

PUBLIC WATER AND COVID-19

DARK CLOUDS AND
SILVER LININGS



Edited by David A. McDonald, Susan Spronk and Daniel Chavez

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David A. McDonald, Susan J. Spronk
and Daniel Chavez

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ABOUT THE AUTHORS

Tatiana Acevedo Guerrero is Senior Lecturer and Researcher in Politics of Wastewater at the IHE Delft Institute for Water Education in the Netherlands. She is concerned with the relationships and histories that are reflected in access to (and exclusion from) water supply, sanitation, and drainage. Her research documents the ways in which residents of different neighborhoods make water flow and evacuate.

Susan Agada is an Environmental Management and Disaster Vulnerability Consultant. Her research specialization is disaster vulnerability and she has spent the last six years working on flood disasters in Nigeria. Susan currently holds a teaching position at the Department of Disaster and Emergency Management, York University, Canada.

Jeimy Alejandra Arias Castaño is a PhD candidate in the Department of Geography, Université de Montréal, in Canada. He has a Bachelor of Political Science and Master's in Political Studies from the Universidad Nacional de Colombia. He is a researcher with the Canada Research Chair in Water and Urbanization.

Elisa Bernal Arellano is a journalist and communications specialist currently working as a consultant for the UN-Habitat-led Global Water Operators' Partnership Alliance (GWOPA), headquartered in Bonn, Germany. She holds a Master's degree in Middle Eastern Studies and has worked for the IEMed, a leading think-tank on Euro-Mediterranean relations.

Catherine Baron is a Full Professor in Development Studies at the Political Science Institute of Toulouse, France. Her research focuses on urban water governance in developing countries, especially in Africa (Burkina Faso, Niger) and Indonesia. She focuses on equity in water access in precarious urban neighborhoods and participatory water governance with institutional approaches.

María Botero-Mesa is a lawyer from the University of Antioquia with a Master's degree in Development from the Universidad Pontificia Bolivariana in Medellín, Colombia. She is legal advisor of the Penca de Sábila Ecological and Cultural Corporation, and of the National Network of Community Aqueducts of Colombia, and researcher at the Territory Group of the Universidad Pontificia Bolivariana-Medellín.

Daniel Chavez is a Dutch-Uruguayan scholar activist. He is a Fellow of the Amsterdam-based Transnational Institute (TNI). He holds a BA in Social Anthropology from Uruguay's University of the Republic and an MA and PhD in Development Studies from the International Institute of Social Studies of Erasmus University Rotterdam. His research interests focus on public policy, water and energy, state theory, and social movements.

Isabelle Delainey is the Project Manager at Eau Secours in Québec, Canada. She has Bachelor's degrees in geology and geography and a graduate diploma in pedagogy. She also holds a Master's degree in Environmental Management and Sustainable Development and a graduate degree in Environmental Auditing.

Milo Fiasconaro has been the Executive Director of Aqua Publica Europea – the European Association of Public Water Operators – since 2012. Prior to that, he worked for different public authorities in the implementation of European policies, especially in the field of Innovation and Environmental policies. He holds an MA in Human Geography from Durham University (UK) and a degree in Political Science from Florence University (Italy).

Kathryn Furlong is an Associate Professor in the Department of Geography at Université de Montréal in Canada. She holds the Canada Research Chair in Water and Urbanization.

Jovana Gojkovic is Senior Officer at Aqua Publica Europea, where she supports the facilitation of exchanges and cooperation between public water operators and contributes to EU policy discussions on behalf of the association's members, in particular in the fields of water and sustainability. Holding a Master's degree in European affairs, she has previously worked with complementary European organisations in Brussels, Belgium.

Marcela González-Rivas is an Assistant Professor at the Graduate School of Public and International Affairs at the University of Pittsburgh in the United States. Her central research interests revolve around sustainable water policy, equity, and water governance with a focus on how uneven access to water varies across communities and regions and how policymaking and planning can exacerbate or diminish such inequalities with particular concentration on Mexico and Latin America more broadly.

Mary Grant is the Public Water for All Campaign Director at Food & Water Watch. She oversees campaigns to support universal access to safe water in the United States by promoting responsible and affordable public provision of water and sewer service. She has a Bachelor degree in Environmental Sciences from Duke University.

Léandre Guigma is an architect with a PhD in urban planning. He combines his professional activities (manager of Perspective, a consultancy agency in urban studies in Ouagadougou, Burkina Faso) with teaching and academic research. His research and expertise focuses on the role of precarious neighborhoods and the coordination of actors governing cities in Africa.

Christopher Herzog has a professional background in civil protection, disaster control and risk management. For the past three years, he has worked at Hamburg Wasser as an engineer in the department that operates and maintains the water supply and wastewater networks in Hamburg. He is specialized in crisis management and plays a key role in the Covid-19 emergency committee.

Petri S. Juuti is the head of the CADWES and IEHG research teams, UNESCO Professor and Adjunct Professor/Docent in Finnish History (University of Turku) and Adjunct Professor in Environmental History (University of Tampere, UTA) and in History of Technology (University of Oulu) in Finland. His major area of interest is environmental history, especially the interaction between society and nature.

Craig Laird works as a Partnerships and Outreach Specialist for the Global Water Operators' Partnerships Alliance (GWOPA) where he is leading efforts to increase GWOPA's membership and engagement among key stakeholders, most notably public water utilities.

Anne Le Strat is the former Deputy-Mayor of Paris and Chair of Eau De Paris. She is currently a research fellow at New York University in the United States.

Alex Loftus is Reader in Political Ecology at King's College London. His research addresses questions in political ecology, ranging from debates over water privatization, to struggles over water in post-apartheid South Africa, around the right to water and more recently debates over the financialization of water infrastructure

Hug March is Associate Professor in the Faculty of Economy and Business, Universitat Oberta de Catalunya (UOC), and researcher of the Laboratory of Urban Transformation and Global Change (TURBA) at the same university, in Spain. He has done extensive research on the urban political ecology and economy of the water cycle, including research on financialization and remunicipalization.

Marwa Marwa is a researcher at Universitas Gadjah Mada Yogyakarta, Indonesia. Her research lies within the field of political economy of environment, international development, and social justice where she has worked on the subject of urban water governance in southern cities such as Jakarta and Freetown.

David A. McDonald is Professor of Global Development Studies at Queen's University, Canada. He is founder and director of the Municipal Services Project, a research initiative that explores progressive and innovative public service delivery models from around the world.

Rebecca McMillan is a PhD Candidate in Geography at the University of Toronto, Canada. Her PhD and MA research has focused on the politics of participation and public services provision in Venezuela.

Erika Meneses is a Master's student in Development at the Universidad Pontificia Bolivariana in Medellín, Colombia. She is an anthropologist from the University of Antioquia and a member of the Study Group on Political Ecology and Water Justice.

Pablo Messina is a Uruguayan economist and historian specialized in development economics. He is a member of Comuna, a Montevideo-based social scientist's cooperative that provides research services for trade unions and other social organizations. He is also an Assistant Professor at the Department of History and Development Studies of the School of Economics and Administration of the University of the Republic, Uruguay.

Beverley Mullings is Professor of Geography at Queen's University, Canada. Her research is located within the fields of feminist political economy, labour geographies, and urban studies, and engages with broad questions of social transformation, neoliberalism, and the politics of gender, race and class in the Caribbean and its diaspora.

Benjamin J. Pauli is Assistant Professor of Social Science at Kettering University in Flint, Michigan, USA. He is the author of *Flint Fights Back: Environmental Justice and Democracy in the Flint Water Crisis*, the president of the board of the Environmental Transformation Movement of Flint, and a member of the Environmental Protection Agency's National Environmental Justice Advisory Council.

Riikka P. Rajala is head of the CADWES research team and UNESCO co-professor and Adjunct Professor/Docent in Water Services at Tampere University, Finland. She has a Doctor of Science (Tech.) and her areas of expertise and research interest are water and environmental services, resilient water and sanitation services, water services management, environmental history and history of technology.

Robert Ramsay is Senior Research Officer at the Canadian Union of Public Employees (CUPE). His work focuses on municipal governance and finance, infrastructure and services, and privatization. He holds graduate degrees in Human Geography from the University of Toronto and Communications from Georgetown University.

Denisse Roca-Servat is Professor and researcher of the Territory Group at the Universidad Pontificia Bolivariana in Medellín, Colombia. She is a researcher at the Water Justice Alliance and co-coordinator of the Working Group on Political Ecology of the South / Abya-Yala of the Latin-American Council of Social Sciences (CLACSO). She has a PhD in Justice Studies from Arizona State University and a Master's from the Institut d'études Politiques-Bordeaux, France.

Greg Ruiters is Professor of Public Policy at the School of Government at the University of Western Cape, South Africa. Previously he was the Co-Director of the Municipal Services Project. Before joining the University of the Western Cape he was the Director of Institute for Social and Economic Research (ISER) and Mathew Goniwe Chair and Professor in Development and Society at Rhodes University.

Martín Sanguinetti is a Uruguayan economist and a member of Comuna, a Montevideo-based cooperative founded by scholar-activists to provide research services for trade unions and other social organizations. He is Assistant Professor of History and Development Studies in the School of Economics and Administration of the University of the Republic, Uruguay.

Mar Satorras is Juan de la Cierva research fellow at the Laboratory of Urban Transformation and Global Change (TURBA) at Universitat Oberta de Catalunya (UOC), Spain. She is an anthropologist and environmental scientist holding a PhD in Environmental Studies (UAB, 2017). Using the lenses of environmental history, political ecology, and ethnoecology she has developed interdisciplinary research particularly on climate change, hydro-climatic risks, and the urban water cycle.

David Saurí is Professor of Human Geography in the Universitat Autònoma de Barcelona (UAB), Spain. He holds a PhD in Geography from Clark University, USA. He teaches or has taught in the undergraduate and graduate programs of Geography, Environmental Sciences and East Asia Studies. His main research interests are in Water, Natural Hazards, Climate Change and Nature-Society theories.

Leonard Shang-Quartey is Coordinator of the Water Citizens Network and a human rights to water activist based in Ghana. He holds a Master's Degree in Governance, Policy and Political Economy from Erasmus University in the Netherlands. He has worked in the water and sanitation policy space in Ghana for more than a decade.

Susan Spronk is Associate Professor in the School of International Development and Global Studies at the University of Ottawa, Canada. Her research interests include social movements and class formation in Latin America, critical perspectives on capitalism and development, and water governance. Most recently she has been comparing cash

transfer policies and women's empowerment in Bolivia and South Africa.

Farhana Sultana is Associate Professor in the Department of Geography and the Environment at the Maxwell School of Citizenship and Public Affairs of Syracuse University, USA, where she is also the Research Director for Environmental Collaboration and Conflicts at the Program for the Advancement of Research on Conflicts and Collaboration (PARCC).

Mildred E. Warner is a Professor in the department of City and Regional Planning at Cornell University, where her work focuses primarily on local government service delivery, economic development and planning across generations. Her current research explores the impact of privatization and devolution on local government and the role of human services as part of the social infrastructure for development. Her work on local government economic development policy focuses also on the potential linkages to environmental sustainability action.

Arnd Wendland is a civil and environmental engineer who has worked for more than 20 years at Hamburg Wasser, Germany. For the past eight years he was the managing director for a water and wastewater association in the Hamburg metropolitan region. He is currently the head of an operating department, which is responsible for about 30% of the drinking water production for Hamburg as well as the control centre for all of the company's waterworks.

Claudia Wendland is an engineer who has worked in water and sanitation for more than 25 years. Before joining HAMBURG WASSER two years ago as senior expert, she worked as a water and sanitation specialist in how to re-use water in water and sanitation projects worldwide. She holds a doctoral degree and was a lecturer at Lübeck University of Applied Sciences and project engineer in the field of sewage sludge management.

Xue Zhang is a Postdoctoral Associate in the Department of City and Regional Planning and the Department of Global Development at Cornell University, USA. Her research focuses on regional development, equity, community development policy and public health.

Sara Correa Zuluaga is an engineer at the Penca de Sábila Ecological and Cultural Corporation, and member of the National Network of Community Aqueducts of Colombia. She has a Master's in Environmental Engineering from the University of Antioquia de Colombia.

Chapter 1

David A. McDonald

Susan Spronk

Daniel Chavez

INTRODUCTION: WHY PUBLIC WATER MATTERS

Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next.

Arundhati Roy (2020)

This book is about how public water operators have responded to the Covid-19 pandemic in different parts of the world. It is largely a celebration of their remarkable ingenuity, hard work and public solidarity in extremely difficult conditions, but it is also a critical reflection on the internal and external challenges public water operators face, the mistakes they have made, and what can be done to improve things in the future.

This introductory chapter sets the stage with a review of why water matters during Covid-19, followed by a discussion of why *public* water matters, including an analysis of different types of ‘public’ water and how they differ from private water providers

during a pandemic. We then examine the dark clouds that Covid-19 has generated for public water operators (from financial crises to privatization pressures), followed by the silver linings that have been revealed: the positive ways in which public water operators have responded to the pandemic and how these ideas and practices might be carried forward into longer-term organizational, financial and philosophical changes. We close with a brief review of the genesis and methodologies of the research for this book and how we have arranged the chapters.

These are still early days, however, and this collection of essays is but a snapshot in time taken shortly after the outbreak of Covid-19 (with most data collection and writing taking place between May and August of 2020). A second wave of Covid-19 infections is affecting many parts of the world as we write (October 2020), and for many countries the first wave continues unabated. The challenges described in this book may become exponentially more difficult for public water operators. A mounting economic crisis is leading to budget cuts and more aggressive forms of cost recovery while rising expenses such as personal protective equipment (PPE) and enhanced cleaning protocols are creating financial and organizational challenges that threaten to undermine the progressive work of public water operators in the near future.

Covid-19 is therefore both a threat and an opportunity for improved public water, and it may cut both ways, sometimes in the same place. As a result, the chapters in this book should be read in the manner suggested by Arundhati Roy in the quote above: as a glimpse into the potential for public water services to act as portals to a better future – one in which water and sanitation services are available to everyone in safe, reliable, affordable and democratic ways, and advance public goods beyond their narrow utilitarian value. Doing this will also require a substantial break from the past.

Covid-19 is not the first pandemic to highlight the need for effective and equitable water services – and it will certainly will not

be the last – but it is a truly universal crisis, showcasing the centrality of water services to basic human well-being in every part of the world. Notably, it has also helped to reveal the ugly underbelly of poor water services in many parts of the North, possibly helping to build a more robust global coalition of voices for change. As Sultana and Loftus note in their review of the impacts of Covid-19 on the human rights to water in this volume: “Throughout the global North, rarely have individuals been so concerned that access to water still seems to rely on the ability to pay. Rarely have the rights to water and sanitation been discussed so widely, with growing anger over the closure of public toilets and growing concern over household water insecurity” (see also Meehan et al. 2020). The chapters on water cutoffs in the United States and water poverty in Spain in this volume provide further concrete evidence of the growing *global* disparities of water service provision.

Not all of the stories in this collection are positive, therefore, but they all illustrate the potential for constructive change (through growing demands for more democratic decision making, the development of more progressive tariff policies, and the sharing of knowledge among public water operators). Some stories are dramatic – with decisions on water services having life-and-death consequences for millions of people. Others are less sensational but no less important or remarkable in terms of how they illustrate the speed and effectiveness with which many public water operators have dealt with the pandemic. In this regard we encourage readers to review the full range of public water experiences in this collection to better understand the breadth of challenges, the widely differing capacities of water operators, and the varying outcomes of public water crises during Covid-19, all in an effort to accomplish the same basic feat: the provision of safe, reliable water services to everyone.

This diverse compilation of stories is intended to accomplish three goals. The first is to provide a robust cross-section of empirical and theoretical insights on how public water operators

from around the world are responding to the Covid-19 crisis. The second is to identify and critically examine what can be considered ‘good’ (as opposed to ‘best’) practices and how these might be transferable to different locations. And finally, we aim to highlight the needs and opportunities for a more progressive public water future over the longer term and what lessons from Covid-19 might be carried forward.

WHY WATER MATTERS

Of the handful of preventative measures deemed effective at slowing or preventing the spread of Covid-19, handwashing is one of the most important. The mechanical action of rubbing hands together in water can itself remove germs, but is most effective when combined with soap because its molecules disrupt SARS-CoV-2’s outer lipid membrane, killing the microbe. Running water then flushes away the viral fragments (Schmidt 2020). Hand sanitizers with at least 60% alcohol content can be equally effective, but they tend to be more expensive, are not always available, and are not as effective if hands are dirty (Smith et al 2020, Sicket-Bennet et al. 2005). Washing hands is also important for warding off other illnesses such as salmonellosis, hepatitis and other influenzas, with co-morbidity being a strong indicator of the potential infection and severity of Covid-19 (Aly et al. 2020, Morley and Vellas 2020).

But handwashing is only possible if water is available. Nearly 2.1 billion people lack access to safe, readily available water at home, while millions more must walk long distances or rely on otherwise unreliable and intermittent water services outside of their homes (UNICEF and WHO 2017). Many government institutions also lack basic hygiene services. In 2016, 47% of schools around the world lacked adequate amenities for handwashing, as did 16% of health-care facilities (UNICEF and WHO 2018, 11).

Water disconnections in many countries exacerbate the problem. In the United States (US) alone, 15 million Americans had

their water services interrupted due to an inability to pay in 2016 (Swain et al. 2020), and the crisis appears to be worsening, with one survey noting that “water bills could soon be unaffordable for more than one third of Americans” (Teodoro 2019, 2; see also the chapters on Baltimore, Pittsburgh and Flint in this volume). Leaky infrastructure, intermittent service delivery and other forms of irregularity all contribute to a massive global problem with access to water for basic handwashing.

Even where water is available, there is not always enough of it for proper handwashing practices. Because the Covid-19 virus is not transmitted by water, the amount of water used in handwashing is more important than its cleanliness (although contaminated water is a vector for other illnesses). Thus, “frequent handwashing with lower-quality water is preferable to infrequent handwashing in high-quality water” (Howard et al. 2020, 382). But as the number of people staying at home has increased during Covid-19 due to lockdown measures, it has been increasingly difficult to ensure that sufficient amounts are allocated to handwashing activities, especially when other pressing household water needs are taken into account.

Access to soap is another problem. UNICEF and WHO (2019) report that only 60% of the world’s population has a location in their household where both soap and water are available that are either fixed (a sink) or mobile (jugs or basins). These figures drop to less than 50% in sub-Saharan Africa (Brauer et al. 2020, Jiwani and Antiporta 2020). Importantly, sewage is not a spreader of Covid-19, as feces do not appear to be a disease vector (although, once again, it is a vector for other serious illnesses, potentially contributing to co-morbidity). However, antibodies from the Covid-19 virus can be tracked in sanitation systems and may be an important tool in monitoring outbreaks of the disease (Farkas et al. 2020; see also the chapter on Québec in this volume). Water operators can therefore play an important role in issuing advanced warnings of site-specific occurrences of the illness.

WHY PUBLIC WATER MATTERS

Although private water companies have also been dealing with the Covid-19 crisis (more on this below), the focus of this book is on public water operators for two reasons. First, they make up the vast majority of the world's water service providers. Private water remains significant in parts of Europe (England at 100%, France at 67% and Spain at 63%), and private water provision is growing in some locations (notably China and Brazil), but for most countries in the world, water and sanitation remains predominantly public. In the US only 15% of water is delivered by private companies, while in Germany only 12% is private, and in Italy it is 11% (Arup 2015, 38). Low-income countries are overwhelmingly serviced by public water agencies, with private water companies showing little interest in serving these markets (WWC and OECD 2015). Nor does the private sector play a large role in capital investments in the water sector, “struggl[ing] to provide more than a tiny portion of the infrastructure investment in the world” (Hall 2015, 10; see also McDonald et al. 2020a).

Second, there are good reasons to argue that public water operators (can) do things differently than private water companies. As members of the NGO *France Eau Publique* argue in their chapter in this book: “Unlike a concession contract, which circumscribes investment within a temporal and spatial framework, the public management model provides the means to make decisions based on long-term consequences. Public operators are committed to defending and preserving water as a common good. Where water is privatized, local authorities must deal with private operators who refuse to go outside of their mandates as defined in their contract. Public operators, by contrast, feel that they have a genuine mission to serve the public good. Employees are at the heart of this movement, ready to commit their time and energy to guarantee service quality.”

It is not our intent to ‘prove’ that public water operators have been better at responding to Covid-19 than their private counterparts. We have not conducted the comparable research on private company reactions to the crisis to allow us to do this. Nor do we claim to have a representative sampling of public water operators to allow for such a comparison. In fact, we have an intentionally biased selection of public water operators which were chosen because we hoped they could illustrate relatively positive examples of public water services in an effort to learn more about what they have done well (and not so well) in their efforts to address Covid-19. We acknowledge that there are poorly run public water services in the world that could have presented a very different picture, but that is not the purpose of this book.

Having said that, we fundamentally believe that public water services can be more democratic, more accountable and more transparent than private water services, largely because they are not driven by narrow profit objectives. They also have better potential for collaboration with other public service providers given their broad public good mandates, and they have longer-term time horizons with regard to investments in people, infrastructure and systems where they work. Three decades of case studies and meta studies on this topic from around the world have clearly demonstrated that private sector water operators tend to be more expensive, less accountable and less interested in long-term investments than their public sector counterparts (Hall et al. 2005, Castro 2008, Bakker 2010, Bel et al. 2010, Tan 2012). We believe that this has negatively affected their ability to manage Covid-19 in a democratic and equitable way, and therefore associate ourselves with the overall conclusions of a group of UN Special Rapporteurs who published an (unprecedented) op-ed in *The Guardian* newspaper in October 2020 arguing that “Covid-19 has exposed the catastrophic impact of privatizing vital services” such as water (Farha et al. 2020).

But this book is not about the impacts of privatization. The question we want to ask is what makes for a ‘good’ public water

operator. On this point our position is one of contingency, with no predetermined outcomes, and with results depending on a wide range of social, political, economic, cultural and geophysical factors (McDonald and Ruiters 2012). To complicate matters, no two places are ever the same, and no single public water operator will ever get everything exactly right. We are interested in the messy collage of indicators that make up an assessment of public water performance and we examine these markers in different locales in an effort to better document and understand how effective (or not) these actions have been in promoting equitable, sustainable and democratic water services during the Covid-19 crisis.

We also showcase the importance of non-state actors in ‘public’ water services. Co-production involving some combination of government, communities, NGOs and other actors has long been a reality in water service provision, particularly, but not only, in countries in the South (Ahlers et al. 2014). We have therefore included one chapter on the role of small-scale local firms filling gaps left by the state in rural Nigeria, and another exploring community-run water aqueducts in Colombia, a practice that is widespread in Latin America (Llano-Aria 2015).

Of equal importance is the fact that we are highly critical of certain types of public water operators; namely those that are corporatized and commercialized. By corporatization we mean water service agencies that are owned and operated by the state (local or national) but which function at arm’s length with separate legal and financial status (McDonald 2014). There are many different forms that corporatization can take but the rise of neoliberalism and new public management over the past 30 years has resulted in the widespread commercialization of stand-alone water utilities, with market-based operating principles dominating decision-making. The general result has been the creation of public companies that operate as though they were private firms in a competitive marketplace, with a focus on the financial bottom line in an effort to “encourage particular types of entrepreneurial,

competitive and commercial behaviour” (Gilbert 2013, 9).

This form of commercialized water provision has manifested itself most noticeably in the push for full cost recovery and harsh penalties for non-payment. The result has been a crisis of water cutoffs in many parts of the world, including in some of the locations in this volume (notably Flint, Medellín and Cape Town), with few public water operators today having entirely escaped the philosophical and institutional influences of utility-based cost recovery mandates and their associated disciplinary actions.

Nevertheless, neoliberal corporatization is *not* privatization, and pure market forces never fully apply to state-owned enterprises or ‘natural monopolies’ such as water and sanitation (Furlong et al. 2018). In this respect we highlight potential openings for more progressive change even in some of the more commercialized public water operators in this book, with Covid-19 helping to expose the contradictions and inequities of narrow cost recovery mandates and the shutoff practices that often accompany them. As such, some of the least positive examples from this collection may prove to be the most instructive in terms of what can and should be done to address the crisis of affordability and to advance a more sustainable and democratic public model in a post-Covid world.

THE FINANCIAL CRUNCH

Nevertheless, the immediate financial situation for public water operators is very dire. Most of the public water operators showcased in this book face serious financial shortfalls as a result of Covid-19, on top of what was already a grim fiscal situation in an era of austerity, making short-term progressive public water policies difficult and diminishing longer-term options for change.

This financial impact has been felt on two fronts. The first has been a major loss of revenue. Lower demand (particularly from industry) combined with a decrease in payments (due to growing poverty and job losses) has meant drastic falls in income. Many

public water operators have also been subsidizing consumption and reconnecting users to the network in an effort to help combat the spread of the virus (sometimes as a result of government legislation, but also due to internal decision-making), exacerbating financial losses. The second factor has been increased costs, such as PPE, organizing new work arrangements, scarce critical supplies, increased cleaning protocols, expanded IT services and digitalization, emergency service provision, overtime for personnel, developing new systems for consumer relations, and so on.

The result has been a crunch on daily cash flows and long-term capital budgets. There are no comprehensive global figures as of yet, but data collected in June 2020 by the International Benchmarking Network for Water and Sanitation Utilities found that collection rates had fallen by 40% in the utilities they monitor while costs had risen significantly as well (World Bank 2020a). Other figures indicate revenue decreases of as much as 70% in the first few weeks of the pandemic (World Bank 2020b). In the United States, financial losses to utilities are estimated to be US\$13.9 billion and the economic impacts US\$32.7 billion (Raftelis 2020); this in a country where infrastructure investment needs in the water sector are estimated at more than US\$1 trillion over the next 20 years (Tiemann 2017, 9). Water operators in countries such as Burkina Faso and Colombia are in equally difficult situations, but with far less fiscal and monetary room for maneuver.

Although many water operators have been able to go into deficit to manage the Covid-19 crisis, it is not at all clear that they will be able to preserve the necessary funding to expand and improve water services when the pandemic is over. If past experience with waterborne health crises are anything to go by, emergency funding will dry up quickly in many countries, with public water operators falling back into a chronic state of financial crisis. As much as we might like to think that this particular pandemic will be the one to finally wake the world up to the need for adequate funding for the Sustainable Development Goal (SDG) targets in water and

sanitation – with global figures for SDG targets 6.1 and 6.2 alone estimated at US\$150 billion per year (World Bank 2017, 52) – even the most well-meaning of governments and donors will find it difficult to find the money given all of the other costs associated with the fallout from Covid-19.

One response to this ongoing financial crisis may be a doubling down on commercialization. There is already evidence of this in some of the chapters in this book. In Colombia, for example, *Empresas Públicas de Medellín* (EPM) has introduced emergency measures to make water more affordable to the poor during the pandemic, but they have been very clear that these are temporary reprieves from market-oriented cost recovery policies, and have been keen to emphasize that they are not offering “free” water. In Uruguay, legislative and managerial reforms introduced during the pandemic by the new market-oriented ruling coalition have intensified the trend towards marketization of the national water utility, OSE.

The World Bank has also used the pandemic as an opportunity to reinforce its marketized view of water services, with the creation of a specialized program on financing for water operators affected by Covid-19. The program is primarily aimed at short-term crisis management but it “could become a medium-term financing facility for the water sector...[B]uild[ing] on the experiences of previous financial crises” (World Bank 2020b, 5). The aim is to employ “blended finance models to assist creditworthy or near-creditworthy utilities to move away from purely concessional donor finance to more sustainable market financing within the context of the pandemic” (World Bank 2020b, 1). They also note that “there will likely be a need to consider new external borrowing in the context of ensuring macroeconomic and fiscal stability,” and that these loans will require “performance contracts” with key performance indicators “assessing whether utility costs are at efficient levels” with the goal of “increase[ing] efficiency and charg[ing] cost-reflective tariffs” (World Bank 2020b, 2, 7, 8, 23). It is hard to

imagine a more classically neoliberal stance.

There is also the distinct possibility of increased privatization in the water sector as a result of Covid-19, with some high-profile multilateral agencies pushing for more private participation. UN-Habitat and UNICEF (2020, 6), for example, want to “promote public-private-partnerships with multinational companies for support in provision of soap and other hygiene materials to the most vulnerable populations in informal settlements.” They would like to:

...engage and empower small private vendors providing WASH services in informal settlements to ensure service continuity and support provision of personal protective equipment where needed for safe delivery of services...includ[ing] grants, materials or any other forms of incentives that will boost the operations of the small private vendors in these areas (UN-Habitat and UNICEF 2020, 7).

For its part, the World Bank (2020b) is pushing for equity investments in water services by private companies.

Some governments also appear to be using the crisis as an opportunity to advance privatization, particularly in locales where there was already a push to do so, such as Brazil (Zislis 2020). In some cases, fiscal pressures alone are pushing authorities to consider privatization, such as with the city of Philadelphia in the US (Mohler 2020). In other cases, Covid-19 has emboldened states to retract on their promise to remunicipalize water (see the chapter on Jakarta, this volume).

Private water companies themselves also appear to be on the offensive, with some using Covid-19 as an opportunity for public relations. Thames Water, for example, has been keen to advertise its Trust Fund donation to support customers in financial difficulties (Thames Water 2020). Similarly, Suez (2020) has announced the following:

As a measure of solidarity, the Chief Executive Officer and the Executive Committee members have decided to donate 25% of their salaries during the lockdown period...via the SUEZ Foundation to the Institut Pasteur and to UNICEF to finance research and provide support of healthcare workers during the crisis.

More importantly, private water companies appear to be bullish on future prospects in the water and sanitation market, with Covid-19 serving to prove the sector's growth and stability potential due to its inelastic demand. As Amit Horman, CEO of Miya, a private equity water company operating in Europe, Africa and the Caribbean, noted in an interview with *Smart Water* magazine in May 2020:

We don't foresee a significant long-term impact on the industry. We believe water utilities are amongst the most resilient sectors to an epidemic and for any financial crisis that can evolve as a consequence of that. Water consumption is rigid by nature and we think the sector will actually become even more attractive to investors (Tempest 2020).

Covid-19 also appears to be contributing to a rash of mergers and acquisitions. Some analysts anticipate a "complete restructuring of the water industry" (Maceira 2020, 3), exemplified by one of the most dramatic potential takeovers of the past 50 years in the sector – an August 2020 bid by French water multinational Veolia for a major stake in rival company Suez, with the latter indicating that this was "the first step in a planned takeover" (Keohane 2020). Ironically, then, Covid-19 may offer private water companies a new lease on life as governments grapple with growing deficits and as multilateral organizations such as the World Bank and certain UN agencies continue to promote private sector participation as a key solution to water and sanitation provision.

Is this “disaster capitalism” at work in the water sector, in which private business and their state backers aggressively push to (re)normalize neoliberal ideas and grab at opportunities to accumulate in the wake of a crisis (Klein 2007, Hashvardhan 2020, Vilenica et al. 2020, Zizek 2020)? There are certainly signs of it, but it is not a foregone conclusion, with progressive governments, unions, NGOs, community organizations and others continuing to fight against privatization while at the same time pushing for more progressive forms of public water services.

SILVER LININGS

Ultimately, this book intends to provide a ‘good news’ story, with signs that Covid-19 has demonstrated both the reality and the potential for public water operators to deal effectively and fairly with the pandemic in the short term, while at the same time opening up possibilities for improved democratization and equity-oriented services in the future. Some of the case studies presented here are more positive than others, but all illustrate the potential for public water to be more democratic, more accountable and more equitable. Some of the lessons learned may not transfer easily between locations given the unique circumstances that most public water operators find themselves in, but the very act of peer-to-peer learning and knowledge sharing documented in this book is an illustration of the potential for public water operators to advance a more collective form of public water provision in the future (see in particular the chapters written by representatives of Aqua Publica Europea and the Global Water Operators’ Partnership Alliance).

Table 1.1 provides a summary of ‘good practices’ captured in these case studies. No single public water operator demonstrated all of them, and some did a better job than others. There are also instances where positive practices (such as a moratoria on cutoffs) were cancelled out by negative ones (such as a failure to provide adequate quantities of water), but the case studies provide con-

crete evidence not only of what is possible on the part of public water operators but what is actually taking place, often in extremely difficult circumstances.

Table 1.1

Examples of progressive actions taken by public water operators

Objectives	Actions
Making water services affordable	<ul style="list-style-type: none"> • Payment deferrals • Reduced rates • Free allocations of water services • Careful targeting of subsidies to those most in need
Keeping people connected to services	<ul style="list-style-type: none"> • Moratoria on cutoffs • Rapid reconnections from prior cutoffs • Rapid repair of breakdowns/interruptions • Ensuring 24/7 services
Closer/safer access points	<ul style="list-style-type: none"> • Installing home/yard taps • Installing community taps • Providing emergency water tankers
New/enhanced online services	<ul style="list-style-type: none"> • Non-contact payment options • Remote technical support for consumers
Emergency services to vulnerable groups (e.g. refugees, informal settlements)	<ul style="list-style-type: none"> • Wash stations • Water tankers • Drinking fountains • Cleaning services
Public education	<ul style="list-style-type: none"> • Importance/methods of handwashing • Easing anxiety by assuring people that water services are safe, reliable and affordable
Supporting staff	<ul style="list-style-type: none"> • PPE provision • Extra training • Remote work options • Childcare support • Testing for virus

Table 1.1
Examples of progressive actions taken by public water operators

Staff commitment	<ul style="list-style-type: none"> • Frontline workers putting themselves at risk • Managers working to develop new systems • Unpaid overtime
Expanding/developing democratic processes	<ul style="list-style-type: none"> • Listening to different voices (communities, workers) • Being more transparent in decision-making • Being more accountable for decisions made
Innovation	<ul style="list-style-type: none"> • Development of new work and IT systems
Networks and solidarity	<ul style="list-style-type: none"> • Peer-to-peer knowledge exchanges on a not-for-profit basis (within the same sector, across sectors, national, international)

Most of the public water operators in this book have done everything they can to keep water flowing and to extend emergency services to areas and households without regular provision. Many frontline staff and managers have been working long periods of overtime, often without extra compensation, and frequently putting their own health at risk (despite the best efforts of most water operators to provide adequate PPE), and with very little in the way of acknowledgement or appreciation by the media or the public at large.

Some water operators were able to introduce new democratic decision-making processes as well as user-friendly payment systems and more accessible consumer services. Many developed public education campaigns around effective handwashing, assuring residents as to the reliability and security of their water and sanitation systems, helping to alleviate anxiety. Most importantly, public water operators have been able to develop and implement these emergency actions quickly and competently, often redesign-

ing plans as they went and, in some cases, developing emergency protocols from scratch. It might not be rocket science in terms of the technologies involved, but these public water operators have navigated an enormously complex terrain of social, political and economic dynamics in the midst of a pandemic at a time when most of the workforce was not able to meet face-to-face.

These positive performances by public water operators during Covid-19 may also help to curtail the aforementioned pressures of privatization. It could even contribute to an acceleration of demands for remunicipalization. Prior to Covid-19 there was already a growing trend towards bringing water services back under public ownership and management, with at least 311 cases of water service remunicipalization over the past 20 years in more than 40 countries (Kishimoto et al. 2020). Hundreds more municipalities will be making decisions about whether or not to renew their private sector contracts in the coming decade, with some having already decided to opt out early even when it incurs a fine (Umler and Gerlak 2019). So too might the strong performance of recently remunicipalized water operators during Covid-19 help to promote this option, as illustrated by the cases of Paris and Terrassa in this volume.

Negative experiences with privatization during Covid-19 could further accelerate demands for remunicipalization. Indeed, the initial waves of water municipalization in the late 19th and early 20th century were largely a result of health epidemics caused by fragmented private water service delivery. Sanitary reformers in Victorian-era England, for example, used cholera outbreaks to expose the gross inadequacies of a *laissez faire* approach to the problem, which had allowed nine companies in the city of London to partition the water supply among themselves in what became “a nine-headed monopoly” without central coordination (Leopold and McDonald 2012). No less an authority than John Stuart Mill took up the cause, criticizing the byzantine inefficiencies of balkanized private supply well before the establishment of a large-

scale monopoly supplier. In 1851 he thought it obvious that great savings in labour “would be obtained if London were supplied by a single gas or water company instead of the existing plurality... Were there only one establishment, it could make lower charges, consistently with obtaining the rate of profit now realized” (Mill 1872, 88-89). It was an error, he argued, to believe that competition among utility companies actually kept prices down. Similar developments unfolded in New York City, which “took over drinking water services from the Manhattan Company, the predecessor of JPMorgan Chase, after an outbreak of cholera killed 3,500 people and a devastating fire caused extensive property damage” (FFW 2012, 12-13).

Nor is it just water privatization that is being questioned during Covid-19. As the op-ed by the UN Special Rapporteurs makes clear, critics are increasingly blaming privatization for a wide range of problems associated with the pandemic, in services ranging from housing to healthcare to education (Farha et al. 2020). Their central argument is that it is extremely difficult (if not impossible) to manage a holistic public health crisis with a splintered for-profit services network. This awareness, combined with a growing recognition of the highly racialized and gendered outcomes of Covid-19 (see Spronk, this volume), may help to strengthen the ties between the anti-privatization movement and broader societal concerns around equity and discrimination in essential services, helping to build a more robust set of demands around a revised pro-public future.

Critical to this rebuilding of public services will be an attempt to integrate more democratic forms of public finance. Here we can briefly mention the potential for public banks in particular to assist with gaps in funding for water and sanitation. There are more than 900 public banks around the world (excluding central and multilateral banks), which collectively hold more than US\$48 trillion in assets and account for about 17% of global banking resources (McDonald et al. 2020a). Some – like the Dutch Neder-

landse Waterschapsbank (NWB) and the German Kreditanstalt für Wiederaufbau (KfW) – have been lending to public water operators at low rates and providing expert public sector advice for decades. Others are relatively new, but the potential for expanding these relationships and building cross-sectoral trust and expertise is considerable. Covid-19 may help to create awareness and opportunities for such new and innovative forms of public-public partnerships [for more on this topic see this book’s companion volume, *Public Banks and Covid-19* (McDonald et al. 2020b)].

STRUCTURE OF THIS BOOK

As noted earlier, this is a selective sampling of what we had hoped would be a relatively positive set of case studies of public water operators responding to Covid-19. In the end, it was neither as systematic nor as upbeat as we had hoped, but it does offer an impressive glimpse into a remarkable moment in time. With contributions from academics, activists, practitioners, unionists, NGOs, community members and water service provider staff based in more than 20 countries, *Public Water and Covid-19* provides a global perspective on a global phenomenon.

When we initially reached out to potential contributors in April 2020, shortly after the declaration of a global pandemic by the World Health Organization in March, it was not clear who would be able to participate and what kind of information they would be able to collect. We provided authors with a standardized list of questions to investigate in their locale – namely addressing: measures taken to ensure access to safe water and sanitation services, employee health and safety, the role that unions play in decision-making, communications and community engagement, collaboration with other public services in their jurisdiction, collaboration with public water operators in other jurisdictions, access to finance for emergency measures, levels of preparedness for emergencies, and the impact of Covid-19 on longer-term planning. However, the con-

stantly shifting nature of the crisis, combined with very different personal and geographical contexts, made it difficult to preserve the kind of consistency we had originally intended.

But it is perhaps the eclectic nature of this book that is its greatest strength, illustrating both a universality of water service experiences as well as its diverse realities. So too are the writing styles different. Some are lengthy and theoretical, while others are brief and practical. Collectively, however, they offer a set of insights that must be fully sampled to appreciate their overall flavour. In this respect we encourage readers to review a broad sampling of chapters, from different locations and different perspectives, and have intentionally placed the essays in random order to promote this.

This is also a ‘rapid response’ project, which means that the authors and the editors were working under very tight timelines to release the findings, as were the translators, copyeditors and graphic designers. We therefore ask our diligent readers to forgive us any minor formatting, citation or typographical errors.

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Chapter 2

Susan Spronk

COVID-19 AND STRUCTURAL INEQUALITIES: CLASS, GENDER, RACE AND WATER JUSTICE

This article argues that Covid-19 has exposed deep, structural inequalities in the world today along the lines of class, gender and race – between well-resourced and precarious workers, women and men, racialized and non-racialized people. Using the lenses of gender justice and environmental racism, the article documents how the inter-related histories of colonialism and capitalism have created the unequal world that we live in, entrenching inequalities in the built environment as clearly evidenced by access to water and sanitation. It argues that the pandemic also creates an opportunity to refocus efforts on Universal Basic Services as one way to exit this crisis.

INTRODUCTION

Covid-19 must be understood through the lens of structural inequalities. To contain the spread of Covid-19, health ministries and the World Health Organization (WHO) have advised everyone to wash hands frequently, wear masks, stay at home, and practice physical distancing in public spaces. These recommendations are mere inconveniences for most well-resourced workers and elites around

the world who are able to shelter-in-place thanks to “essential workers” who have continued to put their bodies on the line filling our orders, delivering our packages, sanitizing our public spaces, putting food on the shelves, growing our food, and caring for the sick and elderly. In addition, these recommendations are nearly impossible to follow for people who have little or no access to safe water and sanitation facilities, who rely on daily wages to survive, or who live in densely populated informal settlements, refugee camps or on the street.

The pandemic and its economic fallout have made the fault lines of privilege and disadvantage stunningly clear: while some are in a social position to be financially stable and stay healthy, most are in much higher-risk, vulnerable situations, and have had to endure devastating consequences. The virus has shone a spotlight into the cracks of our unequal societies, further exposing deep inequalities based on class, gender and race among people both within and between countries.

The lack of access to basic water and sanitation is one such form of inequality. In 2017, 3 billion people still lacked basic hand-washing facilities at home: 1.6 billion had limited facilities lacking soap or water, and 1.4 billion had no facility at all (UNICEF and WHO 2019). Unsurprisingly, this deficit affects primarily the poor in the underdeveloped zones of the world economy, particularly poor women and girls who are tasked with procuring water in communities that do not have access to an improved water source or sanitation.

This chapter argues that in order to understand and address these inequalities, we need to examine how power and inequality are structured differently for historically oppressed groups created by capitalism and colonialism.

Achieving a water justice that contributes to gender and racial justice requires more than just reform of institutions to broaden the representation of women and other political minorities. It requires a rethink of the for-profit system that threatens the ecology, a re-

distribution of wealth and power, and massive public investment in Universal Basic Services.

GENDERED DIMENSIONS OF PANDEMICS AND COVID-19

Pandemics affect men and women differently, and Covid-19 is no exception. Early evidence suggests that worldwide more women than men have been infected by the virus, but men are more likely than women to become seriously ill and die from Covid-19. This higher male morbidity rate is likely due in part to gendered norms that affect behavior, such as higher rates of smoking among men (Wenham et al. 2020). Yet given the fact that more women than men are employed as frontline workers in essential services (Boniol et al. 2019) and are more likely to do high-contact, economically insecure, and unprotected work (ILO 2020), women are particularly susceptible to contracting the disease.

Women, especially racialized, disabled and queer women, are also more susceptible to economic instability and the disruption to services and resources needed for well-being and survival (UNPFA 2020).

During the pandemic, unpaid care work has increased dramatically. UNESCO reported school closures in 180 countries, affecting 60% of the world's student population. Care needs of older people have also increased due to overwhelmed health services. Women's domestic and caregiving burdens have increased exponentially. As Helen Lewis (2020), put it in the early days of the crisis:

At an individual level, the choices of many couples over the next few months will make perfect economic sense. What do pandemic patients need? Looking after. What do self-isolating older people need? Looking after. What do children kept home from school need? Looking after. All this looking after – this unpaid caring labor – will fall more heavily on women, because of the existing structure of the workforce.

Stay-at-home recommendations and the strict lockdowns in many countries have left both men and women jobless, but women workers, particularly racialized women (especially in the global North), are much more likely to lose their jobs (PSAC 2020). For many opposite-sex couples providing care for the young, the sick and the elderly, it might also make sense for the female partner to quit their jobs and stay at home since women generally make less than their male counterparts. The ILO (2020) estimates that from April 2019 to April 2020, 16% of women experienced increased rates of unemployment compared to 13% of men in Canada. Such differences are more dramatic in places with higher rates of gender inequality, like in Colombia, where 29% more women experienced increased rates of unemployment compared to 21% of men over the same time period.

Gender-based violence has also increased exponentially. Many women are being forced into lockdown at home with abusive household members, while at the same time, services to support survivors have been disrupted and are more difficult to access. On top of the financial strain to individuals and families, confinement can also lead to stress. For men, who typically see themselves as the breadwinners of the family, the loss of employment and income may result in higher rates of anger and mental illness (including suicidal thoughts) and for some, domestic violence is an outlet. Many migrant workers have lost their jobs and had to return to rural homes, upending gender dynamics in those households. Researchers have documented how in diverse countries such as Egypt, Jordan, India, Indonesia, Morocco, Nepal and Tanzania, women whose husbands migrate gain autonomy in decision-making, which is often cherished despite the increase in responsibilities (Ullah 2020; Desai & Banerji 2008; Archambault 2010; Maharjan et al. 2012). A comprehensive review by Peterman et al. (2020) identifies these factors among the potential direct and indirect pathways between pandemics and violence against women and girls: economic insecurity and poverty-related stress, increased exposure to exploitative relation-

ships as household structure and composition change, and the inability of women to temporarily escape abusive partners.

Pandemics also curtail access to sexual and reproductive health-care. Past public health emergencies have demonstrated the importance of maintaining access to maternal health care—including prenatal and neonatal care—for women during crises. For example, the closure of maternal health clinics in West Africa during the 2012-14 Ebola crisis resulted in a 70 percent increase in the region's already high maternal mortality rate (Care and IRC 2020). In Sierra Leone, disrupted maternal health services and fear of seeking treatment due to the outbreak contributed to about 3,600 maternal deaths, neonatal deaths and stillbirths. In the affected countries, the number of female deaths caused by problems related to a lack of maternal health care was higher than the number of deaths from Ebola itself.

GENDER, RACE, CLASS AND ACCESS TO WATER AND SANITATION

Water is central to life-making activities. The world over, women are the primary care providers in households. Women rely on water for most daily care-providing tasks, such as food preparation, cleaning, personal hygiene, caring for the young, sick and elderly, as well as for growing crops and keeping livestock. In the marginalized zones of the world economy where households lack access to networked infrastructure, the task of procuring water falls disproportionately on women and girls (UN Water 2006).

Stay-at-home orders have made it difficult for many women to procure safe water and food for their households. Some women will need to decide whether to spend the time permitted outside the home to procure either safe water or food for their children and families. Strict lockdown rules in many countries, including curfews and limits on congregating at common water distribution points, further compound these difficulties. Across the world, 29% of people do not have water inside their home (as high as 73% in

sub-Saharan Africa). The additional long journeys to water sources caused by increased demand for water will mean more chances of contact with others at water points or kiosks (UNICEF/WHO JMP 2020). Women often walk long and treacherous distances and/or wait in long lines to collect water. For example, UNICEF estimates that before the pandemic, the time women spent collecting water on a daily basis amounted to 200 million hours (or more than 22,800 years). Covid-19 has likely made this situation worse. And for many, it will mean spending more of their already scarce resources on buying water at an unaffordable price from private vendors who sometimes see crisis as an opportunity to make windfall profits (Nath and Gosling 2020).

Women and girls also face particular challenges due to lack of access to adequate sanitation. Women and girls who practice open defecation or must use remote latrines located in unsafe spaces face increased risk of sexual violence. Menstruation also presents difficulties. Even in non-pandemic times, inappropriate menstrual hygiene management prevents girls from attending school. UNICEF has estimated, for example, that 1 in 10 girls in Africa miss school because of their period (cited in Noriega 2015). During times of enforced isolation and closure of many public facilities, women and girls' ability to manage menstruation can be further compromised in communities and households. Finding a clean and private space to change and wash while remaining indoors for much of the time with their family, and accessing menstrual materials and water, is even more difficult. As Jennifer Weiss-Wolf (2020) put it, "periods do not stop for pandemics." In order to attend to these particular needs, girls and women require access to menstrual hygiene products, as well as sex-segregated latrines and hand washing facilities equipped with locks and lighting as well as safe and discreet disposal facilities (Cone 2020). This fact is as true in public buildings, such as schools, as it is in informal settlements or refugee camps.

While the WHO's Covid-19 guidelines are essential for everyone's health, it is clear that women, particularly poor women, face chal-

allenges in implementing them that are quite different from those faced by men. Women need support from governments and international organizations to ensure that the pandemic does not wipe out decades of gains in gender equality (UN 2020). Access to clean water and sanitation is part of this gender equality agenda; water justice and gender justice cannot be separate issues.

ENVIRONMENTAL RACISM AND WATER AND SANITATION

Due to historical and continuing relations of colonialism, access to networked infrastructure that delivers a continuous supply of clean water and adequate sanitation is also highly uneven. While environmental factors such as drought and limited supply affect the provision of these services, we must go beyond the idea that scarcity is determined by nature. The 2006 UNDP report *Beyond Scarcity: Power, Poverty and the Global Water Crisis* draws our attention to the way that the crisis is socially constructed. According to the report, there is more than enough water in the world for domestic purposes, for agriculture and for industry. The problem is that some people – notably the poor – are systematically excluded from access by their poverty, by their limited legal rights or by public policies that limit access to the infrastructures that provide water for life and for livelihoods (2006, 3).

Systemic exclusions that create poverty include environmental racism, or patterns that link the discrimination of racialized communities to the marginalized areas in which they are often forced to live – including near mines, toxic waste sites and landfills with higher levels of air, water and soil pollution (Bullard 1993).

The fallout of this crisis will be highly uneven, but one of the positive lasting effects has been the emergence of a global social movement against racism with its epicenter in the United States. The resurgence of the *Black Lives Matter* that has erupted in the context of the Covid-19 pandemic following the murder of George Floyd and Breonna Taylor (and many, many others) has drawn immediate

attention to the ways that legacies of colonialism and racism have shaped access to the state and its services, particularly policing and penal policies. But there are also important connections being drawn between racism and other pressing issues, such as the differential impact of climate change and inequalities in our built environments that affect health outcomes. As summed up by Patrisse Cullors and Nyeusi Nguvu (2017), members of the *Black Lives Matter* movement, “Racism is endemic to global inequality. This means that those most affected – and killed – by climate change are Black and poor people.” The pandemic has exposed the way that racism has structured our highly unequal societies, which deprive racialized peoples of the infrastructure to keep them healthy and safe.

In the global North, legacies of environmental racism in white settler states such as the United States and Canada have left historically marginalized communities at greater risk to the effects of Covid-19 and lacking access to clean, safe water and sanitation. Critical literature on the social determinants of health recognizes that racism is one of the main factors responsible for poorer public health outcomes among racialized and Indigenous communities in the United States and Canada (Paradies et al. 2015; Greenwood and Leeuw 2012). A disease such as Covid-19, primed to exploit pre-existing health issues and infrastructural shortcomings, presents a greater risk to these communities.

Structural racism exists because discriminatory practices in one sector – education, employment, housing, credit markets, health care, and the justice system – reinforce parallel practices in other sectors. This creates interconnected systems of embedded inequities in laws and policies that shape the economy. Consequently, nearly all aspects of our political economy mutually reinforce practices that allow or encourage discriminatory beliefs, stereotypes and unequal distribution of resources. As health researchers Egede and Walker (2020, 1-2) have argued:

Though structural racism shapes the distribution of social determinants of health and social risk factors, action within

the health care system has been hampered by a lack of understanding of how to keep such variables from influencing health. In addition, the discourse about social determinants often frames them as negative factors experienced by only some groups, whereas in reality, nonmedical factors can confer health benefits as well as risks, and they affect everyone. We need to focus on addressing both social risk factors (adverse social conditions associated with poor health) and unmet social needs (immediate social conditions that individuals identify as most pressing for them).

The most obvious unmet need for many racialized Americans is a lack of medical insurance. The United States (US) is one of the only advanced industrialized nations that does not have universal access to health care, the dire consequences of which are painfully revealed by the pandemic. But access to health goes beyond the question of insurance. As US House Representative Alexandra Ocasio-Cortez (2020) put it succinctly, “Covid deaths are disproportionately spiking in Black and Brown communities. Why? Because the chronic toll of redlining, environmental racism, and the wealth gap are underlying health conditions. Inequality is a comorbidity.”

Data surrounding the racial disparities in US cases and deaths have revealed Ocasio-Cortez’s statement to be irrefutable fact. In the US, the Covid-19 infection rate is three times higher in predominantly Black counties than in predominantly white counties, and the mortality rate is six times higher. In Chicago alone, over 50% of Covid-19 cases and almost 70% of Covid-19 fatalities are disproportionately within the Black population, who make up only 30% of the overall Chicago population (Egede and Walker 2020). This dark new demonstration of deep-rooted inequality is telling a tale that is centuries old, a legacy of slavery but also an integral part of neoliberal globalization.

The City of Detroit, Michigan – a rust-belt city whose decline is related to neoliberal globalization – has had a particularly poor re-

cord when it comes to racism and providing access to basic services essential for public health. Since 2014, over 140,000 homes in Detroit have had their water service disconnected as part of a debt-payment program. In 2019, more than 23,000 accounts had their water shut off, and 37% still did not have their services restored as of mid-January 2020. After the WHO declared Covid-19 a pandemic the second week of March, the city promised to restore water to residents, but by the end of the month only about 1,050 of the 10,000 people who called had their water restored without penalty. According to a city report, 8,000 residents who called were told that they did not qualify for the Water Restart Plan. As Reverend Roslyn Bouier, executive director of a local NGO fighting water disconnections, put it in an interview with *The Guardian*, “Common sense says it is racism,” noting that most of those who have had their water shut off are black and poor (cited in Noor 2020). Lack of access to water is one factor that helps to explain the higher fatality rate of Covid-19 among African-Americans. The fatality rate of Covid-19 in Michigan is 7% of confirmed cases; African-Americans make up 40% of the state’s deaths but only 14% of the population. (For more details on water cutoffs in the US see Warner et al., this volume.)

Canada is often seen to be the US’s friendlier, more egalitarian, less racist northern neighbour, but there the pandemic has also hit racialized communities the hardest. In Toronto, Canada’s largest city, Black people and other people of colour make up 83% of the Covid-19 cases while only making up half of the population (Cheung 2020).¹ As Kwame McKenzie, the CEO of the Wellesley Institute and a professor of psychiatry at the University of Toronto, argues, “Some people thought that COVID would be the great equalizer. COVID-19 is not a great equalizer – it discriminates.” As he explains, racialized people are more likely to live in poverty and poor housing, to be

¹ The data was collected on a voluntary basis from patients visiting medical facilities between May 20 and July 16, 2020. It does not include people from Indigenous communities or people in long-term care homes.

victims of crime and discrimination, to have precarious work and to have problems getting enough nutritious food. All of these factors – the social determinants of health – lead to poorer health outcomes (cited in Cheung 2020).

Indigenous communities in Canada are also more vulnerable to infection due to lack of clean water and unsanitary conditions, particularly on reservations. During the H1N1 pandemic in 2009, Indigenous peoples were only 4 percent of the population but represented 28 percent of hospital admissions and 18 percent of the deaths (National Collaborating Centre for Aboriginal Health 2016). The government's response, widely seen as inadequate, was met with intense criticism. Health Canada was forced to apologize when, along with face masks and sanitizers, it also shipped 200 body bags to reserves in northern Manitoba, to the shock and dismay of local leaders (CBC News 2009).

Today, over 100 First Nations and Inuit communities in Canada do not have access to safe, clean water. As of February 15, 2020, Indigenous Services Canada reported that there were 61 communities with long-term drinking water advisories in effect. This number, however, does not include the scores of First Nations communities that have had either boil water or do-not-consume water advisories for a period of less than 12 months. In addition to the lack of clean water, First Nations communities also lack adequate health care facilities, housing and food reserves, as well as the necessary staff to implement any emergency response (Barrera 2020). Inuit communities are also at higher risk due to higher rates of tuberculosis, overcrowded and unsanitary housing and inadequate health facilities (Kiddell-Monroe et al. 2020).

The federal government has allocated C\$300 million to support Indigenous communities (out of a total expense package of C\$81 billion) (Barrera 2020). Before the pandemic, it also committed to making investments that will bring safe water to all of these communities by 2021. Progress has been made, but it seems unlikely that this goal will be reached despite its urgency in the context of

the pandemic. As Covid-19 continues to expose weaknesses in our systems and Canada's history of colonization, the government must provide sufficient and timely emergency support to Indigenous communities.

To understanding racism through an environmental lens, we must address the role played by the global North in subjugating the nations of the global South. Historically, this has occurred through natural resource exploitation, climate change impacts and related political maneuvering, as well as the many modes of political destabilization resulting from colonization and new forms of imperialism.

The recent history of water privatization in the 1990s and mid-2000s is a case in point. Buoyed by the "success" of the world's first large-scale water privatization (the sell-off of the water utilities in England and Wales in 1989), multinational water companies based mostly in Europe and North America saw an opportunity to profit from what they deemed to be the ultimate commodity: water. Water privatization in the developing world was promoted by the World Bank, which made the privatization of water and sanitation utilities part of the conditions required for structural adjustment loans. Years later, in the wake of cancelled and renegotiated contracts and social unrest, even the World Bank recognized that it was a failure (*Wall Street Journal* 2003). As Hall and Lobina (2006, 52) suggest in their review of investments in the water sector between 1990 and 2005, the water privatization agenda at the height of the neoliberal era actually delayed progress in the sector. They argue that misplaced expectations on the private sector have led to a massive reduction in the level of aid and development financing from donors to the water sector, which has far outweighed the actual investments made by private companies. As they summarize: "The net contribution of 15 years of privatization has thus been to significantly reduce the funds available to poor countries for investment in water" (52).

Decades of neoliberal ideology promoting the idea that the private sector will deliver basic services to the poor if we can only get

the incentives right, has not only affected the water sector but housing and other related services needed to combat a public health crisis such as Covid-19. As Mike Davis (2006) details in his book *Planet of Slums*, the underdevelopment of the Third World must be understood in the context of the structural adjustment programs sponsored by the managers of global capitalism – the World Bank and IMF – from the 1980s to the present. The population of “Third World” cities has swelled without creating employment, leading to competition over crumbs in the urban informal sector. Privatization pushes part of the middle class into poverty (laying off former civil servants), turns social services such as health care and sanitation into commodities, and leads to gated communities for the middle and upper classes. Regarding this last point, Davis highlights how these geographies create not only physical distances but also a decline in the possibility of any notion of reciprocity between the haves and the have-nots: “[W]e are dealing with... a fundamental reorganization of metropolitan space, involving a drastic diminution of the intersections between the lives of the rich and the poor” (119).

The Covid-19 pandemic exposes the vulnerability of people who live without adequate housing and health, in addition to lack of access to water and sanitation. The World Bank (2020) estimates that over a billion people worldwide face heightened risk of Covid-19 due to overcrowded and substandard living conditions in slums and other informal settlements. It has been estimated, for example, that 80% of the seven million residents of Dharavi, Asia’s largest urban slum located in Mumbai, India (made famous by blockbuster hit, *Slumdog Millionaire*), have no running water. By the end of July, one study reported that over half of the residents in Mumbai’s slums may have contracted Covid-19 (Biswas 2020). The virus is now spreading quickly in South America. In Brazil, which as of mid-August 2020 was the second country in the world in terms of number of cases (after the US), one in four of Rio de Janeiro’s 12 million inhabitants live in densely packed *favelas*, most lacking proper wa-

ter and sanitation. One study commissioned in June by the mayor's office reported that 28% of residents in one of Rio's largest *favelas*, Cidade de Deus (featured in the film, *City of God*) was infected by the virus (Reeves 2020).

Authoritarian governments have been particularly keen to use repressive measures to keep their wealthy citizens safe from the virus by physically enforcing the separation of the rich and the poor through repressive lockdowns and the clearance of slums and informal markets. While mandatory lockdowns may slow the spread of disease, they do so at the expense of poorest of the poor, who have no ability to purchase a stockpile of essential supplies such as food and water, or have nowhere to go to shelter. In countries such as Ecuador, Bolivia, India and South Africa, poor people who have been accused of violating these orders have faced harsh punishment by authorities and charged with steep fines. In Bolivia, for example, the fine for defying quarantine is US\$150, or about a half of the monthly minimum wage (Gutierrez 2020). Governments supposedly enforce these laws in the name of public health, despite the fact that these actions put the most vulnerable – the displaced populations – at risk of starvation and financial ruin.

In India, a harsh lockdown forced migrant workers to flee the cities, cramming onto trains and buses to get back to their villages to respect the order, leading to long lineups and general chaos, which made physical distancing impossible. Many were forced to walk home (Bisht 2020). Rather than controlling the virus, such measures likely contributed to its spread. In the state of Uttar Pradesh, a cleaning crew hired to sanitize city buses turned their hoses on migrant workers, spraying them down with disinfectant (Al Jazeera 2020). While the cruel act was condemned by local government officials, it reveals the way that migrant workers have been dehumanized in the context of the pandemic.

In some places, slum clearings have continued unabated. In early May, the Nairobi City Water and Sewerage Company in Kenya evicted over 7000 households from land it claims to own despite the

fact that these households have title to their lands and had obtained a halt order from the court (Amnesty International 2020). In early May, military forces with orders from the municipal government evicted about 700 families occupying land in Ciudad Bolivar, in Bogota, Colombia, despite the fact that they had been living there for 20 years. Eyewitnesses reported that one house was bulldozed with an elderly man inside, and that military forces used tear gas to evict the residents. Journalists trying to cover the story were also harassed. Human rights organizations have called for justice, questioning the supposedly progressive orientation of Bogota's current mayor (Habitat International 2020). The report from Habitat International raises the crucial question, "how can people quarantine if their homes were destroyed?"

If the current health crisis offers an opportunity for fundamental change, one of the first targets must be the neoliberal policies that promote private sector participation as a means of addressing infrastructure deficits. Decisions about access to fundamental socio-economic rights such as housing and related services are made by people who do not face the consequences, and that also has to change.

UNIVERSAL BASIC SERVICES: ONE WAY OUT OF THE CRISIS

It has been 10 years since the United Nations recognized water and sanitation as a fundamental human right. The Covid-19 virus demonstrates why water and sanitation must be available, accessible and affordable to all to keep our communities safe, healthy and thriving. While the UN recognition of the human right to water did not mean an immediate change in the daily lives of people who do not have access to water and sanitation, thanks to the efforts of social movements and their organizations, governments and aid agencies did start to take important steps. Approximately two thirds of countries include water and sanitation as human rights in their constitutions, although what that right means in terms of duty

bearers is subject to a wide range of interpretation (Root 2020). The Covid-19 pandemic has also highlighted the absurdity of the US refusal to accept its obligations on the human right to water – against which it has repeatedly argued, including at the United Nations.

The language of rights does not always succeed in challenging the divisive drives of capitalism. In this moment there is a political opening to fight for a vision that does not prop up our destructive for-profit system under the language of “rights,” which can be co-opted by individualistic, pro-privatization agendas and corporate green-washing campaigns (Fantini 2019; Karunanathan 2019). As water justice activist Maude Barlow (2020) notes, “The commitment to honour the human right to water is strongly undermined both by a lack of funds designated by governments and by the pollution, over extraction, diversion and mismanagement of the planet’s water sources. All the human rights in the world will not provide clean water where there is none.” In short, juridical rights are best seen as the beginning rather than the end of a process. As socialist feminist Tithi Bhattacharya (2019) argues, “A juridical right is not a right at all unless we create conditions for substantiating those rights.” In order to substantiate the human right to water, we urgently need to take bold action against climate change, protect and restore watersheds, and advance a public agenda to provide universal access to clean water and sanitation for all. (For more on the question of Covid-19 and the human rights to water see Loftus and Sultana, this volume).

Crisis creates opportunity, and the Covid-19 pandemic has made the impossible suddenly seem possible. For example, to prevent economic collapse and contain the spread of the virus, governments across the world have introduced temporary income support programs to stimulate the economy. These programs might be a small step in the right direction; they demonstrate that it is possible for governments to spend more. The danger of focusing on income supports in the absence of other measures is that they do little to change nature of our neoliberal, financialized economies,

where sectors are often dominated by only a handful of major corporate players. As we have seen with cash transfer policies in South Africa (e.g. social grants), basic services remain unaffordable in the context where housing and related services, as well as health and education are being privatized and treated as commodities (see Ruiter's chapter on Cape Town in this volume). Many households simply sink deeper and deeper into debt, as the cash transfers act as collateral, pushing the burden of economic risk onto the poor.

Paradoxically, temporary income support programs in places like Canada and the US may have also widened inequality. A recent report suggests that the top five billionaires in the world have increased their wealth by 26% between March 18 and June 17 in the context of widespread unemployment (Asante-Muhammad et al. 2020, Collins, Ocampo 2020). As progressive economist Gary Stevenson emphasizes, money may be going to the poor people but that does not mean it stays with the poor people. Citizens have used this cash to pay for food, rent, mortgages and other essentials. The rich receive this money because they own the apartment buildings, the food companies, the e-commerce companies, the utilities and the banks. In this time of risk, the rich are not re-investing this money by creating new employment opportunities in the "real" economy, and instead are accumulating it in their bank accounts. Stevenson stresses that in order for governments to have the money necessary to fund basic services, build much-needed infrastructure and redistribute the economy's wealth to average citizens, they would have to place higher taxes on the rich and close down offshore tax havens that the wealthy exploit. "Otherwise," he warns, "inequity will continue to worsen — which will mean less chance for the economy to bounce back" (cited in Livesey 2020).

To transform the economy, we also need to focus on measures that distribute wealth in the supply parts of the economy. The comprehensive plans for a *Green New Deal*, put forward by progressive movements in the US and the UK, do just that (Aronoff et al 2019; Klein 2019). While there are variations between the two — the UK

version is more reliant on international cooperation – both call for a bold new vision for the economy that aims to mitigate climate change by decarbonizing the economy and prioritize care by expanding housing and related services. The UK Labour Party’s manifesto, entitled *Assuring everyone’s basic rights through the provision of universal services*, argues:

Public services are fundamentally redistributive, as they provide more relative value to those of lower income than high. They are economically resilient, operating with economies of scale and providing secure government employment that is less impacted by recessions or economic crises than market-based services; and they can be delivered and managed so as to minimize climate and environmental impact through public stewardship and efficiency gains (Labour Party UK 2019, 3).

The Green New Deal and its call for Universal Basic Services provides a vision for the kind of economy we need to resolve the crisis of unpaid care work, the ecological crisis caused by climate change and to push for environmental, racial and gender justice after the pandemic.

CONCLUSION

Pandemics change history. As the UNDP report (2006) *Beyond Scarcity* emphasizes, the “great leap” in water and sanitation reform in 19th century England was the result of a cholera epidemic that affected both rich and poor. In the 1920s in Lagos, Nigeria, the bubonic plague opened the pathways for urban planning and innovations in public health and hygiene (Lawanson 2020).

Covid-19 is by no means “the great leveler.” The widespread effects and global nature of the pandemic have exposed the structural inequalities that underpin the world economy. These inequalities

shape who is affected, the severity of that impact, and recovery efforts that take place. The Covid-19 pandemic and its social and economic impacts have created a global crisis unparalleled in a century – one which requires a holistic response to match its sheer scale and complexity. But this response, whether at the national or international level, will be significantly weakened if it does not factor in how inequalities have made us all more vulnerable to the impacts of the crisis.

As Arundhati Roy (2020) argues, the pandemic is also a “portal.” More and more people are asking why the poor have no food, decent work, housing or access to basic services such as health, education, recreational opportunities, water and sanitation. This era of uncertainty, protest and revolt provides an opportunity to think about how to rebuild. The lenses of gender, environmental and racial justice offer more than tools to help understand the problem; they also highlight the importance of struggles for equity in overcoming the legacies of colonialism and racism that persist into the present.

We have a collective opportunity to avoid repeating past policies and to build more equal, inclusive and resilient societies. Past stimulus plans, such as the *New Deal* that followed the Great Depression, demonstrate that public sector investment will play a fundamental role in this crisis as well. Collective, public forms of directing, planning and financing will be necessary in order to create a new economy. Proposals for a *Green New Deal*, which have emerged in the past decade and have gained traction in the context of the climate crisis, provide a path toward a new economy based upon Universal Basic Services, which is centered on an ethics of care. This will place us on a footing to create a fairer, more equitable and more sustainable collective future.

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Chapter 3

Alex Loftus
Farhana Sultana

ARE WE ALL IN THIS TOGETHER? COVID-19 AND THE HUMAN RIGHTS TO WATER AND SANITATION

For more than 2.2 billion people in the world, washing their hands regularly is not an option because they have inadequate access to water.

UN (2020, 7)

The Covid-19 pandemic has underscored the importance of the rights to water and sanitation. This is true in both the global North and global South, where water insecurities, cut-offs, unaffordability and inaccessibility undermine the ability of communities to deal with the pandemic. The realization of economic and social rights such as the rights to water and sanitation makes populations far more resilient and can simultaneously foster conversations about the complexities of challenges and injustices that often remain hidden or ignored. We need to tackle the underlying processes producing unequal access to water and sanitation if we are to achieve the ambitions of the human rights agenda – a world in which we are all genuinely in this together. Mutual aid and solidarity will prove crucial

in realizing such a world, and in providing a way out of the current pandemic.

INTRODUCTION

With frequent handwashing necessary to reduce the transmission of Covid-19, lack of access to adequate water and sanitation clearly poses severe challenges in dealing with the current pandemic. Despite this pressing need, much of the world still lacks sufficient supplies of safe water, and many people lack easy access and adequate infrastructure (Sultana and Loftus 2020, Harvey 2020). In short, water insecurity – not, we might add, only physical scarcity of water but accessibility, affordability, reliability and quality, among other things – poses a grave threat to any response to Covid-19, especially in the developing world (Stoler et al. 2020).

