

PHILAMER C. TORIO, PH.D



METRO MANILA'S WATER PRIVATIZATION: MAKING SENSE OF THE SO-CALLED 'ONEROUS' PROVISIONS

stratbase



ADRI PUBLICATIONS

The Stratbase ADR Institute for Strategic and International Studies (ADRI) is an independent strategic research organization with the principal goal of addressing the issues affecting the Philippines and East Asia through:

1. Effecting national, regional, and international policy change or support
2. Fostering strategic ideas based on cooperation and innovative thinking
3. Providing a regional venue for collaboration and cooperation in dealing with critical issues in East Asia; and
4. Actively participating in regional debates and global conversations

With its international focus, ADRI believes that Philippine regional security and development can be achieved through the cooperation of the public and private sectors.

ADRI traces its roots to the Stratbase Research Institute (SRI) established in 2004. SRI focused on providing strategic solutions to domestic governance, socio-economic, and other policy concerns. It aimed to contribute to Philippine development through research and responsive policy alternatives.

As SRI sought solutions, East Asia's affairs frequently inserted themselves into the equation. There was and is a clear relation between domestic and regional affairs; movement in one reverberates in the other.

METRO MANILA'S WATER PRIVATIZATION

MAKING SENSE OF THE SO-CALLED 'ONEROUS' PROVISIONS

WRITTEN BY
PHILAMER C. TORIO, PH.D



+ADRI PUBLICATIONS

Manila, Philippines

Stratbase ADRI

Albert Del Rosario Institute for Strategic and International Studies

Copyright © 2020

A Publication of the Stratbase Albert Del Rosario Institute for
Strategic and International Studies

Stratbase ADRI Website: www.adrinstitute.org

Facebook: <https://facebook.com/stratbaseadri/>

Twitter: <https://twitter.com/stratbaseadri/>

All rights reserved. Without limiting the rights under copyright reserved above, no part of this publication may be reproduced, stored in or introduced into a retrieval system, or transmitted, in any form or by any means (electronic, mechanical, photocopying, recording or otherwise), without the prior written permission of the Institute, except in the case of brief quotations embodied in critical articles and reviews.

The views, opinions and conclusions expressed in this paper are those of the author and do not necessarily reflect those of the Institute or any of its officers and trustees.

The author is solely responsible for its content.

For information, address ADRI Publications:
9F 6780 Ayala Avenue, Makati City 1200

Design by Carol Manhit
Text set in 11 type Minion Pro

Printed in the Philippines by Rex Publishing
Manila, Philippines

ABOUT THE ORGANIZATION

Victor Andres “Dindo” C. Manhit is the President of Stratbase Albert Del Rosario Institute for Strategic and International Studies. Concurrently, he is Philippine Country Head of the renowned BowerGroupAsia (BGA). He was a former Chair and recently retired Associate Professor of the Political Science Department of De La Salle University. Among the government positions he held include Undersecretary for External Affairs and Special Concerns of the Department of Education, Culture and Sports and Deputy Secretary for Administration and Financial Services of the Philippine Senate. Meanwhile, his legislative experience encompasses the 8th, 9th, 10th, and 12th Congress as the Chief of Staff of the late Former Senate President Edgardo Angara and senior policy research adviser in key senate committees.

BOARD OF TRUSTEES

Ambassador Albert del Rosario was the Secretary of Foreign Affairs of the Philippines from 2011 to 2016. He also served as Philippine Ambassador to the United States of America from 2001 to 2006. Prior to entering public service, Amb. Del Rosario was on the Board of Directors of over 50 firms. He received numerous awards and recognition for his valuable contributions to the Philippines and abroad.

Manuel V. Pangilinan is CEO and managing director of First Pacific Company Limited. He is also the chairman of Metro Pacific Investments Corp., Philippine Long Distance Telephone Company, Manila Electric Co. (Meralco), and Smart Communications, among others. He is a recipient of several prestigious awards including the Ten Outstanding Young Men of the Philippines (TOYM) Award for International Finance in 1983 and the Presidential Pamana ng Pilipino Award by the Office of the President of the Philippines in 1996.

Edgardo G. Lacson is an honorary chairman of the Philippine Chamber of Commerce and Industry (PCCI). He is the Chairman of the Employers Confederation of the Philippines. He holds numerous leadership positions in various companies. He served as a Director of The Philippine Stock Exchange, Inc. and is an Honorary Member of the Rotary Club-Diliman.

Benjamin Philip G. Romualdez is the former president of the Chamber of Mines of the Philippines. He also holds, among others, the following positions: Chairman of MST Management, Inc., President of Oxford University and Cambridge University Club of the Philippines, Director at Philippine-Australia Business Council (PABC), Trustee/Vice President of Doña Remedios Trinidad Romualdez Medical Foundation, Inc, and Trustee/Vice President of Dr. Vicente Orestes Romualdez (DVOR) Educational Foundation, Inc.

Ernest Z. Bower is a senior adviser for Southeast Asia at the Center for Strategic and International Studies (CSIS), having founded the first chair for the region. He is CEO of BowerGroupAsia (BGA) and a leading expert on Southeast Asia.

Renato C. de Castro, Ph. D is a full professor of international studies at De La Salle University – Manila (DLSU). In 2009, Dr. de Castro became the U.S. State Department ASEAN Research Fellow from the Philippines and was based in the Political Science Department of Arizona State University. A consultant in the National Security Council of the Philippines during the Aquino administration, he has written over 80 articles on international relations and security.

Judge Raul C. Pangalangan, Ph. D is a judge of the International Criminal Court. He was previously the dean of the University of the Philippines College of Law and publisher of the Philippine Daily Inquirer. He has taught in many universities around the world, such as Melbourne University, Hong Kong University, and Harvard Law School.

Epictetus E. Patalinghug, Ph. D is a professor emeritus at the Cesar E.A. Virata School of Business, University of the Philippines (UP), Diliman. He received his doctorate degree in Agricultural Economics from the University of Hawaii. His works have been featured in various publications around the world.

Francisco A. Magno, Ph. D is the executive director of the Jesse M. Robredo Institute of Governance and former President of the Philippine Political Science Association. He is a professor of political science at DLSU and previously served as Chair of the Political Science Department and Director of the Social Development Research Center.

Carlos Primo C. David, Ph. D. is a licensed geologist and professor in UP Diliman having obtained his PhD in Environmental Science and Geology from Stanford University. He is a former Executive Director of DOST-PCIEERD. A project leader of the DOST's Project NOAH, Dr. David pioneers short term rainfall forecasting in the country and climate change-related research on water resources.

CONTENTS

Introduction	1
Despite the conciliatory stance taken by the private water firms, as evidenced by their offer to no longer pursue these arbitral payments, President Duterte announced in December 2019 that he would cancel the water concessions unless certain “onerous” provisions of the concession agreements were removed	
History of Water Provision in Metro Manila	3
During the early years of the Spanish occupation, Manila residents collected water from nearby streams, aside from rainwater and water from surface wells, which they stored in jars and loaded into small boats for transport to their homes	
Metro Manila’s Water Privatization	8
Metro Manila’s water privatization has been operating for more than 22 years, a remarkable feat in the global water privatization discourse, such longevity is also a testament to the concession agreements binding both the government and the two private water concessionaires	
Financing PPPs: Project Finance	22
Each concession company was just a shell company without any track record in water utility operations, construction, and loan repayments. Essentially, the main asset of the company was the concession agreement, the provisions of which, the government’s privatization team hoped would address not only the concerns of the bidders but those of the lenders as well. Given such a scenario, how then would project sponsors finance a water privatization project?	
Project Finance Loan for Metro Manila’s Water Privatization	31
The loan’s security package focuses on the company’s cash flows, as well as the accompanying rights that enable generation of those cash flows, to ensure debt service payments. As physical assets are of no value to the creditors if not used for water provision	

CONTENTS

Making Sense of the So-Called “Onerous” Provisions	38
While the country already had power privatization projects in place, there was practically no benchmark for the Metro Manila water privatization in the Philippines, or elsewhere in the region. In particular, the political, contractual, and regulatory risks may have been concerns for foreign investors and creditors	
Conclusion	47
The level of investments made would not have been possible without putting into place the necessary debt financing at the onset of the privatization program. As financing is done on a project finance basis, negotiating these types of loans has always been a complex and difficult task. Yet, for almost a generation, these loans have made possible the continuously delivery of much-needed water services to Metro Manila residents	
Appendix	51
References	58
Acknowledgments	
About the Author	

ABSTRACT

Towards the end of 2019, the Philippine government threatened to cancel the concession agreements governing Metro Manila's water privatization unless certain "onerous" provisions were removed. The paper examines the so-called "onerous" provisions against the history and track record of the privatization program, the requirements of project finance, the financing mode for privatization / Public-Private Partnership (PPP) projects, and the actual provisions of a project finance loan for the program. Viewing the program from an operating and financial lens, the paper tries to make sense of these provisions in the context of the program's performance over the last 22 years.

In underscoring the impact and logic of Metro Manila water privatization, the study discussed the positive difference between scope and services, efficiency, productivity programs, and comparative financial results before and after privatization. Moreover, the considerations needed to be factored in water privatization and concession contracts such as operational, financial, and capital investments, and the water concessionaires' continuing due diligence activity in terms of technical, financial & legal aspects were likewise all accounted for in varying lengths.

After a little more than two decades, around 16.4 million people in 37 cities and municipalities now enjoy 24-hour supply of water; where a higher level of standard and quality now prevails in the provision of urban water services. Success is also seen on implementing best practices in water utility operations and on establishing an enabling policy and regulatory environment. Cognizant of future negotiations about the contract, any dialogue or consultation in this regard must be conducted with full cooperation, transparency and mutual trust between partners whose main objective is arriving at a mutually beneficial proposition.

METRO MANILA'S WATER PRIVATIZATION: MAKING SENSE OF THE SO-CALLED "ONEROUS" PROVISIONS

PHILAMER C. TORIO, PH.D

On March 7, 2019, about 6.8 million residents in the eastern part of Metro Manila suddenly found their households with low water pressure or no water at all (Rivas, 2019a). Such water supply conditions would last for several weeks, causing tremendous hardships for a consumer base that has already been accustomed to enjoying a continuous supply of water on a daily basis. Believing that the water crisis was artificial and intentionally created to justify tariff increases, an angered President Rodrigo Duterte warned the private water concessionaires of terrible consequences if water did not flow from household taps soon enough (CNN Philippines, 2019a, ABS-CBN News, 2019). To make matters worse, the Singapore-based Permanent Court of Arbitration granted arbitral awards worth PhP 10.8 billion to the concessionaires, when the court ruled against the government for disallowances on tariff increases requested by concessionaires (Lopez, 2019; Valiente, 2019). Despite the conciliatory stance taken by the private water firms, as evidenced by their offer to no longer pursue these arbitral payments (Rivas, 2019b), President Duterte announced in December 2019 that he would cancel the water concessions unless

certain “onerous” provisions of the concession agreements were removed (Aurelio, 2019; Romero, 2019). Threatening the firms’ owners with arrest and imprisonment for the case of economic sabotage, the President demanded that the concessionaires should simply accept the amended contract prepared by the government (Aurelio, 2019; Romero, 2019). While it seems that no new contract has been presented to the concessionaires (see Simeon, 2020), the following provisions are those deemed onerous by the government, as stated by the President and the Secretary of Justice during several speeches and interviews:

- Prohibition against the national government from interfering with rate setting
- Indemnification of the concessionaire by the national government for losses arising from such interference
- Financial liability of the national government for early contract termination
- Inclusion of corporate income tax payments as expenses that can be charged to the consumers
- Extension of the concession agreements by another 15 years (until 2037) way before contract expiration (Panaligan, 2019; San Juan, 2019; ABS CBN News, 2019b; Simeon, 2020)

The first three provisions mentioned can be found in Exhibit D (Sections 2 and 4) of the concession agreements signed by Metropolitan Waterworks and Sewerage Systems (MWSS) and the two concessionaires, the fourth contested provision relates to the definition of allowable “expenditures” for the concessionaires (MWSS, 1997a, 1997b), while the last one is found in the concession agreement extension that was signed in 2009 (MWSS, 2009). Appendix A provides a copy of Exhibit D of the concession agreements.

This paper examines the Metro Manila water privatization to determine the rationale for the inclusion of these provisions in the concession agreements. It does not discuss and more so, does not make any attempt to ascertain whether or not these provisions are indeed onerous, as such a determination is more within the purview of the legal experts. Given that these provisions will be the subject of further dialogues between the government and the two private water concessionaires, the paper does not also proffer any recommendations with respect to the conduct of these dialogues. The paper is a product of an academic research that seeks to comprehend the logic and value of these provisions as regards the concession agreements that govern Metro Manila's water privatization. Towards this end, the first section looks at the history of urban water provision from the Spanish colonial era to the present, followed by a comprehensive review of the privatization program. The next two sections discuss the concept of project finance, the type of financing used for privatization / PPP projects, and explain major provisions of a project finance loan for Metro Manila's water privatization. The succeeding section puts into context the so-called "onerous" provisions vis-à-vis the privatization program that has been in place for over 22 years while the last section concludes the paper.

History of Water Provision in Metro Manila

During the early years of the Spanish occupation, Manila residents collected water from nearby streams, aside from rainwater and water from surface wells, which they stored in jars and loaded into small boats for transport to their homes (see Figure 1). In



Figure 1 . Drinking Water Supply for Early Manila Residents

Source: Photo taken by Author (2014). Painting' entitled "Tinajas" depicting early Manila residents carrying jars of water collected from nearby streams and loading them in bangkas for transport to their homes.

