

Conflicts surrounding the “natural antidote against COVID-19”: Brazil sanitation governance in action

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Abstract

As the COVID-19 pandemic sprawled across every continent, ‘hand-washing’ became the official guideline to prevent contagion. In this scenario, governmental and non-governmental actors mobilised to promote the provision of water supply and customer services to the largest number of people. With the imposed isolation, virtual events became the centre of the political debate, bringing to light strategies and challenges to guarantee basic needs, debated within the scope of the federal legislative and executive branches and civil society. The purpose of this article is to explore the discourses produced and the interventions proposed between April and May 2020. In the light of social studies of science and technology and discussions regarding the enactment and production of the state, mapped through the actions of key actors, this ethnography enables us to outline the conflicts of sanitation governance in Brazil.

Key words: Brazil, COVID-19, Sanitation, Ethnography, Institutions.

Conflitos em torno do “antídoto natural contra COVID-19”: governança do saneamento no Brasil em ação

Resumo

A pandemia de COVID-19 se alastrava por todos os continentes e “lavar as mãos” era a orientação oficial. Nesse cenário, atores governamentais e não governamentais se mobilizavam para promover a prestação do serviço de abastecimento de água e o atendimento do maior número de pessoas. Com o isolamento imposto, eventos virtuais se tornaram o centro do debate político, trazendo à tona estratégias e desafios para a garantia das necessidades básicas, debatidas no âmbito dos poderes legislativo e executivo nacional e da sociedade civil. O presente artigo tem como objetivo explorar os discursos acionados e as intervenções propostas entre abril e maio de 2020. À luz dos Estudos Sociais da Ciência e Tecnologia, das discussões a propósito da atuação e produção do Estado, mapeada por meio de ações de atores chaves, essa etnografia permite desenhar os conflitos da governança do saneamento no Brasil.

Palavras-chave: Brasil, COVID-19, Saneamento, Etnografia, Instituições.

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Introduction

Emma Crewe (2021) argues that although social anthropologists have studied political institutions, politicians and other leaders, they have rarely ventured into the centres of power. In the case of Brazil, these centres of power are organised in the form of institutions of the executive, legislative and judicial branches, at the federal, state and municipal levels. There are several institutions that play a fundamental role in the conduct of democracy and in the realisation of human and constitutional rights. Shedding light on these centres of power through the particular filter of anthropology is fundamental, particularly in the current situation facing Brazil.

The country has been dealing with a serious political, economic and institutional crisis since 2014, period of the conflicting impeachment of former president Dilma Rousseff. Within the scope of the National Congress, power struggles became visibly more polarised, with impacts on the governance of basic services. The election of President Jair Bolsonaro in 2018 brought even greater instability to the political scene. The dismantling of public institutions led by the president’s far-right government intensified the impacts on democratic processes and the increasing social inequality. It was within this scenario that the country was traversed by the COVID-19 pandemic. Some facts recorded in a period of 30 days after the first confirmed case in Brazil:

- On March 24, 2020, the non-governmental organisation *Habitat para a Humanidade Brasil* [Habitat for Humanity Brazil] and over 60 entities and networks active in the major themes of housing and public health in Brazil filed a letter with the *Ministério Público Federal* [Federal Public Prosecutor’s Office] reinforcing the need for states and municipalities to ensure the supply of water that focused on favelas, peripheries and vulnerable groups, ‘with the aim of adequately supporting this significant part of the Brazilian population’ (Habitat, 2020).
- On March 25, 2020, the *Defensoria Pública* [Public Defender’s Office] of the State of São Paulo recommended the adoption of measures by the Department of Water and Sewage of the town of Valinhos, with a view to ensuring the continuity of water supplies to families living in the ‘Marielle Vive’ Rural Camp, temporarily prohibiting any suspension of this ‘essential public service’ (DPESP, 2020; emphasis added).
- On March 27, 2020, federal representative Rosa Neide (PT/MT) drafted Bill no. 1142/2020 in the *Câmara dos Deputados* [Brazilian House of Representatives], which provided for ‘very urgent measures to support traditional peoples and communities’ due to the novel coronavirus’.

¹ Traditional Peoples and Communities: culturally differentiated groups that recognise themselves as such, that have their own forms of social organisation, that occupy and use territories and natural resources as a condition for their cultural, social, religious, ancestral and economic reproduction, using knowledge, innovations and practices generated and transmitted by tradition (Brasil, 2007).

- On April 13, 2020, the *Ministério Público Federal* [Federal Public Prosecutor's Office], through the 6th Office of Coordination and Review – Indigenous Populations and Traditional Communities – published new guidelines on action for the *Ministério da Cidadania* [Ministry of Citizenship] ‘while the novel coronavirus pandemic lasts’, in order to guarantee access to basic health services and food security for vulnerable populations (MPF, 2020).
- Also in April, the *Ministério Público do Estado de São Paulo* and the *Ministério Público do Estado de Rio de Janeiro* [State Public Prosecutors' Offices] demanded measures from the state-owned sanitation companies to guarantee the supply of water to all favelas and subnormal agglomerations². The *Ação Civil Pública com Pedido de Tutela de Urgência* [Public Civil Action with Request for Urgent Tutelage] (MPRJ, 2020) affirmed that guaranteeing the supply of potable water and the provision of adequate sanitation conditions ‘are essential factors for the safety and protection of the health of the population, especially during outbreaks of infectious diseases’.

Human rights recognised by the United Nations, such as the right to water and sanitation, and constitutional rights, specifically public health and a balanced environment, gained the spotlight as ‘hand-washing’ became an imperative. Given the challenges posed by the pandemic, the question emerged: how to overcome the historical and unequal deficit of water supply in the short term? And following this, it became fundamental to question: what paths had been proposed by public institutions to guarantee access to water for populations in vulnerable situations? What were the positions of strategic actors in basic sanitation governance vis-à-vis international and local demands? These are some of the questions that we address herein.

The commitment is analytical, descriptive, and imminently political, corroborating the understanding that ‘a healthy democracy needs researchers to take a close look at the claims, relationships and performances of politicians’ (Crewe, 2021: 21-22), in order to indicate tools for improving social control of public policies, as well as to assist in proposing ways to strengthen institutions. Venturing on the potential of the ethnographic method and approach, on the principle that combines the articulation between native theory and accumulated anthropological theory – or rather, more specifically, theories concerning the state and public policies – the purpose is to draw on ethnographic data produced from meetings articulated by governmental and non-governmental actors to analyse the state in action.

Our reflections are organised into five sections. In addition to this introduction, the article comprises Section 2 ‘Ethnographic method and virtual ethnography’, in which we detail the stages of identifying and analysing the virtual events, as well as characterising the mapped network of actors. Section 3 ‘Consensus?’, is dedicated to characterising the confluence of positions on the ‘urgency’ of meeting the demand for water supply. Section 4 ‘Fixes and conflicts’ provides a deeper analysis of the results of the virtual ethnographic study, with the identification of three types of necessary fixes in water supply infrastructure indicated by different interlocutors: material, socioeconomic and political-institutional. The positions of civil society representatives reveal the interconnection of these fixes. Finally, the importance of ethnographic studies to monitor the performance of competent government actors in ensuring basic needs, both during and after the pandemic, together with the social control of public policies, is reinforced.

² According to the definition of the Brazilian Institute of Geography and Statistics (IBGE): subnormal agglomerations can fit within the following categories: squatting, irregular or clandestine allotment, and recently regularised squatted and irregular areas and clandestine subdivisions, while observing the criteria of urbanisation patterns and/or precarity of essential public services (Guimarães, 2015: 2).

Section 2: Ethnographic method and virtual ethnography

We begin with discussions undertaken by Mariza Peirano (2000) concerning Brazilian ethnographic production and its specificities regarding contextualised otherness. Peirano makes it evident that Brazilian anthropology is historically accustomed to ‘reduced alterities’, that is, even when investigating the cultures of Indigenous nations, and ‘others’ considered to be radical alterities (from the perspective of European anthropology), the distance – geographical, or even linguistic, since some peoples knew or were able to communicate in Portuguese – is closer than those instituted in colonial enterprises.