For many, recognizing the human rights to water and sanitation should be seen as a crucial step in righting the wrongs of water insecurity, thereby addressing the lack of sufficient supplies of safe water around the world. Given that recognizing the universal rights to water and sanitation should imply pathways towards realizing those rights, it is clear why they might also be viewed as one crucial element in the fight against Covid-19, as well as why they might ensure greater resilience in the fight against future pandemics. Indeed, a report from UN Secretary General António Guterres entitled “COVID-19 and Human Rights: We are all in this together” (UN 2020) emphasizes with characteristic clarity the importance of human rights in general – not just the human rights to water and sanitation – in responding to the global pandemic.

In a moment in which respect for economic and social rights has become something of a proxy for a country’s resilience to Covid-19, civil and political liberties have simultaneously been eroded through responses to the spread of disease. The importance of human rights has therefore become increasingly evident. Carefully spelling out these issues, the UN report is to be wel-

comed; nevertheless, its framing – “we are all in this together” – fails to reflect the reality of the current situation. While invoking solidarity as a foundation to the universal nature of human rights may well bolster normative claims (“if we’re all in this together then human rights for all should be the appropriate response”), Covid-19 has demonstrated more clearly than ever how the current “syndemic”¹ feeds off pre-existing inequalities, carefully discriminating between socially produced differences (Herrick 2020). We are not quite all in this together, even if solidarity and mutual aid will prove crucial in defeating Covid-19.

Neither the UN nor Guterres are blind to the ways in which the virus affects groups differently. Indeed they state this explicitly in the report, noting that “[t]here are indications that the virus, and its impact, are disproportionately affecting certain communities, highlighting underlying structural inequalities and pervasive discrimination that need to be addressed in the response and aftermath of this crisis” (UN 2020, 10). These disproportionate effects have become only too evident in many parts of the world since the report’s publication in April 2020. Nevertheless, in clinging so tightly to a discourse of universalism, the UN risks overlooking the very processes producing those inequalities that universal rights need to overcome. In this contribution, we consider such dilemmas, suggesting that they present a troubling example of “the maelstrom of contradictions” that Harvey (2000) suggests have always characterized discussions of human rights. If, as Schiel et al (2020) argue, merely constitutionalizing rights does little to actualize them, the profound inequalities being exposed by Covid-19 further demonstrate how tackling unjust processes is a crucial step in the realization of human rights.

For Alston (2017) – as with Harvey (2000) – liberalism’s privileging of civil and political rights over and above economic and social

¹ Following Herrick (2020), among others, we use “syndemic” to capture the multiple synergistic processes producing this health emergency.

rights (such as the human rights to water and sanitation) frustrates the full realization of both sets of rights. The naïve assumption is that guaranteeing political rights will automatically give rise to economic and social rights; political rights, it is assumed, permit citizens to pressure states to realize their economic and social rights. This is all too frequently shown to be false. Indeed, rather than prioritizing one set over another, for Alston, human rights must always include both economic and political rights. Given the need to focus on social vulnerability in the face of Covid-19, the importance of economic and social rights, such as the right to health or the rights to water and sanitation, has become evident. And yet, as one sees in the UN report, if these rights are not put on the same plane as civil and political rights as Alston suggests, a range of contradictions emerge. Considering these contradictions and the UN report more broadly, we examine the limitations and possibilities of the human rights to water and sanitation in achieving fairer and more equitable access to water and sanitation in these times of multiple crises (see also Sultana and Loftus 2020).

WASH – WATER, SANITATION AND HYGIENE

Given the everyday tragedy of infant mortality caused by poor-quality water and the Joint Monitoring Project's estimate that one third of countries are not on track to achieve universal household access to "improved" drinking water sources by 2030, it is little surprise that Water, Sanitation and Hygiene (WASH) remain key development priorities in the global South (UNICEF and WHO 2019). WASH is an essential factor in mitigating the spread of Covid-19 (Howard et al 2020). In some of the clearest statements on why the human rights to water and sanitation matter during these times of Covid-19, authors have emphasized the connection between achievements in WASH and the human rights to water and sanitation. Thus, in a piece by Gosling et al (2020) for the WaterAid blog, the authors write that "the principles of human rights

can save lives now and in the future” given that “water supply, sanitation and hygiene (WASH) are central to the Covid-19 response.” The authors go on to lay out crucial human rights principles – equality and non-discrimination, participation, transparency, accountability and sustainability – that should be built upon. In focusing on the most vulnerable, prioritizing WASH through the human rights to water and sanitation begins to address those economic and social aspects to human rights that Alston (2017) argues are so often sidelined.

For the veteran campaigner Maude Barlow (2020) “Covid-19 puts the human right to water front and centre,” and while the recognition of that right by around 50 countries should be seen as a major victory, Barlow expresses a deep frustration at the unwillingness to actually fund the achievement of the right to water.² The unwillingness of so many countries to either formally recognize or do anything about economic and social rights comes down to the claim that they are simply too costly. However, as Alston (2017) goes on to argue, while a right may not mean immediate access to economic and social benefits, it does mean a commitment on the part of state institutions to ensuring access through recognition of that right, institutional changes to ensure its realization and accountability. And while resources are required to achieve such rights as those to water and sanitation, for Alston (2017), the fundamental changes brought about through ensuring economic and social rights would help to ensure their universal appeal.

To state the obvious, economic and social rights have clear material benefits for vast numbers of people; outlining these material benefits makes it more likely that people will support them. In the specific case of the human rights to water and sanitation, emphasizing the human right to water has further highlighted the

² Barlow goes on to emphasize stress on watersheds as a major factor contributing to water access issues, something on which we would respectfully disagree given the complexities of water injustices globally.

profound injustices undermining resilience to a global pandemic and frustrating the responses to that pandemic. Stating why the right to water might improve the situation makes those rights universally appealing.

DISCONNECTIONS AND DISENFRANCHISEMENTS

The attention to the underlying injustices involved in the denial of the rights to water and sanitation has perhaps been even more evident in discussions of the global North in recent months. Indeed, while discussion of WASH has tended to dominate writings on Covid-19 and the human right to water in the global South, commentaries in the global North have tended to revolve around the question of water disconnections for those finding themselves among the new precariat (Food and Water Watch 2020). On the back of such concern, many water providers in the US have responded positively to the call from the American Water Works Association to suspend disconnections (Lakhani and Adolphe 2020; see also the chapters on Flint and Baltimore in this volume, as well as the chapter on the US-wide disconnections debate). In the UK, a lazy tweet from a government minister to a Premier League footballer noted, patronizingly, how impoverished UK citizens need not fear water disconnections (as the latter had implied) as they are illegal, having been outlawed under a Labour government in 1997. What both situations demonstrate is that throughout the global North, rarely have individuals been so concerned that access to water still seems to rely on the ability to pay. Rarely have the rights to water and sanitation been discussed so widely, with growing anger over the closure of public toilets and growing concern over household water insecurity.

Speaking directly to these growing concerns, Deitz and Meehan (2019) make clear that “plumbing poverty” – households without a connection to the water supply – are not limited to households in the global South. Nor is plumbing poverty necessarily a problem

for isolated rural areas within richer countries. Instead, plumbing poverty is evident throughout some of the largest cities of the US: the phenomenon further emphasizes the deeply classed – and above all, racialized – exclusion of some social groups from access to clean drinking water and sanitation (Switzer and Teodoro 2017). If, as Hyde (2020) argues, sanitation and hygiene challenges in instances of disconnections and water poverty have exacerbated the Covid-19 pandemic throughout the US, the situation in informal settlements across the global South is likely even more grave (see also Amankwaa 2020). As we write, in mid-2020, the highest death tolls remain in wealthy and middle-income countries. The classed and raced inequalities produced within countries of the North have provided particularly important vectors for the virus. In the global South, lack of testing, medical facilities, and under-funded or non-existent public health infrastructures worsen morbidities and mortalities among the global poor, often not accounted for in national reporting; in other words, we do not really know how many have actually died from a combination of neglect and necropolitics involved in Covid-19. Nevertheless, this situation is likely to change over coming months as inequalities produced on a global scale – inequalities associated with lack of those economic and social rights with which we began this paper – become increasingly important in tackling Covid-19. Throughout both the global North and the global South, Covid-19 will continue to expose existing socio-ecological fractures. Thus, we are not quite all in this together.

THE UN'S POSITION – PROCESSES OR OUTCOMES

In focusing on the processes producing unequal access to water and sanitation in the global North and South, we would emphasize that the right to water is one among several tools drawn upon by social movements in achieving fairer access to water. Nevertheless, we would also emphasize how the process of realizing the right to water matters. In this respect, we remain troubled by former

UN Special Rapporteur Catarina de Albuquerque's claim that involving the private sector in the provision of water and sanitation services is a "no-brainer" (Purvis 2016). While de Albuquerque's prioritizing of outcomes – over the processes that achieve those outcomes – might speak to a certain common sense ("who cares who provides the right to water, just so long as it is provided"), as multiple papers in this collection make clear, who provides water matters (see also Sultana and Loftus 2020, McDonald 2016).

Realizing the right to water is continually frustrated by the need to profit simultaneously from the provision of service; as water sources are commodified and privatized, water becomes increasingly unaffordable or inaccessible to the global poor. Economic and social rights are consistently undermined by processes that deepen economic and social injustices. The political economy of water has been utterly transformed in recent years by the development of opaque financial models enabling profits to be reaped by sovereign wealth funds, pension funds and large institutional investors. This is not a terrain over which the right to water will be fostered; indeed, it is one in which the rights to water and sanitation will be consistently undermined.

We therefore welcome the current UN Special Rapporteur, Leo Heller's, Expert Consultation on the involvement of the private sector in the human rights to water and sanitation (UN Human Rights 2020). Although the recommendations of that report are not yet known, its commissioning provides some hope that the UN will acknowledge how deeply implicated an unjust financial model is in the systematic denial of the rights to water and sanitation.

Processes matter, and Covid-19 has shown more clearly than ever why the human rights to water and sanitation need to be understood as processes – ones that combine with other processes to bring about distinct outcomes. When combined with existing socio-ecological injustices, they produce far deeper injustices. Unjust and exploitative processes ensure that we are not quite all in this together. The human rights to water and sanitation need

to tackle such unjust processes if they are to move beyond merely constitutionalizing.

CONCLUSION

Will the human rights to water and sanitation help in fighting Covid-19? Our response is a guarded “yes.” As with our previous writings on the right to water, we have never viewed the right to water as a silver bullet (Sultana and Loftus 2012, 2020). We have shared concerns about the role of the private sector, the potential eclipsing of economic and social rights by property rights, the role of the state, and the genuine commitment of the international community to addressing water insecurity. The global pandemic has not made those concerns go away but rather heightened them. Covid-19 has further emphasized how the realization of economic and social rights such as the rights to water and sanitation makes populations far more resilient to what some quite rightly describe as a syndemic. And it has further emphasized the importance of tackling the underlying inequalities that ensure some have access to such economic and social rights while others are denied them.

In this contribution, we emphasize the importance of a processual understanding of the achievement of economic and social rights. We would express further hope that in recognizing such processes, the forthcoming recommendations from the current Special Rapporteur will give further weight to those struggles, challenging a deeply unequal political economy of water in which large financial players are benefiting from the appropriation of common resources. Given the ongoing challenge of the Covid-19 pandemic, what comes to the fore are the ways that the discourses and practices of the human rights to water and sanitation can foster greater conversations about the hidden or ignored complexities of the various challenges involved.

The rights discourse offers the potential to challenge and address various gendered, classed, racialized, and other unjust dy-

namics that are being compounded simultaneously, both with the lack of water and sanitation as well as the unequal exposures and burdens from the pandemic. While good governance, democratic participation and inclusive planning are vital, tokenistic calls or claims do little to address the current crises. We need to tackle the underlying processes if we are to achieve a world in which we are all genuinely in this together, and in which mutual aid and solidarity will likely provide a way out of the current pandemic

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Chapter 4

Mar Satorras
David Saurí
Hug March

REINVENTING PUBLIC WATER AMID COVID-19 IN TERRASSA

Covid-19 has come to intersect with water poverty, exacerbating the impacts on vulnerable households. To address this, public entities and water companies have undertaken different actions in water provision. In Spain, the national government prohibited disconnecting households from energy (electricity, gas) and water. The government also proposed that unpaid bills be deferred with no interest. Most Spanish water companies followed these options, but some cities, such as Terrassa (part of metropolitan Barcelona) made efforts to guarantee water supply even for those lacking legal access to housing. Terrassa has recently municipalized water services by creating a new public water operator (Taigua) and a citizen observatory (the Terrassa Water Observatory). Responses made by Taigua during the initial lockdown were oriented towards ensuring that citizens did not suffer any interruptions. Furthermore, following the closure of public fountains for sanitary reasons, they also urged the installation of provisional meters to vulnerable households without access to tap water. We argue that the Terrassa model of municipalization, and particularly the existence

of systems that facilitate citizen participation and social movement engagement, has played a critical role in shaping these ambitious and radical responses to the pandemic.

INTRODUCTION

The theme for the 2020 World Water Day was “Water and Climate Change,” surely one of the most relevant and pressing topics to be faced by human societies during the coming decades. However, March 22, 2020 was also a day in which a new global threat was rapidly expanding with devastating effects on the populations and economies of many countries. At the time of writing (July 2020), Covid-19 was responsible for more than 13.6 million infections and close to 600,000 deaths worldwide (Worldometers 2020). This global pandemic appears to be the worst in a century and, although basically airborne, the virus has implications on water access issues, especially regarding the critical importance of personal hygiene (handwashing) to avoid infection. In fact, the World Health Organization has recognized Covid-19 as a Water Access, Sanitation and Hygiene (WASH) disease (WHO 2020).

Urgent and immediate responses to the pandemic by the water sector should be followed by medium-term measures to increase water security, as the latter is critical for preventing and fighting current and future pandemics (Cooper 2020a). As Neal (2020) suggests, the “recognition that water is an essential service will enhance our ability to respond, recover and rebuild a post-COVID-19 world and provides an opportunity for us to rethink and reprioritize our interests, ambitions and resources.” The current pandemic, together with climate change, are “threat multipliers” for the existing issues that water governance faces, as well as in the water-food nexus (Keulertz et al, 2020).

The Covid-19 health crisis raises again the despairing situation of access to water, sanitation and hygiene in a world with more than two billion people lacking reliable and safe water services (Al-Masri

2020). Periodic handwashing, one fundamental action against the virus, is difficult in areas such as South Asia and Africa where as much as 75% of the rural population lacks clean water and soap at home (Bhowmick 2020). Moreover, lockdowns and quarantines can in turn affect access to water, either because of the reduction in maintenance routines or because of the reduction in the activity of non-networked supplies (e.g. water trucks), especially in informal settlements (Cooper 2020b). The pandemic has exacerbated existing challenges faced by water service providers, both formal and informal, especially in informal settings in developing countries, in terms of guaranteeing water supply of suitable quality as well as satisfying sanitation needs and hygienic standards (Armitage and Nelums 2020, Neal 2020, Wilkinson 2020), not to mention some refugee camps, whose limited water access and quality condition could be severely impacted by the pandemic (Kassem and Jaafar 2020).

In Africa, several measures related to water supply have been taken as a response to the effects of the pandemic (Cooper 2020b). Some African countries have announced measures related to free water (e.g. subsidies, free water for the most vulnerable or informal settlements, social tariffs). Other initiatives have aimed to increase (networked) water availability for the urban poor through kiosks or standpipes, for example. Beyond these two bundles of measures, Cooper (2020b) also speaks of additional pre-paid sources, such as pre-paid water meters (recognizing, however, that they might not be appropriate in all contexts and can generate disputes) or digital billing/digitized payments. Other suggested measures include reducing or subsidizing the price of networked water from communal access points, working with community-based organizations to oversee service delivery in informal settlements, and recognizing the important role and enhancing cooperation with private water vendors that cover informal settlements (Cooper 2020b).

Although not comparable in numbers, WASH-related shortcomings are also an issue of preoccupation for people in developed countries. Lack of physical access to improved WASH facilities, for

example, affects perhaps a small proportion of the overall population but concentrates in highly vulnerable segments such as refugees in camps, ethnic groups such as the Roma, temporary agricultural workers, evicted families, homeless populations in cities, and others lacking sufficient water at their homes. Much more important in quantitative terms are individuals and families having increasing difficulties in paying their water bills. Water poverty in terms of affordability has grown to become a serious sanitary and social problem in certain US and European cities (Jones and Moulton 2016, Mack and Wrase 2017, Martins et al, 2016). Up to a third of American households (120 million people) could be at risk of not being able to pay their water bills in the future because of stagnant or declining incomes and, above all, price increases needed to finance an ailing urban water infrastructure (Mack and Wrase 2017). In the US, this scenario could arrive much sooner than expected given the unprecedented impacts of the current pandemic-induced economic crisis on employment, with more than 30 million Americans out of work. Most water companies in the US appear to be reluctant to service households with pending bills despite calls for the contrary, and only about 11% of these companies are willing to reconnect at no cost households that have been shut off (Lakhani 2020). In Europe, public water companies expect a rise in the medium term of people with difficulties in paying the water bills, but water shutoffs have been forbidden in most countries, and a number of financial aid measures (for instance, postponing invoice payments) have been implemented as well (Aqua Publica Europea and GWOPA 2020).

Covid-19 has thus come to intersect in pernicious ways with the issue of water poverty, exacerbating the impacts upon already vulnerable households. While in Europe there appears to be no equivalent to the US in terms of water shutoffs for lack of payment, water poverty remains a matter of concern, especially after the economic crisis of 2008 (March and Sauri 2016). In Spain, shutoff notices exceeded 500,000 in 2014 – 30% more than in 2010 – of which 300,000

ended in disconnections (El País 2014). In the Metropolitan Area of Barcelona (MAB), 9% of all households were in a state of water poverty in 2016 (water-poor households are defined as those dedicating more than 3% of their income to pay for water). For households at risk of poverty, defined as those households with incomes 60% or less than the average household income in the MAB, the percentage of water poverty rose to 82% of all households (Domene et al, 2018).

In Spain, local and regional administrations, water companies, and civic entities are responding to water poverty in different ways and with different capacities, offering assistance and economic help on the water bills through subsidies, discounts and bonuses, among others. Two broad approaches can be discerned from the myriad actions taken to curb water poverty. On the one hand, most water companies consider that the full cost of water should be reflected in prices. For those households unable to afford the bills, assistance may be provided either through general income support or through specific measures (Aqua Publica Europea 2016). On the other hand, civic entities, and particularly social platforms formed to assist those affected by water poverty, objected to the enormous increases in water prices during the worst years of the crisis and struggled for basic rights such as the prohibition of shutoffs for vulnerable households. In Catalonia, for instance, a law passed in 2015 (Law 24/2015 of the Catalan Parliament), explicitly prohibited water and energy shutoffs in vulnerable households for lack of payment (Yoon and Sauri 2019). Public authorities have been supportive of price increases but also critical, depending on the political stance of governing councils and metropolitan boards. Local councils have identified families eligible for financial help, and metropolitan and regional water authorities have provided discounts and other rebates on water taxes, but most relief packages have been provided by water companies.

In March 2020, when Covid-19 was already a pandemic with devastating effects on the Spanish economic and social fabric, public entities and water companies launched several courses of action.

First and perhaps most important, the national government passed a package of economic and labour measures, one of which was the prohibition of shutting off basic flows (electricity, gas, water) for lack of payment (Spanish Government 2020). Demands to write off debts were not accepted. Instead the government proposed extensions on debt repayment, without added interest, until the state of alarm issued on the pandemic ceased.

Most water companies, public and private, are following these options, as illustrated through the examples of Madrid, Barcelona and Seville. The public company Canal de Isabel II, supplying Madrid, has offered rebates to industrial and commercial businesses, charging only the consumption part of the bill but not the fixed fee. Moreover, only 50% of the fixed fee will be charged in the first six months after the lifting of the state of emergency, and 25% in the following six months. For households affected by temporary job losses, a rebate on 100% of consumption (up to 25 cubic meters bi-monthly) will be offered as well as a discount of 50% on the fixed fee. Adding all up this would mean that for an average bill of €41, households in this category would end up paying only €9 (Canal de Isabel II 2020). Aigües de Barcelona, the mixed-capital water company serving the Metropolitan Area of Barcelona controlled by AGBAR (see March et al, 2019), has proposed a six-month extension of water bills with no interest added for self-employed and small and medium enterprises (SMEs) once the state of emergency is lifted (AMB 2020). For individual customers, however, no special measures have been taken beyond those already in practice regarding vulnerable households. EMASESA, the public company supplying Seville, has opted for delaying bill payments until six months after the state of emergency is lifted and charging no interest (EMASESA 2020). Many other urban water companies have taken similar approaches, and some, as we will see, have made important efforts to guarantee water supply even for those lacking legal access to housing.

The next sections of this paper examine the water supply actions taken to address the impacts of Covid-19 in the city of Terrassa

(Barcelona, Catalonia, Spain). This is a key case study to learn from since it represents the biggest city in the region of Catalonia bringing its water services back to public control in the ongoing wave of remunicipalizations. Moreover, Terrassa has innovated in terms of water governance by complementing the public operator (Tigua) with a citizen observatory (the Terrassa Water Observatory). Informed by online and phone interviews with civil servants from the city council, workers from the public water operator, and social movements involved in the citizen observatory, we identify two main strategies developed in response to the Covid-19 crisis and reflect on the learnings and limitations of these reactions.

REINVENTING PUBLIC WATER SUPPLY AFTER MUNICIPALIZATION

In July 2016, the City Council of Terrassa approved a motion to publicly control the water supply service after the end of a 75-year concession contract with a private operator. In fact, this operator (Mina, whose main shareholder was AGBAR, a subsidiary of Suez) had controlled the water services in the city since 1842 (Grau-Satorras 2017). Terrassa is broadly representative of urban water supply in Catalonia: a market dominated by private operators. For instance, 9 out of 10 consumers in the Metropolitan Area of Barcelona depend on water from the AGBAR group (March et al, 2019). Since Terrassa is the third-largest municipality in Catalonia, with 220,556 inhabitants in 2019 (Idescat 2020), the case has been closely watched for its potential to become an example of water remunicipalization for other large municipalities in the region, particularly Barcelona (Steinfort and Kishimoto 2017).

While the political support of the city mayor and the municipal parties was key to reversing water privatization, the municipalization process in Terrassa was initiated and driven by social movements (Bagué 2020, Planas and Martínez 2020). This is why the reinvention of water services in Terrassa has been developed under social democratic principles, but it is also characterized by several

features of the “autonomous” remunicipalization type (see the different typologies in McDonald 2018).

Remunicipalization brought about a new governance model based on two entities. First, the public water operator Taigua (created in 2018) is a public enterprise fully owned by the municipality. The goal of Taigua is the direct management of the municipal services of water supply, responsible for capturing, treating and distributing potable water, as well as managing and collecting water bills (Terrassa 2018a). The design of the public water operator fits with the market and political economy characterizing social democratic states involving traits such as robust state intervention, cost-reflexive pricing and the commitment to better integrate water services with other city government departments.

Second, the Terrassa Water Observatory (TWO), legally approved in 2018 and set up in 2019, is an innovative body of citizen participation designed to define policies and guide strategic decisions affecting the municipal water supply service (Planas and Martínez 2020). The goal of the TWO is to stimulate and channel the participation of citizens, social collectives, and other stakeholders related to water, to facilitate their co-responsibility in the government of the city water supply (Terrassa 2018b). While acknowledging the need for public control, the TWO also promotes community-driven governance of water service, reclaims citizen control and celebrates non-market values of water encapsulated in notions such as a “water commons.”

DISCOUNTS AND POSTPONING WATER BILL PAYMENTS

The reinvention of the water services in Terrassa has taken the most common form of European remunicipalizations (i.e. a social democratic type), although it also contains several rationales and voices advocating for more autonomous remunicipalization. As we will show below, both typologies are represented in the two major sets of measures taken during the crisis of Covid-19.

One week after the declaration of the state of emergency, the

local government of Terrassa announced that it would allocate €500,000 to reduce water bills for the second quarter of 2020 (Terrassa 2020a). As the president of the Terrassa Water Observatory (TWO) noted, “this was a political decision from the local government, probably because Taigua had the economic room to do so without putting future investments at risk” (Interview, J. Martínez, TWO, May 25, 2020). The civil servant responsible for the water service confirmed that they previously “calculated what Taigua could assume without endangering its budget” – a decision based in part on the public nature of the water operator: “Now, we have direct knowledge of the accounts of the public company. And therefore, the discussion of what impact this measure would have or how far we could go, could be done internally [...]. You can talk directly to the accountants of Taigua to determine these €500,000” (Interview, A. Crispi, Terrassa civil servant, June 4, 2020).

The measure was implemented through a local regulation establishing three discounts on the consumption part of the water bill, as Table 4.1 shows.

Table 4.1
Temporary reduction of water bills in Terrassa due to Covid-19

	Number of users	Reduction	Estimated cost
Domestic households (1 st Block)	90,894	0.3339 €/m ³	€455,243 *
Domestic households (2 nd Block)	1,685	5 €/quarter	€8,425
Commercial users (up to 15 mm of diameter)	6,800	0.3559 €/m ³	€36,302*
<i>Total</i>	99,379		€499,970

Source: Decree No. 260 (March 30, 2020) and data from Taigua.

* Considering that all users consume 15 cubic metres per quarter (e.g. 90,894 domestic households x 15 m³ x 0.3339 €/m³ = €455,243; or 6,800 commercial costumers x 15 m³ x 0.3559 €/m³ = €36,302).

First, a 100% discount was announced in the first block of domestic consumption (up to 15 cubic metres each quarter). Second,

a €5 reduction was established in the bill of the second block of domestic consumption (from 15 to 22.75 cubic metres each quarter). And third, a 100% discount was also decided in the first block of commercial users (up to 15 mm of diameter), basically “small businesses and offices, which we considered to be severely affected by Covid-19” (Interview, A. Crispi, Terrassa civil servant, June 4, 2020). Thus, the reductions mostly affected consumers of the first block “understanding that those who have saved water were the ones who benefited the most” (idem).

These reductions were added to the discount offered by the regional water supplier (the Catalan Water Agency), representing 50% of the fixed water fee for all users and up to 100% for vulnerable households. According to the initial assessment of Taigua, both discounts would represent a reduction of 20-35% of the water bill (approximately €10-25). In the case of vulnerable households with social tariffs, the discounts could represent up to 100% of the water bill.

Moreover, in line with the recommendations made by the Spanish government, the city council of Terrassa proposed postponing the second-quarter bill payments until June 1, 2020, with no interest added (Decree No. 260, March 30, 2020). While it was automatic for vulnerable households (i.e. having a social tariff or reporting residential vulnerability), the rest of consumers affected by Covid-19 could ask for this extension as well. This measure also contributed to the observed trend of accelerating the digitization of Taigua procedures during Covid-19: “we enabled a deferral procedure for anyone who was in a critical situation in these months so that they could request a delay and that could be done from the web” (Interview, A. Crispi, Terrassa civil servant, June 4, 2020). According to Taigua, billing has been automatically postponed in 872 vulnerable households and 71 requests of extension have been submitted, 63 of them from domestic users (Terrassa 2020c).

Finally, it is important to take into account the evolution of the measures already in practice regarding vulnerable households and

water poverty (e.g. freezing of supply tariffs, discounts up to 100% of the water fee for vulnerable households, automatic application of the social tariff to households at risk of residential exclusion). In this regard, both public and social stakeholders anticipate an increase of social tariff requests. As the representative of the platform of social movements noted: “The important thing is to know how many families have requested a social tariff [since the beginning of Covid-19]. By May 15, we knew there were 646 new requests. But how many have been granted? The data should be tracked and updated to know the requests made during the state of emergency and the situation of crisis that will come” (Interview, D. Frigola, Consell d’Entitats per l’Acció Ciutadana, June 9, 2020).

GUARANTEEING WATER SUPPLY TO THE MOST VULNERABLE

When the discounts in the water bill were just being estimated and designed, an unanticipated problem broke out. By March 20, the regional government issued a recommendation to cut all public drinking fountains to prevent new infections and the transmission of the virus (Generalitat 2020). The social movements from the city immediately reacted to this measure: “When they cut off the public fountains we sent a letter to the Mayor and the responsible councillors warning that the people who relied on the fountains were running out of water. Then the water councillor told us that they would act” (Interview, D. Frigola, Consell d’Entitats per l’Acció Ciutadana, June 9, 2020). In fact, the Terrassa Water Observatory (TWO) had already identified those extreme cases of water poverty before Covid-19: “We had recorded 19 cases that were very serious situations that had no water or irregular connection to water. Before Covid-19, the social movements had already reclaimed a solution to the City Council for these cases [...] and when the regional governments’ decree asking City Councils to close public fountains came out then we certainly protested. I remember that we replied, ‘but are you aware that you are leaving people without water?’” (In-

terview, J. Martínez, Terrassa Water Observatory, May 25, 2020; see also local statistics on water poverty in Table 4.2).

To force the local government to rapidly and effectively implement their political commitments, two strategies were put in practice. First, to increase political pressure and bring the issue into the public eye, the platform of social movements published opinion pieces in the local press (Malarrassa 2020, Terrassa Digital 2020). Second, the Terrassa Water Observatory intensified their collaboration and exchange of information with civil servants: “We sent this list of 19 cases [to the water service] and they started working on these 19 cases immediately. On the same day, they began to verify the cases one by one, to ask Social Services for reports, but also to check with Taigua if there was a record of the situation. And meters began to be installed” (Interview, J. Martínez, Terrassa Water Observatory, May 25, 2020). The installation of water meters guaranteed a legal connection to the networked water supply system in vulnerable houses without in-house access to tap water. The civil servant interviewed confirmed this effective public-communitarian alliance amidst the context of emergency: “we had to be super-fast, because we were at the peak of the emergency [...] We received cases from different sides, and the Water Observatory [TWO] sent many of them” (Interview, A. Crispí, Terrassa civil servant, June 4, 2020).

Nonetheless, the key turning point to unify the response was the (virtual) meeting organized by the city council service responsible for the water supply with various municipal departments, as well as the representatives of the Terrassa Water Observatory and social movements to discuss possible solutions. All parties agreed that the previous legal framework (Terrassa 2016) to install temporary meters in cases of residential vulnerability lacking legal access to housing such as occupied houses was ineffective (see the differences between temporary meters requested, installed and legalized between 2016 and 2019 in Table 4.2). However, the main problem to install meters in these cases was in “juridical terms” (Interview, D. Frigola, Consell d’Entitats per l’Acció Ciutadana, June 9, 2020).

Table 4.2

Indicators of water poverty in Terrassa

	Background pre-Covid-19 (December 2016 - May 2019)	State of alarm due to Covid-19 (March 2020 - June 2020)
Number of requests for temporary meters	265	52
Number of temporary meters installed	34	36
Number of temporary meters legalized	15	0
Number of cases closed	180	52
Number of pending cases	51	0
Occupied houses with irregular water connection (without meter)	306	--
Houses with irregular water connection authorized by OFIMAPE (without meter)	424	--
Houses with a temporary meter cancelled	69	--
Non-vulnerable houses with unbilled water	135	--
Total users with unbilled water	934	--

Source: Data from OFIMAPE, Taigua and Terrassa Water Observatory (TWO).

According to the president of TWO, the meeting served to address previous concerns and particularly to drop the requirement to obtain owner's permission before installing the temporary meters in occupied houses: "talking with the head of the services in the context of emergency [due to Covid-19], we unblocked the issue. In this tele-meeting with Technical Services, they had not yet given up the idea to ask permission from the owner [...] and we explained: in Terrassa 30 water meters had been installed following this procedure and they were still blocked after six months; in Barcelona doing it differently there are 500 cases that have been resolved and maybe you have 20 in which the owner has complained. [...] What you cannot do is to encourage the owner to complain! And it be-

came clear that the resolution would follow the Barcelona model” (Interview, J. Martínez, Terrassa Water Observatory, May 25, 2020).

Therefore, the Technical Services wrote an emergency resolution establishing an easier procedure to install temporary water meters in vulnerable families in order to secure access to tap water during the state of emergency: “All cases were rapidly checked by Social Services [...] and then we gave instructions to Taigua so that they installed a provisional meter” (Interview, A. Crispi, Terrassa civil servant, June 4, 2020). The framework that provided legal coverage for the study and implementation of the new measures to install temporary water meters was directly issued by the Mayor within a few days (Decree No. 2593, March 27, 2020) and was also posted on official social media such as the City Council Twitter account. However, very little public dissemination was made of the emergency resolution explaining the new criteria and procedure to request and install temporary water meters (Resolution No. 2637, April 15, 2020). For instance, the websites from Taigua or the City Council did not post this resolution. Similarly, the local office of energy poverty did not update the criteria, the legal framework (i.e. Terrassa 2016), and the templates available for citizens to ask for temporary water meters (OFIMAPE 2020). Likewise, the report published summarizing the actions taken by the local government of Terrassa to respond to the Covid-19 crisis did not mention the issue of temporary water meters, while the discounts of the water bill were extensively developed in the document (see Terrassa 2020b). As the representative of social movements critically summarized “it was a half-hearted reaction” (Interview, D. Frigola, Consell d’Entitats per l’Acció Ciutadana, June 9, 2020). The president of the Terrassa Water Observatory also noticed that they had asked for a better communication of the measure, for instance by advertising it on official websites or by hanging posters with relevant information on drinking fountains. However, he also recognized that the measure worked in practice: “what is true is that everyone is informed: in Social Services, in the areas of the City Council, in social groups... And

what is also true is that in this way anyone who has arrived instantly has had an immediate response and intervention” (Interview, J. Martínez, Terrassa Water Observatory, May 25, 2020).

As a result of this measure, 52 cases were studied during the state of emergency, and 36 temporary water meters were installed in vulnerable houses without in-house access to tap water (Table 2). Importantly, irregular water connections, which represented approximately a third of the cases studied, were not addressed or legalized under this action. The emergency procedure implemented therefore only targeted extremely vulnerable situations disconnected from the networked water supply system. Hence, some members of the social movements were critical about the limited scope of the resolution: “According to the little data we now have [early June 2020], 29 meters have been installed. Only 29 families without water? This seems too small for a city like Terrassa” (Interview, D. Frigola, Consell d’Entitats per l’Acció Ciutadana, June 9, 2020).

THE SCOPE OF RESPONSES: POSSIBILITIES AND LIMITATIONS

Compared with other actions taken by water companies in Catalonia, Terrassa stands as an example of practices specifically implemented to overcome some of the worst effects of the harsh economic and social impact of the pandemic and the related lockdown. Other water companies such as the metropolitan Aigües de Barcelona (mixed-capital company) or CASSA (also mixed-capital company) of Sabadell (a neighbouring town with a population and social profile similar to that of Terrassa) did not go beyond the prohibition of water shutoffs (enforced by national and regional legislation anyway) or the establishment of a six-month payment moratorium (after the termination of the state of emergency by the Spanish government) addressed to SMEs and to the self-employed but not to individual customers. Discounts on water bills like those implemented by the public water operator of Terrassa have not been proposed.

Similarly to Terrassa, the public water company of Manresa

(near Terrassa, with a population of some 76,000 people) installed 46 temporary meters in occupied houses and studied the possibility of extending these “solidarity” meters to some 30 additional houses after recommendations by social entities such as Caritas or the PAH (the Platform of People Affected by Mortgages) (Aigües de Manresa 2020).¹ Indeed, while the final impact was modest for the size of Terrassa (36 interventions in a context of 220,000 inhabitants), interviewed stakeholders reported the importance of this measure (and the debate it generated) for three reasons.

First, the process of decision making and the urgent resolutions had the effect of unlocking the revision of previous legislation establishing who and how citizens could access water through temporary meters (Terrassa 2016). As the representative of the Catalan platform against water and energy poverty expressed: “In the case of Terrassa, the activation in emergency mode of these water meters should be highlighted. They are not yet legalized, and they will need to be guaranteed in the future. However, Covid-19 has accelerated their implementation, as it has shown that it is possible to apply a measure to put meters more quickly” (Interview, M. Guiteras, Aliança contra la Pobresa Energètica – APE, June 4, 2020).

In fact, thanks to the urgent procedures more temporary water meters have been installed during the three months of the state of emergency than during the period between 2016 and 2019 (see Table 2). The president of the Terrassa Water Observatory summarized how the debate was transformed in the context of Covid-19: “what was not working until now was the issue of occupations, families who were in a precarious residential situation, and which was a significant volume of people [in Terrassa]. And I think that this debate about the human right to water in the city, which should have been taken place in the Interdepartmental Commission on the

¹ To our knowledge, only two other cities in Catalonia accelerated the installation of temporary meters in vulnerable houses in order to secure water access during lockdown: 21 meters were installed in Tarragona (Tarragona 2020) and 9 in Sant Vicenç dels Horts (El Far 2020).

Human Right to Water and which would surely have been done with reluctance regarding the legal framework [...], has been quickly overcome. And in fact, our proposal has been accepted” (Interview, J. Martínez, Terrassa Water Observatory, May 25, 2020). The most relevant change will be in terms of the relationship with the owner: “the idea is to let the owners know that a meter has been installed. It is not a question of asking them whether they give us permission or not. But to secure that their right to property is not violated, they will be informed afterwards” (Interview, A. Crispi, Terrassa civil servant, June 4, 2020). At the time of writing (July 2020), the new directive was in process of being drafted and we could not access the document.

Second, the debate caused by the closure of public drinking fountains made more visible (and exacerbated) situations of water poverty formerly overlooked by the local government of Terrassa. Moreover, it stressed the need to improve coordination between municipal departments in order to guarantee the human right to water. As the president of TWO noted: “they [the city council] have not thought that cutting off the fountains put certain families in a very critical situation. Because the cut had been processed not through Social Services but through the Technical Services that manage the issue of water and are in contact with Taigua” (Interview, J. Martínez, Terrassa Water Observatory, May 25, 2020).

Finally, the coordination within the city council, but also with social organizations and platforms, was key to building up the response and securing the human right to water amidst Covid-19. In this sense, the representative of the regional platform considered that “the measure of provisional meters in Terrassa arises from the experience and knowledge of civic entities” (Interview, M. Guiteras, Aliança contra la Pobresa Energètica – APE, June 4, 2020). In contrast to the city of Manresa, which has an experienced public water operator since 1982, in the case of Terrassa the active involvement of social entities and a new model of urban water governance including a citizen observatory seem to have been critical in order to

design and enforce this response (ultimately implemented by the public operator, Taigua).

Nevertheless, the scope and transformative potential of the two main actions developed by the recently municipalized water services of Terrassa may be limited over time and space. On the one hand, there are some uncertainties about what will happen after the state of emergency (which was lifted in Spain on June 21, 2020). For instance, the representative of the platform against water and energy poverty questioned: “when will unpaid bills be paid, and who [will pay them]? [...] will the debt be forgiven?” (Interview, M. Guiteras, Aliança contra la Pobresa Energètica – APE, June 4, 2020). Similarly, it is still unresolved how the legalization of the 36 water meters installed in Terrassa during the state of emergency will be carried out. On the other hand, there have been difficulties in communicating and replicating in other municipalities successful strategies amidst the crisis. As the civil servant in direct contact with the regional association of public water operators (AMAP) recalled, “the coordinator of AMAP created a WhatsApp chat with different public operators to have an agile space to share our actions. The truth is, however, that since everything had to be decided very quickly, we were mostly focused on finding solutions within Terrassa [...] and we did not have time to send them a summary of our responses” (Interview, A. Crispi, Terrassa civil servant, June 4, 2020).

CONCLUSION

The recent reconfiguration of water services in Terrassa has been complex and contested. Through this process, social movements and local entities had an important role to play in how the operator, and more generally the water services, were reinvented (Bagué 2020, Planas and Martínez 2020). This close (though not frictionless) relation with social movements has arguably resulted in a municipalization process that could be halfway between autonomous and social democratic re-municipalization models. In turn,

this has shaped the responses propelled by the water operator and the municipal services to the harsh effects (especially on the most vulnerable group) of the pandemic since March 2020. Responses made by the public water operator, Taigua, during the management of the crisis have been oriented towards ensuring that citizens did not suffer any interruptions because of inability to pay (by offering significant rebates or even free service). Not only that, following the compulsory closure of public fountains because of sanitary reasons, the public water company has also urged the installation of provisional meters to vulnerable households without water access. All these measures were aligned with the actions to ensure universal water access identified by Aqua Publica Europea and GWOPA (2020) among public water operators in Europe. However, we could argue that the case of Terrassa shows a public operator that has gone one step further than most of the existing initiatives in the Spanish context (and probably European context) in terms of providing significant rebates and securing water supply for those lacking legal access to housing. All in all, the existence of an organism that serves to channel citizen participation and social movements engagement, such as the Terrassa Water Observatory (TWO), probably has had a critical role in shaping these ambitious and radical responses to the pandemic.

Aqua Publica Europea and GWOPA (2020) point out that one of the “hot topics” in water governance after the pandemic will be the redefinition of the central role of public water operators in society’s wellbeing and safety. The case of Terrassa, with a recently created public water operator that has been able to cope with the harsh effects of the socio-economic crisis provoked by Covid-19, might provide many insights and lessons to be learned in that regard. Of course, it will remain to be seen how the operator (and the water governance structure in which is embedded) can cope with the effect of another Covid-19 wave (and lockdown) if it comes, and how it maintains post-emergency measures in what is expected to be one of the harshest economic crises in decades.

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Chapter 5

Mildred E. Warner
Marcela González Rivas
Mary Grant
Xue Zhang

WATER SHUTOFF MORATORIA IN THE UNITED STATES: THE ROLE OF CITIES AND STATES

Drinking water is treated as a commodity in the United States, not as a human right. With the onset of the Covid-19 pandemic, many US cities and states enacted moratoria on water shutoffs. We explore what differentiates these states and cities from others. We find states that regulate private utilities are more likely to impose moratoria, and those with higher Covid-19 case rates did so earlier. States with Republican legislative control were less likely to impose water shutoff moratoria. Cities with more capacity and more need were more likely to impose moratoria, but cities in counties with more Republican voters were less likely.

These results show the politicization of public health and water access in the US. The shift toward recognition of the public health value of water may lead the US to acknowledge water as a human right. We conclude with policy recommendations for cities, states and the federal government.

INTRODUCTION

During the Covid-19 pandemic, many US states and localities enacted moratoria on water disconnection. This is new. Historically, the United States has been reluctant to protect consumers from water shutoffs, as water is considered a commodity in the US. Protections from shutoffs are limited, and some states even restrict utilities and cities from providing support to low-income consumers (UNC 2017). Many cities, especially older cities in the rust belt, face aging infrastructure and the need to raise water rates to cover upgrades to their systems (Swain et al. 2020).

Baltimore is a well-known case. To enhance investment in water infrastructure, the city approved a 33% water rate increase in 2016, even though 15% of residential customers already had delinquent bills (totaling \$20 million of uncollected debt for the city) (Jacobson 2016). During the early months of the Covid-19 pandemic, the public water system in that city took several steps to ensure water access for households. However, the Baltimore mayor, Bernard Young, used his emergency powers to delay legislation that would have provided lasting protections. In the face of delay, a coalition of labor, environmental, legal aid, housing and religious groups worked with the city council to put in place a comprehensive water affordability program and a customer advocate's office to safeguard long-term access to water service for every person in the city. The Baltimore Right to Water Coalition sought to advance water justice by banning water privatization, stopping water shutoffs and tax sales of homes over unpaid water bills, and setting up a percentage-of-income water affordability program and an independent dispute resolution process (see the chapter by Grant in this volume).

The Baltimore case reflects the intended core principles of public water – accountability, access and participation – as articulated by the United Nations (de Albuquerque 2012). Accountability requires transparency, and access requires affordability, but partici-

pation is also needed, as the public sector alone cannot be counted on to ensure access.

Water is becoming less affordable to many US households, especially low-income households and communities of colour, as rates for water bills rise above the UN recommended level of 3% of household income (Montag 2019). Shutoffs due to nonpayment are common across the US, but with the onset of the Covid-19 pandemic, policy changed. For example, since 2014, over 141,000 Detroit households have been disconnected from water service due to unpaid bills. But on March 12, 2020, the day after WHO declared the Covid-19 pandemic, Michigan's governor, Gretchen Whitmer, and Detroit city officials announced plans to stop shutoffs and temporarily reconnect water services for all residents (The Guardian 2020). On the same day, Mayor Kate Gallego of the City of Phoenix, Arizona, tweeted:

As of today @PHXWater will be halting all water shut-offs for non-payment to ensure residents have access to water for COVID-19 sanitation purposes. Those currently disconnected will be re-connected by @PHXWater for #COVID19 sanitation. These residences will receive low-flow water service that is adequate for sanitation and cooking <<https://twitter.com/MayorGallego/status/1238163868876025858?s=20>>.

The next day, the State of Louisiana declared that,

Due to the risks to public health associated with the COVID-19 Coronavirus, Governor John Bel Edwards has declared a state-wide Public Health Emergency. Given the severity of these events and the uncertain impact it may have on Commission-jurisdictional ratepayers, immediate action is required to ensure utility service is not disconnected for nonpayment. (LA Public Service Commission, Executive Order 13 March 2020)

The Covid-19 pandemic has shifted the attention of state and local officials towards the public health importance of water. But this was not always the case.

RIISING SUPPORT FOR SHUTOFF PROTECTION

A 2015 national US survey found only 8% of cities protected residents from water shutoff – just 153 out of a sample of 1897 municipalities (Homsy and Warner 2020). The study found that cities were more likely to protect residents from water shutoff if the municipality owned the water utility, had a Democrat-majority governing board and had an articulated social equity goal in its municipal plan. Public ownership matters; so too does planning for social equity (Liao et al. 2019).

At the onset of the Covid-19 pandemic, Food and Water Watch, an advocacy group for public water, began tracking cities and states enacting moratoriums on water shutoffs. While Phoenix, Arizona, Detroit, Michigan, and the State of Louisiana were among the first to announce moratoriums, as of April 30, 2020, over 483 cities and 35 states had imposed them as well (FWW 2020) (see Figure 5.1). The Covid-19 pandemic has alerted states and local governments to the critical public health importance of drinking water access.

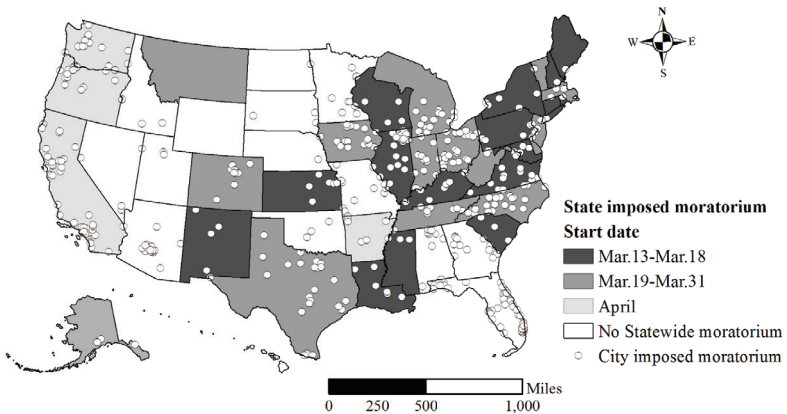
What differentiates states that imposed moratoriums from those that did not? We conducted a study and found that states which regulate private water operators were more likely to impose a moratorium, and those with higher Covid-19 case rates imposed their moratoriums more quickly (Warner et al 2020). We also found states with consolidated Republican control of both the state legislature and the governor's office were less likely to impose a moratorium. Water access, as well as other public health measures in the Covid-19 pandemic, are highly politicized in the US (Warner and Zhang 2020). This makes the participation of civil society especially important to secure water access, as the Baltimore case shows.

The role of the public sector is complicated and sometimes con-

tradictory. Research finds that states are the best level for providing low-income assistance programs in the utility sector (Pierce et al. 2020). While some states provide consumer protections, others may prohibit preferential treatment of specific customers; and some limit the ability of utilities or communities to fund low-income assistance programs (Pierce et al. 2020, UNC Environmental Finance Center 2017).

Figure 5.1

US states and cities enacting water shutoff moratoriums in the pandemic



Built by author. Data sources: TIGER/Line Shapefiles, Food and Water Watch, 2020.

Where states fail to act, cities can. In the 15 states that did not impose a statewide moratorium on shutoffs, 135 cities imposed their own. These cities are characterized by having larger minority populations and higher income inequality, and are thus made more aware of the need for water equity (Warner et al. 2020). These cities also have more local capacity – as measured by higher per capita income and higher community health status. However, our study also found cities in counties with higher percentage of population voting for Trump in 2016 were less likely to impose moratoriums.

As indicated by these results, water equity is highly politicized in

the US, at both the city and state level. Cities and states with Democratic control are more likely to protect residents from water shut-off. Many private water utility operators also voluntarily enacted moratoriums on water shutoffs during the pandemic (AWWA 2020). But will these protections persist as the pandemic drags on? Given the absence of federal leadership during the Covid-19 crisis, some US cities and states have emerged as champions of water equity. But how effective can cities be given the complexity and fragmentation in US water governance and US exceptionalism in water policy?

US WATER POLICY: COMPLEX AND FRAGMENTED

In many countries, water governance reforms provide a coordinating framework for sustainable and integrated water management. In the US, experts have called for a sustainable approach to water management, as the current systems is fragmented and responsibility falls on a multiplicity of actors (DigDeep and US Water Alliance 2019).

One unifying factor is that the majority of Americans are served by public utilities, although the regulation of water service provision involves a multi-level government approach. At the state level, there are health and environment agencies and departments involved in water regulation, in addition to the Public Utilities Commissions (PUCs), which oversee tariff regulation of private and sometimes public utilities. At the federal level, policies are mainly focused on environmental regulation, establishing water quality and discharge standards.

The Covid-19 pandemic has demonstrated the challenges of issuing a rapid response in a multi-actor governance structure. For example, while California did not issue a moratorium on shutoffs until April 2, 2020, various cities in the state were ready to suspend water shutoffs right after the crisis was declared a pandemic on March 12. To do so, they needed to get approval from various other agencies. For example, San Francisco's utilities commission required

approval by the health department before it could act (Buford and Campbell 2020), which delayed the shutoff protection for 48 hours, meaning that delinquent households whose water was shut off had to pay and wait before their service was restored.

To add to this governance complexity, there is also the challenge of fractionalized service areas: i.e. city jurisdictions do not necessarily coincide with water utility service areas. How can cities protect low-income residents that are not served by their own utility? City leadership is crucial here, but there is a need for state and national governments to provide resources and strong guidelines on water access protection as well.

In addition to the complexity of water governance, the US is an exception with respect to the rest of the world in the lack of recognition of water as a human right. This is in stark contrast to European countries, where various mechanisms ensure access to water, including the provision of a household minimum subsistence level (following the World Health Organization guidelines), discounted rates (social tariffs or social funds), and full water disconnection bans. In the European Union, Austria, France, Ireland and the United Kingdom have full disconnection bans in place, while in several other countries, legislation requires water operators to provide the minimum subsistence amount using flow reduction devices or, in some cases, coin-operated water meters. In countries that do permit water disconnections (such as Belgium, Norway and the Netherlands), some of the requirements include approval by an appointed court or other government agency (EurEau 2016).

The European approach is consistent with the United Nations' Sustainable Development Goals (SDG) for 2030. There is general agreement that water access is central to development, as reflected in the commitment to SDG 6 on access to water, sanitation and hygiene, and the 2010 milestone of the UN General Assembly on recognition of water as human right. The Trump administration has generally abandoned a leadership role in this global development forum. While there is variation in how the SDGs are embraced by

different countries, a report of the G20 countries looking at the extent to which countries align national agendas to the SDGs, strategies, action plans and accountability systems reveals that the US shows the lowest levels of political leadership (Bertelsmann Stiftung and SDSN 2018).

POTENTIAL FOR WATER EQUITY IN THE US

The disdain of the US to join global development efforts is alarming because, even though the US is one of the wealthiest countries, it experiences urgent water services needs. An estimated 1.4-2 million Americans lack running water (DigDeep and US Water Alliance 2019), and many communities face the risk of water contamination and inability to pay for rapidly increasing bills. This has had devastating consequences for low-income communities, Native American communities and communities of colour, which face higher disconnection rates and the structural effects of bill delinquency (Montag 2019, DigDeep and US Water Alliance 2019).

In this context, many cities and state governments responded swiftly with temporary moratoria for non-payment to ensure access to water for the most vulnerable groups during the Covid-19 pandemic. However, these are temporary measures, and by August 2020, moratoria in 11 states had expired, but the Covid-19 pandemic and resulting economic crisis continue (FWW 2020). This raises the question of how to make access to water long-lasting. There are various challenges to making the protection of water access more permanent beyond the current pandemic. These challenges are not just because of the complexity of US water governance policy, but also because of the US reluctance to embrace a human right to water (for a longer discussion of the relevance of Covid-19 to the human right to water, see Loftus and Sultana in this volume).

The water affordability crisis in the US is happening at the same time cities and regions are facing problems with decaying infrastructure and the need to address climate change, which presents

cities and water systems with important challenges (as the chapter on Pittsburgh by González Rivas in this volume shows). Action on water policy has been focused on efficiency, investment in new technologies and green infrastructure, while overlooking equity issues such as guaranteeing access to water (Homsy and Warner 2020).

However, cities can implement a more comprehensive, sustainable approach. Philadelphia is an example of how a public water department integrated its affordability program as part of the rate increases that finance the infrastructure investment plan. Despite many water challenges, Philadelphia has implemented a leading program of affordability. Like many other cities in the US, Philadelphia has decaying water infrastructure. The city has not been able to keep up maintenance and investments because of high costs and limited federal funding since the 1970s. However, in 2011 the city launched an infrastructure investment plan to comply with water quality and environmental standards. Water rates increased to finance the investment, and this resulted in an increase in the number of water disconnections. Although the Department of Water had several customer assistance programs for low-income households, the programs were limited, and as bills increased, so did the number of households that could not afford to pay water bills. In response, the city launched a Tiered Assistance Program in the summer of 2017 (City of Philadelphia 2017). The program is a novel approach because it is based on a household's affordability level (versus the common approach of providing a discount on the water service bill). This program is consistent with the United Nation's affordability standard of 3% of household income by making sure low-income households are able to afford their water bills.

In order to have a comprehensive sustainable approach in which equity is not an afterthought, cities and states need to broaden the focus of sustainable water management to ensure protection to water access for the most vulnerable groups. The UN special rapporteur on the human right to safe drinking water and sanitation notes

that access, accountability and participation are core principles that underlie the human right to water. Water must be available, accessible and affordable, and quality and safety must be secured, as well as long-term sustainability (de Albuquerque 2012). But this is a challenge in the US context of rising unaffordability and the need for cities to reinvest in their water systems, as the chapters on Pittsburgh and Baltimore in this volume show. Thus, public participation is critical to putting pressure on government to secure access.

CONCLUSION

The global pandemic has shone a spotlight on the importance of water access for public health. While hundreds of localities and 35 states in the United States suspended water shutoffs in March and April 2020, the patchwork of local and state regulation left millions of Americans unprotected and vulnerable to losing water service. Below are recommendations for each of the three levels of government to take action to ensure that no person is left without the water necessary to protect themselves, their families and their communities from the spread of disease.

Local action

Local water providers are at the frontlines and can most quickly adopt policies and protections for their residents to ensure access to safe water during the pandemic and beyond. These providers can suspend disconnections, safely restore service, waive late fees and penalties, and delay rate increases both during the pandemic and for at least 180 days following the end of the state of emergency. There are 483 cities in the US that imposed moratoriums during the Covid-19 pandemic, but not all moratoriums followed these recommendations on service restoration and fee waivers.

To achieve longer-term sustainability, local water providers must expand existing assistance programs to allow households experiencing Covid-related job loss and lost wages to be automatical-

ly eligible for assistance. As the moratoriums expire, they should extend payment plan periods to 24 months to spread repayment of outstanding bills over a longer period and reduce the monthly burden on households. Money should be set aside for debt forgiveness for low-income households. Local governments can aid in this process by increasing funding for water assistance, including allocating federal Community Development Block Grant assistance and any Coronavirus Relief Fund money to cover the cost of low-income water debt forgiveness. The CARES Act (passed in April 2020) provided \$150 billion to the Coronavirus Relief Fund for states and local governments.

Cities can move beyond assistance toward real, long-term affordability by establishing percentage-of-income payment plans with debt forgiveness for low-income households. This affordability model effectively caps water bills at a level that a household can afford to pay based on its income, such as the United Nations' threshold of 3% of household income for basic water and sewer service. While this affordability model is relatively common in the U.S. gas and electricity sector, only Philadelphia and Baltimore have adopted similar programs in the water sector (Reuters 2020). However, efforts are underway in major metropolitan areas of Detroit and Chicago (Detroit People's Water Board 2020, the Real News Network 2020). More broadly, cities should explore moving to ban water shutoffs permanently. New York City, the largest US water provider, no longer performs shutoffs for nonpayment. A number of cities including Madison, Wisconsin and Albany, New York, do not use shutoffs for collections at all (Food & Water Watch 2020). As the Covid-19 pandemic demonstrates the critical public health importance of the human right to water, cities across the US should shift from this punitive collection method toward more humane practices.

State action

While 35 state governments have taken some form of action to suspend water disconnections, these actions have been varied in their

scope and reach. By late June 2020, 17 states had ordered a water shutoff moratorium that applies to all water utilities, but only California, Michigan, New York, Ohio, Washington and Wisconsin included service restoration for previously disconnected homes. By the end of July, a number of these state orders had expired. The US Senate Environment and Public Works Committee report from July 2020 found that only 10 states and Washington, D.C., had comprehensive statewide moratoriums on water and electricity disconnections still in effect.

To meet the standards set by the UN Rapporteur for Water and Sanitation (de Albuquerque 2012), states should ensure accountability, accessibility and public participation in local water systems. California provides a model for data collection and recording policies. In 2020, California became the first US state to require every water system to track and report water system disconnections due to the inability to pay. This is a model that all states should adopt, so that all water providers can track household water service disconnections and reconnections and publish this information online in a manner that is easily accessible for the public.

Participation requires more than information to ensure accountability. It also requires a voice in utility decision-making. Democratic protections should be offered prior to the sale or lease of water or wastewater services to for-profit entities. Several states, including Wisconsin, require a vote of the electorate of the area served by a municipal utility prior to its sale or lease to a private entity. This is a good model that other states could adopt. Some cities, such as Missoula, Montana have used democratic means to restore public ownership and control (Mann and Warner 2019).

To ensure accessibility, states should establish lasting shutoff protections for vulnerable populations. Legislation could be modeled on New York City's 2008 regulations prohibiting service disconnections to homes with people with serious illnesses and significant medical conditions, young children, elderly persons, blind persons and disabled persons.

Federal action needed

States and municipalities alone cannot address the affordability crisis. The US Congress should pass legislation to impose a nationwide moratorium on utility disconnections with service restoration for all households previously disconnected for nonpayment. In addition, the federal government should provide financial relief for low-income households to help cover the costs of overdue water bills. In May 2020, the House of Representatives passed the HEROES Act, which included a national water shutoff moratorium with service restoration, \$1.5 billion for low-income water assistance, and substantial local government aid, but it is unclear if the Senate will include these provisions in the new Covid-19 stimulus package in August. Participation is required to ensure public accountability and access. A national No Shutoffs Coalition is organizing to press for the inclusion of a national utility shutoff moratorium.

Shutoff protections alone are not sufficient either. We must address long-term affordability and investment needs. Public water providers have been hit hard financially by the crisis. Water systems need to be well funded so they can continue to provide safe water and pay their workforce. The federal government should provide emergency financial relief for public sector water and wastewater utilities, which project revenue losses in excess of \$25 billion, largely due to diminished industrial and commercial usage (American Water Works Association and Association of Metropolitan Water Agencies 2020, National Association of Clean Water Agencies 2020). For the long term, US Congress should pass the Water Affordability, Transparency, Equity and Reliability Act (HR 1417, S 611) to restore the federal government's commitment to water infrastructure. This legislation would provide \$35 billion a year – the amount necessary to comply with existing federal water quality law, according to the latest needs surveys by the US Environmental Protection Agency (2016, 2018). This would provide local water providers with the resources necessary to provide safe and affordable water for all.

The Covid-19 pandemic could help move the US toward more in-

vestment and more equity in its drinking water systems. States and cities have led the way, but they alone cannot rebuild local water systems. Federal assistance is needed. State and local moratoriums on water disconnections during the Covid-19 pandemic are a first step toward recognition of the human right to water. Accessible, affordable and transparent water systems are key to democratic governance of water; and water access is critical to public health.

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Chapter 6

Denisse Roca-Servat
María Botero Mesa
Sara Correa Zuluaga

COMMUNITY-BASED WATER PROVISION IN COLOMBIA IN TIMES OF COVID-19

This chapter examines the significance of the *Red Nacional de Acueductos Comunitarios de Colombia* (National Network of Community Aqueducts, RNAC) in the context of the Covid-19 pandemic. RNAC is a country-wide network that brings together more than 700 self-managed and community-driven organizations active in the provision of water services in the departments of Cundinamarca, Valle del Cauca, Cauca, Bolívar, Magdalena, Sucre, Guajira, Nariño, Meta, Casanare, Guaviare, Santander, Antioquia and Boyacá.

We begin with a discussion of the legal and regulatory framework of the water sector in Colombia, with emphasis on norms related to the community aqueducts and internal measures implemented by these organizations. We then analyze community-based water initiatives vis-à-vis urgent governmental responses to the pandemic. Finally, we offer some reflections geared to highlighting the lessons of democratizing water provision through the lens of community-based water organizations, as well as concrete recommendations for future policy design and implementation.

The research methodology combined qualitative and quantitative methods to access information from a combination of primary and secondary sources. The primary research provided quantita-

tive data obtained through an online survey and in-depth telephone interviews with representative members of community-managed aqueducts. The survey was implemented between June and July of 2020, reaching 101 community aqueducts with snowball non-probability sampling techniques. After processing the data from the survey, we selected relevant cases for in-depth interviews. The secondary sources were water provision laws and regulations passed during the pandemic, as well as technical reports produced by the RNAC itself.

CONNECTION AND RECONNECTION OF WATER SERVICES

In 1991, Colombia's community aqueducts were legally recognized as a distinct modality for the supply of water services across the country. These processes of participatory democracy and solidarity economy were included in the national legal framework as a non-profit and community-driven alternative, different from other business-type schemes – public, private or mixed – that operate under market logic.

Nevertheless, even though the state should guarantee access to water as a right (Corte Constitucional 2015), the current legislation does not include an essential condition for the protection and support of these organizations: a differentiated legal regime that takes into account their specific characteristics and the needs of the population served by them, mostly low-income rural or peri-urban communities (RNAC 2015). Such omission, in practice, imposes a regulatory framework that mainly benefits for-profit water providers. The current legal regime ignores and even obstructs cultural and traditional practices that do not fit into the formats contemplated by national regulations (RNAC 2017).

The emergency measures launched by the Colombian government in response to the pandemic have tended to reproduce the exclusion that community aqueducts have historically suffered. The decrees issued in the times of Covid-19 have reinforced the pre-

vailing logic, prioritizing an urban and profit-centred approach that seeks to transform cooperation between citizens into a business transaction. Moreover, community aqueducts have been affected by the imposition of financial costs and administrative burdens that exceed their economic and operating capacities (RNAC 2020a), as summarized in Table 1 below.

On March 20, 2020, the Colombian government issued Decree Law 441, which obliged water providers to immediately reconnect the service to families who were disconnected due to lack of payment. According to the interviews conducted for our research, most community organizations feel that this concrete measure is irrelevant for them, given that they do not customarily resort to disconnection (RNAC 2020a).

This perception was verified by the results of the survey, which indicate that 91% of the community aqueducts have implemented additional actions to guarantee the water supply during the pandemic. For the remaining 9% of the respondents, it was not necessary to implement new measures. However, in cases where aqueducts had incorporated the water service provision norms contained in Decree 302 of 2000, or exceptionally had to disconnect the water supply, it was found that they complied with the measure stipulating reconnection.

To cut off the water supply to any beneficiary is not a usual practice among community-run aqueducts, and even less for lack of payment. Even in the context of the pandemic, there were no cases of disconnection due to non-payment. In cases of arrears, these organizations favour mechanisms of social control or co-responsibility to guarantee a vital minimum supply to every member. A clear example of this was observed in the actions of the Girardota and Don Matías aqueducts in the department of Antioquia, which have installed flow control valves to guarantee the basic right to water. In some aqueducts, increased awareness of the significance of water as a common good has meant that there is little concern about the financial sustainability of the aqueduct during the pandemic.

Table 6.1

Emergency measures and their impacts on community water provision

Measure	Aims	Impacts on community-based water provision
Decree Law 441 of 2020	To guarantee the water supply to homes, prohibiting tariff increases and suspending water shutoffs due to non-payment.	In the case of community aqueducts, these measures were not necessary, given the principles of solidarity and democracy and the rights-based approach that guide their forms of organization, management and operations to secure access to water to all users.
Decree Law 528 of 2020	To provide financial support to companies unable to fully recover their costs due to the implementation of Decree 441. The resources that could not be collected from non-paying customers would be offset by the facilitation of better access to credit for water operators.	It does not take into account the specific financial needs of community aqueducts. The requirements for accessing credit are contingent on the presentation of financial statements, which most community-based water providers cannot afford. Moreover, the organizations that do manage to comply with this prerequisite would be putting their community assets at risk by creating long-term debt.
Decree Law 580 of 2020 <i>[Declared unenforceable by the Constitutional Court due to formal defects.]</i>	To increase subsidies and allocate public resources for water supply.	Its application is invariably subject to the methodologies and requirements defined in Law 142 of 1994, which means that community aqueducts cannot access these benefits if they have not already complied with Law 142.
Decree Laws 512 and 513 of 2020, plus some elements of Decree Law 580 of 2020	To enable the use of resources such as solidarity funds, plus changes in the royalty allocation regime.	The measures do not contemplate any real guarantee that these resources will be available for community aqueducts, as they are subject to the political will or budget availability of municipal and departmental governments.

Table 6.1

Emergency measures and their impacts on community water provision

Decree Law 819 of 2020	To enable the possibility of granting a subsidy to rural community aqueducts.	This measure establishes fewer requirements for accessing subsidies than Law 142 of 1994; nevertheless, only aqueducts regulated and monitored by the Superintendency of Residential Public Services (SSPD) would benefit, totalling around only 1,600 of the more than 12,000 community organizations registered across the country.
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Members of the Vereda Platanito aqueduct (from Barbosa, Antioquia), Cascajo de Marinilla (Antioquia) and Resguardo de Bonza de Paipa (Boyacá) told us that, in general, the associates have continued their economic contributions at the same level and frequency as before the pandemic. Many aqueducts covered by our research are totally independent in terms of finances and cover all their costs without any external support. In the words of a member of the Veredal AQUA7 Aqueduct, from Acacias, department of Meta:

We had to disconnect because some properties were vacant, but the pandemic caused many people to return to settle back in the community, so we had to find a way to respond to those situations. Payment agreements were made with the returning water users, and we have the expectation that now that we are going to start billing them for the month of July they will begin to pay for the service. (Personal communication, August 3, 2020.)

Furthermore, due to the increase in people who returned to live in the countryside during the lockdown, as well as the internal population growth, many community organizations expanded the network by connecting new families through the granting of *derechos de agua* (water rights), as in the case of the Aqueduct of Nariño

and Palo de Agua, in Loricá, department of Córdoba. This type of agreement implies an economic contribution to the aqueduct made by a family that seeks to access the water network as a new user. It is a common practice in various regions of Latin America (Boelens 2009) based on the recognition of the historical work of the organization for the care of the water basin and the surrounding territory. As an associate of the El Encano (Nariño) explained to us:

Although the new people who arrive buy the land, they do not buy the rights that the community had acquired in previous years, because here we take care of the trees, so that the water does not run out. We plant, take care of reforestation... For us, water is sacred, so nobody can expect just to come here with money and buy something that has historically been cared for, during many years, by the community. (Personal communication, August 5, 2020.)

Socio-economic stratification and redistribution

The community aqueducts have in-depth knowledge about the needs and economic capacities of the inhabitants of each village, and in that sense they fulfil through their collective practices the objectives of solidarity and equity beyond the indicators of socio-economic stratification used by state agencies to guarantee the provision of water services. An illustrative case is the Asociación Vecinal de las Aguas de Caluce (ASOAVEAGUASCALUCE) aqueduct in Palmira, Valle del Cauca, which conducted a detailed economic analysis of the whole community in order to identify the most vulnerable families and waive their economic contributions during the pandemic. Likewise, in the aqueduct of Resguardo de Bonza, in Paipa (Boyacá), a similar survey was carried out to evaluate the possibility of granting a one-month grace period to those members of the organization who might request it, using indicators to measure economic stratification very different from those used by the government for the same purpose.

Unlike profit-oriented water companies – which ensure their financial sustainability by collecting a regulated fee that incorporates both fixed operating costs and consumption charges according to the amount of water consumed by the users – community aqueducts rely on the economic contributions of their members and beneficiaries.

One of the most common sources of income is the *cuota familiar* (family fee), with varying amounts and frequency of collection in each organization. The financial sustainability of the local aqueducts, however, does not depend exclusively on the households, but includes a series of collective and individual actions such as community work, fundraising rallies, voluntary or extraordinary contributions by its associates, private donations, etc. During the Covid-19 emergency, these schemes were also affected, as explained below.