1690, Father Juan Peguero, a Dominican friar, developed a crude distribution network composed of an open aqueduct and a small navigable canal to deliver water coming from a spring behind the San Juan monastery. However, this network covered only a limited area and required residents to walk long distances in order to reach different watering points in the system. In 1743, Francisco Carriedo Y Peredo, a retired Captain-General, bequeathed PhP 10,000.00 to the City of Manila as initial funding for the construction of a water supply system that would deliver water straight to the households of the city's residents (Metropolitan Water District [MWD], 1940).

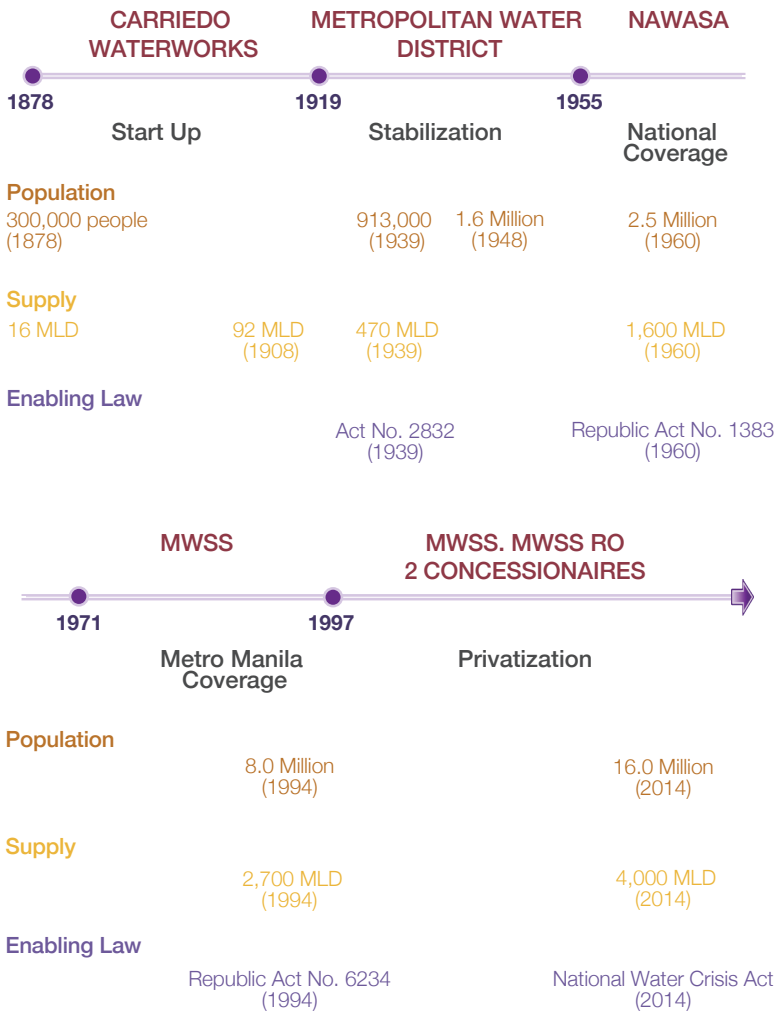
Start-Up

It would take about 135 years though (from 1743 to 1878) before the city government would be able to build Asia's first centralized water system out of the seed capital initially provided. Known as the Carriedo Waterworks, it was built at a cost of PhP 745,509.00 and was capable of supplying 16 million liters per day [MLD] of water to 300,000 residents (MWD, 1940; Metropolitan Waterworks and Sewerage System [MWSS] 2013). Marikina River served as the main source of water, which was pumped to the San Juan reservoir and then delivered by gravity to Manila households. In 1909, the capacity of the system was increased to 92 MLD with the construction of the Wawa Dam and a 224-million liter reservoir in San Juan (MWSS, 2013). Figure 2 presents a timeline for water provision in Metro Manila. For a complete summary, please see Annex B.

Stabilization

Ten years later, the government established the Metropolitan Water District to provide adequate water supply and sanitation services for the City of Manila as well as the 14 adjoining municipalities of

Figure 2 . Water Provision in Metro Manila:
Timeline for the Centralized Water System



Adopted from: Torio (2016). Metro Manila's water provision has undergone several transformations over the last century and a half

Rizal Province. In the process, the Carriedo Waterworks became part of the expanded urban water infrastructure system (MWD, 1940). Between 1924 and 1944, MWD tapped the Angat River as the main source of water supply for the metropolis by developing the Angat-Novaliches System, which consisted of the Ipo Dam and its conveyance system, a 36-billion liter impounding system in Novaliches, a 40-million liter treated water reservoir in San Juan, and a filtration plant in Balara. During the post-war era, a period of economic expansion and population growth, there was a surge in urban domestic water demand, which prompted the construction of new raw water supply aqueducts, expansion of the Balara plant, as well as installation of new storage reservoirs and distribution mains (MWSS, 2013).

National Coverage

In 1955, the Philippine Congress passed Republic Act No. 1383, creating the National Waterworks and Sewerage System [NAWASA], which took over MWD and all of the local government water systems. With this Act, the provision of water and sewerage services was centralized for the entire country. In 1962, NAWASA and the National Power Corporation signed an agreement for 2,000 MLD supply of water from the Angat Dam, then still being constructed at that time. In preparation for the additional volume of water supply, NAWASA borrowed US\$ 20.2 million from the International Bank of Reconstruction to increase capacities for distribution and water treatment of its Balara plants (MWSS, 2013).

Metro Manila Coverage

Adopting a new water governance policy, the Philippine Congress subsequently passed Republic Act No. 6234 in 1971,

which essentially dissolved NAWASA, created the Metropolitan Waterworks and Sewerage System (MWSS) to service the water and sewerage needs of greater Metro Manila, and returned the municipal water systems to their respective local government units. Based on congressional records, it appears that the centralization and decentralization policies for water provision were meant to solve the age-old problems of operational inefficiency, mismanagement, and rent-seeking practices of public officials. Moving into the 1980s, MWSS implemented projects to reduce system losses and build another treatment plant at the La Mesa Dam, increasing overall treatment capacity by 1,500 MLD. In 1991, MWSS started the Umiray - Angat Transbasin Project, with the goal of increasing Metro Manila's water supply by 800 MLD (MWSS, 2012a; MWSS 2013).

Privatization

In yet another policy shift, the Philippine government privatized the operations of MWSS in 1997, given persisting conditions of high non-revenue water [NRW] levels, low water pressure, and intermittent water supply (MWSS Regulatory Office [MWSS RO], 2004). At that time, cash flows from operations were minimal, thus necessitating extensive MWSS borrowings and government support to operate, maintain, and expand the water system. The next section provides more details about Metro Manila's water privatization.

Metro Manila's Water Privatization

Like other developing countries, the Philippine government implemented private sector provision of water services in an

effort to increase operating efficiency in the sector and reduce the government's fiscal burden related to water infrastructure development (see Araral, 2009). Specifically, the main objectives of Metro Manila's water privatization were to increase water and sewerage coverage, which then stood at 67% and 8%, respectively; improve operating efficiency, particularly as regards the high system losses;² and relieve the national government of the fiscal burden of investing US\$ 5 to 7 billion over the next 25 years. Aside from these benefits, the privatization program was projected to generate about PhP 107 billion in tax revenues for the government (International Finance Corporation [IFC], 1996a). The success of a similar program in the power sector further reinforced the decision to privatize Metro Manila's water provision, not to mention the strong push by the International Finance Corporation and the multinational water firms to implement the program (Dumol, 2000). Privatization programs in the power and water sectors were seen as solutions to the country's then prevailing water and energy crises. In preparation for private service provision in these sectors, the government enacted the Electric Power Crisis Act, Build-Operate-Transfer Law, and the National Water Crisis Act, which provided the political and legal bases for these programs as well as the frameworks to expedite their implementation (Torio, 2016, 2018).

Pre-Privatization Scenario

Prior to privatization, MWSS was providing water and sewerage services to only 67% of the 10.9 million residents in its service area, which covered 8 cities and 29 municipalities³ within the National Capital Region, the Rizal province and a portion of the Cavite province. Water supply averaged only 17 hours per day for 825,000

service connections, of which 7.5% were community standpipes (IFC, 1996b). Non-revenue water, water lost in the system due to leakage and pilferage, was also very high, estimated at a level of 58% (Asian Development Bank [ADB], 1997). This meant that of the 2,800 MLD of water supplied to the system, only 42% were billed to the consumers. Note that the high accounts receivable level at that time meant that not all of the billed revenues were collected. In addition, MWSS had 7,985 employees, which translated to almost 10 persons per 1000 connections, a level higher than the average for similar Asian water utilities (IFC, 1996b). Given the aforementioned state of operations, the government had to infuse into MWSS additional equity of PhP 229 million and PhP 62 million in 1994 and 1995, respectively to ensure continuous provision of water and sewerage services in the metropolis (IFC, 1996a). Like most public

*Table 1 . MWSS Pre-Privatization:
Comparative Performance of Asian Water Utilities*

City	Coverage (%)	NRW* (%)	Water Availability (Hours)	Staff/1,000 Connections Ratio
Manila	67	58	17	9.8
Bangkok	82	38	24	4.6
Kuala Lumpur	100	36	24	1.1
Singapore	100	7	24	2.0
Seoul	100	35	24	2.3
Shanghai	100	14	24	6.1
Average (50 utilities)	81	35- 40	19	11.8

* Non-Revenue Water – system water loss due to leakage and pilferage

Source: (Torio, 2018). Prior to privatization, MWSS was performing below par compared to other Asian water utilities

water service providers, funding for MWSS operations came most from equity rather than debt,⁴ a practice that was unsustainable for the government.

As shown in Table 1, MWSS was faring poorly against water utilities in Bangkok, Kuala Lumpur, Singapore, Seoul, and Shanghai, which had a 24-hour water supply, mostly 100% service coverage, as well as lower NRW and manpower levels. Even if compared to the average performance of 50 Asian water utilities, MWSS performed below par, thus, making it a suitable candidate for privatization in 1997.

Private Water Concessionaires

Four international consortia, comprised of the most diversified Philippine conglomerates and the largest global water companies, participated in the bidding for two water concessions in Metro Manila: Benpres Holdings Corporation – Lyonnaise des Eaux, Ayala Corporation – North West Water, Aboitiz Holdings Corporation – Compagnie General des Eaux, and Metro Pacific Corporation – Anglian Water International (Rivera, 2004). Based on the lowest tariffs offered, the east concession was awarded to Manila Water Corporation, Inc. [MWCI], a company owned by Ayala Corporation, Bechtel Corporation, and United Utilities, Inc. (parent company of North West Water). At the same time, the west concession was won by Maynilad Water Services, Inc. [MWSI], whose shareholders were Benpres Holdings Corporation and Lyonnaise des Eaux (Dumol, 2000). The two local sponsors, Ayala Corporation and Benpres Holdings Corporation, were large Philippine corporations with business interests in property development, banking and financial services, electronics and telecoms, with the latter also having major interests in power generation and distribution, as well as

toll road operations. North West Water, the international operator for the east zone, was a UK-based water and sewerage company operating in the Manchester area while that for the west zone, Lyonnaise des Eaux, was a leading French conglomerate in the field of environmental services (Rivera, 2004). In 2004, the consortium of Maynilad Water Services, Inc. returned the west concession to the government as operational difficulties and the effects of several global crises resulted in accumulated company losses of PhP 8.3 billion since the commencement of the program. After restructuring the company's debt and equity capital, and undertaking a major rehabilitation program, the government was able to re-privatize the west concession through an international auction for the rights to 84% ownership of MWSI (Torio, 2016). Two local infrastructure conglomerates, DMCI Holdings and Metro Pacific Investments (MPIC), won the bid with an offer of more than US\$ 500 million, thus completing the re-privatization of Metro Manila's west zone (ADB, 2008).

Concession Agreement

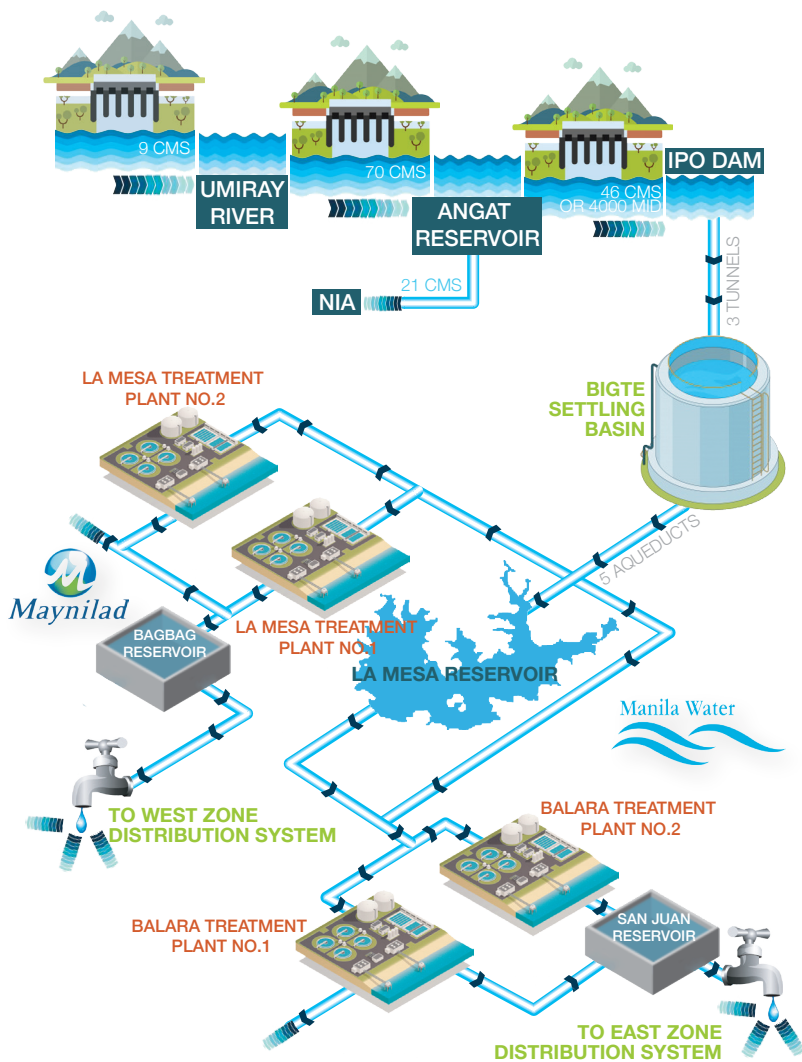
Upon commencement of Metro Manila's water privatization program in July 1997, the two private concessionaires were granted the sole right to manage, operate, repair, and install all assets necessary to provide water and sewerage services in their respective areas of operations. In turn, the concessionaires were allowed to bill consumers directly and collect payments for services rendered. Until 2022, the year the concession agreements expire, the concessionaires will hold legal claims to all properties, plants, and equipment they contributed to the system. Upon expiry, all titles, rights, and interests in those assets would automatically vest in MWSS (MWSS, 1997a, 1997b). During the second-rate

rebasing, the concession period was extended by another 15 years to minimize the tariff increases that would be needed to cover capital investments for new water supply and wastewater projects. These projects included the government's bulk water supply project for Metro Manila as well as the concessionaires' wastewater projects that would assure compliance with the Clean Water Act and the Supreme Court's directive on Manila Bay's clean up and preservation (MWSS, 2009). However, amidst the 2019 water crisis in Metro Manila, the MWSS board of trustees revoked the resolution approving this 15-year extension of the concession period (CNN, 2019b). Whether or not this means that the concession agreements will expire in 2022, still remains unclear.

