if they can incorporate non-technical programs into their short term and long-term agendas such as professional service and asset management, improved services, and sound financial management. Technical programs required for adoption by water enterprises include (1) tapping novel water resources and tapping engineering and innovative potentials which have not been utilized, (2) decreasing water loss from 38% to 25% through improved monitoring and improved pipe systems, and (3) increasing the number of installations in terms of households, small and medium enterprises and individuals in urban and rural areas. Non-technical programs include (1) improved pricing, (2) allocation of funding for 50% of the required funding from the national budget and the other 50% from the sub-national budget and/or the private sectors, and (3) improvement in the management, maintenance and operation of water enterprises. Moreover, Government Regulation No 16/2005 also stipulated the minimum service standard for low-income communities.

Funding from the national government is differentiated into two, one of which is for cost recovery and entrepreneurial purposes targeted to the middle and upper-class consumers and the other one of which is for non-profit and non-cost recovery goals targeted to the low-income consumers. This is adopted to stimulate local governments to fund the construction of pipes and water provisioning through the sub-national spending budgets. Moreover, through Presidential Decree No 20/2009 the national government also subsidizes the interests accrued by water enterprises. In accordance to National Regulation No 7/2004, the Government of Indonesia or GOI ensures water for all of its citizens, hence in its effort to subsidize water enterprises within downstream areas, the GOI also considers (1) the diversification of water sources and water collection methods, taking into account the geographical areas and water pockets within the regions, (2) increasing the supply of freshwater from upstream through improved reservoirs, river systems and collection methods in conjunction with decrease in water leakage and evaporation, (3) progressive pricing to induce water conservation among users. The approaches above, in conjunction with the adoption of service-oriented public private partnership schemes, are expected to induce justice and ecological sustainability in water provisioning.

Conclusion

GLOBAL SOCIAL JUSTICE CONFERENCE 2021

Theme: "Bridging Theory and Practice to Empowering and Culminating Social Justice towards COVID-19 Ramification"

10 – 11 June 2021

The Government of Indonesia has promulgated policies, regulations and strategies to increase service quality, stimulate funding, develop institutions and programs, increase water sources and improve public-private partnerships in the provision of potable water services. The effort by the GOI is not devoid of challenges. To resolve these challenges, the GOI has promulgated follow up programs, enacted new regulations, and put in place technical and non-technical guidelines for government departments and water enterprises to follow. This is all done in the hope to achieve a move towards more explicit and measurable (or at least verifiable) standards of performance for public sector organizations, in terms of the range, level and content of services to be provided, as against trust in professional standards and expertise across the public sector. Some successes have materialized, namely that in extending the pipes and services, in diversifying the range and economic backgrounds of users in urban areas, in decreasing the leakage from pipe and infrastructure damage and in risk management where public-private partnership schemes prevail. The sustainability of water resources still remains an issue, whereas the financial resources and financial health of water enterprises for long-term maintenance and operation remains problematic. Public accountability should be judged based on transparency, responsibility and responsiveness.

References

- Fischer, K., & Schot, J. (1993). *Environmental Strategies for Industry*. Island Press.
- Geertz, C. (1973). *Interpretation of Cultures*. Basic Books Inc.
- Huber, J. (1991). *Ecological Modernization. Away from Scarcity, Soberness and Bureaucracy*. Den Haag: SDU.
- Mol, A. P. J. (1995). *The Refinement of Production. Ecological Modernization Theory and The Chemical Industry*. University of Amsterdam.
- Smallwood, F. (1979). *Politics of Policy Implementation*. St. Martin Press
- Sorensen, E. (2017). *Governance and Innovation in The Public Sector*. Oxford University Press.
- Sterling, G. (1982). *Managing the Public Sector*. The Dorsey Press.
- Weale, A. (1992). *The New Politics of Pollution*, Bell and Bain Ltd.