The community aqueducts are aware of the impossibility of supplying free water services, considering the operating costs. Their definition of *cuota familiar* implies at least a minimal contribution from each member of the organization. As explained by a member of the Espinales-Cabrera Vereda Aguafría Aqueduct, from Ocamonte, department of Santander: “being a community-based association, we cannot afford to eliminate the family fee, even if it is collected only once a year and kept as low as possible, which sometimes it is not enough to cover all the water provision costs” (personal communication, August 3, 2020).

In many cases, the amount of the family contribution is fixed and is not based on consumption. This means that the aqueducts do not charge for water itself, but for the costs of delivery, the installed infrastructure, and the maintenance works. In this way, the fee reflects a commitment to the community organization and is not aimed to guarantee the economic sustainability of the aqueduct. In the face of the special circumstances that have arisen after the declaration of a national emergency due to the pandemic, some aqueducts had to adjust the amount of the family fee, request voluntary and extraordinary contributions, or introduce a temporary increase

to the regular fee, as explained by a member of an aqueduct from Encano, in the department of Nariño.

In addition to the extra resources contributed by the members of the aqueducts to cover operating costs, some community organizations have also requested subsidies entitled to them by law. Nevertheless, the different meanings and understandings of water charges – a *cuota familiar* in the case of the community-based organizations, and a *tarifa* (tariff) in the context of private and state-run water utilities – have complicated the interaction between aqueducts and the state. As a regulator, the state must ensure that water companies do not impose disproportionate charges to increase their profits. Such risk does not exist in the framework of community-based water providers, because they are not profit-oriented. However, in the absence of differential regulations, state entities condition the access to subsidies by forcing community aqueducts to make adjustments in the collection of economic contributions. The changes requested by the state often contradict the established managerial practices of community aqueducts, involve additional costs, and ignore intra-community agreements or the objective capacities of their members to make financial contributions, therefore hindering access to the subsidies.

Faced with the repeated denunciation of this situation, after the eruption of the pandemic, the Colombian government modified the regulatory framework to make access to subsidies more flexible for rural aqueducts, with the sole condition that they be registered with the Superintendency of Domiciliary Public Services (SSPD). As mentioned above (in Table 6.1) this measure would only benefit 1,200 community aqueducts, out of more than 12,000 officially registered and over 20,000 operating across the country, according to RNAC's calculations.

Since the onset of the Covid-19 emergency, the vast majority of community aqueducts have implemented different payment modalities of the family fee, either granting a longer term for payment, dividing the amount into smaller instalments, opening addi-

tional payment points to reduce territorial mobility, or absolving families with greater economic needs. The direct knowledge of the economic and social situation of each family within the community was of great importance, facilitating appropriate, equitable and fair decisions. For instance, in the case of the Cascajo de Marinilla (in Antioquia), the local organization consulted with its members and agreed to contemplate different family situations, while the ASOAVEAGUASCALUCE Aqueduct (from Palmira, Valle del Cauca) intensified its communication with families in the community and promoted greater co-responsibility.

Access to government subsidies

In the context of the pandemic, the deferral of members' economic contributions became more widespread, due both to the economic crisis caused by Covid-19 and the confusion generated by state programs and regulations launched during the national emergency to facilitate payments and access to subsidies. The governmental measures created the expectation that the state would pay to guarantee the provision of water. In particular, there was confusion around the scope of Decree 580, which gave local mayors the authority to subsidize the total costs of water supply; however, that norm was soon declared unenforceable by the judicial power due to legal defects caused by the lack of some ministerial signatures. Moreover, Decree 819, which created a new rural subsidy, would only benefit a few aqueducts – and temporarily at that, as explained above. Therefore, for example, in the cases of Cascajo de Marinilla (Antioquia) and Resguardo de Bonza de Paipa (Boyacá), the local aqueducts had to open ad-hoc information channels to explain the limitations of the government measures to their members.

Some aqueducts have been able to access municipal subsidies to guarantee water access for low-income families. This is an indirect subsidy regulated by Law 142 of 1994, which requires registering with the SSPD and being part of the *Sistema General de Participación* (General Participation System). Access to this subsidy often de-

depends on the political will of the local administration. Even when the aqueducts have access to such resources, they maintain the possibility of establishing flexible agreements to collect the unsubsidized percentage. More than collecting the money at a certain time, what matters when establishing payment agreements is the commitment and joint responsibility of the aqueduct and its members and beneficiaries.

For example, the aqueduct of Nariño and Palo de Agua in Lórica (Córdoba) receives a subsidy equivalent to 50% of the total family fee. However, despite receiving this support, the aqueduct has proposed deferring the fees to families as an alternative form of payment. Likewise, the AQUA7 community aqueduct from Acacias (Meta) uses the subsidy to provide a discount on the family fee. In any case, they also establish payment agreements that allow the fees to be more flexible, considering the commitment between the organization and its members.

The results of our research indicate that few community aqueducts can access subsidies due to the criteria and large number of requirements demanded by the state. Only 21% of the surveyed community aqueducts responded that they had accessed new forms of financing during the pandemic. Community organizations struggle to meet all the regulatory requirements, which often mean absurd burdens on them as well as dubious benefits for the community. First, they must carry out a rate study in accordance with Resolution 825 of 2017 and Resolution CRA 844 of 2018, which involves stratifying the local population, hiring an accountant with special knowledge of International Financial Reporting Standards (IFRS), reporting financial statements, preparing a users registry, as well as conforming to very strict monitoring and control procedures. Then, the water users must approve the established “rate”, which involves a very foreign discussion about the meaning of “fee” (which, as explained above, would contradict the community’s understanding of the *cuota familiar*, the most usual form of economic payment for water services). Then, they must register in the SSPD and comply

with other requirements such as having a web page where they can upload the financial statements. This list of bureaucratic requests does not take into consideration the limitations of Internet connectivity in rural areas and the more than 600 forms that they must also complete online. Quite often, the local authorities insert additional special conditions, such as submitting the application before a certain date. Many times, faced with the impossibility of accessing the subsidies granted by the state, the aqueducts themselves implement internal mechanisms for cross-subsidization, redistributing resources from those members who are in a better economic situation to those who are in more precarious conditions.

By virtue of Decree 580 (which the judiciary declared legally unsound), launched by the Colombian government in the framework of the national response to the pandemic, municipalities – in accordance with their political will and budgetary capacity – would guarantee the payment of water services for the low-income population. This measure could have benefited a small number of community aqueducts that met the norms for accessing indirect subsidies and which were already registered with the SSPD. However, as a member of the Vereda Platanito aqueduct from Barbosa (Antioquia) explained to us, “applying is not a option because they demand a number of documents, procedures of infrastructural conditions that we would never be able to comply with.”

The municipal aqueduct AQUA7, from the town of Acacias (Meta), was able to access this subsidy because it met the basic requirements and was registered with the SSPD, and therefore the local municipality had already agreed to subsidize it. However, after a more detailed evaluation of the scope of the grant, the members of the aqueduct decided that the bureaucratic process involved too much effort, resources and capacities. Another aqueduct that managed to access this emergency grant was Nariño y Palo de Agua, from Lorica, Córdoba. This aqueduct had already received the ordinary subsidy; therefore, during the months of May and June, the Lorica mayor’s office decided to cover the remaining payments with

the emergency grant. However, the members of the community thought that the government would continue to pay indefinitely for the water services, which created confusion in family contributions that have affected the financial viability of the aqueduct.

In the words of a member of the Bonza aqueduct, from Paipa, Boyacá: “The government misinforms the population by issuing decrees that do not take into account the particular profile of community aqueducts and which confuse users about the payment of fees.” A member from the Nariño and Palo de Agua stated, along the same lines, that “these measures are good only for larger aqueducts; but for us, being a small organization, it has been detrimental, because it forces us to guarantee the service while relying only on the economic contributions of our members.”

The pandemic also triggered the launch of a new subsidy specifically aimed at rural water providers via Decree Law 819. In Colombia, there were no subsidies for rural aqueducts. According to the government, it was conceived as a “pilot test.” The intentions are good, but the barriers to accessing the subsidy remain. There is an increasing pressure for the aqueducts to register with the SSPD. The registration entails a large number of requirements, procedures and bureaucratic costs, as well the strengthening of a model of water management and provision based on market logic, subsuming the communal nature of the aqueducts to a commercial and bureaucratic ethos. Among other conditions, they are forced to adopt the methodology to calculate the tariff defined by the state under business-as-usual parameters, as well as a series of administrative expenses and very high cost overruns that also go against the principles of reciprocity and solidarity.

COMMUNITY WATER PROVISION DURING THE PANDEMIC

Ensuring access and quality of water services has always been a concern of community aqueducts. According to their capacities and particularities, they have implemented appropriate technologies

and strategies to manage and protect hydrographic micro-basins. Recently, in times of Covid-19, the network of aqueducts published a report entitled *General Recommendations for Responding to the Pandemic* with community-based water provision practices, which proposes concrete measures for the safe provision of water using both centralized chlorination systems and decentralized methods of disinfection for households (RNAC 2020b).

Measures to guarantee water access and quality

Even though the bibliography consulted by RNAC acknowledged that there was no evidence of the survival of the Covid-19 virus in drinking water (CDC 2019, MSPS 2020, WHO 2020), community aqueducts called on themselves to implement additional protocols for cleaning and treating water. With the novel coronavirus being an unknown and poorly studied pathogen, the community aqueducts were concerned about the way the virus could spread through the water services. Guided by precautionary principles, the RNAC promoted behavioural changes on its own.

According to our survey, 94% of the participating organizations have taken additional measures on water quality, while the remaining 6% considered this unnecessary. Among the additional actions implemented, the following stand out: the intensification of monitoring and community work, additional upkeep of the environmental conditions of hydrographic micro-basins, infrastructural improvements, and the design and implementation of additional protocols for the treatment and purification of water.

Monitoring and community work

Among the actions launched during the pandemic, RNAC representatives stated that local communities have intensified their efforts to monitor the proper functioning of local water systems and repair any damage. Mutual aid or intra-communal cooperation through *mingas* and voluntary workdays have been dedicated to build, repair and maintain local aqueducts in times of Covid-19. Even though

local assemblies or other meetings of large groups could not be organized, the distribution of tasks and the rotation of responsibilities among community members have continued,

In the case of an aqueduct run by an indigenous community in the municipality of Pasto-Nariño, “when we face any problem with the infrastructure, such as when a hosepipe breaks down or gets clogged, the community gathers and one of us goes up to the mountain to fix it without any additional help”, as one of its members told us in an interview.

These emergency response actions have generally been accompanied by innovative communication strategies. In the case of the aqueduct run by Asociación Vecinal de las Aguas de Caluce (ASOAVEAGUASCALUCE), a plumber and a local female leader have assumed the main responsibility of monitoring the water system on a daily basis, but the community relies on an early warning system that involves all its members. This organizational structure facilitates communication about damages, fires, or any other problem or risk in the micro-basin, and is supported by a WhatsApp group to ensure rapid response.

Safeguarding of the micro-basin

“The quality of the water is a reflection of the state of the micro-basin.” This is the slogan of many community-run aqueducts. The rigorous and constant community work to secure the conservation of the water basin is based on the coordination of multiple efforts, such as participatory restoration processes, educational campaigns for children, donation rallies and communal pressure on environmental authorities to protect water sources and the local environment.

In general, these are practices that were already in place prior to the declaration of a national emergency in response to Covid-19. One such example is the purchase of land to reforest the micro-basin decided by the Acueducto Ojo de Agua de Palmarito. However, by focusing on ecological restoration, these actions highlight the

capacity of these organizations to serve their communities in the midst of a crisis. The capacity to react during emergencies became clear when an aqueduct in the department of Santander was able to cover the needs inhabitants of a neighbouring village badly affected by the summer drought and facing a water shortage.

According to a member of the Platanito village aqueduct, from Barbosa, the community is in a constant struggle to protect “*la piel de la microcuenca*” (“the skin of the micro-basin”). This is to avoid “the loss of vegetation cover, which makes the water hit the ground too hard and washes the dirt into the intake, contaminating the community’s water” (personal communication, August 18, 2020).

Another best practice originates in an aqueduct from the municipality of Palmira, in the department of Valle del Cauca, where the community aqueduct is today widely acknowledged as a leading environmental and social organization. Such recognition has been the outcome of more than 15 years of work in defence of the territory and for the restoration of the Los Naranjos micro-basin to which the community belongs.

This process began with a participatory diagnosis of the local ecosystem. The environmental restoration included actions such as planting native trees, isolating core areas, community monitoring, and organizing waste collection days as *mingas* with the help of forest rangers from a neighbouring community. In addition, the members of the local aqueduct have built strong alliances with external actors, such as the Palmira branch of the National University of Colombia and the University del Valle, with whom they have been working for over a decade.

Among the achievements highlighted by local community leaders is the recovery of forests in the borders of reclaimed areas, in collaboration with the farms located near the water sources. Initially, the farmers had agreed to respect a protected area of a maximum of 30 metres from the source, but today there are some extending to 100 metres or more. These protected areas, as reported by a local community leader whom we interviewed, have allowed nature to

recover and become active biological corridors that guarantee that the water remains in the micro-basin longer and that it is good quality water (personal communication, August 12, 2020).

Another best practice centred on the preservation of the micro-basin has been the work carried out by an aqueduct from the municipality of Acacias, in Meta, which emphasizes the importance of environmental pedagogy. The local community implemented information and awareness-raising campaigns aimed at reducing household water consumption and the proper discharge of domestic liquid waste, as well as an initiative with children from local schools, in which each child became responsible for a plant, took care of it for six months and then re-planted it near the water intake.

The work around liquid waste is very important because the local community has been applying appropriate technologies in areas unreached by the municipal sewage system, due to topographic barriers and the long distance between houses. Rural households separate the waters that contain excrement from the “grey waters,” which refer to those generated by the kitchen, laundry, shower and sink. For the treatment of the former, the rural population use septic tanks.

For the latter, they use bio-planters, a technology that simulates the natural processes of decomposition of organic matter that occur in nature; also referred to as artificial wetlands, these mechanisms consist of a simple gravel and stone filter upon which semi-aquatic plants are grown.

This basic technology removes pollution through a recycling sequence and prevents surface and underground water sources from being contaminated by untreated wastewater discharges. Technologies like this are very important, since the World Health Organization has reaffirmed the need to keep the water consumed by households as clean as possible (WHO 2020). In consideration of these practices, we can assert that the water supplied by many rural aqueducts has not been polluted and therefore reduces the risk of transmission of Covid-19 or other pathogens.

Infrastructural improvements

Another strategy widely adopted by the community aqueducts during the pandemic was to improve their local infrastructure. For example, the Resguardo de Bonza Regional Aqueduct in Paipa, Boyacá, changed the filter beds to improve the efficiency in the retention of suspended material (less turbidity). Likewise, other aqueducts renovated or expanded their systems to reduce the amount of solids present in the water. In the town of Acacias, in Meta, the community installed a new intake in an alternate water source after the river from which they used to get the water was found to carry a large quantity of suspended solids during the rainy season, making its treatment very difficult.

Other aqueducts repaired their storage tanks to avoid infiltrations that could cause the deterioration of water quality. In other locations, local communities replaced the pipe networks to prevent microbiological contamination of water. Some aqueducts also addressed the challenges posed by the increase of water users, since in some locations – such as in Las Ánimas-Piedrahita or in Cascajo, in the department Antioquia – more families have moved to the countryside. On the other hand, in rural territories more dependent on tourism, such as El Encano, in the department of Nariño, water consumption has decreased since the pandemic erupted.

Water treatment, purification and cleaning protocols

During the pandemic, the measures taken by community aqueducts have included: increasing the frequency and intensity of cleaning and disinfecting their facilities, treatment plants and storage tanks; pre-chlorinating intake water; disinfecting surfaces; and cleaning household filters and storage units. They also extended the water boiling times and the exposure to solar radiation, among other actions.

Members of the Acueducto Regional Resguardo de Bonza in Paipa, Boyacá, informed us that the treatment plant installations are being cleaned and disinfected more often, with emphasis on wash-

ing the filters and the storage tank (personal communication, August 10, 2020). Similar practices were reported by members of an aqueduct in Palmira, Valle del Cauca, which managed to improve their water quality standards, even though before the Covid-19 emergency they were already complying with current regulations in terms of water quality.

In some cases, in addition to the cleaning tasks, the use of chlorine as a disinfectant was introduced or expanded. Its use in rural areas has been the subject of great debate due to the multiple uses of water in the Colombian countryside. In rural areas, water is used for human consumption, cleaning homes, watering the garden, feeding domestic animals, sustaining agriculture and livestock, etc. These diverse uses have led some community aqueducts to consider that it does not make sense to chlorinate water as part of conventional centralized treatment methods, which is why they have favoured the adoption of domestic treatment systems and safe storage of water for consumption as alternatives. This political stance is not the only reason why there are cases in which there is no centralized system to treat the water and supply raw water to the fields. Other reasons that explain such an absence are the topography of the land, the types of supplying sources (surface or underground), the distance between farms, cultural aspects, other understandings of development and a lack of money.

However, the commitment to guaranteeing safe water and the prevention and control of contagious diseases such as the Covid-19 virus have also been fundamental for the aqueducts that have continued to operate during the emergency. Some aqueducts have, for example, organized campaigns so that households become more aware of the importance of water purification. An aqueduct from Ocamonte, in Santander, has held awareness days where they emphasize the importance of purifying water for household consumption either by boiling it or by using individual filters. A member of another aqueduct from Páramo, also in Santander, told us that their historical solution had been to buy “clay filters for each house to

ensure that everyone has access to drinking water” (personal communication, August 3, 2020).

In summary, there is not a “single” option for the treatment or purification of water, as intended by the regulations stipulated in Resolution 2115 of 2007 of Colombia’s Ministry of the Environment, Housing and Territorial Development, which refers to the *Índice de Riesgo de la Calidad del Agua para Consumo Humano* (Risk Index for Water Quality for Human Consumption, IRCA) as the basic instrument. To calculate this indicator, the ministry assigns a risk score of 15 points to the *cloro residual libre* (free residual chlorine) parameter, which affects any aqueduct that does not use chlorine as a disinfectant but maintains it as a residual: even if they comply with the other required parameters (there are 20 of them) they will be marked as a risk to public health, meaning that the water they supply will be considered not suitable for human consumption.

CONCLUSION

Community aqueducts are governed by customary rules. They carry out public works and deliver services that do not depend on the state. Moreover, they tend to view the state with distrust and concern, being conscious of their subordinate relationship with the government and the imposition of measures that, instead of strengthening the community organizations, have ignored them. However, there are also many aqueducts that want to change the way they relate to the state in terms of what they believe the notion of *Estado Social de Derecho* (enshrined in the Colombian constitution) should really mean: the state ensuring the rule of law, equity and the social wellbeing of every citizen.

Community aqueducts are understood as heritage, sovereignty, peasant and indigenous identity and self-management. They are important because they are the social mirror of the territory and the guarantors of the human right to water. Without their existence, many communities would not have water. They are also a successful

community alternative for managing collective needs and strengthening local ties and networks from the grassroots.

As was explained to us by water activist from the ASOAVEAGUAS-CALUCE aqueduct:

We are the life of our community because a territory without water would die, and therefore we represent the future of our descendants. We are the ones who really love this water, because we do not see it from the capitalist point of view, but from the social and community point of view. And because we have a sense of belonging and love for our community we must continue to rely on ourselves, to move on, to support the processes that we have built for so many years and which were initiated by our grandparents, our uncles and our neighbours, protecting this great inheritance for our children and grandchildren.

Likewise, in the words of another water activist, from the neighbourhood aqueduct AQUA7 (from Acacias, Meta):

This means everything to us. We have been building AQUA7 for 48 years, and only once have we had to request external engineering services. Every other time, all the works that the aqueduct has demanded have been carried out by our community and by professionals who have come from the same community. For us, that is important, because it is a process of defending our identity. Our people get to build and operate the water network, so we only need to bring the materials we might need from outside, carrying them on the back of a mule. And all that leads to our people falling in love with the aqueduct. If someone is linked at some point with our association, all his or her life will remain linked to it, and the other way around. Our grandparents built this and we are now the generation of their grandchildren, so what better way to

move forward than strengthening this process, and now with more structured and better designed knowledge, relying on the empirical knowledge of our communities, which is also quite extensive.

At the beginning of the pandemic there were many constraints, such as those resulting from the impossibility of meetings to manage or operate the aqueduct. Several activities that community organizations had programmed had to be postponed or cancelled. The relationship of many aqueducts with public administration during the pandemic has also changed. This is because the emergency coincided with the beginning of new local and regional governments, and with the start of the implementation of the multi-year *Plan de Desarrollo Municipal* (Municipal Development Plan). In several localities, the aqueducts were not taken into account when preparing the local plans, and municipalities are not convening community organizations to participate in local decision-making structures and processes.

In a broader sense, the relationship with the state in general has been problematic. The connection with the SSPD is also detached. The community aqueducts do not see viable scenarios of dialogue with the institution because their surveillance and control objectives contradict the aqueducts' practices and principles of solidarity. There are cases of aqueducts that signed agreements with the SSPD and ended up losing their autonomy and organizational profile, transforming their community practices into those that are typical of a business-driven organization. A rural aqueduct cannot conceive of its own existence without having its autonomy and community organization guaranteed.

The economic impacts will be seen more clearly in 2021, since the budget will be reduced, affecting the capacity to improve the network or fix damages to the water system. The economic requirements of the SSPD are very high for community aqueducts: in addition to imposing a changed rate structure, the requirements

also include mandatory contributions to support state institutions (including interest on arrears in which the charges had been suspended by agreement between the SSPD and the community organizations). These costs are compounded by the annual registration fee with the Chamber of Commerce, a private institution on which the recognition of the legal status of community organizations depends. Although the very existence of community aqueducts implies a commitment to community beyond a purely instrumental logic and appeals to social bonds and local solidarity, there is increasing uncertainty about their future and the survival of community-based water organizations in rural and urban territories.

In environmental terms, they face new challenges related to water scarcity, due to the lack of reforestation in the upper segments of the water sources caused by the lack of commitment of public authorities. One solution would be for the state or the aqueduct to acquire the land surrounding water sources and enable reforestation with the participation of the community. There is a clear need to extend current initiatives in the area of environmental awareness for the conservation and proper use of shared water resources.

Another challenge is the management of wastewater, which is polluting the land and ends up in rivers. Likewise, there are threats to territories posed by extractive mining, monoculture, agribusiness, large-scale cattle ranching and outsized energy projects. For example, ongoing energy projects throughout the Andes Mountains risk destroying entire native forests.

The crisis prompted by this pandemic has demonstrated the power of community-based water resource management founded on the principles of solidarity economy. This reaffirmed consciousness drives the need for the state to recognize and reaffirm community-based management as its own legitimate form of maintaining and ensuring the conservation, restoration and protection of micro-basins and water springs, thus guaranteeing the wellbeing of local communities. The RNAC network has been supporting initiatives aimed at defending local community organizations, including

the elaboration of new legal mechanisms that acknowledge the importance and particularities of community-based water provision. This also means a reconsideration of the right to water by taking into account its diverse components: an individual dimension (water for human consumption), a collective dimension (protection of water basins) and a community dimension (the legal recognition of community-based water provision). This approach has not yet been fully incorporated into national laws, but it has become a collective roadmap for local advocacy and further engagement in national and international processes.

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Chapter 7

Mary Grant

A BEACON OF HOPE AT A TIME OF CRISIS? PURSUIT OF AFFORDABLE PUBLIC WATER IN BALTIMORE

During the early months of the Covid-19 pandemic, the public water system in Baltimore City, United States, took steps to ensure water access for households in the short term, but the mayor, citing the pandemic, used his emergency powers to delay legislation that would have provided lasting protections. In the face of delay, a coalition of labour, environmental, legal aid, housing and religious groups continued to work with the city council to put in place a comprehensive water affordability program and water customer advocate's office, necessary safeguards to ensure long-term access to water service for every person in the city. The Baltimore Right to Water Coalition has worked to advance a model of water justice: banning water privatization, stopping water shut-offs and tax sales of homes over unpaid water bills, and setting up a percentage-of-income water affordability program and an independent dispute resolution process. If implemented, it could provide a progressive public water model for other US municipalities.

INTRODUCTION

In March 2020, as Covid-19 began to spread like wildfire across the United States, reaching every state by month's end, many towns and cities took action to suspend water service shutoffs for non-payment (see Warner et al, this volume). Public water providers recognized the importance of water access for public health, with proper sanitation and handwashing necessary to help slow the spread of disease.

Baltimore City, Maryland, was one of only a dozen US cities that had a pre-existing policy against water shutoffs (Food & Water Watch 2020a), and had not disconnected water services to any household for non-payment since 2017 (Clemmens 2017, 2018). As a result, Baltimore did not have to rush to reconnect water service to homes, and instead could focus on providing other forms of support. On March 13, Mayor Jack Young reaffirmed this policy, announcing a joint executive order with the Baltimore County Executive to retain the water shutoff moratorium for at least the duration of the crisis:

It is critical that we ensure residents have all the essential resources and services they need to safeguard themselves and their families. All residents in the Baltimore region can be assured that their services will continue regardless of their ability to pay, while we continue to work through this public health crisis (WJZ 2020).

The Department of Public Works of Baltimore City also announced on March 19 that it would perform no cutoffs for any utility work except in emergencies, it waived all late fees and offered repayment plans to residents falling behind on their bills (2020a).

Baltimore City has not always had this protective policy. In fact, in 2015 it faced community protests against planned mass water shutoffs to 25,000 customers, an estimated 60,000 people, who were

behind on their bills (Broadwater 2015). At the time, the city offered a discount to senior citizens but it provided no support to low-income residents to help prevent them from falling behind on their bills (Food & Water Watch 2015).

COMMUNITY-LED GROUNDWORK FOR PUBLIC PROTECTIONS

This affordability crisis stemmed from skyrocketing water rates due to the city investing billions of dollars in necessary water and wastewater infrastructure, with little in the way of financial support from state or national levels of government. From 2000 to 2017, typical household water bills more than quadrupled, and by 2017, water bills were unaffordable for roughly one-third of households. In 2015-16, the city disconnected more than 6,600 homes for non-payment, affecting an estimated 16,300 people. In addition, from 2015 to 2017, the city sold liens to about 1,700 owner-occupied homes at tax sale because of unpaid water bills, with these households facing foreclosure if they could not repay the investors that bought the liens, plus interest and fees (Food & Water Watch 2017).

In 2016, to address these deep challenges, Food & Water Watch convened the Baltimore Right to Water Coalition, bringing together groups working on water access, housing, labour and social justice issues. The members include Jews United for Justice, the Public Justice Center, the Community Development Clinic at the University of Baltimore, Maryland Volunteers Lawyers Service, Pro Bono Resource Center, 1199SEIU United Healthcare Workers East, AARP Maryland, Homeless Persons Representation Project, the Baltimore Chapter of the National Association for the Advancement of Colored People and more than 32 other groups. Since its formation the Coalition has worked with the Baltimore City Council to address the longstanding issues of the water billing system and has won several policy changes that protect the public's access to safe and affordable water.

In November 2018, Baltimore City also became the first major

US city to ban water privatization. Seventy-seven percent of voters went to the polls and approved Ballot Measure E to declare the water system to be an inalienable asset of the city (Biron 2018), shutting down the efforts of French multinational Suez to take control of the city's water system with a 40- to 50-year lease concession scheme (Broadwater 2017). By preserving local control, the city retained the flexibility to address the needs of its residents by stopping water shutoffs and creating new programs to address affordability and accountability concerns.

The Baltimore Right to Water Coalition also supported efforts by State Senator Mary Washington and Delegate Nick Mosby to pass the Water Taxpayer Protection Act in 2019, stopping the practice of sending homes and places of worship to tax sale to collect unpaid water bills (Broadwater 2019). Later that year, the Baltimore city council passed the Water Accountability and Equity Act to establish a comprehensive water affordability plan and an Office of Water-Customer Advocacy and Appeals (Food & Water Watch 2020b). The groundwork laid through these efforts positioned the city well to handle the immediate water access concerns created by the Covid-19 public health and economic crisis.

COMMUNITY DEMANDS

As the Covid-19 crisis unfolded, the Baltimore Right to Water Coalition continued to work with the Baltimore city council to help create political space for the Department of Public Works to enact policies protective of water access. On April 1, 2020, the Coalition wrote to the mayor and the city council asking the city to take swift action to ensure universal access to safe and affordable water service during the emergency and beyond. In a letter signed by 43 labour unions, advocacy organizations, legal providers and religious organizations, the Baltimore Right to Water Coalition (2020a) asked that for the duration of state of emergency, and at least 120 days following its end, the city should:

- Continue to waive all late fees
- Eliminate certain fixed fees and waive usage charges for an essential amount of water consumption
- Delay a scheduled rate increase
- Allow all households that experienced lost income due to the pandemic and state of emergency to become eligible to apply for existing low-income assistance programs
- Ease the application process for low-income assistance programs
- Monitor for illegal utility shutoffs of renters by landlords
- Work to ensure timely implementation of the Water Accountability and Equity Act

On April 9, 2020, City Councilwoman Shannon Sneed urged the mayor's administration to go even further, calling for a water billing moratorium for 180 days. She recognized that water service was one of few essential services that were fully within the city's control, and as 15,000 Baltimore residents had already filed for unemployment at that time water bill relief would be the fastest way to provide financial help to residents. The letter was signed by eight of her colleagues, including City Council President Brandon Scott. In her announcement, she said:

Our neighbors are hurting. Our neighbors are not working. Baltimore residents have lost hours at work or lost their jobs altogether. Our business owners have lost sales or have completely closed down. It will take months for our families and businesses to recover, and we must look at every avenue possible we can to alleviate suffering. The city can provide water bill relief now and will help us focus on basic needs like food, medicine, and housing (Sneed 2020).

On April 15, the Baltimore Right to Water Coalition (2020b) delivered a second letter to the mayor, co-signed by 26 organizations, echoing the call of Councilwoman Sneed to provide water bill relief

and urging him to engage in a conversation with the city council about potential relief for Baltimore households.

ADDITIONAL STEPS TO PROTECT WATER ACCESS

A week after receiving the Coalition's second letter, the mayor announced additional protections for Baltimore households. On April 22, 2020, Mayor Young announced a new Emergency Covid-19 Discount, which extended existing water billing assistance to all water account holders who show proof of unemployment eligibility. This assistance, called BH2O Assists, reduced the water and sewer usage charges by 43 per cent and waived stormwater fees for a year (Department of Public Works 2020d).

The expanded assistance went into effect on May 8, 2020 and was scheduled to remain in effect through 90 days after the end of the state of the emergency, or December 31, 2020, whichever came first (Department of Public Works 2020d). The city also announced plans to make it easier to apply for its existing assistance program by launching an online application on May 8 (Department of Public Works 2020d).

Responding to the call of the Baltimore Right to Water Coalition, the city also announced a delay in a scheduled rate increase. Water bills were set to increase by roughly 10 per cent on July 1, 2020, but the mayor announced a three-month delay, pushing the effective date back to October 1, 2020 (Department of Public Works 2020g; Baltimore City Board of Estimates 2020).

SAFETY OF DRINKING WATER AND WORKPLACE PROTECTIONS

From March through June 2020, the Department of Public Works continued to assure residents about the safety of the city's drinking water. According to a March 19 announcement, the Department indicated that they had emergency plans in place to ensure high-quality water through the crisis, reassuring residents that the existing

filtration and disinfectant processes killed the coronavirus (Department of Public Works 2020a). The city emphasized the safety of the drinking water again in a frequently asked questions document released on March 25 (Department of Public Works 2020c). In June 2020, the city released its annual water quality report that informed residents that the drinking water met or exceeded all state and federal regulations (Baltimore City 2020).

With regard to workplace protections, in March 2020, following the advice from the US Occupational Safety and Health Administration and the Center for Disease Control, the Baltimore City Department of Public Works said that it provided personal protective equipment to all workers, encouraged good handwashing and reduced the number of staff working at the water treatment plants to help with social distancing. The department moved the additional workforce reserve to ensure sufficient staffing of the critical functions in the event of an outbreak (Department of Public Works 2020c).

Effective March 23, 2020, to protect the health of the public and its workers, the acting director of the Department of Public Works ordered all staff to work remotely and suspended in-person customer service, moving all payments to online and mail. It closed public access to the customer support and services walk-in centre, and suspended all water maintenance, construction and engineering projects except emergency and essential work (Department of Public Works 2020b).

The transition to telework was not without its problems. The city had to create a new process to bill customers and provide customer service remotely, which took several weeks to establish. As a result, water bills were delayed for part of March and all of April 2020. When billing resumed in May 2020, the water bills were larger than typical because they covered several months (Department of Public Works 2020d). In addition, many households likely saw increased water usage at home because of the state of Maryland's stay-at-home order. Because of the billing delay, the city mailed a

postcard to all city water customers to announce when water bills would resume and provide information that assistance is available (Department of Public Works 2020f).

Notably, in June 2020, although the water system workforce was unaffected, a serious outbreak of Covid-19 affected the Department of Public Works' workers at a recycling centre in the city. Fifteen sanitation workers tested positive, causing the city to suspend recycling for three weeks (Wenger 2020).

LONG-TERM SAFEGUARDS

“Clean and affordable water should have never been an issue for any Baltimorean. Period,” said Baltimore City Council President Brandon Scott at a city council hearing on April 30, 2020. “That is why the city council fought so hard, hand-in-hand, side-by-side, with the community, to get this piece of legislation passed. We know that we must do better” (Baltimore City Council 2020).

During the pandemic, the Baltimore Right to Water Coalition continued to call on the Department of Public Works to fully and promptly implement the Water Accountability and Equity Act, groundbreaking legislation which offered comprehensive solutions to the city's longstanding water billing and affordability problems, but needed to be put into action. The act had passed unanimously through the city council on November 18, 2019, and had been signed into law by Mayor Jack Young on January 13, 2020.

The Water Accountability and Equity Act had two key features:

1. The Water-for-All Affordability Program, which provides credits to cap water bills of low-income households at a level they can afford to pay based on their income on a sliding scale of 1 per cent of income to 3 per cent based on the federal poverty line.
2. The Office of Water-Customer Advocacy and Appeals, which provides a fair, neutral and accountable process for all customers to resolve their water billing problems.

Once put into action, the legislation would build on the Department of Public Works' existing assistance program by expanding coverage and credits to ensure that water service is affordable for all low-income households, and that credits matched the need of the household, making it a progressive model that dedicates larger credits to households most in need.

It will also provide a pathway out of water debt for low-income households. During this period of economic devastation, with record-breaking unemployment, many households will struggle to pay their bills even with assistance. And although the Department of Public Works has taken the progressive stance of suspending late fees and shutoffs, some customers are still falling into potentially crushing water debt. The department therefore also offers installment plans that allow households to repay their late bills over six to 12 months, depending on the size of the down payment (Department of Public Works 2020h). These repayment plans, however, can be a sizable burden for customers already struggling to pay their regular monthly bills. The Water Accountability and Equity Act addresses this issue by creating a pathway for households to resolve their existing water debt. When enrolled in the program, water debts will be deferred, so households will not have to make additional payments to repay the debt, and each on-time payment of their water bill will count toward repayment of their existing debt.

The new program will also provide support to far larger numbers of residents. The Department of Public Works' BH2O Assists program fails to reach a majority of city residents – that is, those who rent their accommodation. The existing program requires landlords to add tenants to the water account, which has been a significant barrier to assistance for many renters in the city (Shah 2020). The Coalition therefore continued to call for prompt implementation of the Water Accountability and Equity Act to address these outstanding problems and ensure that renters receive equal access to protections and assistance: “Even in this pandemic crisis, DPW [the Department of Public Works] has not lowered the hurdles

for renters,” said Zafar Shah of the Public Justice Center during a city council committee hearing on April 30, 2020.

The new emergency provisions for the BH2O was announced last week and all the language in DPW’s outreach and press for this emergency discount is about account holders.... Renters make up over half of households in Baltimore City and African Americans make up nearly two-thirds of those renter households, so let’s be forthright about who among us is going to be continued to be treated as second class when DPW doesn’t meet the July 13 deadline [to implement the Water Accountability and Equity Act] (Shah 2020).

The Water Accountability and Equity Act provides a clear legal process for tenants to receive assistance from the affordability program and to dispute their bills with the customer advocate’s office. It has forward-thinking protections, which proactively ensure that water bills will remain affordable for all households based on their income into the future, regardless of the expected annual rate increases. It will ensure that households across the city have access to affordable and accountable water service for generations.

“This law is designed to turn this agency around. It requires affordable rates, new ways to solve high-bill problems, a people’s advocate, and a public process for reforming DPW [the Department of Public Works],” said Jaime Lee, Associate Professor at the University of Baltimore School of Law and Director of its Community Development Clinic in January 2020 when the bill was signed into law. “Now, we need strong new leadership at DPW to robustly implement the law and to rebuild public trust” (Food & Water Watch 2020b).

KICKING THE CAN DOWN THE ROAD

The legislation gave the Department of Public Works and the mayor’s administration six months for full implementation – drafting

rules and regulations by April 13 and implementing the program fully by July 13 – but they failed to meet both deadlines, citing the pandemic as the cause. By the end of July 2020 (at the time of writing this paper), the Department had not even produced the draft rules and regulations. It did however release drafts for the customer advocate’s office on May 4 (Department of Public Works 2020e).

Following an implementation oversight hearing in April 2020, the acting director of the department sent a letter to the city council formally requesting a delay and change in implementing the bill (Garbark 2020). On June 22, 2020, the mayor’s administration filed an ordinance seeking to delay the bill by nearly a year. On July 9, 2020, Mayor Young signed an executive order to officially delay the implementation of the bill until 30 days after the end of the Maryland Covid-19 state of emergency, invoking emergency powers granted by the state governor (Young 2020).

“A decision to completely kick the can down the road is immoral and unnecessary,” said Molly Amster, Baltimore Director for Jews United for Justice, in response to this decision. “Many of the law’s requirements can and should be implemented right now. Baltimoreans need action from our Mayor and DPW [Department of Public Works] to have affordable and just water access during this pandemic – immediate implementation where possible and diligent work toward full implementation” (Food & Water Watch 2020c).

CONCLUSION

The Baltimore Right to Water Coalition recognized that proper implementation of the legislation was more crucial than ever because of the financial hardship of the pandemic. They continued to work with the Baltimore City Council on a timeline to implement the legislation so that the new programs will be strong and effective at meeting the needs of residents in the city.

Baltimore is not alone in facing a water affordability crisis. Across the United States, water bills are rising beyond what house-

holds can afford to pay. Other cities should meet this challenge by adopting the Baltimore model of water justice:

1. Ban water privatization
2. Stop the punitive collection measures of water shutoffs and tax sales of homes over unpaid water bills
3. Set up lasting protections through a comprehensive water affordability program with percentage-of-income payment plans and debt forgiveness, and through an independent customer advocate's office.

American towns and cities have the means to act quickly to address the needs of their residents, but the scale and scope of the water crises in the United States require nothing short of federal action. The United States Congress should act to address the dual threats of the nation's water affordability crises and the Covid-19 pandemic through relief legislation that centres on the needs of people. This relief bill should require a national water shutoff moratorium with restoration for all during the pandemic and for 180 days following its end, and it should provide financial help to publicly owned water providers and local and state governments.

For long-term economic stimulus and water security, the US Congress should pass the Water Affordability, Transparency, Equity and Reliability Act (HR 1417, S 611), which would create a \$35 billion-a-year water trust fund to fully fund publicly run water and wastewater systems across the country. It would help systems improve water quality, stop sewage spills, remove lead pipes from homes and schools, expand support for indigenous communities, remove toxic PFAS chemicals and create up to one million jobs across the economy.

Baltimore provides a beacon of hope. The city "is shattering antiquated water billing inequities, setting a new benchmark for billing fairness and government accountability, and rising up as a water justice champion in this country," said Rianna Eckel, Senior Organizer with Food & Water Action and convener of the Baltimore Right to Water Coalition, on January 13, 2020 when the Water Ac-

countability and Equity Act was signed into law. “Baltimoreans can now rest easy knowing they will be able to afford to turn on the tap, but the rest of America is still far behind. We need federal action to make sure the rest of the country catches up to Baltimore and all Americans have access to safe, clean, and affordable public water.” As tragic as it is, Covid-19 might be the stimulus needed to generate such a national campaign.

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Chapter 8

Daniel Chavez
Pablo Messina
Martín Sanguinetti

COVID-19, WATER AND THE STATE IN URUGUAY: DARK CLOUDS OVER A SUCCESSFUL MODEL OF PUBLIC SERVICES DELIVERY

Uruguay seems to be an outlier in one of the world regions most affected by the pandemic, as it has (up to October 2020) contained the expansion of the coronavirus much better than other Latin American nations. The country's strong and long tradition of state-owned enterprises, a robust health care system and universal access to basic services are key factors in its success. Nevertheless, the rise to power of a right-wing and market-oriented coalition has generated dark clouds over the national utility responsible for water and sanitation, *Obras Sanitarias del Estado* (OSE), and other state-owned companies.

This chapter analyzes the objective reasons behind Uruguay's success against Covid-19 and the recent evolution of public services delivery, focusing on the expected impacts and prospects of a set of legislative and managerial initiatives launched by the government during the pandemic.

INTRODUCTION

At the time of writing this chapter, the Covid-19 pandemic continues to spread around the world. While the so-called second wave is generating a new series of confinements in several European countries, Latin America is becoming the most affected region, with more than eight million confirmed infections and almost half of all deaths worldwide. Unlike most Latin American countries, the spread of the virus in Uruguay has been slow, hospital capacity has not been over-stretched and there has been enough time to improve the responsiveness of the health system in the event of a future spike in infections.

Against this backdrop, Uruguay has generated interest from influential journalists and scientists who highlight the country's supposed "victory" in the fight against Covid-19 (*BBC News* 2020, *The Economist* 2020, Taylor 2020). From the perspective of one US researcher, the country's positive results are the product of its "well-organized and efficient public health system and Uruguayans' strong faith in government" (Spires 2020). At the end of September, a correspondent for *The Guardian* alleged that thousands of Argentines have "flocked" to Uruguay in the midst of a pandemic (Goñi 2020), noting that "[o]nce known as 'the Switzerland of South America' because of its high quality of life and its former banking secrecy laws, Uruguay has now become its New Zealand."

Another commentator (Pribble 2020) similarly argued that Uruguay's success can be explained by the fact that its citizens "have good reason to trust the system," considering the existence of an "expansive welfare state [that] provides near-universal access to pensions, child care, health care, education and income support for the poor." Crucially, and in contrast to places such as the United States of America where the disease has run rampant, "[p]olitical trust and support for democracy encourage people to follow public health recommendations, and a strong welfare state provides in-

come support and reliable health care to help slow infection.”

In this chapter, we argue that these positive results observed in the initial months of the pandemic are the legacy of Uruguay’s history of strong state-owned enterprises that deliver essential services and help to define the politics, culture and economy of the country, a legacy that is now under threat. In contrast to many other countries featured in this collection, *Obras Sanitarias del Estado* (OSE) – a solidly established state-owned company with nationwide coverage – guaranteed access to essential water and sanitation services during the health crisis. However, the rise of a coalition of conservative parties with a neoliberal orientation that assumed government on March 1, 2020, has generated multiple dark clouds that threaten the universal provision of public services. This threat raises questions about Uruguay’s ability to stem the advance of the coronavirus and other potential health crises in the future.

SUPPOSED URUGUAYAN EXCEPTIONALISM

Uruguay’s apparent exceptionality in relation to its neighbours becomes even more evident when we consider that Uruguay borders two of the most affected countries: Brazil to the north and east – with 5,082,637 confirmed cases and 150,198 deaths – and Argentina to the west – with 883,882 infections and 23,581 deaths. With Uruguay’s population of 3.5 million, as of October 12, 2020 there were 2,268 cases and 50 deaths. At the same time, Panama, another Latin American country with a similar population (4 million) has accumulated over 119,666 cases and 2,482 deaths in the same period.¹

The first case of Covid-19 in Uruguay was recorded on March 13, 2020, in the country’s capital, Montevideo. With support (or at least without opposition) from all political parties, the government decreed the cancellation of public events and the closure of bars,

¹ All these figures have been taken from the World Health Organization (WHO), with data updated daily: <<https://covid19.who.int>>.

churches, shopping centres, stadiums, theatres, concert halls and other crowded spaces. Classes in schools, high schools and universities were also suspended, and border controls with neighbouring countries were tightened. However, unlike other countries in the region, Uruguay never reached the level of total or compulsory lockdown. Classes have gradually been restarted at all levels of the education system, and from April onwards, the state authorized the gradual reopening of businesses and public service activities. In the context of the transition to the so-called *nueva normalidad* (new normal), both the government and the most representative institutions of civil society (in particular the trade unions and cooperatives) have promoted the use of masks, respect for physical distancing and voluntary isolation of people with the greatest health risks as forms of protection for the most vulnerable sectors. These measures are particularly important considering that Uruguay has the largest proportion of people over age 60 of any country in Latin America.

Quoting a state official, *The Guardian* suggests the following list of reasons as factors that explain Uruguay's achievements:

Why we're so successful against the pandemic? Because the government called in the scientists and respected their advice. People saw that and in turn respected the government's recommendations to wear masks and socially distance without it ever having to be mandated. We have a solid democracy with economic rules that don't change with every new president, unrestricted press freedom, no corruption, a government-run fast internet across the whole country, powered by 100% renewable energy, a solid public health system, transparency, respect for the institutions and a strong respect for science (cited in Goñi 2020).

This particular relationship between society and the state is the legacy of more than a hundred years of state-led development. At

the turn of the twentieth century, during the mandates of President José Batlle y Ordoñez – a social democrat who feared the growing social and political conflict in the country and in the world, and who governed between 1903 and 1907 and from 1911 to 1915 – Uruguay approved several social-legislative reforms including unemployment insurance, paid maternity leave, divorce at the wife’s request and the eight-hour workday. In the following decades, the working class also won a system of collective bargaining that enabled negotiation between trade unions, employers and the state to set wages and working conditions.² After a long process of economic, political and social regression in the post-war era, which culminated in a military dictatorship between 1973 and 1985 and a subsequent process of democratic reconstruction marked by social conflicts, the left-wing *Frente Amplio* (Broad Front) coalition was victorious in the presidential and legislative elections of November 2004 and took office in March 2005, ushering in the so-called *era progresista* (progressive era) (Garcé and Yaffé 2014).

Over a period of 15 years (2005-2020), during the Broad Front governments led by Tabaré Vázquez and José Mujica, labour rights and the tripartite negotiation framework that had been weakened in the previous decade were revitalized, with improvements in economic indicators, employment rates and working conditions, in parallel with the recognition of new social rights. The government also aimed to modernize and strengthen state enterprises and other public bodies that in previous decades had underpinned the development of the very particular Uruguayan model of the welfare state (Chavez and Torres 2013).

However, the “progressive era” ended on November 24, 2019, when Luis Lacalle Pou Herrera, the candidate of an alliance of right-wing parties known as the *coalición multicolor* (multicoloured coa-

² For a more detailed explanation of Uruguay’s historical evolution as a country characterized by an enduring influence of the state on the economic and social order, see Caetano 2019.

lition) won the second round of the presidential elections.³ Barely six months after assuming office on March 1, 2020, this right-wing coalition has already generated multiple dark clouds that seriously threaten the primacy of the state and the continuity of the Uruguayan model of public service provision.

STATE COMPANIES AND THE URUGUAYAN PUBLIC SYSTEM

One of the main components of Uruguay's strategy to deal with the pandemic has been its high capacity for early detection, surveillance and tracing. According to data from the first week of October 2020, 117 tests are carried out in Uruguay for every confirmed case of Covid-19, well above its neighbours in the Southern Cone: just 1.5 in Argentina and 19.7 in Chile.⁴ These figures would not have been possible without the pre-existence of objective conditions: the strong role of the state in general and of public enterprises in particular. As two Uruguayan commentators summarize:

At a structural level, the country has historically been characterized by the presence of a strong state. It has good pub-

³ The “multicoloured coalition” is made up of the two historic traditional political groupings – the National Party and the Colorado Party – in alliance with the minority Independent Party and *Cabildo Abierto* (Open Assembly), a new party led by a former army commander that includes neo-fascist and other far-right components. The Broad Front, founded in 1971 and historically self-defined as a “democratic, popular, anti-oligarchic and anti-imperialist political force,” is also technically a coalition – made up of more than 15 parties and an ideological spectrum that comprises communists, social democrats, various expressions of the radical left, and progressive liberals and Christian democrats – but in practice it functions as a unified party, with a common programme for all the national and local elections it has contested since its foundation.

⁴ Data updated on a daily basis by the *Our World In Data* portal based on official sources: <<https://ourworldindata.org/coronavirus-testing#tests-per-confirmed-case>>. In the case of Uruguay, the scientific and technological capacity developed within the State has been fundamental, since the laboratories of the University of the Republic and other public bodies were responsible for processing 67% of the tests, with data updated to August 12, 2020 (Ubal and Demirdjian 2020).

lic health coverage compared to the rest of the region. It has sanitation networks that reach the majority of its inhabitants, and almost universal access to drinking water. Since 2007, the country has had an integrated public-private health system created during the first government of the left-wing Broad Front coalition, which guarantees care for the population regardless of income. Another structural strength is the existence of a public university – the UdelaR [University of the Republic], which serves 86 percent of the country’s university enrolment – and scientific institutions that put their developments at the service of society, and which ensured the availability of diagnostic tests already in the first months of the pandemic (Ubal and Demirdjian 2020).

This existence of a solid network of state institutions has meant that even before the start of the pandemic, Uruguay was already one of the few countries in Latin America – together with Cuba, Costa Rica and Colombia – that had reached the level of universal health coverage recommended by the World Health Organization, which means that “all people and communities can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship” (WHO 2020). The current model of healthcare was created between 2005 and 2009, with the introduction of an Integrated National Health System (SNIS), followed by the creation of the Integrated Health Care Plan (PIAS) and the introduction a financing structure through the National Health Fund (FONASA). The Uruguayan model is not perfect and has generated criticism from the left (which argues for a fully state-run system) and the right (which has criticized the supposedly excessive role of the state in the current system). Despite these criticisms, it has been able to successfully address the immense challenges posed by the pandemic (Ferreira Maia 2020).

Many years before Uruguay made headlines in the international media for its successful response to the pandemic, the country had already become a reference for researchers and social activists around the world interested in resistance to the privatization of public services. In 1992, the Uruguayan citizenry revoked a law enabling the privatization of the country's main public companies by popular referendum. In 2004, another popular consultation approved a constitutional reform that established water as a human right and prohibited its privatization, promoted by the water workers' union (the Federation of OSE Employees, FFOSE), together with other unions and popular organizations in the country that formed the National Commission in Defence of Water and Life (CNDAV) (see Santos et al. 2006).

In the period following the plebiscite, social organizations focused their struggle on ensuring compliance with the 2004 popular mandate that recognized the state as the sole provider of water and sanitation services, the design and implementation of other laws related to the water sector and the protection of water basins.⁵ In recent years, the social movements have focused their actions on the repeal of a recent law on agricultural irrigation (Law 19,553), approved in 2018, which FFOSE and CNDAV believe violates the 2004 popular mandate.⁶

The services provided by OSE as a national public water and sanitation company have enabled Uruguay to boast very high coverage rates. Safe and practically uninterrupted drinking water service coverage reaches 96% of the population.⁷ Access to water from

⁵ Law No. 18,610, approved in 2009, establishes the general framework in which water management should be developed, regulating among other things the creation of a national water information system and the right to effective participation of civil society in the formulation, implementation and evaluation of water policies.

⁶ Law No. 19,553 provides greater incentives for water reservoirs to be used for monoculture agribusiness, in addition to those already in use for rice production.

⁷ As other researchers have observed, "Uruguay is one of the few countries in Latin America where citizens turn on the tap, fill their glass with water and drink it without having to think twice" (Spronk et al. 2014). In recent years, however, several

different sources covers 99.4% of the population, 95.2% of which obtain their services from OSE (OPP 2018). According to official data, basic sanitation coverage reaches 99.2% of the population, including 43% with access to safe sanitation (MVOTMA and SNAACC 2019). OSE is responsible for the sanitation of the entire country except for the capital, Montevideo, where the service is provided by the Departmental Government of Montevideo.

OSE'S BUDGET AND TARIFF STRUCTURE

From the creation of the company in 1952 until the early 1990s, water and sanitation services ran a deficit, and the negative balance was financed by transfers from general revenues. Nevertheless, unlike the other companies analyzed in this book, which are local or regional in scope, OSE operates at the national level. Due to the fact that OSE is a national utility, it can finance unprofitable services by cross-subsidizing operations and investments and adjusting tariffs at the national level.

The southern region, which includes the urban localities of the metropolitan area in the departments of Montevideo, Canelones, San José and Maldonado, where more than 70% of the population resides, generates operating income above its costs, which allows OSE to finance other areas of the country with lower population density. OSE has also established a tariff structure that allows for the cross-subsidization of households at different income levels, and between the industrial and commercial sectors and the residential sector.

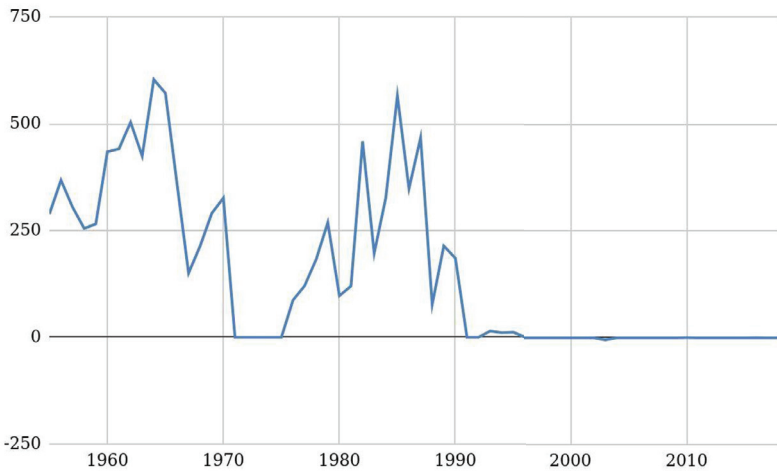
OSE has been praised for having a balanced budget. A recent report published by the Inter-American Development Bank (IDB) concludes that “with respect to the operation and maintenance

studies have highlighted the deterioration of water quality, which is evident in the excessive levels of phosphorous and nitrogen detected in the basins. The increasing risk of eutrophication would be directly related to intensive land use aggravated by agribusiness and monocultures (Kruk et al. 2015, Brazeiro et al. 2020).

(O&M) costs of the water and sanitation sector, operating revenues are sufficient to cover them, as well as the servicing of its debts.” The same report add that “OSE is developing a process to improve the quality of its services and is in a position to support the leverage of the investments required to maintain potable water coverage, and to guarantee the collection and treatment of wastewater in the medium and long term in the interior of the country” (Maroñas et al. 2020).

Figure 8.1

OSE transfers from or to general revenues (in millions of 2010 pesos)



Source: Comuna (2020a), en base a datos oficiales.

While popular resistance prevented the auctioning off of state-owned companies from the Uruguayan state to the private sector in the 1990s, the government still implemented significant pro-market reforms in the water and sanitation sector. So-called *realismo tarifario* (tariff realism) was introduced in the early 1990s in OSE, modifying the level and structure of tariffs (Bertino et al. 2012). Under “tariff realism” OSE must cover all of its operating costs and investments in water and sanitation services, which also implies that

these costs should be passed onto users who should pay for the full costs of water and sanitation services.

Recent comparative studies have observed that water and sanitation rates are higher in Uruguay than in other countries in the region (Lentini 2015, Brichetti 2019). From this perspective, it could be concluded that OSE is “inefficient.” This narrow assessment, however, ignores a number of factors that must be considered to make such comparisons meaningful. In the words of a team of Uruguayan researchers:

Many water providers do not incorporate investments into their costs, as these are either entirely absorbed or subsidized by the state, which is not the case at OSE. On the other hand, service quality and coverage are also important in the comparison. OSE has a service with very adequate continuity, both in terms of the quantity and time of service and its quality. In turn, it reaches the entire population, despite the fact that when the service is extended to less densely populated and dispersed locations the average costs increase. Therefore, it is good to think about improving water production and distribution processes, but we must be careful when comparing international tariff levels (Comuna 2020, 29).

There are a number of additional considerations to bear in mind when considering OSE’s financial performance. First, OSE’s services have expanded and improved significantly since its inception. In 1952, Uruguay had around 2,500 kilometres of drinking water networks; by 2018 the national network had extended to over 16,000 kilometres, reaching the remotest parts of the country. In addition, the sanitation networks in the country’s cities and towns beyond the metropolitan area has expanded from 713 kilometres in 1952 to a total of 3,910 kilometres in 2018 (MVOTMA and SNAACC 2019).

Second, the weight of the wage bill in OSE’s budget has varied over time depending on the technology available, the conception

of public enterprises by different governments and the investments required to expand the service and cover the growing demand. Over the last three decades, however, the weight of salaries and social security contributions has decreased dramatically, dropping from 70% of costs in 1985 to less than 29% in 2018 (Comuna 2020a).

Third, since 2008, the costs of inputs for the treatment of drinking water, the expansion of the sanitation network and the costs of treating effluents have also increased. The sharpest cost increase can be seen between 2012 and 2015, when OSE began using activated carbon in order to clean up the country's waterways. Despite these increased input costs, in the five years prior to the pandemic (2015-2020), the overall operating budget remained stagnant, mainly as a result of staff reductions. These cost savings have been achieved by the hiring of *personal tercerizado* (temporary and contracted labour), that is, by the outsourcing of services, which rose from 725 million pesos (constant) in 2015 to 1,015 million in 2018 (OSE 2018).

In terms of its overall budget performance, between 2002 and 2010, operating revenues were higher than costs, which made it possible to pay for a good part of new investment with current revenues. Since 2012, however, revenues have not been sufficient to cover costs and OSE's investments have been financed with debt. These financial decisions have a long-term impact, as users are now paying for investments made with loans in previous years through tariffs.

An analysis of OSE's budgetary performance leads to the conclusion that although OSE recorded the highest levels of investment in the company's history in the past decade, additional investments are still necessary. In a report for the IDB, Maroñas et al. (2020) estimate that OSE would need to make an additional investment of around two billion dollars to reach its goal of universal coverage for sanitation and drinking water.

The regulatory body has estimated that the average water consumption of a typical Uruguayan family (three or four people) ranges from 10 to 20 m³ per month (URSEA 2018). The establishment

of a pricing structure that considers these volumes of water at an affordable price in order to achieve universality implies the consideration of a series of factors that are likely to be affected both by the economic crisis associated with the pandemic and by the new criteria for public policy defined by the new government.

A recent study (Comuna 2020a) shows that water rates have risen worryingly in recent years.⁸ The signal is that intensive land use will continue to increase with consequent higher costs on water treatment. If plans to continue improving and expanding sanitation are fulfilled, operating and investment financing costs will also increase.⁸ The Comuna's analysis also suggests with respect to the residential tariff structure, that there is a negative cross-subsidy between households considering their income level. This diagnosis, together with the very important changes that the new government left for public companies, presents possible dangers for water and other public services.

Currently, there is a *tarifa social* (social tariff) for residential consumption by the vulnerable population, which fluctuates between total exemption from water and sanitation service charges to tariff discounts (OSE 2020a). The bill discounts in force since April 2020 cover the following population groups:

1. Beneficiaries of social programmes of the Ministry of Social Development (MIDES) and households living in informal settlements that are considered to be in a situation of socio-economic vulnerability according to criteria established by the Ministry of Housing;
2. Retirees or pensioners with incomes not exceeding the lower amount of the Social Security Bank's retirement or pension scale;
3. Shelters authorized by the Ministry of Social Development;

⁸ Tariffs for sanitation entail both a fixed and variable cost. The latter depends on the water payment, which from 2015 became 100% of that value. Therefore, increases in the variable water payment have a direct impact on the costs of sanitation.

4. Households with individual meters in rural areas with participatory water management by the community;
5. Rural households with water service provided by public taps with general meters in localities with participatory water management.

As the beneficiary population is small in size and the benefit does not exceed 15m³ per household, it has little impact on OSE's budget, as Table 8.1 shows. The total social benefits are equivalent to 2.4% of the company's operating income, according to calculations based on the company's 2020 annual budget.

Social Plan	Estimated amount for the 2020 budget (US\$)	Impact on OSE's income (% of budget)
MIDES Relief Plan	5,327,405	1.23
Informal settlements	5,009,810	1.16
Retirees and pensioners	129,013	0.03
Shelters	27,368	0.01
Other social bonuses	58,138	0.02
<i>Total</i>	<i>10,551,735</i>	<i>2.44</i>

Source: Source: Own elaboration based on OSE budget information systematised by Comuna (2020a)

From 2005 onwards (with the left in government), prices for the lowest residential water consumption brackets became substantially cheaper, while the highest consumption brackets increased, and fixed costs fell in line with average tariffs. However, in January 2016, OSE added a surcharge on the fixed charge to residential users who exceeded 15m³ in their average water consumption. A year later, in January 2017, the company began charging the so-called *tarifa ambiental* (environmental tariff), reflecting the increased investments and operating costs associated with the deteriorating quality of raw water. In addition, since 2011, Law 18,840 has made it compulsory to connect to the sanitation network when available.

The changes in the tariff calculation that have been in effect

since 2016 mean that the company charges an extra fee to those households that have an average of more than 15m³ of water per month, affecting a fifth of the poorest households in the country (Comuna 2020a). On the other hand, the company charges for the entire price of the surplus block when consumption exceeds 15m³, thus also affecting the poorest households. Furthermore, despite water being an essential good for life, it is not exempt from value added tax (VAT). At the same time, the increase in the fixed costs of water treatment and its reflection in the tariff is also retrograde in terms of social justice: it affects all the users, but with a greater impact on the poorest households than on the richest in proportion to household income.

The worsening of the economic crisis due to the pandemic could even mean that OSE's tariff system becomes a barrier to accessing water and sanitation. Although at present the payment for these services does not have a very significant impact on the budget of low-income households, the growing trend towards the commercialization of OSE and of all state-owned companies could include the elimination of the social tariff and an increase in service charges as a way to achieve full cost recovery, in accordance with the new government's approach to managing public enterprises to be analyzed in more detail in the following sections of this chapter.

Unlike many other governments, the Uruguayan authorities never ordered a strict lockdown at the beginning of the pandemic. However, a significant part of the population was confined to their homes, and subsequently retail commerce and demand was severely diminished. Lower economic activity also reduced demand for public services and affected the finances of OSE and other state-owned enterprises. At the beginning of the pandemic, in April 2020, seven of the largest state-owned companies (including the water utility) reported losses for a total equivalent to US\$45.5 million (Búsqueda 2020a). In the following months, however, public enterprises demonstrated their economic resilience. By the end of the first half of the year, the accounts of most of the state-owned com-

panies had already recovered or did not reveal very serious impacts: three companies (in the areas of telecommunications, electric power and oil refining and distribution) reported surpluses, and three (in the areas of water and sanitation, port administration and rail transport) declared losses; added together, however, they generated profits of nearly US\$200 million for the January-June period, almost twice as much (US\$107 million) as in the same period of the previous year. OSE, in particular, which had made almost US\$7 million in “profits” in the first half of 2019, reported losses of less than US\$4 million in the first half of the pandemic (*Búsqueda* 2020b).

The arrival of the coronavirus to the country coincided with a 10% increase in tariffs that was already planned for April, affecting the price of water, electricity and telecommunications services. Pressed by the social and political opposition, the OSE board that the new government had recently appointed offered postponements and additional payment flexibility for its customers as *medidas de emergencia* (emergency relief measures) to mitigate the economic and social impacts of the pandemic (OSE 2020b).

DARK CLOUDS OVER URUGUAY’S PUBLIC ENTERPRISES

Despite the fact that Uruguay has been in the news worldwide as a successful case of containing the pandemic, the medium- and long-term future is very uncertain. Uruguay will probably be less affected by the international post-pandemic economic crisis than other countries in the region, but the economic outlook is still very worrying. Tourism, which generates substantial income for the country during the summer (November to March), is expected to suffer a serious fall as a result of the closure of borders.

The rise to government in March 2020 of a coalition openly in favour of the commercialization of public services and the dismantling of the state apparatus as a whole – with demands for severe cuts in the budget of public companies – and the worsening of the economic crisis, are generating much concern in the trade unions

movement and other social movements (see Messina 2020). The recent approval of Law No. 19,889, the *Ley de Urgente Consideración* (Law of Urgent Consideration, popularly known as LUC), provides that water rates will no longer be established by OSE, but by the regulatory agency (URSEA). This change mandates URSEA to update tariffs taking into account costs as the main criterion, a clear regression to the “tariff realism” approach. The LUC also establishes that the calculation of tariffs may not contain social considerations, and therefore the continuity of social tariffs, which although currently low and benefiting a small part of the population, may be cancelled altogether.

In this way, OSE and all state companies would return to the path of “tariff realism” that had lost intensity during the progressive governments of the Broad Front, and this trend can be expected to worsen as the economic crisis deepens and the accounts of the Uruguayan government deteriorate. The official assessment of the Gross Domestic Product (GDP) for the April-June period released at the end of September by the Central Bank (BCU) warned of a violent contraction in the level of economic activity associated with the health emergency, with a drop of more than 10% in the volume of goods and services produced in the country in the second quarter, compared to the same period in 2019 (*Búsqueda* 2020c), with a parallel intensification of social inequalities.

In a context of crisis, preserving or deepening social justice in access to water and other public services does not seem to be the new government’s priority. At the time of writing, the Executive is sending Parliament the five-year national budget 2020-2024, which according to government spokespersons is “*un presupuesto de guerra*” (“a wartime budget”) focused on defending the country’s investment grade, which the risk rating agencies have maintained before and during the pandemic with the warning that they could remove it if the government does not implement a drastic fiscal consolidation plan (*UyPress* 2020).

The budget law reaffirms the same approach to public enter-

prises that had already been announced in late April and early May 2020, when the government presented new guidelines for the management of state-owned companies. The new criteria determining the budgetary administration of public enterprises are structured around indications for macroeconomic adjustments of a rather generic nature, without consideration of the specific reality of each company, thus making it clear that the aim is to collect as much revenue as possible to improve the macroeconomic accounts of the government and not to improve the economic or social efficiency of the water, energy and telecommunications utilities.

The government's new political orientation can be interpreted as a concerted offensive tactic to dismantle the network of state entities – from the public University of the Republic to the public health system and the national system of public enterprises – that international observers have identified as the main reason for the successful containment of the pandemic in Uruguay.

In particular, the new corporate governance approach affects the operational capacity of OSE and other state-owned companies by requiring a reduction in the number of budgeted staff and the elimination of current and future vacancies – allowing only one out of every three vacancies to be filled with new hires. In ageing workforces, as is the case with OSE and other public enterprises, this requirement means a drastic contraction of the number of workers. It also affects the hiring of outsourced staff, denying the option of automatic renewal of contracts and requiring a sharp reduction in the current number of contracted-out jobs (Comuna 2020b).

The draft sent to Parliament contains several articles that would have a serious impact on OSE and other public enterprises. In particular, Article 682 states that public enterprises “shall formulate their budgets in such a way as to meet minimum standards of return on their assets” (MEF 2020, 289). The same article states that the technical criteria for meeting this requirement must consider global indicators of the profitability of other companies active in the same field at the international level, in addition to requiring

that the economic return of public companies should “in no case be less than the average cost of the state’s public debt” (ibid.). Finally, the article adds that for the purpose of calculating the rate of return on equity, the methodology to be applied will take into account as income “tariff subsidies” derived “from laws, decrees and other regulatory provisions,” while excluding “subsidies received from general revenues or affected revenues and, if any, surcharges charged on their tariffs as a result of their operation in monopolistic markets” (ibid. 290).

The concept guiding the budget bill is regressive for several reasons. According to the assessment made by a team of Uruguayan economists

Firstly, it establishes as a fixed and immutable criterion the idea that public enterprises must have a positive rate of return. While this may be desirable in the long term, it has the constraint of reinforcing the commercial nature of SOEs by minimizing their potential as drivers of social and economic development. In this sense, the proposed mechanism strengthens the search for short-term profitability, thus inhibiting investment policies aimed at universalizing services or making long-term leaps in productivity. (Comuna 2020b, 5)

With this logic, Uruguay would not have reached a level of nearly universal access if OSE had had to apply this rule for the provision of water. Furthermore, the application of this approach contradicts the principle established in Article 47 of the Constitution of the Republic, which states that “the provision of potable water and sanitation services must be done by putting social reasons before economic ones” (IMPO n.d.). At the same time, the methodology and technical criteria to be applied by the national government to determine the minimum standards for the profitability of public companies are not made explicit, reducing the transparency of management. The inclusion of subsidies granted by companies to facilitate

access to their services as part of revenues is also problematic, since although the proposal is conceptually correct in practice it is difficult to apply, with predictable theoretical and technical controversies regarding the “right price” and the nature of cross-subsidies or other types of subsidies that may exist.

The budget law responds to ideological prejudices evident in the mention of a *sobreprecio monopolico* (monopoly overprice), since in markets that enable economies of scale the monopoly price is not necessarily higher than if a more competitive regime were established. In the same vein, the requirement that the rate of return should be at least “the average cost of public debt” is also dangerous, since the cost of debt may increase or decrease for reasons totally unrelated to the management of public enterprises. If Uruguay were to suffer another bank run like the one in 2002, which shook the entire financial system, there would be a substantial increase in the cost of public debt. In the context of a global, regional and national economic crisis such as the one that might follow the pandemic, OSE and other public enterprises would be required to substantially increase their profitability. This logic is very much in contrast to what happened to state-owned companies in the 2002 crisis, which rather acted as “buffers” in the context of widespread economic crisis (Comuna 2020b).