Metro Manila's Water System

Under MWSS' regulatory control, the private concessionaires provide water and sewerage services to around 16.4 million residents in 21 cities and 16 municipalities of greater Metro Manila area (MWSS, 2012b; MWSI, 2019a; MWCI, 2019a). Figure 3 shows the flow diagram of Metro Manila's water system. About 97% of its water supply comes from the Angat Dam, located 58 kilometers from Metro Manila, while the balance is accounted for by groundwater and water sourced from Laguna de Bay (MWSS, 2012b). MWSI receives 60% of the urban water supply from Angat Dam which it uses to serve 9.6 million consumers (Saulon, 2019a) while MWCI utilizes the balance of 40% to provide water services for 6.8 million consumers (MWCI, 2020). From Angat Dam, the water initially goes to the IPO Dam, where it then flows through three tunnels until it reaches the Bicti Settling Basin. From there, water is conveyed by six aqueducts to the Novaliches – La Mesa Portal, which distributes the water to the La Mesa and Balara

Figure 3 . Metro Manila's Water System



Source: Adopted from (MWSS, 2014). Metro Manila has a "North to South" water supply infrastructure which supplies 4.0 million cubic meters/day to 16.4 million people in 38 cities/municipalities

treatment facilities of MWSI and MWCI, respectively. Excess water from the portal goes to the La Mesa Dam, which will be treated at the Balara plants at a later time. On a daily basis, 4,000 MLD of treated water from the La Mesa and Balara plants are then distributed through 35 pumping stations, 25 reservoirs, and more than 10,000 kilometers of underground pipelines (Japan International Cooperation Agency et al, 2013). With a “North to South” water infrastructure system, water from the north of Metro Manila flows into the households of 16.4 million people on its way to the southern peripheries of the concessionaires’ service areas.

Performance Scorecards: Pre- and Post-Privatization

Like performance scorecards commonly used by the MWSS, private concessionaires, multilateral agencies, and analysts (see MWSS RO, 2004; Wolf, 2007, Wu & Malaluan, 2008; International Finance Corporation, 2010; Fabella, 2011; Rivera, 2014), Table 2 shows the pre- and post-privatization service levels. Despite a mere 48% increase in new water supply since the commencement of the program, the concessionaires were able to increase the number of people served by 125%, through programs that increased service connections by 190%. Note that this new water supply was supplemented by the 36% reduction in non-revenue water, particularly the volume of water that was recovered from leakages. Moreover, households connected to the concessionaires’ networks are able to enjoy a 24-hour supply of water that is of good quality and pressure. Such substantial service level improvements may be attributed to higher operating efficiencies brought about by new management and operating paradigms as well as capital investments worth more than PhP 374 billion (see Bernardo, 2019).

Table 2 . Metro Manila: Pre- and Post-Privatization Service Levels

Service Indicators	1997	2018			% Inc. / (Dec.)
	Pre-Privatization	MWSI (West Zone) ²	MWCI (East Zone) ³	Combined ⁸	
Population Served (Millions)	7.3	9.6 ⁶	6.8 ⁷	16.4	125%
Service Connections, #	825,000 ¹	1,407,503	986,756	2,394,259	190%
Water Supply (Million Liters/Day)	2,800	2,515	1,632	4,147	48%
Non-Revenue Water	58%	30%	11%	22%	(36%)
Water Service Coverage (Population %)	67%	94%	93%	94%	37%
24-Hour Availability	67%	98%	100%	99%	32%
Water Pressure (@ 7 psi)		100%	99% ⁵	100%	
Water Quality		100% ⁴	100% ⁵	100%	

Note: ¹(International Finance Corporation, 1996b); ² Unless otherwise stated, (MWSI, 2019a);

³ Unless otherwise stated, (MWCI, 2019a); ⁴ (MWSI, 2020); ⁵ (MWCI, 2020a);

⁶ (Saulon, 2019a); ⁷ (MWCI, 2020); ⁸ Authors' estimates

Adapted from: Torio (2016, 2018). Regular performance scorecard shows generally improved services provided by the concessionaires in terms of NRW levels, water supply availability, water pressure, and water quality

While water tariff increases may have played a vital role in the attainment of higher profitability levels (as exhibited by net profit margins as well as returns on asset and equity in Table 3), credit must also be given to the concessionaires for initiating efficiency and productivity programs, and investing heavily in capital assets that have resulted in improved water services. Through NRW level reduction and new water service connections, the concessionaires

have managed to increase revenues by 881%. At the same time, they kept operating expenses at 37% of total revenues as compared to MWSS' level of 74%, thus increasing operating and net income margins. Plowing back their earnings and incurring higher levels of borrowings, the concessionaires invested more towards the rehabilitation and expansion of the water networks. The concessionaires' combined debt and equity of PhP 225 billion have made it possible to increase the asset base of Metro Manila's water system by 579%. Though it seems that raising this level of debt was easy for the concessionaires, this was not the case during the first few years of the concession. Nevertheless, getting the loan in place at the early stage is a critical factor in every privatization / PPP project. The succeeding sections examine this matter in more detail. It is important to bear in mind that all of these operational, financial, and capital investment considerations must form part of the discussions pertaining to Metro Manila's water privatization and its concession contracts.

Moving forward, one major factor that may depreciate the service level improvements already in place is the new water supply source needed to address the increasing urban water demand. The 2019 water crisis in Metro Manila may already be an indication of current water demand outstripping available supply. Yet, there is still on-going debate as to who is responsible for developing new water sources. MWSS insists that these types of projects are under its jurisdiction, noting that its program for water resources and infrastructure aims to ensure the availability of new water to meet Metro Manila's water demand starting 2011 (MWSS, 2020a). However, former MWSS officials involved in the water privatization have stated that the concessionaires should be responsible for water source development since they cannot be held accountable for their

Table 3 . Comparative Financial Results: Pre- and Post-Privatization

	1995		2018		
	MWSS ¹	MWSI ²	MWCI ³	Aggregate	% Inc.
Revenues	3,873	21,761	16,234	37,995	881%
Operating Expenses	(2,862)	(9,429)	(4,804)	(14,233)	397%
Operating Income	1,011	12,332	11,430	23,762	2,250%
Net Income	(157)	7,341	6,521	13,862	-
Current assets	4,034	15,720	12,549	28,269	600%
Non-current Assets	28,816	91,732	103,061	194,793	576%
Total Assets	32,850	107,452	115,610	223,062	579%
Current Liabilities	1,758	17,490	21,789	39,279	2,134%
Non-current Liabilities	9,337	41,806	44,115	85,921	8,202%
Total Liabilities	11,095	59,296	65,904	125,200	419%
Total Equity	21,755	48,156	49,706	97,862	1,028%
Debt/Equity Ratio	0.5	1.2	1.3	1.3	-
Net Profit Margin	-	34%	40%	36%	-
Return on Assets	-	7%	6%	6%	-
Return on Equity	-	15%	13%	14%	-

Note: Except for financial ratios, all figures are in million PhP. ¹IFC(1996a),

²MWSI(2019a), ³Author's computations from MWCI(2019a)

Adopted from: Torio (2016). Comparative pre- and post-privatization financial data show higher profitability levels for the concessionaires due to improved operating efficiencies and massive capital investments

service targets without an adequate supply of water (Bernardo, 2013). Things get further complicated when the government flip-flops on the modality for building the structure, which will take several years to complete. A case in point is the Kaliwa Dam, a 600 MLD reservoir that will address Metro Manila's water demand for the next several years.

Located within the Rizal and Quezon provinces, the Kaliwa Dam project was already being bidded out under the government's PPP program prior to the national elections in 2016 (MWSS, 2015). Two international consortia were preparing their bids for the project which would have been completed by mid-2020, had the bidding pushed through. However, the new administration decided to construct the dam using Chinese official development assistance funding in lieu of the PPP option (Garcia, 2019), believing that the former approach would be faster and easier to complete (Oplas, 2017). Until today, project construction has not yet commenced, with MWSS still negotiating for the purchase of the land where the tunnel outlet portal will be built (MWSS, 2020b).

It should be emphasized that the new water source project for Metro Manila has been in the planning stage since the commencement of the program. In fact, the technical and business assumptions used during the bidding for the MWSS privatization stated that the new water source would be aligned by 2007 (MWSS, 1997a, 1997b). Without this new source, conditions of low water pressure or no water supply at all will persist, like what happened during the 2019 water crisis. In such a situation, the efficiency improvements that were put into place through new operating and management paradigms, as well as large capital investments, will be rendered insignificant and worthless.

While the scorecards present significant improvements in

service levels and quality, there is still further need to determine whether or not such improvements in consumer welfare have been experienced by all, particularly those that belong to the marginalized sector of society. Understanding the diffusion of consumer welfare across the socio-economic spectrum is important to Philippine policymakers, especially with respect to complaints of non-governmental organizations, consumer groups, and urban poor organizations about the access and affordability concerns of the poor households. To further define the scope of the paper, please note that it will not delve into the state of equitable water provision for Metro Manila's water privatization. For discussions on the assessment of the privatization program from an equity lens, please see Torio (2016, 2018).

Metro Manila: In the Context of Global Water Privatization

Contextually, Metro Manila's water privatization program may be considered as the largest and longest-running privatization program for a water utility (Torio, 2016). Marin (2009) estimates that private water firms serve only 7% of the urban population in the developing world. In 2006, the Metro Manila and Jakarta water privatizations were acknowledged as having contributed the most number of new connections across all similar privatization programs in the developing world (Hall & Lobina, 2006). However, several years later, Jakarta's privatization would be in disarray and eventually, be forced to stop by a court ruling because of poor service delivery (Hall, 2010, Elyda, 2015). As such, Metro Manila's 16.4 million water consumers would probably constitute a large portion of the urban population still being served by private water firms.

While private sector participation in the water sector grew tremendously in the 1990s, many privatization contracts have been terminated early or not renewed upon their expiration (Gleick et al, 2002; Hall & Lobina, 2006; Castro, 2007; Marin, 2009, Bakker, 2010). Essentially, cancellations increased for all utility sectors, which were affected by the Asian, Russian, and Argentine financial crises, but the highest rate was seen in the water sector, a reflection of its high investment-high risk nature. Furthermore, private water firms moved away from long-term concession agreements and turned to short-term, low-risk contracts, such as management contracts, which required little or no investment (Bakker 2010). Related to this, Hall and Lobina (2006) note that 80% of all water lease and concession contracts in sub-Saharan Africa have already been terminated while Harris and Roa-Garcia (2013) report that most Latin American concessions are no longer operational and several of these countries have already pursued constitutional amendments banning water privatization. Outside of China, there were only six urban domestic water concessions, four of which were in Jakarta and Metro Manila (Hall & Lobina, 2006). Across Europe, there has been a resurgence of public sector delivery of municipal services, most notably, the re-municipalization of water services in Paris, the headquarters of Veolia and Suez, two of the world's largest water multinational companies. Their subsidiaries had provided water services in Paris before the city government took over the water operations in 2010 (Hall, Lobina, & Terhorst, 2013).