We suggest that the relationship of alterity was traversed by the proximity and engagement of the first author with the field of investigation, given that she is an environmental engineer and proposes an interdisciplinary approach that is simultaneously investigative, analytical, and capable of generating interventions. As discussed by Nader (1972), the stimulating effect of indignation has resulted in research and university extension projects in the field of environmental engineering since 2013, a period in which the first author began to question the distance between classroom theory and the reality of rural areas: ‘What can explain the fact that a family, 20 km [12.4 mi] from the university that is a national reference in the research and teaching of hydraulics and sanitation [University of São Paulo], lives without a bathroom and with an intermittent supply of water?’ (Fantin et al., 2021: 57).

After seven years of work on the subject, her indignation at the invisibility of Brazil’s social and territorial diversity in infrastructure projects and public sanitation policies, as well as in teaching and research actions by large universities, was mitigated by the rapid mobilisation of the sanitation sector when faced with the COVID-19 pandemic. Actions being outlined for populations and areas that were excluded from access to water supply services emerged as ‘urgent’ problems – albeit old and structural. The expectation that the moment Brazilians were facing could be one ‘*freio de arrumação*’³ – like a brake on a moving bus that puts everyone and everything in its place – ended up remodelling indignation to a feeling of distrustful hope in the investigation.

We undertook the empirical case explored here as an example of anthropology that is conducted ‘close to home (at home)’, as suggested by Peirano, taking this proximity to home as familiarity with the technical discussions and engagement with the networks that are focused on the investigation. And it is precisely because of this proximity, and based on the assumption that the observer is an integral part of the process of knowledge and discovery, that the methodological device of otherness is activated in the sense of finding the familiar strange, a practice fundamental to doing anthropology.

In this sense, we corroborate Peirano’s suggestion (2000) that, in anthropology, there are no social facts, but rather ‘ethnographic facts’, emphasising that there is always a process of selection in that observed and in the report’s interpretations. Thus, unfamiliarity, that is, part of the methodological device committed to producing a distancing in relation to the supposedly familiar, becomes not only the way in which the confrontation between different theories transpires, but also the means of self-reflection.

The ethnographic enterprise developed here is located in the field of social studies of science and technology⁴, to the extent that it examines the institutions we understand to be central to the shaping and maintenance of modernity. We qualify such studies as those committed to revealing unsuspected connections between power and knowledge (including here forms of policies and interventions based on scientific expertise), producing new perspectives on science, politics and society. As Isabelle Stengers (2002: 11) suggests, this is an approach that confronts the audacity of studying science and its interventions in the manner of a social project ‘neither more detached from the concerns of the world, nor more universal or rational than any other’.

3 An expression used by Nei Lopes in an opinion piece published in Piauí magazine. <https://www1.folha.uol.com.br/opiniao/2022/06/freio-de-arrumacao.shtml> and <https://piaui.folha.uol.com.br/materia/na-companhia-dos-orixas/>

4 For a history of the consolidation of the field of social studies of science and technology, we suggest Sismondo (2010), Spiegel-Rosing (1997), Winner (1993) and Zilsel (1942).

In a scenario in which scientists claim to speak for nature and democratic governments speak for the needs of the people, Sheila Jasanoff suggests that a foundational question concerning representation emerges: how are the few authorised to speak for the many?

We also dialogue with works on the state in its practical dimension. In the making of the state, considering dynamic and procedural processes as the object of description and analysis, operating ethnographically in order to advance in the face of perspectives that are limited to the prescriptions inscribed in the law, 'we want to value the dimensions of process, flow, and performance, not only those apprehensible through the analysis of great rituals and events, but also their daily updating' (Lima, 2012: 561). Therefore, as argued by Teixeira et al. (2019: 11), this concerns researching the 'making of a state', by considering the discourses of state agents as native, attentive not to the transcendence of their statements, but to the practice and particular construction, providing this abstraction with specific, local, historical bodies and meanings.

Responding to the demand for some urgency in a reinvention of anthropology and its commitment to examine power (Nader, 1972), the commitment here is to return to those 'at the top', through a democratic commitment to evaluate and enable transformations in the quality of life of citizens affected by the policies and agents that shape and control institutional structures⁵. According to Nader, it is pertinent that a reinvented anthropology study powerful institutions and bureaucratic organisations, given that they affect the lives of the people that anthropologists have traditionally studied around the world.

In the movement to pry 'behind the facelessness of a bureaucratic society' (Nader, 1972), we highlight that the ethnography that underlies the reflections presented here was conducted virtually, which implies specificities in the way our interactions were developed. Our analysis was established through the narrow screen of our computers, in the safety of our private environments in times of pandemic⁶.

Events on YouTube, Facebook, Instagram, Zoom and Eventials enabled different actors to meet with the aim of raising topics related to fulfilling basic needs. This article presents the results of the ethnography conducted in April and May 2020. Eight online events were selected as the focus of this study, which were determined by the criteria of the relevance of the actors present and that provided analyses of the centres of power: representatives of regulatory agencies, public companies supplying water services, the national legislative and executive branches, together with representatives of social movements and associations.

As a result of the analyses, institutional-legal conflicts and epistemological conflicts were discussed in the spheres of decision-making, regarding the manner of solving 'sanitation' problems. Despite the consensus that water supply is fundamental, the causes for the absence of this public service, and the means to ensure its full guarantee, were shown to diverge among the groups of actors analysed.

Virtual ethnography

(...) ethnography is not just data collection and interpretation, it involves writing about people evocatively and with imagination. The people are the focus because anthropology tends to be empirical, starting with guesses about what is going on, proceeding to people's everyday experiences, meaning-making and relationships, and building up more certain theory from the bottom upwards. (Crewe, 2021: 10-11)

⁵ For Nader (1972: 292): 'If anthropology were reinvented to study up, we would sooner or later need to study down as well. We are not dealing with an either/or proposition; we need simply to realize when it is useful or crucial in terms of the problem to extend the domain of study up, down, or sideways.'

⁶ It is important to highlight that this article is the result of research for a Master's degree pursued in the Post-graduate Programme in Scientific and Technological Policy at the State University of Campinas (UNICAMP). The research, initiated in 2019, was directly impacted by the context of COVID-19, and underwent reformulations of the objectives and methodologies used. The complete document of this dissertation can be accessed at the institutional repository of UNICAMP, here: <http://repositorio.unicamp.br/Acervo/Detail/1233315>

Segata and Rifiotis (2016: 9-10) argue that studies in the ‘field of cyberculture’ have gained prominence in Brazil over the last 20 years. E-mails, chats, blogs, bank transactions, electronic games, applications and social networks are some of the examples raised by the authors who were and continue to be mobilised by disciplines that include sociology, communication, philosophy, anthropology and the arts: ‘Not for less, this field has been dynamic, challenging, controversial and has mobilised intense debates in events and publications. The authors argue in defence of ethnography as the ‘master key’ of research in this field, with ‘Internet Ethnography’, ‘Virtual Ethnography’, ‘Online Ethnography’ and/or ‘Netnography’ already propounded as methods in different research works (Beaulieu, 2004; Hine, 2011; Martinhago, 2018).

Analysing the debates surrounding attention deficit hyperactivity disorder (ADHD) in a community on the social network Facebook, Fernanda Martinhago (2018, p. 3331) points out that ‘the virtual world has provided a transformation in the research context, such that ethnographers can free themselves from “place” through the Internet’. Hine (2011, p. 3) emphasises this transformation and argues that the Internet ‘offers rich data for almost any social researcher’, since many aspects of everyday life are reflected ‘somewhere online’. The author argues that using data ‘found’ on the Internet enables the exploration of ‘people’s understanding of a topic or cultural phenomenon’.

