

Regulatory and investment coordination issues in the Philippine water sector

Lawrence G. Velasco

The *Philippine Development Plan 2017–2022* (PDP) underscores “building a future where every Filipino enjoys a *matatag, maginhawa at panatag na buhay*” (NEDA 2017, p. 11). A critical bedrock to the plan is to “implement strategic infrastructure programs and projects” (p. 40) where water supply and sanitation investments play an essential role.

This *Policy Note* discusses the current landscape of local water service delivery and determines whether this facilitates or hinders the attainment of the PDP goals. It does this by examining the issues in the water sector’s institutional arrangements and identifying gaps and overlaps in regulation.

Data from this Note were derived from a study that employed a mixed-method approach. A sequential explanatory approach was used to distill information from various reports of the relevant regulatory bodies.

Qualitative methods, such as key informant interviews with the Local Water Utilities Administration (LWUA) and the Philippine Association of Water Districts, and desk research provided the needed on-the-ground, regulatory, and industry context of the issues.

















Salient Points:

- *The fragmented structure of the water sector is evident on two fronts—conflict in regulation and lack of investment coordination.*
- *There are inconsistencies in the technical operating standards that regulatory agencies require, resulting in nonuniform levels of service across the country.*
- *The fragmented structure results in multiple water supply utilities operating in the same areas, making some water supply investments redundant.*

Water supply provision

Eight laws govern the Philippine water sector. Among these, the Water Code of the Philippines is the basic law that regulates the ownership, appropriation, utilization, exploitation, development, conservation, and protection of water resources (NWRB 1976; PD 1067). These enabling laws gave rise to several water-related agencies created to regulate and implement water supply services delivery. Overlapping mandates and functions were observed in policy planning, data monitoring, infrastructure, and program development, as shown in Figure 1.

Figure 1. Fragmented and overlapping range of functions of Philippine water-related agencies

Philippine Water-related Agencies	Functional Areas								
	Policy Planning	Data Monitoring	Scientific Modelling	Infra and Program Development	Operations of Water Facilities	Regulatory Functions	Financing	Public Relations, Capdev't and IEC	Local RBO Development
 NWRB	●	●		●		●		●	
 LWUA	●	●		●		●	●	●	
 DENR	●	●		●		●	●	●	●
 LGUs	●	●		●	●	●	●	●	
 DPWH	●	●		●	●			●	
 DOH	●	●		●		●		●	
 NIA	●	●		●	●			●	
 NAPOCOR	●	●		●	●			●	
 PAGASA	●	●	●	●				●	
 DOF	●						●	●	
 MWSS	●	●		●	●	●		●	
 DILG	●	●		●				●	
 DOE	●	●		●		●		●	
 MMDA	●	●		●	●	●		●	
 DOT				●				●	
 LLDA	●	●	●	●		●		●	

CapDev't = capacity development; IEC = information, education, and communication
 Source: Rola et al. (2015)

As of 2015, 87.7 percent of the national population had access to water supply, with around 12.4 million people living waterless (NEDA 2019). Furthermore, only 43.6 percent of the population were supplied through piped household connections (Level III). The rest of the population (11.2%) accessed water from communal faucets (Level II) and point sources (Level I) like shallow

wells (45.2%). Figure 2 shows the distribution of the 21,972 water service providers as of September 2020. Of these, only 5,853 provide Level III water service.

Most water service providers have small or limited service areas and serve a small percentage of the population. For example, barangay water and sanitation

associations (BWSAs) and rural waterworks and sanitation associations (RWSAs) are community-based organizations covering one to several barangays in a municipality or city, with limited to no plans of expansion. Table 1 provides a summary of these implementation entities.

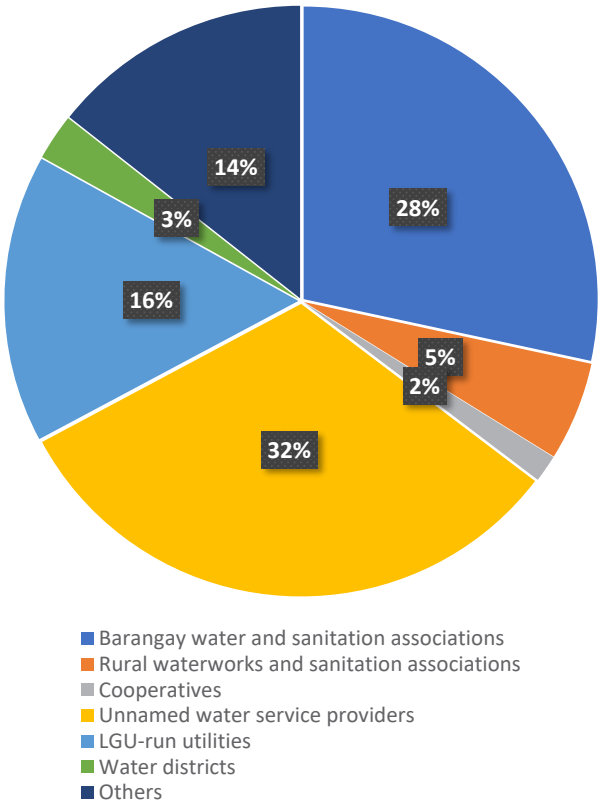
Oversight agencies

There are two primary regulatory agencies for water service providers: LWUA and the National Water Resources Board (NWRB).