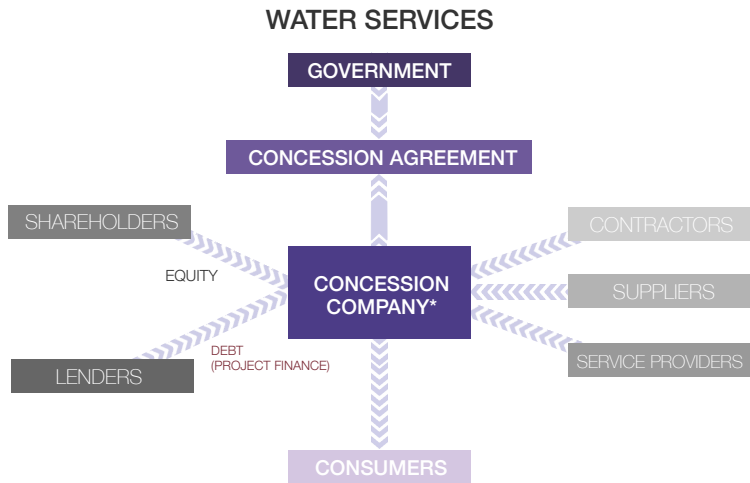
Metro Manila's water privatization has been operating for more than 22 years, a remarkable feat in the global water privatization discourse. In some ways, such longevity is also a testament to the concession agreements binding both the government and the two private water concessionaires. Notwithstanding the return of

the concession by the winning bidder, the concession agreement has allowed the Philippine government to obtain a replacement operator in the west zone, which has made significant progress in improving operating efficiencies. Additionally, the private concessionaires have expanded their operations both locally and in other Asian countries – MWCI, with 8 Philippine/4 Asian water projects (MWCI, 2019a) and MWSI, with 5 Philippine/2 Vietnam water projects (Metro Pacific Water, 2020).

Financing PPPs: Project Finance

For the winning bidders, the special-purpose vehicles [SPVs] they formed during the privatization bidding exercise would eventually

Figure 4 . Contractual Arrangement for Metro Manila’s Water Privatization



* Special Purpose Vehicle

Source: Torio (2020). Diagram shows contractual arrangement between the government and the concession company

become the concession companies providing water and sewerage services in their respective service areas (see Figure 4).

Upon takeover of the concessions in 1997, these two private water firms would have to avail of multimillion-dollar loans to support capital investment programs with a combined worth of US\$ 7.0 billion (see PPP Center of the Philippines, 2020) for the next 25 years. While some of the major shareholders had experience in operating water utilities, each concession company was just a shell company without any track record in water utility operations, construction, and loan repayments. Moreover, almost all of its personnel would come from a pool of MWSS' officers and staff who would need to be absorbed by the two private concessionaires, in compliance with a requirement of the concession agreement. Essentially, the main asset of the company was the concession agreement, the provisions of which, the government's privatization team hoped would address not only the concerns of the bidders but those of the lenders, as well.

Project Finance: All about Project Cash Flows

Given such a scenario, how then would project sponsors finance a water privatization project? In the context of privatization / Public-Private Partnerships [PPP],⁵ the general mode of financing is “project finance”, a type of lending that focuses mainly on the cash flows of the project, coupled with an extensive evaluation of the various risks associated with the construction, operations, and financing of said project, as well as the allocation of these risks through contractual arrangements and support mechanisms (see Yescombe, 2007). It is also known as a non-recourse or limited recourse financing, given that security is generally linked to the project's ability to generate cash, with no or limited recourse (claim)

on the sponsors' assets (Furquharson, Torres de Mastle, Yescombe, & Encinas, 2011; Comer, 1996). As the project's fixed assets have practically no value outside of water operations, the creditors do not rely on them as security but more so, on the concession agreement between the government and the private water firm (Furquharson, et al., 2011), together with the other contracts/agreements that are able to generate cash (e.g. insurance policies, licenses, permits, etc.) for the company.

Project Finance Features

There is no standard project finance structure for privatization / PPP projects. Many factors, such as the utility sector, sponsors, country, economic conditions, political environment, etc., influence the financing structure needed for the project. However, there are underlying features that are common to project finance in general. Yescombe (2007) and Comer (1996) enumerate these features:

- *New and ring-fenced, capital-intensive projects* – Project finance is associated with large PPP projects that require enormous amounts of debt and equity capital. Most of the time, these are new and ring-fenced projects that are carried out through a special-purpose vehicle.

- *Highly-leveraged* – Transactions tend to have high debt to equity ratios, with debt ranging from 65% - 80% of the company's total capital.

- *Finite life* – As it is an SPV, the company's life normally coincides with that of the project, especially if all assets will be transferred to the state at the end of the cooperation period. Hence, the project finance debt must be fully paid before the project life ends.

- *Non-recourse or limited recourse financing* – With the project

company as the borrower, lenders rely mostly on the robustness of future project cash flows, with no or limited guarantees provided by the company's investors.

- *Project contracts as creditors' main security* – These contracts are tied to the company's ability to generate cash flows. Physical assets not being used for the project company's operations are of no use to the lenders, as these assets will not fetch reasonable values even if they are able to sell them.

- *Close control by lenders of project company's activities* – Lenders always try to micro-manage the company, especially those activities that affect the company's cash flows.

- *Restrictions on dividend payments* – Lenders will ensure that utilization of available cash prioritizes debt servicing over dividend payments.

- *Risk identification and allocation* – Lenders would like to understand the different types of risks the project may face, which would affect cash flows moving forward. In this regard, they would like the risks to be identified and allocated to the party best capable of controlling them.

- *Higher transaction costs* – Project finance entails much information, monitoring, and documentation which increases the transaction costs when compared to regular corporate loans.

In contrast, approvals for regular corporate loans are based on the strength of the company's balance sheet, previous cash flows, and profitability record. As the borrowing company will be in business for an indefinite period, it can continue procuring corporate loans over time. In addition, lenders have access to the cash flows of all the borrower's businesses, and physical assets are used as security for the loan. Under normal conditions, creditor banks also do not

impose restrictions on the day to day operations of the company (Comer, 1996; Yescombe, 2007). For a more detailed comparison between corporate finance and project finance, please see Appendix C.

Risk Profile for Metro Manila's Water Privatization

For privatization / PPP projects, the term "risk" is associated with unforeseen events or outcomes that negatively affect the provision of services or the financial viability of the project (Yescombe, 2007). In turn, both results affect the project's ability to generate the necessary cash flows needed for operations, investment, and debt-servicing. Thus, any privatization / PPP project would require identification of all possible risks across the different project phases, assignment of these risks to parties best able to handle them, and implementation of mitigation measures to minimize their impact. Contracts should, therefore, incorporate provisions for proper assignment and mitigation of the risks that have been identified for the project. Without proper risk management, the price of service may be too expensive, the quality of service may be below par, the project company may not be able to raise the necessary financing, or in the extreme case, there would be a failure of privatization.

For this paper, the risk profile for Metro Manila's water privatization will be discussed in terms of systematic risks and project-specific risks. Systematic risks are those that are associated with the project's external environment, such as political risk, economic risk, etc. while project-specific risks are those that arise due to the project's nature or implementation, such construction risk, operating risk, etc. (see Chan et al., 2011). Since systematic risks are not within the control of the private water concessionaires, mitigation measures would require either government support or

tariff adjustment. Conversely, project-specific risks would have to be borne by the concessionaires, and hence, they would have to come up with measures that properly address these risks. Creditors examine the risk profile and its management plan and use this information to draft the loan provisions that would ensure full repayment of their loans.

Upon signing of the concession agreements, the private concessionaires would have to contend with the following risks in the course of providing water and sewerage services for Metro Manila's consumers:

Systematic Risks

- *Political risk* – Associated with changes in the political landscape (Comer, 1996), particularly with respect to the probability of succeeding administrations not honoring the concession agreement or unilaterally changing major provisions. This may also pertain to changes in national policy or law that may negatively affect the privatization program.
- *Contractual risk* – Associated with non-enforcement of the concession agreement (in part or in whole), particularly with respect to government's responsibilities and undertakings
- *Regulatory risk* – Associated with a weak regulatory agency, especially on matters involving tariff adjustments
- *Economic risk* – Covers local currency depreciation, inflation, and convertibility of local currency into foreign currency
- *Force majeure* – Associated with any unforeseen event that may reduce the projects ability to generate cash,

especially water supply reduction due to the climate change (El Niño) or network infrastructure damage due to earthquake

Project-specific Risks

- *Construction risk* – Covers delayed completion of construction work and cost overruns
- *Operational risk* – Inability to meet NRW targets and increase household connections; poor operating and maintenance practices
- *Commercial risk* – Inefficient billing and collection processes
- *Financing risk* – Inability to get project financing; also linked to high interest rate and short repayment period

Risk Mitigation

A study by Torio, De Vera, Timbang, and Siriban. (2013) examined 30 Asian water PPP projects to determine the type of government support provided and tariff adjustment mechanisms used to mitigate the effects of systematic risks, which are normally beyond the control of private sector providers. Worth a total of US\$ 12.5 billion, these water projects were in the form of concessions, leases, and bulk water supply contracts that were implemented from 1985 to 2012. For these water PPP projects, governments provided guarantees on the rate of return, the supply of water, and off-take purchase, and extended direct lending to the project, as well. In terms of tariff adjustments, these projects were allowed mechanisms to increase tariffs based on the inflation rate, foreign exchange losses and even, a fixed annual rate. Torio et al.'s (2013) study also looked into transportation and energy PPP projects and found out

that these projects had been given more government support and tariff adjustments than water PPP projects, such as government equity and viability gap funding, plus tariff adjustments for interest rate movements. Appendix D presents a summary of Torio et al.'s (2013) findings on government support and tariff adjustment mechanisms provided for 99 Asian PPP projects (transportation, water, and energy), with a combined project cost of US\$ 77 billion.

For the MWSS privatization, the framers of the concession agreement recognized that there are inherent systematic risks and as such, included certain provisions to address different these risks. First and foremost, the concession agreement encourages consultation and negotiation between MWSS and the concessionaires for any dispute, especially those associated with political, contractual and regulatory risks. If the two parties are unable to jointly resolve the dispute, they can avail of arbitration proceedings, which are in accordance with the rules of the United Nations Commission on International Trade Law. However, the concession agreement states that any decision or award of the Appeals Panel⁶ during the arbitration proceedings shall be final and binding upon the two parties, who shall waive their rights to appeal for a review of the award by any court, regulatory body or tribunal. Finally, if MWSS or the concessionaire fails to perform any material obligation, and such violation remains outstanding for a certain period of time, the other party may declare an event of termination, subject to an early termination amount being paid to the concessionaire (MWSS, 1997a, 1997b).

The concession agreement provides for the mitigation of systematic risks arising from unforeseen events or force majeure through water tariff adjustment mechanisms. One such mechanism is the extraordinary price adjustment, which uses the discounted

cash flow methodology to adjust tariffs for foreign exchange losses and lost revenues due to water supply reduction and other unforeseen events. Inflationary effects on goods and services purchased by the concessionaires are recovered by means of a pass-through tariff adjustment using the country's official inflation rate estimates. Water tariffs are reviewed every five years by way of the rate rebasing exercise that is undertaken by the MWSS Regulatory Office together with the two private concessionaires. More details on tariff adjustment mechanisms are provided in a later section. For the Metro Manila water privatization, Table 4 below presents the author's assessment of the risk mitigation measures that are provided for by the concession agreement.

Table 4 . Mitigation Measures for Systematic Risk

Systematic Risk	Reason	Mitigation Measure
Political	Change of administration or law	Consultation & negotiation / Arbitration /
Contractual	Non-implementation of concession agreement	Early termination / Performance undertaking
Regulatory	Tariff adjustment	
Foreign Exchange	Peso devaluation	Tariff adjustment (EPA mechanism)
Inflation	Change in prices of goods/services	Tariff adjustment (Pass-through)
Currency Convertibility	Assured conversion of PhP to USD	Performance undertaking
Water Supply Reduction	Climate change (El Niño)	Tariff adjustment (EPA mechanism)
Other Force Majeure	Unforeseen events	Tariff adjustment (EPA mechanism)

Note: EPA – Extraordinary price adjustment ⁷

Source: Table developed by Author (2020). Certain provisions of the concession agreement address systematic risks inherent in the privatization program

Project-specific risks are borne solely by the concessionaires. As is common practice to all PPP projects in general, construction risks may be passed on to sub-contractors through fixed contract amounts that have penalties for delays. Operating and commercial risks require that the concessionaires adopt best practices related to water utility operations while financing risks requires them to avail of the best financing available from the market. Given that the concession agreement allows a fixed project rate of return, which is subject to review and adjustment during the rate-rebasing exercise, it is to the concessionaires' best interest to always perform better than their financial projections by either attaining higher revenues than projected or reducing operating expenses and capital expenditures for the same level of revenues.

Project Finance Loan for Metro Manila's Water Privatization

Given that project finance is essentially a non-recourse or limited recourse financing, the lenders try to control the company's cash flows through the loan agreement and its supporting documentation. This section highlights the major provisions of a project finance loan for Metro Manila's water privatization (MWSI, 2000).

Continuing Due Diligence: Technical, Financial & Legal

Before initial and subsequent drawdowns, the lenders would have to receive satisfactory reports by an independent auditor, as well as technical, legal, and financial advisors on the company's actual performance. More so, a banking case (update financial model) would have to be prepared for several milestones, such as initial

loan drawdown, mid-year review, annual budget presentation, and others. As water PPP projects are capital-intensive, the lenders would need to continuously monitor the company's capital spending against the approved capital expenditure plan and annual budget. In addition, the lenders would like to closely monitor government approvals, consents, licenses, and permits and the borrower's adherence to major loan covenants, such as those related to the performance bond, absence of material litigation, absence of actual or potential events of default, and other key commitments. See

Table 5 . Continuing Due Diligence: Technical, Financial & Legal

ISSUES	LENDERS' REQUIREMENTS
Capital expenditure plan & annual budget	<ul style="list-style-type: none"> • Continuous monitoring • Based on agreed expenditures
Banking case preparation	<ul style="list-style-type: none"> • Before initial drawdown • Mid-year review • Annual budget presentation • Financial covenant breach • Potential or actual events of default • Any material adverse event
Before initial drawdown	<ul style="list-style-type: none"> • Satisfactory report from: <ul style="list-style-type: none"> - Independent auditor - Technical, insurance, tax, and legal advisors
Subsequent drawdowns	<ul style="list-style-type: none"> • Satisfactory report from technical advisor re CAPEX program • Compliance with financial covenants • Accepted budget
Other monitoring requirements	<ul style="list-style-type: none"> • Government approvals, consents, licenses, and permits • Performance bond issuance • Absence of material litigation • Absence of actual or potential events of default • Other major covenants

Source: Table developed by Author (2020). Certain provisions of the concession agreement address systematic risks inherent in the privatization program

Table 5 for a list of the lenders' requirements in relation to their continuing due diligence activity.