For this empirical study, a ‘specific place’⁷ was not previously selected. Given that the events took place in different places and mobilised different actors, we opted to follow the events instead of remaining on one platform. Between April 7 and May 19 – a period in which the increase in COVID-19 cases was observed in every state in the country, and while the debate for approval of the *Novo Marco Legal do Saneamento*⁸ [New Legal Sanitation Framework] was gaining clearer contours in the Brazilian Senate – we were mapping events publicised in networks of actors active in the major themes of sanitation and public health: the WhatsApp groups ‘Grupo de Trabalho Água e Saneamento’ [Water and Sanitation Working Group], created by the Environmentalist Parliamentary Caucus of the Legislative Assembly of the State of São Paulo; and ‘Grupo OTSS Redes’ [OTSS Networks Group], created by the *Observatório de Territórios Sustentáveis e Saudáveis da Bocaina* [Bocaina Healthy and Sustainable Territories Bureau], an initiative of the Oswaldo Cruz Foundation and the *Fórum de Comunidades Tradicionais de Angra-Paraty-Ubatuba* [Forum of Traditional Communities of Ubatuba, Paraty and Angra dos Reis] (OTSS - FIOCRUZ). Several Facebook pages: *Associação Brasileira de Saúde Coletiva* (ABRASCO) [Brazilian Association of Collective Health], and the *Conselho Pastoral dos Pescadores* (CPP) [Fishermen’s Pastoral Council]. And the following newsletters: Connected Smart Cities, the *Grupo de Economia da Infraestrutura e Soluções Ambientais da Fundação Getúlio Vargas* [FGV Group on Infrastructure Economics and Environmental Solutions], and the *Associação Brasileira de Engenharia Sanitária e Ambiental* (ABES) [Brazilian Association of Sanitary and Environmental Engineering].

During this period, 16 announcements of virtual events were identified, including the following: *Saneamento Básico e a Pandemia* [Basic Sanitation and the Pandemic]; *Coronavírus e o Setor de Saneamento* [Coronavirus and the Sanitation Sector]; *Soluções em Saneamento para atendimento a Populações Vulneráveis em período de quarentena* [Sanitation Solutions to attend Vulnerable Populations under quarantine]; and *Perspectivas de especialistas da área de recursos hídricos sobre os impactos da Covid-19* [Perspectives from specialists in the field of water resources

7 Martinhago (2018) researched a specific Facebook community and Belloti et al (2010) focused on the game “World of Warcraft”.

8 Law 11,445/2007, which until 2018 was presented as the great structuring pillar of the sanitation sector, entered the political agenda more intensely after two provisional measures (MP) signed by then interim president Michel Temer: MP no. 844 of July 2018 and MP no. 868 of December 2018. Despite having expired, the effects of these provisional measures materialised in Bill no. 4162, approved by the *Câmara dos Deputados* (Brazil’s lower house) in December 2019. The debate surrounding the ‘*Novo Marco Legal do Saneamento*’ [New Sanitation Legal Framework], the role of the National Water Agency, and the greater participation of the private sector and ownership of the service, were some elements present in the public debate months before the covid-19 emergency.

on the impacts of COVID-19]. Amidst a veritable ‘explosion’ of announcements, with an average of three per week, criteria were created to elect the events in which participation could occur in ‘real time’ – with the aim of interacting in the chats and possibly presenting questions to the speakers – and those saved to watch later. For both formats, the following criteria were applied: open events (available on public platforms, without admission fees or education specifications for registration) and with the presence of representatives of governmental and non-governmental actors strategic for the debate. Among these events, eight were selected for subsequent presentation of the results and discussion.

Table 1 presents the events selected, including the respective dates, platforms, forms of access, and views, together with who began the initiative and who the participating actors were. Over a period of 30 days (April 16 to May 19), we navigated through three different platforms: YouTube, Zoom and Eventials⁹. Despite these different platforms, the dynamics of the events followed very similar protocols, with around 50 to 60 minutes of debate between the invited actors, succeeded by a period reserved for questions from the participants. All platforms enabled interaction through chat, where in addition to asking questions directed at the speakers, participants talked to each other. This interactive space was only included in the analysis of the events monitored in ‘real time’, given that the availability of the recording did not include a ‘replay of the chat’. The recording, on the other hand, only enabled analysis of the questions that were answered by the guest actors via the organisation’s mediation.

Regarding the network of actors mapped, we categorised them into governmental and non-governmental actors. Governmental actors from the federal legislative branch stand out, in particular federal representatives: Geninho Juliani (DEM/SP), Joenia Wapichana (REDE/RR), Bira do Pindaré (PSB/MA) and Rodrigo Agostinho (PSB/SP). The performance of male and female representatives, based on their individual trajectory and the analysis of events, enabled us to determine the mobilisation of two central agendas: approval of the New Legal Sanitation Framework within the scope of the lower house, and the defence of traditional peoples and communities in the face of COVID-19.

On one side stands Geninho Juliano (DEM/SP), rapporteur for the new regulatory sanitation framework, who credits state-owned companies with most of the basic sanitation problems in Brazil and defends opening up the market. His arguments revolve around greater legal certainty for private companies to participate in providing the service, and he is seen as a ‘Hercules’ by his allies in academia and the private sector – an expression used throughout Event 1. On the other, Joenia Wapichana (REDE/RR), the first Indigenous woman elected as a federal representative, broadens the debate by turning to structural causes for the non-guarantee of basic needs, especially in the case of Indigenous peoples. The representative, together with Bira do Pindaré (PSB/MA) and Rodrigo Agostinho (PSB/SP), participated in Event 7 with allies from civil society and academia. Within the scope of the executive branch, the participation of the special secretary for *Programas de Parcerias de Investimentos do Ministério da Economia* [Investment Partnership Programmes of the Ministry of the Economy] (Event 3), and representatives of regulatory agencies and public sanitation companies (Events 2, 4 and 6) is observed.

⁹ YouTube: a video sharing platform, where the events were broadcast live and remained saved, with the full recording available. A widespread platform in Brazil, which has no access restrictions and does not require user login and registration. Zoom: a videoconferencing software programme, where participants and guests must request permission to access the room. Later, the recordings of the meetings were made available on YouTube. Eventials: a Brazilian video transmission platform, where a simplified user registration is requested for release at the event. The events were broadcast live and remained saved for a period on the same platform, with free access.

The intense participation of non-governmental actors also attract attention. Among actors representing the sanitation sector, associations like the Brazilian Association of Sanitary and Environmental Engineering (ABES), the *Associação Brasileira de Agências de Regulação* (ABAR) [Brazilian Association of Regulatory Agencies], *Associação Brasileira das Concessionárias Privadas de Serviços Públicos de Água e Esgoto* (ABCON) [Private Concessionaires of Public Water and Sewage Services] and the *Associação Brasileira das Empresas Estaduais de Saneamento* (AESBE) [Brazilian Association of State Sanitation Companies] organised and participated in several events during this period.

Some of these organisations and civil associations in the sanitation sector, like the ABES, AESBE and ABCON, should be briefly characterised. The ABES has 55 years of experience and its associative body unites around 10,000 professionals from the sector, particularly sanitation, environmental and civil engineers. The AESBE has 37 years of experience and represents the basic sanitation companies of each state. ABCON, in turn, has 25 years of experience and unites private companies that provide these services, representing the private sector together with public authorities and organised civil society.

Within the scope of social movements active in Indigenous and *Quilombola* territories, the *Articulação dos Povos Indígenas do Brasil* (APIB) [Articulation of the Indigenous Peoples of Brazil] and the *Coordenação Nacional de Articulação das Comunidades Negras Rurais Quilombolas* (CONAQ) [National Coordination for the Articulation of Black Rural Quilombola Communities] should be highlighted. The APIB was created by the Indigenous movement in 2005, bringing together regional Indigenous organisations from across the country. The Indigenous movement articulated by APIB acts on several fronts, including Indigenous legislation, Indigenous health, Indigenous education, the management of territories and sustainability, and social participation. CONAQ, in turn, was created in 1995 with the aim of mobilising *Quilombola* communities from various states in the struggle to guarantee the collective use of their territories.