Established by Presidential Decree (PD) 198 and amended by PD 768, LWUA serves as “a specialized lending institution for the promotion, development, and financing of local water utilities”. In the implementation of its functions, it shall:

- “prescribe minimum standards and regulations to assure acceptable standards of construction materials and supplies, maintenance, operation, personnel training, accounting, and fiscal practices for local water utilities;
- furnish technical assistance and personnel training programs for local water utilities;

Figure 2. Distribution of water service providers as of September 2020



LGU = local government unit
Source: NWRB (2020a)

Table 1. Water supply service providers by management type

Major Groups	Management Type	Description
Water districts	Water district	A quasi-public corporation formed by the LGU under the Provincial Water Utilities Act for the operation and maintenance of water supply and wastewater management system and has been issued a Certificate of Conditional Conformance by LWUA.
LGU-run utilities	LGU-run utilities	A water supply system owned and operated by the provincial, city, or municipal government.
Community-based organizations	Barangay water and sanitation association	A nonstock and nonprofit organization that owns, operates, and maintains a water system and sanitation facilities in the barangay.
	Rural water supply association	A nonstock and nonprofit organization formed by a group of persons in a defined area, such as a street, a group of houses, a <i>sitio</i> , or a <i>purok</i> , to establish and maintain water supply and sanitation.
	Cooperative	A membership organization formed under the Cooperative Code of the Philippines to operate and maintain water supply systems and is registered with the CDA.

LGU = local government unit; LWUA = Local Water Utilities Administration; CDA = Cooperative Development Authority
Source: NEDA (2019)

- monitor and evaluate local water standards; and
- effect system integration, joint investment and operation, district annexation, and de-annexation whenever economically warranted” (Section 50, PD 198, as amended by Section 22, PD 768).

Meanwhile, the NWRC, the predecessor agency of NWRB, was established through PD 424. Several executive orders shaped the mandate, scope, and functions of NWRB. In its current form, NWRB has three primary mandates:

- policy formulation and coordination within the framework of Integrated Water Resources Management (IWRM);
- water resource regulation through the issuance of water permit and resolution of water use conflicts; and
- regulation of water service providers through the issuance of Certificate of Public Convenience or

Certificate of Public Convenience and Necessity and setting of water tariffs of these water utilities (NWRB 2020b).

Key findings

Conflicting regulations

There are three categories of water sector regulation: resource, technical, and economic regulation. Table 2 shows the overlaps and conflicts in the regulatory functions of NWRB and LWUA.

NWRB has full powers over water resource regulation. This power is also recognized across different water service providers. However, there are apparent conflicts in regulatory scope in terms of technical and economic regulation. NWRB’s Memorandum Circular 2019-001

Table 2. Regulators for each water service provider

Water Service Provider	Resource Regulation ^a	Technical Regulation ^b	Economic Regulation ^c
LGU-run utilities	NWRB	LGU Code (RA 6170) but NWRB provides optional coverage (NWRB MC 2019-001)	
Water districts	NWRB	LWUA (PD 198) but NWRB provides optional coverage (MC 2019-001)	
BWSA	NWRB	NWRB	
RWSA	NWRB	Competing mandates between LWUA (EO 124) and NWRB (MC 2019-001)	
HOA, Other private utilities	NWRB	NWRB	
Private partners in PPP projects	NWRB	PPP Partner (LGU, Water District, Economic Zone)	
	NWRB	PEZA / TIEZA / BCDA / SBMA but NWRB provides optional coverage (MC 2019-001)	

^a allocation and issuance of water permits; ^b setting of minimum performance standards; ^c setting of water rates; LGU = local government unit; BWSA = Barangay Water and Sanitation Association; RWSA = Rural Water Supply Association; HOA = Homeowner’s Association; PPP = public-private partnership; NWRB = National Water Resources Board; LWUA = Local Water Utilities Administration; PEZA = Philippine Economic Zone Authority; TIEZA = Tourism Infrastructure and Enterprise Zone Authority; BCDA = Bases Conversion and Development Authority; SBMA = Subic Bay Metropolitan Authority; RA = Republic Act; PD = Presidential Decree; MC = Memorandum Circular; EO = Executive Order