In early October 2020, the PIT-CNT (*Plenario Intersindical de Trabajadores - Central Nacional de Trabajadores*: Labour Plenary - National Workers’ Congress) – one of the strongest and most influential trade union movements in Latin America, with a long tradition of unity and class independence – decided to support a popular campaign to collect signatures to call a referendum against the LUC. It is currently coordinating actions with other social and political organizations – in particular the Federation of University Students, the Uruguayan Federation of Housing Cooperatives for Mutual Aid, and the Broad Front – and diverse personalities representing civil society. The coordination of popular struggles is also extending to the resistance against the five-year budget bill.

In consideration of the need for articulated responses to the challenges of the post-pandemic, and seeking to develop longer-term perspectives for social and economic recovery, the trade union movement decided in July 2020 to organize a deliberative process in 2021 with a spirit and objectives similar to those of the *Congreso del Pueblo* (People's Congress) of 1965 – a national conference organized by the Uruguayan trade union movement to elaborate a popular programme aimed at reversing the country's serious social and economic crisis of that time.

For the People's Congress of 1965, labour and student unions, cooperatives, agrarian organizations and churches agreed a programme of urgent demands (better salaries and pensions and access to housing, health and education) and proposals for structural transformations – such as agrarian reform, industrial policies, nationalization of banks and foreign trade, reform of the tax system, and the protection and expansion of public enterprises (see Nahum et al. 1990). The proposal for 2021 has been conceived as “a great social encounter for solutions, bringing together the national and popular majorities to take up the programmatic and historical initiative,” the unions propose “to draw up a national project for the country and launch a democratic process based on the broadest participation of the working class for its effective realization” (PIT-CNT 2020). Within this framework, the survival and progressive reform of the public enterprises that deliver water, sanitation, energy, telecommunications and other essential services and which have contributed so much to containing the pandemic in Uruguay will surely be one of the central axes of the deliberative process.

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Chapter 9

Milo Fiasconaro
Jovana Gojkovic

TRANSNATIONAL SOLIDARITY: EUROPEAN PUBLIC WATER OPERATORS WORKING ACROSS BORDERS TO ADDRESS COVID-19

When the Covid-19 pandemic broke out in Europe between the end of February and early March 2020, lockdown measures were adopted hurriedly and water utilities experienced a high level of pressure to ensure the continuity of essential services despite significant disruptions.

This chapter provides an account of the initiatives taken by Aqua Publica Europea – an organization of more than 60 publicly owned water utilities from 14 European countries – to support members. By facilitating the sharing of information and experience among peers, Aqua Publica Europea helped public utilities to quickly develop contingency plans. This was only made possible thanks to the generous contributions of staff at various utilities who gave their time despite a stressful context to help colleagues operating in areas not yet affected. Public ownership of water utilities proved fundamental in allowing for such transnational solidarity. Finally, the authors outline what public operators expect will be the long-term impact of the pandemic on the water sector.

INTRODUCTION

In Europe, the Covid-19 pandemic first broke out in Northern Italy on February 20, 2020. The initial reaction of the Italian government was to declare a lockdown in the affected towns (so-called “red zones”) and adopt milder restrictions in the surrounding areas. In the rest of the country, measures were limited to bans of large gatherings of people. Meanwhile, in other European countries, life (and business) continued almost as usual, with important public events ranging from football matches to national elections still taking place at the beginning of March.

Over the following weeks, the situation evolved rapidly. Italy adopted strict nationwide lockdown measures on March 8, followed by Spain on March 14, France on March 16, and a majority of other European countries soon thereafter. In parallel, external borders were closed and strict national border controls were re-established within the Schengen area (a zone encompassing 26 European countries with free circulation for goods and people) to only allow for essential supplies to transit.

This brief chronology of the outbreak in Europe shows that, despite the news coming from China and South-East Asia as early as mid-January, most European countries were not expecting such a quick spread of the coronavirus within their territories. Over a very short period, they moved from a state of normality to an unprecedented situation in which mobility and social life were restrained, many business relations were suspended or disrupted, and a certain number of socio-economic activities considered essential were hurriedly reorganised in order to ensure their continuity.

Water utilities were among the actors that experienced and managed a high level of pressure to ensure the continuity of an essential service while protecting their employees’ safety, in a context of heightened uncertainty and significant limitations to normal operability. In a matter of days (sometimes hours), water utilities had to

completely rethink the way they operate to adapt to the exceptional situation. They had to adopt new internal procedures and find ways to communicate with authorities, users and partners. Further, they had to respond to growing concerns about tap water safety in a context where scientific knowledge about the new virus and its behaviour were extremely limited.

Most operators effectively relied on their existing risk management protocols to develop contingency plans that allowed for a swift and orderly reorganization of operations, which avoided service interruptions. Nonetheless, given the absolute novelty of this emergency, some complications were difficult to predict, or simply out of a utility's control (e.g. sourcing of some essential supplies). Due to the lack of comparable past experience, managing this kind of crisis was uncharted territory for all operators. In this context, water utilities – and in particular public water utilities, which cannot rely on a multinational structure to learn what works or not elsewhere in the world as may big private companies – expressed a strong need to exchange and share information with their European peers.

In this paper we present the initiatives undertaken by Aqua Publica Europea (or Aqua Publica) to respond to this need for knowledge exchange and, based on this experience, we draw some lessons on the role that the public sector can play in ensuring collective well-being in times of crisis. In the following section, we describe the main activities carried out by Aqua Publica to organize the exchange of information on best practices to ensure service continuity during the Covid-19 emergency, as well as some initiatives taken jointly with other actors and institutions with the aim to contribute to a better coordination of the collective effort of tackling the impact of the pandemic. We then discuss how the action of Aqua Publica helped European public operators take better informed decisions regarding the management of the crisis, thus reducing the level of uncertainty. The association was able perform this task thanks to the generous contributions of utility staff who, despite the stressful situation they found themselves in, gave their time to share expe-

riences and information with colleagues operating in areas not yet affected by the pandemic to help them prepare. We argue that such transnational solidarity is key to strengthening the capacity of the public sector, which is fundamental to ensuring collective well-being. Finally, we examine the expected long-term impact of the pandemic on the role and mission of public water operators, outlining both challenges and opportunities.

AQUA PUBLICA'S SUPPORT FOR PUBLIC WATER UTILITIES

Aqua Publica is a not-for-profit organization that gathers 66 publicly owned water operators from 14 European countries that together provide water and sanitation services to over 80 million citizens. Aqua Publica was created in 2009 by a handful of utilities with two complementary objectives: promoting public water management and providing European public water operators with a platform to share and exchange best practices on concrete management problems.

The creation of Aqua Publica followed the successful re-municipalization of water services in Paris in 2009, as well as the initiatives of various movements that were disputing the model of private management that was still politically predominant in other parts of Europe at the time. In that context, there was a growing awareness that public forms of water provision could challenge private multinationals precisely in what was thought to be their strongest feature, namely the ability to organize services efficiently, thus ensuring affordable tariffs and providing universal access to a high-quality service. Consequently, the founders of Aqua Publica believed that public water management needed its own representation, as the choice between a public and private model was not grounded in technical or economic justifications but on essentially political motives. However, in order to overcome some structural asymmetries between public and private operators (specifically, the knowledge advantages that multinationals have based on their

scale), the founders believed that public operators needed to have their own forum to discuss technical solutions and learn from each other in ways that were not dependent on the know-how of private multinationals.

The intuition of the founders has proved right, as illustrated by the continued growth of the association. Members collectively strive to bring the voice and values of the public service into policy-making while also working to facilitate peer-to-peer learning processes. These initiatives include operator-led working groups on specific topics, its program for short-term international staff exchanges for young professionals employed by the utilities, and seminars on technical problems where members use their expertise to identify the best solutions (for more information see www.aquapublica.eu).

When it became clear at the beginning of March 2020 that the coronavirus was likely to spread all over Europe, operators started to ask their colleagues from areas already affected by the pandemic (mainly in Italy and Spain) for information about the impact of Covid-19 and lockdown measures. Aqua Publica was able to rely on its existing exchange platform to swiftly set up dedicated initiatives responding to needs of its members. More precisely, Aqua Publica developed a strategy revolving around two axes: internal – organizing the collection and sharing of information on measures and best practices on crisis management; and external – coordinating with other organizations to ensure consistency of policy responses at the European level and to source additional relevant information for members. These two levels of action will be described further in the following sections.

SHARING INFORMATION AND EXPERIENCE

Because public water operators were at the forefront of emergency response, they had to adopt effective measures extremely fast and adapt them as the situation evolved. Such urgency was particularly

intense in the areas of Southern Europe that were hit first by the pandemic, where the spread of the coronavirus was not fully anticipated – at least not with such speed. When strict lockdown measures were adopted first in Italy and then in Spain, operators from other European countries began to ask how their Mediterranean colleagues were responding to the multifaceted challenge of ensuring continuity of service while protecting the safety of employees in a context where social distancing rules and mobility limitations were hampering normal operations .

To respond to this knowledge gap, Aqua Publica Europea facilitated knowledge exchanges and experience sharing based on a three-fold approach:

- ensuring direct communication between utilities
- collecting relevant information and knowledge related to crisis management from external sources (World Health Organisation, European Union’s technical bodies, etc.)
- providing synthetic, practical and ready-to-use support material based on information shared internally between members and from external sources.

In practice, this assistance materialized with thematic webinars as well as regular email updates integrating operator-to-operator questions and answers, and an accessible and regularly updated online resource library that included documents from members and external resources. The details of these exchanges are too lengthy to replicate here, but the main topics addressed were as follows:

How to prioritize functions and reorganize teams in order to minimize physical contact and ensure back-up in case a colleague falls ill (referred to as “segmentation”);

- How to quickly reorganize IT infrastructure to ensure that a maximum number of employees are able to work remotely while minimizing security risks;
- How to ensure monitoring operations on drinking water and wastewater quality while complying with social distancing rules and travel limitations;

- How to ensure customer care service when offices are closed in compliance with lockdown provisions and how to reorganize provision from suppliers in order to limit contact;
- How to reorganize internal office spaces when lockdown provisions are partially relaxed.

Webinars and videoconferences during the lockdown were attended by a large number of participants which, on average, was higher than for in-person meetings organised by Aqua Publica during “normal times”. This shows that the need for exchange during the pandemic was particularly strong, due to the fact that operators could not build on previous comparable experience to develop their strategy for crisis management and, consequently, the sense of uncertainty was high. As Dr. Marco Blazina – director for wastewater treatment operations at MM (the public water operator of Milan, Italy) – stated during one of the webinars: “The Covid-19 emergency taught us that, in order to face disrupting and unexpected situations, we need to be versatile and open-minded about the search for solutions. This means being ready to question any aspect of existing processes, and to explore options that, until that moment, we considered impossible”.

However, aside from the need to “manage the unknown”, participants found the meetings useful for another reason related to the very nature of Aqua Publica. The fact that the association is a network of utilities allowed members to bring together technical expertise to foster concrete discussions. Furthermore, the diversity of participants, including both management and technical staff from urban and rural, larger and smaller operators, provided the opportunity to have a wide view of the topics discussed, from operator strategy to on-the-ground questions. Finally, the fact that all participants were from *public* utilities increased the sense of trust and facilitated the peer learning process. Participants could recognize in their colleagues people facing the same problems and talking the same language, without fear that they had hidden agendas or commercial interests in the solutions they shared or proposed.

Overall, the knowledge exchanges made it clear that despite significant differences in both the varying gravity of the pandemic across territories and more structural factors (such as the size of operators and different national legislations), the members of Aqua Publica were facing very similar challenges and uncertainties. Consequently, through their participation in the online meetings or through the synthetic documents prepared by the Secretariat of the association, operators could be reassured that the solutions they were adopting were consistent with what their peers were doing, and they could learn from the experience of others about factors or options not originally taken into account. This sharing of information was particularly relevant for smaller operators from rural areas who did not have specialized staff dealing with risk management.

We can therefore say that the initiatives carried out by Aqua Publica helped the European public water sector to improve the efficacy and speed of its response to the challenges raised by the pandemic. Despite the existence of the European Union, governments struggled to coordinate amongst themselves effectively on measures to counteract the spread of Covid-19, especially at the beginning of the emergency. , Aqua Publica played a complementary role to these efforts by ensuring greater coordination and homogeneity of the responses across the continent with regard to essential water and sanitation services. (It is also worth noting here that drinking water quality and wastewater treatment processes are regulated by the European Union and not by individual countries.)

The contents of the webinars and the other materials shared by members, as well as the main lessons learned by the operators in the management of the crisis, were then collected and summarized in a publication called *Managing the unexpected - European Public Water Utilities Facing the Coronavirus*, which Aqua Publica produced in partnership with the Global Water Operators Partnership Alliance initiative (under the umbrella of UN-Habitat), available for free at the Aqua Publica's website for the benefit of other operators across the world that might face similar challenges.

AFFIRMING THE VALUE OF PUBLIC SERVICE

In addition to the internal exchange activities for the benefit of members described in the previous section, Aqua Publica also worked on external initiatives in parallel with what members were doing in their own individual contexts. The main concern was reassuring citizens about the continuity of the water service. Acknowledging a high level of responsibility towards citizens, the members of Aqua Publica endorsed an early public statement published in March by the Association's Management Board. Translated into many languages, the statement aimed to provide reassurance to citizens that their water utilities were implementing measures to ensure continued and safe services. Through this immediate commitment, public operators were transparent with citizens in a time of great uncertainty. This statement was supported in practice by uninterrupted and safe water supplies throughout the emergency.

Another widespread concern among citizens was about tap water safety. While TV reports showed supermarkets running out of bottled water, since people feared that tap water could be a source of transmission of the virus, many Aqua Publica members launched communication campaigns to reassure users about tap water safety. Aqua Publica joined this effort by creating a video that collected the campaigns of its members and by relaunching the individual campaigns on social media (see www.aquapublica.eu/article/members-activities/aqua-publica-europea-members-ensuring-tap-water-safety-during-covid-19).

As water services can sometimes be overlooked and taken for granted by the population, public operators have put the spotlight on the dedication of their employees during the pandemic, with campaigns recognizing and thanking those working at the forefront on maintenance, in laboratories, in customer service and in many other functions. The association produced a video gathering these individual initiatives to show the faces of the public water sector

and highlight workers' crucial role in ensuring uninterrupted service (see www.aquapublica.eu/article/members-activities/video-healthy-and-safe-water-supply-guaranteed-thanks-commitment-water).

Aqua Publica was also in regular dialogue with various European Union institutions to ensure that essential supplies (including PPE, chemicals, etc.) continued to reach water operators despite the closure of the EU's internal borders and significant disruptions to international supply chains. Finally, Aqua Publica joined forces with other organizations in sharing and making available good practices and lessons learned from the management of the Covid-19 emergency. In particular, Aqua Publica co-organized a webinar on the emergency response with the Global Water Operators Partnership Alliance (GWOPA), facilitated the participation of its members to other webinars organized by GWOPA and, as mentioned in the previous section, co-published the report *Managing the Unexpected*. The motivation behind this collaboration is that water is a common good and consequently should be managed as a publicly owned service for the general interest; similarly, the knowledge and expertise generated within the public sector should be available freely for the benefit of all. The solidarity that fuels the internal activity of Aqua Publica therefore characterizes its external relations as well.

PUBLIC SERVICE, SOLIDARITY AND COLLECTIVE WELLBEING

As noted earlier, the activities carried out by Aqua Publica to facilitate the exchange of information and good practices among public water operators would not have been possible without the generous contributions of the staff of member utilities who gave their time – often without extra or overtime compensation – to share experiences and explain to their colleagues from all over Europe the solutions they had adopted in their context. Since there was no economic incentive to these contributions, we would argue that the most important motivation was a genuine spirit of solidarity to-

wards other colleagues about to face similar problems, as well as a sense of awareness of and pride in the responsibility of carrying out an essential service that, more than ever, was crucial for collective wellbeing and security.

We do not intend to suggest that private operators' employees have not shown similar levels of dedication and commitment during the pandemic; far from it. Our argument, rather, is that because of the profit-making constraints of private companies, and the strictly defined productivity targets these constraints involve, the kind of transnational, trans-institutional solidarity we have described above among public water operators would have been much more difficult to realize among private water companies. Indeed, we are unaware of similar non-remunerated knowledge-sharing activities among competing private water firms.

Moving from the utilities' staff to the level of operators themselves, we can also mention examples of solidarity of public water utilities helping other public sector services (like the case of VIVA-QUA – Brussels' water operator – producing and donating disinfectant gels and other protective equipment to local public hospitals). There are also several cases of public water operators suspending water billing before similar decisions were required by governments, as well as utilities that increased the allocations dedicated to households facing difficulties with payment in the expectation of the impact of the economic downturn resulting from the pandemic.

More generally, the Covid-19 emergency has proved that some societal challenges cannot be addressed through market-based solutions, but require strong, well-staffed and well-financed public services ensuring universal access. Only a universal public health system can ensure adequate health protection for all and thus limit the spread of the coronavirus; only a public water service can ensure universal access to water and sanitation that, beyond being essential for living, is also crucial for the sanitation practices that limit the spread of the virus. We could also extend this argument to other essential services. In short, only a public service that is not

constrained by profit or competition objectives can look beyond the market value of its operations and take initiatives that look at general interest and collective wellbeing.

LOOKING FORWARD

While many countries around the world are still struggling with the acute phase of the pandemic, people and organizations alike are trying to assess the impact of this unprecedented crisis both on their individual situation and on society. This reflection is taking place also within Aqua Publica Europea and, although drawing conclusions for the long term is certainly still premature, exchanges with members point to three main domains where the pandemic is expected to have long-lasting effects: the role of water operators in society; the internal work organization of operators; and the economic impact of the pandemic on water service and the urgency of a new economic model to finance them.

The role of public water operators in society

Many members of Aqua Publica have noted a rise in the level of satisfaction and trust amongst their users during the pandemic, with their quick and successful actions having helped to renew or strengthen citizens' awareness about the importance of universal access to safe water for collective health. There are additional, more specific, elements that can also help explain the increased confidence in water services. Due to social distancing rules, many operators have introduced innovative tools to interact with users (based largely, but not entirely, on mobile applications), while customer offices were closed. For example, customers were asked to perform small tasks in their home (like reading the meter) while being guided remotely by operators' staff. Not only did this help to create new direct ties, but it likely contributed to increasing user awareness about the complexity of the service that allows them to access safe water whenever they turn on the tap at home.

Many public operators also promoted solidarity-based initiatives beyond the realm of water services. This may have helped raise the awareness both of citizens and water operators themselves of the social responsibility that public water utilities have towards their local communities. Several members of Aqua Publica have already started broadening the scope of their mission in their strategic planning by acknowledging the crucial role they have in the ecosystem of public services and in societal progress at large. Examples of this expanded mission include initiatives to co-fund education and research efforts in the environmental domain, strategies for the greening of their supply chain through public procurement procedures, campaigns to raise awareness of the importance of tap water consumption, cooperation with other social security services for targeted support to households in need (who tend to consume more water as they depend on less efficient building and house appliances), and partnerships with other companies and sectors (energy, waste, farmers etc.) to reduce pollution and increase recovery of energy and nutrients from water.

Many good practices in this domain are collected in another publication of Aqua Publica Europea entitled *The Public Water Service of the Future* (www.aquapublica.eu/article/news/publication-managing-unexpected-european-public-water-utilities-facing-coronavirus). We believe this trend will become stronger in the years to come.

The internal organization of water operators

Water operators had to quickly introduce significant changes to their organization to ensure service continuity during the pandemic. Some of these changes are likely to have long-term impacts on the organization of water utilities: the massive shift to working remotely; the importance of risk management approaches and strategies; new ways of communicating with customers. All these transformations have the potential to modify the vision that water utilities have of their own internal way of operating and, conse-

quently, can affect future strategies regarding management, workforce and investments.

However, when discussing the impact of the Covid-19 on operators' internal organization, we would like to emphasize in particular the renewed attention to the role and contribution of workers to the company's decision making. Many operators have stressed – including via dedicated communication campaigns – that ensuring business continuity throughout these difficult times was only possible due to the extraordinary commitment of the operators' staff. When presenting their approach for staff reorganization, many operators have highlighted the participation of employees in decision making (including safety rules and work organization) and their involvement around shared objectives, noting that these inputs have been essential to tackling challenges successfully.

This crisis gives the opportunity for the public water sector to elaborate a more specific model of public workforce management – as compared to the private sector. It provides an opportunity to underscore the importance of frontline workers in defining and realizing the public service's mission, precisely as a condition to increase the resilience of the operators. Aqua Publica will continue to support operator-to-operator cooperation on this topic and provide its members with a framework to confront decisions, develop practices and exchange ideas.

The financing challenge

Financing is another domain where water utilities are currently assessing the consequences of the pandemic. Although the severity of the economic impact varies across Europe, members of Aqua Publica highlight two phenomena: a short-term decrease of revenues due to the freeze of industrial and tourist activities (in particularly affected areas, this may decrease as much as 20% on an annual basis); an expected medium-term rise in the number of people facing difficulty to pay the water bills due to a protracted economic downturn and rising unemployment. The worsening of

the economic situation occurs at a time when financing needs for the water sector are already significant throughout the EU. A very recent (but pre-pandemic) study by the Organisation for Economic Development and Cooperation-OECD (2020) estimates that investment needs to be an additional €289 billion (compared to current expenditure) for the water sector in the EU for the next decade – with some countries already reaching the affordability threshold for significant parts of the population.

In the recovery phase following the Covid-19 emergency, leaders and citizens have already emphasized the need to take the opportunity to move towards more sustainable financial models, but also to ensure fairness for citizens and improve preparedness for possible future shocks. The members of Aqua Publica Europea have the potential to be great partners in the considerable efforts to be deployed by working towards all three of these goals. Public water services are essential services that leave no one behind. With a citizen-focused approach, rather than profit-seeking objectives, public water operators seek to develop socially fair and responsible practices, from special attention to the most vulnerable clients to inclusiveness of all citizens, including remote areas. In this framework, the members of Aqua Publica are working to put forward concrete proposals that can address the financing gap, while ensuring social and territorial equity and long-term sustainability.

First, the traditional tariff/tax component will need to evolve towards “smarter” and fairer approaches that better reflect the differentiated pressure on water resources caused by different types of users. New approaches to raise additional revenue can include, for example, a tax on property developers for soil-sealing (which would also capture the economic value this actor gains from the access to high quality water and sanitation services), or more accurate mechanisms to charge the cost of water pollution across users, like the approach based on the so-called “Extended Producer Responsibility.” Both these approaches are currently under discussion at the EU level and have been tested in some countries.

Second, the shift towards a more circular economy can also create new opportunities for the financing of water services. Regardless of the approach for economic recovery chosen, it will be impossible to ignore the sustainability challenge. From nutrient recovery to energy neutrality, water operators hold a strategic position in efforts to tackle climate emergency. In this framework, conducive regulation and incentives can foster the creation of new value chains connected to other sectors (agriculture, construction, etc.) that can open new economic opportunities, trigger investments and support the shift towards a more sustainable economy.

Finally, and probably most importantly, minimizing financial needs and liabilities must remain the key objective. Of course, public water operators must continue to focus on efficiency and performance improvement to make the best use of existing assets and resources. However, thanks to their non-profit nature and their consequent long-term view, public operators can and must propose solutions that provide structural responses to water challenges in terms of quantity and quality. Most often, this means moving away from “easy technological fixes” – as even the European Commission demands (2019, ii) – which are easy to implement but extremely capital-intensive. Instead, operators must devise solutions that ensure that water resource are protected by preventing pollution at source or by relying on natural capital to address water deterioration or water scarcity problems (so-called nature-based solutions).

The possibility of implementing these solutions lies with public authorities (as they imply regulations and fines or politically sensitive land-allocation decisions). However, the mission of a public operator also includes the responsibility of helping public authorities in devising solutions that minimize costs for current and future generations. Some good practices by Aqua Publica’s members are collected in *The Public Water Service of the Future* as well as in the publication *Water and Climate: European Public Water Operator’s Commitment to Water Resources Protection* (www.aquapublica.eu/document/water-and-climate-european-public-water-operators-com-

mitment-water-resources-protection).

CONCLUSION

Opportunities and challenges can be identified in all historic moments characterized by deep transformation of social organization. Although things will not be the same as they were before Covid-19 in many respects, the continued supply of safe drinking water to all, and well-performing sanitation services, will remain critical for the wellbeing and security of our societies. The water sector will continue to play a key role in the collective efforts toward a more sustainable model of development.

In this framework, strengthening the capacities of public water operators – like all other public services – must remain a strategic political objective for national and international institutions. While specific companies' programs for staff training remain essential and resources continue to be needed for this purpose, the public nature of these services make international cooperation an effective and viable complement for capacity development. The high attendance at the virtual meetings hosted by Aqua Publica prove the importance that international peer-to-peer learning has for public water operators.

Together with other international institutions like GWOPA, Aqua Publica Europea will continue to facilitate cooperation, knowledge sharing, and partnerships among public water utilities. Capacity development is important for the water sector per se, but it also represents an essential element of a broader societal effort to ensure safety and wellbeing for all, and to strengthen our collective resilience to current and new threats.

This is the mission of Aqua Publica but, once again, its realization will not be possible without the effort and commitment to solidarity of public water operator staff. As the President of Aqua Publica Europea (and also President of Eau de Paris and Deputy-Mayor of Paris in charge of the Environment), Célia Blauel has summarized

it: “Across Europe, we are all in this together and, under these exceptional circumstances, we need to show commitment, solidarity and work together to, above all, ensure continuity of an essential public service so that citizens already deeply affected by Covid-19 can continue to access, safely and without worries, high-quality drinking water.”

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Chapter 10

Craig Laird
Elisa Bernal Arellano

WATER OPERATORS PARTNERSHIPS (WOPS): PUBLIC UTILITY KNOWLEDGE EXCHANGE AND SOLIDARITY IN RESPONSE TO CRISIS

Water operators from around the world have been sharing knowledge about coping with Covid-19 as part of the Global Water Operators' Partnerships Alliance (GWOPA), a United Nations (UN) agency that facilitates peer-to-peer exchange. This chapter summarizes the initiatives of GWOPA thus far, highlighting the potential for knowledge sharing based on principles of solidarity and not-for-profit collaboration to help public water operators manage the immediate crisis and seek longer-term solutions for better resiliency in the future

INTRODUCTION

The Global Water Operators' Partnerships Alliance (GWOPA) is a global network supporting public sanitation and water service providers. Its mission is to facilitate not-for-profit knowledge sharing and cooperation among water operators via Water Operator Part-

nerships (WOPs) – solidarity-based, capacity-focused partnerships between peer water utilities – as a scalable and effective way to support public water utilities. Former UN Secretary General Kofi Annan called on UN-Habitat to mobilize global commitment and engagement in the practice during his tenure. GWOPA is now a robust solidarity network that continues to promote and support water operators’ partnerships, bringing together a strong network of public utilities, utility associations, NGOs, universities, donors and other stakeholders.

When the Covid-19 pandemic struck, GWOPA helped members face new pressures and constraints, relying on the basic principle of WOPs that, despite widely differing contexts, many of the challenges and solutions water operators have are common to utilities everywhere. For evidence, we need only look back to early 2020 when many operators were scrambling to pre-empt the crisis before it hit their shores by learning from the experiences of earlier-affected peers. This peer learning approach not only allowed them to fast-track solutions and avoid repeating errors, but also built solidarity between operators that will continue beyond the crisis.

As the global body leading the WOPs movement, GWOPA facilitated the exchange of knowledge and peer support between utilities while also, in parallel, raising awareness on the global stage of the critical role of utilities in slowing the spread of the virus. By supporting peer exchange, gathering testimonies and mobilizing network partners to advocate for measures to support increased resilience in public utilities, GWOPA has been able to start documenting the lessons learned from this experience and initiate a dialogue on how the water and sanitation sector must begin to plan for a more resilient future.

GWOPA’S RESPONSE TO THE CRISIS

The initial action taken within the GWOPA network was to gather testimonies from Alliance members and partners on the practi-

cal actions that utilities were taking to face the crisis and ensure access to safe services. This was done principally through surveys and internal communication within the network. Testimonies were placed on the GWOPA website and on social media using a common hashtag (#UtilitiesFightCOVID). The social media campaign also sought to highlight public water utilities as key actors in the fight against Covid-19 and draw attention their important work in slowing its spread.

The testimonies provided a snapshot of the extraordinary measures being taken by public utilities to face the crisis in different parts of the world. Most of the experiences shared focus on immediate action or the emergency response without addressing the mid- and longer-term implications and challenges related to the pandemic. As a global alliance committed to advocating for public utilities, GWOPA was keen to draw greater attention to the potential longer-term challenges of utilities and, where possible, foster more in-depth peer exchange around the crisis. The next step was therefore to create a “community of practice” focused specifically on the immediate and ongoing response of utilities to Covid-19. The community allows for individual interaction and resource sharing among members and, as of October 2020, gathers almost 200 members. Members are mostly utility staff but there is also a strong presence of professionals from international organizations, academia and other stakeholder groups who share their knowledge on the topic. Community members exchange resources and insights with the spirit of solidarity and not-for-profit partnership that characterize GWOPA.

To help further mobilize the network, GWOPA began a series of webinars in collaboration with the German sustainable development consulting firm GIZ, on priority topics identified through the testimonies and community of practice dialogue. As an alliance made up of diverse actors, GWOPA worked with a range of partner institutions and regional platforms to bring different perspectives and knowledge to the discussion. The webinars sought to prioritize

exchanges between utility staff in different regions of the world and complement them with the views of partner organizations such as the World Bank, UNICEF Aqua Publica Europea, and GWOPA's regional WOP platforms. Initial webinars focused on emergency responses, with subsequent exchanges looking at services to informal settlements, wastewater and financial challenges (see Table 10.1). The webinars gathered utilities from different regions, at different phases of their encounter with the pandemic and with distinct local conditions.

The added value of the webinar series was that GWOPA's thematic partners were also able to share their solutions, knowledge and research on effective Covid-19 responses. Interactive polling and open Q&A during the webinar allowed for greater discussion on emerging issues facing operators as the coronavirus pandemic evolved. Interpretation in Spanish and French was also provided to ensure that utilities in Latin America, one of the worst-hit regions, and Africa were able to follow along. All discussions were captured in the webinar outcome briefs that were circulated to GWOPA's network. The webinars were also tied to the community of practice, and speakers and participants alike were invited to continue their exchanges on the platform.

AFFIRMING THE VALUE OF PUBLIC SERVICE

In addition to the internal exchange activities for the benefit of members described in the previous section, Aqua Publica also worked on external initiatives in parallel with what members were doing in their own individual contexts. The main concern was reassuring citizens about the continuity of the water service. Acknowledging a high level of responsibility towards citizens, the members of Aqua Publica endorsed an early public statement published in March by the Association's Management Board. Translated into many languages, the statement aimed to provide reassurance to citizens that their water utilities were implementing measures to

ensure continued and safe services. Through this immediate commitment, public operators were transparent with citizens in a time of great uncertainty. This statement was supported in practice by uninterrupted and safe water supplies throughout the emergency.

Another widespread concern among citizens was about tap water safety. While TV reports showed supermarkets running out of bottled water, since people feared that tap water could be a source of transmission of the virus, many Aqua Publica members launched communication campaigns to reassure users about tap water safety. Aqua Publica joined this effort by creating a video that collected the campaigns of its members and by relaunching the individual campaigns on social media (see www.aquapublica.eu/article/members-activities/aqua-publica-europea-members-ensuring-tap-water-safety-during-covid-19).

As water services can sometimes be overlooked and taken for granted by the population, public operators have put the spotlight on the dedication of their employees during the pandemic, with campaigns recognizing and thanking those working at the forefront on maintenance, in laboratories, in customer service and in many other functions. The association produced a video gathering these individual initiatives to show the faces of the public water sector and highlight workers' crucial role in ensuring uninterrupted service (see www.aquapublica.eu/article/members-activities/video-healthy-and-safe-water-supply-guaranteed-thanks-commitment-water).

Aqua Publica was also in regular dialogue with various European Union institutions to ensure that essential supplies (including PPE, chemicals, etc.) continued to reach water operators despite the closure of the EU's internal borders and significant disruptions to international supply chains. Finally, Aqua Publica joined forces with other organizations in sharing and making available good practices and lessons learned from the management of the Covid-19 emergency. In particular, Aqua Publica co-organized a webinar on the emergency response with the Global Water Operators Partnership

Alliance (GWOPA) , facilitated the participation of its members to other webinars organized by GWOPA and, as mentioned in the previous section, co-published the report *Managing the Unexpected*. The motivation behind this collaboration is that water is a common good and consequently should be managed as a publicly owned service for the general interest; similarly, the knowledge and expertise generated within the public sector should be available freely for the benefit of all. The solidarity that fuels the internal activity of Aqua Publica therefore characterizes its external relations as well.

Through the combination of the online campaign, the community of practice and the webinar exchange, GWOPA has been able to capture the main issues utilities are facing with respect to Covid-19 and the responses they have been offering. While it may not be possible for governments and decision-makers to provide greater support to water and sanitation operators during this current pandemic, there will come a time in the near future when a collective reflection on these topics and the vulnerabilities exposed by the pandemic will take place. Active networks and GWOPA partners such as Aqua Publica Europea have already initiated the process by capturing and documenting lessons. In the coming months, GWOPA will continue to provide opportunities for utilities still dealing with the crisis to exchange and learn. However, our efforts will also shift to facilitating and contributing to this wider reflection. For many GWOPA partners, the Covid-19 pandemic has confirmed that peer exchange is an effective mechanism to support emergency response. We would also suggest that it can be even more effective as a mechanism for disaster prevention. Fostering WOPs, peer exchange and networks of solidarity within the water and sanitation sector will help build up the resilience that is currently lacking in many public water utilities. Most water operators resorted to existing crisis management plans (for those that had them), which did not foresee a crisis on this level. Smaller utilities or those not well connected to a network of peers lost valuable time trying to improvise solutions or learn from others retroactively. Those involved

in networks such as GWOPA, or those already engaged in WOPs, were able to react quickly, consult their peers and adapt tested solutions from earlier-hit countries to their context.

Table 10.1
GWOPA webinars in 2020

Date	Topics
April 28	Lessons from Beyond the Curve: German Operators' Experience with COVID
May 12	Utilities' Support to Inclusive WASH Access in Informal Settlements and Vulnerable Communities
June 2	Crisis Management: Strategy, Assessment and Decision-Making
June 16	COVID and Wastewater – Mind the Poop!
August 11	There's a Hole in My Bucket: Addressing Utilities' Growing Liquidity Challenges to Ensure Inclusive Service Continuity through the Pandemic
November (date TBD)	Peer Support in the time of COVID

From the WOPs documented by GWOPA over the last ten years, emergency and safety planning is a recurring focus area. This suggests that many utilities are aware that they must plan for such events but do not have the in-house capacity to do so. Under its current strategy, GWOPA will continue to promote and facilitate peer support to build utilities' resilience and advocate for the conditions that allow utilities to anticipate and recover from shocks like the one we are experiencing. As GWOPA prepares for the 4th Global WOPs Congress, scheduled for late 2021, the lessons learned from this crisis will shape the discussions and dialogues at the event to help forge more solidarity in the water sector.

ACTIONS TAKEN BY WATER OPERATORS

Expanding access

Through GWOPA's interaction with utilities, most were part of coordinated local health responses that involved their expertise and

technical capacities in extending water access and service coverage to those who were previously unserved. Particularly at risk are people who live in informal settlements, the homeless, those in precarious work, elderly people, migrants, refugees, people with disabilities and other groups forced to take risks for economic reasons or those who cannot access services to adhere to hygiene and safety standards. The pandemic has, in many areas, exposed deep injustices within cities and laid bare the fact that many utilities' service levels do not include the entire city but rather are only focused on formalized neighbourhoods. In Africa, for example, these neighbourhoods represent a fraction of the urban territory and house less than one third of the urban African population.

Consequently, the most visible actions taken by water and sanitation utilities were to ensure services in informal settlements. Where overcrowding is prevalent and people have limited access to basic services such as healthcare and water, several public utilities have been instrumental in making Covid-19 hygiene measures possible through temporary network expansion, mobile service units and the provision of soap in an effort to slow the spread of the virus. In one example, from South Africa's third largest city, Durban, the local government and utility scaled up static water tank operations to help serve the 200,000 residents living in informal settlements. In Indonesia, many utilities have installed handwashing tanks in public areas and in highly populated areas, with some giving free water to up to 40% of customers, mainly in poor communities.

While these measures are a priority, they are being implemented with reduced staff numbers, reduced availability of resources and at considerable additional cost to the utility. Many utilities were not able to ensure the accompanying financial and resource planning to take on new or expanded operations. Consequently, these unprecedented efforts to ensure water and sanitation services to all may seem encouraging at first glance but they carry a heavy risk. If not accompanied by the long-term resources and policy framework to maintain them, they will be discontinued after the current

state of emergency period is over, leaving utilities heavily in debt. The Covid-19 Solidarity Response Fund, led by the World Health Organization (WHO), provides a first step to ensuring that long-term development gains can be achieved and maintained through the Covid-19 response. Nevertheless, these concerns must also be addressed by governments and policy makers.

Halting disconnections

Many governments introduced policy measures to require utilities to ensure service continuity, particularly for poor segments of the population. The most notable change for service providers were measures prohibiting disconnection, particularly those related to non-payment, and the reconnection of services to disconnected households. In some cases, measures included the provision of free water supply in communities where household connections were uncommon or nonexistent.

Utilities in Greece and Jamaica recounted a similar commitment from governments and utilities to waive disconnection procedures for customers unable to pay their bills. According to the National Water Commission (NWC) in Kingston, Jamaica, consumption increased by 20% in informal settlements during the early stages of the pandemic, which suggests more people were accessing services than before Covid-19. This increase is attributed to the support and funding from Jamaican authorities, as well as a strategy put in place to improve water and sanitation infrastructure and ensure reliable access to services in informal settlements. While such testimonies speak of advancing service levels, the sustainability of these gains is less certain, with many utilities highlighting a pending cash-flow crisis resulting from increased operational costs with reduced revenues.

Protecting staff

Water and sanitation utilities are employers to large numbers of staff. Many utilities engaging with GWOPA's campaign highlighted

the additional challenges (and costs) of caring for staff. The pandemic has required utilities to acquire additional essential supplies in a challenging market. Usual procurement approaches have been put to the test with some collapsing due to market vulnerability. In some cases, national governments have intervened to help procure essential equipment such as personal protective equipment (PPE), which is then distributed to utilities and other key industries. In Europe, some utilities banded together to collectively purchase needed supplies. This approach has lightened the burden for some utilities and saved valuable time, allowing them to benefit from economies of scale and secure goods that may otherwise have been difficult to buy.

Additional measures taken by many utilities to protect staff have included flexible working arrangements, reduced working hours and health monitoring protocols. While defining and enforcing such measures may be relatively easy for some organizations, the diversity of roles within the utility workforce adds a layer of complexity to this changing work environment. For staff required to do on-site work, utilities had to quickly define safety protocols and ensure constant communication with all staff on the latest development of the virus and health measures.

Many operators decided to close their physical customer offices to protect both workers and customers. This shift required the rapid deployment of digital customer services and forced special measures to be taken for those not online. The effectiveness of these measures over the long term is yet to be seen, but the immediate result for many utilities has been a drastic reduction in bill payments from customers who are unable to access physical offices. The International Benchmarking Network for Water and Sanitation Utilities (IBNET) has collected data from several water utilities, which reveals that collection rates fell by 40% in the first months of the pandemic. This drop may be attributed to the inability of customers to pay or an inability to access pay points.

Wastewater monitoring

GWOPA's webinar on wastewater focused less on the risks of the presence of Covid-19 in wastewater (which are extremely low) and more on the potential for utilities to support monitoring and detection of the virus. Monitoring wastewater systems for viral loads has long been a common method to track infections in urban populations and, for Covid-19, can serve as a cost-effective “early-warning” mechanism to identify hotspots. Even during the early stages of the pandemic, various utilities collaborated with research institutions to accelerate understanding around virus tracking and explore how they can slow the spread and facilitate agile responses. A joint initiative between the Swiss Federal Institute of Aquatic Science and Technology (EAWAG) and the *École polytechnique fédérale de Lausanne* (EPFL), is tracking the spatial development of Covid-19 with findings suggesting a correlation of SARS-CoV-2 load with Covid-19 infection rates over time, although further research is required. Similar initiatives are being undertaken by the utilities themselves in France and Argentina, with promising results. Such innovation further highlights the essential role of utilities in managing health crises and raises questions about how to ensure they are fully resourced and able to fulfil that role.

Ensuring service continuity

Experiences from the GWOPA network highlighted that protracted crises cause supply chain disruptions and declining revenues for utilities and may also compromise utilities' capacity to continue providing these essential services. A survey of around 50 utilities by GWOPA put cash flow as the second-biggest challenge for water operators as a result of Covid-19. In the same survey, a global sampling of utilities expressed that increased subsidies and new financial approaches are among the most-needed support to prepare for emergencies like Covid-19. If the Covid-19 pandemic is prolonged, or if it is indeed followed by another crisis – be it economic, environmental or social – utilities may not have the financial or opera-

tional redundancy to respond effectively. Ways to maintain liquidity will need to be found in collaboration with government authorities, ensuring universality in service levels.

CONCLUSION

Through our activities around the Covid-19 response, we have seen that utilities are currently operating in a context of reduced revenue and constantly shifting safety measures. These circumstances are having an immediate impact on the financial health of utilities and putting a huge strain on their ability to provide accessible services in a financially sustainable way. When facing a cash-flow crisis, utilities may be forced to increase prices, reduce operations or cut services. Such measures run counter to global targets around access to sustainable services for all and the human rights to water and sanitation. Many utilities are, however, hoping that their rapid and effective response to the Covid-19 crisis will result in greater recognition of their role, resulting in additional resources and other measures to help alleviate the current and impending challenges they face. Herein lies the core of the wider reflection coming out of this crisis: How can we ensure public utilities are prepared for and able to respond to crisis without compromising their financial and operational sustainability? From the findings of activities led by GWOPA and its partners, utility responses thus far highlight the need for the following actions:

- **Provide additional financial support and technical assistance to water and sanitation service providers**, and in particular to ensure coverage for those living in poor urban areas not connected to water networks. This will also be essential in the medium term to avoid the effects the expected economic crisis will have on services that are essential to ensure health and economic recovery.
- **Enable peer support between service providers during the Covid-19 crisis.** Service providers around the world are al-

ready showing tremendous capacity and readiness to share lessons, good practices and equipment through existing partnerships. Cooperation and exchange can continue effectively through remote exchange – webinars and learning through virtual platforms.

- **Build more resilient, inclusive and financially robust utilities.** As the immediate crisis subsides, there is opportunity for utilities to learn from this experience and increase their disaster preparedness, be it through capacity, infrastructure, safety planning, or all of the above. This requires dedicated resources, programs and frameworks to engage in capacity-building through, among others, water operators' partnerships.

Covid-19 is not the only challenge. The growing impact of climate change on water resources, treatment and infrastructure presents a significant threat to utilities' normal operations into the future. The findings from GWOPA's Covid-19 exchanges can be applied to these pressing concerns. The GWOPA network and the global commitment to peer learning between operators that it fosters is therefore a powerful tool to strengthen the capacity and resilience of utilities. The increased commitment to our principles is encouraging and suggests that a growing number of utilities, financiers and water stakeholders are recognizing that solidarity is part of the solution. The recently approved €9 million EU-WOP Programme, implemented by GWOPA, attests to this and will provide major new opportunities for utilities to engage in peer support partnerships. GWOPA will continue to lobby for such programs and call for greater support to strengthen the capacity of utilities both in the context of Covid-19 and in the framework of Sustainable Development Goal 6 and the Human Rights to Water and Sanitation. To amplify our voice, we call upon all like-minded organizations to join us in our efforts, be it through the #UtilitiesFightCOVID activities (webinars, community of practice, campaigning) or through engagement with the Global Water Operators' Partnerships Alliance membership more broadly.

Chapter 11

Rebecca J. McMillan

DEFENDING PUBLIC WATER IN TIMES OF CRISIS: “POPULAR WATER GOVERNMENT” IN CARACAS, VENEZUELA

In Caracas, Venezuela, an ongoing water crisis exacerbates the impact of Covid-19. Despite the commitment of Caracas’s public water utility, Hidrocapital, to being a social-public model of provision, water service quality and reliability have been declining since 2014. The cause is a combination of cyclical droughts, poorly maintained and inadequate infrastructure, hyperinflation and declining government oil revenues. US sanctions have also undermined the water utility’s day-to-day operations. All of these factors have resulted in intermittent water services for both residents and healthcare facilities, making it difficult to respond to the pandemic. This chapter argues that resolving the current health crisis also requires addressing the water crisis. A sustainable solution must include immediate public investments in water and sanitation infrastructure as well as a renewed commitment to community participation and transparency to strengthen social-public management.

INTRODUCTION

In Venezuela’s capital, Caracas, a pre-existing water crisis has made coping with Covid-19 difficult. For two decades, Caracas’s public utility, Hidrocapital, has been experimenting with a unique model

of public participation, but it faces increasing challenges. Caracas's social-public model of service provision has been threatened by the deteriorating political and economic situation marked by a lack of transparency in decision-making, hyperinflation and US sanctions. Infrastructure deficiencies have made adequate hygiene a daily challenge for residents, increasing the risk of the virus's spread.

With fewer international travelers entering Venezuela than neighbouring countries – aside from an influx of returning Venezuelan migrants in the border regions – the oil giant seems to have been spared some of the high rates of Covid spread experienced by neighbouring countries like Brazil. The country has also adopted strict social distancing policies, and benefitted from international solidarity through agreements with strategic allies like China. However, after over five years of political and economic challenges, the country's response systems, like water and healthcare, were already vulnerable even before the virus hit.

This chapter offers preliminary considerations on the causes and implications of the water crisis in Caracas, and evaluates aspects of government, labour and community responses. It argues that resolving the Covid-19 health crisis also requires resolving the water crisis, which must include immediate public investments in water and sanitation infrastructure as well as a renewed commitment to public participation and transparency to strengthen social-public management. The analysis is based on participant observation and key informant interviews during field research in Caracas from August-December 2012 and April 2016-December 2017. Data from 2020 have been collected from secondary sources and personal communications with key informants.

CARACAS “SIN AGUA” IN 2020: A NEVER-ENDING STORY

Water challenges have long plagued Venezuela's capital, which is home to approximately seven million people and over a fifth of the country's population. Upon visiting Caracas in the 1950s, Latin

American literary hero Gabriel García Márquez wrote a short story entitled *Caracas Sin Agua* (“Caracas without water”), which could have been written today.

While Venezuela technically met the Millennium Development Goal for Water and Sanitation in 2001, reporting 92% improved water coverage, our 2012 research found that these high coverage rates obscured some issues with water service quality (McMillan et al. 2014). Since then, however, the situation has deteriorated significantly. Water service quality and reliability have declined, and water protests have again become a near-daily occurrence in Caracas, bringing back memories of the brutal neoliberal period of the 1990s. The social-public model of management has its roots in the social conflicts of that era in Caracas’s popular barrios (informal settlements, similar to Brazil’s *favelas*). During that time, due to severe water shortages and service interruptions, residents resorted to self-help water solutions, organized street blockades and even “kidnapped” Hidrocapital officials.

It was partly the deep social and economic dislocations of the 1990s, as well as public discontent with an increasingly disconnected political elite, that first brought about the military and political movements that swept political outsider and leftist Hugo Chávez to office (1999-2013). With input from civil society, the Chávez administration ushered in a new water management model that aimed to reverse trends of privatization and outsourcing, enhance community participation, and also prioritize investments in low-income areas. Together with a plethora of other social programs during this era, water reforms brought about real improvements in many people’s lives, particularly in the long-neglected *barrio* or informal settlements.

However, the Chavista leftist political project, which has carried on under elected successor Nicolás Maduro (2014-present) – also known as the “Bolivarian Process” – has deepened key vulnerabilities of the oil-dependent economy. During times of abundant oil revenues, public services planning prioritized getting resources to

communities to meet immediate needs, with little attention to long-term planning and maintenance.

The problems with this strategy have become visible following oil price declines in 2014, which precipitated a broader political and economic crisis (Hetland 2016, Ellner and Koerner 2016a,b). Defending public water in Venezuela means recognizing the gains of this process, but also coming to terms with its shortcomings.

The World Food Programme reported in 2019 that 25% of the Venezuelan population lacked sustainable access to water, while 4 out of 10 residents experienced daily water supply cuts (WFP 2019). Meanwhile, the Venezuelan Observatory for Social Conflict found that of 2,505 recorded protests in the first six months of 2020 – equivalent to 14 per day – over half were related to basic services; first electricity, followed by water and gas (Observatorio Venezolano de Conflictividad Social 2020). Caracas has not seen this rate of water protests since the turbulent 1990s.

Venezuela's already stressed healthcare system has also been affected by the water crisis. In a recent study of health facilities conducted in February and March, 2020, 31.3% of respondents reported not having access to clean water, with over 60% indicating that their access was limited (Médicos Unidos Venezuela, 2020). This prevents adequate washing protocols to reduce the risk of Covid-19 spread, including medical professionals' ability to shower before leaving hospitals (Torres et al 2020).

THE CARACAS WATER SYSTEM

It is difficult to know the scale of Caracas's water problems as the Venezuelan government stopped publishing official water coverage and quality statistics in 2014, reflecting a worrying decline in transparency. Yet, studies from international and domestic organizations paint a grim picture. In August 2020, the Venezuelan Observatory for Public Services, found that while 91.7% of the country's surveyed residents (and 94.6% of Caracas's residents) had piped wa-

ter services, only 13.6% received continuous (24/7) service (OVSPA 2020).

Water and sanitation services in Caracas are the responsibility of Hidrocapital, a regional subsidiary of the national water company HIDROVEN. Hidrocapital, a wholly public utility, is responsible for providing water to the Caracas Metropolitan Area, and neighbouring Vargas and Miranda states. Water policy and service regulation fall under the jurisdiction of the *Ministerio del Poder Popular Para Atención a Las Aguas* (Ministry of People's Power for Attention to Water), created in 2018 after being split away from the environment ministry. Some infrastructure construction and investment functions are also under municipal jurisdiction.

Providing water in Caracas is no easy task. The city is located in a valley, lacking sufficient nearby water sources for its population and economy. Water is pumped into the city from distant reservoirs through three separate water distribution systems referred to as Tuy I, Tuy II, and Tuy III. The Camatagua water reservoir that feeds Tuy III and serves the majority of the western hillside barrios is located at a distance of almost 100 km from the city. The aqueduct must then pump water from sea level to an altitude of approximately 2000 m. These geographical challenges are exacerbated by the establishment of many informal neighbourhoods, which possess deficient or makeshift internal networks.

Past research has identified Hidrocapital as an example of a “progressive” public utility given its commitment to worker empowerment, community participation through local *Mesas Técnicas de Agua* (Technical Water Committees, MTAs) and its attention to low-income and vulnerable areas: all features of the national government's stated commitment to *Gobierno Popular del Agua* (Popular Water Government) (McMillan et al. 2014, Spronk et al. 2012). This commitment does not just exist on paper. Residents of Caracas's barrios or low-income neighbourhoods frequently report that despite its many shortcomings, Hidrocapital has the most regular on-the-ground presence of all government institutions. According

to one water activist previously interviewed, “they are the only ones that come regularly! But they can’t do everything.”

Water management is highly centralized in Venezuela, despite Venezuelan water law indicating that jurisdiction for water provision should be a municipal responsibility (Asamblea Nacional de la República Bolivariana de Venezuela 2001, 2007). However, since 2016, HIDROVEN has been decentralizing some aspects of service provision by establishing *Salas de Gestión del Agua* (Community Water Management Offices), which remain in development. The *Salas* are pillars of a larger policy goal of transferring local water distribution systems to communities, including maintenance and repairs, the changing of water valves and potentially even the collection of user fees. The *Salas* are given a vehicle, computer and telephone so they can receive calls about water issues and organize the daily workplans of Hidrocapital maintenance crews assigned to their area.

The *Salas* are the latest part of a long-term effort to increase the role of communities in water service planning and delivery. In 2001, the national government institutionalized participatory planning in its public water utilities through the promotion of community relations offices in its utilities and community-led “technical water committees”. The MTAs are neighbourhood-level committees that work with Venezuela’s public water utilities to plan and execute local infrastructure projects and oversee service delivery. Before becoming national policy in 2001, the MTAs were successfully piloted by a progressive mayor in two Caracas communities as a response to severe water problems in the 1990s. The MTAs are in turn affiliated with an umbrella neighbourhood planning body, called the *Consejos Comunales* (Communal Councils), which includes other sub-committees dedicated to healthcare, electricity, telecommunications, recreation, food distribution and other areas.

In addition to neighbourhood-level MTAs, residents are invited to regular community-wide meetings of the *Consejo Comunitario del Agua* (Community Water Council, CCA), which brings together all of

the MTAs within a local water distribution system. In regular CCA meetings, residents meet with representatives from Hidrocapital, including “community promoters” assigned for each community. The promoters are key liaisons between the communities and the utility’s management and technical staff. The CCA is an opportunity to air grievances about the service, follow up on work plans and discuss other aspects of service provision.

In the context of Covid-19, some water committees (MTAs) are reportedly assisting with response measures like tanker deliveries. However, some public CCA meetings have been suspended indefinitely due to an inability to access public spaces for meetings, even with social distancing protocols in place. According to a water activist from a barrio in Caracas’s west where water meetings have been suspended, this hampers their ability to exert social control at a time when it is urgently needed (personal communication, August 23, 2020).

DROUGHT AND INFRASTRUCTURE DEFICITS

Given this commitment to service reform, how can we understand the current water deficiencies? There are a few proximate causes such as environmental factors related to drought, but also political decisions: rationing and infrastructure deficits. The latter have grown worse within the highly politicized environment of hyperinflation, irregular tendering procedures and US sanctions.

From 2014 to 2016, Venezuela suffered its worst drought in 47 years (Dutka 2016), which left the reserves at Caracas’s main drinking water reservoirs at dangerously low levels. It also famously disrupted electricity in the capital and other parts of the country due to the reliance on hydroelectricity produced at the Gurí dam. Again, in early 2020, as the Covid-19 pandemic hit the Caribbean nation, the capital experienced a dry spell (León 2020). However, the roots of the water problem go much deeper than the weather.

In response to drought conditions in 2015, Hidrocapital imple-

mented water rationing through the Caracas *Plan de Abastecimiento* (Water Supply Plan). Rationing has reduced its overall water production from 18-19,000 L/s to 13-14,000 L/s, with many of Caracas's 86 pumping stations operating at half capacity (Delasio, presentation in Hidrocapital, November 2017). However, even after the reservoirs recovered, the plan has remained in effect. Current and former Hidrocapital officials explain that the reduced level of operations has outlived the drought given leaky and malfunctioning pipes and breakdowns at pumping stations (interview with Hidrocapital community promoter, December 14, 2017; interview with former Hidrocapital management, December 21, 2017). These issues stem from a combination of difficulties accessing replacement parts and poor maintenance. Operating the pumps at half capacity also takes a toll on the systems as the equipment degrades more quickly when it's turned off and on.

The reduction in service levels means that since 2015, many communities who used to receive water continuously now receive water for only half of the week. Many popular barrios have always received intermittent service according to what's called an "internal cycle." The internal cycle is a community-level water rationing plan whereby the utility directs water to individual neighbourhoods according to a loosely predetermined schedule. Parts of the city with the longest internal cycles have been exempt from the rationing plan. For those on an internal cycle, periods without water can range from 7 to 15 days, or as long as every 1-2 months, so residents must prepare by storing water. The community water councils discussed above play an essential role in overseeing these water cycles. Residents help the utility by informing them if water has not arrived on time; the utility, in turn, conveys important information about the cycle in these meetings.

Infrastructural breakdown lengthens the already long cycles. Such instances have become more frequent due to shortages of materials and reduced utility budgets due to hyperinflation. Regular blackouts in Caracas further interrupt water services given the reli-

ance on electricity for pumping water. When service is intermittent it means that pipes are not pressurized, which increases the risk of water contamination (interview, former Hidrocapital manager, December 21, 2017). Blackouts further take a toll on the machinery when protections are not in place for water backflows that damage the pipes and pumps (Prodavinci 2018).

Some water experts suggest that the water shortages could have been avoided with additional investments in the maintenance of existing infrastructure, as well as additional measures to maintain water reservoirs and protect their watersheds. While data are unreliable given the politicized nature of water supply, available sources maintain that from 2002 to 2014, Venezuela's water sector suffered a US\$150 million per year deficit below the level needed to maintain service coverage (Bausson 2018, Brin Laverde and Guevera Rey 2017). Meanwhile, some water experts estimate that US\$400-600 million per year over the next two years are needed to bring Caracas's existing infrastructure back up to acceptable standards (CSIS 2019, Sequera and Carvajal 2020).

Infrastructure works designed to increase the capacity of Caracas's water system have also been delayed. In 2005, the government began the construction of Tuy IV, a fourth water system (including a dam, reservoir and aqueduct) that would have delivered 21,000 L/s of water to approximately two million inhabitants of Caracas, Valles del Tuy and Los Teques. During our research in 2012, Hidrocapital officials told us that once the system was completed, many *barrios* would receive water 24/7. While the megaproject's completion was promised for 2012, it has experienced several delays due to budget shortfalls and changes to the project design (Bausson 2018, Observatorio de Ecología Política de Venezuela 2018). Today, it remains largely stalled.

Tuy IV is not alone among Venezuelan infrastructure projects that have experienced delays, cost overruns and irregularities. Problems with project design and management play a role. Under Chávez, and subsequently Maduro, infrastructure investment agree-

ments were increasingly achieved through bilateral agreements with strategic partners like Brazil and China, rather than through competitive and transparent procurement processes (Ellner 2017). Supporters and critics alike allege that the Bolivarian government has brokered these agreements to sideline sectors of domestic capital that were believed to be complicit in anti-government activities (e.g. the illegal failed coup of 2002), to forge counter-hegemonic alliances as a counterweight to US presence in the region and to move the money as quickly as possible. However, decreased public oversight has also fostered corruption and rushed planning decisions, leading to white elephant infrastructure projects (Ellner 2017; López Maya 2018; development bank official in Caracas, personal communication, May 16, 2016).

Economic sanctions have further hampered day-to-day Hidrocapital operations. As of 2019, US sanctions have prohibited foreign companies from trading with Venezuelan state entities and have blocked the country's access to international financial markets. A number of Venezuelan assets abroad have also been blocked since 2018, including Venezuela's US-based oil subsidiary CITGO, valued at approximately US\$7 billion, as well as US\$1 billion worth of gold in the Bank of England (Dobson 2020a). Economic analyst Francisco Rodriguez has noted that access to these funds could have provided crucial support for the country's Covid response (Dobson 2020a). Meanwhile a \$5 billion loan appeal during the pandemic was rejected by the International Monetary Fund (IMF) allegedly due to uncertainty over the legitimacy of Maduro's presidency (Dobson 2020a).

In the water sector, sanctions have crippled the government's capacity to import necessary replacement parts to fix broken pumps and pipes due to a lack of foreign reserves. As explained in 2019 by then-vice president of Hidrocapital, Maria Flores, "With the blockade, we've had situations where we have the pumps and the motors and they are about to ship and then comes the all-powerful hand of the United States and they block the money in the bank or sanction

the company that is working with us, just for selling us this equipment and without seeing that they are affecting people's lives" (cited in Fox 2019). A lack of materials, equipment and vehicles causes further delays in the already long internal water cycles within barrios because water is redirected to different sectors manually through an elaborate system of valves. If Hidrocapital technicians cannot access vehicles to change the valves, it means that communities do not receive water on time. The communities in which service continues are also impacted negatively since leaky pipes cause flooding when water is kept in the sector too long.

WATER USERS, PRIVATE VENDORS AND POPULAR ENGINEERING

How are residents coping with this new reality? A national survey during the pandemic finds that at least 56.7% of respondents store water, 18.5% pay for water from private tankers, 12.0% collect water from other places, and 10.5% buy bottled water (OVSP 2020b).

While the water crisis has undoubtedly affected all *Caraqueños*, some residents are better able to pay or have higher water storage capacity to weather long water interruptions. For example, ethnographic field research in 2017 indicates that many of residents of Caracas's wealthy Altamira and Los Palos Grandes districts in the east also face intermittent water services (with water arriving a few days a week), but buildings and individual apartments often have large water tanks to store water. Other middle and upper-class residents reportedly have illegally built private wells on their properties (Smith 2018). In the *barrios*, some residents have rooftop storage tanks, while those who are accustomed to more regular service have never had to invest in storage and must now scramble to fill whatever container they can find.

In the absence of regular public piped water or modern storage facilities such as water tanks, residents in low-income sectors who must leave their homes to purchase water or collect it from streams and springs of questionable quality face the greatest health

risk. In addition to contamination concerns, these residents cannot follow public health recommendations to stay home to stop the virus's spread. Meanwhile, having to spend scarce resources on water from private suppliers is heavy burden for Venezuelans still suffering from a prolonged economic crisis. A new tax on bottled water has further driven up the costs of what is, for many, an essential item (Voces Por el Agua 2020).

Other reports highlight cases of “popular engineering” in low-income sectors, with residents digging shallow wells or adopting even more extreme measures. Sputnik correspondent Magda Gibelli (2020), reports that communities near Caracas's Cuota Mil highway have taken matters into their own hands after months without water during the pandemic. Neighbours improvised their own water system, making use of abandoned water-filled tunnels from a highway construction project in the foothills of the Waraira Repano mountain (commonly referred to as El Ávila). They built a pipe system that carries water to their community by gravity. Water arrives to a community tap connected to a long hose. Each family is assigned certain days and times to collect water from the tap, avoiding the need to wait for water trucks or buy water. While heroic, such artisanal solutions are also dangerous given concerns about the safety of the water supply, as well as risks to community safety in the construction process.

THE COVID-19 RESPONSE

In response to Covid-19, the utility, municipal governments and the national water ministry have adopted a multi-pronged approach. On March 22, 2020, the government announced a six-month moratorium on shutoffs for basic services due to non-payment to assist residents affected by Covid (*Infobae* 2020). Another key pillar of its emergency measures has been an enlarged fleet of water tanker trucks managed by the water utilities and municipalities. Each day a small army of tanker trucks takes to the Caracas streets, providing

water for those with the most irregular services, as well as essential facilities like healthcare centres, Covid testing sites and hotels with quarantined travelers.

The national government has imported over 1,000 new tanker trucks through agreements with China and Mexico, which exchange oil for food and other goods (*El Nacional* 2020, Martínez y Marianna Párraga 2020). In Caracas, both Hidrocapital and the municipality offer tanker deliveries. As of late August 2020, through its *Plan Agua Caracas*, the municipality is distributing at least a million litres of water per day with 23 regular tankers, 18 supertankers with a capacity of 35,000 L and 5 with 10,000 L (VTV 2020). Distribution is carried out in cooperation with local technical water committees to determine areas in need. Unlike their expensive private equivalents, public tanker deliveries are free. While tankers provide an important lifeline during the pandemic, some water experts suggest delivering water by tanker is economically inefficient and inadequate for meeting daily water needs (Sofia Garcia 2020). Moreover, during Covid, waiting in line for tanker deliveries can create an additional risk of spread for water users and workers.

Venezuelans with formal connections to water and sanitation have traditionally benefitted from low, subsidized rates for public services. Residents of certain Caracas neighbourhoods benefit from an additional tariff reduction under a “social tariff,” while *barrio* residents with highly deficient services are not charged at all. Water charges are volumetric, but based on an estimated water use since most Caracas households are not metered.

As part of a government commitment to affordable public services, tariffs were frozen from 2004 to 2009, and then reportedly again from 2011 to 2018 (official from the Hidrocapital Subgerencia Comercial Metropolitano, personal communication, November 2, 2017; Bausson, 2018), but since then have been increased in response to inflation. In May 2020, early in the pandemic, Hidrocapital reportedly further raised the tariffs. The increases have allegedly reached as high as 19,000% (*El Universal* 2020), with commercial

users affected more than residential ones (Venezuelan journalist, personal communication, August 23, 2020); however, it is difficult to find official information on the increase.

Some have critiqued the utility's decision to increase tariffs in the context of a pandemic and low service quality (*El Universal* 2020). However, for others, such measures are sorely needed. One study in 2018 found that Venezuela's water tariffs were below the rates of other large cities in the region by as much as 4,349-27,460% (Prodavinci 2018). As early as 2016-2017, water activists from the technical water committees were arguing for an increase in tariffs, with the hope that such reforms would strengthen the public service and reduce their reliance on more expensive private providers. Hidrocapital officials noted that in 2017 less than 5% of the utility budget came from user fees (official from the Hidrocapital Subgerencia Comercial Metropolitano, personal communication, November 2, 2017).

Defining an appropriate tariff structure is complicated, given the disconnect between Bolívar-based and dollar-based economies in Venezuela, as the country undergoes gradual (though unofficial) dollarization. While many utility expenses – like importing component parts – must be paid in dollars, official wages continue to be paid in bolívares. For years, the government subsidized imports using oil revenues, which allowed prices for goods and services and wages to remain artificially low. While this stifled domestic production, it maintained stability so long as oil reserves could support the subsidy system. Today, as food and other necessities are adjusting to “real” market prices and are increasingly sold in dollars, residents who earn in local currency struggle to make ends meet. This disconnect between earnings and the cost of living also makes it difficult for the utility to charge the types of water tariffs that might bring meaningful revenue to the utility.

A future path that would help to redistribute the wealth would be an overhaul of the tariff systems to provide a more significant cross-subsidy between wealthy and poor users, such as the tariff

structure in OSE (Uruguay) (Spronk 2010, Spronk et al. 2014).

To give an example to support the need for reform, *El Universal* (2020) reports that in May 2020, an apartment in Caracas's city centre experienced a monthly increase on its water bill from VES1,200 to VES40,000. As of August 24, 2020, the official exchange rate for the US dollar was VES307,000 – which would mean that VES40,000 is mere cents! However, if you are earning the minimum wage of VES400,000 (plus 400,000 in food credits), that is 10% of your monthly cash income on piped water. This expense may also need to be supplemented with bottled water given questionable water quality in some areas.

In terms of long-term responses to the crisis, the government has recently announced a new *Plan Nacional de Aguas* to address the combined threats of water deficiencies and Covid. This will hopefully bring renewed attention and much-needed investment to the sector. The latter will likely need to come from a variety of sources, including potentially progressive tax reform. Public and worker consultations for the plan were held in August 2020. While details of concrete measures remain scarce, Water Minister Evelyn Vásquez explains that the plan contains six axes, which include:

1. reinvigorating the technical water committees and the community water councils and mapping local solutions;
2. strengthening and preserving the sovereignty of the water system through repairs and stabilization of the systems;
3. strengthening the security of the water system in cooperation with the military and police;
4. education, innovation and technology to stimulate local production of component parts and the training of local water experts;
5. the transformation of the management model, including accelerating the transfer of services to communities and the creation of workers' production councils (see below);
6. water harvesting and production, including water conservation (Alvarez 2020).

PUBLIC WATER WORKERS RESPOND TO THE CRISIS

Hydrocapital workers are on the front lines during the Covid-19 pandemic and maintain a strong commitment to public service despite serious declines in working conditions and real wages for all public sector workers in Venezuela. Employees of HIDROVEN and its subsidiaries like Hydrocapital are unionized through the national *Federación de Sindicatos de las Empresas Hidrológicas de la República Bolivariana de Venezuela* (FESIEMHIDROVEN). During Covid-19, Hydrocapital workers are shielded by special labour protections the government has implemented during the pandemic. For example, job dismissals as a result of quarantine have been outlawed, and all public and private sector workers receive a special government bonus (Dobson 2020b). Masks are mandatory in Venezuela, and the national government has deployed the *Sistema Nacional de Gestión de Riesgo* (National Risk Management System, SNGR) to regularly disinfect public spaces, including the Hydrocapital offices and pumping stations. In addition, the teams clean other government offices, airports, bus and metro terminals, public squares, streets, markets and other high traffic areas (*Ciudad CCS / VTV* 2020).

Despite these protections, there are serious concerns about the deteriorating economic situation exacerbated by the pandemic. Like Venezuela's other public sector unions, the water union laments that their wages have not kept up with the challenges of an increasingly expensive and dollarizing economy. In a publicly available communiqué dated May 7, 2020, the water workers' union denounced a "grave deterioration" in the conditions of current and retired workers in the middle of the Covid-19 crisis. Their main grievance: that their base salaries and the special bonus did not cover their basic cost of living, meanwhile food baskets (a benefit guaranteed to workers) were not arriving (FEDESIEMHIDROVEN 2020).

Among other concerns were a lack of transport and equipment for workers, and other safety provisions. This has been an ongoing

issue in the resource-strapped nation amid revenue shortages and sanctions. During field research in 2016-2017, Hidrocapital workers were using public transit and borrowing community members' for vehicles to do much-needed repairs or change water valves since the utility's fleet was in disrepair due to shortages of vehicle parts, batteries and engine oil. Many workers expressed concern about personal security and liability given that community vehicles are uninsured.