Security Package

The loan's security package focuses on the company's cash flows, as well as the accompanying rights that enable the generation of those cash flows, to ensure debt service payments. As physical assets are of no value to the creditors if not used for water provision, the security package will normally consist of the following:

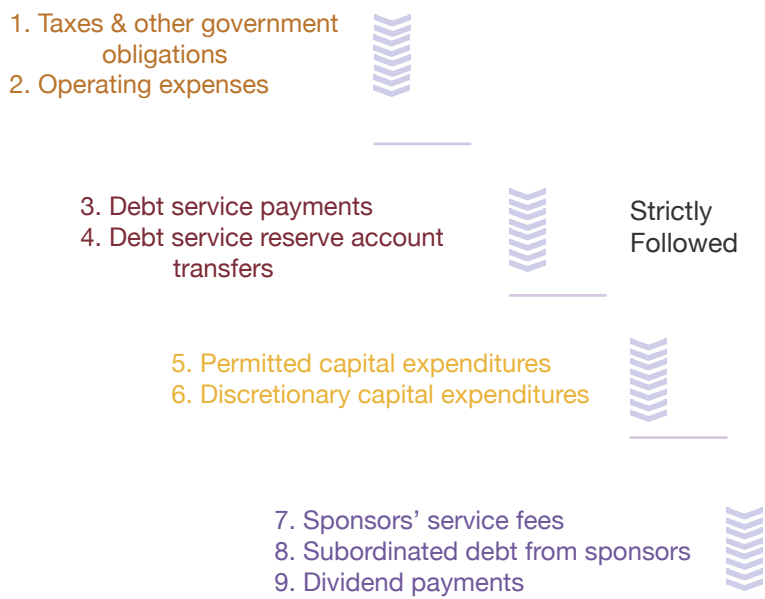
- Pledge of all revenues, cash flows, and project bank accounts
- Assignment of all claims, rights, and remedies under the concession agreement (especially, termination payments)
- Endorsement of insurance policies
- Pledge of rights over financial investments
- Right to appoint a qualified replacement operator
- Assignment of performance undertaking provided by government
- Assignment of all project permits
- To the extent permitted by law and concession agreement, security on shares of project company
- Corporate guarantees from sponsors to fund cash shortfall requirements, with a cap on the total amount

Priority of Payments

Lenders require a priority scheme for payments to be made by the company, which should be followed at all times. This scheme, which is also called the cash waterfall, is a way of asserting some control over the company's cash utilization to ensure that there are

sufficient funds for interest and principal payments. From Figure 5, it can be seen that only payments for tax and other government obligations plus operating expenses are prioritized over debt servicing and topping up of the debt service reserve accounts. Capital expenditures and subordinated debt follow with dividend payments as the last priority under the cash waterfall.

Figure 5 . Priority of Payments



Source: Developed by Author (2020). Project finance lenders require that cash utilization strictly follow the prescribed priority scheme

Financial Covenants

As part of their monitoring and oversight intentions, lenders require the borrower to maintain certain financial ratios that allow them to determine the company’s ability to make the necessary

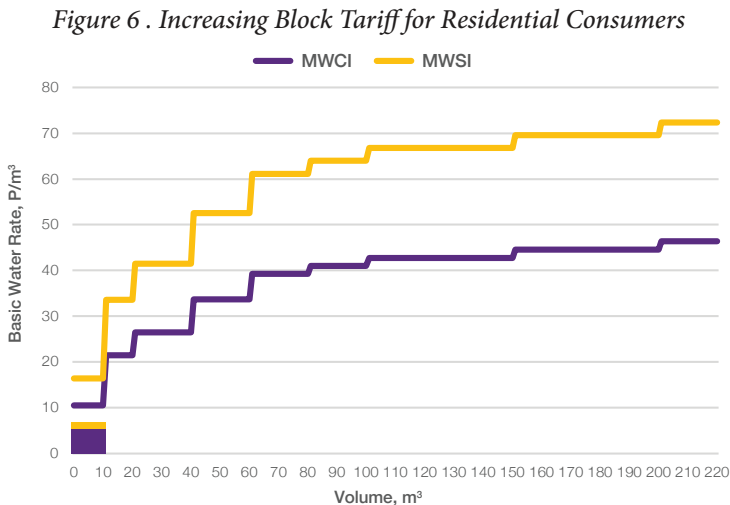
interest payment and principal repayments. Among these ratios is a maximum debt to equity ratio of 70:30, which limits the amount of allowable debt the company can have, as well as ratios that ensure there is sufficient cash to make debt service payments, such as minimum debt service coverage ratio [DSCR] of 1.15, and minimum loan life cover ratio [LLCR] of 1.15.

Lenders' consent is required for additional indebtedness, amendment or termination of key agreements, settlement with government, and other material concerns that may affect the ability of the borrower to make the necessary loan payments. Furthermore, dividend payments are allowed only when the borrower has started principal repayments, no potential or actual event of default is existing, debt service reserve account (for next payments) is fully funded, and the required DSCR and LLCR are met. The lenders may declare the project company in default and accelerate repayment of their loan once there is a loan payment default, breach of financial covenants, termination or abandonment of the concession agreement, declaration of bankruptcy or insolvency, and cross-default on other permitted indebtedness, among others.

Discounted Cash Flow Methodology for Tariff Adjustments

Upon takeover of the concessions in 1997, the two private water firms continued using MWSS' increasing block tariff structure, with the basic water rates reduced by the discounts they offered in their winning bids. Increasing block tariffs, which charge higher marginal prices for higher consumption levels, were used by MWSS to address concerns related to revenue adequacy, equity, affordability, and conservation (IFC, 1996). Diakit , Semenov, and Thomas (2009) notes that most developing countries use this type

of social tariff scheme in an effort to influence consumer behavior through the structure of consumption blocks, the basic water rate per block, and the inclusion of a fixed component of the tariff, like the connection fee. For Metro Manila, every customer class has a different increasing block tariff rate schedule, with residential and semi-business classes divided into 9 consumption blocks while commercial and industrial classes, into 33 consumption blocks. Basically, the MWSS tariff structure allows cross-subsidy of low-volume users by high-volume users within each class, as well as between the different classes. Residential customers have the lowest water rates, followed by semi-business, commercial, and industrial customers. The lowest tariff rate for semi-business customers is 68% higher than that of residential customers. For commercial and industrial customers, the lowest water rates are



Note: Purple and yellow rectangles denote coverage of lifeline rates / volumes for MWCI and MWSI, respectively

*Adopted from: Torio (2016), using existing water tariffs from MWCI (2019b) and MWSI (2019b).
The private concessionaires use increasing block tariff structures for billing residential consumers and other water users*

respectively set at levels that are 354% and 392% higher than that of residential customers (Torio, 2016). Figure 6 shows a diagram of the increasing block tariff used for billing MWCI and MWSI residential consumers.

Low-income residential users are provided a lifeline rate (the lowest tariff available) if they consume 10 cubic meters per month or less (see Figure 6). Based on the current water tariff schedule the lifeline rates for MWCI and MWSI are 43% and 41% less than the basic water rates, respectively, for the consumption of 10 cubic meters per month or less. In addition to the basic water charge, the water bill also includes an environmental charge, maintenance service charge, and value-added tax (MWCI, 2019b; MWSI, 2019b). Whenever warranted, the following tariff adjustments to the basic water rates are implemented:

- *Adjustment for inflation* – Official inflation rates are used to adjust basic water rates once a year
- *Extraordinary price adjustment* [EPA] – Tariff adjustment to recover concessionaires' losses due to events beyond their control (force majeure), such as foreign exchange devaluation, reduced water supply due to El Niño, etc.
- *Rate rebasing adjustment* [RRA] – Undertaken every 5 years, this tariff adjustment depends on the concessionaires' ability to earn a project rate of return equivalent to the appropriate discount rate [ADR], which is defined as the weighted average cost of capital for a similar water utility project. Depending on whether or not the actual project rate of return is above or below the ADR set by the MWSS Regulatory Office, the tariff adjustment may either be an increase or decrease in basic water rates.

EPAs and RRAs are computed based on a discounted cash flow methodology, which uses the ADR as the discounting factor, and project cash flows (historical and future) for the entire concession period. These adjustments to the basic water rates are used merely to recover losses due to extraordinary events, which are not within the concessionaires' sphere of influence, with such recovery based only on a project rate of return (which is equal to the ADR) allowed by the MWSS Regulatory Office. The concession agreement defines cash flows as both receipts and expenditures where receipts pertain to all cash receipts from customers plus third-party grants while expenditures mean pre-operating and operating expenses, capital expenditures, concession fees, and Philippine business taxes of the concessionaires. These expenditures must be prudently and efficiently incurred, as determined by the Regulatory Office and exclude all penalties, interest charges on late payments, financing cost, and bad debt provisions (MWSS, 1997a, 1997b).

Making Sense of the So-Called "Onerous" Provisions

The physical and political boundaries of water provision in Metro Manila were redefined by the state at different periods over the last century. The city's water system, which started as a small network constructed with donated funds, expanded as the boundaries of Metro Manila spread over time. Over a span of 16 years, urban water provision became part of a national water system only to be decentralized into a government-owned and controlled corporation. Twenty-five years thereafter, another policy shift was made, one that was geared towards privatization, in the hope that the private sector would succeed where previous public service

providers had failed, as regards the provision of water and sewerage services for Metro Manila consumers (Torio, 2016). Among other reasons, the shifts in urban water governance policy resulted from the government's desire to improve management and operational efficiency of the water utility providing water and sewerage services for the country's capital city.

Service Level Improvements: PhP374 Billion Price Tag

From a global water privatization perspective, the number of consumers served, longevity of contract, and service level improvements over the last 22 years may be reason enough for officials of MWSS and the concessionaires, as well as certain analysts and observers, to view Metro Manila's water privatization as a success (see MWSS, 2017a, 2017b, 2018; Manila Standard, 2017; Wallace, 2019; Berba, 2019; Miraflor, 2019; Manhit, 2019; Magno, 2019). As seen from Table 2, both concessionaires are now serving 16.4 million consumers, an increase of 125% since the commencement of the program in 1997. System losses due leakage and pilferage (non-revenue water) for the two concessions now average only 22%, as compared to a level of 58% prior to privatization. In areas where the concessionaires' networks are already in place (94% of the entire service area), consumers are able to experience a 24-hour supply of water that is of good quality and pressure. This is in contrast to a pre-privatization scenario where water supply was intermittent and water pressure was low for consumers who were fortunate enough to get connected to the system. Indeed, such achievements may be a rarity in the global water privatization experience, considering that so many privatization projects have been terminated early or not renewed upon contract expiration (Gleck et al, 2002; Hall & Lobina, 2006; Castro, 2007; Marin, 2009; Bakker, 2010).

While the paper highlights these accomplishments, it also acknowledges the concerns of many scholars and water justice advocates⁸ about the need to look at equity and social justice concerns rather than merely focusing on efficiency and profitability, themes that have somehow dominated the water resource management discourse. Moreover, there are competing rationales between efficiency and equity as a measure of a water utility's performance. These discussions feed into an important policy issue on the regulation of water utilities, and is best explored in a separate paper. For more information on the performance assessment of the program using both efficiency and equity metrics, please see Torio (2016, 2018). Discussions on the rural-urban water equity linkages for Metro Manila's water system may be found in Torio, Harris, and Angeles (2019).

The attainment of such substantial service level improvements required the concessionaires to undertake capital investments worth more than PhP 374 billion, aside from introducing new management and operating paradigms into the sector (see Bernardo, 2019). Today, it may seem easy for the concessionaires to raise the necessary financing to support these capital investments, given their current operating and financial results, however, such was not the case when they took over the concessions in 1997. Metro Manila's water privatization was part of the global trend for private sector participation in the water sector during the 1990s (see Budds & McGranahan, 2003). Following the blueprint for the Buenos Aires water privatization, the program can be considered as the first water concession in Asia with a very large consumer base,⁹ having been implemented ahead of the Jakarta water privatization, which was completed only in 1998 (see Hall, 2010).

Systematic Risks for Water Privatization:

No Available Benchmarks in Asia

While the country already had power privatization projects in place, there was practically no benchmark for the Metro Manila water privatization in the Philippines, or elsewhere in the region. In this regard, one may rightfully ascribe a lot of uncertainties to the project, with such uncertainties possibly affecting service provision or financial viability, thus also increasing its risk profile. In particular, the political, contractual, and regulatory risks may have been concerns for foreign investors and creditors. Would the concession agreements be honored by the succeeding administrations? Would contractual covenants be assiduously adhered to? Would the regulatory agency be capable of performing tasks critical for the continuity of the program? Among many others, these were proper questions to ask for a program that was just being introduced not only in the country but also for the rest of the developing world. Although there were signs then of an economic upswing for the Philippines (Institute of Developing Economies - Japan External Trade Organization, 1997), concerns regarding the trajectories of local inflation rates and foreign exchange rates moving forward were also properly justified. Hence, the framers of the concession agreements had to ensure that there were provisions to address these concerns.