Table 1. Virtual events selected for analysis and discussion (April and May 2020)

Event ID	Date	Name of Event and Organisation	Platform, Access, Link e Views ¹⁰	Actors ¹¹
1	April 16, 2020	<i>COVID-19: Saneamento em Foco – Prevenção e Desenvolvimento</i> [COVID-19: Sanitation in Focus – Prevention and Development] <i>Fundação Getúlio Vargas</i> (FGV) [Getúlio Vargas Foundation] and the <i>Instituto Brasileiro de Estudos Jurídicos da Infraestrutura</i> (IBEJI) [Brazilian Institute of Legal Infrastructure Studies]	YouTube: Live (open), available at: https://www.youtube.com/watch?v=3XGY-ursBTY Views: 691	Governmental: Federal Representative Geninho Juliani (DEM, SP) and rapporteur of the New Sanitation Regulatory Framework in the lower house. Non-Governmental: Daniela Mattos Sandoval, Vice-President of Corporate Affairs and Regulation at BKR Ambiental; Rosane Coelho and Charles Schramm, Executive Managers at FGV Projetos; Augusto Nevez Dal Pozzo, President of IBEJI; João Negri Neto, Administrative and Financial Director at IBEJI; Percy Soares, Executive Director of the Brazilian Association of Private Concessionaires of Public Water and Sewage Services.
2	April 17, 2020	<i>Perspectivas de especialistas da área de recursos hídricos sobre os impactos do COVID-19 no Estado de São Paulo</i> [perspectives of specialists in the area of water resources on the impacts of COVID-19 in the State of São Paulo] (United Nations Global Compact Network)	Zoom: (open inscription), available at: https://www.youtube.com/watch?v=FMMyV3NarzhI Views: 899	Governmental: Benedito Braga, President of SABESP (Basic Sanitation Company of the State of São Paulo) Non-governmental – Civil associations: Giuliana Moreira, United Nations Global Compact Network Brazil; Telma Rocha - Director of the Avina Foundation; Francisco Lahóz, Executive Secretary at the Intermunicipal Consortium of the Piracicaba, Capivari and Jundiaí River Basins (Consortium PCJ).
3	April 20, 2020	<i>Perspectivas para o saneamento básico no Brasil: por que um Novo Marco Regulatório?</i> [Perspectives for basic sanitation in Brazil: Why is a new regulatory framework necessary?] (Connected Smart Cities)	Zoom: (open inscription), available at: https://www.youtube.com/watch?v=FMMyV3NarzhI Views: 734 *Watched the recording	Governmental: Martha Seillier, Special Secretary for the Investment Partnerships Programme (PPI) at the Ministry of the Economy. Non-governmental: Mauricio Portugal Ribeiro, Partner at Portugal Ribeiro Advogados (Law Firm); Luiz Felipe Graziano, Partner at Giamundo Neto Advogados (Law Firm); Sebastián Butto, Partner at Siglasul (Regulatory Consultants).
4	April 30, 2020	<i>Soluções em Saneamento para atendimento a populações vulneráveis em período de quarentena</i> [Solutions in Sanitation to care for vulnerable populations under quarantine] (<i>Associação Brasileira de Engenharia Ambiental e Sanitária</i> [Brazilian Association of Environmental and Sanitary Engineering])	Eventials: (open inscription), available at: http://abes-dn.org.br/?p=33618 Views: 3842 *Watched the recording	Governmental: Paulo Massato, Metropolitan Director of SABESP) Non-governmental: Samanta Tavares de Souza, ABES Thematic Chamber Coordinator for Service Provision and Customer Relations; Juliana Almeida Dutra, Projects Director at Deep Consulting.

¹⁰ Views up to August 19, 2021. It was not possible to count the number live participants.

¹¹ A description of each of the actors presented at the event.

Event ID	Date	Name of Event and Organisation	Platform, Access, Link e Views ¹⁰	Actors ¹¹
5	May 4, 2020	<i>Reequilíbrio Econômico - Financeiro nos contratos de concessão de Saneamento Básico</i> [Economic-financial rebalancing in basic sanitation concession contracts] (Associação Brasileira de Engenharia Ambiental e Sanitária [Brazilian Association of Environmental and Sanitary Engineering])	Eventuals: (open inscription), available at: http://abes-dn.org.br/?p=33618 Views: 903	Non-governmental: Rodrigo Hosken, Technical-Legal Coordinator of ABES Corporate Law and Governance Thematic Chamber; Luciana Figueras, CEO at <i>Tomorrow Gestão</i> [Tomorrow Management]; Rogel Martins Barbosa, Founding Partner of Martins Barbosa Advogados (Law Firm).
6	May 13, 2020	<i>Coronavírus e o Setor de Saneamento: efeitos financeiros e a visão do regulador</i> [Coronavirus and the Sanitation Sector: financial effects and the regulator's view] (Associação Brasileira de Agências de Regulação (ABAR) [Brazilian Association of Regulatory Agencies])	Zoom: (open inscription), available at: https://www.youtube.com/watch?v=8WKGag6Yb_8 Views: 121	Governmental: Mario Augusto Parente, Economic-Tariff Coordinator at the Regulatory Agency of the State of Ceará. Non-governmental: Cássio Leandro Cossenno, coordinator of the Tariffs and Accounting Technical Group of the ABAR Basic Sanitation, Water Resources and Health Technical Council.
7	May 14, 2020	<i>Encontro Virtual das Frentes: Indígena, Quilombola, Ambientalista e Fórum da Amazônia - Painel 3: Estratégias dos povos no enfrentamento ao COVID-19</i> [Virtual Meeting of the Indigenous, Quilombola, Environmentalist and Amazon Forum Caucuses - Panel 3: Strategies of peoples in combating COVID-19] (Câmara dos Deputados [Brazilian House of Representatives])	Zoom: open access. Made available later on Facebook (https://bit.ly/2NK1n56) Views not quantified	Governmental: Joenia Wapichana, Federal Representative; Bira do Pindaré, Federal Representative; Rodrigo Agostinho, Federal Representative. Non-governmental: Sonia Guajajara, Coordinator of the Coordination of the Indigenous Peoples of Brazil; Virgílio Viana, Sustainable Amazonas Foundation representative; Marta Azevedo, Researcher at NEPO/UNICAMP (Centre for Population Studies at Campinas State University); Caetano Scannavino, Director of the NGO <i>Saúde e Alegria</i> [Health & Happiness]; Paulo Roberto Nunes Ferreira, UNICEF representative; Biko Rodrigues, Coordinator of the National Coordination of the Articulation of Black Quilombola Communities; José Ivanildo Gama, Director of the National Council of Extractivist Populations.
8	May 19, 2020	<i>COVID-19 e Povos do Mar</i> [COVID-19 and Peoples of the Sea] (Instituto Oceanográfico [Oceanographic Institute] of the University of São Paulo (IOUSP))	Zoom: open access. Made available later on YouTube (https://bit.ly/38fLYY) Views: 54	Non-governmental: Santiago Bernardes, articulator of the Forum of Traditional Communities of Ubatuba, Paraty and Angra dos Reis; Bianca Gabani, IOUSP; Nuala Costa, Leader of the feminist movement ' <i>Todas para o Mar</i> ' [Women for the Sea]; Cristiano Ramalho, professor in Fishing Sociology at the Federal University of Pernambuco (UFPE).

Source: Elaborated by the authors based on the research, originally presented in Ramos (2021: 67 & 68).

Throughout the analysis, two large debate blocs emerged. Seeing the scenario of a health crisis and an economic crisis, actors in the sanitation sector (service providers and regulators) emphasised the negative impacts of COVID-19 both in terms of regulation and provision. It is important to underline that the actors in the sector dialogued with their allies in academia and the legislature, as is evident in the configuration of the actors invited to Events 1 to 6.

As observed at the event organised by the Brazilian Association of Regulatory Agencies (ABAR), Mario Augusto Parente argued that the pandemic is in itself a ‘tragedy’ for the sector, where ‘the users have no money and suppliers are asking for tariff readjustments’ (Economic-Tariff Coordinator of the Regulatory Agency of Public Services of Ceará, Event 6). Linking the health crisis with the economic crisis, the actor signalled the measures being adopted in the case of households already connected to the supply networks. In particular, to guarantee access to water for low-income users – in the category of social residential/social tariff usage – the exemption of billing, guaranteeing supply in cases of non-payment, and the suspension of fines and interests for late payments were the measures highlighted by the actor. According to him, the immediate consequences of these actions ‘are cutting into the cash flow of these companies.

Along similar lines, Luciana Figueiras, a speaker at the event organised by the Brazilian Association of Environmental and Sanitary Engineering, pointed out that the economic effects of the pandemic can be observed in the current concession contracts: ‘The public and private concession contracts are suffering an imbalance given the scenario of public calamity’ (CEO at *Tomorrow Gestão* [Tomorrow Management], Event 5). On different platforms, however, the narratives of the actors of Events 5 and 6 were aligning. Luciana Figueiras, Rogel Martins Barbosa, Rodrigo Hosken, Cássio Leandro and Mario Augusto elucidated the connection between the economic crisis and the health crisis and justified joint efforts to ‘minimise the economic losses experienced by this sector’ (Mario Augusto, Event 5).