Until recently, Hidrocapital outsourced many of its operations functions, including the management of its Caracas pumping stations, to private "cooperatives." Since 2014, the utility has taken over these functions, absorbing many of the original cooperatives' staff members. In theory, this move strengthens the public sector union and brings workers into the government benefit structure. However, in 2016-2017, workers also reported serious challenges with this transition. Many of the vehicles and other equipment belonged to the private provider, which repossessed them after the transition. Some days workers reported remaining stranded at the base, unable to carry out necessary repairs. As one Hidrocapital manager commented in 2017, "before, when the workers had their cooperatives, it was *mantequilla* ("easy-peasey"). Now, I have to take care of my workers for everything... boots, uniforms..." (meeting of the *Salas de Gestión del Agua*, Hidrocapital, December 1, 2017).

There were also concerns about workers' safety even before the pandemic hit. The death of a worker in 2018 raised serious concerns over safety protocols (Meneses 2018). Conducting work in the barrios can also present security risks of violence or theft. While visiting a pumping station in El Valle in 2017 (a western parish home to many barrios), for example, workers reported that the pumping station had been robbed of its copper components. Others have reported being threatened at gunpoint or having vehicles hijacked. Allegedly, in part due to the risks of violence and criminality, the government began piloting a training and recruitment program to hire local operators from the area under what they described as a

“community brigade.”

During the pandemic, workers have demanded an increased role in the governance of Venezuela’s public water utilities. While workers in Hidrocapital already have various opportunities for participation and *autoformación* (self-training), the national union has called for the creation of *Consejos Productivos de Trabajadores* (Workers’ Production Councils) in the operations sector of all utilities (FEDESIEMHIDROVEN 2020). According to Venezuelan law, Venezuelan public and private sector enterprises should have at least one council (Asamblea Nacional Constituyente 2018). Their role is to evaluate and oversee production, commercialization, and distribution of goods and services in the interests of “the people.” Some utilities like Hidrofalcón in the western Falcón state already have functional councils while others are under development.

CONCLUSION

At stake in the current moment is not only the health and well-being of residents, but also the future direction of Venezuela’s public services. Given residents’ high rate of reliance on private providers and self-help measures, HIDROVEN and Hidrocapital require a much-needed influx of cash to maintain the pumping stations and pipes, and restore abandoned infrastructure works. Crisis-driven austerity risks hollowing out the public utility and further reversing the gains of the Chávez era. Addressing the compounding social and economic crises exacerbated by Covid-19 will require the following:

Transparency and communications:

- A lack of transparency on water quality, quantity and other utility operations undermines the social-public nature of the utility. It can also breed distrust with the public utility in a context where there may be legitimate reasons for service delays or service challenges.
- Transparency in decision-making and investment plans will help boost confidence in the public service at a time when

trust in government services is low.

Infrastructure investment:

- Water experts highlight the need to invest in maintaining and upgrading existing infrastructure in the short term rather than building new infrastructure. In the long term, an investment plan should guide future decision-making. Public debate on such plans and on tariff reform and alternative financing mechanisms would strengthen the social-public character of the utility.

Labour protections:

- Hidrocapital workers are at the frontlines of a challenging situation and are calling for greater worker protections and greater voice in water utility governance.

Community participation:

- Community participation, with adequate precautions, is as essential as ever during the pandemic, given the need to oversee crisis responses.
- Public dialogue is needed on tariff reforms and alternative financing mechanisms, including plans for cross-subsidization.

Sanctions and international solidarity:

- Venezuela's water service and Covid-19 recovery has been undermined by foreign sanctions. In a spirit of solidarity, defenders of public services must show critical solidarity in advocating against punitive sanctions on the part of their home governments.

Given the quickly evolving situation, more research is needed on public water management in Venezuela, particularly in smaller cities and rural areas. The combined water, health and political crisis in Caracas illustrates the importance of well-managed and transparent public services for health, social equity and democracy. While this chapter paints a grim picture, it also illustrates that against all odds, struggles for a social-public model of public provision persist. In the words of one community water activist, "water is vital. And it

now more than ever it is going to depend on all of us, united.”

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Chapter 12

Marwa Marwa

A DOUBLE-EDGED SWORD? COVID-19 AND WATER REMUNICIPALIZATION IN JAKARTA

Jakarta has emerged as the epicentre of the Covid-19 outbreak in Indonesia. While handwashing has been promoted as the most effective preventive measure, Jakarta's unequal water governance has made it difficult for the urban poor to access adequate water supplies. Critics of Jakarta's water privatization have long argued that remunicipalization is the best way to address these inequities, and the Covid-19 crisis has added momentum to this ongoing struggle. However, this paper finds that Covid-19 has the potential to be a double-edged sword for Jakarta's remunicipalization process. While increasing bottom-up pressure for water remunicipalization, the social and economic impacts of the Covid-19 crisis have allowed the national government and international development agencies to promote privatization. As a result, the future of Jakarta's remunicipalization remains uncertain.

INTRODUCTION

By mid-2020 Jakarta was the region in Indonesia hit second-hardest by Covid-19, with almost 20% of the country's 95,418 confirmed cases (Government of Indonesia, 2020). The provincial government has been promoting a healthy and hygienic lifestyle, with handwashing promoted as one of the most effective preventive measures to curb

the spread of the virus. However, it will be difficult for the campaign to succeed considering Jakarta's unequal water governance, which has created a disproportionate burden among citizens, particularly the urban poor. A lack of adequate water access is worsened in densely populated settlements with no adequate basic infrastructure such as sanitation facilities and drainage, which heighten the risk of Covid-19 infections.

The failure of Jakarta's water service governance in providing adequate water access for its citizens has been brought to the fore by the Coalition of Jakarta Residents Opposing Water Privatization (KMMSAJ). Since 2011, this coalition of groups has condemned the current form of privatized water governance and demanded that the city's administration take over water utilities as a public service – i.e. remunicipalization. In this context, remunicipalization is not merely a matter of transferring the water company to public hands, but also evaluating existing water service governance by redefining the human right to water and expanding space for public participation (Lobina et al. 2019). After years of struggle, mobilization for water remunicipalization gained significant momentum in 2019, when Jakarta's governor, Anies Baswedan, agreed to eventually remunicipalize the water sector. Hence, considering its emancipatory objectives, Jakarta's water remunicipalization has raised hope for better water service provision, especially for low-income communities (Atika 2019).

This paper aims to understand the extent to which the Covid-19 crisis has affected the push to remunicipalize water in Jakarta and what impacts this could have on water inequality. With a combination of primary and secondary data, news reports, as well as online interviews with key actors in the remunicipalization coalition, I argue that Covid-19 has the potential to be a double-edged sword for the remunicipalization process. On the one hand, it has increased the urgency for water remunicipalization and forced the coalition to modify some of its strategies. On the other hand, the social and economic impacts of the Covid-19 crisis have allowed the national

government and international development agencies to promote privatization at the city level. Therefore, the future of Jakarta's remunicipalization remains uncertain.

To explore the case study, I arrange the paper into three sections. First, I examine how Covid-19 has worsened Jakarta's existing water inequality, producing a disproportionate distribution of burden and risk on the urban poor. Next, I discuss how Covid-19 has influenced Jakarta's process for water remunicipalization in the context of the grassroots movement and policy discussions. Lastly, I conclude by presenting the lessons learned from Jakarta's water remunicipalization process and how to maximize its transformative potential to address Jakarta's persisting water inequality.

JAKARTA WATER INEQUALITY AMIDST THE COVID-19 CRISIS

The exclusion of low-income communities in Jakarta's water governance structure has been well researched (Bakker et al. 2008, Colbran 2017, Kooy et al. 2018, Kurniasih 2008, Putri 2016). Bakker et al. (2008, p.1897) used the term "elite archipelago" to describe Jakarta's Dutch-inherited water infrastructure. The network concentrates on the middle-higher income areas, making access to water in Jakarta socially and spatially fragmented. In 1997, the city's water utility PAM Jaya was officially transferred to two water multinationals, Suez and Thames, who operated through subsidiary companies, namely Palyja and Aetra. They managed the western and eastern parts of the town respectively through a 25-year concession. The scheme is also known as a public-private partnership where PAM Jaya acts as the owner of the piped water facility. Meanwhile, service operation such as treating water, building new connections, and collecting fees became the responsibility of two private operators.

From the beginning, however, stakeholders were aware that providing access for low-income communities was not in the interest of private operators due to concerns of low-cost recovery and uncertainty of investment. In response to this, the government required

the utility and private operator to implement a block tariff system and flexible payment mechanisms for low-income households to complete the payment for an initial connection in 12-month instalments (Lanti 2006). The effort to promote water privatization's legitimacy in addressing water inequality is also supported by financial aid from development agencies. For example, in 2007, World Bank awarded Palyja with US\$2.57 million to subsidize instalment fees for low-income households (Menzies and Setiono 2010). Another example was the USAID-sponsored master meter program implemented in 2015 to connect low-income families lacking administrative qualifications such as land titles and identity cards. These strategies were seen as a pro-poor strategy providing "the missing link between the welfare of the poor and the private sector financial needs" (Mumssen et al. 2010 as cited by Padawangi and Douglass 2015, p.122).

Despite these policies, the number of low-income households connected to the network remains low. According to the Jakarta Water Regulatory Body (JWRB), service coverage of the network is now at a historical high of 40%, where middle class consumers represent the most significant number of customers of private sector water service providers (Kooy et al. 2018). The low number of piped water connections for low-income households can be explained in two ways. From the supply side, it is not in the interest of private operators to connect low-income households, especially those situated in informal settlements, given the lack of potential profit. From the demand side, low-income communities are facing structural barriers to connect, with many residents in informal settlements unable to prove their residential status and land ownership, and therefore considered to be ineligible for piped water connection (Colbran 2017).

Meanwhile, for those connected to the piped water network, water privatization has created the burden of constant tariff increases and low-quality service. Since it was first implemented in 1997, water tariffs have been revised seven times and increased ten times

(Zamzami and Ardhanie 2015). But the increase in water tariffs have not been met with improved service quality, as water supply becomes increasingly intermittent and unsafe, with low-income households on the periphery of the network having very low water pressure (Padawangi and Vallée 2017, Marwa 2019a). In contrast, the city's business districts and affluent neighborhoods enjoy more reliable access to clean water (Heriyanto 2018).

In the absence of reliable piped water connections, low-income communities are forced to seek alternatives such as groundwater (Colbran 2009). However, massive groundwater exploitation has made it increasingly difficult for low-income households, especially those who live in the coastal side of the city, to access water as the shallow groundwater has both exhausted and salinized (Abidin 2014). As a result, low-income households engage in a variety of water-collecting methods, including buying water from neighbours, pushcart vendors and water trucks (Marwa 2019a). In Penjarangan, a low-income settlement in North Jakarta, around 88% of the lowest-income residents buy water from their neighbours (Kooy et al. 2018).

These practices are 40 to 60 times more expensive than subsidized piped water, with quality that is dubious. According to Statistics Indonesia (BPS), in 2019, low-income households spent 36% of their income on daily water needs (Surjadi 2019), as well as considerable time spent travelling to collect water. In times of Covid-19, accessing water this way becomes all the more challenging financially and logistically. The provincial government policy of large-scale social restriction has made it difficult for low-income communities to maintain their household income generated from the informal street economy (Wilson 2020). As a result, the decrease in revenue is not consistent with high household expenses on water, with low-income communities having to negotiate their need for handwashing and other personal hygiene activities such as bathing.

Additionally, the economic impacts of Covid-19 have also made it difficult for low-income communities connected to piped water

networks to fulfil their monthly water payments, so they run the risk of having their water supply cut off. Both Palyja and Aetra still demand payment for all types of customers whose bills will be calculated based on average usage in the past three months. The water cut-off policy is still applicable when the customer does not pay the bill. One clear example was water cut off to low-income housing in eastern Jakarta, where some residents were unable to pay the bill due to the loss of household income (Setiawan 2020). Consequently, with the lack of adequate water and sanitation, Jakarta's water inequality has worsened with the Covid-19 crisis, and the low-income community has to bear a disproportionate risk of catching and spreading the Covid-19 virus. Thus, it is evident here that Jakarta's water inequality and Covid-19 crisis have trapped the low-income community into a vicious cycle of vulnerability that can only be solved through a transformation of Jakarta's water governance structure.

COVID-19: MOMENTUM OR CHALLENGE?

Criticisms of Jakarta's water inequality have been frequent since the early era of privatization (Ardhianie 2006). Like most anti-privatization criticism, they were built upon the notion of the human right to water, which is argued to be contradictory with the practice of water privatization. This notion was manifested in 2002 with the creation of the civic coalition KRuHA (People's Coalition for the Right to Water). Their aims were to promote the human right to water and oppose water commodification and privatization. Later in 2011, KRuHA organised a civic coalition that consisted of different actors with various social and environmental concerns, known as the Coalition of Jakarta Residents Opposing Water Privatization (KMMSAJ). The movement later evolved into a remunicipalization movement aimed not only for the transfer of ownership of the water sector but also for increased public recognition and participation in water sectors for the fulfilment of the human right to water (Lobina et al.

2019).

While the struggle for remunicipalization is ongoing, the Covid-19 crisis and the need for equitable access to water have strengthened its urgency, and it has been argued as an alternative water governance model for Jakarta's persisting water inequality (Atika 2019). KMMSAJ used this momentum to reaffirm that the private operator has failed to provide adequate, reliable, and affordable access to water, especially for low-income communities during the Covid-19 crisis. Representatives from Jakarta Legal Aid Foundation, a member of KMMSAJ, argued that water privatization had turned water into a commodity whose access is exclusive to the middle-to-upper class (Ambari 2020). Along with the same lines, KMSSAJ released an official statement addressed to institutional actors in Jakarta's water service governance, with the following demands (Ambari 2020):

- State control over water resources for the greatest benefit of the people as stated in Indonesia's constitution article 33;
- Jakarta's governor to terminate water privatization contracts with two operators and return the service to public control;
- Jakarta's government to ensure availability and access to clean water for all residents, especially the low-income and marginalized community, to contain the spread of Covid-19 virus and protect public health;
- The regional legislative body to ensure that Jakarta's governor carry its constitutional duty to control and manage water for the resident's welfare;
- Allow for the involvement and participation of the people in Jakarta's water governance and decision-making processes;
- Demand Corruption Eradication Commission (KPK) to supervise the hand-over process of the Jakarta water sector, which is prone to corruption.

Aside from KMMSAJ demands, some organizations also demanded a specific emergency water response for low-income communities, especially in informal settlements. The demands include handwashing facilities and water payment relief. Unfortunately,

PAM Jaya only responded to the handwashing facilities, installing them in one third of informal settlements, while the demand for water bill relief has gone unanswered (G. Muhammad, personal interview, 2020). Nevertheless, KMMSAJ continues to circulate these demands through online media and platforms in the hope of local government policy response. KMMSAJ are also creating various online policy discussions, seminars and conferences (M. Reza, personal communication, June 10, 2020; G. Muhammad, personal interview, 2020). These strategies work well to increase public pressure given that traditional mobilization strategies such as rallies and marches are not possible during the pandemic.

The Covid-19 crisis has motivated KMMSAJ not only to use an online platform but to rethink its litigation strategy (M. Reza, personal communication, June 10, 2020). In the past, KMMSAJ's litigation strategy and its consecutive legal winnings have been highlighted as a distinctive feature of Indonesia's remunicipalization struggle (Marwa 2019b). But the Covid-19 crisis has made it more difficult to challenge privatization through legal strategies as the national government has been producing various pro-business regulations to attract foreign investors deemed necessary for post-crisis economic recovery (Harsono 2020). One such example is the controversial omnibus law on job creation that seeks to encourage more investment by deregulating the labour sector, easing environmental protection, and privatizing previously state-owned infrastructure, such as electricity. The proposed legal article that is particularly challenging for the water remunicipalization struggle is the promotion of a centralized form of resource governance to ease business activities that are hindered by local regulations (Eloksari 2020).

As an alternative to litigation strategy, a representative from KRuHA defended the importance of linking the water remunicipalization struggle with more prominent movements for social justice and environmental protection. The omnibus law has generated opposition mainly from human rights and environmental groups, which have criticized the prioritization of economic growth over so-

cial and environmental justice (Jakarta Post 2020). A representative from KRuHA described the current situation as “going back to the post-reformation” era (M. Reza, personal communication, June 10, 2020). He argued that as the social movement is forced to absorb so many issues at the same time, it becomes more challenging for grassroots organizations to shape the public debate (M. Reza, personal communication, June 10, 2020). Therefore, rather than focusing on the sectoral narrative of urban water access and competing with other movements, KRuHA links the struggle for water remunicipalization with other social justice and environmental struggles at a national scale to reclaim public control over water resources. This strategy is in line with the concept of *Semesta Air*, which embodies a holistic idea of water that connects humans with the environment on various scales and forms connections with different kinds of surface water based on hydrological cycles (Lobina et al. 2019).

Unfortunately, increasing demands and pressures for remunicipalization have not necessarily accelerated the process in a pragmatic sense of ownership transfer or in a transformative understanding of increased public participation in water governance. The governor, Anies Baswedan, promised to gradually take over the water sector last year via a civil suit, as recommended by his advisory team in 2018, but his administration has not shown any significant progress on the take-over except an ongoing contract renegotiation between PAM Jaya and two private operators. This is partly due to the inconsistencies of Jakarta’s provincial government throughout the remunicipalization process, from a seemingly supportive move by creating an advisory team, to a dubious one of assigning an ex-Director of Aetra to lead the negotiation process. These inconsistencies have put the policy process for water remunicipalization into a deadlock as the provincial government has to face stiff opposition from two private operators and the national government (M. Reza, personal communication, June 10, 2020).

While negotiations continue to take place behind closed doors,

the current situation with the Covid-19 crisis has actually served to intensify pressures in favour of privatization, with pro-privatization advocates arguing that it is good for economic recovery and building the city's resilience. International development agencies such as the World Bank have been promoting private capital as the sole solution to funding massive infrastructural projects (Bigger and Webber 2020). This pressure has resulted in Jakarta's provincial government favouring public-private partnerships to achieve urban resilience. For example, Jakarta's governor has recently given the green light for a controversial project of National Capital Integrated Coastal Development (NCICD) as part of a flood mitigation strategy. The high investment cost up to US\$40 billion for this project would be generated through a public-private partnership scheme (Both ENDS, SOMO and TNI 2017; Nurbaiti 2020).

As a result, debates about water remunicipalization have been sidelined to some extent among government elites, while the focus of discussion has been limited to transfer of ownership and expansion of access without acknowledging the importance of public participation (Tambun 2019). The head of PAM Jaya also used Covid-19 to shift the debate into a more technical discussion of water distribution while neglecting the persisting inequalities that characterize Jakarta's water governance. When confronted with the question of water remunicipalization, he simply said the company would focus on providing clean water by adding as many as 30,000 new customers in North and West Jakarta and setting up portable sinks in some public spaces to tackle the pandemic (Syakriah 2020).

RETHINKING WATER REMUNICIPALIZATION

To conclude, the Covid-19 crisis has exacerbated Jakarta's existing water inequality and placed low-income communities into a vicious cycle of vulnerability where they bear a disproportionate virus burden and risk. The grassroots coalition KMMSAJ has used this momentum to highlight Jakarta's water inequality and accelerate the

policy process for remunicipalization. Considering the limits of resources and space as a result of the Covid-19 crisis, KMMSAJ has been forced to modify some of their strategies by moving their activities online, using non-litigation strategies and expanding their alliances to boost the bottom-up pressure for remunicipalization.

Nevertheless, this pressure has not resulted in urgency at the policy level. Covid-19's negative economic impacts have motivated the national government to promote privatization to attract more foreign investment, while international development agencies have endorsed private investment as the solution to the city's twin dilemmas of resilient infrastructure and fiscal constraint. Meanwhile, the provincial government, which has been inconsistent in its position on remunicipalization, has authorized flood mitigation projects using a public-private partnership scheme. For these reasons, the Covid-19 crisis has become a double-edged sword in Jakarta's remunicipalization process. It provides momentum for bottom-up pressure while at the same time reinvigorating a pro-privatization elite

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Chapter 13

Beverley Mullings

AN OPPORTUNITY TO PAUSE AND REIMAGINE: JAMAICA'S PUBLIC WATER AFTER COVID-19

The Covid-19 pandemic has brought into sharp relief the threat to public health that accrues when segments of a population do not have access to public water. Water has emerged as a crucial element in the sanitization regime of hand-washing and surface cleaning that has proven successful in slowing the spread of contagion. Efforts in Jamaica to respond to the urgent need for universal public water access are revealing the magnitude of the financial challenge that the island's deteriorating water infrastructure poses for its main public water operator – the National Water Commission. The pandemic has also amplified the shortcomings of efforts to create public-private partnerships that focus on cost recovery of non-revenue water rather than investments in sustainable infrastructural alternatives.

This chapter argues that the Covid-19 pandemic has offered Jamaicans an opportunity to pause and re-evaluate the importance of universal public water access to island life and health, and the imperative of placing greater emphasis on innovations aimed at creating sustainable infrastructural upgrades rather than sophisticated technologies aimed at improving efficiencies in cost recovery.

INTRODUCTION

It is somewhat ironic that the name *Jamaica* derives from the word *Xaymaca* – a term meaning “land of wood and water” that was used by the earliest inhabitants, the Taino, to describe the island. This is a description that no longer characterizes the environmental conditions under which the people on this 11,000 km² island secure access to water. Although approximately 93% of the population have access to drinking water, there are great inequalities in the distribution, ease of access and cost of access, all of which have been exacerbated by the Covid-19 pandemic. What has become clear in the wake of the coronavirus crisis is the scale of water mismanagement in Jamaica over the last 40 years and the need to reassess what it means to provide universal access to clean and safe water. As Arundhati Roy so aptly observes, the pandemic is a portal that has illuminated the inequalities of existing water management policies that expose specific populations to death and disease, but also an opportunity to re-imagine public water provision in ways that truly value universal access as a basic human right.

A quick perusal of aggregate statistics paints a picture of public water access in Jamaica that looks relatively good. In 2017, 90.6% of the population had access to at least basic drinking water services (World Development Indicators 2020), defined by the WHO/UNICEF (2020) as “drinking water from an improved source, such as piped water, boreholes or tubewells, protected dug wells, protected springs, and packaged or delivered water, whose collection time is not more than 30 minutes for a round trip.” This figure rose to 95.5% for people in urban areas and fell to approximately 85% in rural areas. Estimates published in the 2019 National Water Sector Policy and Implementation Plan provide a more detailed picture of access to water across the island. The plan indicates that approximately 70% of the population receive water via house connections provided by the main public water operator – the National Water

Commission (NWC), with the remaining 30% obtaining water from public standpipes; water trucks; wayside, community and rainwater catchment tanks; as well as rivers and streams (Government of Jamaica 2019).

But behind these figures lies a less impressive story of deteriorated infrastructure, restricted quality of service, highly unequal access and a significant transfer of provision costs to private households. While most Jamaicans have access to a drinkable water supply (National Water Commission 2020), the quality and quantity of the service provided is compromised by the ineffectiveness of its ageing water infrastructure (Government of Jamaica 2019). The Covid-19 pandemic has brought to light the inequalities and vulnerabilities of Jamaica's water regime. Not only has it amplified the inability of the island's deteriorating water infrastructure to provide households with continuous access to potable water, it has also illuminated the unacceptable levels of public health risk that inequalities in service provision impose upon low-income households.

DETERIORATING WATER INFRASTRUCTURE

Jamaica's deteriorating water infrastructure is the culmination of years of inadequate investment – a reflection of the island's ongoing indebtedness and economic crisis that has left much of the infrastructure laid down in the 1960s at the time of independence woefully under-maintained. The Jamaican auditor general estimated that levels of non-revenue water (water that is “lost” before getting to the consumer), were as high as 71%. In 2014 the agency calculated that of the 270 billion gallons of non-revenue water produced, approximately 49% was due to leakages and 51% to unpaid use (Auditor General's Department of Jamaica 2014). Combined with the low rainfall and drought conditions in parts of the island for almost a decade, consistent water supply continues to be an ongoing problem for households across the island. Water is routinely restricted, and in urban areas like Kingston it is not uncommon for piped wa-

ter to be suspended at night or on certain days during the week. Insecurity of water supply has become such a fact of daily life that even among the 70% of urban households who receive water from a piped source it is necessary to purchase water storage tanks in order to ensure a reliable supply. Without these tanks most households in Jamaica would not be able comply with the World Health Organization's washing and sanitation guidelines for keeping safe during the pandemic.

INSECURITY OF TENURE, INSECURITY OF WATER

For households in rural areas, where less than half the population have piped water access (Government of Jamaica 2008), and among the estimated 20% of the island's population living in Jamaica's 750 informal communities, water insecurity has already become a life-threatening affair (Ministry of Transport, Works and Housing 2014). For as the pandemic has already illustrated, it is impossible to keep safe when a household's only source of access to drinkable water is a shared pipe within a tenement yard serving multiple families, or a public standpipe shared by a wider community. In addition, as noted in the 2019 National Water Policy and Implementation Plan, public water sources are often far away from homes (Government of Jamaica 2019). Twenty-seven percent of those who obtain water from standpipes in rural areas and towns outside the Kingston Metropolitan Area (KMA) must walk more than 500 metres. Among low-income households with insecurity of land tenure, social distancing, handwashing and surface sanitizing guidelines have been difficult to achieve in the absence of a reliable piped water supply.

It is not surprising that the rural community of Portland Cottage in the southern parish of Clarendon was one of the early Covid-19 hotspots, with some of the first recorded cases of infection (Mundle 2020). Located in a flood-prone no-build zone, Portland Cottage is an informal settlement whose residents have tried to maintain a

long-term presence in the hope that their continuous occupation of the land might eventually be recognized and their informal land tenure regularized. But the informal nature of the community has been part of the reason why 25% of the 4,704 residents of Portland Cottage purchase the water they use, 23% rely on public standpipes, and 22% rely on private catchments (Social Development Commission 2020). As Jamaica's economic crisis deepens under the strain of the pandemic, low-income and unemployed households will find it increasingly difficult to finance the increased water Covid-19 hand hygiene and sanitation protocols, especially since the cost of privately trucked water is higher than that levied on a piped supply. As one recently interviewed Portland Cottage resident explained: "The water only a serve...a week now because we have to wash we hand more often, and a \$4,000 we have to pay every time, and we're unemployed, so it difficult....This [purchased water] used to all serve more than two weeks, but it can't right now. We round here woulda like be like normal people and get water inna we house too" (Hyman 2020).

RESPONSES TO THE COVID-19 PANDEMIC

In response to the pandemic, the National Water Commission waived late payment and reconnection fees between May 2020 and July 2020 and developed a Covid-19 Assistance Programme (CAP) that provided customers experiencing arrears in excess of 90 days with a 30% discount (Allen 2020). Estimated as a \$500 million loss of earnings, the relief program (subsequently extended to August 31, 2020) offered approximately 31,000 formal customers a respite from the threat of disconnection, while helping the loss-making company remain economically viable (Loop Jamaica 2020, Dawkins 2020). The NWC has also expanded its provision of water to communities outside of its utility zone by hiring private contractors to truck water to communities outside its supply area (Linton 2020).

The CAP is a welcome intervention that will help households in

financial distress and those faced with precarious access to water. But this intervention neither addresses the ongoing problem of restricted and unreliable water access that billed residential customers routinely experience, nor the difficulties faced by families without access to a piped source. These are structural challenges that speak to Jamaica's need to overhaul its water infrastructure. But importantly, these are interventions that would have been unlikely had the NWC been a private water operator.

PRIVATIZATION: A FALSE SOLUTION?

For the past five years, the NWC has operated under the threat of privatization. Operating at a loss for the past decade, the public utility (established in 1980) has struggled to increase public access, distribution and infrastructure upgrades while at the same time increasing its levels of cost recovery. Water provision in Jamaica has also tended to be costly because of the large amounts of energy needed to produce water. For example, in 2019, energy accounted for approximately 30% of the utility's operating costs (Government of Jamaica 2019). Recognizing the depth of the challenge facing the wider water sector, in 2002 the government indicated its commitment to an Integrated Water Resources Management approach aimed at creating an enabling environment for "the development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems" (Government of Jamaica 2002).

As part of this approach, the government has focused on making the NWC more energy-efficient in a bid to reduce the high levels of non-revenue water lost in the production process. One such initiative has involved a five-year public-private partnership with Miya, a company specializing in urban water efficiency solutions owned by the European private equity investment firm Bridgeport (Reuters 2019). Contracted at a cost of \$42.5 million dollars the Miya/

NWC partnership aims to achieve daily savings of 70 million litres of water per day in the Kingston Metropolitan Area (Miya 2015), potentially saving the country \$250 million over the first five years (Kebede 2015).

At first glance, the NWC/Miya public-private partnership appears to be a successful venture, achieving a reduction in non-revenue water losses in the communities of Nannyville and Rockfort from 80% to less than 30%. But the savings obtained from this poor community have come from increased efficiencies in customer billing rather than from investments to upgrade the city's crumbling water infrastructure. While government efforts to improve efficiencies in public water provision are welcomed, the interventions undertaken appear to be less motivated by the goal of universal access than the need to demonstrate the government's commitment to the principles of cost recovery – a prerequisite for International Monetary Fund (IMF) support and an important incentive for investor confidence (Government of Jamaica 2019, 53).

In 2015, the government indicated its intention to privatize the NWC, and since that time has continued to move ahead with plans for divestment despite calls to consider alternative ways of improving the agency while keeping it in public hands. At that time, then acting president of the water commission, Mark Barnett, opposed the privatization of the utility (Johnson 2015) arguing that the NWC had already embarked on the type of strategies to reduce existing inefficiencies that private corporations typically would – i.e. increased tariffs, investments in more efficient billing technologies and the introduction of charges for late payments. Barnett also argued that privatization would not necessarily lead to a reduction in operating costs given the utility's heavy reliance on high-cost energy and mooted the possibility of exploring options of incorporating renewable sources of energy (Johnson 2015). While the NWC's program of cost recovery was viewed as a much-needed strategy to reduce the losses it routinely incurred, it has tended to prioritize short-term cost recovery strategies like increased tariffs and short-

ened grace periods for late payments, rather than the long-term renewal of the infrastructure that lies at the heart of the island's water problems (National Water Commission 2018).

An appeal written by the Jamaica Association of Local Government Officers to the World Bank to withdraw its support for privatization also highlights some of the general concerns held by civil servants for the lack of benefits to the poor (Davis Whyte 2016, Campbell 2016). Citing the relationship between privatization and high consumer tariffs, cut-offs for households unable to pay, quality problems and a general lack of transparent governance, the association echoed many of the concerns that civil society groups the world over have voiced for the last 20 years. But like the World Bank, the Jamaican government has continued to support the idea of privatization because of the opportunity it would present to divest itself of \$29 billion of debt linked to an unfunded pension scheme that was placed on the NWC's books in 2004 (Loop Jamaica 2019).

In 2018, the government negotiated a JMD15 billion loan (the second-largest transaction of this nature in the country's history) from the National Commercial Bank (Saunders 2018). The loan has allowed the NWC to refinance JMD59 million in US-denominated loans owed to foreign interests and has made it possible for the NWC to carry out a number of capital projects aimed at further reducing existing non-revenue water levels. In effect, the bond issue has served as a market signal. As the Prime Minister has noted, "We are now creating the NWC as an asset in which pension funds, insurance funds, and insurance funds can invest. That sets the stage for possibly placing the NWC on the stock market, where Jamaicans can own a piece of the NWC in terms of shares" (Saunders 2018). Combined with the government's declared intention to forge a new business model with "an international business partner who understands water" in 2019 (Loop Jamaica 2019), the privatization of the National Water Commission appeared to be a *fait accompli* until March 2020 when the novel coronavirus ushered in the current global pandemic.

CONCLUSION

The Covid-19 pandemic has offered Jamaica an opportunity to pause and re-imagine public water provision in ways that truly value universal access as a basic human right. Forty years of integration into global markets has decimated Jamaica's water infrastructure and left vulnerable communities at greater risk. As numerous scholars have argued, the principles embodied in the goals of universal water access do not sit well with market logics, and Covid-19 now reminds us the fate of our most vulnerable populations are intimately tied to those of our own. That the NWC has been able to respond to this crisis without resorting to market metrics to determine who should be supported and who should be abandoned, speaks to the difference between a mandate driven by profits and shareholder accountability, and one driven by the singular goal of universal access. If there is a lesson to learn from the Covid-19 pandemic it is that creative solutions abound – if we have a clear vision and the moral certitude to think beyond the logic of market fundamentalism. As Arundhati Roy reminds us, this terrible despair offers us a “chance to rethink the doomsday machine we have built for ourselves. Nothing could be worse than a return to normality” (Roy 2020).

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Chapter 14

Christopher Herzog
Arnd Wendland
Claudia Wendland

AN INSIDERS' PERSPECTIVE: HAMBURG WASSER'S RESPONSE TO COVID-19

This paper offers insights and shares the experience of Hamburg Wasser – the second-biggest German water and wastewater utility – in response to the Covid-19 pandemic, up to August 2020. As employees of this public-owned utility, we focus on the challenges and measures taken in our organizational structure to ensure delivery of water and wastewater services without compromising stability and safety, examining our emergency planning protocols, how they evolved during the crisis, and lessons for future crisis management and day-to-day operations.

INTRODUCTION

Hamburg Wasser is a group of public water and wastewater utilities providing water and sanitation services to more than two million consumers in the metropolitan region of Hamburg, Germany. There are two separate legal entities in the company – Hamburg Water Works (Hamburger Wasserwerke GmbH) and Hamburg Public Sewage Company (Hamburger Stadtentwässerung AöR) – but

they were combined in 2006 under one roof with a common aim, structure and procedures, as well as identical management for the first three hierarchical levels.

Both companies have always been owned by the Federal State of Hamburg. In 2004, citizens petitioned for a referendum against their potential privatization, and were successful, resulting in legislation in 2006 that guaranteed the public supply of water. The act reads as follows:

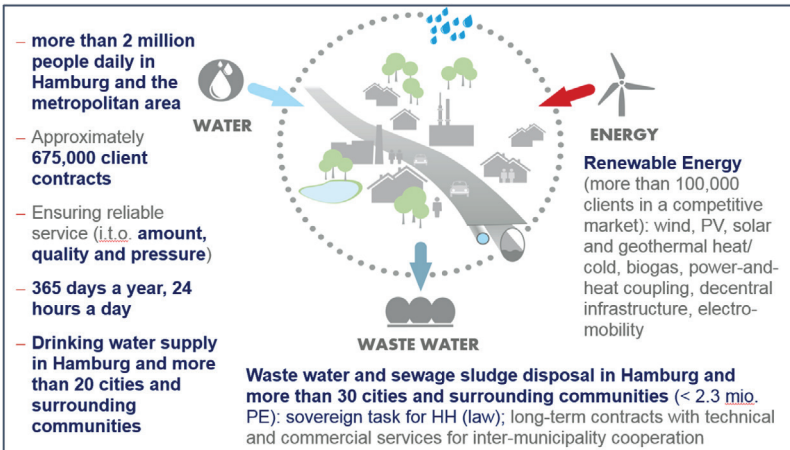
The public water supply is the responsibility of the Free and Hanseatic City of Hamburg as the state task. If this task is carried out by third parties, their shares are fully owned by the company of the Free and Hanseatic City of Hamburg. (Freie und Hansestadt Hamburg, 2006)

Hamburg Wasser's mission is to provide affordable water services to all residents and consumers in its metropolitan area, ensuring economic and ecological sustainability for future generations. In 2009, Hamburg Wasser founded a subsidiary providing renewable energy – Hamburg Energie – which has since become one of the biggest local suppliers of renewable energy in northern Germany. Another 100% subsidiary is Consulaqua, which provides an interface between a public utility and the private consulting sector. Figure 14.1 provides an overview of the company structure.

EMERGENCY PREPAREDNESS BEFORE COVID-19

Emergencies and crises in critical infrastructure facilities can lead to considerable impairment of their functionality and cause damage to broader public and economic systems (BMI 2011). The causes of these events are diverse, and Hamburg Wasser has created a variety of very specific emergency and crisis management protocols, including responses to coliform bacterial infections in the network, storm tides, and terrorist threats.

Figure 14.1

Hamburg Wasser at a glance

The emergency plan for pandemic situations consists of three main aspects: internal management and responsibilities in the event of a pandemic; concrete proposals for measures to reduce the incidence of infection and to protect vulnerable processing areas; and minimum staffing requirements to maintain adequate levels of water supply and sewage disposal. An organizational instruction and crisis management manual describes structures and procedures to be applied as soon as normal operations are no longer possible. The focus is on maintaining a crisis management team with 18 defined staff and assistance functions that can meet in different configurations depending on the situation.

In addition to the provision and development of theoretical structures and procedures, capacity building of crisis management members is a central instrument of our strategy, with regular training and testing of structures and procedures to anticipate specific scenarios. The members of the crisis management team come from the different operational areas of the company and in some cases do not know each other. Training sessions provide a network and familiarize members with the procedures. At the end of 2019, Ham-

burg Wasser conducted just such a joint team exercise, in cooperation with the electricity and gas network operators in Hamburg, to strengthen networking between the infrastructure operators in case of a crisis.

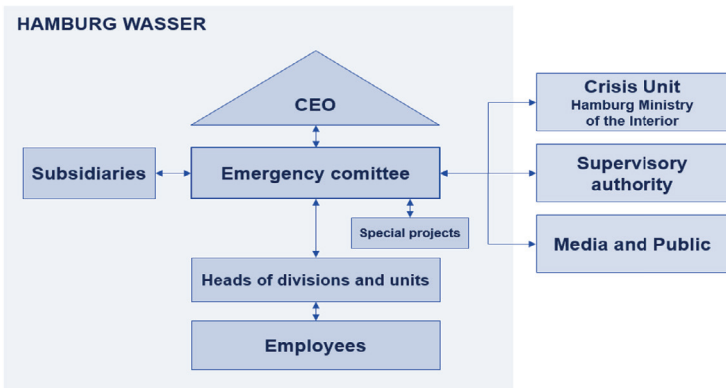
EMERGENCY MANAGEMENT DURING COVID-19

Shortly before the first coronavirus case in Hamburg was identified, it was decided to set up a cross-divisional emergency committee. Hamburg Wasser considered the pandemic situation as an “emergency” for the company rather than a “crisis.” Crisis management tools were applied regardless. Due to the pandemic scenario, all meetings of the emergency committee were conducted exclusively via telephone and video conference.

The first meetings were a test run in terms of digital communication as well as a first attempt to grasp the extent of the work ahead. The structural preparations and training of the past few years paid off and were continuously updated and revised. Responsibilities and communication structures were defined and working methods were coordinated.

Figure 14.2

Communication structures of the Emergency Committee



Including vacation replacements, 23 people from different departments were part of the emergency committee, as follows:

- **Head of Operation:** Manages the entire organization and moderates the situation meetings. He/she has the authority for final decisions in the emergency committee. The Head of Operation keeps close contact with the two CEOs and the staff councils.
- **Coordination Team:** Organizes and ensures smooth operations of the committee. Prepares situation meetings in cooperation with the Head of Operation.
- **Staff and Health Team:** Draws up basic recommendations for dealing with the pandemic, especially from an organizational, medical and occupational safety point of view.
- **Emergency Operation Team:** Develops special emergency plans for the various organizational units (such as operation and maintenance) and prepares for potential worsening of the situation.
- **Materials Management Team:** Monitors inventories and the procurement of key consumables.
- **Communication Team:** Establishes internal and external communication during the pandemic.
- **Information Technology Team:** Coordinates all technical prerequisites associated with the change in working methods (e.g. tools for video conferencing).

The focus of the emergency committee was to centralize the collection of information, assess the situation, identify critical developments and prepare responses, all under the motto of “staying ahead of the development.” In addition, the emergency committee ensured the comprehensive exchange of information and communication within the utility.

Major problems were discussed in the emergency committee and secondary issues were delegated. Proposed solutions were prepared in smaller working groups and presented to the emergency committee for decision making. Inquiries from organizational

units were individually handled by the responsible delegates. Those responsible for the topics decided which issues needed to be discussed within the emergency committee and which could be decided on their own.

The following practices have proven to be useful for the efficiency of the emergency committee:

- Daily meetings
- Tracking of the external situation in Hamburg, Germany and other countries
- Tracking of the internal situation, especially of personnel, by means of a regular query in the operating areas
- Fixed and standardized agenda and good preparation of visuals for the meetings to enable efficient decision making

To ensure transparent and consistent internal communication, managers and employees were regularly updated via e-mail, intranet and video. They received information on the development of the situation regarding coronavirus exposure in the company, personnel management issues, and instructions about decisions and latest hygiene regulations. The emergency committee acted as a focal point, communicating with a uniform e-mail address.

COLLABORATION WITH OTHERS

Contacts with other water suppliers and network operators were established at various levels. Best practice information was exchanged with bilateral and informal contacts. A regular exchange took place with the company doctors of two other public operators from the heating network and the electricity network. And given that Hamburg Wasser does not have the necessary expertise to assess the virus situation, we rely on the assessments and recommendations of the German Robert Koch Institute and the Federal Ministry of Health.

At the CEO level, telephone conferences of the public operators in Hamburg took place regularly under the direction of the super-

visory authority. During the pandemic, the supervisory authority regularly discussed, prioritized and centrally provided protective equipment (mainly special protective masks such as FFP2 or FFP3 masks). Experience has shown that the basic measures taken by the public operators were all similar (clear hygiene regulations, working from home, separation of units), but differed in detail depending on the internal circumstances.

MEASURES TAKEN TO ENSURE ACCESS TO SERVICES

It quickly became clear that the coronavirus pandemic would not be over in a few weeks, and that the situation would continue to worsen. Accordingly, the aim was to maintain the “normal operation mode” as long as possible. The following strategic action lines were developed by the emergency committee:

- **Delaying the spread of the virus and minimizing concurrent diseases.** The objective was keeping the number of people who fall ill at the same time as low as possible and to gain time to be able to make further preparations (e.g. increasing treatment capacities in hospitals, avoiding peaks in the burden on the health system, developing antiviral drugs and vaccines) and to avoid internally widespread simultaneous illnesses/quarantines.
- **Protection and support of particularly affected employees.** The objective was ensuring the health of employees as a corporate social responsibility.
- **Preparation of an emergency operation for a worsening of the situation.** The objective was to ensure the operation of the company if all employees not required according to minimum staffing levels are sent home and a relevant number of employees fall ill.

Concrete measures to operationalize these action lines were developed by the emergency committee. The focus of the measures was to limit contacts for all employees (managers, support staff and

frontline workers) and to allow only contacts necessary for operations under special hygiene rules. For employees in the offices, they were working from home where possible (1300 employees out of 2400 could work from home, see Figure 14.3). Others, whose work content did not allow them to work remotely, or who are technically unable to do so, continued to work on site with specific hygiene rules and in strictly separated teams. The IT services for networks, hardware, and software were improved and upgraded very quickly so that staff could work adequately from home (measures included increased laptop availability and server capacities).

For employees in the operation units, a consistent decentralized system was put in place by taking advantage of the regional structure of operating units such as waterworks and network operations. The number of employees in the departments for operation and maintenance were reduced substantially. The active (on-site) and passive (at-home) teams alternated weekly and had no contact with each other. Access to particularly sensitive key units, such as control rooms, was possible for required operating personnel only. Overall, the company has reduced on-site presence of staff from approximately 75% to 20%. Notably, sickness rates have dropped by about 50%.

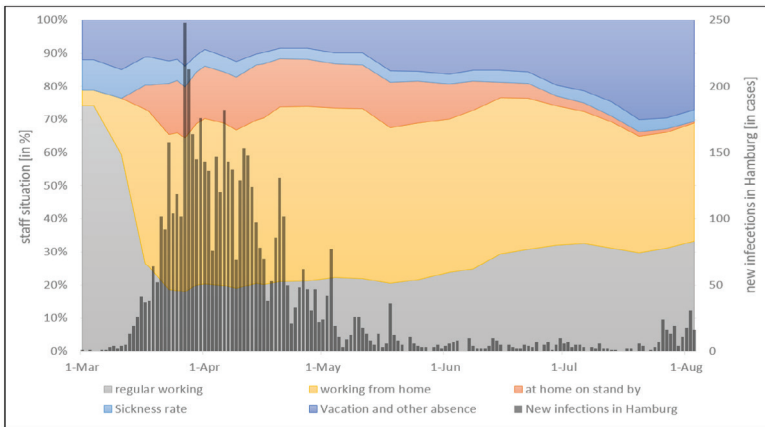
Strictly tightened hygiene and occupational health rules were also introduced. The focus was on internal contact restrictions, such as a 1.5m distance rule, no shaking hands, and wearing face masks. The company increased the cleaning routines of the company buildings, especially in social rooms, restrooms, changing rooms and showers. Also, door handles and handrails are cleaned at least daily. Additional safety rules along the Covid-19 occupational safety standard of the Federal Ministry of Labour and Social Affairs (BMAS 2020) were adopted for office workplaces, in-person talks and meetings, the use of company cars, and the organization and segregation of company buildings.

Meetings are avoided as much as possible, and telephone and video conferences are used if necessary (e.g. job interviews via vid-

eo conference). Further measures have been taken to reduce contact between external parties and customers, including the closure of the customer centre and training centre, as well as pausing the exchange of operating water meters. Staff coming home from holiday in “risk regions” are not allowed to enter the company premises. Furthermore, several risk assessments in terms of occupational safety were prepared, such as for office workplaces, the use of face masks and ventilation systems. Individual arrangements had to be made for the postponements of test obligations and audits.

Figure 14.3

Development of the staffing situation of Hamburg Wasser and number of Covid-19 infections in Hamburg from March to July 2020



To protect and support employees with an increased health risk, they can agree with their supervisor on how their work can be performed (e.g. working from home). In addition, shopping and personnel transport services are available for those affected by school and daycare closures.

Financial and organizational arrangements for staff were also made. These include continued salary payments, childcare, arrangements for recording remote working hours, and a refund of public transport tickets. In addition, changes were made to deci-

sion-making powers for digital work processes (especially signatures and approvals).

In terms of consumer-related measures, the Federal Ministry of Justice put civil legislation in place authorizing deferments on water bills. All customers – households as well as industrial – were informed of this. To date, however, very few private or industrial customers have requested it. In addition, it was decided to suspend all water cutoffs. Household water meter changes were also suspended, and the customer service centre was closed to physical visits.

CRITICAL PROCESS COMPONENTS AND EMERGENCY PLANS

The highest risk in the pandemic has been the possibility that a process breaks down because of the lack of staff present on site. To be prepared for an acute exacerbation of the situation, a systematic approach was developed to identify staff shortages in critical processes. The methodology is based on a German norm (DIN-EN 15975-2) and was further adjusted to adapt to emerging circumstances (DIN 2017). This critical analysis process provides information about the modules that are necessary to provide the services and how many personnel are available in which place.

This analysis was carried out according to the following three steps:

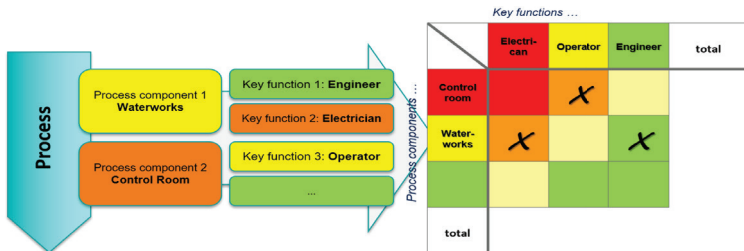
1. All critical process modules were identified. A critical process module is a building, plant, activity or process that is necessary for ensuring water supply and wastewater disposal including all support processes (e.g. waterworks, pumping station, laboratory, IT infrastructure).
2. All key functions were identified. A key function is one occupied by staff that are absolutely necessary to maintain a process in an emergency situation (e.g. plant engineer, personnel from the control room, electrician, fault clearance service).
3. Process modules and key functions were evaluated in terms

of their criticality using a traffic light system. A systematic evaluation matrix was developed for the assessment of personnel availability, considering the required personnel, the maximum number of employees available and the separation in space and time of employees. This is intended to check how many employees are required for a process module, how many are sufficiently qualified and where they are located.

In the end, 59 process modules and 128 key functions were identified in a risk matrix. The results showed an overlap of particularly critical processes with particularly critical key functions. To reduce these risks, special protective measures had to be defined and implemented. Figure 14.4 illustrates this risk matrix.

Figure 14.4

Risk matrix analysis for Hamburg Wasser



Measures to reduce the vulnerability of specific process components were carried out in addition to the measures mentioned above such as physical and temporary segregations. These include:

- Creation of personnel reserves (e.g. short-term rudimentary training of employees)
- Integration of external service providers (e.g. construction companies for necessary construction work)
- Work by employees who are under quarantine
- Isolation of employees on site to protect them from infection

A procedure to be followed in the event of a quarantine require-

ment has been developed with the health authorities. For this purpose, an emergency plan has been drawn up to define the general conditions that must apply to ensure that the operation of the technical facilities can be operated or maintained even by employees who are under quarantine.

THREE-STAGE RECOVERY AND RETURNING TO A “NEW NORMAL”

Although infection figures in Hamburg decreased significantly between April and May 2020, the virus still is circulating. For the emergency committee it is therefore necessary to develop options for coping with a “new normal.” The following guidelines determine the recovery strategy: limit potential chains of infection by continuing to segregate organizational units; increase on-site presence gradually; implement special hygiene and protective measures for urgent operational contacts; and use separate protective measures for critical key functions.

Hamburg Wasser has opted for a three-stage process to limit potential chains of infection and gradually increase on-site presence (see Figure 14.5). The process will depend on a drop in new infections in Hamburg and surrounding federal states. If these are stable at a low level (e.g. < 25 per week per 100,000 inhabitants), it is conceivable that restrictions can be relaxed. However, infection numbers at Hamburg Wasser itself are also relevant. Here it is difficult to give a concrete guideline, since the number as well as the potential chains of infections and quarantine effects must be taken into account. To be able to evaluate how relaxing restrictions affects infection rates, intervals between the stages should be at least four weeks.

The step-by-step plan was used to define a target direction and a framework. It enabled an identical procedure at all organization units of the company. However, adjustments to the specific peculiarities in each unit were necessary. If, for operational reasons, it was necessary to deviate from the outlined procedure, this would

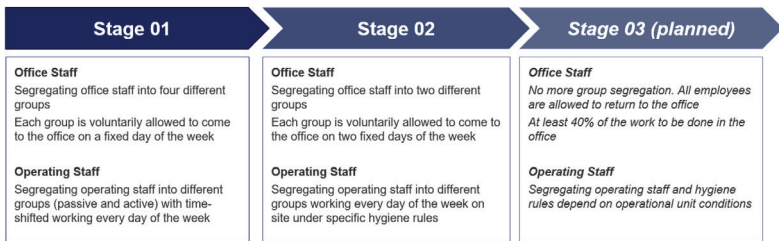
be done by the local managers. In such cases, a risk assessment must be carried out in which the effects of a potential infection are estimated, and additional protective measures are taken.

Apart from the many arrangements made during the pandemic, which had to be considered in the recovery plan, two initial situations were required:

- Employees working from home must return to the office and operating sites gradually
- Segregated teams must return completely to their sites to meet operational and maintenance demands

Figure 14.5

Hamburg Wasser's three-stage recovery plan



LESSONS LEARNED

In summary, the measures taken have been successful so far. Hamburg Wasser has not entered a crisis and can deliver reliable services without compromising service levels or quality, while contributing to the decrease of infection in Hamburg. Only a few employees of Hamburg Wasser have been infected by the virus, and with measures such as remaining under quarantine after returning from vacation there has been no further spread among colleagues. Internally, there was widespread solidarity and understanding of the situation among the staff. In particular, employees appreciated the transparent communication and sharing of information.

Although the crisis has not yet ended, some of the key lessons learned thus far are:

- **Identifying key challenges:** Reorganization of daily work and communication were the two central tasks. The reorganization of work within a very short time has been very successful. More than 1000 employees worked from home. Meetings and events were prohibited, and operating personnel were kept separate as much as possible and significantly reduced on site. Transparent communication was one of the most important instruments to give the employees security and confidence in the company, so that all measures were accepted. At the same time, there was a high level of readiness for any measures that might be considered, such as isolation of different plants.
- **Emergency management:** Even though there was no crisis from the perspective of water supply and wastewater disposal, we made use of crisis management structures. Our crisis management, which is based on theory, has also proven itself in practice. Above all, the experience gained through regular crisis management exercises since 2015 have been an important success factor. The centralized organization by means of an emergency committee, in which all important areas of the company were represented, was a success. The regular and transparent presentation of information and decisions to the staff was a key success factor. It was important to coordinate continuously and very closely with the CEOs, but not necessary to include them in the emergency committee meetings. The CEOs showed a high level of trust and confidence in the work of the emergency committee.
- **Decision making:** Even though the head of the emergency committee formally had the authority to make unilateral decisions, no use was made of it, even if there were controversial discussions in the emergency committee meetings. The final decisions were always based on collective discussion and consensus.
- **Long-term crisis:** During the first phase of the pandemic, it

was not clear that the changes made would be in place for a long time. Initially, actions were only taken as a reaction to the current situation. Only gradually were more long-term perspectives developed and strategies derived from them.

- **Preparing for a pandemic:** The operation of water and wastewater utilities can be influenced by many different external scenarios. Floods, power cuts, hacker attacks or a terrorist attack are just a few examples. When it comes to organizational, technical or even mental preparation for hazards and risks, there is always a tension between necessity and economic efficiency. Although a pandemic was considered an unlikely scenario, basic principles for dealing such a crisis were in place in the emergency plan, which proved to be very helpful and gave useful guidance. However, the planning was not very detailed. For many problems, especially for organizational aspects, solutions were developed as the crisis unfolded.
- **Stockpiling of consumables:** There were considerable supply bottlenecks, especially for protective clothing and hygiene articles, with no special stockpiling in advance. In particular, the availability of FFP2 and FFP3 masks for work on wastewater facilities was problematic at the beginning of the pandemic. This must be considered in future emergency planning.
- **Technical requirements:** Independent from the pandemic, it was fortunate that about 80% of our employees had been equipped with laptops a few months before. This made working remotely very easy and laptop access can now be used as an important basic requirement for working from home. The company and its staff have gained a lot of experience with digital tools, which will be helpful for future crisis situations.
- **Cooperation:** Collaboration and exchange of ideas on “how someone else is doing it” proved very useful. At the same

time, there was a high organizational workload, especially at the beginning of the pandemic, leaving little time for extensive exchange and coordination with other water or wastewater utilities. Nevertheless, regular networking within the sector and with other public companies has been beneficial and should be further encouraged, allowing for a faster exchange of ideas in the event of another crisis.

CONCLUSION

The findings from the emergency response at Hamburg Wasser are still at a very early stage, but there are two outcomes that are quite clear as we look forward to longer-term planning. The first is that our positive experiences with updated IT equipment indicate there will likely be more working from home in the future. If work processes and team cohesion allow, this could be up to 60% of working time. As a result, office space requirements may not be as high, and the redesign of workspaces will need to be considered.

Second, all our work will likely be more digitalized. Paper use will be reduced, and more digital signatures implemented. Certainly, more meetings will be held via videoconference and telephone. Online meetings are often more effective, focused and shorter (although physical meetings on site will not be completely replaceable). In addition, video or telephone conferences can save travel time and thus be more ecologically sound. In terms of operation and maintenance, there was already a high level of digitalization before Covid-19, and there will probably be no fundamental change in the technical installations. When working in the field, however, it will be more common to start directly from home, which will save travel time too. This development can be supported by the expanded use of digital tools and equipment.

Hamburg Wasser is confident that for many employees, the daily routine will change after the pandemic. Regular working from home and the use of video conferencing are most likely the essen-

tial changes in the future of everyday working life.

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Chapter 15

Leonard Shang-Quartey

COVID-19 AND THE HOPE FOR DEMOCRATIC WATER OWNERSHIP IN GHANA

The response to the Covid-19 pandemic in Ghana followed a pattern seen around the world, with people's movements highly restricted. But unlike many countries, most people in Ghana are unable to access water at home, forcing them to access water from their neighbours or public standpipes. The Government was quick to provide free water for all residents, but what use is free water if people do not have running taps in their homes?

INTRODUCTION

At the onset of the pandemic in early 2020, the Government of Ghana declared a national emergency and introduced a partial lockdown of the country's major towns and cities. The response restricted the movement of all persons in affected towns except for essential service providers and for the procurement of necessities. In a country where basic survival for the majority of the poor means constant movement to earn a wage, these restrictions presented enormous challenges. Stay-at-home compliance was essentially impossible, leading to the deployment of the military and police to enforce travel restrictions.

It was in the above context that the minister of finance present-

ed the Covid-19 Response Bill to parliament to provide some reliefs for citizens. The president directed the Ghana Water Company Ltd and the Electricity Company of Ghana to ensure the stable supply of water and electricity during this period (Akufo-Addo 2020). In addition, it was declared that there was to be no disconnection of supply and that the government would absorb the cost of water bills for all Ghanaians for three months (April, May and June). All water tankers, both publicly and privately owned, were also to be mobilized to ensure the supply of water to vulnerable communities (Emmanuel 2020).

This was also in a period where several parts of the country experienced water shortages due to prolonged power outages caused by technical difficulties at the Ghana Grid Company Limited (GRID-Co) (Dapaah 2020). To address this challenge, the Ghana Water Company said it had instituted a “strategic water supply-demand management plan,” the objective of which was to bring on board “other institutions like the National Disaster Management Organisation, National Security and other agencies with water tankers to support our fleet of tankers in the delivery of water to critical areas” (Dapaah 2020).”

The new plan was designed to determine water volumes that need to be supplied in order to meet the various demands of the general public and other essential institutions during the outbreak. The GWCL also asked the public to store and preserve water.

EMPLOYEE HEALTH AND SAFETY

To ensure employee safety, the GWCL introduced a new billing system designed to reduce the frequency of visits by meter readers and frontline workers (Ibrahim 2020). The Company also advised the general public to make use of electronic and mobile payment platforms. For workers who had to visit customers, they were provided personal protective equipment including personal sanitizers and face masks. And although the Ghana Trades Union Congress has

been active at the national level addressing issues of potential worker layoffs and a call for social and economic support for workers, the main water sector union (Public Utilities Workers Union) has not been active in the discussions around water provision to date.

ACCESS TO FINANCE FOR EMERGENCY MEASURES

To finance the Covid-19 response plan, it was reported that the government borrowed US\$1.4bn to create the Coronavirus Alleviation Programme (CAP) to deal with the fallout of the Covid-19 pandemic for people's health and for the different sectors of the economy, including the water sector. The government allocated an additional US\$2.6 billion (4.1% of GDP) for this program in the 2020 budget to fill gaps.

It is expected that costs for free water provision will be drawn against this amount. It is not clear at the time of writing exactly how much was provided to the water sector or has been disbursed. However, the Association of Small Town Water Producers issued a statement in August 2020 saying that they do not intend to heed the government's earlier directive to provide free water since the government had not paid for the earlier water they provided (Water Citizens' Network 2020a).

The claims of the Association were denied by the Community Water and Sanitation Agency, explaining that the government was committed to paying, and that payment would be done after verification of data by suppliers (Water Citizen's network 2020b). The Chief Executive of the Community Water and Sanitation Agency had issued an earlier statement on April 8, 2020, directing members of the Association to heed the government's directive (CWSA 2020). A check with the GWCL in August (by the author) showed that the government had paid the company for the water supplied for April to July as per the earlier directive. This is despite a statement by the Managing Director of GWCL that customers who owe water bills will not enjoy the free water policy (Nyabor 2020).

CONCLUSION

The Government of Ghana did well by providing universal access to free water for all residents for the months of April through to September 2020. Universal access is a good approach during Covid-19 as the country has not been successful in the application of targeting vulnerable populations in the past. This fact has been demonstrated significantly by the ineffectiveness of the water lifeline tariffs introduced to assist the poor but which ended up subsidizing the rich (Moselle 2017). This is because the poor in Ghana, like elsewhere, tend to live in larger groups and tend to consume more per household than wealthier families.

Though the government is providing free water to all from April to September, the problem remains that many citizens will not have access to this provision. The majority of people in urban poor communities simply have no access to piped water connections in their homes and depend on community water vendors, whom they buy from on a daily basis in buckets for household use. These people will not be given free water by the vendors. Furthermore, a lack of household access puts these people at further risk because they must leave home to buy water where they also meet other buyers, which makes the practice of physical distancing difficult. With only 42% of Ghanaians having household water connections (only 17% in rural areas), free water provision will only go so far in the prevention of Covid-19 (Ghana Living Standards Survey 2014, 91). There are also the previously disconnected who will suffer a similar fate. Additionally, there are communities which, due to existing supply challenges of the Ghana Water Company Limited, have not been experiencing sufficient water flow, and will not have water in the Covid-19 period.

The silver lining to the Covid-19 crisis for the water sector is that it has clearly demonstrated the importance of democratically controlled public water management and supply systems – a step

that would not have been possible if the government had pursued the privatization agenda they were previously being encouraged to pursue by some in the donor community. It is expected that the Covid-19 experience and lessons will aid in the full realization of the need to make water more available to people without hindrance and strengthen people's resolve to keep water public.

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Chapter 16

Anne Le Strat

A DEMOCRACY STRESS TEST: EAU DE PARIS AND THE COVID-19 CRISIS

Accompanying the remunicipalization of its water services in 2010, Paris set up a new democratic governance model with the aim of including workers, civil society and other stakeholders in the decision-making process. This participatory approach continues to influence the way that *Eau de Paris* (Paris Water) is managed today and has helped to shape the ways in which this publicly owned water company has handled the Covid-19 crisis. Building a more water-secure world must go hand-in-hand with robust democratic systems.

INTRODUCTION

The Covid-19 pandemic has demonstrated how essential water services are for health and socio-economic development, shining a harsh spotlight on the inequalities and hardships that result from a failure to uphold the human right to safe drinking water and sanitation. One of the lessons drawn from this crisis is the need to build a more water-secure world with robust democratic systems. Water services must be managed as a common good rather than guided by profit maximization. Good public management is the key, with publicly owned utilities able to take a long-term perspective and

integrate wider social and environmental considerations. Many governments, even the most economically liberal ones, are (re) discovering the advantages of public agencies and regulations for economic recovery.

Nevertheless, and paradoxically, public institutions face a strong trust deficit. It is essential therefore to strengthen public services by building open and more inclusive governance, building trust with citizens. Covid-19 provides an opportunity for public water operators to experiment with more democratic management by taking the demands and points of views of civil society, staff and other actors into account. The experience of Paris' remunicipalized public water provider can offer some insights in this regard.

In January 2010, a complete overhaul of Paris's water services was realized with a new publicly owned operator, Eau de Paris (EDP), which took over all water operations from private water companies. The remunicipalization of the Paris water utility was accompanied by a complete redefinition of municipal water policy and by new governance. The aim was to establish new governance structures under the aegis of elected representatives to allow the active engagement of all water service stakeholders. There are three particularly important components to this restructuring, outlined below, which help to shed light on why EDP has managed the Covid-19 crisis in a relatively progressive manner.

THE PARIS WATER OBSERVATORY

In 2006, the municipality created the Paris Water Observatory (OPE), a participatory decision-making body. At first it was merely a means of communication, aimed at civil society associations, but it was soon transformed into a platform for information, discussion and debates on water issues, including oversight functions in the defining and implementation of water policy. The idea was to make elected representatives of the City of Paris, its administration, and the employees of Eau de Paris accountable to citizens. It is also a

place where citizens can raise concerns and transmit their requests to the municipality regarding water issues (resource protection, water production, wastewater treatment, rainwater management and so on). The Observatory prepares an annual work program covering all water-related issues on which the Paris Council makes decisions.

The Observatory acts as an advisor and can present new items for the city council to debate and decide. It organizes at least four public meetings a year, open to all, preceded by online posting of documents and, as far as possible, by visits to projects or installations to inform debate. The municipality can also ask the Observatory to work on specific issues to provide input to municipal debate and decision-making.

The Observatory is open to everyone. Its members are drawn from civil society associations, trade unions, academia, elected officials and others. Any interested Parisian can participate, with the president of the Observatory elected by its members. The Observatory exists by virtue of an official order from the Mayor, as an extra-municipal committee on water policy, voted by the Paris City Council.

The Observatory is not just another committee that rubber-stamps decisions already made. All acts, reports and official proceedings related to water management must be submitted to the Observatory before they are considered by the Paris Council. Even if the members of the Observatory do not have the right to vote like the city councillors, they put forward an opinion which is taken into consideration. Since its creation, the Observatory has participated in various activities and given its opinion on many topics. Most importantly, all information is made available in an accessible way, enabling people to build knowledge on water issues. One of the most relevant aspects is the joint work it does on how new water policy encompasses socio-economic and environmental issues.

One of the challenges the Parisian municipality is facing is the gap between the demand for more democracy and the reality of democratic participation. In the case of the Water Observatory, peo-

ple want it to exist, but they do not necessarily want to be involved in its operations. One of the consequences is a relative homogeneity of participants within the Observatory, with a high proportion of retirees from specialized socio-professional categories. Less privileged communities and young people tend not to attend the meetings. The question is how to reach out to a broader demographic.

BOARD OF DIRECTORS OPEN TO ALL STAKEHOLDERS

A major political decision was also made to expand the Eau de Paris board of directors to include representatives of civil society and EDP's workers. Previously, only elected officials have had seats on the board. There are now 20 seats with a more balanced composition: nine city councillors appointed by the municipal majority party, four city councillors appointed by the municipal minority, three representatives from civil society (the consumers' association UFC Que Choisir, the environmental association France Nature Environnement, and the Paris Water Observatory), and two representatives from Eau de Paris staff. All have the right to vote. Two additional members are experts – a scientist and a local participatory methods specialist – with consultative rights but no vote. No member of the board receives financial compensation. The president is nominated by the mayor, subject to approval by city council. The president can cast the deciding vote in the case of a tie.

The workers' representatives are elected within the company's workers council: they represent all the employees, not just trade union members. Initially, Que Choisir and France Nature Environnement - influential organizations with national scope – were not willing to be accountable for decisions taken by Eau De Paris, which they felt could undermine their independence with respect to the municipality of Paris and its water operator. They eventually accepted seats on the condition of being non-voting members with consultative power. However, it is interesting to note that they ultimately requested the same voting rights as the workers and political

representatives. The board position allows them access to all the information they need to carry out their mandate of independent administrators.

The core democratic principle that underpins the new governance of Eau de Paris is to associate workers and civil society with long-term and strategic decisions. Specifically, it means that the business plan, investment programming and strategic policies like safeguarding water resources are discussed and decided by the Board. Hence the workers' representatives, the citizens and the associations all play a role in the major issues faced by the company. The representative of the Paris Water Observatory on the board also informs the Observatory about EDP's activities. Any director of the board can request that any item, be it very specific or more widely strategic, be discussed. All employees of EDP must implement decisions taken by the board.

CHECKS AND BALANCES

The principle of “checks and balances” guides the governance of water policy in Paris insofar as different stakeholder opinions do not always converge. A telling example is the 2010 debate about the commitment taken by the municipality to decrease the price of water by 8% after remunicipalization. Representatives of civil society were in favour, but representatives of staff were opposed as they thought that lower revenue for EDP would damage the employees' interests. Most Board members voted in favour of the decrease, and the decision did not have any impact on the wage negotiations within EDP. In 2020, the price is still much lower than it was before 2010.

Another example concerns the decision to insource customer service. There were disagreements among senior management about the capacity of the public company to manage this service. In July 2011, all board members voted unanimously in favour, even if the top management remained unconvinced. This decision marked an important milestone in the governance structure, as the board

overruled management. Bringing the service in-house allowed EDP to establish a new relationship with its users. The new service ended up winning the award for Best Customer Service of the Year (for water distribution) for seven years in a row, with 97% customer satisfaction.

The new organization of the water system also allows for a more transparent evaluation of service quality by the municipality and by citizens. The main evaluation tool is a performance contract between the city and EDP. It has several fixed objectives, is reviewed every five years, and is publicly available. The main principles are to provide the best water at a fair cost and to place users at the heart of the service. Ten main social, environmental, economic and technical goals are defined and backed by forty more detailed performance indicators, ranging from “Ensure the supply of good quality water in any circumstances and a transparent management,” to “Users are placed at the heart of the water service.” In June 2017, Eau de Paris was awarded the United Nations Public Services Award in the category “Promoting transparency, accountability and integrity in public services.”

RESPONDING TO COVID-19

How have these reforms affected Eau de Paris’ response to Covid-19? Although the crisis is far from over, three lessons can be drawn from the experience thus far. The first is EDP’s commitment to protecting its workforce from exposure to the virus. Employees with critical roles or skills were swiftly identified, and on-site work was organized to avoid any risk of contamination by staff members at all levels in the organization. When national confinement began in France in March 2020, it was also decided, in full accordance with the chair and the elected members of the board, to maintain full wages of all staff members. Those who could not work from home also retained full pay and were put in a “reserve” position (task-free at home but available to come on-site if needed). This was in stark

contrast with the decision by private utilities in France to resort to part-time unemployment. The rationale behind this decision was not only to preserve the staff members' economic status but also – because the duration of the crisis could not be foreseen – to sustain commitment and capacity in the long run. When the confinement was lifted eight weeks later, all staff members went back to their “new normal” ways of working without hesitation, and perhaps with an extra feeling of commitment to the organization. This was illustrated by a survey taken among the staff members shortly after the end of the confinement, which showed an 83% rate of approval of the measures taken to protect the workers' health.