Investors and creditors have different appetites for risks. The successful bidding and award of the west and east concessions to private water firms are indications that the investors were willing to accept the risks inherent to these concessions. Given that privatization / PPP projects are financed more by debt rather than stockholders' equity, the lenders tend to have a stronger aversion to risk than the investors. Furthermore, given the nature of project

finance, the financing mode for privatization / PPP projects, the lenders' have to rely mainly on the cash flows of the concession company, a special purpose vehicle with no track record of operations and borrowings. How then do you provide comfort to the project finance lenders? Towards this end, the concession agreement must contain provisions that provide some degree of assurance, whether directly or indirectly, on the repayment of loans incurred by the concession company. Before making any commitment, lenders ask critical questions, typical of which relate to loan repayment under scenarios where political, contractual, or regulatory risks make it difficult for the company to operate in an efficient and viable manner. Or, under a worst-case scenario where these risks lead to the early termination of the concession. Again, security for project finance is limited mainly to project cash flows and contracts, thus lenders undertake extensive due diligence related to the technical, financial, and legal aspects of the concession. In addition, loan documentation takes a long time with a tendency to be very complex and exhaustive. Rightfully so, the lenders take this approach since they usually provide up to two times more of the project funds, as compared to the investors.

Providing Comfort to the Lenders:

Three Provisions from the Performance Undertaking Letter

Considering that cash receipts are derived mainly from the water tariffs, the policy and process related to tariff adjustments are of great interest to the lenders. The concession agreement provides for three tariff adjustment mechanisms: the pass-through annual inflation rate, the extraordinary price adjustment (EPA) for unforeseen events or force majeure, and the rate rebasing adjustment (RRA), which is done every five years. Requests

for tariff adjustments by the concessionaires are reviewed and subsequently approved or disapproved by the MWSS Regulatory Office. Included in the government's performance undertaking is a clause that states the state will not cause the reduction or non-implementation of approved tariffs. The reason for this might be political in nature, particularly if the approved tariff increase will be implemented during an election year. Kikeri and Nellis (2004) note that water tariffs of state enterprises in developing countries have generally been set below the cost of service provision, which normally results in operating losses and poor service delivery. If the national government does interfere with the tariff setting, the performance undertaking letter also states that it becomes liable for losses incurred by the concessionaires.

For any dispute, including those for tariff adjustments, the concession agreement encourages MWSS and the concessionaires to initially take the consultation and negotiation route before proceeding to arbitration. Disputes on tariff adjustments are decided on by an Appeals Panel whose members are duly appointed by the concessionaires. The concession agreement states that any decision by the Appeals Panel is final and binding on the two parties in arbitration. Any interference by the national government on the implementation of the Appeals Panel's tariff decision will again fall within the ambit of the performance undertaking letter.

If for any reason, the dispute remains outstanding even after the conduct of arbitration proceedings, either party may call for the termination of the concession agreement. Upon termination of the agreement, the concession company will be entitled to an early termination payment, part of which will be used to repay the loan in full. With the performance undertaking letter, the national government guarantees full payment of the early termination

amount, such compensation being made in exchange for all the assets built into the water system.

The three "onerous" provisions which form part of the performance undertaking letter provides comfort to the project finance lenders and helps them decide in favor of extending the much-needed financing to the concession company. Absent this financing, the concessionaires would not be able to fully implement its operating and capital investment programs. After more than 22 years of water privatization experience in Metro Manila, there has been no case of loan defaults by the concessionaires. Given the concessionaires' operating and financial performance, it is possible that the lenders may relax some of their requirements. As such, there may be room for relaxing the provisions of the performance undertaking letter, as well.

Pre- or Post-Tax ADR: That is the Question

Tariff adjustments, particularly the extraordinary price adjustment (EPA) and the rate-rebasing adjustment (RRA) are computed using the discounted cash flow methodology, with the appropriate discount rate (ADR) as the discounting factor that is applied to the project cash flows. According to the concession agreement (MWSS, 1997b, p. 2), the ADR "means, at any time, the real (i.e. not inflation-adjusted) weighted average cost of capital (after taxes payable by the concession business)". Cash flows are based on receipts and expenditures (both historical and future) that are efficiently and prudently incurred, as determined by the MWSS Regulatory Office. The concession agreement defines receipts as all cash receipts from customers and third-party grants while expenditures as operating expenses, capital expenditures, concession fees, and Philippine business taxes. In simple terms, the cash flow can be presented as:

Receipts

- *Operating expenses*
- *Capital expenditures*
- *Concession fees*

Pre – tax cash flow

- *Corporate income tax*

Post – tax cash flow

Tariff adjustments could be computed based on pre-tax cash flows or post-tax cash flows. Pre-tax ADRs are higher than post-tax ADRs, but using the same numbers for receipts and expenditures, these two ADRs would provide the same tariff rates. In 1997, the corporate income tax rate was 35% (Trading Economics, 2020) but there were plans to reduce the tax rate to 32%. If the pre-tax ADR formula was used, there would be no tariff adjustment downward and the consumer would not benefit from a lower water tariff. All the additional cash generated from the lower corporate income tax rate would accrue only to the concessionaires.

On the other hand, if a change in tax law was invoked by MWSS, then a downward EPA would have to be computed based on the reduction of the corporate income tax rate. Using the pre-tax ADR to compute for the downward tariff adjustment, would unduly disadvantage the concessionaires as the pre-tax ADR is a higher discounting factor than the post-tax ADR. Note that an increase in the corporate income tax rate would have the reverse scenarios for the two cases mentioned above.

There must be consistency in the computation of tariff adjustments. The basic rule is that pre-tax ADRs must be used with pre-tax cash flows and post-tax ADRs, for post-tax cash flows. If

corporate income taxes were to be excluded from the computation of tariff adjustments, then the pre-tax ADR and cash flows should be used for the computation. There would be a clear mismatch if the post-tax ADR would be used on the pre-tax cash flows for tariff adjustment computations. This is the scenario the concessionaires now find themselves in. In essence, the concessionaires are not made whole according to the ADR the MWSS Regulatory Office has given them.

To Extend or not to Extend the Concession Period:

The Other Question

In 2009, the concession agreement was extended by 15 years, for an expiry date of 2037. This move was in consideration of the new MWSS water source project that would address increasing urban water demand as well as the concessionaires' wastewater facilities that would allow them to comply with the Clean Water Act and the Supreme Court's order to clean up and preserve Manila Bay (MWSS, 2009). Without seeing the actual numbers, the capital investments for MWSS' New Centennial Water Source – Kaliwa Dam Project and the planned sewerage projects of the two concessionaires may be used to estimate the total project cost, which translates to roughly PhP 342 billion (see Domingo, 2018; Saulon, 2019b; MWSS, 2019). Note that this amount is almost as large as the PhP374 billion capital investment made by the two concessionaires over a period of 21 years, from 1997 to 2018. By inference, if an additional capital investment of PhP 342 billion were to be recovered only up to the original expiry date (from 2009 to 2022), the tariff adjustments would be very large, resulting in a water tariff level that would likely be more than double by 2022. The only way to generate reasonable tariff increases was to extend the cost-recovery period.

In all probability, this was the reason for extending the concession period up to 2037, when these projects were reviewed in 2009.

In 2009, the concession period was extended by another 15 years to minimize the tariff increases that would be needed to cover capital investments for new water supply and wastewater projects. These projects included the government's bulk water supply project for Metro Manila as well as the concessionaires' wastewater projects that would assure compliance with the Clean Water Act and the Supreme Court's directive on Manila Bay's clean up and preservation (MWSS, 2009).

Conclusion

Governments spend much time, effort, and money to develop a privatization / PPP project, which they then bid out on a competitive basis, and finally award to a winning bidder. From a global perspective, water privatization / PPP projects are the most difficult ones to operationalize and regulate, as evidenced by many projects of similar nature that have already been terminated early or not renewed upon contract expiration. In today's world, water privatization projects that have been operating for a long time is a rarity. More so, for those that have extensively improved service levels and expanded service coverage. Metro Manila's water privatization is such a project.

In operation for more than 22 years, around 16.4 million people in 37 cities and municipalities now enjoy a 24-hour supply of water that is of good quality and pressure. While the paper acknowledges that there are other parameters for assessing the performance of water utilities, such as those concerning equity, social justice,

poverty, human rights, gender, and other aspects of water, the paper also recognizes the higher level of standard and quality that now prevails in the provision of urban water services. Undeniably, water provision in the country's capital city has gone a long way from the initial practice of fetching water in jars from nearby springs.

Examining the so called "onerous" provisions of the concession agreement, a document that has already been reviewed by several administrations, the paper looks into the rationale for including such provisions in a contract governing Metro Manila's water privatization. Without knowledge of the program's historical context and a sole focus on current water service levels, any service interruption, including those arising from force majeure, prompts "knee-jerk" reflex reactions of massive complaints and even calls for abrogation of the concession agreements.

Oftentimes overlooked by critics of the program, is that the new normal for mega-urban water provision, that of a 24-hour water supply of good quality and adequate pressure, required capital investments of PhP 374 billion, aside from new operating and management paradigms. Moving forward, an additional PhP 342 billion of capital investments is still needed for new water and wastewater facilities. More importantly, the level of investments made would not have been possible without putting into place the necessary debt financing at the onset of the privatization program. As financing is done on a project finance basis, negotiating these types of loans has always been a complex and difficult task. Yet, for almost a generation, these loans have made possible the continued delivery of much-needed water services to Metro Manila residents.

Towards this end, the lenders must be viewed not merely as external players relative to the project, but in fact, as major partners and stakeholders, considering that they provide the majority of the

risk capital necessary to operate, maintain, and expand the water system. It is in this context that the so-called “onerous” provisions must be seen, that is, with an understanding that these provisions provide additional comfort to the lenders for them to extend the much-needed loans for the project. Without these loans, the concessionaires may find it difficult to meet their operating and capital expenditure programs, thus possibly leading to unmet service obligations required under the concession agreements. Having said this, the paper does not in any way belittle the roles played by the government and the concessionaires as regards the water privatization. On the contrary, they are essential to the program’s success: the former on implementing best practices in water utility operations and the latter on establishing an enabling policy and regulatory environment.

After more than 22 years of water privatization, with its current state as well as historical antecedents, there may now be room for a review of these provisions in relation to future agreements. The concessionaires’ strong balance sheets as well as the resolution of certain major issues based on the concession agreement may have built more confidence into the program, thus, generally providing more comfort and assurance to the lenders as well. However, any dialogue or consultation in this regard must be conducted with full cooperation, transparency, and mutual trust between partners whose main objective is arriving at a mutually beneficial proposition.

¹ Painting can be found at office of the MWSS Chairman of the Board.

² Also known as non-revenue water [NRW], which is the amount of water lost due to leakage and pilferage

³ After commencement of the program, some municipalities were granted cityhood status.

⁴ The 1995 financial performance of MWSS can be seen in Table 3.

⁵ PPPs are "long-term contracts between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance." (World Bank, World Bank, Asian Development Bank, Inter-American Development Bank, & Public-Private Infrastructure Advisory Facility, 2014)

⁶ Please see MWSS (1997a, 1997b) for the composition of the Appeals Panel and the arbitration procedures.

⁷ EPAs must be more than 1% to be approved at the time the grounds for EPA occur. Otherwise, these tariff adjustments are usually made during the rate-rebasing exercise.

⁸ Roth, Boelens, & Zwarteveen (2005); Wegerich (2007); Boelens (2009); Lacey (2008); Whiteley, Helen, & Perry (2008); Kirjan (2012); Harris (2013); Perreault (2014); Harris, McKenzie, Rodina, Shah, & Wilson (2017); Zwarteveen et al. (2017); Boelens, Perreault, & Vos (2018); Torio, Harris, & Angeles (2019); Hommes, Boelens, Harris, & Veldwisch (2019)

⁹ The Macau water concession started in 1985 (Torio et al., 2013) but this is much smaller than the Metro Manila concessions.

¹⁰ Page 64 image credit: news.abs-cbn.com/business/05/31/18/manila-water-seeks-to-expand-portfolio-in-southeast-asia

APPENDIX

Appendix A . Copy of Exhibit D of the Concession Agreement

EXHIBIT D

Form of Undertaking Letter of Republic

[Letterhead of Secretary of Finance]

[Date]

[Name and address of Concessionaire]

Ladies and Gentlemen:

I am the Secretary of Finance of the Republic of the Philippines (the "Republic") and am delivering this undertaking letter on behalf of the Republic in connection with the granting by the Metropolitan Waterworks and Sewerage System ("MWSS"), a Government-owned corporation, of a concession to operate its waterworks and sewerage supply services within a specified service area to _____ (the "Concessionaire") pursuant to a Concession Agreement dated _____, 1997 (the "Agreement") by and between MWSS and the Concessionaire. This undertaking letter is furnished to you pursuant to Section 15.3 (iii)(d) of the Agreement. Capitalized terms used herein which are not otherwise defined herein shall have the meanings ascribed to such terms in the Agreement.

In connection with your entering into the Agreement, the Republic undertakes with you as follows:

1. Acknowledgement

The Republic hereby acknowledges and approves MWSS' entering into, and performing its obligations under, the Agreement.

2. Financial Guarantees

The Republic hereby guarantees, as primary obligor and not merely as surety, the payment when due of all amounts for which MWSS may _____
To be dated the Closing Date. Become liable pursuant to Section 3.2 ("Liabilities/Revenues"), Section 9.4.4 ("Expiration Payment"), Section 10.3.2 ("Early Termination Amount") and Section 14.2 ("MWSS Indemnity") of the Agreement.