In terms of provision, a convergence of narratives was also observed. The Vice-President of BRK Ambiental – the largest private company in Brazil –, the Executive Director of the Brazilian Association of Private Concessionaires of Public Water and Sewage Services (ABCON), and the President and Metropolitan Director of the *Companhia Estadual de Saneamento Básico do Estado de São Paulo* (SABESP) [Basic Sanitation Company of the State of São Paulo] – considered one of the largest sanitation companies in the world in terms of population served – all touched on similar points, emphasising the economic impacts, the challenges of maintaining continued provision and regulatory challenges.

If I could choose one [challenge] I would say that it is a more stable regulation, a better understanding of the rules, the safety of the investor in knowing the rules and knowing what they are getting into (...) I will give an example here of the COVID situation (...) We had around 180 acts, decrees, rules, that touched on the operation in various ways (...) this excessive decentralisation allows for different acts (...) there are multiple people thinking in different ways each with their respective interests, and from the investor’s point of view, you are left without the necessary legal certainty of knowing what the rules are beforehand and being able to invest. (Daniela Mattos, Vice-President of Corporate Affairs and Regulation at BKR Ambiental, Event 1)

As Crewe (2021: 14 – 15) suggests, if we only concentrate on individuals who make policy and do not look at the processes – the relationships and communication between them – we may attain an impoverished analysis.

Thus, it is essential to underline the connections between the narratives presented by actors representing the private sector (BRK and ABCON) and the argument of Martha Seillier, Special Secretary of the Investment Partnerships Programme of the Ministry of the Economy¹², in an event held four days later:

I asked to bring up this agenda for core reforms, which was what I had worked on, and I said ‘Minister, it’s so complex and the legal framework for this sector, which dates back to 2007, fell far short of addressing these federative complexities and the reality that we live today, which is a wholly different fiscal reality from 2007, and which I think that if we don’t consider real reform for basic sanitation, reviewing its legal framework, we won’t move forward’. Because to attract private investment to this sector, you need to have legal certainty, you need to have regulatory stability, you need to have a series of things that this sector doesn’t have, and it’s no wonder that there is only a 6% share of private investment. (Martha Seillier, Event 3)

Martha Seillier was the only representative of the federal executive branch mapped in the events analysed. She is an economist who served in the Civil House during the Michel Temer administration, and became responsible for coordinating the Federal Privatisation Programme under the influence of then-president Jair Bolsonaro himself¹³.

From April 16 to May 13, therefore, the relationships of the actors of Events 1 to 6 – shown in Table 1 above – were becoming visible, together with their intentions. The economic impacts and regulatory challenges emphasised by service operators and regulators were the same aspects mobilised by the federal government’s representative. These arguments are the result of a prior mobilisation, marked by the approval of the new legal framework for basic sanitation in the lower house in December 2019¹⁴. In June 2020, at the height of the first wave of COVID-19 and about two months after the discourses described above, the new framework – Bill 4,162/2019 – was approved in the upper house¹⁵. On July 15 the same year, the president signed the bill into law¹⁶.

As a complement to Table 1, Figure 1 illustrates the relationships between these individuals and institutions: the relationships between the private sector (consultancies, law firms and private sanitation companies), civil associations and the federal executive and legislative branches within the scope of Events 1 and 3; between social movements, universities and the federal legislative branch within the scope of Event 7; between the private sector and civil associations within the scope of Event 5; and between civil associations, universities and social movements within the scope of Event 8.

Figure 1 also illustrates the intense participation of non-governmental actors. In this context, it is essential to emphasise that many participatory spaces have been closed and that the proliferation of virtual forums, often independent of the relevant institutions for the governance of public services, shows the vitality of civil society and a capacity for self-organisation. A sign that citizenship resists, that social movements are alive.

12 The Minister of Economy at that time was Paulo Guedes, one of the founders of the private bank BTG. He was part of the economic team of the Pinochet government, in Chile, in the early 1970s, and has an explicitly ultraliberal privatizing agenda. Paulo Guedes owns a millionaire account in the tax haven of the Cayman Islands. The scandal, revealed by the journalistic investigation that raised supporting documents pointing to tax evasion and suspicions of other crimes - the Pandora Papers -, also pointed out other names on the ultraliberal agenda raised by the first echelon of the Bolsonaro government, including the president of the Central Bank, Roberto Campos Neto. See: <https://piaui.folha.uol.com.br/paulo-guedes-tem-offshore-milionaria-em-paraiso-fiscal/>

13 In February of this year, 2023, Martha Seillier - who was nominated by Paulo Guedes and Bolsonaro for a board of directors at the Inter-American Development Bank (IDB), in Washington, at the end of 2022 - gave birth to the former president’s granddaughter.

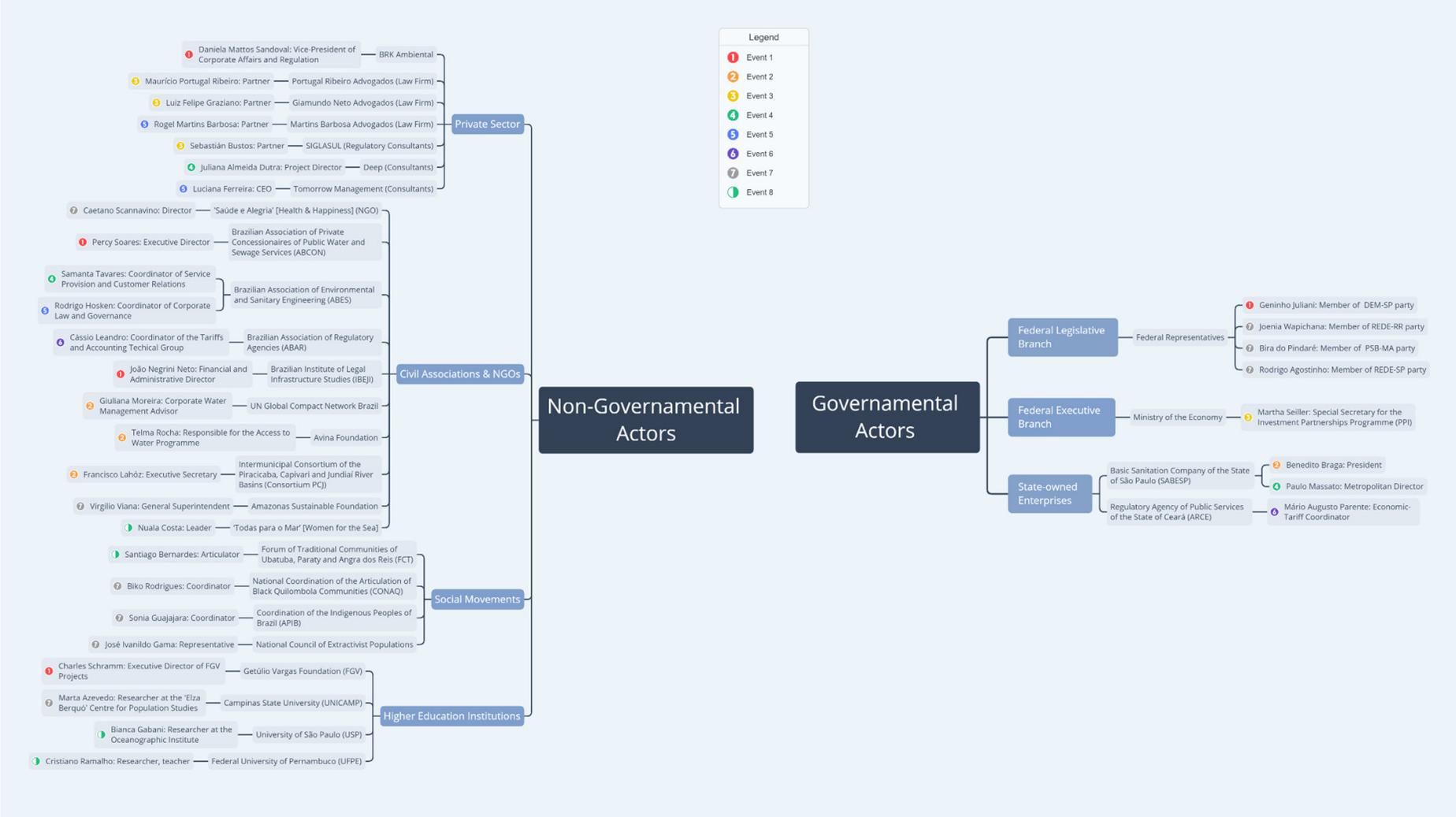
14 News regarding the approval of the new framework in the *Câmara dos Deputados* (lower house): <https://www.camara.leg.br/noticias/627851-camara-aprova-novo-marco-legal-do-saneamento-basico/>