The second lesson is that Eau de Paris's governance allows it to contribute to a wide array of public policies, not just water (e.g. climate change adaptation, ecological transition, social inclusion, etc.). During the Covid-19 crisis, these contributions to the general welfare were continued in spite of confinement. Access to water was ensured for all, even to the poorest and most marginal areas. For example, Eau de Paris, in coordination with the city of Paris, installed water taps close to migrant camps in the northern districts of the city. Also, to ensure access to water for the homeless, Eau de Paris kept 110 public fountains operational all winter. Moreover, in the early days of the confinement, the company donated 7000 reusable water bottles to associations in charge of helping migrants and homeless people to guarantee everyone could individually access water. This represents an integrated approach to public service that characterizes Eau de Paris and its open governance model.

Finally, Eau de Paris has become a scientific leader in addressing Covid-19, with its own research laboratory and R&D team. These researchers, doctors and engineers boast cutting-edge expertise in virology. When the pandemic first began to spread in Europe, the team started developing a technique to identify the virus in waste water, working with other public research institutions to form a research group named OBEPINE (*OBservatoire EPIdémiologique daNs les Eaux usées*). Together with water and sanitation utilities, they

used the analytical technique perfected by Eau de Paris to monitor the pandemic through the presence of the virus in wastewater in Paris and other cities. What is striking in this initiative is that it was conceived and launched by public institutions, showing that creativity and inventiveness are also defining traits of public research. The group also made their research available to decision makers, especially local elected officials, as soon as they were scientifically vetted. This would not have been the case if a privately owned entity had been in control.

These lessons illustrate how the open, democratically controlled governance of Eau de Paris has deeply influenced the decisions made by the public utility's management during the crisis. Far from suspending their integrated approach to public service, the pandemic has reinforced its commitment, with the support of all stakeholders. This is another sign that 11 years after Eau de Paris's inception, its innovative model of governance is deeply rooted in the way the organization works and its staff members' ethics – from top management to frontline workers.

CONCLUSION

Covid-19 has demonstrated the need for strong public entities. Their strengthening can be achieved only by accelerating their shift towards more democratic, collaborative, horizontal and transparent management models. Even if the Paris experience is not perfect in terms of citizen empowerment, its participatory governance experience represents a positive model in the water sector.

Initially, many people were reluctant to set up this governance model. The municipal administration and the Eau De Paris staff were worried, at the beginning, about the extra work generated by the creation of the water Observatory and by the new composition of the board. Some of these frictions remain. Indeed, it is difficult to build genuine democratic participation. The asymmetry of information between stakeholders is always in favour of management,

giving them greater power. To compensate, there must be clear political will to address the partial lack of knowledge and technical skills of some parties – users, citizens, associations – who need appropriate financial and technical training. Democratic consultation is time-consuming, and if there is not a strong political will to foster it, the temptation is to give up.

However, this new public governance model implemented for the Parisian water service demonstrated its effectiveness during Covid-19. True democratic management requires that citizens and users be well-informed and able to participate in the decision-making process. The cornerstone of democratic participation lies in adequately considering all concerned parties' interests. It can generate frictions, but it is the only way to guarantee sustainability and prepare us for future crises.

Chapter 17

Susan Agada

NIGERIA'S INFORMAL WATER PROVIDERS: FILLING IN THE PUBLIC GAPS

Access to water in Nigeria remains a challenge for many, despite considerable natural water resources and a well-defined bureaucratic water infrastructure. These gaps in the public water system have been amplified by Covid-19, with informal water operators providing desperately needed water services, particularly in rural areas. This chapter highlights how the informal water sector in Nigeria has made a difference during Covid-19, especially for the poor, who have no other option. It can be argued that informal operators have bailed the Nigerian government out of an imminent water scarcity disaster, providing further evidence of the need to rebuild Nigeria's public water infrastructure.

INTRODUCTION

Nigeria is endowed with immense freshwater resources (Wutich et al 2016, Muhammad and Dansabo 2018). Indeed, it is so rich that many of its 36 states derive their names from rivers, which are important sources of livelihood and wealth creation for many families. Nigeria also has a well-established institutional infrastructure, along with administrative resources, to facilitate water supply to all Nigerians.

Despite this, Nigeria has failed to harness its water resources and has mismanaged costly investments (Nwankwoala 2011, Omole et al 2015, Obeta 2019). Some of the factors include bureaucratic inefficiency, weak financial performance of water supply and sanitation utilities, poor maintenance of water and wastewater networks, power supply interruptions, and corruption. Other challenges include political interference, poor coordination between federal and state actors, and the inability of State Water Agencies to recover operating costs, focused on infrastructure rehabilitation and lacking commitment and accountability (Wutich et al 2016). Overall, Nigeria's water scarcity is a human-made condition, underscored by a disconnect between Nigeria's abundant water resources and the government's willingness to harness these resources and prioritize provision of basic services to poor households, especially in rural areas.

Access to clean drinking water therefore remains a pipe dream for many. About 90 million Nigerians – out of a population of approximately 200 million – lack water that is suitable for drinking (Obeta 2019, Ezenwaji et al 2016). In many rural communities, water supply schemes have collapsed. Most rural villages and small towns face severe and persistent challenges in meeting their water needs, with 61% of the rural population living more than 30 minutes away from a water source and a further 34% living more than 2 hours away (World Bank 2019).

As a result, millions of Nigerians rely on non-state water providers, which include formal and informal for-profit water provision. This paper focuses on informal for-profit water services providers (PPWSPs), many of which are providing crucial services in the context of the Covid-19 pandemic. PPWSPs are individuals or small and micro-enterprises that generate, treat and distribute water to households or businesses as commercial or business undertakings (Obeta 2019, Adeleye et al 2014). They deliver water at the grassroots levels in small towns and rural areas which otherwise have no access to water services.

While PPWSPs are not a direct response to the Covid-19 pandemic, the sector provides much-needed intervention for combating the virus. PPWSPs have stepped into the gap to make water available to millions and are helping to alleviate the water-related challenges associated with the pandemic.

AND THE PPWSPS SAID, LET THERE BE WATER!

The massive failure of public water infrastructure in Nigeria has helped to crystalize and expand the role of informal water providers. They offer solutions ranging from water tanker deliveries, domestic wells, boreholes and hand-carried water containers. These actors help consumers meet their water needs by offering a range of different options for water supplies. In some communities, there are no alternatives.

PPWSPs have no formal responsibility for water supply services but invest in water infrastructure and operate as small businesses in areas where public water infrastructure is lacking (Akpomunje 2010). PPWSPs usually get their water from streams, rivers and boreholes using water tankers and pushcarts. Tanker operators deliver water to homes or commercial locations that can afford to buy large quantities of water, often for resale to people who can only afford to buy in small quantities. Sometimes water vendors deliver water directly to consumers in their homes in jerrycans. There are also sachet producers who package water in sachets which can be directly consumed. It is the affordability factor of sachet water which makes it accessible and popular.

PPWSPs are actively involved in rural water supplies in all 36 states of Nigeria (Ofoezie 2003, Okeje 1989). They are also in small towns and in large cities. Despite this, they are largely neglected by government. The tanker water suppliers and the sachet water producers who substantially invest in water services delivery are self-funded. Many of them are not much financially stronger than the population they serve. Most times, their equipment is old and

in poor shape. The water tankers regularly break down. PPWSPs have no access to loans but they are loosely unionized in producers' associations. A sachet water producer and a member of the union in Otukpo stated that the members meet regularly to address their challenges and to control market pricing (D. Ochoga, personal communication, July 7, 2020). According to her, some of the problems encountered by the members include "distance to the source of water, ageing vehicles and operation machines, irregular and high cost of electricity, lack of manpower, particularly machine operators and high cost of the packaging materials".

PPWSPs as a boost to the economy

In Nigeria, employment opportunities in the formal sector are minimal. The large informal sector is made up of small business enterprises almost always individually owned and, in many cases, requiring very little investment. PPWSPs make up a significant portion of the informal sector in Nigeria. According to the National Agency for Food and Drugs Control (NAFDAC), the standards regulating body for the PPWSPs sector, "packaged water especially the sachets (pure water) production is a good poverty alleviation program and should be encouraged. It is an industry that has immense potentials for job and income generation" (Muhammad and Dansabo, 2018, 48).

The PPWSPs sector is not only a direct source of employment for thousands of people; it also helps support others small businesses that depend on water for their operation. Small businesses such as food services providers, laundry services providers, food grinding machines operators, through the PPWSPs, have access to water and can launch and operate their businesses. Where businesses are allowed to operate during the pandemic, PPWSPs are helping to sustain the livelihoods of many young people and reduce mass poverty (Kjellen 2000, Muhammad and Dansabo 2018, Obeta 2019).

Promoting public health

Water and sanitation remain the major primary drivers of public

health. Lack of access to safe water creates vulnerability to the threats of water-related diseases, including diarrhea, cholera, typhoid fever, salmonellosis, dysentery, and other gastrointestinal viruses (Muta'a Hellandendu 2012, 115), which are common in Nigeria. Because PPWSPs deliver water directly to homes and businesses, PPWSP vendors are essential service providers who allow others to observe physical distancing when possible and quarantine when necessary.

Speaking to a mother after she delivered her baby in the hospital, she noted that she was very thirsty but could not drink the water in the hospital because it came directly from the borehole and was not treated. She had sachet water delivered instead. When asked how she would cope with the water situation with a new baby, she stated that her husband had arranged with a water vendor for regular delivery to her home (J. Ken, personal communication , July 20, 2019).

Supporting gender equality

Access to water in Nigeria is a gendered issue. Women and girls bear the brunt of inadequate access to water services, spending as much as a quarter of their waking hours fetching water for their household (Omole and Ndambuki 2014, Omole et al 2015). Speaking on the positive impact of PPWSPs in her community, a woman who grew up in Otukpa in Benue State in the 1980s, captured her experience in this way (K. Iga, personal communication, July 4, 2020):

I cannot tell you how long we walked, but I am sure it was not less than twenty kilometers, to the stream and back. We (women and girls) got up around 6 in the morning and got back around 9.00 am. Most of the young girls like myself could carry no more than 10 to 20 liters of water and the older women up to 40 liters. This is because of the distance and also because the water is carried in open contains such as clay pots, pails and buckets which make water more difficult

to transport. Sometimes some will have an accident, miss a step and fall, losing their water. In such cases, the others would contribute a cup or two of their water so the person can at least go home with some water. The girls always got to school late, tired and sometimes not at all. In the rainy season, we collected surface water runoffs which came from up the hills where open defecation takes place. We tried to treat the water using alum, but people still fell ill from using it. Today all that is changed. Thanks to the PPWSPs, most of that has changed. I went home to bury my father in 2019 and the transformation was significant. We had water tankers deliver water throughout the event. Every activity that required water, from cooking, to laundry and personal were performed without any hitches. We purchased tons of sachet water at reasonable cost and everyone had water to drink. Although at some cost, there is a level of access to water which would be impossible without the PPWSPs.

Due to family responsibilities, lack of skills, and social and cultural barriers, the informal water sector can also be one of the few ways that women have to access employment to earn an income (Fapohunda 2012, 35). PPWSPs have therefore become an important part of transforming gender norms and mitigating the unnecessary cost of accessing water for girls and women, especially among the most vulnerable. Access to water also means that women and girls are better positioned to deal with the Covid-19 crisis.

Providing water to the poor

A 2019 World Bank report finds that water subsidies disproportionately benefit higher-income households, particularly with networked systems (Andres et al 2019). In Nigeria, while only 48% of poor Nigerians have some access to public water delivery services, about 80% of wealthy Nigerians have access to at least an essential supply. In other words, public water delivery services target

the wealthy in affluent neighborhoods, and government-reserved areas, mostly in urban centers. The delivery of water to the wealthy means that the actual beneficiaries of subsidized public water are the wealthy, since the poor are generally not connected to the piped grid. According to one study, public water sources are 4–10 times cheaper than private sources (Jideonwo 2014). This means that increasing subsidies to public providers will not resolve the inequality gap without a massive expansion of public, networked infrastructure.

CONCLUSION

In spite of the immense contributions of the PPWSPs in providing access to water for low-income households in Nigeria, the sector is not without challenges. For one, the safety of the water is often questionable, especially sachet water (ironically referred to as “pure water”). This concern led to a proposed gradual nationwide ban on packaged water by the national regulator. But because of the invaluable service which the sector provides, especially to women and the poor, the proposal was not implemented, and the sector continues to thrive (Dada 2009). Without PPWSPs people in most small towns and rural areas in Nigeria would be in continuous crisis, and Covid-19 would be an unmitigated disaster.

Covid-19 has therefore shone additional light on the urgency of building effective, reliable and affordable public water. It is incomprehensible that the Nigerian government, with all its resources and support from international organizations cannot provide water for its citizens. If the PPWSPs, with very limited resources, can distribute water effectively to the poor at the grassroots, why is it so difficult for the government of Nigeria to provide water to its citizens?

The government can also provide better guidance for the operation of PPWSPs. First, an improved policy environment should include the provision of technical assistance to help design, construct, operate and maintain their infrastructure. Technical assis-

tance should also provide support with related infrastructure that facilitates water distribution, particularly roads and electricity. Second, the 2000 National Water Act of Nigeria and/or the NAFDAC standards specifications state that all domestic water supplies should be clean and drinkable. Policy should cover regulation and monitoring to ensure that PPWSPs comply with these specifications. Third, policy should provide incentives to promote efficient water services delivery. Such incentives could include provision of soft loans for production and delivery equipment. Finally, policy should inform mechanisms that safeguard the interest of consumers and protect them from exploitation, extortion or price gouging.

Access to water lies at the heart of development anywhere. To achieve its development goals, Nigeria must reactivate its under-performing public water agencies and harness its immense natural water resources to facilitate the supply of water to all its citizens. In the meantime, PPWSPs play a central role in this realizing this goal

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Chapter 18

Marcela González Rivas

A TALE OF TWO WATER OPERATORS: LEGACIES OF PUBLIC VERSUS PRIVATE AMIDST COVID-19 IN PITTSBURGH

Pittsburgh has positioned itself as a city with a strong commitment to sustainable development. This paper analyzes the challenges the city faces concerning its specific commitment to water services, which have been at the core of public health responses to the Covid-19 pandemic. After comparing the responses of the two major water operators in the city – one public, one private – the paper identifies the key challenges for enhancing public water protections in the long run. It concludes with a call for increased government support for water bill assistance for low-income groups who are at increased risk of losing access to water services in the future.

INTRODUCTION

The Covid-19 pandemic brings renewed urgency to water access and its direct connection to public health. This paper analyzes the responses to Covid-19 of water operators in Pittsburgh, Pennsylvania, in the United States of America, focusing on protections designed to ensure water access for groups facing difficulties paying

their water bills during the pandemic. It includes a comparison of the Covid-19 response efforts implemented by water operators in Pittsburgh and an analysis of the extent to which programs adequately address the needs of vulnerable groups. The analysis also highlights the key challenges water operators face in making assistance programs more permanent beyond the Covid-19 pandemic in the context of local commitment to sustainability and equity.

Specifically, the paper argues that while there has been widespread implementation of protections related to public health, there are numerous obstacles to implementing full water access protections in the longer term – notably protections against the economic effects of the pandemic. One of the key obstacles is the ongoing increase of water services rates taking place because of decades of infrastructure neglect and a lack of state and federal resources. As a result, water operators face the complexity of compliance with water quality and environmental standards as well as expansion of assistance programs to ensure low-income customers have access to safe and affordable water.

The paper offers a comparison of Pittsburgh's two major water service providers: one public (Pittsburgh Water and Sewer Authority - PWSA) and one private (the Pennsylvania American Water Company - PAWC). It demonstrates that PWSA's response to Covid-19 has been better than that of the private water company in terms of protections related to public health (such as ensuring access to water during the pandemic) but that neither operator has implemented full protections designed to counter the economic impact of Covid-19. Moreover, the prospects of expanding those extensions imply daunting challenges for the public operator in particular, due to the historical legacies of public-private water systems in the city. The paper concludes with a call for increased federal and state government support for water bill assistance for low-income groups who are at increased risk of losing access to water services in the future.

Using a combination of online interviews and secondary mate-

rials, the paper analyzes the measures taken by water operators as a response to the Covid-19 pandemic and the challenges of making them permanent, with a focus on those measures which aim to ensure access to safe water (notably water shutoff moratoria and customer assistance programs). Interviews include structured and unstructured consultations conducted over the phone and in online meetings as well as email exchanges with leaders of the city's main water system operators, former members of PWSA's Board of Directors, civil society organizations and local policy makers, among others (a full list of interviews is provided at the end of the paper). The paper also reviews official documents, census data, newspaper articles, surveys of civil society organizations, and website content from water operators as well as the Pennsylvania Utility Commission. The research was conducted from May to July 2020.

WATER OPERATORS IN PITTSBURGH

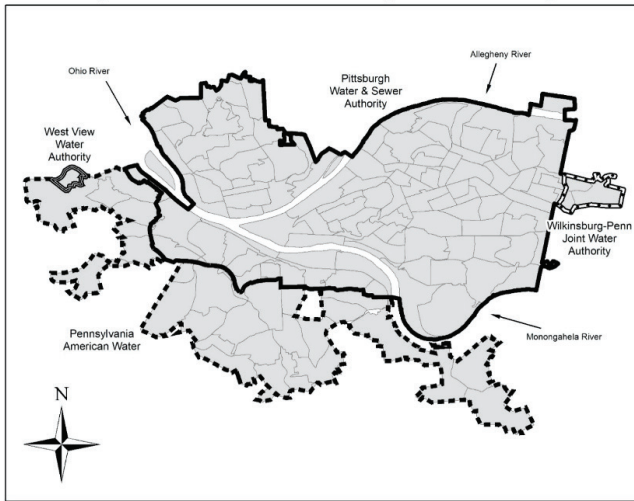
Pittsburgh is the second-largest city in Pennsylvania, with approximately 300,000 residents. The city's economy has seen important transformations, from being a steel production powerhouse (with supportive industries, like coal) to becoming an economy based on higher education, innovation and research. Located at the confluence of three rivers, Pittsburgh is often cited as an example of a rust belt economy that rebuilt itself and developed concerted efforts to clean the land, air and waterways damaged as part of the legacy of its industrial past (Beery 2018).

Pittsburgh currently faces several water-related challenges. Similar to many other cities in the US, Pittsburgh has a decaying water infrastructure. It often experiences flash floods, environmental impacts from a lack of capacity for storm water management, and water quality issues such as boil water advisories, lead contamination and pipe failures. More recently, water affordability is becoming a prominent challenge given the poverty levels in the city. Pittsburgh has its own municipal water authority, but water is provided by four

water operators. While the publicly run Pittsburgh Water and Sewer Authority (PWSA) serves approximately two thirds of the city's population, there are three other water operators serving city residents (and other areas outside the city limits). These include the Pennsylvania American Water Company (PAWC) – a private firm with a large presence throughout the state, serving around a third of the City's residents – and two smaller public water operators serving a small fraction of residents. Figure 18.1 shows the service areas of the water operators.

Figure 18.1



Service areas of water operators in Pittsburgh



Legend

Water Provider Boundaries

Provider

-  Pittsburgh Water & Sewer Authority
-  Pennsylvania American Water
-  Wilkensburg-Penn Joint Water Authority
-  West View Water Authority

Source: Map by Ben Saint-Onge using Western Pennsylvania Regional Data Center, 2010 Census Tracts for shape files; service area boundaries from PWSA's interactive map and corresponding with the WJWA.

Table 18.1 highlights the basic operational characteristics of the two main water operators, PWSA and PAWC.

	PWSA	PAWC
City of Pittsburgh population served	73,000 residential customers	27,000 residential customers
Share of city total	53.60%	19.80%
Public/Private	Public, Municipal Authority	Private
Financial assistance from federal or state government for responding to Covid-19 pandemic	No, but are planning on requesting extra expenses reimbursement	No, but are planning on requesting extra expenses reimbursement
Increase in non-payment of bills during Covid-19	107% increase from previous year	21% increase from previous year
<i>Total</i>	<i>10,551,735</i>	<i>2.44</i>

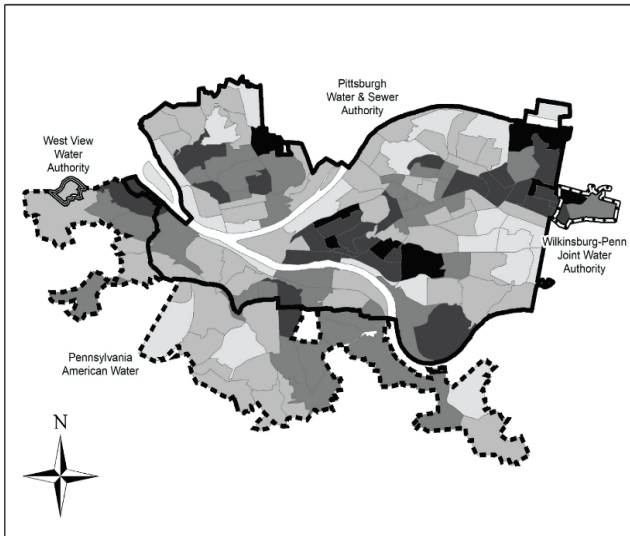
Source: Created by author using information provided by water operator representatives and census data (<https://www.census.gov/quickfacts/pittsburghcitypennsylvania>).

The current situation thus represents a major challenge for a large segment of the population in the city. According to the US Census, 21% of residents live in poverty –well above the state (12.2%) and national (11.8%) averages – while 40% of the population are eligible for assistance programs (US Census 2018). It is important to note that there are significant dynamics of inequality across race and gender along various dimensions, including health, income, employment and education. For example, a recent report comparing Pittsburgh’s race and gender inequality to similar cities in the US shows that the poverty rate among African-American is higher in Pittsburgh than in 85% of similar cities, and more Black children in Pittsburgh grow up in poverty than in 95% of similar cities (Howell et al. 2019, 29). Figure 18.2 shows the variation of percentage of individuals living below the poverty line across census tracts.

Significantly, there are more city census tracts with more people living under the poverty line (shown in darker shades on the map) in the service area of the PWSA (the public water operator) than of the PAWC (the private water operator). This is an important point because in the absence of federal and state funding for water bill assistance, water operators serve larger numbers of households who struggle to pay their bills.

Figure 18.2





Poverty and water services operators in Pittsburgh



Legend






Water Provider Boundaries

Provider

-  Pittsburgh Water & Sewer Authority
-  Pennsylvania American Water
-  Wilkensburg-Penn Joint Water Authority
-  West View Water Authority

Individuals Below 200% FPL

Portion of Population

-  0% - 20%
-  21% - 40%
-  41% - 60%
-  61% - 80%
-  81% - 100%

Source: Map by Ben Saint-Onge using Western Pennsylvania Regional Data Center, 2010 Census Tracts, poverty Measures, and service areas boundaries from PWSA's interactive map and corresponding with the WVWA.

In the case of Pittsburgh, an old infrastructure system upgrade requires an increase in water rates. In other words, the condition of the water operator impacts the price of water that customers pay, creating a potential water affordability crisis (Pierce et al. 2020). In the context of the Covid-19 pandemic, this historical legacy of water infrastructure is of crucial importance.

WATER OPERATOR RESPONSE TO THE COVID-19 PANDEMIC

The two main operators providing water services in Pittsburgh, PWSA (public) and PAWC (private) set up water shutoff moratoria after the state declared an emergency (see Table 18.2). Specifically, for PWSA, given it had a winter moratorium already in place, it meant that the moratorium would continue, whereas for the private company, PAWC, it only started with Covid-19. The state government issued the mandate on March 16, 2020, for all utilities regulated by the Pennsylvania Utilities Commission (PUC). It is important to note that the PUC only regulates private companies, but as an exception, the publicly run PWSA has fallen under its oversight since 2018.

Both operators also restored service to those accounts that had been previously disconnected, ensuring access to water services for all residents of Pittsburgh during the pandemic, regardless of their ability to pay. Table 18.2 shows that the PWSA (public) established more enhanced elements of these protections (for example, waiving the eligibility requirement for the moratorium and setting it to a higher level from 200% to 250%), drawing perhaps on their experience with winter moratoria on water shutoffs since 2018.

However, none of the protections implemented fully protect water users (see Figure 18.3). Full protections include not only temporary access to water for public health reasons, but also protections for the economic effects of the pandemic (Campbell-Ferrari and Wilson 2020). For example, PWSA and PAWC continue to bill customers and have not set up a grace period for payments. PAWC suspended late fees, but neither have a debt forgiveness program.

Table 18.2 <i>Protections implemented as part of the Covid-19 response by water operators</i>		
	PWSA (public)	PAWC (private)
Pre-Covid-19 moratorium in place	Yes, winter moratorium; Dec 1st to March 31st since Jan 2018. Income eligibility 250% of Federal Poverty Level	No
Covid-19 moratorium, start date	March 13, 2020	March 13, 2020
Public/Private	Public, Municipal Authority	Private
Moratorium end date	August 1, 2020 (according to PWSA Board); PUC Emergency Order End Date	PUC Emergency Order End Date (mandated)
Income eligibility, with respect to Federal Poverty Level	Waived income eligibility requirement in response to Covid-19	Must prove financial hardship
Restoration of service	Yes; however, less than 10 accounts reconnected due to Winter Moratorium still in effect.	Yes
Are customers continuing to be billed?	Yes	Yes
Are there late fee charges for customers?	Yes	Suspended late fees until further notice
Post-Moratorium grace payment period	No	No
Debt forgiveness	Considering addressing past due charges accumulation through an arrearage forgiveness program.	No

Source: Created by author using information provided by water operator representatives and census data (<https://www.census.gov/quickfacts/pittsburghcitypennsylvania>).

The implication is that current protections are merely postponing the financial burden of low-income households once moratoria

reasons that might explain the low enrollment of the programs. The discussion focuses on PWSA because it serves most of Pittsburgh’s residents and because it is the operator for which more information was available.

Table 18.3
Customer assistance programs offered by water operators

Water operator/assistance program	Prior to Covid-19	Expansions during Covid-19	Process of registration
PWSA (public)	Winter Shutoff Moratorium	Income eligibility 250% of Federal Poverty Level	Call PWSA, Dollar Energy or Community-Based
	Bill Discount Program	150% of the Federal Poverty Level	
	Hardship Grant Program (Annual up to \$300)	150% of the Federal Poverty Level	
PAWC (private)	H2O Help to Others Program	Payment arrangement, proof of financial hardship	Call water operator directly
	Grant Programs (Annual up to \$500)	200% of the Federal Poverty Level	
	Service Fee Discounts	150% of the Federal Poverty Level	

Source: Author’s own analysis based on information from water operators’ representatives and their websites.

The low enrollment in the PWSA’s programs is related to the fact that these programs – which are similar to other utility assistance programs – do not provide enough assistance (Czewinski et al. 2017, 300

148). For example, they exclude customers with incomes not low enough to qualify but who still struggle to pay their water bills, such as elderly residents on a fixed income. Furthermore, the programs require customers to pay past-due charges or make a sincere effort of payment, which usually means paying a portion of the past bills and committing to paying the rest within a set amount of time. Without at least partial debt forgiveness, accrued bills represent a severe financial burden.

Another reason for the program's low enrollment is a lack of information about them. PWSA have engaged in community outreach – holding public information meetings across neighbourhoods in response to spikes of lead in the water and boil water advisories that took place in 2016 and 2017 – and have included information inserts in customer bills, but it would appear that most people are unaware of the programs. Survey responses indicated a general lack of information about municipal assistance programs by customers and by community-based organizations, with comments such as “residents not having access to a computer,” “water and sewer companies not having these assistance programs,” and “not understanding information about programs.”

It is also evident that registration for the programs is not a straightforward process. For example, the PWSA's customer assistance programs website lacks simple directions for enrolling. At the time of writing (July 2020), the website stated that people in need should call them directly to see if customers are eligible for getting help paying their bill. However, when one calls, one is directed to make another call to the organization administering the programs, Dollar Energy. But the process of signing up for assistance through Dollar Energy is also confusing because one could do it through a community-based organization, choosing the organization based on the customer's zip code and by phoning them directly. When calling them directly, the process should be straightforward: a representative helps customers fill out an application, indicating income of all household residents. The paper is submitted and it takes two to

three months to get processed, if approved. But if customers try signing up through a community-based organization, the process varies widely across organizations; some of them respond promptly and provide help over the phone, while others were not informed about water assistance programs or did not answer the phone after several days of trying.

This lack of clarity is clearly an obstacle to enrollment. This is especially true for those experiencing poverty, as research shows that navigating assistance programs can be difficult for families living with chronically limited budgets (Mani et al. 2013). In Pittsburgh, low-income communities include communities of colour, refugees and immigrants. In surveys of organizations providing services to refugees and immigrants in the summers of 2019 and 2020, water affordability was identified as the number one challenge, and there is lack of information about assistance programs (González Rivas 2019, 2020). Language is sometimes a barrier leading to a lack of knowledge about the programs, even though PWSA has contracted out interpretation services for customers who do not speak English.

In sum, the current PWSA programs could make improvements to enhance their existing assistance programs. Aside from simplifying and clarifying the enrollment process and improving outreach to low-income groups, seniors and other potential beneficiaries, PWSA could improve program design by dropping enrollment barriers by, for example, incorporating debt forgiveness and payment plans, which give customers a clean slate and an opportunity to catch up on paying their bills in full. The Philadelphia Tiered Assistance Program (TAP) provides an illustration of this approach because it is based on a household's affordability level, available to low-income customers.

The TAP program design also takes into account the extra burden that low-income households face navigating assistance programs and the onerous processes of applying for assistance. By simplifying the process to include a single application, and by offering a variety of ways of registering (online, in person and by mail), the

program aims to remove barriers to access (Lakhani 2020).

THE COSTS OF WATER

As noted earlier, rising water tariffs are a reality across the United States due to lack of federal funding and a growing list of necessary upgrades, with water consumers paying the cost of neglect. Table 18.4 compares PWSA and PAWC's water service charges, showing that PWSA's rates are higher (and likely to increase for the next two years, depending on PUC approval), exacerbating the affordability problem.

Table 18.4

Comparison of monthly service charges by water operators

Charges	PWSA (public)	PAWC (private)
Fixed monthly rate	\$27.27	\$16.50
Volume charge (per 1000 gallons)	\$11.04	\$12.20
Typical household bill consuming up to 3000 gallons a month	\$60.39	\$53.10

Source: Author's own, using information provided by water operators' representatives and from websites. Current rates as of the time of writing, July 2020. Note that PWSA also charges for blocks of 1000 gallons consumed, even if not consumed in its entirety. In comparison, PAWC charges for every 100 gallons

Traditionally, however, PWSA water service rates were not the highest in the city. For decades they were lower than those of PAWC, the privately owned company. It is important to put the current rates in historical perspective, as PWSA's infrastructure conditions and consequently current rates are at least partly explained by an agreement that put PWSA at a disadvantage vis-à-vis PAWC (private). The agreement was signed by the city's legislative body – Pittsburgh City Council – with PAWC's predecessor company in 1958 (which lasted until 2020). The agreement forced all city residents, regardless of their water service provider, to pay the same service rates, effectively subsidizing the private water company for 60 years, amounting to millions of dollars that could have been reinvested in public water

infrastructure.² Meanwhile, the private company was using these funds to invest in its own infrastructure (Bauder 2019).

Under growing financial pressure, the PWSA Board of Directors decided to establish a public-private partnership with Veolia Water in 2012 to take over management of water services (WaterWorld 2013). This arrangement soon resulted in a series of problems, including boil water advisories and spikes of lead in water, ending in lawsuits between PWSA and Veolia in 2016 and undermining the trust of consumers in the quality of their water (Rosenfeld 2017). PWSA's management returned to public control, but in 2018 PWSA was put under state regulatory oversight (Hughes 2017), where it had to comply with an ambitious investment plan, resulting in further rate increases.

It is important to note here that one of the advantages of the governance structure of public water operators is that they often set up mechanisms for public participation. For example, the Board of Directors of PWSA traditionally works with civil society organizations on issues related to water, including affordability. When PWSA was placed under PUC oversight, this was formalized. For example, each rate increase must be approved by the PUC and includes participation from a variety of actors. The PUC also requires utilities under its oversight to set up a low-income assistance advisory committee (LIAAC). The role of the LIAAC is to shape assistance programs with members from PUC, the consumer protection office, PWSA staff, board members, as well as members of civil society and community-based organizations, setting up an official participatory process.

According to interviews with members of this committee, there are differences in how to address low enrollment levels in assis-

² For the period 1985 to 2001, PWSA paid \$44.8 million in reimbursements. This does not include the first 12 years of the agreement, where the City Water Department paid the subsidy directly from the city budget. Over time, there were several attempts to revise this subsidy without success, facing political opposition from representatives in affected neighborhoods but also from the PAWC (private). For more information see: McNulty 2001 and Nootbaar 2010.

tance programs. PWSA is focused on improving community outreach and is preparing to launch a new initiative (being vetted by PUC) to help reach potential beneficiaries by setting up a team designed to work solely on increasing program enrollment in low-income neighborhoods. Civil society and community-based organizations in the committee are advocating for full protections: making water shutoff moratoria permanent and implementing a debt forgiveness program. Although neither one of these protections has been implemented, interviews with PWSA members suggested that a debt forgiveness program is being considered (as shown in Table 18.2 above).

This is not to say that PWSA did not have good governance before PUC oversight. In fact, the PWSA's Board of Directors had instituted water protections for low-income customers in late 2017 working closely with civil society organizations as part of "Our Water Campaign" efforts. However, the procedures instituted under the oversight formalize a more democratic process, providing a record of participation and increasing transparency, which are all steps in the right direction within PWSA.

CONCLUSION

This paper shows that although the public water operator (PWSA) set up more enhanced water access protections during the pandemic than its private counterpart (PAWC), neither operator has offered the extent of assistance required for long-term water affordability in Pittsburgh. Furthermore, the prospects for implementing the necessary policies are particularly daunting for the public water operator due to historical legacies, such as the agreement from 1958 that served to starve them of funds, a lack of federal funding, and the fact that it is responsible for the majority of low-income households in the city.

Water operators can nevertheless utilize the Covid-19 crisis to highlight the essential nature of the water and sanitation sector and

to elevate calls for prioritizing resources to ensure water affordability as part of the rescue packages being implemented by the US Senate. Even though the role of the federal government for water infrastructure has decreased since the mid-1970s, and there have been failed attempts at passing national legislation for assistance for drinking water service in the US (Pierce et al 2020), the current water affordability crisis is a national problem that requires federal government intervention (see Warner et al in this volume).

The current aid packages to alleviate the economic effects of the Covid-19 pandemic in the United States should include water infrastructure upgrading as an essential part of public health and as an economic stimulus. Public water operators should be part of a coalition of actors advocating for federal funding for clean, safe and affordable water access. Specifically, for PWSA, this means working closer with organizations that have been advocating for clean affordable water and joining other networks that are working towards the same goal. This is not new to PWSA (for example, it has joined the US Water Alliance and has been working with local organizations like the Our Water Campaign Coalition) but could be a central part of its mission. The progress PWSA is making in catching up with badly needed infrastructure investment should put water affordability at the center of its mandates.

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LIST OF INTERVIEWS

- Nick Bianchi, Executive Director, Wilkinsburg-Pen Joint Water Authority, July 10, 13 and 15, 2020.
- Patrick Dowd, former Pittsburgh City Council member and former member of PWSA's Board of Directors, July 9, 2020.
- Michele Garvey, Director of Administration, West View Water Authority, June 15 and 30, 2020.
- Glenn Graystone, member of PWSA's Low Income Assistance Advisory Committee, July 9, 2020.
- Deborah Gross, Pittsburgh City Council member and former member of PWSA's Board of Directors, June 25, 2020.
- Krystle M. Knight, member of PWSA's Low Income Assistance Advisory Committee, July 20, 2020.
- Gary Lobaugh, External Affairs Manager for Western Pennsylvania, Pennsylvania American Water Company, July 6 and 21 and August 8, 2020.
- Noble Maseru, member of PWSA's Low Income Assistance Advisory Committee, June 30, 2020.
- William Pickering, PWSA's Executive Director, July 13, 2020.
- Jennifer Presutti, PWSA's Deputy Director, July 13, 2020.
- Julie Quigley, Director of Administration, PWSA, June 19, June 26, July 13, 2020, and multiple email exchanges.
- Monica Ruiz, Casa San José's Executive Director, May 19, 2020.
- Allyson Shaw, former campaign leader of clear rivers and our water campaign, Pittsburgh UNITED, July 13, 2020.
- Megan Stanley, Director of Pittsburgh Commission on Human Relations, June 30 and July 13, 2020.
- Madeline Weiss, Environmental Justice Organizer, Pittsburgh UNITED, July 7, 2020.

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Chapter 19

Benjamin J. Pauli

THE LONG ROAD OUT OF CRISIS: (RE)BUILDING TRUST IN FLINT'S PUBLIC WATER FROM POISONING TO PANDEMIC

The city of Flint, Michigan, has found itself dealing with crisis upon crisis with the emergence of the Covid-19 pandemic. Since the disastrous switch of its water source to the Flint River in 2014, which resulted in corroded pipes, population-wide lead exposure and a historically deadly outbreak of Legionnaires' disease, Flint has been struggling to repair the damage done to infrastructure, public health, and resident trust.

The pandemic has complicated this ongoing recovery work and other water priorities in Flint in a variety of ways. It has also inspired new policies around water accessibility and affordability that have brought with them their own implementation challenges. In certain respects, however, lessons learned from the Flint water crisis, as well as people and resources mobilized in response to it, have put the city and its water utility in a better position to confront the unique threats posed by Covid-19, and may offer inspiration to other struggling public water operators in the United States and beyond

INTRODUCTION

The first confirmed cases of Covid-19 in Flint and surrounding Genesee County appeared in March 2020. By early June, countywide cases had grown to over 2000, with over 250 deaths, the fourth-most of any county in the State of Michigan, USA. The disproportionate effects of the virus within the county were also notable: African-Americans accounted for about 50% of cases, despite comprising 20% of the population. Most of these cases were concentrated in majority-Black Flint (MLive 2020b; New York Times, 2020).

Even before any cases had been officially confirmed within city limits, Mayor Sheldon Neeley's administration took a proactive approach to the pandemic, issuing an emergency health alert on March 11 and declaring a state of emergency the next day (City of Flint 2020b). Neeley also appointed respected local pediatrician Dr. Lawrence Reynolds to the volunteer position of City Health Advisor to ensure that Flint's pandemic response would be guided by the latest advice coming out of the medical community. To reinforce the State of Michigan's stay-at-home order of March 23, and discourage gatherings at liquor stores and house parties, on April 2 the city announced a curfew forbidding residents from leaving their homes between the hours of 9 p.m. and 6 a.m. except in case of emergency (City of Flint 2020c). Neeley, in defending the strict and somewhat controversial measure (ultimately extended through the month of May), repeatedly expressed his commitment to putting public health first in Flint, even if it meant making unpopular decisions. As talk began to shift locally and nationally to the possibility of lifting lockdown orders and reopening the economy, Neeley appointed a "blue ribbon" task force comprised of a diverse group of residents to advise the city about how to do so safely (City of Flint 2020e).

The Neeley administration's response to the pandemic has emphasized the integral relationship between public health and residents' access to clean, affordable water, especially in light of med-

ical recommendations around regular handwashing. To address residents' water needs during the pandemic, the city has in some instances been able to repurpose or reaffirm roles, resources, and policies created in response to the Flint water crisis. These include grant-funded public health positions at city hall, bottled water distribution sites, and a citywide moratorium on water shutoffs put into place several months before the pandemic hit. Additionally, at the urging of City Health Advisor Reynolds, Neeley issued a water restoration order in conjunction with the emergency declaration of March 12 aimed at helping homes that were shut off prior to the moratorium reconnect to the grid. In April 2020, the city also announced a water bill relief program for residents whose ability to pay Flint's notoriously high water rates had been further compromised by the economic hardship of the pandemic (FlintBeat 2020).

Flint's water-related initiatives in response to the pandemic, as well as its ongoing water crisis recovery work, have required coordination across city departments. However, the water utility and the water department (which handles billing and interfaces with residents) are responsible for their implementation. The city's water employees have faced not only new challenges created by the pandemic itself, but stubborn structural limitations of resources and a lingering lack of public trust that has led some residents to question their efforts and the city's commitment to its own water policies. The success of these policies depends, to some extent, on popular buy-in and participation. Therefore in order to understand how Flint's water and Covid-19 intersect, one must understand the history of crisis that looms over local water management in Flint and how it continues to shape public perception.

IN THE SHADOW OF THE FLINT WATER CRISIS

In April 2014, a State-appointed emergency manager tasked with turning Flint's finances around oversaw the switch of the city's publicly owned and operated drinking water supply from Lake Huron

water (which had been purchased pre-treated from the Detroit Water and Sewerage Department for over four decades) to the Flint River. The switch required the local water utility, for the first time since the mid-1960s, to take responsibility for treating the city's water. In an email to state regulators eight days prior to the source change, Laboratory and Water Quality Supervisor Michael Glasgow warned that the drinking water treatment plant was not ready and that he needed more time for training and planning. Nevertheless, on April 25 the switch was pushed through by Glasgow's superiors, and Flint River water began to flow into the city's distribution system (Clark 2018; Pauli 2019, 2020).

Some of the details of what happened next have been lost due to limited record-keeping at the treatment plant, but the overall picture suggests that plant staff quickly found themselves in over their heads (Masten et al, 2016). Retrospective analysis has shown that chlorine levels fluctuated wildly throughout the system over the ensuing months, likely contributing both to residents' skin problems in the shower (when chlorine levels were too high) and bacterial infections (when chlorine levels were too low) (Zahran et al, 2018). Most famously, the water dispensed by the plant was more corrosive than before, leading to disruption of biofilm and lead-bearing mineral scale on the inside of pipes – contributing to bacterial and lead contamination – as well as pipes rusting through entirely in some parts of the system (Pieper et al, 2018). Not all of the consequences of improperly treating the water were immediately clear, but the overall disruption to the water system that followed the source switch forced the utility to spend much of the next 18 months confronting a variety of aesthetic and safety issues with water quality.

The way that the public utility communicated about and responded to these challenges did little to foster trust among residents. When the utility began to detect high levels of carcinogenic disinfection byproducts in 2014, it waited months to inform consumers, leading to anger at its lack of transparency and lingering suspicions about its intentions. When then-Director of Public

Works Howard Croft participated in public meetings about the water problems in early 2015, many residents felt condescended to and dismissed by him and other officials. When the utility conducted federally mandated lead and copper sampling later that year under the direction of the Michigan Department of Environmental Quality, it minimized the amount of lead in its samples by encouraging pre-flushing of pipes and the use of small-neck sampling bottles, miscategorized sampled homes as having lead service lines when the actual composition of their pipes was unknown, and threw out two high-lead samples that should have triggered remedial action under Environmental Protection Agency guidelines. Furthermore, as it struggled to collect the required number of samples, it resorted to convenience samples clustered in particular neighborhoods, treating them as if they were indicative of water quality across the city as a whole. The resulting picture of water quality downplayed the presence of contamination, and it took an independent sampling effort led by local activists to reveal the city's system-wide lead problem and force the utility to acknowledge it (Clark 2018; Pauli 2019, 2020). The fact that it had required a concerted grassroots initiative to expose the utility's incompetent-at-best and criminal-at-worst behavior (Croft and two utility workers were among those charged with felonies and misdemeanors for their roles in the crisis) offered a powerful and lasting lesson.

Concerns about water affordability added to residents' water-related frustrations during the water quality crisis. Indeed, it was mainly these concerns that first generated popular protest around water in Flint in 2014. Despite the fact that over 40% of Flint residents live below the poverty line, they pay some of the highest water rates in the United States. The high cost is a product of the utility's struggle to maintain an oversized, aging water system built many decades ago for a population more than twice Flint's current size. The city has also had to find ways of recouping the cost of "non-revenue" water – some 40-50% of what it purchases wholesale – that leaks out of its pipes before making it to household water meters.

The water department has regularly resorted to water shutoffs (or the threat thereof) for failure to pay water bills, although the full extent of this practice is clouded by a lack of publicly available data. The department has also been known to threaten residents with tax liens, which require homeowners to pay off accumulated water debt along with their property taxes or risk foreclosure (MLive 2018).

While water quality has improved substantially system-wide since the onset of the crisis, residents continue to raise concerns about household-level quality issues and dangerous pipes that remain embedded in the city's infrastructure. At the time of this writing, Flint is still in the process of replacing its lead and galvanized steel service lines – a process slated to be completed by the end of 2020. Many residents remain skeptical of the tap, regularly waiting in line for hours at the three bottled water distribution sites that remain in the city.

Aside from the profound and lasting damage the water crisis has done to residents' confidence in their public water and local water institutions, the crisis also led to a significant shift in the role and responsibilities of the water utility. Part of the logic of switching to the Flint River in the first place was that it would offer the utility an opportunity to practice treating its own water before making a permanent switch to a new raw water pipeline under construction between Flint and Lake Huron. Through early 2018, the utility operated with the belief that it would assume ongoing responsibility for water treatment after the completion of the pipeline, and it put considerable effort into preparing the treatment plant and its people for that eventuality. When it was announced in April of that year that Flint would be leaving the pipeline project in favor of a long-term contract for pre-treated "Detroit" water (now managed by the regional Great Lakes Water Authority), the utility abandoned its treatment plans and settled into a water distribution role. Consequently, many of its most highly trained employees left for other jobs. Unable to offer competitive salaries that would attract and retain experienced operators, the utility has had to fill much of the

resulting vacuum with entry-level staff.

The utility's financial challenges were only exacerbated by the infrastructural impact of the water crisis: while Flint's water fund is relatively healthy, with US\$20 million in available cash, the water system's capital needs are so large that current resources fall well short of what is required to address them (upgrading the city's wastewater infrastructure alone will cost an estimated US\$114 million (MLive 2019)). (For similar accounts of funding shortfalls for public water operators in other American cities see the papers by Grant (Baltimore) and González Rivas (Pittsburgh) in this volume.) Just as problematic, however, is the utility's failure to use available resources effectively. In late 2016, the US Congress appropriated US\$100 million through the Water Infrastructure Improvements for the Nation Act for upgrades to Flint's drinking water system. The money was placed into Michigan's Drinking Water State Revolving Fund, to be used for reimbursement of projects planned and implemented by the city. As of March 2020, however, less than US\$13 million of these funds had been used, a reflection of the slow pace of progress on water in Flint even before the pandemic (MLive 2020a).

BUSINESS AS (UN)USUAL DURING THE PANDEMIC

In the immediate lead-up to the Covid-19 pandemic, Flint's water utility, along with water engineering contractors hired by the city, were working on a number of upgrades to the water system that were disrupted or made more complicated by the threat of viral transmission. Among the priorities were: repairs to Flint's ailing wastewater infrastructure (thought to be in imminent danger of collapse); replacement of broken and vulnerable water mains (the city experiences upward of 200 water main breaks each year); installation in every home of a new water meter capable of being read remotely; and extraction of Flint's remaining lead and galvanized steel service lines. According to Director of Public Works Rob Bincsik, the pandemic did not so much alter these priorities as require

the utility to approach them differently (R. Bincsik, personal communication, July 22, 2020).

While the utility was able to implement social distancing measures and temperature screenings early on, it proved difficult to procure adequate personal protective equipment and supplies for utility employees, including masks, suits, goggles, and hand sanitizer. As a consequence, the utility had to limit or eliminate for a time activities that required home visits and direct interactions with residents. Water meter and service line replacements were officially suspended for a period of two months beginning on April 2, and took even longer to get started again (City of Flint 2020a). One takeaway lesson from the pandemic, Bincsik says, is that the utility should always have a stockpile of protective gear on hand in anticipation of similar public health emergencies.

Federally mandated Lead and Copper Rule sampling, already a challenge for the utility under normal circumstances due to low resident participation and uncertainty around the location of lead service lines, has also taken on added difficulty within the context of the pandemic. Having fallen below 100,000 residents, Flint is now required to collect only 60 eligible samples as opposed to 100, but even obtaining this smaller number can be difficult: it requires getting testing kits into the hands of residents with lead pipes – an ever-shrinking pool with the progress of replacements – as well as resident follow-through with the collection and return of samples. For help with distribution of kits and follow-up with residents, the utility has turned to Public Health Manager Billie Mitchell, who originally joined the city as part of a grant-funded public health department formed in response to the water crisis. Prior to the pandemic, Mitchell and a group of community navigators funded by the county health department were already organized around connecting residents with water crisis-related resources, putting them in a good position to assist the utility with outreach during the pandemic. Mitchell and her team have found that handing out kits at water distribution centers – already woven into the fabric of

everyday life for many residents – has proven especially effective.

At the time of writing (August 2020), there has been no confirmed case of Covid-19 within the water utility. The tragic death of a city employee on the customer service side, however – one of two city hall employees to die of the virus – caused the entire customer service department to shut down for a number of days, putting a temporary halt to any projects that required consent or enrollment from residents. Director of Public Works Bincsik also reports that one of the city’s construction vendors has experienced COVID cases. Although these do not appear to have been as disruptive to the progress of water work, the ever-present threat of infection has significantly changed the texture of daily operations.

ENSURING WATER ACCESSIBILITY AND AFFORDABILITY

Even at the height of local and national outrage over Flint’s tainted water, the City of Flint water department continued to threaten residents and businesses that were behind on their water payments with shutoffs—long deemed a necessary tool in a city where it is not uncommon for more than half of residential water accounts to be delinquent at any given time. In the context of the water crisis, however, legal challenges and public indignation about the policy did occasionally put the city on the defensive and make what was already framed as a policy of last resort even less attractive. When the Neeley administration took office in November 2019, the city had not shut off a water account since August of the same year. In one of his first acts as mayor, Neeley made this de facto moratorium on shutoffs official, pending an audit of the city’s finances. By the time the Covid-19 pandemic appeared, no property had been shut off for eight months, and Neeley took the opportunity to reaffirm the no-shutoff policy, reframing it as a public health measure essential to promoting consistent hygiene.

Where Neeley went beyond previous policy was in issuing a water reconnection order aimed at ensuring that every occupied home

had water flowing from the tap. The reconnection order presented some special challenges with respect to implementation. While the city had a list of homes without active water accounts, many of these homes were almost certainly abandoned, given Flint's high vacancy rate, or owned by landlords who did not have any current tenants. The problem was that the water department was not able to tell which were which from afar: determining whether a house is actually inhabited requires a site visit. Consequently, the success of the reconnection policy has been largely dependent on residents themselves taking the initiative to call the department and request reconnection.

Public Health Manager Mitchell says she expected thousands of calls, but as of July 2020, under 500 had come in (B. Mitchell, personal communication, June 29, 2020). There were indications, however, that some residents had failed to get the message about reconnections. There were also reports circulating through the activist community that the process of applying for a reconnection was overly burdensome, requiring documentation that was difficult to get and submit in the context of the pandemic. Some residents also said they had been asked to pay a fee to reconnect. Finally, there were concerns that the utility's insistence on inspecting homes for potential leaks prior to reconnection was leading to unnecessary delays (although reconnection work, unlike some other infrastructure-related work, did continue through the lockdown months of April and May).

Skeptical that the city was taking its reconnection order seriously, some local water activists began conducting their own outreach to residents living without water. Additionally, on June 10, 2020, the Flint Democracy Defense League and the Environmental Transformation Movement of Flint held a joint, socially distanced press conference on the lawn of city hall raising concerns about the overhead involved in getting reconnected and demanding clearer communication from the city about its reconnection policy. The same day, the city put out a press release claiming that it had "turned on water

service to 518 properties,” calling it “a monumental achievement for the City of Flint, marking the first time in Flint’s history that this many users have been on the water system at its current population level” (City of Flint 2020d). The number seemed suspiciously high to the activists, who later learned that the actual number of reconnections was closer to 100, with the 518 figure representing all new connections to the grid since March of that year.

Episodes like these contributed to a feeling among activists and residents that it took scrutiny and pressure from below to keep the city honest and hold it to its promises about water. That much had been learned from the water crisis; what was new about the political dynamic under Covid-19 was the support activists now felt they had from above, at the state level. On March 28, at the urging of water activists and the Michigan Environmental Justice Advisory Council, Governor Gretchen Whitmer issued a statewide shut-off moratorium/reconnection order, making Michigan one of only five States in the country to mandate reconnections (the order was eventually extended through the end of 2020) (Office of Governor Gretchen Whitmer 2020). Activists came to see the State order as offering a clearer, more detailed, and more authoritative set of reconnection guidelines – guidelines that could be used to keep pressure on the city. For example, they appealed to the State order to insist that the city confirm that reconnections were to be entirely free, without any kind of fee involved (a point the city did, in fact, emphasize in its June 10 press release). The State order also required cities to speed up reconnections and report on progress, which ultimately made it possible to get a more accurate number than the mayor’s office had released initially.

When announcing the City of Flint’s reconnection order, and repeatedly over the ensuing weeks, Mayor Neeley stressed that the policy was not a “free-for-all,” and insisted that residents still pay whatever they could of their water bills to maintain the integrity of the city’s water fund (which experienced a 15-20% decline in revenue during the first five months of the pandemic). At the same

time, Neeley acknowledged that the pandemic had created even more economic hardship than usual for residents. In early April, his administration and the Flint City Council announced an innovative pilot program, the Water Payment Assistance Fund, which involved diverting US\$74,000 of federal Community Development Block Grant money (out of about US\$3.5-5 million typically awarded to the city on an annual basis) to help residents with water bills. The program allowed moderate- to low-income residents, as well as those on unemployment due to the pandemic, to receive up to US\$75 per month of matching assistance on water payments for up to three months (FlintBeat 2020). Demand proved to be overwhelming, with the city only able to choose 230 households of over 1000 that applied. The State Department of Health and Human Services made further support available by providing reimbursements to utilities to forgive past due bills and fees, as well as a 25% rebate on water bills for eligible customers (Office of Governor Gretchen Whitmer 2020).

The fact that assistance programs are typically temporary and/or partial and often involve considerable amounts of paperwork for people who are already overburdened has led to demands for a more fundamental restructuring of water rates in Flint. For at least fifteen years, activists in Flint have called for the city to establish a water affordability plan, preferably tying the rate residents pay for water to their household income. Specific recommendations of this nature have, in fact, already been drawn up by experts and are being discussed not only within activist groups but among a group of residents brought together by the C.S. Mott Foundation. There are indications that some of the people overseeing Flint's finances may be open to change: city Financial Advisor Eric Scorsone agrees with those calling for affordability that there is a need to break out of the "uniform rates" box (E. Scorsone, personal communication, July 16, 2020). Furthermore, there is a growing sense among advocates that potential legal hurdles created by the Michigan Constitution – which some have claimed forbid affordability plans as a form of

“price discrimination” – can be overcome. Whether the pandemic generates enough pressure to move affordability measures forward, however, remains to be seen.

Given the continued mistrust of the tap in Flint, and the Genesee County Medical Society’s standing recommendation that some medically vulnerable residents avoid even filtered tap water, making water available to residents during the pandemic has required going beyond ensuring access to the municipal water grid. Since 2014 when the water quality issues emerged, residents have depended on a mixture of private and public water distribution sites, as well as one-off charitable water giveaways for free cases of bottled water. The number of distribution sites began to dwindle in 2017, when the State began to withdraw its support for them, and the last four State-sponsored sites closed in April 2018. That same month, the State ended its sponsorship of water delivery to homebound residents.

On both fronts, there has been an effort to fill the gap through a combination of grassroots initiatives and private donations of water. Three main church-based water distribution sites have remained open, supplied by the 100,000 water bottles that the Nestlé corporation donates every week. Even before the pandemic, these locations had already become important sites of food and water distribution – a service made more important by the complications of visiting the grocery store in the COVID era. Although these sites have had to adopt new protective measures and limit person-to-person interaction, the city continues to direct residents to them and utilize them for certain forms of outreach. Churches have also taken the lead in assuming responsibility for home water delivery, but they have struggled for lack of resources. On March 30, and with the coordination of the Neeley administration, Nestlé announced that it would step up its donations to help get water directly to those most at risk of Covid-19 (City of Flint 2020f). Private-public partnerships of this kind (especially with Nestlé, a favorite target of activists for its aggressive extraction of Michigan groundwater) typically draw

mixed reviews in Flint. The local culture includes a proud commitment to public institutions and services, but residents have learned that, in times of crisis, principle must sometimes be combined with practicality.

CONCLUSION

The layering of crisis upon crisis has made water issues in Flint even more challenging: residents wait for service line replacements and try to obtain bottled water; the public water utility attempts to juggle infrastructural priorities and accessibility initiatives; and the water department tries to keep the water fund's revenue stream flowing during a global economic collapse. In some ways, however, the fact that certain crisis-response pieces were already in place has put the city in a better position to respond to the pandemic than it may otherwise have been. The overriding lesson of the Flint water crisis has shone through the pandemic response at both the city and State levels: public health must come first, even when it creates logistical complications, and even when it is expensive. Like the crisis that preceded and merged with it, the Covid-19 pandemic has shown the world that water "has a lot of public good aspects that we didn't really consider before," in the words of city Financial Advisor Scorsone. It is time, he suggests, to "rethink the whole model," from shutoffs to rates to reconnections (E. Scorsone, personal communication, July 16, 2020).

If there is any other essential lesson to take away from the Flint water crisis, it is that it matters not only what particular decisions are made about our water, but how they are made. For several years, after Flint's affairs were taken over by the State of Michigan in 2011, residents watched a series of unelected emergency managers make critical decisions about water, without meaningful public involvement and regardless of whether or not they had popular support. Some of these decisions – above all, the decidedly unpopular switch to the Flint River – proved to be disastrous. The moral of the story

is clear, at least to many Flint residents and activists: water and democracy must go hand-in-hand.

Among the changes to State law that followed the water crisis was a requirement that every water system of moderate size have an advisory council comprised at least in part of local residents, with annual public meetings to facilitate popular awareness of, and feedback about, the water utility's operations. It could be an important step toward creating systems that are not only publicly owned, but democratically run, transparent, and accountable. Two years after passage of the statute, residents of Flint are still waiting for their city to take that step, and in a time of renewed crisis, there is a danger that democratic reform will be sacrificed to the demands of the moment as other priorities take precedence. On the other hand, residents know well by now that there is truth in the old cliché that with crisis comes opportunity. It may be that this part of the “whole model,” too, will be reimagined – with residents themselves playing a significant role – in the days to come.

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Chapter 20

Jeimy Alejandra Arias Castaño
Kathryn Furlong

FULL COST RECOVERY MEETS CRISIS: GUARANTEEING ACCESS TO WATER UNDER COVID-19 IN COLOMBIA

Underscoring the importance of handwashing to halt the spread of Covid-19, on March 14, 2020, the Colombian government ordered the reconnection of water services to more than one million people whose services had been disconnected for non-payment. A few days later, “preventative isolation” was imposed, forcing the widespread closure of business and industry. Many suddenly found themselves without a paycheck. These closures and the unemployment they provoked seriously compromised utility revenues at the very time that people needed more water and had no way of paying for it. In response, the government announced measures to provide tariff relief and to facilitate access to credit and revenue support for utilities. In this context, Colombia’s long-standing tension between ensuring service access and reliable utility revenue came back into focus. Since the late 1980s, policy has been pushed towards a neoliberal model that prioritizes a punitive and less redistributive, full-cost recovery model to ensure utility revenue. The current crisis has put the limits of this model centre-stage. Political space may be opening

for a more social and redistributive model through initiatives like efforts to nationalize the *mínimo vital*, a programme to guarantee a basic lifeline of water to low-income households.

INTRODUCTION

Colombia's first case of Covid-19 was diagnosed in Bogotá on March 6, 2020, just before the World Health Organization reclassified Covid-19 as a pandemic. Although some restrictions have been relaxed since preventative isolation began in March, most measures have been extended, causing major economic difficulties. Recognizing the impact on household finances and the national economy, various levels of government have taken measures to facilitate access to and payment for utility services.

Colombia has a long tradition of trying to balance social and economic concerns in the provision of utility services through programs like cross-subsidization that have existed in various forms since the 1930s. While these policies have been repeatedly challenged by various sectors, the current crisis is bringing debates over the social nature of water and measures for economic redistribution back to the fore. This debate is not simply social or economic. It is highly political. Beyond a container of power relations (Swyngedouw 2004), water emerges as a substance through which political parties and politicians can define their identity, garner widespread public support, and maybe even vie for the presidency.

These issues are explored in this chapter through a review of newspaper articles, bulletins and official documents related to the management and consequences of Covid-19 in Colombia since March 2020. We begin with an overview of the measures taken to ensure access to water and utility revenues. These include service reconnection, tariff relief, and increased access to credit and income support for utilities. Next, we examine how this situation is reviving debates around the nationalization of the *mínimo vital* – a basic lifeline supply of water – potentially signaling a shift away

from the dominance of neoliberal policy around water access and utility financing. We conclude with a reflection on what this might mean for how we think about the politics of water and the state's role in this regard. We focus on examples from Bogotá, the capital of Colombia, where the epidemic is concentrated.

MEASURES TAKEN TO REDUCE THE SPREAD OF COVID-19

Reconnection

With the first confirmed case of Covid-19 on March 6, 2020, President of Colombia Iván Duque and his ministers began giving daily briefings on national television, presenting the measures that would be taken to reduce the spread of the virus. The first measures included restrictions on travelers from countries with high rates of infection and the cancelation of large events. On March 14, the president announced restrictions on air traffic, a policy of working from home where possible, and online schooling. With respect to water supply, he announced:

[for] people who have had their water services disconnected for non-payment, the most vulnerable families in the country, we have decided to reconnect their services for the duration of the health emergency. We are also instituting a tariff freeze during this period...given the importance of regular handwashing for all Colombians (Presidencia de la República 2020a)

These decisions were formalized through Resolution 911 of the Commission for the Regulation of Drinking Water and Basic Sanitation on March 17 and ratified by Presidential Decree 441 on March 20. In particular, Decree 441 required the “immediate reconnection of water services to residential subscribers whose services had been suspended or disconnected” (Art. 1). According to the Minister of Housing, Jonathan Malagón, the measure would benefit more

than 200,000 families (over 1 million people). Reconnection, which usually costs users between COP\$30,000 and COP\$50,000¹ (Malagón 2020), would be done free of charge with the costs being borne by utilities. In Bogotá, the city and its utility – the Water and Sewerage Company of Bogotá (EAAB) – expected to reconnect around 40,000 households, benefitting 160,000 people. EAAB dedicated 100 employees to the reconnection effort. By March 23, 92% of the households had been reconnected (EAAB 2020). In June, the Minister of Housing stated that more than 303,000 families had been reconnected at a cost of over COP \$50 billion, paid by the national government (MVCT 2020). All infrastructure maintenance that might interrupt community supply was also halted.

Nevertheless, reconnection was not about a new economic justice. Reconnected households would still be on the hook for their existing utility debts as well as for the cost of the water they consumed during the pandemic. This poses a problem for households and utilities. Utilities continue to bill services as normal, using a tariff structure that is based on household consumption and the level of cross-subsidization to which the household is entitled based on its socioeconomic tier (or *estrato* in Spanish). Thus, while service suspension for non-payment is prohibited during the emergency, households continue to accumulate utility debt. Still others, with reduced means, prioritize other expenses over their water bills. Concerned by diminishing utility revenues and the continued ability of utilities to provide services, this situation generated debates over how to compel payment during the pandemic (without the threat of disconnection) and – more progressively – how Colombia's cross-subsidy system might be reformed to improve people's ability to pay by reducing costs to the most vulnerable households (El Espectador 2020a).

Still, the most vulnerable had to be among the “well-behaved.” Decree 441 excludes households disconnected for “illegal” connec-

¹ 1 US\$ is approximately COP\$3850.

tion from the reconnection programme. This restriction was debated in the Constitutional Court, which determines the constitutionality of government legislation. There, human rights advocates and academics argued that the exclusion violated the right to equality, undermined efforts to limit the spread of Covid-19, and that illegal connection would be unnecessary were there a *mínimo vital* and thus was rather a reflection of the state's failure in its duty to guarantee the right to water (El Tiempo 2020b). Their arguments prevailed. Through *Sentencia* C-154 of May 28, 2020, the Constitutional Court approved Decree 441 except for the section corresponding to the exclusion of households associated with illegal connection. The court argued that excluding some users was “incompatible with the duty to ensure the life and health of users and other members of the community.” Nevertheless, those disconnected for illegal connection will be charged for reconnection including any repairs to infrastructure that may have been damaged by the illegal connections. Concerned with the impact on utility revenue and doubting the likelihood that these fees and debts will actually be paid, the National Association of Colombian Utilities (Andesco) wants municipalities to assume the responsibility for their payment (El Tiempo 2020a).

Tariff relief

On March 20, “preventative isolation” (*aislamiento preventivo*) was implemented in Bogotá. Four days later the restrictions were extended to the whole country and have been prolonged several times. Although some restrictions have been lifted, those on commercial and industrial activities remained in place until September 2020, with a possibility of extension. The ensuing economic contraction has only aggravated pre-existing social and economic disparities. The crisis has been especially difficult for those who work in the informal economy, as well as people who lost their jobs due to the closures. A recent survey conducted by Invamer (2020) found that unemployment in Bogotá is now at 30% compared with 27% nationally. Approximately 67% of Bogotá's unemployed and 54% of those

unemployed nationally lost their jobs as a result of the pandemic. The crisis has also affected many in the middle classes, where entrepreneurs, merchants and small business owners have had trouble staying afloat (El Tiempo 2020b).

This sudden crash in people's incomes, combined with the stay-at-home order and government recommendations for regular handwashing and surface cleaning, means that people's bills for water and other public services are increasing just as their means to pay these bills are compromised. This situation is compounded by the fact the subsidies associated with Colombia's cross-subsidization programme only apply to basic consumption, while "sumptuous" consumption is charged at an unsubsidized rate. This means that many low-income users are faced with bills not only for higher levels of consumption, but at higher tariffs for a part of their consumption. As a result, affected users have begun to contest their bills, arguing that the preventative isolation impedes them from generating sufficient (or any) income to pay their utility bills.

The ensuing political debate is a testament to the political nature of water and how it is accessed. At the beginning of Bogotá's quarantine, the city's mayor Claudia López, a centrist politician and member of the Green Alliance party, proposed that public services be provided free of charge during the first month of quarantine. Mayor López, however, did not have the authority to order a suspension of billing; she could only request permission for her proposal from the central government (El Tiempo 2020c). Her initiative was immediately rejected by Andesco. Their representative, Camilo Sánchez, emphasized not only the mayor's lack of authority in the matter but that no such policy could be implemented without clearly establishing where the resources to finance utility services would come from (El Espectador 2020b).

The Colombian president Iván Duque of the far-right Democratic Center party was no more receptive to Mayor López's proposal. Fees would not be suspended; instead, flexible models to ensure repayment would be sought (Revista Semana 2020a). He reasoned his

position by drawing on the national household basic services Law 142 of 1994, under which gratuity is banned. While the law recognizes the social function of utilities, it emphasizes that their provision depends on sufficient utility revenue to invest in infrastructure and cover operating costs, making full cost recovery necessary for all utilities. While Mayor López accepted the decision (not having a choice), she pointed out that mayors like her had been mandated by the presidency to ensure funding for the “health, shelter and sustenance of the most vulnerable” (Revista Semana 2020b). In the ensuing debate over the response to Covid-19, Mayor López is winning in the court of public opinion. In the same poll conducted by Invamer mentioned above, 53.6% of Colombians and 66% of Bogotanos agree with Mayor López’ positions against 28.3% and 19% respectively who favour those of President Duque.

Other mayors began to side with Mayor López. They stated their intention to cover the cost of services with or without the approval of the presidency. In response, President Duque gave local leaders the permission to allocate a part of their budgets to the payment of utility services (Decrees 517 and 580/2020). Short of sufficient funds to completely cover people’s bills, the City of Bogotá began allocating resources to subsidize the additional consumption generated by preventative isolation. The measures were for all utility services and specifically targeted the lowest-income users – i.e. those in socioeconomic tiers 1 to 4 of Colombia’s 6-tiered cross-subsidization programme (in which socioeconomic tiers 5 and 6 subsidize the consumption of households in socioeconomic tiers 1-3, and socioeconomic tier 4 pays at cost). For water, additional consumption caused by the isolation was estimated at around 1.4 m³ per month. Mayor López and Bogotá’s water utility EAAB agreed to discount services by COP\$7,528 per month for 3 months, with a budget of COP\$94 billion (Alcaldía de Bogotá 2020 a, b). According to EAAB, the measure would benefit 1.8 million families in Bogotá (El Espectador 2020a). In addition, to promote early payment, they announced a 10% discount on water bills for those who paid in ad-

vance. The national government allowed other cities to do the same in order to incentivize payment.

Under President Duque's programme to develop flexible models to ensure full cost recovery in the context of preventative isolation, several measures were implemented. The first group of measures concerns deferred payment. Initially, users who were unable to pay could defer payment for the first two months of the confinement. Then, users in socioeconomic tiers 1 and 2 were allowed defer payment for a period of 36 months (Decrees 528 and 819/2020) – a measure that also applies to electricity. Users in socioeconomic tiers 3 and 4 were given 24 months (Decree 819/2020). Interest on deferred payments will not be charged, but inflation adjustments will be charged to users in socioeconomic tiers 3 and 4. These could prove onerous, as the value of the Colombian peso has plummeted since the beginning of the pandemic.

The second group of measures concerns cross-subsidization. The presidency gave mayors the authority to increase the level of cross-subsidization for water, sewerage and sanitation services from 70% to 80% for socioeconomic tier 1, from 40% to 50% for socioeconomic tier 2, and from 15% to 40% for socioeconomic tier 3 (Decree 580/2020). The Decree was to apply from April 15 to December 31, 2020. The greater increase for socioeconomic tier 3 was justified by the "hidden poverty" and lack of other economic subsidies for households in this socioeconomic tier. Still, the national government provided no funding to implement the new subsidies, and municipalities could only apply them if they had the resources to do so. Even worse, Decree 580 was struck down by the Constitutional Court on July 23, 2020, on procedural grounds: it had not been signed by all of the ministers. The requirement for the signatures of all ministers on any presidential decree is meant to ensure deliberation and limit the discretionary powers of the president, thereby safeguarding democracy (Constitutional Court 2020b). Such an amateur error led the other political parties to speculate that the omission was a cynical ploy to avoid responsibility for, and the costs

of, the additional subsidies (El Espectador 2020c).