Source: Author’s compilation from NWRB Memorandum Circular 2019-001, PD 198, RA 7500, and charters of PEZA, TIEZA, BCDA, and SBMA

opened the opportunity for government entities to voluntarily subject themselves to NWRB’s economic regulation. While this will ensure the harmonization of tariff principles across water service providers, implementing this may pose some problems. First, it is unclear whether local government units (LGUs) and water districts opting for NWRB regulation will be subjected to the NWRB’s technical regulation. Economic and technical/operational standards are intertwined and interdependent. Technical regulation directs water utilities to follow certain standard quality of operations, which drive the nature of capital investments that water utilities will implement. Such capital investments will then affect the water rates that will be considered in economic regulation. Second, it is unclear whether LWUA and the local legislative councils have the legal capacity to provide consent on this arrangement. Both institutions have regulatory mandates under their respective enabling laws, and ceding these powers may result in a legal breach.

Another clear overlap is in the regulation of RWSAs. LWUA inherited the power to regulate RWSAs under Executive Order 124, which gave it the mandate to exercise oversight. LWUA, however, has been remiss in its oversight of RWSAs. This was confirmed by there being no specific guidelines for technical nor tariff regulation of RWSAs.

Inconsistent economic and technical regulatory rules

There are varied technical standards across regulators with some missing critical standards like water pressure, customer feedback, and efficiency measures. There are also nonaligned standards like nonrevenue water targets and water availability, as shown in Table 3. These inconsistencies affect the quality and delivery of the water service.

Monitoring operational efficiency and spending prudence is vital since operating costs are the primary determinant

Table 3. Nonalignment of technical operating standards of LWUA and NWRB

Technical Standard	LWUA	NWRB
Nonrevenue water	Less than or equal to 30%	Less than or equal to 25%
Collection efficiency	Must be greater than 90%	-
Capital expenditure (CAPEX)	Actual implementation of scheduled CAPEX	-
Reserves	Actual amount of reserves compared to approved capital outlay budget	-
Current ratio	At least 1.50:1	-
Net income	Positive net income for the past 12 months	-
Staff productivity Index	Ratio of water district employees to active connections	-
Water availability	Percent of households enjoying 24 by 7 water service	Greater than or equal to 12 hours per day
Operating ratio	-	Less than or equal to 80%
Customer feedback	-	Satisfied customers greater than 80%
Water pressure	-	Gradually increase per plan

Note: “-” means none or missing
Source: Author’s compilation from LWUA Memorandum Circular 011-2018 and NWRB Memorandum Circular 2019-001

for water rates charged to the public. Inefficiency and wastage may be priced in and passed on to consumers without a clear and consistent technical benchmark. Thus, there should be more stringent and nationally aligned technical standards to ensure fairness and greater transparency in charging water rates.

Ensuring uniform standards will also facilitate the allocation of funding support to various regions of the country. Since these regulators impose different operating standards, water service providers will also perform differently across the country. With a common yardstick and common public service objective, performing and nonperforming water utilities can be identified, and resources can be deployed to areas where they are needed.

Overlap in investments among various entities

There is no single agency responsible for water service delivery nationwide. Water resource management and development falls within the ambit of the Department of Environment and Natural Resources and NWRB, but water supply for domestic consumption is provided by water districts, LGUs, and private water utilities. Under

this setup, only 50 percent of the country’s households have Level III connections, with some regions lagging and poor LGUs challenged to provide water due to funding constraints (NEDA 2019). This calls for a more coordinated local and regional planning on water supply infrastructure to improve water service.

Due to lack of coordination, multiple water supply utilities operate in the same areas, resulting in inefficient use of funding and redundant investments. For example, Taytay, Palawan, has both a water district and an LGU-run water utility. (Taytay, Palawan Water System Management Operating Office). In this case, there are overlaps in the coverage area and, therefore, duplication in investments.¹ Table 4 shows examples of other LGUs with multiple operators. While these water service operators may serve different areas within a city or municipality, they do not benefit from potential collaborative investments that may be more efficient due to economies of scale.

¹ Interview of the author and Dr. Justine Sicat, PIDS research fellow, with Mr. C. Santos Jr., General Manager of Santa Maria Water District, on October 19, 2020.

Table 4. Examples of Municipalities with more than one water service provider

Municipality	Water District	LGU-run	Others
Urbiztondo, Pangasinan	Urbiztondo Water District	Malayo Urbiztondo Water Utility	None
Alcala, Cagayan	None	Alcala Municipal Water System	Pinopoc, Alcala (BWSA)
Baler, Aurora	Baler Water District	Multiple barangay water systems	Multiple BWSAs
Liliw, Laguna	None	Liliw Waterworks System	Laguna AAA Water Company (private, province-wide), multiple BWSAs

LGU = local government unit; BWSA = barangay water and sanitation association
Source: NWRB (2020)



Ways forward

This *Policy Note* has looked into the Philippine water sector’s fragmented nature, which resulted in regulatory conflicts and lack of investment coordination. These issues will hinder the attainment of the *Philippine Development Plan*. Below are some recommendations to address these issues.