3. Special Tax Arrangements/Investment Incentives

D1

Source: MWSS (1997b): Common to both concession agreements, the performance undertaking letter spells out certain responsibilities of the national government with respect to the Metro Manila water privatization

Appendix A . Copy of Exhibit D of the Concession Agreement

The Republic hereby acknowledges the approvals issued by the Board of Investments on _____, 1996 and the Bureau of Internal Revenue on _____, 1996 (copies attached), concerning the exemption from certain Philippine taxes as fully described therein.

4. Standard Rates Reduction

The Republic shall not interfere with the mechanisms contained in Article 9 of the Agreement relating to the Agreement relating to the setting of rates and connection charges for water and sewerage services provided by the Concessionaire within the Service Area. In this regard, the Republic hereby confirms that if the Republic or any Government-owned agency shall cause MWSS or the Regulatory Office to reduce Standard Rates below the level that would otherwise be applicable in accordance with the Agreement, or to defer implementation of any increase in Standard Rates beyond the date for implementation thereof accordance with the Agreement, the Republic shall indemnify the Concessionaire in respect of any loss to the Concessionaire occasioned by such action.

5. Foreign Exchange Convertibility

The Republic hereby confirms that the Concessionaire shall be entitled to convert earnings received in Pesos under the Concession into foreign currency from time to time on a non-discriminatory basis.

6. Raw Water Supply

The Republic hereby acknowledges and approves the letter delivered pursuant to Section 3.9 of the Agreement from MWSS to NWRB dated _____, 1996, which letter was acknowledged and approved by the MWSS Board of Directors on _____, 1996.

* * * * *

This undertaking letter shall be governed by, and construed in accordance with, the law of the Republic of the Philippines. Any dispute relating to this undertaking letter shall be finally settled by arbitration before an arbitration panel consisting of three members appointed and conducting proceedings in Singapore in accordance with the arbitration rules of the United Nations Commission on International Trade Law as in effect on the date hereof. The arbitration shall be conducted in English language.

The Republic hereby waives for itself and its assets and revenues, to the extent permitted by applicable law, any and all immunity from suit, execution, or other legal process in connection with any action or proceeding to enforce an arbitral award relating to this undertaking letter. Notwithstanding the foregoing, the Republic does not waive any such immunity in respect of property which is (i) used by a diplomatic or consular mission of the Philippines, (ii) property of a military character and under the control of a military authority or defense agency, or (iii) located in the Philippines and dedicated to a public or government use.

D2

Source: MWSS (1997b): Common to both concession agreements, the performance undertaking letter spells out certain responsibilities of the national government with respect to the Metro Manila water privatization

Appendix A . Copy of Exhibit D of the Concession Agreement

This undertaking letter is being furnished to you solely for your benefit in connection with the Agreement, and is limited strictly to the matters stated herein and is not to be read as extending, by implication or otherwise, to any other matter.

The Republic consents to any assignment by you of your rights under this letter to section loans incurred in connection with carrying out your obligations under the Concession. Apart from any such assignment, this undertaking letter is not be used, circulated, quoted or otherwise referred to for any purpose.

Very truly yours,

THE REPUBLIC OF THE PHILIPPINES

By: Roberto de Ocampo
Title: Secretary of Finance

Attachments

Source: MWSS (1997b): Common to both concession agreements, the performance undertaking letter spells out certain responsibilities of the national government with respect to the Metro Manila water privatization

Appendix B . The Transforming Nature of Water Governance in Metro Manila

Period	Government Agency	Purpose	Population	Capacity (MLD)	Facilities
1878 – 1918	Carriedo Waterworks	Start Up	300,000 (1878)	16	Pre-1908: Manila water supply system; water from Marikina River 1908-1924: Wawa Dam, Santolan pumping station; San Juan reservoir (224 ML)
1919 – 1954	Metropolitan Water District (Act No. 2832)	Stabilization	913,000 (1939) 1,600,000 (1948)	470	Angat-Navaliches System (tapping Angat River) consisting of Ipo Dam, Ipo-Bicti tunnel, Navaliches reservoir (36 BL); Navaliches-Balara aqueduct, Balara filtration plant, new San Juan reservoir (40ML)
1955 – 1970	National Waterworks & Sewerage Authority (Republic Act No. 1338)	National Coverage	2,500,000 (1960)	1,600	New Angat multi-purpose dam; larger Ipo-Bicti tunnel; additional Bicti-Navaliches aqueducts; additional capacity for Balara plant; new San Juan reservoirs; extension of distribution mains
1971 – 1997	Metropolitan Waterworks and Sewerage System (Republic Act No. 6234)	Metro Manila Coverage	8,000,000 (1994)	2,700	First La Mesa treatment plant; new pumping stations; rehabilitation of water network, rehabilitation of Central Manila sewerage system
1971 – 1997	Metropolitan Waterworks and Sewerage System (National Water Crisis Act)	Privatization	16,000,000 (2014)	4,000	Uniray-Angat tunnel; second La Mesa treatment plant; smaller treatment plants along Laguna de Bay; rehabilitation of existing network plus expansion into unserved neighborhoods

Adopted from: (Torio, 2016). Over the years, Metro Manila's water governance has undergone several transformations: single city to multi-city service coverage; local agency vis-a-vis national agency jurisdiction; and public to private water provision

Appendix C . Corporate Finance vis-à-vis Project Finance

Component	Corporate Finance	Corporate Finance
Borrower	Going-concern, multi-purpose vehicle	Special purpose vehicle, ring-fenced
Equity capital	Permanent, unlimited time horizon	Finite, matches project life
Financing plan	Normal structure	Tailor-fit to particular project
Borrowings	Against company's balance sheet	Non-recourse or limited recourse
Security	Company's assets (building, land , equipment)	Project cash flows, bank accounts, project contracts, step-in rights
Credit evaluation	Company's financial health, balance sheet	Technical, financial, & legal due diligence, financial projections
Leverage	Usual D/E ratio	High D/E ratio
Cost of Debt	Low	High
Transaction cost	Low, short evaluation process	High, long completion period
Capital investments	Not monitored, no influence on operations	Monitored very closely, may influence operations
Lender base	Broad, with secondary market	Few, limited secondary market
Risk management	Low importance	Very important, reflected in loan provisions

Source: Table developed by Author (2020) from information provided by Comer (1996) and Yescombe (2013). Project finance is more difficult and complicated to implement than corporate finance

Appendix D . Asian PPP Projects: Government Support & Tariff Adjustment Mechanisms

	Guarantee				Government Support				Equity	ROW
	Credit	Rate of Return	Revenue	Profit	Off take	Supply	Direct	Viability Gap		
Transportation	•	•	•	•			•	•	•	•
Water		•		•	•	•				•
Energy	•		•		•	•	•		•	•

Tariff Adjustments							Performance Incentive
CPI	Forex Loss	Interest Rate Movements	Annual Rate Increase	Passenger Volume			
Transportation	•	•	•	•		•	•
Water	•	•		•			
Energy	•	•					

Source: Torio et al. (2013). For 99 Asian PPP projects worth US\$77 billion, water had the least government support and tariff adjustment mechanisms compared to transportation and energy

REFERENCES

- ABS CBN News. (2019a, March 15). Manila Water's 'mistake' lead to water crisis: MWSS. ABS CBN Online News. Retrieved February 18, 2020, from <https://news.abs-cbn.com/news/03/15/19/manila-waters-mistakes-led-to-water-crisis-mwss>
- ABS CBN News. (2019b, December 5). DOJ finds 12 'onerous' provisions in concession agreements with Maynilad, Manila Water. Retrieved April 7, 2020, from <https://news.abs-cbn.com/video/news/12/05/19/doj-finds-12-onerous-provisions-in-concession-agreements-with-maynilad-manila-water>
- Araral, E. (2009). The failure of water utilities privatization: Synthesis of evidence, analysis and implications. *Policy and Society*, 27(2009), 221-228.
- Asian Development Bank (Ed.). (1997). *Second water utilities data book: Asian and Pacific Region*. Mandaluyong City: Asian Development Bank.
- Asian Development Bank. (2008). *Country water action: A second chance for an ailing utility—The Maynilad experience*. Mandaluyong City: Asian Development Bank.
- Aurelio, J. (2019, December 4). Duterte threatens water execs, orders new deals. *Philippine Daily Inquirer*.
- Bakker, K. (2010). The limits of 'neoliberal natures': Debating green neoliberalism. *Progress in Human Geography*, 34(6), 715-735.
- Berba Jr., F. T. (2019, June 24). Water woes. *BusinessWorld*.
- Bernardo, R. (2013, October 13). Being water secure. *BusinessWorld*.
- Bernardo, R. (2019, December 15). Water woes - just the facts. *BusinessWorld*.
- Boelens, R., Perreault, T., & Vos, J. (Eds.). (2018). *Water justice*. Cambridge: Cambridge University Press.
- Castro, J. E. (2007). Poverty and citizenship: Sociological perspectives on water services and public-private participation. *Geoforum*, 38(2007), 756-771.
- Chan, A., J. Yeung, C. Yu, S. Wang and Y. Ke. 2011. Empirical Study of Risk Assessment and Allocation of Public- Private Partnership Projects in China. *Journal of Management in Engineering* 27(3), 136-148.
- CNN Philippines. (2019a, March 15). Duterte order to release 150 days' worth of water from Angat not possible – MWSS. Retrieved February 20, 2020, from <https://cnnphilippines.com/news/2019/3/15/Water-shortage-Angat-Dam-Duterte.html>
- CNN Philippines Staff. (2019b, December 11). MWSS revokes contract extension of Maynilad, Manila Water. Retrieved March 21, 2020, from <https://www.cnnphilippines.com/news/2019/12/11/mwss-revokes-contract-maynilad-manila-water.html>
- Comer, B. (1996). Project Finance Teaching Note. Unpublished manuscript.
- Diakit , D., Semenov, A., & Thomas, A. (2009). A proposal for social pricing of water supply in C te d'Ivoire. *Journal of Development Economics*, 88(2009), 258–268.
- Domingo, R. W. (2018, March 14). Maynilad, MWC to spend P67B on sewerage systems. *Philippine Daily Inquirer*.

- Dumol, M. (2000). *The Manila water concession: A key government official's diary of the world's largest water privatization*. Washington D.C.: The World Bank.
- Elyda, C. (March 24, 2015). Court decision ends privatization of water in Jakarta. *The Jakarta Post*.
- Fabella, R. V. (2011). The privatization of the Metropolitan Waterworks and Sewerage System: How and why it was won. In R. Fabella, J. Faustino, M. G. Mirandilla-Santos, P. Catiang & R. Paras (Eds.), *Built on Dreams: Grounded in Reality*. Makati City: The Asia Foundation.
- Farquharson, E., Torres de Mastle, C., Yescombe, E. R., & Encinas, J. (2011). How to engage with the private sector in Public-Private Partnerships in emerging markets. from <https://openknowledge.worldbank.org/bitstream/handle/10986/2262/594610PUB0ID1710Box358282B01PUBLIC1.pdf;sequence=1>
- Garcia, M. A. (2019). What is the Kaliwa Dam project? GMA Online News. Retrieved February 17, 2020, from <https://www.gmanetwork.com/news/news/nation/713465/what-is-the-kaliwa-dam-project/story/>
- Gleick, P. H., Wolff, G., Chalecki, E. L., & Reyes, R. (2002). *The new economy of water*. Oakland: Pacific Institute for Studies in Development, Environment, and Security.
- Hall, D. (2010). *Indonesia – Water - Water privatisation in Jakarta: Public Services International Research Unit, University of Greenwich*.
- Hall, D., & Lobina, E. (2006). *Pipe dreams: The failure of the private sector to invest in water services in developing countries*. London: Public Services International Research Unit, University of Greenwich.
- Hall, D., Lobina, E., & Terhorst, P. (2013). Re-municipalisation in the early twenty-first century: water in France and energy in Germany. *International Review of Applied Economics*, 27(2), 193-214.
- Harris, L. M. (2013). Variable histories and geographies of marketization and privatization. In L. M. Harris, J. A. Goldin & C. Sneddon (Eds.), *Contemporary water governance in the Global South* (First ed., pp. 118-132). New York: Routledge.
- Harris, L. M., & Roa-Garcia, M. C. (2013). Recent waves of water governance: Constitutional reform and resistance to Neoliberalization in Latin America (1990-2012). *Geoforum*, 50, 20-30.
- Harris, L. M., McKenzie, S., Rodina, L., Shah, S. H., & Wilson, N. (2017). Water justice: Key concepts, debates, and research agendas. In R. Holifield, J. Chakraborty, & G. Walker (Eds.), *The Routledge Handbook of Environmental Justice*. London and New York: Routledge.
- Hommès, L., Boelens, R., Harris, L., & Veldwisch, G. J. (Eds.). (2019). *Rural-urban water struggles: urbanizing hydrosocial territories and evolving connections, discourses and identities* (1st ed.). Abingdon, UK and New York: Routledge.
- Institute of Developing Economies, Japan External Trade Organization. (1997). Chapter VIII Philippines: Reforms removal results. Chiba: Institute of Developing Economies, Japan External Trade Organization.
- International Finance Corporation. (1996a). *Privatization strategy report*. Washington, D.C.: International Finance Corporation.
- International Finance Corporation. (1996b). *Privatization of MWSS*. Washington, DC: International Finance Corporation.
- International Finance Corporation. (2010). *Philippines: Manila water*. Washington DC: International Finance Corporation.
- Japan International Cooperation Agency, Nippon Koei Co. Ltd., & The University of Tokyo. (2013). *The study of water security master plan for Metro Manila and its adjoining areas*.