The failure of the decree to come into force limits the possibility for municipalities to provide economic relief. The municipalities that had announced such a programme have had to cancel them for lack of funds (El Espectador 2020d). Had the additional cross-subsidization measure passed, wealthier residents would have had to assume a greater portion of the cost of the services of low-income households, making the subsidy more affordable for municipalities. In Bogotá, where the City had been subsidizing additional Covid-19 related consumption, the discounts were discontinued as of July 24. They will resume if a new measure is issued that would make it affordable for the city (El Espectador 2020e). While the court's decision is not retroactive – it does not apply to the costs incurred by municipalities between April 15 and July 23 – it leaves the government without the possibility of acting again until the end of the year, as a government cannot issue new emergency decrees after the end of July (El Espectador 2020d). To resolve the issue, on July 27, senators from different political parties tabled Bill 170/2020 for a new law that would increase the level of cross-subsidization until the end of 2020.

Financing the measures

The measures to control the spread of Covid-19 and to ensure access to water have hurt the finances of Colombia's utilities. The forced closure of many businesses and industries has meant a reduction in the consumption of high-volume and high-tariff paying users. At the same time, measures such as halting service suspensions, reconnecting users without charge, and deferring bill payments have reduced revenues. Andesco reported a 35% drop in fee collection (Sánchez Ortega 2020). In response, the government has made various efforts to help utilities ensure an adequate revenue stream. These have taken on two forms. On the one hand, the government facilitated access to credit for utilities. On the other hand, it eased the acquisition of the needed resources for local governments to

cover the mandated subsidies and discounts on behalf of the utilities.

With respect to credit support, Decrees 581 and 819 empowered the Bank for Territorial Development (Findeter) (a state-owned national development bank) to provide direct loans to utilities and other water providers. The utility loans are meant to cover the deferred payments of users, in hopes that payments will eventually be made. Given the uncertainty of this situation, the loans have the same conditions given to users whereby the state assumes the risk associated with the loans. That is, the credits are at 0% interest, not subject to inflation, and granted for a term of 36 months, payable at end of the period. The financial costs are borne directly by the Findeter, but these have been significantly reduced as the government has waived the taxes on financial transactions that normally would have been associated with the loans. Findeter is authorized to renegotiate debts and discounts with the utilities, with the ultimate guarantors of the credit being local governments. To finance these measures, Findeter was granted an “Emergency Mitigation Fund” by the national government.

With respect to enabling government assistance to utilities, Decree 441 empowered municipalities to allocate resources to finance other forms of water supply in cases where there is no access to infrastructure. Decree 528 enabled the national government to directly transfer funds to utilities to cover the subsidies. Local governments are charged with utility oversight to ensure the correct allocation of funds.

RETHINKING COST-RECOVERY UNDER CRISIS

The tension between ensuring sufficient utility revenues and access to essential services has a long history in Colombia. Today, with the strain of Covid-19, the increased tension has brought renewed attention to the *mínimo vital* with the possibility that a real guaranteed minimum water access might be established. At the beginning

of the 20th century, cholera and typhus caused significant suffering in Bogotá. In that context, local government, industry and the press pushed for the municipalization of water services to improve water quality and extend infrastructure to poor neighbourhoods. To pay the loan on the purchase of the water infrastructure, the city was dependent on user fees and installed volumetric metering by the late-1920s (Acevedo-Guerrero, Furlong and Arias 2016). From then on, full-cost recovery, metered billing, corporatization and various forms of cross-subsidization between income groups became central pillars of Colombian utility governance. These policies sought to reconcile various factors in a context of deep economic inequality and repeated economic crises: on the one hand, the need to guarantee water for human consumption and public health, and on the other, the need to secure the financial stability of utilities and maintain and expand basic infrastructure for water supply.

From the 1960s to the 1990s, Colombia's cross-subsidization system was nationalized, standardized and, under pressure from low-income users, tended (slowly) towards greater equity. The neo-liberal reforms of the 1990s, however, severely curtailed the level of cross-subsidy allowed while increasing fees and requiring suspension for non-payment. Municipalities and users' groups challenged these measures, and restrictions on cross-subsidies were gradually rolled back. In 2003, the Constitutional Court ruled in favour of the recognition of the right to water, underscoring water's status as a fundamental human right that is essential to health and life. The ruling prohibited service suspension in homes with vulnerable residents including children, people with certain health conditions, and senior citizens.

Following the ruling, cities like Bogotá and Medellín established a *mínimo vital* for water. These programs guaranteed a free basic amount of water per month for people living in low-income neighbourhoods (socioeconomic tiers 1-2). Still, the *mínimo vital* has not been adopted nation-wide and operates differently in each city. According to Restrepo and Zarate (2016), the *mínimo vital* is usually

linked to bill payment, as it is still legally required to suspend services for non-payment under Law 142 except in cases protected by the 2003 decision of the Constitutional Court. It is only in Bogotá that users are granted a *mínimo vital* irrespective of whether or not their bills are fully paid.

Covid-19 has brought the debate over the *mínimo vital* back to centre-stage. In July, the Green Alliance re-tabled their 2018 bill for a national *Mínimo vital de Agua*. While it was defeated in 2018, the Green Alliance senator Antonio Sandino argues that the crisis of Covid-19 has given it renewed importance. If successful, the initiative will “establish a *mínimo vital* for drinking water, improving the general well-being and the quality of life of the population” making it an essential element of “the fundamental right of Colombians to a dignified life” (Article 1, Bill 168/2020). The Bill defines the *mínimo vital* as the water needed by an individual to meet their basic needs and is set at 20 m³ per household per month in socioeconomic tiers 1 and 2 in every municipality across the country.

Efforts to nationalize the *mínimo vital* began in 2013. That year, three bills were tabled. Among them was a bill tabled by the Liberal Party, which included basic rights to telecommunications, water and energy services (Isaza 2014). Since 2013, at least 15 bills have been tabled to ensure access to public services as fundamental human rights, especially a *mínimo vital* for water. Still, none have made it into law. The reason always comes back to fears over utility solvency. As the president of Andesco asserted in a recent interview, although the Association of Colombian Utilities recognizes the necessity of water for life and health, in the Colombian context it is not possible to provide water for free and guarantee sufficient income to sustain utilities (El Espectador 2020f).

Nevertheless, the epidemic has strained these traditional positions. In a world where water has become essential in the fight against the spread of Covid-19, where people are seeing their incomes suffer due to mandatory isolation orders, and where many can no longer afford to pay their utility bills, there seems to be an

opening to rethink full cost recovery, cross-subsidization and tariffication in ways that place greater emphasis on health, adequate housing and basic human needs. Here, the debate over the *mínimo vital* has re-emerged alongside others for a universal basic income to ensure adequate living conditions for all Colombians (El Espectador 2020g), and a requirement that all homes be connected to water infrastructure (Bill 158/2020). In this context, Bogotá's mayor Claudia López sees the pandemic as a transcendental moment in the history of Bogotá through which she intends to establish a new social contract based on a new subsidy for the poorest families, and a revision of the socioeconomic tier system on which cross-subsidization is based, so that it better reflects people's incomes and enables greater redistribution (El Espectador, 2020h). Recalling the results of the Invamer survey above, Mayor López's proposals have a great deal of support and have no doubt helped to consolidate her position as a national figure and potential future presidential candidate.

CONCLUSION

These debates around water access and pricing are not novel. They are rooted in traditional responses to utility and water governance in Colombia that are themselves derived from dominant discourses around the social and economic objectives of the Colombian state. Still, these ideologies and responses are very much matters of political debate. As such, they must also be read in the context of the politicization of water and utility governance within Colombian partisan politics and the ideological positions that the various parties represent. These contests for political and electoral support are key to understanding the politics of water, its allocation and its governance (Acevedo 2018). Both President Duque and Mayor López promote policies that emanate from the political parties they represent. Through these positions, they aspire to appeal to sectors of the population in sufficient numbers to retain or increase their political influence and authority.

In debates over reconnection, tariff relief, utility financing, cross-subsidization and the *mínimo vital*, the ideological positions that divide Colombian political life are on full display. In the contemporary crisis, however, where the daily anguish of not knowing what will happen in the coming months, whether the preventive isolation will be re-extended, where money needed to sustain oneself and one's family will come from, or how accumulating utility debt will eventually be paid, a space may be opening for a softening of the neoliberal positions that have dominated Colombian water and utility governance since the 1990s. Mayor López and the Green Alliance may get a national *mínimo vital* this time around. Fingers crossed.

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Chapter 21

Greg Ruiters

CAPE TOWN'S CRISIS-RIDDEN RESPONSE TO COVID-19

This contribution seeks to take a critical survey the responses of the City of Cape Town and social movements to the Covid-19 pandemic. The major hotspots for the virus have been in dense informal settlement areas with unreliable communal taps. The city provides additional emergency water services but this relief will be withdrawn once the virus subsides, with the city's main preoccupation being the maintenance of its revenue base. Mass unemployment in a vulnerable tourist-led economy is likely to deepen inequality, fuel already disruptive protests about essential services, and spark more land invasions. Organized resistance requires linking workers who provide services with people's committees and the unemployed, working towards a solidarity economy.

INTRODUCTION

In early July 2020, a video of a naked man, Bulelani Qolani, being hauled out of his home by Cape Town's Anti-Land Invasion Unit went viral. When asked why the City of Cape Town (CCT) was evicting people despite a moratorium on evictions during the Covid-19 pandemic, Mayor Dan Plato repeated his previous response: "These are not evictions but anti-land invasion operations."

Cape Town's housing crisis is “manufactured” in the sense that vast amounts of under-utilized, fully serviced houses in low-density, well-located (mainly white) areas are often held as speculative assets. Meanwhile, the majority of citizens – the poor – are packed into dense informal housing settlements and townships on the periphery. Many have been forced to “invade” unused land to build shelter.

Regarded as the wealthiest city in Africa, Cape Town is also amongst the most unequal, racist and unevenly developed of cities in the world (McDonald 2008, Lemanski 2007, Turok 2001, World Bank 2018). Under the African National Congress (ANC) and the centre-left Democratic Alliance (DA), it has become a paradigmatic neoliberal city.

This chapter uses water as lens to look at how Cape Town's racial and spatial inequalities graphically reveal the incompleteness of the ANC's social and national revolutions in South Africa, arguing that the Covid-19 crisis and responses to it are best understood by looking at the existing faultlines in the space-economy and the priorities of the ruling elite.

CAPE TOWN AS EPICENTRE

Cape Town was the first city to become an epicentre of the pandemic in Africa, with 60% of the South African cases from March to June of 2020. Introduced by foreign tourists, the virus soon spread to workers and then to black townships, where in the worst cases, 1 out of 50 people were infected. According to Dr. Mnguni, head of internal medicine at Khayelitsha District Hospital in Cape Town, by July the virus was “spreading like wildfire” (BBC 2020).

The healthcare system in South Africa remains separated between a world-class private system for a minority who can afford private medical insurance while the mostly black population use an overburdened public system. These inequalities will have dire consequences during the pandemic. The private healthcare provider

Netcare estimates that more than half of the country's 6000 critical care beds are in private hospitals.

Compounding the crisis, South Africa also has the world's largest epidemic of HIV, making the population more susceptible to Covid-19 and other infections. According to 2019 figures, only two thirds of an estimated 7.7 million people living with HIV in South Africa were on anti-retroviral treatment.

With the number of Covid-19 cases in South Africa close to 500,000 by the end of July 2020 – more than half of Africa's total and the world's 7th highest number of cases – the country's cruel inequalities act a major accelerator of the virus and of death. As of July 2020, South Africa's infection rate is at 2100 per million people (compared, for example, to China's 60 per million people). Tellingly, the ANC government has refused to provide a breakdown of cases and deaths by race.

The health crisis is compounded by an economic crisis. Pre-pandemic, over 30% of South Africans were unemployed. Two weeks into the lockdown, a survey by the Human Sciences Research Council found that more than half (55%) of residents of informal settlements had no money to buy food, and the same was true for two thirds of township residents (News24 2020).

THE NATIONAL RESPONSE

The Department of Cooperative Governance and Traditional Affairs declared a national disaster on March 15, 2020, under the terms of the Disaster Management Act (2002) and imposed one of the harshest lockdowns in the world. Municipalities were directed to close all public facilities that do not provide essential services. Community gatherings, weddings and other celebrations were prohibited. Funerals were permitted to continue, but mourners were limited to close family members and restricted to 50 people. The state suspended the issuing of permits for marches, protests and the handover of petitions. Every person was confined to their place

of residence unless strictly for the purpose of performing essential services, obtaining essential goods or services, collecting social grants or pensions, or seeking medical attention. Movement between provinces and between metropolitan and district areas was prohibited, except for essential workers, transportation of cargo and mortal remains, or to attend funerals.

The government took a particularly heavy-handed approach to enforce the measures. The South African Police Services (SAPS) and National Defence Force used brutal measures to enforce the lockdown. There have been many complaints about people being assaulted and killed by the SAPS. By March 26, the Independent Police Investigative Directorate had already recorded 14 assaults, one rape and eight deaths as a result of SAPS action.

NGOs and many mainstream political parties also expressed concern that the one-size-fits-all approach made no sense for many segments of the population, particularly those in informal settlements and dense housing settlements, since the lockdown measures would destroy peoples' livelihoods. For example, many workers in the informal sector, such as waste pickers and street traders, lost their main source of income when their activities were banned and markets shut down.

The government announced two cash transfer measures in an attempt to prevent total collapse. First, in April 2020, the state announced that the unemployed would receive a grant of R350 per month from May until the end of October.¹ The grant is only open to applicants who are not beneficiaries of any other form of social security grant or Unemployment Insurance Fund payment and are not currently receiving other income. Second, the government increased social grants from R350 to R500 per month. About 42% of households in South Africa rely on social grants; it is the most important source of income after salaries (Eyewitness News 2019).

¹ 1 USD = 16 ZAR.

RESPONSE OF THE CITY OF CAPE TOWN

In March 2020, the CCT announced measures in compliance with national directives. During the early months of the pandemic, the city operated with only skeletal staff, responding to emergencies only. Personal protective equipment (PPE) provisioning was extremely tardy. As one worker put it during the June 4 meeting of the Water and Wastewater Portfolio Committee meeting, “the provision of PPE has improved since the start of the lockdown period but there had been challenges with regards to the supply... Currently, there is one cloth mask per person” (City of Cape Town 2020b).

Once “hotspots” emerged, the contracted healthcare workers went door-to-door, asking residents questions about Covid-19 symptoms. If residents answered yes to certain questions, they were referred for Covid-19 testing, either at a clinic or one of the mobile sites located throughout the city (City of Cape Town 2020a). Between 30 and 40 public sites were identified for quarantine and the setup of isolation facilities, but as of September 2020, the city was waiting for funding to be released.

Problems with autocratic decision-making have also emerged in the context of the emergency. At the end of March, city councillors agreed to go into recess, giving the mayor executive power. Craig Kesson (Director, Corporate Services) was appointed to head the Covid-19 response. According to Kesson, the recess “does not mean the councillors have not been active as they are involved on the ground and doing humanitarian work.” He further stressed, “The mayor is in a meeting about keeping the tourism industry afloat” (Parliamentary Monitoring Group 2020a).

Municipal services

The CCT entreated its residents: “We continue to urge account holders to pay for services to ensure that the City continues to function to provide basic services; we have existing relief available in the

form of indigent relief for rates and services, however, all options are currently being explored. Our call centre remains open.”

In terms of basic municipal services, on March 25, 2020, the CCT suspended new water restrictions on debtors but continued to deduct arrears from electricity purchases – an established form of collateral punishment since it is illegal to completely discontinue water supply. In April, the Cape Town city council announced that commercial property owners may apply to make arrangements to pay off the rates over an agreed number of months. No interest will be charged, and debt management actions were taken for the duration of the arrangement. The same arrangements were made for households, and additional rates rebates were made available to pensioners and disabled property owners who have experienced a reduction in investment returns and household income due to Covid-19. The CCT also provided rates rebates and temporary payment arrangements to those who are unemployed. To allow for more residents to qualify for free services, the indigent threshold was raised to R7,000 income per month, and the rates discount for many in this category has been increased.

The city has also enabled a faster registration process for the indigent, disabled and pensioner rebates. Instead of the normal three-month assessment period, applicants will now be assessed based on just one month of income.

Budget priorities

On May 27, 2020, the City of Cape Town adopted its 2020-21 budget, totalling R54 billion. While there have been some provisions for the poor, certain budget choices reflect the toxic spatial politics of the DA administration. In the context of the pandemic, R12 million initially earmarked for community development initiatives was reprioritized for emergency food relief. Representing only 0.002% of the budget, this amount is nowhere near the amount needed in the context of the pandemic. Nor does it do anything to address the structural and systemic nature of food insecurity, which goes

beyond the question of hunger (Crush et al. 2018). It is revealing that in the same budget, the CCT allotted more money for Christmas lights in the wealthier (mostly white) tourist parts of the city. In addition, in the early months of the pandemic the CCT did not stop cleaning kelp off beaches, even though tourism came to a halt and the beaches were closed to the public.

Despite the obvious importance of water services to promote public health, the council decided to increase tariffs for water services an additional 4% even in the context of the pandemic. Water in Cape Town was already extremely expensive. Under the rising block tariff scheme the price of water increases the more one uses, punishing lower-middle-income residents with large households who consume more than the basic supply of 6 kilolitres (kL) per month. In 2018, the water bill for a lower-middle-income household using about 25 kL per month was R800. Although such cross-subsidization schemes can be progressive, in Cape Town the city “steals” from not-so-poor larger households to subsidize the ultra-poor, and in the process massively over-recovers on water bills (Daily Maverick 2019).

The municipal bureaucracy argued that Covid-19 has exacerbated an already difficult financial situation for the city. The city suffered major losses in revenue from water services when consumers were restricted during the drought of 2015-2017. Total water usage declined 45% from 900 million litres per day (MLD) in February 2017 to 500 MLD in February 2018. In order to shore up revenues in the context of reduced water sales, the city increased the price of water from an average of R18 to R32 per kilolitre, a staggering 80%. Because sanitation tariffs are based on the volume of water used, there have also been hefty adjustments to sanitation tariffs.

Informal Settlements

Approximately 25% of Cape Town’s residents live in shacks – semi-permanent areas that receive “emergency services” (communal taps, shared toilets, etc.) and are constantly under threat from

fires, floods and crime. As Overy (2013: 25) notes of investment in these areas, “there was a general perception by the City, and hence, municipal staff, of informal settlements as temporary, and therefore not worthy of long-term investment or high priority either in terms of planning or resources.”

City officials have repeatedly warned that informal settlements are located on illegal land in environmentally hazardous areas and therefore are regarded as unsuitable for service delivery beyond emergency services (News24 2016, Limberg 2019). But given that these informal settlement areas – with over 200,000 households – are at the greatest risk from Covid-19, the city had little choice but to increase the delivery of services during the pandemic. As an emergency measure, they announced that they would send 28 water trucks to communities in informal settlements that lack access to water.

At its meeting on August 6, 2020, the city’s Water and Waste-water Portfolio Committee summarized its additional response to Covid-19 (City of Cape Town 2020c) as follows:

- 307 additional tanks (2700 L in size) installed in underserved areas – filled daily by tanker trucks – to improve access to water
- More than 50 million litres supplied, which also includes direct supply from tanker trucks in some areas
- Additional chemical toilets provided to all
- Increased janitorial services

There have been other attempts to address the compounding housing and related services crises in the context of the pandemic. The Endlovini area in the township of Khayelitsha is home to an estimated 20,000 people who share 380 communal toilets (about 53 people per toilet). In some instances, people have to walk up to 200 meters to their toilet. As an approach to de-densification, the city has confirmed its commitment to 6500 new housing opportunities at an estimated cost of R500 million (Parliamentary Monitoring Group 2020a). In April, the city council shifted funds within

directorates as part of its Covid-19 mitigation plan (Daily Maverick 2020b), promising to:

- Invest R63-million in providing water in informal settlements;
- Install 93 water tanks in informal settlements;
- Spend R122 million for enhanced cleaning at homeless shelters and informal settlements, including deep-cleaning communal areas in informal settlements, which will be done five times a week by city staff and contractors.

GRASSROOTS AND LEFT RESPONSES

The key civil society players during the Covid-19 crisis have been the South African Federation of Trade Unions (SAFTU), C19 People's Coalition, Cry of the Xcluded, and other social movements. The main dilemmas in South Africa relate to the failure to make organizational links and connect the movements in a broader program. Many black South Africans still hope that the ANC will pull the country out of the morass, while the stable black middle class (teachers, medical professionals and police who have private medical aid) have largely abandoned the black townships and “whitened” themselves. As SAFTU puts it:

The political elites and the ruling class do not care. They are more likely to survive even when infected. But thousands of the poorest people who have all manner of underlying health problems including tuberculosis and HIV and AIDS and weak immune systems will become the victims of the coronavirus. The children of the black working class families attend schools from a completely different world, where the kids are crammed into overcrowded classrooms in which social distancing is as impossible as in the overcrowded homes they come from.

SAFTU have threatened to mobilize for a nationwide stay-away and general strike as Covid-19 has turned into a class and race war.

In the context of the pandemic, the political support for the ruling DA administration in Cape Town appears to be weakening. The Gatvol CT (a local “coloured” nationalist movement) has emerged as a splinter group from the DA. Gatvol’s leader noted: “The City has invented a system that only caters for the elites and whites. And we are tired of it we want what has been promised to us” (IOL 2019).

Anti-privatization activists formed the Water Crisis Coalition (WCC), with the National Union of Metalworkers (Numsa), the biggest trade union in Africa, and SAFTU to mobilize poor and working-class Capetonians against the local government and offer solidarity to students. These organizations have been active in a recently formed national formation called the Covid-19 Crisis Coalition.

CONCLUSION

The Covid-19 crisis exposes both the manufactured nature of Cape Town’s problems such as the appalling unevenness and deep segregations of the city and how these are created by an economy that serves a narrow elite. It has also exposed greed and the disposability of black lives. The barbaric option of letting poor black lives “go” has been realized dramatically in the appalling facts of the large number of people dying of the disease and of hunger.

On June 1, 2020, national restrictions were lowered to level 3, but the country was still far from peaking. Most industrial and mining workers could return to work; schools gradually would reopen, and one third of university students could return for essential activities. By mid-August the government went down to level 2, claiming that the number of new Covid-19 cases was dropping. SAFTU issued a warning:

Unlike at the beginning of lockdown, government is no longer doing contact tracing nor using Community Healthcare

Workers to vigorously screen citizens. At the beginning of the campaign there was aggressive random testing. This is no longer happening.

The death toll from Covid-19 is likely to be three times higher than the official figure. While middle class professionals in comfortable home offices sing the praises of the “online revolution,” frontline workers are dying, and capital is using the crisis to its own advantage by restructuring work and normalizing precariousness. Meanwhile, the appetite of the mostly corrupt ANC and DA administrations for business opportunities has increased. The South African Revenue Service revealed in early September that 63% of companies awarded PPE-related contracts were not tax compliant, and most of these contracted companies were politically connected (SABC News 2020). There is always money to be made in a crisis.

The CCT has not seen the Covid-19 crisis as a time to rethink the architecture of the city and its manufactured “problems.” Its main concern is “business continuity,” centralizing power and financial survival of the state bureaucracy. The city is deeply worried about rising violent protests (hijacking, looting) and more than 260 incidents of alleged illegal land occupation between April and July’s lockdown (SABC News 2020).

It is likely the pressures on the working class and the poor will increase dramatically with IMF loan conditionalities, drastic cut-backs in the public service of around 300,000 employees, while more concessions will be offered to business to further depress the conditions of workers. Land “invasions,” food riots and protests are likely to increase. The South African Local Government Association (SALGA) has noted that once the Covid-19 crisis is over, it is likely that services such as water tanks could be discontinued due to the financial stress in municipalities (SALGA 2020).

Mass unemployment in a vulnerable tourist-led economy is likely to fuel already disruptive protests, and land invasions have escalated. Meanwhile, additional emergency services and food

parcels offering temporary relief are unlikely to be sustained after Covid-19. The city's main preoccupation is with its revenue base, and there has been an utter failure to rethink the structures of social reproduction.

Under these conditions, clawing back democracy and accountability and rethinking how we institutionalize new forms of spatial governance around housing, water, food production and distribution relations are crucial. Solving the spatial/housing issue, occupying the city, creating peoples' committees for food distribution, working towards a solidarity economy, and drawing the mass of unemployed into organized resistance are among the most urgent challenges facing a still-disorganized Left in South Africa.

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Chapter 22

Robert Ramsay

SOBER SECOND THOUGHTS: COVID-19 AND WATER PRIVATIZATION IN CANADA

The Canadian government has long sought to attract private investment into municipal water and wastewater services, so far with little success. Prior to the Covid-19 pandemic and its accompanying economic crisis, the national infrastructure bank committed to funding a public-private partnership (P3) in a small Ontario municipality. However, this plan fell apart during the pandemic, despite the increased economic pressure on municipal budgets. The failure of the national infrastructure bank to finalize this project demonstrates the weaknesses of the P3 model for municipal public services and offers a counterpoint to the politics of disaster capitalism.

INTRODUCTION

The Canada Infrastructure Bank (CIB) was created in 2017 by the federal government as a way of attracting private investment capital to large, revenue-generating infrastructure projects. Designed as a successor to the now-defunct Crown agency PPP Canada, the CIB has, since its inception, announced only a handful of major investments, and the political pressure has been intense for the CIB to

show some results.¹

Beginning in 2018, through representations at industry conferences (Lavallée 2018), CIB leadership signalled an openness to small infrastructure projects that were not part of its original mandate. By mid-2019 the CIB had launched an aggressive campaign to privatize municipal and Indigenous water and wastewater systems across the country through public-private partnerships (P3s). Although only one project has been announced to date, in a small Ontario municipality, the CIB has stated it plans to replicate this example in other municipalities and in Indigenous communities across the country.

This has not happened. Rather, the bank's single proposed foray into the water and wastewater sector fell apart during the Covid-19 pandemic. More time will need to pass before a comprehensive review of the case can identify all the inflection points. However, what is clear now is that even the economic slowdown caused by a public health crisis was not enough to save the CIB's water and wastewater P3 plan from its own inherent weaknesses.

FINANCIAL PRESSURE

Austerity budgeting and the underfunding of infrastructure – historic and contemporary – have left Canadian municipalities struggling to find the funding necessary to build new water and wastewater facilities, or to upgrade existing facilities. When the Covid-19 pandemic began in early 2020, the quarantines and lockdowns imposed across Canada precipitated a massive financial crisis for municipalities, exacerbating an already sparse fiscal environment. The Federation of Canadian Municipalities (FCM) estimates that municipalities will face a C\$10-15 billion shortfall in operating funds (FCM

¹ For example, at a Finance Committee meeting on June 22, 2020, members of Parliament repeatedly pressed CIB officers for evidence of progress and whether the bank had completed any projects.

2020). Cities with transit systems were particularly hard hit, as these systems must continue to operate with drastically reduced ridership. These dire conditions led many public sector unions and civil society groups in the country to predict an increased openness on the part of small, cash-strapped municipalities to water and wastewater privatization via the CIB.

Currently, the vast majority of water and wastewater systems in Canada are publicly owned and operated. Data from the Canadian Union of Public Employees (CUPE) suggests that less than 2% of Canadian water and wastewater facilities are privately owned or operated, with another 1-2% operated by arms-length Crown corporations or provincial agencies. The data also indicates that public confidence in municipal water and wastewater systems is high, with approximately 90% of Canadian municipalities reporting no intention or interest in exploring private sector involvement. Canadian municipalities provide a high-quality service that suffers few failures, although issues with lead lines in older homes continue to pose a water-quality challenge in some urban neighbourhoods (IJ 2019). In addition, clean water advisories in Indigenous communities remain a stubborn problem that the federal government has struggled to address (Gerster and Hessey 2019).

Municipalities have the primary responsibility for water service and delivery in Canada, and they do this through a combination of taxes, levies, and user fees, as well as provincial and federal government grants. Municipalities are permitted to take on debt to finance infrastructure improvements, but this capacity is limited. For example, municipalities in Ontario and Alberta cannot exceed 25% of their own revenue in annual debt servicing costs. In Manitoba, the debt servicing limit for municipalities is 20%, while in Nova Scotia, municipalities cannot exceed 30% of their own revenue in total annual debt.

Over time, the federal and provincial governments have asked municipalities to do more with less. Municipalities own and operate over 60% of the country's infrastructure but receive only 10

cents on the dollar in tax revenue from the federal government (Johal 2019). At the same time, municipalities have only a few tools by which they can raise revenue themselves, and their most lucrative tool – property taxes – are already high among peer nations, and property tax increases prove perennially unpopular with municipal voters. While the Trudeau-led Liberal government has made welcome efforts to boost infrastructure funding for municipalities – for example, by doubling the Gas Tax Fund in 2018-2019 – federal funding has been slow to flow, sparking criticism from the Parliamentary Budget Office as well as groups like the Canadian Centre for Economic Analysis (Haider and Moranis 2019).

Looking to take advantage of chronic underfunding by provincial and federal governments to municipalities and new opportunities for returns on investment, private sector capital in Canada has long sought to make inroads in infrastructure markets – including water and wastewater – and it has generally found the federal government to be a friendly partner (Harris 2007). In 2013, PPP Canada – a Harper-led Conservative government creation that is now defunct – released a report on the water and wastewater sector titled, “Improving the Delivery of Public Infrastructure by Achieving Better Value, Timeliness and Accountability to Tax Payers through Public-Private Partnerships” (PPP Canada 2013). The laughable presumption of the title notwithstanding, this report noted that “P3 delivery models have been used infrequently for water and wastewater projects in Canada,” because – among other reasons – “private financing spreads exceed those of the public sector...ultimately making it more difficult for Design Build Finance Operate Maintain P3s to demonstrate Value for Money” (Ibid).

PPP Canada had little success in privatizing water and wastewater prior to its wrap-up, but this did not signal the federal government’s disinterest in continuing its privatization agenda. On July 15, 2019, the CIB (PPP Canada’s successor agency) announced a \$20 million investment in a 20-year water and wastewater project in the Township of Mapleton, Ontario (CIB 2019). Unlike its financial com-

mitments in other projects, the CIB investment was to be “in the form of a standardized debt financing package” to a private sector partner, which would “improve the cost of project financing” and ensure “appropriate risk transfer to the private sector” (Ibid).

After the announcement, the CIB and its agents, including the largest law firm in Canada,² engaged in significant outreach efforts to other municipalities and municipal organizations, such as the Association of Municipalities of Ontario (AMO) and the First Nations Major Projects Coalition (FNMPC), promoting this model as “innovative” and as “a pilot project to demonstrate new models for structuring and financing smaller municipal water and wastewater infrastructure projects” (Chattha 2019). They also presented to industry groups such as the Canadian Water Network, and they made contacts with provincial governments (Froese 2019).³

The Mapleton Model – A Wedge for the Rest of Canada?

Mapleton, Ontario, was a ripe target for the CIB because it had a well-documented history of unsuccessfully seeking provincial and federal grants and financing for the expansion of its water infrastructure. In 2012, the Township of Mapleton submitted a high-priority funding application to the Ontario government’s Municipal Infrastructure Investment Initiative, to expand water system capacity to meet residential and industrial development; this application was denied (Wellington Advertiser a). Again in 2013, the Township applied for funding for a new water tower in its Drayton community through the provincial Small, Rural, and Northern Municipality Infrastructure Fund, and again it was denied (Ibid). The next year,

² Borden Ladner Gervais LLP (BLG), which has extensive experience in infrastructure P3s. The big accounting and financial advisory companies, such as PricewaterhouseCoopers LLP and KMPG, have also been active in promoting CIB projects.

³ The provincial government in Manitoba included the following in its mandate letters to ministers accompanying its 2020 budget: “...working with other levels of government to explore the feasibility of utilizing a P3 delivery model and the Canada Infrastructure Bank to finance and deliver the necessary upgrades to the City of Winnipeg’s North End Water Pollution Control Centre.”

hoping for better luck at the federal level, the Township applied for the water tower funding through Infrastructure Canada's Small Communities Fund. This application was also turned down, apparently because the project was not deemed a significant health and safety issue, and because the town was in a good fiscal position and able to take on debt (Wellington Advertiser b).

It is unclear if the Township pursued provincial and/or federal funding options for the current water and wastewater project. But it is understandable that the town's leadership may have been frustrated by the lack of support from higher orders of government in the past and therefore open to the pitch for a P3. Town council minutes do not indicate exactly when the proposal for a CIB-subsidized P3 first came to the floor, but it was in late 2018 that discussion of the water project began, and on December 4, council directed city staff to retain law firm Borden Ladner Gervais LLP (BLG) to conduct the Request for Qualifications (RFQ) process. By May 28, 2019, six proponents had been chosen as responsive to the RFQ, and council authorized BLG to hire the accounting and financial consulting firm PricewaterhouseCoopers LLP (PwC) to prepare a Value for Money (VfM) report on various models for the water and wastewater project. This report was delivered and released publicly – with redactions – on July 11, 2019.

The PwC report to council compares three models for the water project: public procurement, a concession model, and a concession model with CIB financing. Unsurprisingly, the report concludes that the concession model with CIB financing provides the most value. As is typical of these reports, capital costs for the public option are accounted for during the construction period, which results in dramatic rate hikes for the first few years, after which rates would return to normal. In the two private models, capital costs are amortized over the life of the proposed contract (20 years), which allows for rate stability. This is presented as if municipalities cannot issue debt at all, which is not true. The PwC report also calculates Mapleton's retained risk in the public model at \$6.3 million – be-

tween 21 and 42 percent of the total value of the project. Without this inexplicably astronomical risk calculation, the public option is less expensive than either private model. Indeed, this calculation of retained risk underlies the conclusions about VfM. CUPE has questioned the integrity of this calculation in other cases in the past, as have numerous auditors general.⁴

Notably, the PwC report neglects to include in its analysis any provincial or federal funding options. Granted, Mapleton had been stymied in its previous efforts to receive public infrastructure funding, but the Trudeau government has significantly increased the availability, if not the speed, of infrastructure funding over multiple budgets, and has indicated that water and wastewater is a priority area. The doubling of the Gas Tax Fund, which provides federal funding to municipalities either directly or through a municipal organization (e.g. AMO in Ontario), is a particularly relevant development for municipalities in similar situations as Mapleton, and yet the PwC report makes no mention of this option.

Still, the CIB began calling the Mapleton case a “pilot project” early in the process, and a model that can be replicated “across the country” (CIB 2019). Were this to happen, it could lead to widespread privatization of municipal water systems, something that has been rare in Canada so far, and a trend that many other countries are reversing (Kishimoto, Steinfort and Petitjean 2020).

Rather than being innovative, however, this “new model” from the CIB was in fact a standard Design Build Finance Operate Maintain public-private partnership, where the higher private sector borrowing costs would have been backed up with public money. Because of this, the private corporations involved bore very little financial risk associated with taking on debt. This was intended to encourage private corporations to pursue opportunities in water

⁴ The federal auditor general, in examining the Champlain Bridge P3, criticized the VfM calculations as unclear, inaccurate, and biased toward a P3. The Ontario auditor general, in her 2014 review of 74 P3s, made a similar critique.

and wastewater, even in small communities.

For municipalities and Indigenous communities, this arrangement creates the illusion that there is no cost difference between public procurement and a P3. However, research has shown time and again that P3s are more expensive (particularly in terms of financing costs) and of a lower quality than public projects, and that the transfer of risk to the private sector is highly overstated (Boardman, Siemiatycki and Vining 2016).

SOBER SECOND THOUGHTS?

The township council was prepared to select one of the private sector proposals at its meeting in March 2020, but this meeting was delayed because of the coronavirus pandemic. At the same time, increased community awareness of the plan resulted in media scrutiny and questions from residents (Raftis 2020a). It was noted and acknowledged that the township had conducted all of its deliberations of the plan in camera with its lawyers, there had been no public consultation, and that parts of the VfM report had been redacted. Meanwhile, the CIB's premature promotional work raised red flags for public sector and water rights advocates, like the Council of Canadians (Bui 2019).

The decision was delayed for months, as other public health issues took priority. Then, in late July 2020, to the surprise of observers, the Mapleton township council decided to terminate the RFP process. "CAO Manny Baron said to council that after a long technical and financial review, his opinion was the town shouldn't go any further in the RFP process," reported the website *Guelph-Today.com* (Kozolanka 2020). "Council was in agreement with the CAO and many felt there was too much risk involved in having a private company run water and wastewater." The township will now be looking at how best to move forward with the project on its own. In explaining the change in course, Mayor Gregg Davidson indicated that it would be more advantageous for the township to finance the

project itself, rather than proceed with a P3, even one backed up by the CIB (Raftis 2020b).

While there is no direct evidence that the arrival of Covid-19 had a direct bearing on this decision, the arrival of a crisis in which safe and reliable water is so essential to the health and well-being of the community must have given pause for thought. It certainly provided additional time for Mapleton's Council to think about such a monumental decision. The delay also offered more time for opponents of the P3 to mobilize. After the CIB's initial announcement in the summer of 2019, a number of organizations coalesced around building a response to the proposal. CUPE, Canada's largest labour union with the largest membership of municipal employees in the country, immediately released an analysis of the proposal (CUPE 2019) and reached out to its members in the locality. The Council of Canadians, a social action organization that advocates for clean, public water (among other initiatives), worked through its local chapter to raise awareness of the town's deliberations. A local group of water activists organized a letter-writing campaign and a well-attended informational webinar (WWW 2020) that situated the Mapleton case in a global context of municipal de-privatization.

The attention was felt by the town leadership. In explaining the circumstances of the decision to cancel the CIB-funded P3 project, Mapleton mayor Gregg Davidson told the local newspaper, "When you get phone calls from England asking what's going on in Mapleton, Ontario, it's pretty significant and that's what we had going on during this RFP process" (Raftis 2020b). He also echoed the CAO's conclusion on risk transfer by stating that the "financial analysis indicated self-financing was more advantageous to the township than proceeding with the RFP."

CONCLUSION

Privatization of water and wastewater services subordinates quality public services to returns on investment. Municipalities lose the

ability to maintain control over their facilities and service quality, often for long periods of time as they are locked into restrictive and expensive contracts. Public money that should be spent on direct funding of infrastructure in the public interest is instead channeled to private companies whose primary obligation is to shareholders. Efforts to privatize water and wastewater systems goes against the global trend, and for good reason: “Experiments with privatization have failed all over the world, and a growing trend in Europe, the United States and Latin America is toward remunicipalization (or de-privatization) of private and P3 water projects. Time and again, partial or full privatization of water systems has been a disaster; accountability disappears, water rates go up, workers are laid off, service levels decline” (CUPE 2010).

In an attempt to try and force the P3 model on Canadian municipalities, the CIB is aggressively encouraging private sector actors to pursue opportunities in water and wastewater. To wit, six private sector consortia responded to the request for proposals in Mapleton, including EPCOR, Stantec, Veolia, and ASI. What interest would these players have in Mapleton’s small-scale water project if the CIB were not offering to guarantee their debt? Governments across Canada are increasingly demonstrating that they are willing to grease the wheels for the private sector. For example, the Ford-led Conservative government in Ontario is modernizing (read: weakening) its environmental assessment procedures for infrastructure projects and is taking on the risk of utility relocation for P3 transit projects. In Nova Scotia, the government is eliminating “red tape” in order to ensure “the balance of risk is not tipped toward the market players” (Durant 2019).

For municipalities, this arrangement creates the illusion that there is no difference between the cost of a P3 and the cost of public procurement. However, the CIB financing is not free, and the municipality will still pay for it, either directly through lease or operating payments, or indirectly through user fees. Indeed, the CEO of the CIB acknowledged that this arrangement will result in money

flowing from the pockets of residents to big companies, telling a business magazine that “users will fund the bulk of the operations and of the returns to investors through user-fees and other revenue mechanisms” (PressProgress 2020). Municipalities may also be drawn to P3s in water and wastewater because the costs will be off-book, and therefore not affect their borrowing limits. Again, this is an accounting trick that disguises long-term liabilities and results in an “underestimation of the state burden that is, instead, presented as cost-neutral” (Cepparulo, Eusepi and Giuriato 2019).

The dissolution of the CIB plan in Mapleton does not signal the end of the CIB’s ambitions in the water and wastewater sector. Indeed, Covid-19 may be seen by the CIB as an opportunity to expand their plans because of the municipal budget shortfalls caused by the economic lockdown. It will therefore be necessary for opponents of public service privatization, including labour unions and public sector advocacy groups, to remain vigilant as the CIB regroups in anticipation of playing a major role in the Covid-19 economic recovery project.

At the same time, the Covid-19 pandemic and its resulting economic disruption present an opportunity to expand resistance to such privatization efforts, serving as a reminder to Canadians that publicly owned and operated water and sanitation services are essential at times of crisis. To wit, a local group of water activists seized upon this event and mounted a virtual conference in September 2020 that used the momentum of the Mapleton story to define and advance a regional water justice agenda (Watershed 2020). As resistance to water privatization ripples further afield, Mapleton may serve as a timely and prophetic counterpoint to the logic of disaster capitalism.

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Chapter 23

Catherine Baron
Léandre Guigma

THE PARADOX OF FREE URBAN WATER: BURKINA FASO'S FIGHT AGAINST COVID-19

As soon as the first cases of Covid-19 were reported in Burkina Faso, the national government drew up a Response Plan, which, among other measures, made water free at standpipes and for “social tariff” recipients in urban areas. The government assessed the financing needs of running this program and solicited donor assistance. This chapter analyzes the consequences of these measures on the public water operator, l'Office national de l'eau et de l'assainissement (ONEA), which plans to ensure the supply of drinking water to as many urban households as possible by 2030. We also report on a survey conducted in Bissighin – an “irregular” neighborhood of the capital city, Ouagadougou – which documents how households have (or have not) appropriated these measures and the strategies they have developed to ensure their water supply in the context of the pandemic.

INTRODUCTION

The Covid-19 pandemic has revealed structural inadequacies in essential services in Africa (JMP 2019). It has also served as a reminder that access to water remains a crucial issue, particularly in

the major cities of West Africa where there have been a significant number of reported cases of Covid-19. Indeed, compliance with prevention recommendations presupposes the availability of safe water to ensure hygiene, hand washing and, more generally, the health of the population.

In this chapter, we analyze the institutional responses in Burkina Faso to the Covid-19 health crisis. Burkina Faso was one of the first countries in West Africa to be hit by the pandemic. As of August 25, 2020, there were 1,338 confirmed cases, 1,034 recoveries and 55 deaths (Johns Hopkins University & Medicine 2020). Burkina Faso also stands out for the responsiveness of the state with the development of a fully costed national strategy – the Response Plan – and the introduction of exceptional measures in the urban water sector, with some water services being made free over a period of three months (April to June 2020).

We also studied the impact of these measures on households living in Bissighin, a precarious, irregular¹ neighborhood of Ouagadougou (the country's capital), which has limited access to water. The research documents the coping strategies of households in the context of the health crisis and the changes in their water consumption habits given the fact that water is free.

We discuss the choices made by the Burkinabe state and the public water company, l'Office national de l'eau et de l'assainissement (ONEA), in partnership with donors, to favour universal free water measures without targeting poor households or irregular areas. We ask whether this policy reinforces the inequalities that already exist, particularly between urban and rural areas and between households, and how these policies impact the strategy and finances of ONEA. Specifically, we want to know if this policy will slow down

¹ We use the term “irregular” instead of “informal” to describe what local actors in Burkina Faso refer to as unplanned neighborhoods (“*quartiers non lotis*”) (Deboulet 2016), many of which have limited formal services. In 2017, only 74% of Burkina Faso's inhabitants had access to improved water sources (92% in urban areas and 66% in rural areas [JMP 2019]).

network extension projects in the future.

Our research team conducted semi-structured interviews, carried out in June and July 2020 with representatives from ONEA (Secretary General and Customer Service Management), donors (Agence Française de Développement, GIZ) and the Burkinabe Red Cross. Interviews were also conducted in Bissighin: 24 households; two managers of standpipes; a representative of a privately run mini-water network (ACMG); managers of a private school and a public school; a nurse from the health and social promotion center; and members of the Bissighin neighbourhood committee. The analysis of various reports and press articles provided additional information gathered during our investigations.

THE RESPONSE PLAN

Since March 9, 2020, when the first cases of Covid-19 were confirmed, the Burkinabe state has taken several restrictive measures: closing national borders, quarantining cities affected by the pandemic, and closing schools, markets and public transport. In a speech addressed to the nation on April 2, 2020, the president of Burkina Faso also unveiled a response plan to fight the pandemic that was accompanied by several social measures to relieve the population, the private sector and the informal sector.

Given the recommended prevention measures (e.g. hand washing and social distancing) and hygiene rules, water appeared to be an essential contingent in the plan. But how can one protect oneself against the virus when one has limited access to water and lives in a densely populated neighbourhood?

Three measures were therefore taken to ensure “free water” for three months (April, May and June 2020). During this time, the state covered the cost of the “social block” in the water bills of all urban households with access to private connections and suspended

charges for water provided at standpipes.² In addition, penalties for late payment of bills were cancelled over the same period. Donors recommended that these measures be only for a limited time so as not to have too great an impact on public finances. According to the Secretary General (SG) of ONEA, the three-month period chosen is not linked to financial criteria, but to health information that predicted the peak of the pandemic in April 2020. It was therefore necessary to support the populations whose economic activity was going to be reduced and who would face difficulties affording essential services such as water.

In an interview, the ONEA SG explained the political process that led to the adoption of these measures. The Ministry of Economy and Finance contacted ONEA for an evaluation of the cost of making water completely free for all Burkinabé households. However, given the numbers involved, the ministry then asked ONEA to evaluate the cost of free water for the social block, water at standpipes in towns and markets, and the cancellation of late payment penalties. From then on, “everything was decided very quickly, a week having elapsed between the two estimates and the decision taken in March 2020” (SG ONEA).

According to ONEA’s SG, the speed at which decisions needed to be made justified the fact that the mayors of cities, who are responsible for the management of water services, were not consulted in the process. Similarly, the union representing ONEA workers, user associations and civil society organizations were not involved in the consultation. Finally, the assessment of household needs, based on their location and socio-economic situation, was not carried out upstream. Thus, in this emergency context, a hierarchical management of the crisis was favoured.

² Burkina Faso has adopted a tariff grid with four blocks for urban households (“large houses,” industries and public administration offices are under one tariff). The social block corresponds to a water consumption of 8 m³/month at a rate of 188 FCFA/m³ (for a production cost of 400 FCFA/m³; 1 USD = 554 FCFA). The price of water at the standpipe is normally 188 FCFA/m³.

The Response Plan served as a basis for discussion with the donor organizations supporting Burkina Faso (World Bank, European Union, KfW and GIZ, Danida and Agence Française de Développement), which were asked to finance these measures. In an interview, a representative from the Agence Française de Développement (AFD) underscored “the great responsiveness of the Burkinabe State with precise figures and a time frame.” Good coordination between certain donors through meetings on different platforms made it possible to target aid more effectively. The AFD financed free water at standpipes through specific budget support in the form of a state subsidy to ONEA. This aid was released very quickly. Other donors did not adopt the same targeted strategy. According to the ONEA SG, “no donor has positioned itself to provide financial support to the social block.” The World Bank is going to strengthen its cash position, but this debt will have to be repaid. German cooperation via KfW and GIZ contributed to the Response Plan by providing personal protective equipment (hand sanitizer, soap and masks), notably within the framework of the Water Supply and Sanitation Program partially financed by GIZ.

“FREE” WATER: IMPACTS ON ONEA

ONEA is a public operator that ensures the production, treatment and distribution of drinking water in the main cities of Burkina Faso (Baron 2014). It supplies neighbourhoods with water from private connections and standpipes (standpipes being considered as part of a social policy). Irregular neighbourhoods are normally outside its scope of intervention since they are characterized by an absence of formal property titles and land registry, and there are difficulties in laying the network and collecting bills.

The measures taken to deal with the health crisis could weaken ONEA, which in recent years has faced major challenges related to changes in governance and has also set a target to increase the

population receiving water services by 2030.³ Free water for three months could mean not only less revenue for ONEA, but additional costs.

A standpipe manager is paid for volume of water sold. Normally, a standpipe operator would pay ONEA 198 FCFA⁴ per m³ sold, which gives them a profit of 102 FCFA/m³. With the free meter-reading measure introduced by the Response Plan, ONEA has committed to remunerating the water attendant based on an estimate and has rounded up the water attendant's compensation to 150 FCFA per cubic metre sold. There were delays in implementing the scheme, and some standpipe managers were afraid of not being compensated, which led to initial misunderstandings. ONEA also pays for the water distributed to consumers at the standpipes, with no upper limit. Finally, ONEA recruited controllers to verify that the rule of free water was respected at the standpipes.

If we consider free water for the social block, initial estimates show that users tended to “turn off the tap at home” once the 8 m³ of the social block had been consumed to make use of the free water at the standpipes. Thus, according to ONEA's SG, the free water measures are “not interesting for ONEA if you only consider the financial point of view, and the difference between the cost of water production and the selling price per m³ shows a significant loss for the ONEA.”⁵

ONEA makes the advance payment and invoices the state every month for the loss of income on the basis of actual consumption at the standpipes and private connections. Thus, in principle, the health crisis should not impact ONEA's financial equilibrium. However, according to its general secretariat, delays in repayment by

³ In the National Program (PN-AEPA 2015-2030), the population served by ONEA is expected to grow from 3.5 million in 2015 to more than 8 million in 2030.

⁴ 1 USD = 554 FCFA.

⁵ For three months, it has been estimated that the social bracket costs €5 million; free access to standpipes (about 3,500 in the country, including 1,500 in Ouagadougou), €3.5 million; and the cancellation of penalties amounts to €0.63 million.

the state could weaken ONEA in a context where ONEA's debt ratio is already high. In addition, some ministries and companies have been late in paying their bills. Despite these constraints, ONEA is not considering layoffs, unlike in other African countries where water management is a private sector activity.⁶

Moreover, donors have recommended from the outset that the duration of these free measures be limited to a short period of time. Extending this form of aid beyond this period would weaken the company's financial situation. Nevertheless, the social consequences should also be taken into account. Indeed, household budgets are likely to be significantly reduced in the coming months as a result of the economic crisis. The share of water as a percentage of household spending could encroach on other items, such as food. The risks of a food crisis in the sub-region, aggravated by the Covid-19 crisis, therefore cannot be considered independently of a policy to support access to essential services, such as water.

Finally, the health crisis has had an impact at the operational level. ONEA had planned investments to maintain the network and expenditures for connection equipment, water treatment products, etc. However, as most orders could not be met, ONEA adopted a strategy of diversifying its suppliers, some of which have higher costs.

“FREE” WATER: EXACERBATING OR REDUCING INEQUALITIES?

The measures relating to free water concern the entire urban population rather than the most vulnerable. Admittedly, while targeting is complex to set up (Hydroconseil 2019), it is useful in reducing inequalities. For instance, the so-called social connection policy means that ONEA subsidizes the connection to the network for all urban households, regardless of their socio-economic status. How-

⁶ GWOPA, UN Habitat and GIZ. 2020. “There's a hole in my bucket!” Webinar Series: Utilities Fight Covid-19. August 11.

ever, this usually involves having to pay a monthly water bill, which is not possible for poor households that do not have regular income. As a result, many households do not have access to tap water at home. Vulnerable populations who are engaged in small-scale, irregular economic activities in the informal sector cannot be included in this system as they do not have regular income every month (Baron et al. 2016). While some donors have debated the merits of a scheme that benefits the relatively better-off, the state and ONEA have not discussed this point. However, the ONEA general secretariat emphasizes that “large houses,” industries and government agencies do not qualify for the social tariff. Finally, households living in extremely precarious conditions (displaced,⁷ isolated, or which include people with disabilities) saw their situation worsen during the crisis and need more specific support.

Although the spread of Covid-19 is probably greater in densely populated cities (OECD 2020), rural areas have not benefited from these free water measures. Donors put forward two arguments regarding the choice to focus only on the urban: water governance in rural areas is more complex (involving municipalities and private operators), and technical systems are more diverse (boreholes, human-powered pumps). Rural populations complain, however, that they pay more for water than city dwellers; the measures to provide free urban water will exacerbate these inequalities.

COPING STRATEGIES IN BISSIGHIN, OUAGADOUGOU

The free water measures taken by the government and implemented by the ONEA target both formal and irregular neighborhoods. However, the irregular areas where precarious populations reside present specific difficulties. In the context of the Covid-19 crisis,

⁷ The OECD (2020) warns of the extremely precarious situation of displaced people in Burkina Faso. There were 22,000 internally displaced people in July 2018, and 500,000 in early 2020.

households in these areas noticed water cuts or low water flow – common at that time, but exacerbated by high demand. Long queues now form at standpipes, but curfews must be respected. An IRC study (2020) concluded that: “Blue Gold [water] is therefore free but unavailable due to the discontinuity of service. How can a population regularly wash their hands with water they do not have?”

To document this unprecedented situation, we investigated the neighbourhood of Bissighin, where no cases of Covid-19 had been reported by the end of June 2020. Bissighin is an old village, engulfed by urbanization, northeast of Ouagadougou, with a population of about 30,000 inhabitants in 2017 (Guigma 2017). The neighborhood grew rapidly in 2020, following the arrival of displaced persons from conflict-affected areas in the Sahel region. In principle, the lack of a formal title deed excludes the neighborhood from access to the ONEA centralized water network.

However, a project initiated in 2009, financed by the AFD and the World Bank, made it possible to provide certain irregular neighbourhoods, including Bissighin, with a mini decentralized network (Baron et al. 2016). This network is managed by a private delegate (private operator), which was selected following a call for tenders and which signed a leasing contract with ONEA. In Bissighin the company is called ACMG. ONEA sells water wholesale to the delegate, and provides it with network connection equipment free of charge. This mini-network supplies both standpipes and private connections at home for households that can pay a monthly water bill. According to ACMG, there are 2,020 subscribers via individual connections and 18 standpipes in Bissighin (June 2020). ACMG charges the same rates as ONEA based upon the principle of equality with respect to water services. However, during Covid-19, some residents complained about the higher rates charged by the delegates – a point of tension with the ONEA that was discussed at a meeting in August 2020 (Lefaso 2020).

This project has had some success, and the demand for individual connections is increasing. But not everyone can get access due

to the lack of connection material provided by ONEA. This problem of supplies is recurrent, but the Covid-19 crisis has made it worse. According to ACMG, “we have just received, 3 days ago, 200 connection kits out of 508 requests.” This was discussed during a meeting between ONEA and the delegates.

Our field survey highlighted the consequences of the measures taken in the water sector on the living conditions of Bissighin households. The following aspects will be discussed: the consequences on the quantity of water consumed by households; the effects of “free” water on household behavior; and adaptive strategies to deal with the health crisis.

A significant increase in water consumption

The pandemic has had a direct impact on the volumes of water consumed because preventative actions require large quantities of water. ONEA’s customer service manager estimates that water consumption rates increased 25% from April to June compared to the same period last year. This corresponds to the dry season, with high temperatures and recurring water cuts. However, the inhabitants of Bissighin specified that, faced with low water flow and frequent water cuts, they have resorted to drilling wells where water is permanently available. The representative from ACMG also commented that water pressure was low.

Access to drinking water differs depending on the location of households in the neighborhood. The difficulties usually faced by the most vulnerable households were exacerbated by frequent hand washing. These households, far from the standpipes, continued to rely on wells for water. Some have even built new wells that do not guarantee the quality of water for drinking.

Two thirds of the heads of households surveyed in Bissighin say that their daily water consumption has increased since April 2020 by more than 25%. This can be explained by the frequency of doing laundry, washing dishes and washing hands. One head of household explained it this way:

Here is what has changed in our habits. We no longer use the same water twice to rinse our plates; we throw away the water from the first rinse. In addition, we rinse the same plates twice, so we use more water. We no longer eat from the same dish. We no longer drink water with several people from the same cup, and if the water remains in the cup, we throw it away. We wash our clothes more frequently. We don't wear the same clothes several times before washing them. We also wash our masks. To wash ourselves, we don't use the same buckets with several people. Each person has their own bucket. (Personal communication, not dated.)

Other households installed handwashing facilities in their yards.

We have placed a wash-hand [sic] basin at the entrance of the courtyard for anyone who enters to wash their hands....Before the coronavirus, I washed my hands three times a day, but since the coronavirus, I wash my hands about nine times a day. (Personal communication, not dated)

These new habits have had an impact on the sources and means of water supply and storage.

New behaviors at standpipes

Free water at standpipes has led to large crowds with long lines of people waiting to fill buckets with water. This problem was aggravated by low water pressure at the standpipe, which is recurrent during the dry season. It has also affected the water consumption of households with individual connections and those far from modern water points.

According to the ACMG delegate in Bissighin, since the announcement of free water at the standpipes, the flow rate has decreased because most households with an individual connection, as well as the standpipe operators, have opened their water points

from 9 a.m. to 7 p.m. without a break. The water bill doubled in April because there was a lot of waste, although he noted “there was a reduction in waste in May and June.” Some households had large water bills because they thought that free water applied to all their consumption, not realizing that only the first 8m³ – the social block – was free.

According to one manager of a standpipe:

We were forced to prohibit fetching water with containers other than jerry cans and buckets because children would come to fill bowls with water, pour water over their bodies for fun and come back for more.

According to ONEA’s customer manager, instructions have been given to standpipe managers to allow only one can to be filled per person. The aim was to prevent certain customers from “monopolizing” the standpipe. However, this measure does not seem to have been respected: some standpipe managers allowed “tricycle” drivers to fill about thirty 20-litre cans at a time (see Figure 23.1).

Figure 23.1

Filling 20-litre cans of water with a tricycle.



Source: Guigma, Bissighin (June 19, 2020).

Figure 23.2

Diversity of water transportation.

Source: Guigma, Bissighin (June 19, 2020).

In order to be able to store the maximum amount of water at home and avoid multiple round trips between the home and the standpipe, several solutions are being tested by households to transport the maximum amount of water on foot, with a rickshaw or by bicycle (see Figure 23.2, above). Residents compete with each other in ingenuity. A bicycle can easily carry three to four 20-litre cans. The record, according to the manager of one standpipe, is six 20-litre cans on one bicycle.

Most of the households surveyed confirm that water is free at the standpipe. However, according to ONEA's customer service manager, at the very beginning of the measure's application, not all standpipes were free of charge because some standpipe managers thought they would not be compensated. Compensation is supposed to take place every two weeks, but since there were delays at the beginning, they continued to sell water to their customers. ONEA's customer service manager says that "now it's all been sorted out." In addition, a unit led by ONEA's customer service department has been set up to monitor and discipline those who do not respect the measure of free water, which could result in a breach of contract between the delegate and the standpipe manager. In Ouagadougou, 15 people have been specially recruited to monitor the standpipes even in irregular settlements. To date, no contract has

been cancelled.

Nevertheless, some heads of households claim that water has never been free at the standpipe. A standpipe manager in Bissighin reported:

Water is free, but some customers support us by paying something: half-price for example.... Before COVID, we had monthly subscribers; some continue to pay monthly for their water consumption. It is the free service that has created the problem of water availability because payments are irregular on the part of the delegate. [In irregular neighbourhoods, the contract is between the delegate and the standpipe manager.]

Indeed, some households claim that some standpipe managers took advantage of the general water shortage to serve water primarily to customers who were willing to pay, promising to provide free water to others when the flow at the standpipe was better. These situations generated tensions around the standpipes and impede compliance with physical distancing (Kinda 2020).

Solidarity behaviors have also emerged. Given the high number of people using standpipes due to free water, households with private connections have authorized neighbors to come and take water for free at their homes. Donations of water are usually infrequent in the capital (Baron et al. 2016).

New constraints for precarious households

Precarious households in Bissighin have experienced a slowdown in their informal economic activities, resulting in new constraints to pay for water. However, residents who live far from the standpipes and are unable to pay a monthly bill have to solicit informal water vendors and thus pay for the transport of water to their homes (Kjellén and McGranahan 2006). The cost of water is consequently higher for these households. According to ONEA, the state has taken over the water supply service but not the transport of water

to households far from a modern water access point. The role of these informal water resellers has therefore not been considered in the measures taken by the state. The delegate confirms ONEA's statements: "For those who are far from the standpipes, the water remains free even if they have to pay for the transport; they can always come and fetch the water for free themselves, at the standpipe."

Rationality in water use and daily expenses

In view of the increased need for water and the limited financial resources following restrictive measures to reduce travel and the closure of markets, 7 out of 10 households that we surveyed opted to rationalize their daily expenses in general, and water in particular.

Although the health crisis of Covid-19 particularly affected the most vulnerable populations in the precarious neighbourhoods of Ouagadougou, we can see that households were adaptable and were able to find answers to the new financial and health constraints in the short term (Guigma, 2020). The support of the state and ONEA in providing detailed solutions to water supply was welcome. However, the consequences in the medium term threaten to weaken populations without savings and those without the capacity to protect themselves in the face of uncertainty, who are suffering most from the crisis.

CONCLUSION

Burkina Faso sets an example in terms of responsiveness and the adoption of exceptional measures to enable urban populations to comply with preventative health recommendations requiring access to water. The technical responses provided by the state – making water at standpipes free and paying for the social block in monthly water bills for all households – form part of a public policy based on the principles of equal access for all urban dwellers, whether they live in formal or irregular neighborhoods. But could the health

crisis of Covid-19 not have been an incentive to think about a long-term pro-poor policy, targeting the most precarious (in urban and rural areas) in a context of growing inequality?

It is also true that civil society was not consulted in the development of the Response Plan, under the guise of a health emergency. But if participation is necessary to ensure adherence to the rules set out to counter this pandemic, it is fundamental that citizens should be involved in the formulation of policies. Furthermore, the approach must be systemic and not isolate the water issue from other issues such as job insecurity.

Finally, as the OECD (2020) reminds us, the focus on the health crisis must not overshadow other crises, particularly those related to conflicts in the Sahel (which have produced a sharp increase in the number of displaced persons), as well as the humanitarian and nutritional crisis looming in the region. The combination of these insecurities makes populations more vulnerable to the Covid-19 pandemic. As Vidal, Eboko and Williamson (2020) point out, this crisis also reflects our “difficulty in thinking of Africa as an actor on the world stage, beyond being a subject of observation by those who dictate the tempo of globalization.”

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Chapter 24

France Eau Publique

ADAPTABILITY, COMMUNITY AND SOLIDARITY: PUBLIC WATER OPERATORS IN FRANCE DURING THE COVID-19 CRISIS

France Eau Publique is a network of public water and sanitation operators that supports information-sharing and the exchange of best practices, as well as the mutual strengthening and promotion of public water management. This chapter reports on how public water operators in France adapted to the Covid-19 crisis in the early months of the pandemic during periods of quarantine and as activities resumed. Three characteristics of public water operators are highlighted: capacity for adaptation and resilience; a deep commitment to local community; and an ability to foster solidarity at the local and national levels.

INTRODUCTION

Although not as visible as essential workers in the health professions, local water authorities and their public operators and employees in France can be proud of the work they have accomplished during the Covid-19 pandemic. Public water and sanitation service providers in the country have been able to adapt in record time to guarantee the delivery of high-quality public services and protect the health and safety of their employees. Many have been able to continue with major infrastructure projects. They have also been able to be flexible in their procurement procedures to remain re-

sponsive and supportive of local suppliers and service providers. In so doing, they have contributed to the survival of local businesses.

Even though the public health crisis is far from over, and other crises have emerged, public water operators play a key role in thinking about water and sanitation services of the future. They are critical players providing a long-term vision and strategy that anticipates transformations for a sustainable water future.

DURING THE CRISIS

In France, the lockdown period between March 17 and May 11, 2020, was the height of the crisis and an exceptional moment in the life of water and sanitation services. During this extraordinary period, public water and sanitation operators faced many difficulties. One of the main challenges was to adapt to the various legal and regulatory frameworks that were constantly changing. Some water and sanitation services set up a special Covid-19 legal watch. Operators had to deal with sometimes contradictory interpretations and health requirements that varied depending on jurisdiction.

The operators had to manage the dual priorities of providing service continuity and guaranteeing the health and safety of their staff. This challenge resulted in the drafting and implementation of business continuity plans, followed by business resumption plans, to support various functional and operational departments and to ensure the continuity and adaptation of activities. In terms of human resources, operators managed to shift to telework within just a few days even though it was the first time for many. Operators carried out daily monitoring of each employee's situation (whether they were in quarantine, their health and mobility status, whether they were working from home or performing childcare duties). They drew up safety instructions on an ongoing basis and increased internal communication to inform, reassure and raise awareness. Payroll was another challenge, but it was not interrupted thanks to various electronic management tools.

Supplies and inventory management represented another major test during the crisis. Like all business sectors, the water and wastewater services encountered difficulties in obtaining supplies, such as personal protective equipment, but also generators, replacements parts and IT equipment. Since April 1, 2019, local authorities have been subject to the Public Procurement Code, which stipulates the rules relating to public contracting. This regulatory framework is designed to guarantee the transparency of public procurement but also provides for flexibility in the event of an emergency. Public operators have used this flexibility to be responsive and place orders with local suppliers within shortened procedural deadlines, which ultimately enabled them to cope with the crisis and avoid excessive stock shortages.

During lockdown, all public facilities, including customer service centres, were closed. While several facilities were able to maintain telephone service by diverting calls to agents' home phones, not all were able to do so due to a lack of adequate technology. Billing was another major issue due to the suspension of meter reading during quarantine. To compensate, some operators asked users to transmit their own readings, while others set up flat-rate billing, using the average daily consumption history of previous years as a basis for invoicing.

Most have introduced options to allow users to stagger their payments and to encourage them to pay by electronic means. Some departments were affected by the suspension of the public mail service. Online agencies, which were already being deployed before the crisis, were heavily solicited to maintain the link to subscribers, to inform them of various procedures, and to enable them to pay their bills online. To reduce the burden on staff, only essential activities were performed. The processing of invoice claims and tax relief requests, the installation of new connections, and routine maintenance of the facilities were temporarily postponed.

During the lockdown period, some operators were affected by significant variation in water consumption. The first to be impacted

were industrial and commercial sectors, where water consumption fell due to the closure of companies and production centers. College towns and urban centers also emptied, with the departure of students and the move of many city dwellers to their second homes. As a result, there was an unusual influx of inhabitants in rural areas and major increases in water consumption there, combined with a decrease in urban areas. For example, in April 2020, Eau de Paris noted a 20% drop in drinking water consumption in the capital.

The impact of the crisis on cash flow has varied from one operator to another. There has been an increase in requests for suspension or modification of payment schedules. In Lille, the collection of invoices was suspended due to the temporary closure of the treasury processing center.

RESUMPTION OF ACTIVITIES: AN EVEN GREATER CHALLENGE

There was general agreement that the resumption of activities was more complex to manage than the initial period of confinement. Unlike the period of lockdown, which had a clear beginning and end, the resumption of activities in May 2020 brought far more uncertainty.

The main difficulty for human resources departments has been to manage the very wide variety of employee situations. Employees are facing various health conditions and family circumstances (e.g. care responsibilities, lack of childcare), and have different abilities to work from home. Managers have had to deal with some employees' fears about returning to work as well as the impatience of others who are eager to return to work. The application of special measures that regulate temporary labour contracts in France has been particularly difficult for utility managers to understand due to the imprecise nature of regulations regarding whether or not water and wastewater utilities qualify for these employment schemes.

Equipping employees with quality personal protective equip-

ficant challenges. Securing enough masks was particularly difficult due to stock shortages and long delivery times. Some operators distributed protection kits for their employees (gel, gloves, disposable suits, single-use masks) while others chose to focus on compliance with physical distancing, including a total reorganization of the office in order to direct traffic flow and changes to employee schedules. Physical distancing also requires the modification of equipment such as utility vehicles, which have been outfitted with Plexiglas to avoid contact within the same vehicle.

The re-opening of offices also required an adaptation of facilities that serve the public: the provision of protective equipment for customer service representatives and visitors (e.g. masks, visors, screens, hand sanitizer at each entrance), the introduction of scheduled appointments to prevent customers from contacting each other, the removal of documents from waiting rooms (flyers, leaflets, etc.) and training agents to encourage users to comply with public health recommendations. The resumption of activity has also meant a spike in activity for customer relations services. Public utilities have received an increased number of requests for tax relief, as well as an increased number of requests related to new and old accounts due to the resumption of real estate sales.

The choice of whether or not to continue major construction projects differed according to the operators: while most suspended all projects during the peak of the crisis, some priority projects were nevertheless maintained, particularly those relating to water supply infrastructure in anticipation of future droughts. To support construction companies in the context of the health and economic crisis, some operators signed protocols with the main representatives of the construction industry in order to be able to return safely to work. For example, in June 2020, the unions representing construction workers and water workers in Alsace-Moselle jointly defined new health and safety protocols for construction sites and negotiated provisions for increased health-related costs due to Covid-19 for contracts already signed or in progress.