15 News regarding the approval of the new framework in the Brazilian Senate: <https://www12.senado.leg.br/noticias/materias/2020/06/24/senado-aprova-novo-marco-legal-do-saneamento-basico>

16 News on the signing of the new sanitation law: <https://g1.globo.com/politica/noticia/2020/07/15/bolsonaro-sanciona-novo-marco-legal-do-saneamento-basico.ghtml>

Closely analysing this resistance is also fundamental to democracy. Even though the centres of power do not mirror Brazilian diversity in political positions, social movements and associations representing civil society traverse public institutions with diverse mobilisations and articulations, as emphasised in the speech of a CONAQ leader: ‘We have been working together with the *Quilombola* Parliamentary Caucus, with Congress (...) to try to present our demands, also in partnership with Indigenous peoples, with the Indigenous Parliamentary Caucus’ (Biko Rodrigues, Event 7).

Figure 1. Map of the actors identified in the events analysed



Source: Elaborated by the authors based on the research, originally presented in Ramos (2021: 67 & 68).

Section 3: Consensus?

Far from the scientific controversies associated with possible treatments for the disease, like those observed for chloroquine and hydroxychloroquine, which mobilised world leaders and the President of the Republic, no disputes were identified concerning the use of water as a preventive measure. The statements in agreement with this measure were dominant in the narratives analysed, and expressive in the opening of the events:

Good afternoon, everyone, (...) Sanitation is on the agenda of the day, though not for the first time, it is more important right now. In fact, it is frightening to say that 3 billion people in the world do not have soap and water (...) this means that 40% of the entire world population does not have water (...) And today (...) among many uncertainties, there is no doubt that washing your hands is fundamental. (Opening speech by Charles Schramm, executive manager of FGV Projetos, Event 1)

This was an event that paid attention to local difficulties marked by the pandemic; not merely generic concerns regarding the calamity of the lack of water in a broad sense, but also the social problems that preceded and likely survived the health crisis. However, we see that world data and the chronic structural situation are used in this speech to assert the seriousness of the problem. Augusto Dal Pozzo, president of the *Instituto Brasileiro de Estudos Jurídicos da Infraestrutura* (IBEJI) [Brazilian Institute of Legal Infrastructure Studies], reiterated Schramm's statement at the same event:

What's funnier is that despite this many people who have no water, this ends up being the very *natural antidote against COVID*, right? Because the simple act of washing your hands with soap and water is exactly the initial antidote that can fight this very serious problem that we're living here with COVID-19. (Augusto Dal Pozzo, Event 1; emphasis added)

If there is an urgent demand, the discourse of the two interlocutors enables us to consider that because these problems occurred and were even worse prior to the pandemic, the solution to an apparently simple problem, such as washing your hands, is a challenge of great magnitude, given that a representative percentage of the population does not have access to these services. Giuliana Moreira, Event 2 mediator, also began her speech in this regard: 'We know that one of the fundamental preventive measures for COVID-19 is hand hygiene, which, of course, can only be achieved through access to clean water' (Global Compact Network Brazil Advisor, Event 2).

Initiating the analysis of these discourses by mobilising authors from the field of social studies of science and technology is justified by the possibility of disputing concepts like 'infrastructure' and 'technology', often crystallised as neutral concepts in the fields of engineering and economics. The debate on infrastructure in the works of Howe et al. (2016) and Star (1999), the discussion on technological determinism by Pfaffenberger (1988) and De Laet and Mol (2000), together with Haraway's (1988) defence of localised knowledge, allow us to weave such analysis from an interdisciplinary perspective.

Howe et al. (2016) begins the reflection on infrastructure, pointing out that 'Infrastructure is not inert, but rather infused with *social meanings* (...) [it] epitomizes the conjunction of material forms, expertise, social priorities, cultural expectations, aesthetics and economic investments' (2016: 548-549; emphasis added). Apparently, the representatives of the sanitation sector exhaustively focus on the material dimension of the narrated 'infrastructural' problem, regardless of its social meanings – marked by privileged or exclusionary social criteria regarding access to water supply.

The evidence is presented in the argument of Martha Seillier, Special Secretary of the Investment Partnerships Programme of the Ministry of the Economy. The secretary narrates that she received an invitation from the *Casa Civil* [Executive Office of the President (US) / Prime Minister's Office (UK)] to help coordinate major reforms – fiscal, social security, labour and taxation – and later was included in the sanitation working group. The solution they advocated is directly linked to attracting private investment:

Until one day, the minister met with the chief secretaries in this area and said that the president was extremely bothered by the basic sanitation numbers (...) always returning the agenda to how shameful the basic sanitation numbers were (...) medieval numbers on basic sanitation, right? (...) and the traditional answer has always been ‘ah, this is the competence of the municipalities, the states have their own state companies, the [federal government] basically provides funding’ (...) it was a tragic story, which may get worse, this was the diagnosis (...) so the minister at the time asked us to try to assess how the federal government could alter this reality (...) basically considering how to attract private investment into the basic sanitation sector. (Martha Seillier, Event 3)

From this perspective, the pandemic impacts only one aspect of the infrastructure and part of the sector’s governance, accelerating reforms within the scope of provision and regulation. Representatives of actors from public and private companies, regulatory agencies, civil associations in the sector and the federal legislative branch all pointed to regulatory measures, tariff adjustments and increased private investments in the sector, as well as to exceptional measures of tariff gratuity and the suspension of cuts in water supply ‘while the pandemic lasts’ (Events 1 to 6) – focusing on the material dimension of water supply infrastructure. From another perspective, representatives of social movements, non-governmental organisations and public universities raised other elements, such as territorial dynamics, conflicts in rural areas, food insecurity, the historical invisibility of peoples and traditional communities, and the omissions of the state – signalling the *social and political-institutional dimensions of infrastructure*.

Section 4: Fixes and conflicts

In Pfaffenberger’s (1988) approach, the solutions proposed in the material dimension can be read as ‘technical fixes’. These fixes, implemented in a short period of time by engineers, lawyers and economists, promised the delivery of ‘infrastructure’ in a pandemic scenario. However, this interpretation through ‘mundane mechanisms’ (Howe et al., 2016) produces technical fixes that are exclusionary and temporary. The misgivings of the participants in the chats following the debate between the speakers reinforces this argument: ‘how are the strategies in terms of land regularisation in these areas going, so that these measures are permanent, and not just in times of coronavirus?’ (Question raised in the chat, Event 2), and ‘What are SABESP’s initiatives to make drinking water available for homeless people? For example, in Cracolândia’ (Question raised in the chat, Event 2).

Presented as ‘universal’ fixes (Law, 2011), they only fit in realities that are more accustomed to water supply networks, such as densely populated regions. Thus, only regularised households – in terms of registration and documentation, and in terms of land ownership – and those already included in these networks can benefit from such measures. When asked about how companies and regulatory agencies are mapping groups that are in a vulnerable situation, Mario Augusto replied that ‘in practice... in practice, we are assuming information from records that already existed¹⁷. We had no previous quantification or validation work’ (Event 6). Households in rural areas with territorial occupation and use specificities, such as traditionally occupied territories, which historically have the greatest deficit in relation to adequate attendance by basic sanitation services (Brasil 2019; Guimarães, 2015) were therefore not entitled to the tariff and regulatory fixes. Neither were homeless people or those who do not have access to decent housing.

¹⁷ Concerning the limitations of Brazilian databases, see the following publication by the *Centro de Estudos em Regulação e Infraestrutura* [Centre for Studies on Regulation and Infrastructure] (FGV, 2018).