- Clarify conflicting and overlapping regulatory mandates that cause different rules and varying application and implementation of water rates. By streamlining and unifying regulations, the government can hone its regulatory knowledge and apply uniform rules nationwide. This will result in the harmonization of water rate-setting formulas and ensure that all consumers benefit from the same principles of prudence and operating efficiency. The government needs to reconcile PD 198, Republic Act 7160, and Memorandum Circular 2019-001. A quick fix is to amend NWRB’s memorandum circular to clarify overlaps. Legislation may be needed to consolidate various rules and regulations.
- Align the formulation of technical regulation and operating standards. A unified level of standards and operating efficiency will improve water service delivery. Uniform key performance indicators (KPI) will ensure alignment in water service providers’ capital investment plans and objectives. Moreover, alignment in KPIs will also guide investment planning nationwide. With uniform objectives, funding allocation will be more efficient since it is clear whether one area is strong on one KPI or weak on another.
- Assign a central coordinating body to keep track of KPIs, investments, and funding needs of water supply entities nationwide. Investment coordination is vital to avoid duplication of investments in the same city or municipality. Not all duplications are inefficient as there could be multiple water service providers in a municipality but servicing different barangays. However, there should be proper monitoring to ensure this, which a central coordinating body should perform.

References

- Executive Order 124. 1987. Reorganizing the Ministry of Public Works and Highways, redefining its powers and functions. Manila, Philippines: Office of the President of the Republic of the Philippines.
- Local Water Utilities Administration (LWUA). 2018. Memorandum Circular 011-18. Key performance indicators (KPIs) to monitor water district performance. Quezon City, Philippines: LWUA.
- National Economic and Development Authority (NEDA). 2017. *Philippine Development Plan 2017–2022* Abridged Version. Pasig City, Philippines: NEDA.
- . 2019. *Philippine Water Supply and Sanitation Master Plan 2019–2030*. Pasig City, Philippines: NEDA.
- National Water Resources Board (NWRB). 2019. Memorandum Circular 2019-001. Economic regulatory framework (light-handed regulation). Quezon City, Philippines: NWRB.
- . 2020a. *Listahang tubig*: A national survey. <http://listahangtubig.cloudapp.net/> (accessed on September 15, 2020).
- . 2020a. NWRB mandate. <https://nwr.gov.ph/index.php/transparency/mandates-and-functions> (accessed on September 15, 2020).
- Presidential Decree 198. 1973. Provincial water utilities act. Manila, Philippines: Office of the President of the Republic of the Philippines.
- Presidential Decree 424. 1974. Creating a National Water Resources Council. Manila, Philippines: Office of the President of the Republic of the Philippines.
- Presidential Decree 768. 1975. Amending Presidential Decree 198. Manila, Philippines: Office of the President of the Republic of the Philippines.
- Presidential Decree 1067. 1976. The water code of the Philippines. Manila, Philippines: Office of the President of the Republic of the Philippines.
- Republic Act 6234. 1971. An act creating the Metropolitan Waterworks and Sewerage System and dissolving the National Waterworks and Sewerage Authority; and for other purposes. Manila, Philippines: Congress of the Philippines.
- Republic Act 7160. 1991. The local government code of 1991. Manila, Philippines: Congress of the Philippines.
- Republic Act 7227. 1992. Bases conversion and development act of 1992. Manila, Philippines: Congress of the Philippines.
- Republic Act 7916. 1995. The special economic zone act of 1995. Manila, Philippines: Congress of the Philippines.
- Republic Act 9593. 2009. The tourism act of 2009. Manila, Philippines: Congress of the Philippines.
- Rola, A.C., J.M. Pulhin, G.Q. Tabios III, J.C. Lizada, and M.F. Dayo. 2015. Challenges of water governance in the Philippines. *Philippine Journal of Science* 144(2):197–208.

Contact us

Address: Research Information Department
Philippine Institute for Development Studies
18/F Three Cyberpod Centris - North Tower
EDSA corner Quezon Avenue, Quezon City

Telephone: (+63-2) 8877-4000

Email: publications@mail.pids.gov.ph

Website: www.pids.gov.ph

PIDS Policy Notes are analyses written by PIDS researchers on certain policy issues. The treatise is holistic in approach and aims to provide useful inputs for decisionmaking.

Lawrence G. Velasco is a consultant at PIDS. The views expressed are those of the author and do not necessarily reflect those of the PIDS or any of the study's sponsors.