THE STRENGTHS OF PUBLIC MANAGEMENT DURING THE CRISIS

Although the crisis impacted stakeholders in both public and private sectors, it has nevertheless revealed some of the advantages of the public management model. Three qualities of the public management model were highlighted by the crisis: a capacity for adaptation and resilience thanks to an agile organization; a public service deeply rooted in local community and territory; and the ability to foster solidarity at the local and national levels. Passionately committed to their mission of providing an essential public service, employees were the real drivers behind this success.

Adaptability: a great capacity for reactivity and resilience

In terms of internal organization, the shift to teleworking was a major accomplishment that represents a radical change in workplace culture. Before the pandemic, teleworking was viewed as something that was elusive and difficult to implement. The crisis accelerated the transition to the digital age. Telework was deployed very rapidly the day after the announcement of the lockdown. It has since been rethought as to how it can be integrated as activities resume. Some operators have opted for a gradual and then total return of teams in the field; others have seized the opportunity to rethink their operations. In that process, some have sought to make teleworking – which until the crisis had been the exception – a common practice. For example, the SPL O de Aravis decided to move to teleworking one day per week for managers, and one day per month for technicians. The latter is possible since data operations and maintenance for facilities can now be done remotely thanks to digitalization.

IT security is an essential prerequisite for telework. Faced with increased cybersecurity risks, some operators have undertaken major IT projects to continue to have access to the business software essential for maintaining activities (e.g. online customer servi-

ce agency, invoicing, HR, finance, etc.). The urban community of Niort, for example, has hosted its business software on a specific server and set up a secure system allowing restricted access to a certain number of employees.

The further ahead an operator was in moving to virtual work, the better it was able to manage the crisis and guarantee business continuity. For example, the electronic signature has proved to be a particularly invaluable asset. Managers have also been forced to innovate to maintain relationships with their teams and to strengthen social cohesion despite distance. To do this, operator managers have employed a variety of initiatives, including:

- Distribution of filmed interviews with managers to explain the crisis plan;
- Organization of live question-and-answer sessions between management and employees (e.g. Vienna water workers' union);
- Setting up weekly field trips for managers to meet with agents and provide them with support (e.g. Sourcéo);
- Systemic telephone check-ins, particularly for on-call teams, who receive a call from a manager every morning and every evening;
- Circulation of regular internal newsletters;
- Organization of cross-functional meetings where employees are able to present their activities and report on how they were adapting to the crisis (e.g. the "Radio Café Sources" online conference series organized by Eau de Paris).

However, uncertainty has also caused tension among employees, who sometimes had difficulty understanding and accepting the choices made by Human Resource managers relating to leaves, temporary contracts, etc. To respond to the significant stress that employees were experiencing, managers have tried different initiatives to reinforce employee motivation and commitment. Some called for internal solidarity, encouraging employees to volunteer to take leaves. Others chose to rotate leaves to put everyone on an

equal footing. Some managers also offered bonuses to reward the most committed agents.

Several operators set up psychological units to accompany employees and offer them personal support (e.g. Eaux de Vienne). Nevertheless, not many employees used these services during the confinement period, at least not for their intended purposes. They tended to call with questions associated with the resumption of activities, such as questions related to labour law.

This period has resulted in innovative solutions to craft new internal communication tools and create social bonds despite distance. Paradoxically, while employees were further apart, the confinement made it possible to reinvent inter-personal relationships. All operators have noted a strong ethos of solidarity, with employees paying greater attention to each other, even outside the circle of close associates. The evolution of internal communication has contributed to this change in outlook, with greater importance given to social media platforms, such as the creation of WhatsApp groups. The fluidity between private and professional life has also contributed to changing perceptions and has helped to humanize relationships. Managerial relations have also evolved: they have become more direct, with managers making regular contact with their teams, and more horizontal, encouraging solidarity initiatives between agents.

Proximity: the strength of the territorial network

By nature, public actors derive their identity from the territory to which they belong. Integration into a network of local players, whether suppliers or contractors, has proved to be a major asset in terms of efficiency and responsiveness. Thanks to their privileged relationships within regional buyers' groups, public operators have been able to benefit from the exchange of contacts of available suppliers that help overcome constraints in supply, such as that of personal protective equipment, and compare prices. By calling on local supplier networks, public operators have thus helped to keep the

local economy running and maintain employment in the regions.

The fact remains, however, that the scattering of public players throughout the territory has sometimes limited their effectiveness. Compared to private operators that have centralized purchasing departments on a national or even international scale, public operators have had difficulty pooling their requests and sharing contacts with suppliers. The relative isolation of certain public management players in the same region has also slowed down cooperation.

Despite this, public operators have maintained (or even strengthened) a special relationship with users. Thanks to digital technology, specific information supports have been created to keep the link with the users: special question-and-answer sessions on operators' websites, multimedia communication campaigns, electronic mail-outs and personalized text messages. Beyond the digital, telephones have made it possible to keep in touch and to strengthen human relationships.

Some operators, such as at Eau de Grenoble Alpes, have created specially dedicated on-call numbers during the lockdown. While the on-call number is normally reserved for emergencies, Eau de Grenoble Alpes deployed exceptional back and front office processing, calling back all subscribers during the day to respond to their requests. Special relationships have also been created with companies; Grand Poitiers water and wastewater service, for example, called all companies in the area one by one to assess their eligibility for the bill payment suspension system.

Solidarity: the emergence of new forms of cooperation

Throughout the crisis, local authorities and their public operators were able to count on the support of the France Eau Publique network. In almost daily contact with the ministries representing local authorities and their services, the National Federation of Concession Authorities and Public Water Authorities (FNCCR) and the France Eau Publique network were particularly committed to supporting their members during the turmoil. A number of new tools

to support local authorities were deployed throughout the crisis: an open-access news feed, weekly virtual conferences dedicated to Covid-19, and the creation of ad hoc working groups promoting experience-sharing between public operators in the France Eau Publique network. All these virtual exchanges have made it possible to break the isolation and create a common front by sharing best practices.

The FNCCR has invested heavily in guaranteeing optimum service quality throughout the country, regardless of the size of the operator and whether it belongs to the network. To urgently remedy the lack of equipment, it has embarked on an exceptional operation to distribute masks to all public sanitation operators in France, including its overseas territories. Not exclusive to its members, this large-scale action ensured the safety of the agents most exposed to the risk of transmission. Between April 2 and May 20, 2020, around 243,000 masks were distributed to more than 1,300 public water and wastewater services thanks to a government allocation of FFP3 masks at the end of March and a bulk purchase of FFP2 masks at the end of April. The collective success of this operation, led at a moment's notice by the FNCCR with the exceptional commitment of its employees and members, exemplifies the values of solidarity and sharing between local public players.

Alongside this operation to distribute masks, public operators responded to the call from the FNCCR, the France Eau Publique network and the Association of French Mayors to set up an operational solidarity chain in the regions. In less than 48 hours, more than 50 departments were able to count on voluntary public water and wastewater services ready to offer emergency material or human assistance in their areas.

LESSONS LEARNED FOR AN UNCERTAIN FUTURE

The crisis has highlighted the essential role of local services while underscoring the fragility of an excessive economic dependence

on globalized structures and supplies. The upheavals of 2020 are not, however, one-off events. For several years now, crises have followed one another, whether they are of social, cyber, climatic or health-related origin, placing elected officials in the position of having to think differently and find solutions to deal with this rapidly changing context.

The upstream preparation of the structures played a role in the success of crisis management: the more crisis management was already integrated into the operators' general strategy, the better they were able to adapt and respond effectively. Nevertheless, even though some operators already had risk management teams and had been working for a long time on preparing for and anticipating crises, Covid-19 revealed the need to anticipate more and to plan crisis scenarios that could be adapted to all activities. The aim is to capitalize on this experience and create crisis management tools, whatever the type (health, environmental or digital). In particular, predictive resource management is a key point that needs to be strengthened to enable a better understanding of changes in levels of water consumption and the impact on operators' financial models. Finally, the crisis has highlighted the need for reflection on quality and certification approaches. While some organizations, such as the Water Workers' Union of Alsace-Moselle, are currently working to integrate the UN's Sustainable Development Goals into their development strategy, others find that certification criteria are too restrictive and do not allow the necessary flexibility to adapt to a period of crisis.

Some operators set up "on-the-spot" evaluations as the crisis unfolded, seeking to assess the actions in progress as of mid-April by sending questionnaires to elected officials and employees in order to take stock of the situation and adapt quickly to anything that could be done immediately. In order to capitalize more broadly on the actions carried out during the crisis, and to integrate them into their general strategy, several organizations have hired consulting firms to help structure their assessment methodology.

CONCLUSION

More than ever, the Covid-19 pandemic has highlighted the importance of local management of common goods, whether water, sanitation, energy, food, agriculture, local welfare, or education. These are themes and dynamics to which the public players in the water sector contribute fully, each in their own way, taking into account local specificities.

Crisis management is an inherent part of the day-to-day work of operators who deliver water and wastewater services, which are constantly confronted with network breakdowns, but it also an inherent part of a longer-term vision, such as how to deal with the impact of climate change on water resources. The challenge now is to learn how to adapt to crisis at all levels, and to develop a truly forward-looking and bold vision for the management of this essential resource.

Unlike private operators, public operators are the guarantors of this long-term vision. Unlike a concession contract, which restricts investment within a temporal and spatial framework, the public management model provides the means to make decisions based on their long-term consequences. Public operators are committed to defending and preserving water as a common good. Where water is privatized, local authorities must deal with private operators who refuse to go outside of their mandates as defined in their contract. Public operators, by contrast, feel that they have a genuine mission to serve the public good. Employees are at the heart of this movement, ready to commit their time and energy to guarantee service quality.

Through the actions of employees, field and support functions, and elected officials, the crisis was overcome by a collective commitment to a priority mission: that of providing an essential public service that played a crucial role in combating the pandemic (e.g. washing hands). The crisis has broken down borders and hierar-

chical walls, fostering greater proximity within communities and changing the way people look at things.

Thanks to the long-term perspective of public management, public operators prioritize creating strong internal relationships – a process that takes time – over short-term considerations of profitability. In concrete terms, this orientation allows for greater flexibility and responsiveness, and an agile management style that prioritizes social dialogue and the search for quality of life and meaning at work.

Integration into a flexible territorial network enables public players to be part of a living, changing network, which knows how to adapt and modify its form as crises occur. Depending on their needs, public players can pool their skills and reinvent the scales of territorial action. The protean nature of public operators makes it possible to develop synergies between several levels of governance to create coherence and give meaning to different public policies.

At a time when France is rediscovering the major role of local levels in the resilience of territories, and when urban planners and developers are rethinking the city and development through integrated and ecosystem-based approaches, public water stakeholders are already making a full contribution to the transformation of territories. The model of public water management, which has been widely proven successful in France, Europe and around the world, is the bearer of an innovative vision of public services as a common good. With the potential to generate new forms of local governance, it contributes to the renewal of a local economy based on cooperation with a broader scope, adapted to the climatic, economic, public health and social challenges of the 21st century.

Chapter 25

Tatiana Acevedo Guerrero

“THE PEOPLE WON’T GIVE UP, DAMN IT!”: RECLAIMING PUBLIC WATER IN BUENAVENTURA, COLOMBIA

This chapter provides a brief history of water supply in Buenaventura in an effort to demonstrate how this background affects the ways in which the city has responded to Covid-19. First, it discusses the shortcomings of the regional public water utility in the 1970s and the process of privatization that began in the 1990s with a concession contract. Second, it reviews the performance of the private company, *Hidropacífico*, between 2002 and 2014. It then focuses on the emergence of a social movement around access to public services and the 2017 Buenaventura civic strike (*Paro Cívico de Buenaventura*). The final section is dedicated to the strategies by which communities face the Covid-19 emergency in a context of water shortages and infrastructural breakdown. The chapter’s purpose is to highlight the ways in which, through persistent mobilization and crisis, communities seek to regain control over the distribution of their water.

INTRODUCTION

“The people won’t give up, damn it!” was the slogan of the 2017 Buenaventura civic strike that paralyzed the city and threatened to block most of Colombia’s international trade for more than three weeks. The decision to take to the streets was made after several years of waiting for better access to services such as health, education and water. A drought in the Escalerete River, the city’s main source of water, catalyzed the protest, exposing the infrastructural decay and lack of maintenance that had hampered water supply for years, and triggering extended water cuts. Civic strike negotiations with central and regional governments were focused not only on securing a budget for new infrastructure, but above all on implementing profound changes in municipal water management.

Buenaventura, which in Spanish means “good fortune,” is a city on Colombia’s Pacific coast, populated mainly by Afro-Colombians. During the late nineteenth century it was promoted as a port and its importance in foreign trade grew rapidly. Communities then settled by the water, reclaiming land from the sea by building stilt houses. The city was founded on Cascajal Island, which still hosts much of the city’s population as well as its commercial and political centre (Gärtner 2005). Besides being surrounded by the sea, Buenaventura is enclosed by a number of streams and rivers.

Throughout the mid-twentieth century, migration from nearby rural areas contributed to the city’s rapid urbanization. The port gained importance during the 1970s and 1980s and, managed by the state company *Puertos de Colombia*, it represented a source of work for communities. However, after Colombian ports were privatized through concession contracts in the early 1990s, labour unions were abolished, and formal employment became almost non-existent in Buenaventura (Castillo 2017). Over the past three decades, state and international actors have invested in infrastructure megaprojects to expand the capacity of the port. In parallel, drug trafficking has

taken hold in the port, and confrontations between private armed groups and displacements of the civil population have become acute (Memoria Histórica 2015).

Buenaventura has a population of 432,417 people, of which 66% are under the poverty line. Life expectancy is 51 years, which is 11 less than the national average (Revista Semana 2017). By early 2020, the city had a 34% unemployment rate (Redacción Cali 2020b). Different reports highlight the unequal and sometimes conflictual relationship between the city and the port, because despite the success of the port and the many investments it attracts, it generates a limited amount of employment, mostly for workers brought in from elsewhere, while the city is one of the country's poorest and least developed (Castillo 2017, Nicholls and Sánchez-Garzoli 2011, Zeiderman 2016). Approximately 80% of the population has water supply connections but do not receive more than five continuous hours of water a day. Many depend on rainwater harvesting, and only 50% have access to improved sanitation (Silva 2017a, Suárez 2017).

FROM PUBLIC TO PRIVATE

Despite rapid growth in Buenaventura, the city's water was provided by an aqueduct built for a small town well into the late 20th century. Likewise, water services continued to be provided by a departmental public utility, *Acuavalle*, which focused mainly on municipalities and rural towns with smaller populations. During the 1970s some works took place with regional funding to extend water supply and update the treatment plant. However, as the city expanded, the existing infrastructure became insufficient, and *Acuavalle's* work began to draw greater criticism. The population continued to receive water intermittently, supplementing their needs with rainwater (Hurtado 2017).

In the early 1990s, the municipal government, then led by the Liberal party, began infrastructure repair works to fix various sections of the network, and the city hired an engineering firm to

design a so-called “Water and Sewer Master Plan.”¹ Many of these works were not completed due to lack of funds (Suárez 2017). In 1994, Law 142 introduced nationwide reforms pushing for the neo-liberalization of public service provision. The 1991 constitution had opened the door to private sector participation by making public services subject to “free market competition” based on the principle of “economic freedom.” Law 60 of 1993 had already authorized municipalities to privatize the water supply, but it was Law 142 of 1994 that required cities wishing to retain public ownership to justify their choice. Where public ownership could be “justified,” service providers were required to be organized as corporations, be they wholly public, mixed ownership (with a maximum of 50% public ownership), or fully private (Acevedo Guerrero et al. 2015).²

These changes at the national level paved the way for reforms in Buenaventura. In 1996 a document issued by Colombia’s highest national planning authority, the National Council for Economic and Social Policy (CONPES), authorized the state to contract loans for US\$17 million to finance the City’s Water and Sanitation Master Plan. CONPES document 2861 stipulated that, in order to access the resources, the city had to create its own autonomous water corporation (CONPES 1996). Thus, in July 2001 the municipal government created the Water and Sewer Society of Buenaventura (SAAB) with capital from the municipality. Members of the city’s construction sector also contributed with small sums and became shareholders. Since the newly created SAAB had no previous experience supplying the service, the plan was to outsource the service through a concession contract (H. Cárdenas 2017). However, the tender was irreg-

¹ The two traditional Colombian political parties, Liberal and Conservative, were founded in 1849 and ruled the country throughout the 20th century and until 2002. These parties were simultaneously mass actors and very lax multi-class coalitions. While liberals pushed forward an agenda of land, electoral and educational reform, conservative discourse revolved around the defense of the Catholic Church, property and order (Arias Trujillo 2011, Palacios 2003).

² The largest cities (Bogotá, Medellín, and Cali) resisted the pressure to privatize, but were further corporatized (Acevedo Guerrero et al. 2015).

ular since only one candidate was presented and the selection was carried out in a rushed manner and at the ministerial level (Redacción 2014). In the end, the newly created joint venture Hidropacífico, signed an operation and maintenance concession contract for 20 years.

Hidropacífico was constituted by *Conhydra*, a water operator from the city of Medellín that specialized in providing services to small towns, and *Hidroservicios*, a small water operator from Bogotá (Redacción 2014). According to a 2002 editorial from the national leading newspaper *El Tiempo*, the prospects were very good. Not only was the new operator, which had a good reputation in the Antioquia department, expected to provide a more consistent service and improve water quality, but also to manage the new resources to extend and improve the infrastructure in a matter of a few years (Editorial 2002). Funds secured for the Water and Sanitation Master Plan would ensure the improvement of the treatment plant and the repair of leaks along the network.

In general, it was believed that the public departmental utility Acuavalle was responsible for the deterioration of the service, and a certain prestige was attributed to the entrepreneurs of the city of Medellín, who had cultivated a popular image of being good businessmen (Editorial 1999, Editorial 2002). The private sector was also thought to embody a certain discipline and technocracy that avoided corrupt practices.

HIDROPACÍFICO AS WATER OPERATOR: 2002-2014

This optimism was short-lived. The funds promised in the CONPES were partially disbursed in 2004, and in the end, were not managed solely by Hidropacífico but with the intervention of the city's public entity, SAAB. Over the years, the service did not improve. While local administrations blamed the private operator for the poor maintenance of the network, the operator blamed the government for the lack of investment in new treatment plants and in the extension

of the network (H. Cárdenas 2017).

In 2007, the local government obtained a loan for infrastructural improvements to solve water leaks, ensure micro and macro metering, improve water pressure and provide daily service for 16 hours, as well as improving sanitation coverage and addressing flooding problems. Despite the disbursement of funds, none of these problems were solved (Comité por el Agua y por la Vida 2018). The construction company hired to complete the works declared bankruptcy and the funds were eventually exhausted (H. Cárdenas 2017).

Corruption investigations were opened against city officials and the mayor. And as water supply in the city became increasingly unpredictable, the private operator's performance began to be questioned as well. Hidropacífico declared that the concession contract in Buenaventura was not profitable due to leaks and fraudulent connections. In turn, city council argued that the operator was not adequately maintaining the networks due to their own mismanagement and not a lack of revenue (Redacción 2014).

This cycle of state funding for infrastructure works that were never completed continued for years. There were also disagreements over the suitability and adequacy of the infrastructure. Service regularity did not improve (Hurtado 2017). In 2011, the attorney general's office opened corruption investigations. Mayors in office from 2004 to 2019 were eventually investigated and charged for crimes related to corruption (H. Cárdenas 2017, Redacción Cali 2018).

It is also important to mention that during this period, political dynamics in the city (and the country in general) had changed considerably due to the intrusion of paramilitary groups into electoral politics (Romero and Ávila 2011). The collaboration of politicians with paramilitaries included harassment of voters and donations to campaign funds. Once elected, politicians returned the favors through the appropriation of public funds and public offices (Verdad Abierta 2011).

While Hidropacífico's manager argued that the company had

“fulfilled its obligation to manage and keep existing networks in good condition,” adding that “the company had never been profitable,” a group of protestors walked to the mayor’s office and burned their water bills (Editorial 2011). The protestors complained about water cuts that left entire neighbourhoods without water for several days. While communities spent weeks waiting for water, “cargo ships receive the liquid without problem and pay it in dollars, and this leaves a bad taste in the community,” said Andrés Santamaría, regional ombudsman (Editorial 2011). In the meantime, supply to the city was becoming increasingly complicated due to multiple leaks and low pressure (Redacción 2012).

A 2013 a federal investigation reported that just 16% of Hidropacífico’s subscribers had continuous service for at least 15 hours a day. During the rainy season, the service was further disrupted (Suárez 2017). In 2014, the Ministry of Finance and Public Credit declared that 13 years after signing a concession contract for the operation and maintenance of the network, Hidropacífico had not been able to guarantee the adequate and efficient provision of services in terms of continuity and coverage. In addition to irregularities in the work of public institutions such as the SAAB, the local administrations and the federal oversight institutions, the private operator did not invest in maintenance (Redacción 2014).

THE CIVIC STRIKE OF 2017

The possibility of terminating the concession contract was first discussed in 2012 (Redacción 2012). By 2014 the situation was tense. Not only did access to water and other essential services worsen, the city was also in the middle of an armed confrontation with paramilitary groups that were forcing the displacement of communities and providing armed support to private investors (see Memoria Histórica 2015, Zeiderman 2016).

Thus, in July of that year, more than 30,000 people took to the streets in a massive mobilization that ended with a sit-in at the

mayor's office to demand that the government intervene to end the violence. They also demanded better public investment in water, health and education infrastructure (Silva 2017a). After the street protests, leaders of the social movement went to Bogotá to meet with the federal government. Then-President Juan Manuel Santos sided with the community. He described the water system as one “designed 80 years ago, with a trail of unfinished works, and with expensive unused equipment that has mostly been dismantled” and announced that the federal utilities regulator *Superintendencia* was going to audit Hidropacífico (Redacción 2014).

After an eight-day mobilization, the government agreed with the movement leaders to create the *Todos Somos Pazcífico* fund, a US\$400 million trust to build water and sanitation infrastructure in Buenaventura and invest in health and education (CONPES 2015). But soon after, the funds initially promised only for Buenaventura were split between 178 municipalities along the Pacific coast (Arenas 2017a). Moreover, promises to audit Hidropacífico were not kept. There was ongoing talk of terminating the contract, but an agreement could not be reached with the operator. Paradoxically, while maintaining that operations in the city left them with economic losses, the company refused to end the contract prematurely (Redacción 2014).

Tension mounted again in 2017, triggered by a prolonged water cut in the midst of a drought which left 5000 community members without any water for weeks (Redacción 2017c). According to Hidropacífico's manager, water levels declined to a point that did not allow “for optimal water production.” The manager noted that the company would continue to serve the city with water tank trucks (Redacción 2017a). Despite this, water shortages continued, and water quality was poor.

Faced with protests, the regional government promised more investment (Ramírez 2017b). The governor also initiated talks with the operator, through the mediation of the city mayor, to reach an agreement about ending the concession ahead of its formal date.

Hidropacífico's management declared that they were willing to step aside if the government compensated them (Silva 2017b).

By May 2017, the city's crisis was not improving. Thus, a general strike was organized (Silva 2017a). Fifteen community associations worked on the mobilization with support from 11 trade unions, including those that represented transporters, teachers and all other public workers. The general purpose was to force the national government to declare an "economic, social and ecological emergency" in Buenaventura, which would only allow rapid disbursement of funds to the city and facilitate citizen oversight and control of these funds and of the provision of public services (Silva 2017a). More than 150,000 people took to the streets to protest, and roads were blocked to stop national trade.

The reasons for the strike went beyond access to public services and contested structural problems such as inequality and structural racism. Buenaventura is a city with a majority Afro-Colombian population (88.7% according to the last national census), and by 2017, two thirds of the population were living under the poverty line and 62% were unemployed (N. Cárdenas 2017). Historically, Colombians have mapped racial hierarchy onto the country's different regions by developing a racialized discourse that associated certain regions with progress and "whiteness" while other regions were characterized as "black" or "indigenous" and associated with disorder and danger. Located mainly in the Caribbean and Pacific coasts, Afro-descendants have been historically marginalized in terms of infrastructural investment, socioeconomic development and political power (Wade 2009, 2012).

Buenaventura's civic strike paralyzed the city for 23 days. In the final agreement signed by the national government, the organizing committee, and some international guarantors, Buenaventura was awarded funds (in part from taxes derived from the port, and in part from state loans) (Silva and Arenas 2017). A new Water Master Plan was introduced to extend the pipelines and guarantee water supply 16 hours a day without interruptions. The first phase of a

Sanitation Master Plan was also funded (Hurtado 2017).

The political landscape changed after the strike. Not only had the population organized itself into assemblies, but the traditional political class was weakened. With mayor Eliecer Arboleda in jail and many of the politicians linked to paramilitaries legally barred from public life, the road was clear for other forces to enter the electoral arena (Soto 2018). With a popular coalition, independent from political parties, one of the strike's leaders, Víctor Hugo Vidal, was elected mayor and began his term in October 2019. After Vidal was elected, the strike organizing committee cut ties with him to maintain its independence from government and continue its citizen oversight work.

The operation and maintenance contract signed with Hidropacífico ends in December 2021, and the local government aims to come up with an institutional scheme to provide the service as of January 2022.

PANDEMIC AND PRECARITY

In January 2020, Víctor Vidal took over a debt-ridden city. Unlike his predecessor, Vidal set up a cabinet with almost no ties to political parties (Soto and Ávila 2020). Vidal also represented a threat to illegal and private interests related to drug trafficking and control over the port, creating potential barriers to getting things done. Another obstacle would come from a newly elected right-wing national government (Carranza 2020).

Within his government plan, Mayor Vidal intended to open new paths and alternatives in water supply. Instead of paying Hidropacífico to terminate the contract early, the local government is exploring the possibility of creating a public company located in Buenaventura, owned by the city, to provide the service as of December 2021 when the concession with Hidropacífico ends. This process, which began in August 2020, will have three phases. The first phase, which would run until October 2020, is an analysis of

alternatives. The second phase, which would run until February 2021, would be dedicated to developing the legal, technical and financial constitution of the utility. Finally, phase three, which would run until mid-2021, would be to prepare the utility to start providing the service in January 2022 (N. Rosero, leader of the MAV, personal communication, August 14, 2020).

All these initiatives, however, were affected by the arrival of Covid-19. Faced with a precarious situation of massive job losses and threatened food security, the local government had to organize the delivery of monetary aid and food assistance. During the first week of May 2020, Mayor Vidal asked the national government to give special consideration to Buenaventura, due to the economic vulnerability of its inhabitants.

But the Covid-19 pandemic has also served to highlight the paradox that characterizes the city: the port has funds but the city does not. This is because the port of Buenaventura did not stop for a single day during the months of March-August and continued to operate without many changes (Redacción 2020b). In tune with the dreams of a “Pacific Alliance,” which would entail linkages between the economies of Colombia, Chile, Mexico and Peru (Eder 2017), the central state protects public and private investment in the port which in turn leaves little for the urban population (Comisión de la Verdad 2019).

The National Health Institute, for its part, warned about the vulnerability of Buenaventura to Covid-19, not only because it houses a port, with people entering and leaving the city, but also because of the intermittent water service that complicates hand-washing measures (Redacción Cali 2020a). Faced with questions about the state of the city’s water infrastructure, the deputy minister of water, José Luis Acero, argued that despite the investments, the improvements will be seen little by little and that “before 2024 it will be difficult for the residents of Buenaventura to have continuous water supply and sanitation services.” Acero also explained that despite the agreements reached by the previous government with the strike commit-

tee, the current government must make investments according to its own budget (Espinosa 2020).

Among the federal measures taken to face the pandemic, some were related to water supply. The first of these, which were taken in March, were: service reconnection to households that had been suspended for non-payment; the freezing of water tariffs; and the cleaning and disinfection of public places with high volumes of activity. Other nationwide measures included payment plans for low-income residents who could defer their utility bills to pay in 36 instalments without penalty or interest, and for middle-income residents who could defer their payment over 24 instalments (Government of Colombia 2020). However, these measures did not help the majority of Buenaventura's residents, who receive low-pressure water every other day for only a few hours and depend largely on rainwater.

The situation worsened significantly during the last days of June when infrastructural damage caused a prolonged water outage in the city. As Mayor Vidal explained to the press: "Almost 66 meters of pipeline fell into the river and we have a very complicated situation given that 70% of the water supplied to the city is conducted through this pipeline" (Redacción 2020a). It was not, as some national media described it, a "natural disaster." On the contrary, the collapse had been anticipated because of the lack of maintenance by Hidropacífico (Arenas 2017b).

Both the local government and Hidropacífico organized the distribution of water in tank trucks to address the situation, but conflicts between and within communities emerged while lining up to receive one or two buckets of water (Yamile, resident of El Capricho neighborhood, personal communication, July 5, 2020); a situation made even worse by the fact that there were 1,282 cases of coronavirus in the city at that time (Redacción 2020a).

Supply was eventually restored, but the rupture weakened other fragile infrastructure. During the month of August, households in some neighbourhoods received water every three days instead of

every other day, forcing them to collect rainwater (Alicia, resident of El Capricho neighborhood, personal communication, August 20, 2020). This situation made the main Covid-19 prevention measure, to wash your hands every three hours, difficult. Thus, a population that was already struggling was made even more vulnerable. By the beginning of July, when the pipeline was repaired, Buenaventura had the highest mortality rate from Covid-19 in the region of Valle del Cauca (Bravo 2020).

CONCLUSION

The civic strike of 2017 proved to be a turning point for Buenaventura, contributing to the election of a mayor who does not come from traditional politics, is committed to enforcing the agreements that were reached with the national government, and intends to fight corruption (Duque 2020). And even though city council and the national government are run by right-wing parties, Mayor Vidal insists that he will push through a progressive agenda:

The National Government is obviously not in our ideological line, but it understands that this local government is serious... We have a direction which is embedded in the strike agreements. In other words, we are not going to discuss with the national government if the hospital will be rebuilt or not. That has already been agreed. We will discuss the times, the plan, the path, but we will not reopen discussions that have already taken place during the strike negotiations (Vidal, quoted in Duque 2020)

Among the purposes of the new local government is the crafting of alternatives for the provision of water service after the departure of Hidropacífico in December 2021. In the meantime, Vidal's government aims to monitor all investments in water infrastructure, drainage and sanitation. These plans, however, will have to over-

come many obstacles. Among these is the national economic crisis that may delay some investments in infrastructure. Furthermore, unemployment in the city will make it difficult for households to pay for services without a strong system of subsidies. It is also worth noting that the elected national government has systematically breached some of the peace accords signed in 2017 (Redacción Política 2020), adding to the unemployment situation and contributing to the worsening of violence in the city. In this context, it is difficult for local government to work in some neighborhoods where there are armed confrontations (Carranza 2020).

There is also a paradox around the return of water to public hands. As the city waits for a new public water operator in 2022, Hidropacífico has little incentive to do a good job during its remaining tenure, made worse by the fact that it has not faced any sanctions at the hands of national regulators and it has a fixed income from the sale of water to the port's administration and ships. Thus, the city will have to face another year of poor water service, despite the fact that by late August, 2020, Buenaventura had the highest fatality rate from Covid-19 in all of Colombia (Redacción Cali 2020a).

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Chapter 26

Petri S. Juuti
Riikka P. Rajala

THE SUCCESS OF PUBLIC WATER IN BATTLING COVID-19 IN FINLAND

Finnish water supply and sanitation have evolved through many crises. This is the case especially in Tampere, the first industrialized city in Finland, where there have been crises related to sanitation, typhoid, city fires and high infant mortality rates. Tampere is the third-largest city in Finland and the largest inland centre in the Nordic countries. Tampere Water serves as a municipal corporation, with operations managed and steered by a management group that consists of the heads of units in addition to a CEO. An organization of 150 people is responsible for its operating activities. Tampere Water's costs are covered by collecting water and wastewater fees from users. More than 250,000 people live within Tampere Water's operating area. This paper discusses how the Covid-19 crisis has affected water services in Finland, with a focus on Tampere.

INTRODUCTION

On March 16, 2020, the Finnish government announced a state of emergency in response to the Covid-19 pandemic. The aim of this action was to protect the population and safeguard the economy.

Persons over 70 years of age were instructed to avoid contact with others. Schools, educational institutions and universities were closed, and contact teaching was suspended and replaced by alternative methods, such as distance learning. Only early childhood education, care units and pre-primary education were allowed to operate. Public gatherings were limited to a maximum of 10 persons. Travelling to and from the Uusimaa region (the Helsinki metropolitan area) was also forbidden, with few exceptions. In early May, the government decided on a hybrid strategy to manage the coronavirus crisis and start lifting the restrictions.

We asked Finnish water utilities to tell us how the pandemic has affected their work. We interviewed seven water utilities in a Zoom meeting in June 2020 and sent a Webropol questionnaire via email to 90 water utilities (of which 20 responded). We had a second Zoom meeting with the same seven water utilities in September 2020.

A MANAGEABLE CRISIS

Overall, Covid-19 has not caused a crisis for water utilities in Finland, although their experience is varied. One indication of this was how the pandemic has affected customer relations and communication, with most respondents experiencing some disruptions but nothing they could not manage (see Table 26.1).

Most water utilities switched their customer service to operate online and via telephone so that their offices were not open to the public. Tampere Water, for example, announced that: “Our customer service is closed for the time being. We serve by e-mail and telephone as well as through the online service. Via online service you can check information about your own connection, water use and invoicing in real time.” All personnel that could do so started to work from their homes. In some cities, plumbers worked in designated pairs, avoiding contact with others: “Plumbers leave for destinations directly from their homes. All contact with customers and co-workers is avoided and minimized. No urgent work will be post-

poned to the future.” Coffee rooms and break rooms were closed, or only a few people were allowed to enter at the same time. Water utility managers’ aims were to make sure that staff members would not be exposed to the virus (and potentially end up in quarantine) and to guarantee that water services would always remain running.

Table 26.1

How Covid-19 has affected customer relations and communications (number of water utilities who mentioned each action)

Customer service office closed (6) or limited (1). Visits to water utility offices forbidden. Services available on the Internet or by phone.
Information and instructions available through webpage and other media (10)
Non-urgent tasks postponed. No visiting customers unless in an emergency (8)
More online services (5)
All meetings rescheduled or organized using Microsoft Teams or Skype (2)
Water museum events cancelled (1)
Distance working whenever possible (1)
Only one worker per vehicle (1)

Source: Webropol survey conducted by the authors

Although Finnish water utilities have contingency plans for different situations and emergencies, there were no direct plans on how to deal with a pandemic such as this. As one respondent noted, “the instruction from higher up to follow the emergency instructions was frustrating because waterworks did not have instructions for such an emergency. So, we used common sense and applied general guidelines when deciding what to do.”

Water utilities also worked together to exchange information after the crisis started. There was dialogue between neighbouring urban water utilities and especially between those that already had cooperation mechanisms in place. One water utility told us that they immediately agreed that if any of neighbouring utilities were in trouble they would lend staff for essential tasks. The leader of a small wastewater treatment plant told us that they had considered bringing in extra staff from outside, but this was not necessary in

the end because staff remained healthy.

Nationwide, the Finnish Water Utilities Association (FIWA) played a significant role as a data collector and mediator between different water utilities. An online seminar they organized featured 220 water utilities sharing experiences. Also, a weekly online meeting organized by FIWA brought together authorities and water utilities. Around Tampere, for example, environmental and health-care authorities convened water utilities in the Pirkanmaa region. There was a lot of unofficial discussion between different actors. In addition to FIWA, two other actors played an important role as sources of information on Covid-19: the Finnish Institute for Health and Welfare (THL) and the Finnish Institute of Occupational Health (FIOH). Finnish water utilities were also interested in experiences on a European scale, although no information was available in our interviews about this cooperation (on this point of pan-European cooperation, see the chapter on *Aqua Publica Europea* in this volume).

As water utilities in Finland are owned by municipalities (mainly limited corporations or business enterprises), cities cooperated closely at the beginning of the crisis, and the exchange of information between the water utility and the city was effective. In one case, we heard that a water utility reacted to the virus faster than the city and shut down its customer services while the city was still considering its actions.

One of Tampere Water's decisions was to stop visits to their offices. Some of their staff started working from home. Nevertheless, water quality remained the top priority at all times, and wastewater was monitored in the wastewater treatment plant (with no traces of Covid-19, although in Helsinki, there were traces of the virus found in wastewaters from the Viikinmäki wastewater treatment plant). Tampere Water increased communication on their website. They cooperated with the authorities on data collection and closed their customer service point. The utility also prioritized and increased communications directed at staff members.

CONCLUSION

Finland cancelled its state of emergency on June 15, 2020. By June 25, the number of Covid-19 fatalities in the country was 327, with deaths per million people at 59. Finland started to remove restrictions, and the city of Tampere also began to open up some services (e.g. public swimming pools and playgrounds). However, Tampere Water has approached its return to normal activities slowly. Water utilities have said that they will maintain precautions until at least the end of 2020. It seems that most office staff are still working remotely. Only a small number of workers have indicated that they want to return to the office. Some water utilities have considered enabling more telework in the future, when the crisis is over.

Nevertheless, one water utility told us that in June and July, it seemed that the staff had already forgotten precautions because there were almost no infections outside metropolitan areas of Finland. This was addressed and discipline was restored to re-establish precautionary measures. Again, precautions had to be strictly followed.

Covid-19 did not cause a crisis for water utilities in Finland. Having a municipally owned water utility has proved to be the right historical choice, since it enables seamless cooperation with the other municipal organizations to this day. The water utilities we interviewed actively exchange experiences with other water utilities and are ready to assist other water utilities during potential emergencies.

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- Riihimäen Vesi
- Tampereen Vesi - Tampere Water
- Ylöjärven Vesi Oy
- Äänekosken Energia

Chapter 27

Isabelle Delainey

BLUE COMMUNITIES IN QUEBEC: UPHOLDING THE HIGHEST WATER STANDARDS IN UNCERTAIN TIMES

There are 23 certified Blue Communities in the province of Quebec, Canada – all of which are committed to defending water as a common good. *Eau Secours*, a non-profit organization that works to protect public water in Quebec, carried out a study with 60% of these Blue Communities to highlight the challenges they have encountered since the start of the Covid-19 pandemic. This chapter reveals that managers and their work teams have adapted their procedures and working methods according to public health directives and their respective situations. Blue Communities have performed well and have managed to carry out their daily tasks to serve their populations while protecting their employees. Managers of Blue Communities also learned valuable lessons during the first wave of the pandemic that should make managing a potential second wave easier

INTRODUCTION

The purpose of this study is to highlight the efforts and difficulties encountered by Blue Communities in the province of Quebec, Can-

ada, since the start of the Covid-19 pandemic. In Quebec, 17 administrative regions are divided into regional county municipalities (RCMs) and non-RCM territories. These are subdivided into municipalities, cities, Indigenous and Inuit territories, and unorganized territories that provide public water services to all citizens. This study focuses on municipalities that have received Blue Community status over the years (see Box 1 for a definition) because they recognize water as a common good and a public resource to be protected. To date, there are 23 certified Blue Communities in Quebec (Blue Planet Project 2019).

Since the start of the pandemic, Blue Communities have faced several major challenges in producing drinking water and treating wastewater. To help inform the discussion about possible future action, Eau Secours conducted a telephone survey of water service operators in Blue Communities between June and July 2020 to discuss problems they encountered during the first months of the pandemic. Water service managers in 60% of the province's Blue Communities participated in the survey. At the time of the interviews, the municipalities did not have any data compiled on the issues discussed; hence, no statistics appear in the research results. The identity of the respondents is confidential.

Box 1

What is a Blue Community

A Blue Community is one that adopts a water commons framework that treats water as a common good, shared by everyone and the responsibility of all. Municipalities, Indigenous communities, educational institutions, religious communities and other collectivities can sign up to become a Blue Community (Eau Secours 2019). To become a Blue Community, three actions must be taken: recognize the human right to water and sanitation services; promote publicly funded, owned and operated drinking water and wastewater services; and prohibit the sale of bottled water in public buildings and at events. In early 2020 there were approximately 85 Blue Communities around the world, including 44 in Canada and 23 in Quebec.

In the interviews, managers identified several priority issues: the management of human resources, drinking water production, wastewater treatment, sampling and analysis, and scientific collab-

oration with universities. This study aims to get a clearer picture of the adjustments water service operators in Blue Communities have made to their daily operations, including the measures they have taken to protect the health and safety of their workers, to preserve the quality and quantity of drinking water and to continue to treat wastewater in the public interest.

BEING A BLUE COMMUNITY DURING A PANDEMIC

Blue Communities all share a common goal of defending water as a common good, but they vary widely in terms of their population size and the resources they have at their disposal. Management structures are diverse, with larger municipalities having much more complex management structures than smaller ones. As such, municipalities with a large workforce, multiple sites to manage, and a sizable population to serve reported that management during the pandemic has been much more cumbersome than normal. Smaller municipalities, on the other hand, said that while they had to make some adjustments, everything was going relatively well.

Municipalities noted that they applied an integrated management approach to the crisis, taking into account the interests of various stakeholders, the resources required, and the constraints for the production of drinking water and treatment of wastewater. Also, some cities are helping each other by engaging in sporadic exchanges about the different ways they carry out their tasks.

Although Blue Communities are well aware of the importance of offering high-quality service at all times, the Covid-19 crisis has posed a major challenge in the daily operations of water operators who must continue to provide essential services without compromising the health and safety of their employees. The following sections highlight some of the difficulties Blue Communities have faced, but also their successes, including good decision-making and the hard work that water operators continue to perform on a daily basis to ensure the delivery of high-quality water and sanitation.

Human resource management

While water services are essential during a pandemic, worker health and safety is also a priority to ensure service continuity. Municipal water and sanitation workers face increased risks of contracting Covid-19 in performing their duties. In the survey, water service managers reported that employees were facing increased levels of anxiety and that management had become more complex.

According to several water managers, human resource management has been the biggest daily challenge since the start of the pandemic. A large majority have completely rethought staff schedules and work plans to reduce the stress on operators and prioritize health. Managers reported higher-than-normal levels of anxiety among operators related to fears about contact with colleagues, the use of common rooms and shared computers, and the handling of common work instruments. The treatment of wastewater was an additional source of stress given that when the pandemic was first declared, little was known about the presence of residual fragments of the virus in wastewater. Managers responded by reorganizing and shifting schedules of work teams to reduce the number of personnel working together at the same site at the same time to lower the risks of contamination. Notwithstanding these measures, uncertainty about the vectors of transmission of the virus contributed to high levels of anxiety among employees.

The reorganization of teams was challenging because they had to take into account several factors, including the safety of water operators, the hygiene measures established by the government, the needs of citizens, the preservation of the quality of drinking water and the quantity to be produced, and the wastewater treatment service to be performed, all in the context of great uncertainty created by the pandemic. Whenever possible, and depending on the position held, some team members also worked from home. A few municipalities suffered labour shortages due to illness. Others set up teams of employees on standby to replace workers when necessary. Finally, some municipalities dedicated a permanent monitoring

station on each of their sites to increase security and the continuity of operations.

Hygiene measures

To protect their water operators, the municipal directorates of Blue Communities adopted increased and appropriate hygiene measures in accordance with government recommendations and those of the National Institute of Public Health of Quebec. Frequent sanitation of all equipment and premises has been carried out to reduce the risk of contamination. Social distancing has been in place at all work sites since the start of the pandemic. The managers have also reorganized work teams to cover different sites to reduce cross-contamination. The use of respirator masks or face coverings has become a mandatory practice in all Blue Communities to further protect water operators. The use of protective gloves is often required. Finally, frequent handwashing after performing all tasks is the preferred measure to reduce the risk of the virus spreading.

Management of the production and consumption of drinking water

During discussions with the Blue Communities, some reported that they had encountered problems with the management of drinking water, while others reported none. Overall, the actual production of drinking water has not been an issue raised by Blue Communities. So far, the treatments required to produce drinking water have been going well. Concerns were raised, however, about rising levels of water consumption compared to previous years, with the vast majority of Blue Communities having experienced higher levels of drinking water consumption, particularly in residential and agricultural sectors – with demand dropping in industry. Residents consumed more water than usual because they stayed at home, cancelled their trips abroad, went less frequently to restaurants, bought more swimming pools and did more home renovation projects. In addition, citizens were more engaged in gardening, which requires

frequent and sustained watering. The increased washing of outdoor and indoor items, such as cars, garden items, furniture and food, all contributed to significant increases in the consumption of drinking water. In addition to these non-essential water uses, recommended hygiene measures to combat Covid-19 such as cleaning surfaces and frequent handwashing have also increased the demand for potable water.

With the lockdown, people also transferred their usual work and business activities from their offices to their homes. Water usually consumed in the workplace, which is often located in a commercial or industrial district, has instead been consumed in the residence. Thus, for municipalities with one or more residential areas, the quantity of drinking water that needed to be produced increased considerably.

Unusual weather patterns are also to blame for increased levels of water consumption. Heatwaves in Quebec normally start in the month of July, but in 2020 the first heatwave arrived in May. During heatwaves, citizens consume more water for hydration and personal care. Also, due to warmer weather, private and public swimming pools were opened earlier, and more people were gardening and watering their lawns. All these activities have further increased water consumption on municipal meters.

For a few communities, these higher-than-normal levels of consumption only took place during the heatwaves, and when the heat broke, consumption levels returned to normal. Other municipalities have experienced higher levels of consumption since the start of the pandemic. Intense heat and reduced rainfall in the months of May and June 2020 reduced the water level of rivers, putting further pressure on water operators. Some communities had to double the production of water, approaching their maximum production capacity. This situation alarmed officials in some municipalities who expressed fear that citizens' demand for water could outstrip supply.

Despite the increased levels of consumption of drinking water

in most of the Blue Communities and the drop in water levels in the rivers, water quality has consistently met standards since the start of the pandemic. While increased demand made some municipalities fear the worst, with some contemplating issuing boil water advisories, none had to implement them. They are closely monitoring the situation and are engaging in public education campaigns around the sustainable use of water through social media and their websites. It is important to note that in Quebec the fees for water services are payable per building in the form of an annual water tax, which does not take into account individual consumption. Without an immediate financial incentive prompting responsible use of water, this type of awareness was essential.

Some municipalities came close to issuing boil water advisories during the pandemic, but water use restrictions prevented this by discouraging people from washing their cars, watering their lawns or refilling their private swimming pools. However, the majority of Blue Communities chose not to restrict the watering of vegetable gardens, believing that this activity promoted well-being and was much-needed during a period of confinement.

Among the environmentally responsible measures used by Blue Communities, one was to use river water to wash the streets in the spring in order to save drinking water. The discharge was directed to storm sewers, and this wastewater was subsequently treated in the plant. This initiative deserves to be highlighted since it would certainly benefit several other municipalities facing water stress.

Some Blue Communities had planned to install additional public drinking water fountains in 2020 as part of an effort to promote the consumption of tap water instead of bottled water, and to make it easier for residents to hydrate during outdoor activities in the city. Some were fortunate enough to be able to continue with these plans, but others had to pause them due to the pandemic. All municipalities carried out increased cleaning of water fountains to make drinking water accessible to residents in the context of the pandemic.

Wastewater treatment management

None of the managers of Blue Communities reported problems treating their wastewater. However, the pandemic has introduced new sources of solid waste that have found their way into the sewerage systems. Several municipalities have found cleaning wipes in their sewer screens, which has caused blockages and broken pumps. To this end, several Blue Communities have issued notices through social networks and their websites asking citizens to throw cleaning wipes in the household garbage rather than in the toilet. At the time of the interviews, the situation had significantly improved. In addition, some Blue Communities reported the presence of industrial cleaning wipes in sewer screens, but that situation was also rectified after they issued notices. Finally, protective gloves, transported by rainwater to storm sewers, have also occasionally been found in the wastewater of some municipalities. As with the wipes, notices to citizens have helped reduce this problem. Waste management notwithstanding, wastewater treatment has performed well for all municipalities, and wastewater test results have met environmental standards.

Treatments and analysis

Although the amount of water used in communities has increased since the start of the pandemic, no additional treatment has been required to produce drinking water and treat wastewater. All Blue Communities have said that everything is going well on this front. The results of the water analyses were within environmental standards for all the municipalities contacted since the start of the pandemic, whether for the production of drinking water or for the treatment of wastewater. Some municipalities reported carrying out some preventive chlorination treatments nonetheless. Regular monitoring of the quality and quantity of water produced and treated is maintained to prevent any problems.

A few municipalities reported encountering difficulties shipping water samples and test results to the proper authorities due to

increased volumes of traffic for shipping packages by commercial carriers. No penalties were recorded, however, and all sampling was completed within the regulatory time frame.

Research

In order to prepare better for a potential second wave of the Covid-19 pandemic in Quebec, some Blue Communities have joined a team of university researchers in a scientific study that aims to track the presence of the coronavirus in municipal wastewater. The researchers hope that monitoring the presence of the virus in wastewater may provide an early warning sign of a potential outbreak of the disease in the population, as a complement to individual testing. In the study, wastewater samples are being collected and analyzed twice a week. Another objective of the study is to help municipalities better detect the virus in wastewater and ensure adequate treatment.

CONCLUSION

Some municipalities are looking to the future with a glimmer of hope while continuing to be very vigilant. They argue that the second wave should be easier to manage. We know more now about the virus and its transmission vectors than we did when the pandemic was first declared, and water operators have learned valuable lessons that will help them manage the situation even better in the future. In addition, the second wave is expected to occur at a time when there will be less demand for water. Swimming pools and other water features will have closed at the end of the summer season, public drinking water fountains are shut down in the fall, and citizens use less water for outdoor activities such as gardening in the colder months. Water consumption is expected to decrease gradually in the coming months, and municipalities will have less to fear from higher-than-normal consumption and will be able to start managing water and staff more “normally.”

Given the prevailing pandemic situation, Blue Community municipalities have done well in managing their drinking water and wastewater treatment. The quality and quantity of drinking water and wastewater treatment have consistently met established standards. Citizens have enjoyed continual access to good quality drinking water in sufficient quantity. Blue Community municipalities have demonstrated that they are able to adapt to an unprecedented situation. Despite the fact that some have faced difficulties, especially larger municipalities and cities, they have shown initiative in the management of their human and material resources, while putting in place the hygiene and safety measures recommended by public health authorities. Some have innovated in their practices and worked together to develop better strategies and learn about what other municipalities are doing.

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Chapter 28

Denisse Roca-Servat
Erika Meneses

ABILITY TO PAY VERSUS RIGHT TO WATER: COMMERCIAL IMPERATIVES AND SOCIAL PUBLIC ALTERNATIVES IN MEDELLÍN, COLOMBIA

This chapter describes water service provision in Medellín, Colombia, in the context of the Covid-19 pandemic. It does so by analyzing the introduction of national and local emergency measures regarding public water and sanitation services, and how social movements and vulnerable communities reacted to these measures. Following national mandates, the local public utility company EPM offered a tariff discount for the poorest users and more favourable terms of payment for the rest. However, none of these measures were “free.” Instead, they added to the debt burdens of the poor and did little to address the lack of essential services in the most marginalized neighbourhoods. In response, social organizations proposed alternative strategies to guarantee the constitutional right to water, including debt forgiveness for the most vulnerable users, as well as strengthening neighbourhood improvement programmes and community aqueducts.

INTRODUCTION

Medellín is considered one of the most unequal cities in Colombia and in Latin America, with marked socioeconomic contrasts between neighbourhoods (Medellín Cómo Vamos 2019). The public

utility company, *Empresas Públicas de Medellín* (Public Enterprises of Medellín, EPM), claims to provide water and sanitation for the vast majority of residents, with a water coverage rate of 97% and sewer coverage rate of 95% (EPM 2019). These statistics, however, do not account for the fact that poorer and more vulnerable neighbourhoods are outside the coverage area.

With the aim of critically examining the Covid-19 national emergency measures on water service provision introduced locally by EPM, this chapter takes into account the views of social movements and the most vulnerable communities in the city. Research was carried out using the method of virtual ethnography. This method included a review of secondary sources, institutional webpages and social networks, in addition to 12 in-depth interviews conducted by phone or virtual platforms with EPM officials, the Medellín Mayor's Office, municipal city council members, leaders of urban social movements, activist lawyers, and residents of human settlements.

EPM'S COVID-19 MEASURES

Before the pandemic, EPM estimated that about 19,000 households had their water services suspended or disconnected, and about 8,000 more were at risk of losing service (EPM 2020a). In addition, about 16,644 customers had prepaid water services and therefore were at risk of running out of water because of economic constraints. *Agua prepagada* (prepaid water services) are offered to users who have not paid their water bills for six months and have had their services cut off. With prepaid water meters, 10% of what they are charged goes to paying off previous debt, and the rest to consumption.

Following national public service provision mandates, EPM suspended the re-payment debt portion of the water charges for users of *Agua y Energía prepagada* (prepaid water and energy services) (EPM Decree 2280, 2020; EPM official, personal communication, June 26, 2020). In addition, it created a programme to allow users to access a certain quantity of water and electricity service during the

lockdown, and to pay for this extra consumption later (EPM 2020c). Under the *Precargas por la Vida* (Preloads for Life programme), EPM introduced “financed recharges” (EPM 2020e) for prepaid water users. If a user’s consumption of prepaid water was normally between 8 and 9 m³ per month, under this programme they were given two charges of 15 m³ per month so that they would not have to go to a store to reload the prepayment card (EPM official, personal communication, June 26, 2020).

While introducing these initiatives, EPM made it clear that it was simply rescheduling payments, not offering “free” public services. Prepaid programme users could enroll from March 27, 2020, to July 15, 2020. As of July 22, these special preloads of water service were to be added to previous debts (EPM 2020d) without charging interest for 36 months. According to EPM, the aim of *Precargas por la Vida* – under which households would be allocated 30 m³ for a month (equal to about three months of regular consumption) – was to give families peace of mind during lockdown (EPM 2020e). As of March 31, 3,000 preloads had been charged in the Aburrá Valley, of which 2,500 correspond to the city of Medellín (EPM 2020f).

From March 23 to July 31, 2020, EPM also suspended all water cutoffs during the national health emergency and ordered the reconnection and re-installation of drinking water service in homes or premises where it had to be suspended. Under this programme 7,650 families were prevented from cutoffs in the metropolitan area (EPM 2020a, 2020c). As of April 29, 2020, about 96% of the 11,400 users who had not paid for more than nine consecutive months were able to have their services re-installed (EPM 2020c).

To comply with national government decrees, EPM suspended the collection of interest on unpaid water bills from March 23 to July 31 (EPM Decree 2310, 2020). It also created new flexible terms for financing, setting deadlines and fees that varied according to socio-economic tier. EPM offered residential users in the lowest-income tiers (1 and 2) a preferential interest rate for 36 months and for the middle tiers (3 and 4) a preferential interest rate for 24 months. The

highest-income tiers (5 and 6) and non-residential users were also offered special terms and reduced fees. In addition, the company offered a 10% discount for tiers 1 and 2, which was valid for up to a maximum of three bills paid on time (EPM Decree 2310, 2020; EPM 2020g).

In the city of Medellín, the inability to pay is not the only issue that limits access to water. The formal water and sanitation network does not extend to some neighbourhoods because these settlements are situated beyond the urban perimeter in the higher parts of the mountains. To service these populations, EPM considered delivering water by tanker during the pandemic. It concluded, however, that users were too scattered throughout the Aburrá Valley and that they did not have the appropriate equipment. EPM also feared that distributing water in this manner would encourage large gatherings of people, which would not allow for the appropriate physical distancing measures (EPM, personal communication, April 13, 2020).

SOCIAL MOVEMENT DEMANDS

For social movements, Covid-19 served to expose problems in the poorest neighbourhoods of the city that existed long before this crisis. These neighbourhoods consist of people from different parts of the country, many of whom are victims of the Colombian armed conflict (Granada 2008, Zibechi 2015, CNMH 2017). For residents in these communities water is a “vital element necessary for survival” (Comuna 8 social leader, personal communication, July 23, 2020). However, they feel that at the moment, because they lack access to water, it also hinders them from exercising their right to the city.

Thus, for them, water constitutes life, but it also reveals the possibilities that all the inhabitants of a territory have to access rights that are respected and guaranteed equally. In this order of ideas, according to a social movement member of the *Mesa Interbarrial de Desconectados* (Inter-neighbourhood Roundtable of Disconnected People), water has been one of the physical reference points around

which the city has been planned and organized (personal communication, July 9, 2020).

EPM's water and sewerage networks do not reach these communities because they are informal settlements not legally recognized by the municipal administration (member of the *Corporación Jurídica Libertad*, CJL, personal communication, July 13, 2020). Households have therefore developed different ways to access water which continue during the pandemic. In some cases, residents in the hillsides have built their own formal and informal village aqueducts, drawing water from springs that run through the mountains (Botero-Mesa and Roca-Servat 2019). Others solicit donations of water from neighbours who have a formal connection with EPM, or rely on the solidarity of friends, family and acquaintances (Comuna 1 resident, personal communication, August 1, 2020). When finances permit, some households also buy bottled water. In certain neighbourhoods, there are sources of untreated water that are controlled by clandestine groups. This water often arrives late at night, and when it does, people wash clothes or store it for later use. The fee for this service is 5,000 pesos¹ per week (Comuna 1 resident, personal communication, August 1, 2020). Others obtain water from water tanks via "informal" hoses, although this water is not suitable for human consumption.

Some of these mechanisms entail physical contact with others, creating fear, stress, anxiety and even depression in the face of contagion (Stoler et al. 2020). Women are the most affected because of the additional threat of domestic violence (Stoler et al. 2020) and because they are often the head of household. As one resident put it: "Do we work and become infected? Or quit working and lack the means to eat and pay for services?" (Comuna 1 resident, personal communication, August 1, 2020).

Many households in the neighbourhoods located in the higher areas of the mountains cannot pay their bills even during regular

¹ 1 USD = 3844.20 pesos.

times. The economic crisis of these families has been exacerbated by the pandemic (Observatorio de Seguridad Humana Medellín 2020), with rising concerns over water service disconnections. Disconnection occurs in two ways: non-prepaid utility users, and *Aguas Prepago* (prepaid water services). Both are subject to the ability to pay. As one member of the CJL put it: “We understand prepaid water as another form of disconnection. A user with prepaid services can be disconnected from one moment to the next because it depends on the user’s purchasing capacity. If you have money, you can recharge; if you do not, you are disconnected” (personal communication, July 13, 2020).

Residents have also complained that information disseminated about the *Precargas por la Vida* (Preloads for Life) programme has been confusing. One resident had this to say: “With the pandemic, when I was looking at *Precargas por la Vida*, both in energy and water utility, it said that you can only receive a water load once for the first few months, but afterwards it was not very clear” (member of the CJL, personal communication, July 13, 2020). Many residents were uncertain about how many times they could purchase preloads and how they would pay off the additional debt in the future.

Social movement organizations have made several demands related to water in the context of the pandemic. In addition to proposing that EPM suspend all disconnections (Corporación Contracorriente et al. 2020, Zona Nororiental de Medellín 2020) – a measure that was implemented – they also demand supply by tanker truck for neighbourhoods and territories where there is limited access to the formal water network (Corporación Contracorriente et al. 2020). Neighbourhoods in the Northeast Zone also propose additional forms of payment for utilities that take into account real capacities of low-income families to pay: forgiving all debts for tier 1, forgiving 50% of the overdue payment accounts for tier 2, and eliminating late penalties for tier 3 for the duration of the pandemic (Zona Nororiental de Medellín 2020, 4).

In making these demands, these organizations call upon the

state to enact the right to *Mínimo Vital de Agua Potable* (vital minimum amount of drinking water) or MVAP, which is defined by the Constitutional Court of Colombia as “a fundamental right that allows the individual to live according to the lifestyle that characterizes him, according to his economic situation and all that he requires to live with dignity” (Judgment T 469/18 cited in Roman 2020). They call upon the state to guarantee this right in the medium term for all households, not only in the context of the pandemic, but because of the constant exposure of children to other infectious diseases associated with water quality (Corporación Contracorriente et al. 2020, Zona Nororiental de Medellín 2020).

These organizations have criticized EPM’s minimum drinking water measures, calling for continuity of water service and public investment to expand service coverage. They draw attention to the fact that in the midst of the greatest public health threat of the century, EPM’s business-oriented logic has inspired nothing but a commercial innovation: *agua a crédito!* (water on credit!) (Penca de Sábila 2020).

Proposals made by these organizations also call on the mayor to prioritize the recovery and stabilization of vulnerable populations in the 2020-23 Development Plan, implementing measures to strengthen the informal economy and ensuring universal health coverage and better health conditions through “providing essential public services and basic sanitation and improved housing” (Corporación Contracorriente et al. 2020). To this end, they propose the implementation of the February 2020 judgment in which the State Council ordered the city to provide drinking water to the Granizal district, which would entail building infrastructure that could benefit more than 30,000 people that live between the Granizal district and Comunas 1, 3 and 8 (Zona Nororiental de Medellín 2020, 12).

In addition, social organizations have called on the local and the national governments to provide a basic income. The first phase would involve identifying recipient families, and the second phase (to be implemented between 2021 and 2023) would entail the rollout

of transfer payments to these families to cover costs for health, education, food security, access to culture, public services, decent jobs and recognition of household work.

The aim of the basic income is to strengthen peoples' capacities to access the minimum conditions essential for life. These exceptional circumstances are giving rise to reflections on the historical demands put forward by the inhabitants of working-class districts. Many social movement and community leaders are now reconsidering their discursive strategy that has emphasized basic minimums. Instead of minimums, the idea of *máximos vitales* (vital maximums) has been gaining ground during the pandemic. *Máximos vitales* refers to the integral development and dignity of the human being, issues that cannot be addressed by covering minimum needs, but rather require that all forms of oppression and vulnerability be eradicated (Comuna 13 social leader, personal communication, July 15, 2020). Among the vital maximums for a dignified life is an expansive notion of socio-economic rights, "including food, essential public services, housing and education" (Comuna 8 social leader, personal communication, July 23, 2020).

UNITED FOR WATER NEIGHBOURHOOD IMPROVEMENT PLAN

Although the 2020-23 Development Plan recognizes the existence of housing in areas that lack basic service provision due to their geographical location and includes discussion about how to integrate these areas through new technologies, there are no concrete plans to materialize this idea. The development plan also proposes many interventions aimed at increasing basic service coverage in peri-urban neighbourhoods "because that is where the largest deficit exists and where compliance with health measures to curb contagion by Covid-19 or any other pandemic becomes much more complex" (Concejo de Medellín 2020, 11). More specifically, it mentions the goal of expanding water and sewerage coverage through the continuation of the *Unidos por el Agua* (United for Water) programme and

the upgrading of community aqueducts (Movimiento de Laderas 2020). This programme has been in place since 2016 as a municipal programme of the previous local administration in partnership with EPM.

According to the *Corporación Jurídica Libertad*, a legal advocacy organization in the city, this programme led to the expansion of water and sewerage services in some sectors of Moravia, La Honda and La Cruz (CJL, personal communication, July 13, 2020). However, the Development Plan of the current administration does not give sufficient importance to this project. The CJL is concerned that in the 2020-2023 Development Plan, the *Unidos por el Agua* programme, which has been re-named *Conexiones por la Vida* (Connections for Life) by the new municipal government, is not well-defined and its continuity is unclear. Social leaders have also criticized this programme for not contemplating the limited ability of people to pay, which will lead to disconnections and more prepaid water users (Comune 13 social leader, personal communication, July 15, 2020).

STRENGTHENING COMMUNITY AQUEDUCTS

Prior to the expansion of EPM into peripheral neighbourhoods, water management was carried out by various community or village aqueducts. For example, the aqueduct of the El Faro neighbourhood located on the limits of the urban-rural periphery has existed for more than 30 years. The water it supplies comes from the La Castro stream, and it has no system to treat its water. Between 2008 and 2016, the community built a non-conventional aqueduct and sewerage system that today benefits more than 2100 families. Yet there are approximately 350-400 households in the highest neighbourhoods of Comuna 8 that still do not have services because they lie outside the urban perimeter (Comuna 8 social leader, personal communication, July 23, 2020).

During the pandemic, the inhabitants of these sectors have had to face some additional difficulties regarding the use of water

from the aqueduct: “During the holidays local tourists come to the area and pollute the water. We have to close the valve on Saturdays, Sundays, and Mondays, and have to use whatever water is left in the tank. Those who don’t have a storage tank have to drink mud” (Comuna 8 social leader, personal communication, July 23, 2020). These families have made some improvements to clean the water and have been fighting since 2016 to make the water of El Faro potable (Comuna 8 social leader, personal communication, July 23, 2020; member of MID, personal communication, July 9, 2020).

It is important to mention that while El Faro is the best-known case of a peri-urban aqueduct, it is not the only one (MID member, personal communication, July 9, 2020). Popular neighbourhoods on the hillsides call for the support, creation and “strengthening of community aqueduct processes, to ensure water suitable for human consumption” (CJL member, personal communication, July 13, 2020). On the other hand, community leaders question EPM’s role on this issue: “Why does it not allow the formalization of community aqueducts? Why does it not help improve their infrastructure?” (MID member, personal communication, July 9, 2020). Strengthening community aqueducts is crucial to democratize water management and guarantee water as a fundamental right.

CONCLUSION

The EPM case illustrates the importance of democratizing basic water and sanitation services and defending water as a commons and fundamental right. The Covid-19 pandemic has deepened a water crisis that Colombians have been experiencing because of a capitalist economic model based on neoliberal, technocratic, cumulative and often individualistic ideals. In this sense, when we talk about democratizing basic water and sanitation services we do not mean the ways in which capitalism has coerced or appropriated liberal democracy – which is limited to a superficial representative democracy in which private interests rule (Roa 2016) – but rather a need

to transcend representative democracy and transform our communities to create deliberative and community forms of participation exercised at the local and national levels (Santos and Avritzer 2007). This democratization must take into account intersectionality as a tool that reveals the complexity of the inter-relationships of different oppressive structures such as race, social class, gender, age, functional diversity or sexuality, among others (Collins 2017).

In this sense, water service provision in the city of Medellín shows the tension between the neoliberal vision of water and the one that understands it as a fundamental right. There are at least three points of contention: (a) the tension between the understanding of water as a strategic natural resource versus a commons, (b) the tension between water as a commodity and as a fundamental right, and (c) the tension between corporate models of water management and community water management.

Regarding the first tension, we highlighted that according to EPM's corporate logic water is at the same time a scarce resource that must be governed by the market and a public good that belongs to the state. When performing its duty of providing a service, EPM must first and foremost perform its business function. By contrast, for social movements such as the *Mesa Interbarrial de Desconectados* and the neighbourhood organizations of Comuna 8, access to water provides the possibility of accessing a dignified life (in terms of health, housing and basic services). As the basis of life, water is not a thing/object but is present in multiple ways and can therefore be accessed and known in various ways as well.

Regarding the second tension, we see how for the company the goal of achieving universal coverage clashes with the problem of accessibility and affordability. For EPM, it is impossible to guarantee the right to water without integrating the costs and payment for its use. By contrast, for social movements, the lack of clean water reveals unequal access to rights and dignity. That is why, in the context of the pandemic, neighbourhood movements have called for debt forgiveness for the payment of basic services for the lowest

tier, the extension of the *Mínimo Vital de Agua Potable* (vital minimum amount of drinking water) for the most vulnerable population, and the implementation of a basic income as rates of hunger, pauperization and violence increase.

Finally, the third point reveals the contrast between the orientation of EPM and community aqueducts when it comes to management. For its part, the market logic of EPM limits its ability to provide basic public services. We can see this in the example of the programme *Unidos por el Agua/Conexiones por la Vida*; although it provides water access to vulnerable people living in areas of high risk or outside the limits of the urban perimeter, it does not adequately respond to the inequity of the economic system or the violence that intersects social class issues with race, gender, age, sexuality, etc. According to social movements, EPM appears to be more interested in payments than guaranteeing fundamental rights.

In light of these findings, these are our recommendations:

- Expand communication channels and trust between EPM and civil society, particularly with neighbourhood movements and associations.
- Ensure the *Mínimo Vital de Agua Potable* as a fundamental human right within the framework of the Social Rule of Law and as redress mechanisms for victims of internal armed conflict. Moreover, the vital minimum amount of drinking water must be extended to the entire vulnerable population during crises.
- Integrate an intersectional analysis, which takes into account subjects of special protection, as well as in the different forms of oppression in public water policies.
- In the context of a deepening economic crisis, the municipal government of Medellín and EPM should integrate efforts in order to forgive 100% of the debts for basic service for tier 1, 50% for tier 2, and create more flexible payment facilities for tier 3. Additionally, more attention should be put into how public services are handled, viewed and implemented.
- Continue and strengthen cross-subsidies and solidarity mecha-

- nisms between social groups, seeking redistribution and equity.
- Strengthen and expand the *Unidos por el Agua/Conexiones por la Vida* programme to reach more areas in the city by including comprehensive neighbourhood improvements and guaranteeing access to water as a fundamental right.
 - Recognize the autonomy of community aqueducts and strengthen public-community agreements, allowing a variety of ways to manage water as a common good.

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Covid-19 has once again demonstrated the significance of safe, accessible and affordable water for all. It has also highlighted enormous disparities in service provision while at the same time dealing a blow to public water and sanitation operators around the world due to massive drops in revenues, rapidly rising costs and concerns about health and safety in the workplace. This book provides the first global overview of the response of public water operators to this crisis, shining a light on the complex challenges they face and how they have responded in different contexts. It looks specifically at ‘public’ water and asks how public ownership and public management have enabled (or not) equitable and democratic emergency services, and how these Covid-19 experiences could contribute to expanded and sustainable forms of public water services in the future.

“This excellent and timely collection highlights the importance of democratic and equitable water services. If any good can come from this terrible pandemic, it is the recognition that public services are vital components of fundamental justice for a post-Covid world.”

Maude Barlow, author/activist and Chairperson of the Blue Planet Project