Thus, when Paulo Massato, metropolitan director of the largest basic sanitation company in the country, ends his presentation by saying that ‘these basic sanitation actions need to be intensified so that this lower income population has *at least the benefit of basic sanitation infrastructure*’ (Paulo Massato, Metropolitan Director of SABESP, Event 4; emphasis added), what is actually being proposed? If, on the one hand, Paulo Massato described the actions of donating water tanks to peripheral urban areas, Benedito Braga, president of the same company, detailed other measures adopted for the ‘poorer population’:

What then is our company doing at this very complicated time? We are collaborating with the population suffering the most, with the poorest population of our consumers. The first measure we took was that in the next three months, people who are on the social tariff and in favelas, they will not need to pay for water, they will receive water for free, right? (...) we had to have the approval of our Board of Directors, because this obviously involved significant costs on the part of the company (...), but the company understood that the poorest people would be the most impacted. Because this here not just a health crisis, it’s an economic crisis, right? (Benedito Braga, President of SABESP, Event 2)

The emergency measures put in place by the actor to guarantee continued provision for the ‘poorest’ users, were also adopted by the largest state companies in Brazil in terms of service coverage, such as *Companhia de Saneamento de Minas Gerais* (COPASA) [Water Supply Company of the State of Minas Gerais] and *Empresa Baiana de Águas e Saneamento* (EMBASA) [Water Services Company of the State of Bahia]. Free service seems to be a minimum condition for offering what was understood to be an essential service when facing a health crisis, which is necessary when facing a crisis that is also financial. However, the immediate solution is insufficient to address the problems raised by other actors, as observed in Event 7:

At this time, we have faced several violations, violations in which public policies do not reach us, and other violations (...) the benefits that are set out for our people to access in this time of pandemic, they are overly bureaucratised, asking for numerous demands of people who don’t even have electricity, mobile phones (...) And we have appealed to the Quilombola Parliamentary Caucus, we have sought out the Federal Public Prosecutor’s Office, because our enemies, they do not sleep, even in the face of a pandemic as big as the one that we are living through in this country, our enemies counterattack our people daily through the withdrawal of rights, on the issue of weakening the public structures that work for the demands of Quilombolas, of Indigenous peoples and of traditional communities and also regarding the murders. It’s been four days since we lost a Quilombola leader who was murdered in Bahia. On the issue of evictions, in the middle of a pandemic, the Brazilian state, the Brazilian Justice [system] signs an eviction order for the Quilombolas of Alcântara, on the Alcântara Space Base (...) Among several other cases of conflicts that we have followed. (Biko Rodrigues, CONAQ representative, Event 7; emphasis added)

Based on our analysis of Events 7 and 8, what emerges is an expansion of the interpretation of the emergency situation in which representatives of social movements claim historically violated rights, such as access to public health, a balanced environment, territorial and cultural rights. In these events, the actors include in their claims for ‘basic sanitation infrastructure’ the recognition and demarcation of land, actions on food security, the prohibition of eviction orders, the fight against conflicts and murders in rural areas and, emphatically, the actuation of public institutions in their territories.

From this we can suggest that there are three ‘levels’ of fixes presented in the events:

- **Material fixes:** the distribution of water tanks, water delivery in tanker trucks, hand sanitiser, and basic food baskets,
- **Socioeconomic fixes:** invoice exemption, guarantee of supply in cases of non-payment, the suspension of fines and interest for late payment, and the readjustment of contracts,

- **Political-institutional fixes:** the participation of the private sector in the sanitation sector at the national level and approval of the new legal framework in the Senate; the recognition of territories and land deeds; public food security policies; and the actuation of public institutions in their constitutional and legislative competences.

The solutions proposed by the president of SABESP – and by BRK and ABCON – cover two of these dimensions (material and socioeconomic), and hint at the political-institutional dimension – as observed in the intentionality of approving the new framework in the dialogues of Events 1 and 2. By considering that land titling, for example, does not form part of the issue of water and sewage distribution implies that part of the population will continue to be excluded from the provision of these services, which may mean that such claims were silenced or ignored by the competent actors. At Event 4, Paulo Massato answered a question ‘*from the people of Rio de Janeiro*’ concerning the legal obstacles to providing services in irregular areas. SABESP’s Metropolitan Director pointed out that ‘we have always had concerns about working with so-called irregular areas and actions involving public ministries, and potential actions against the company’ (Event 4). He concluded that, for these cases, ‘joint actions with municipal governments are necessary to seek land regularisation’.

The alternatives put forward throughout Events 2 and 4 for realities that circumvent urban planning and that lack housing structures, therefore, were reduced to the delivery of ‘hygiene kits’ – soap and hand sanitiser –, and efforts to mobilise water delivery in tanker trucks. While fundamental, these efforts erase the obligation to ensure the continued provision of such services – no intermittent service or prolonged rationing, and proper potability standards – as well as erasing the need to work with public policies on urban, rural and regional development, housing, combating poverty, and promoting health, thus considered local specificities (Brasil 2007; 2019).

Moreover, the fact that the strategies are presented in terms of ‘urgency’ and ‘exceptionality’ – terms used recurrently – is yet another aggravating factor. The very demands of the judiciary issue directives for actions to be adopted ‘during the period of the novel coronavirus pandemic’ (MPSP 2020: 25) or until we return to a ‘scenario of normality’ (MPRJ 2020: 28). On the one hand, this means the urgency is justified by the crisis situation, but on the other, it can be strategically used to divert attention from definitive and structural decisions.

Within this problematic, a question posed in the Event 5 chat provocatively questions the speaker: ‘How does the law interpret an emergency situation? In the scenario of subnormal conglomerates and ‘irregular’ territories (favelas, *Quilombos*, Indigenous lands), given the lack of sanitation, the public health situation has been an emergency for centuries’.

Is this an emergency? It is. When it’s been going on for years, it is theoretically no longer an emergency, because you manage to live with it [...] In truth, we can live without sanitation, isn’t that right? It’s what we’re living through. (PhD in Waste and founding partner of Martins Barbosa Advogados (Law Firm), Event 5).

The debate surrounding the emergency situation that ‘has been going on for years’ takes on clearer contours through the reports of non-governmental actors representing social movements, such as the Virtual Meeting of the Indigenous, *Quilombola*, Environmentalist Caucuses and the Amazon Forum (Event 7). Biko Rodrigues, representative of the National Coordination for the Articulation of Black Rural *Quilombola* Communities (CONAQ), begins his speech by emphasising the centuries of invisibility of traditional peoples and communities under the Brazilian state:

This moment we are going through is aggravating, it becomes even more aggravating due to a whole process, you know, a process of these most vulnerable segments not having access to public policies: Indigenous peoples, *Quilombola* communities, traditional peoples and communities. And this is getting even worse due to

this pandemic, right? We have encountered the state which has not responded to our demands (...) *so it's been 520 years of being forgotten by the Brazilian state, and this is reflected, this forgetfulness is reflected in what we see today.* (Biko Rodrigues, CONAQ representative, Event 7; emphasis added)

Characterising the situation posed by the pandemic as one aggravated by the vulnerability that has continuously been encountered by traditional territories, the actor shifts the previously presented narrative of 'emergency' and opens the path to question what parameters actors in the sanitation sector used to classify the current situation as a 'health crisis', an 'economic crisis', an 'unbalanced situation' and/or an 'exceptional situation'. In the event organised by the *Instituto Oceanográfico* [Oceanographic Institute] of the University of São Paulo (Event 8), the worsening of vulnerabilities is also exposed in the case of artisanal fishermen and women, and *caiçara* communities. Nuala Costa, leader of the *Todas para o Mar* [Women for the Sea Movement], points to the impact of the pandemic on the food security of fishing communities: 'Confinement is a class issue (...) Those who are hungry are in a hurry (...) The only way to be at home, is to be fed' (Event 8).

At the same event, Santiago Bernardes, coordinator of the *Fórum de Comunidades Tradicionais Angra-Paraty-Ubatuba* [Forum for Traditional Communities in Ubatuba, Paraty and Angra dos Reis], highlights the importance of solidarity networks¹⁸ to guarantee food safety and hygiene products in communities: 'We made what we call the *'Solidarity Network'*, we buy products (...) and make this exchange. Of course, there is a lot of demand, not all communities are provided for, but we manage to get together and help out' (Event 8, emphasis added).