- Tokyo: Japan International Cooperation Agency.
- Kikeri, S., & Nellis, J. (2004). An assessment of privatization. *The World Bank Research Observer*, 19(1), 87-118.
- Kirjan, L. (2012). Principles of equity in water law. *Queensland Environmental Practice Reporter*, 18(81), 38-55.
- Lacey, J. (2008). Utilising Diversity to Achieve Water Equity. *Rural Society*, 18(3), 244-254.
- Lopez, M. L. (2019). Arbitral court tells PH gov't to pay 7.4B to Manila Water. Retrieved February 19, 2020, from <https://www.cnnphilippines.com/news/2019/11/29/Manila-Water-arbitration.html>
- Magno, A. (2019, September 19). Privatized. *Philippine Star*.
- Manila Standard. (2017). Water security and legacy projects under the Duterte administration. Manila Standard.
- Manila Water Company Inc. (2019a). 2018 integrated report: Resilient in the pursuit of sustainable water and sanitation. Quezon City: Manila Water Company, Inc.
- Manila Water Company Inc. (2019b). Notice to Manila Water customers and the public: New water rates for the east zone. Retrieved April 3, 2020, from https://www.manilawater.com/laravel-filemanager/files/9/east-zone-manila-concession/ckeditor-files/20190109024432_MWCI%202019%20Standard%20Rates%20Tariff%20Table-signed_FA.jpg
- Manila Water Company Inc. (2020). Our story. Retrieved February 20, 2020, from <https://www.manilawater.com/customer/about-us/our-story>
- Manhit, D. (2019, August 29). Hydropolitics and good governance. *Philippine Daily Inquirer*.
- Maynilad Water Services Inc. (2000). US\$100,000,000 loan agreement. Quezon City: Maynilad Water Services Inc.
- Maynilad Water Services Inc. (2019a). Maynilad 2018 annual report: Sustaining growth. Quezon City: Maynilad Water Services, Inc.
- Maynilad Water Services Inc. (2019b). Notice to Maynilad customers and the public: New water rates for the west zone. Retrieved April 3, 2020, from http://www.mayniladwater.com.ph/uploaded/PhilStar_9x34_2018_1214.jpg
- Maynilad Water Services Inc. (2020). Water quality results. Retrieved February 20, 2020, from http://www.mayniladwater.com.ph/customers-water_quality.php#
- Metro Pacific Water. (2020). Our companies. Retrieved March 24, 2020, from <https://metropacificwater.com/portfolio/>
- Metropolitan Water District. (1940). Official opening of the Angat-Novaliches water supply system and the Metropolitan Water District office building. Manila: Bureau of Printing.
- Metropolitan Waterworks and Sewerage System. (1997a). Concession agreement: Service area east. Quezon City: Metropolitan Waterworks and Sewerage System.
- Metropolitan Waterworks and Sewerage System. (1997b). Concession agreement: Service area west. Quezon City: Metropolitan Waterworks and Sewerage System.
- Metropolitan Waterworks and Sewerage System. (2009). Concession agreement extension. Quezon City: Metropolitan Waterworks and Sewerage System.
- Metropolitan Waterworks and Sewerage System. (2012a). Proposed rehabilitation, operation, and maintenance of MWSS-owned auxiliary turbines AN4 7AN5 at the Angat hydro-electric power plant through Public-Private Partnership: Metropolitan Waterworks and Sewerage System.
- Metropolitan Waterworks and Sewerage System. (2012b). Water security legacy roadmap. Retrieved June 1, 2012, from <http://mwss.gov.ph/learn/water-security-legacy-roadmap/>
- Metropolitan Waterworks and Sewerage System. (2013). MWSS' 135 years of providing water

- service: A historical Perspective. Quezon City: Metropolitan Waterworks and Sewerage System.
- Metropolitan Waterworks and Sewerage System Regulatory Office. (2004). Information kit. Quezon City: Metropolitan Waterworks and Sewerage System
- Metropolitan Waterworks and Sewerage System. (2014a). The MWSS water system. Quezon City: Metropolitan Waterworks and Sewerage System.
- Metropolitan Waterworks and Sewerage System. (2015). New centennial water resource project. Quezon City: Metropolitan Waterworks and Sewerage System.
- Metropolitan Waterworks and Sewerage System. (2017a). World water leaders cite MWSS partnership with Manila Water, Maynilad in Korea confab. Retrieved January 29, 2020, from <http://mwss.gov.ph/world-water-leaders-cite-mwss-partnership-with-manila-water-maynilad-in-korea-confab/>
- Metropolitan Waterworks and Sewerage System. (2017b). MWSS, Manila Water, Maynilad observe 20th successful PPP. Retrieved January 29, 2020, from <http://mwss.gov.ph/mwss-manila-water-maynilad-observe-20th-successful-ppp/>
- Metropolitan Waterworks and Sewerage System. (2019). New Centennial Water Source – Kaliwa Dam project. Retrieved April 13, 2020, from <http://mwss.gov.ph/projects/new-centennial-water-source-kaliwa-dam-project/>
- Metropolitan Waterworks and Sewerage System. (2020a). Legacy 1: Water resources and infrastructure development. Retrieved February 7, 2020, from <http://mwss.gov.ph/legacy-1-water-resources-and-infrastructure-management-development-and-protection/>
- Metropolitan Waterworks and Sewerage System. (2020b). New centennial water source; Kaliwa Dam project. Retrieved February 17, 2020, from <http://mwss.gov.ph/projects/new-centennial-water-source-kaliwa-dam-project/>
- Miraflor, M. B. (2019, August 3). Water privatization a successful legal framework - MWSS chief. Manila Bulletin.
- Oplas Jr., B. S. (2017, June 2). PPP vs ODA (User pays vs all taxpayers pay). BusinessWorld.
- Panaligan, R. (2019, December 3). DOJ review finds onerous provisions in water contracts with Maynilad, Manila Water. Manila Bulletin.
- Perreault, T. (2014). What kind of governance for what kind of equity? Towards a theorization of justice in water governance. *Water International*, 39(2), 233-245.
- Public-Private Partnership Center of the Philippines. (2020). MWSS privatization project. Retrieved March 30, 2020, from https://ppp.gov.ph/ppp_projects/mwss-privatization-project/
- Rivas, R. (2019a). Manila Water's crisis: What we know so far. Rappler. Retrieved February 20, 2020, from <https://www.rappler.com/newsbreak/iq/225953-what-we-know-explanation-manila-water-supply-crisis>
- Rivas, R. (2019b). Maynilad, Manila Water will no longer demand payment from gov't. a. Retrieved February 19, 2020, from <https://www.rappler.com/business/246909-maynilad-manila-water-will-no-longer-demand-payment-from-government>
- Rivera, V. C. (2004). The experience of Manila Water Company under the MWSS privatization. Paper presented at the Regional Conference on Universality of Infrastructure Services: Financing, Delivery, Legal, and Regulatory Issues.
- Rivera, V. C. (2014). Tap secrets: The Manila Water story. Mandaluyong City and Quezon City: Asian Development Bank and Manila Water Company.
- Romero, A. (2019, December 3). Duterte threatens water firms with 'economic sabotage' charges. Philippine Star.

- Roth, D., Boelens, R., & Zwarveteen, M. (Eds.). (2005). *Liquid relations: Contested water rights and legal complexity*. New Brunswick: Rutgers University Press.
- San Juan, J. (2019, December 4). MWSS's water concession deals onerous, DOJ finds. *BusinessWorld*.
- Saulon, V. (2019a, October 10). Maynilad allots P53 billion for new sewer lines. *BusinessWorld*. Retrieved February 20, 2020, from <https://www.bworldonline.com/maynilad-allots-p53b-for-new-sewer-lines/>
- Saulon, V. (2019b, February 15). Manila Water gears capex plans to boost wastewater treatment business. *BusinessWorld*.
- Simeon, L. M. (2020, January 9). New deals won't kill water firms — DOJ chief. *Philippine Star*.
- Torio, P. (2016). *Water privatization in Metro Manila: Assessing the state of equitable water provision*. Institute for Resources, Environment and Sustainability, PhD, from <https://open.library.ubc.ca/cIRcle/collections/ubctheses/24/items/1.0300017>
- Torio, P. C. (2018). Leveling the playing field for metro Manila's impoverished households. *Water Policy*, 20(2018), 631-646.
- Torio, P. (2020). PPP Contractual Arrangement. In *Public-Private Partnerships for Infrastructure Development: Lecture No. 6*. Quezon City: Ateneo School of Government.
- Torio, P., De Vera, M., Timbang, M., & Siriban, C. (2013). *Asian Public-Private Partnerships: An overview of trends and innovations*. from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2221100
- Torio, P. C., Harris, L. M., & Angeles, L. C. (2019). The rural-urban equity nexus of Metro Manila's water system. *Water International*.
- Trading Economics. (2020). *Philippine corporate tax rate: 1997 - 2020 data*. Retrieved April 4, 2020, from <https://tradingeconomics.com/philippines/corporate-tax-rate>
- UP National Engineering Center. (2010). *UP NEC: Public service to the nation*. Quezon City: UP National Engineering Center.
- Valiente, C. S. (2019, December 10). MWSS, water firms to 'sanitize' contract. *The Manila Times*.
- Wallace, P. (2019, June 13). Keeping your word. *Philippine Daily Inquirer*.
- Wegerich, K. (2007). A critical review of the concept of equity to support water allocation at various scales in the Amu Darya basin. *Irrigation Drainage System*, 21(2007), 185-195.
- Whiteley, J. M., Helen, I., & Perry, R. W. (Eds.). (2008). *Water, place, & equity*. Cambridge: The MIT Press.
- Wolf, C. (2007). *Manila water - Privatising regulated services in a developing country* [Electronic Version]. Retrieved June 29, 2014 from <http://ssrn.com/abstract=1133437>.
- World Bank, Asian Development Bank, Inter-American Development Bank, & Public-Private Infrastructure Advisory Facility. (2014). *Public-Private Partnerships Reference Guide*. from <http://api.ning.com/files/Iumatxx-0jz3owSB05xZDkmWIE7GTVYA3cXwt4K4s3Uy0NtPPRgPWYO1lLrWaTUqybQeTXIeuSYUxbPFWlYsuyN15rL6b2Ms/PPReferenceGuidev02Web.pdf>
- Wu, X., & Malaluan, N. (2008). A tale of two concessionaires: A natural experiment of water privatisation in Metro Manila. *Urban Studies*, 45(1), 207-229.
- Yescombe, E. R. (2007). *Public-Private Partnerships: Principles of policy and finance*. London: Elsevier Ltd.
- Zwarteveen, M., Kemerink-Seyoum, J. S., Kooy, M., Evers, J., Acevedo Guerrero, T., Batubara, B., et al. (2017). Engaging with the politics of water governance. *WIREs Water*.

ACKNOWLEDGMENTS

ADR Institute gratefully acknowledges all those who have extended their support, cooperation, and commitment to the development of this project. This publication would not have materialized without their help.

We are fortunate enough to engage with insightful persons from different sectors, namely: the academe, public and private sectors, as well as civil society organizations, who have shared their expertise and have actively contributed to discussions in various fora.

We would also like to thank Prof. Victor Andres ‘Dindo’ Manhit, President of the ADR Institute, for his leadership, vision, and guidance in making this endeavor possible.

Last but not the least, we would like to thank the following for their hard work and dedication and for working tirelessly towards the completion of this project:

Our design consultant, Ms. Carol Manhit, for the publication layout and cover design;

And the rest of the ADRi team headed by Executive Director, Francesco “Paco” Pangalangan, Deputy Executive Director for Programs, Ms. Ma. Claudette Guevara, Deputy Executive Director for Research, Dr. Jimmy Jimenez, External Affairs and Social Media Manager, Ms. Krystyna Dy, and Research Associate, Ms. Clarisse Dacanay.



ABOUT THE AUTHOR

Dr. Philamer C. Torio

*Associate Professor and Senior Research Fellow
Ateneo School of Government*

Dr. Torio has over 25 years of experience in management, finance, teaching, research, and policy making related to public infrastructure, as a senior corporate officer, government official, and academic scholar.

At present, he is an Associate Professor at the School of Government of the Ateneo de Manila University as a core faculty, PhD coordinator, and senior research fellow. He undertakes research and capacity building projects in the areas of resource management, governance, infrastructure development and finance, and Public-Private Partnerships, with special focus on the water sector.

Just before joining Ateneo de Manila University he served as a Senior Lecturer at the IHE Delft Institute for Water Educations, a Netherlands-based graduate academic institution which is considered the largest water education facility in the world. There he coordinated lectures and researches on water infrastructure finance and Public-Private Partnerships. As Philippine country coordinator, he also liaised with Philippine government agencies and developed programs aimed at increasing the number of Filipino students/training participants at the institute.

As the first Executive Director of the Public-Private Center of the Philippines, he was instrumental in shaping the Philippine government's policy and strategy with respect to the development of public infrastructure through private sector participation. As the first Executive Director of the center he reorganized the BOT Center into the Public-Private Partnership Center of the Philippines, in accordance with Executive Order No. 8, and was also pivotal in setting the vision, goals and strategies to ensure successful implementation of the government's PPP program.

He has a PhD degree in Resource Management & Environmental Studies from the University of British Columbia, as well as master's degrees in various disciplines - Master of Engineering from the University of the Philippines, Master in Management from the Asian Institute of Management, Master in Public Administration from Harvard University, and Master of Arts in Asia Pacific Policy Studies from the University of British Columbia.

His diverse work experience coupled with various graduate studies allows him to take an interdisciplinary approach towards teaching, research, and capacity building.

The views, opinions and conclusions expressed in this paper are those of the author and do not necessarily reflect those of the Institute or any of its officers and trustees.

The author is solely responsible for its content.



STRATBASE ADRI FOR STRATEGIC AND INTERNATIONAL STUDIES

9th Floor
6780 Ayala Avenue
Makati City,
Philippines 1200

www.adrinstitute.org