There is a pandemic economy that is not accounted for, which takes into consideration the functioning of forms of solidarity, of mutual aid and self-management in the circulation of agricultural and extractive products, which ensures greater autonomy for the community in the face of conventional tutelage: state agencies, churches and large merchants (...) It engenders forms of solidarity and action that can be approximated to *new ways of thinking about politics and acting politically with greater autonomy*, relativising the weight of tutelage and the strength of power relations, which seek to submit traditional peoples and communities to control mechanisms anchored in colonialist foundations (Almeida et al., 2020, p. 46, emphasis added).

The mentions of solidarity networks in Events 7 and 8 occurred in parallel to demands for the actuation of the state in these territories. Almeida et al. (2020), discuss the failure of the federal government towards traditional peoples and communities, observed mainly through: the lack of monitoring and regular, public disclosure of cases involving traditional peoples and communities; the absence of government measures to support sanitary-territorial protections through the provision of personal protective equipment; the absence of measures to protect traditional *Quilombola* and Indigenous land ownership during the pandemic, creating risks of forced collective displacement of these communities during a period of maximum vulnerability; the absence of an institutional instance of the state within the scope of the federal executive branch dedicated to the consultation and participation of the national representative entity for *Quilombola* and Indigenous peoples; the absence of minimally effective scaled, regular actions that enable food and nutritional security, such as the distribution of seeds, other agricultural inputs and basic food baskets.

Sonia Guajajara, coordinator of the Articulation of the Indigenous Peoples of Brazil (APIB), emphasises the negligence of the competent official bodies at the federal level, in particular the *Secretaria Especial de Saúde Indígena* (SESAI) [Special Secretariat for Indigenous Health] and the *Fundação Nacional do Índio* (FUNAI)¹⁹

¹⁸ UNICAMP publication mapped several solidarity networks active in the context of traditional territories during the pandemic: <https://www.unicamp.br/junicamp/index.php/noticias/2020/08/10/redes-de-solidariedade-o-enfrentamento-da-pandemia-nos-territorios-tradicionais>

¹⁹ The former name is used here because all the documents pertaining to this study existed prior to a very recent change in name. On Jan. 1, 2023, one of the initial acts of the newly sworn in Lula government was to rename the FUNAI, now known as the *Fundação Nacional dos Povos Indígenas* [National Indigenous Peoples Foundation], which together with the new Ministry for Indigenous Peoples, seeks to rectify the wrongful and frequently pejorative naming of Brazilian Indigenous people as 'índios' [Indians] and move towards a new era in the government's relationships with the First Peoples of Brazil, one no longer regulated by military tutelage.

[National Indian Foundation] in monitoring cases in Indigenous territories, and the consequent creation of the *Comitê Nacional pela Vida e Memória Indígena* [National Committee for Indigenous Life and Memory]. This leader also reinforces the actions of the Indigenous movement in the centres of power.

We at the APIB, we have also made a huge effort so that coping strategies are adopted, by the executive, the legislative, the judiciary and also among ourselves in the Indigenous movement. Right at the beginning, when the pandemic hit here in Brazil, we immediately wrote a letter to the federal government demanding the adoption of an emergency plan to deal with it. And then we presented measures to the SESAI, to the FUNAI, and we participated in all the meetings here in the caucus as well (...) some were met, others remain pending even today. Then we wrote a letter to all the governors, presenting 10 measures that each governor, you know, that each state could adopt, concrete actions to avoid contamination. Some states responded, others did not, and we are seeing the progress of this contamination among Indigenous peoples. (Sonia Guajajara, APIB Coordinator, Event 7; emphasis added)

When entering the arena of political agenda formation, the consensus surrounding the ‘natural antidote’ turns into conflict (Heller, 2014). First, through an institutional-legal conflict, translated into whose responsibility it is to guarantee the antidote continuously and of the right quality for the diversity of users. In the case of traditional territories, the dispersion of competences – with the superposition and fragmentation of roles between jurisdictions – goes beyond the legal institutional dimension of the sanitation sector and falls to the ministries responsible for recognising territories and land regularisation. As Martha Seillier points out: ‘We saw that, in the federal government, basic sanitation was actually a universe of players’ (Event 3).

The institutional-legal conflict made evident by the scenario of the COVID-19 pandemic recalls the context of the early twentieth century. According to Hochman and Silva (2014), during the three decades of Brazil’s First Republic, Indigenous peoples ‘were outside the Brazilian public health agenda, the actions of its institutions and the reflections and concerns of its actors’. Invisibility was reinforced by omissions in the 1891 Constitution regarding dual recognition: of their very existence and their traditional lands (Coelho, 2002). Denounced by actors of Events 6 and 7, the invisibility of traditional peoples and communities in the public health agenda – despite the establishment of several national and institutional legal instruments²⁰ –, and the lack of coordination and organisation of the multiple competent institutions remains latent.

Ramos (2021: 55 and 56) draws attention to four actors within the scope of the federal executive branch with powers to promote water supply services in traditional territories – the *Secretaria Nacional de Saneamento* [National Secretariat for Sanitation], the *Agência Nacional de Águas* [National Water Agency], the Special Secretariat for Indigenous Health (SESAI) and the *Fundação Nacional de Saúde* [National Health Foundation] –, and four actors with powers to promote land recognition and land regularisation – the *Fundação Cultural Palmares* (FCP) [Palmares Cultural Foundation], the FUNAI, the Chico Mendes Institute for Biodiversity Conservation (ICMBIO) and the *Instituto Nacional de Colonização e Reforma Agrária* (INCRA) [National Institute of Colonisation and Agrarian Reform]. Starting with the premise that the guarantee of a territory must occur before or in parallel with the guarantee of the right to health and a balanced environment, the articulation of a minimum of seven ministries is required in advance so that public policies²¹ on health and the environment are fully realised in their plans and programmes.

²⁰ International instrument: Convention no. 169 of the International Labour Organisation; National instruments: the 1988 Federal Constitution; the 2007 *Política Nacional de Desenvolvimento Sustentável dos Povos e Comunidades Tradicionais* [National Policy for the Sustainable Development of Traditional Peoples and Communities]. The different forms of legal recognition for modalities of appropriation of traditionally occupied lands can be found in Ramos (2021: 49).

²¹ Carvalho (2016) and Dedini and Ramos (2017) highlight ten national policies: National Water Resources Policy; National Basic Sanitation Policy; Urban Policy; National Health Policy; National Health Care Policy for Indigenous Peoples; National Health Care Policy for the Black Population; and the National Policy for the Comprehensive Health of Rural and Forest Populations; National Environmental Policy; and National Policy for the Sustainable Development of Traditional Peoples and Communities.

To this requisite articulation, the budgetary dimension and the institutional performance of these ministries must be added. In the last seven years, INCRA's budget has fallen by 94%²². At the beginning of 2022, all activities that involved displacement or that were assessed as 'non-urgent' were ordered to be suspended²³. In the case of the Palmares Cultural Foundation, the Black movement denounced the dismantling of the institution²⁴. The Indigenous movement, in turn, requested the initiation of a civil inquiry to investigate FUNAI's failure to demarcate Indigenous lands²⁵. In this scenario, the *Organização Terra de Direitos* [Land Rights Organisation] estimates that Brazil will take 1,000 years to regularise all *Quilombola* territories. To regularise all traditional territories, the estimate is incalculable. The guideline, therefore, of 'universal sanitation by 2033' – placed in the newly approved framework – does not include the complexity of these multiple realities.

In addition to the political-institutional dimension, there is the epistemological conflict, translated as disagreements between which strategy should be implemented as a solution. Therefore, the need for an integrated vision of policy formulation and implementation is underscored, tensioning the frontiers of 'sanitation policies', 'health policies', 'environment policies' and 'land policies'. Lotta and Cavalcante (2021) argue that governments are facing increasingly complex and ambiguous environments, where traditional and 'departmentalised' solutions are no longer able to resolve them, requiring 'boundary-crossing initiatives'.

In dialogue with Backstrand et al (2010), these initiatives are fundamental in the case of socio-environmental problems – energy, climate, water, sewage – since they vary regarding their temporal and spatial effects. The authors identify a proliferation of 'new modes of environmental governance' in recent decades, in local, regional and global policies, characterised by less hierarchical and more collaborative governance arrangements via a 'deliberative turn'.

The 'promise' of these new arrangements, built through participatory and deliberative quality with governmental and non-governmental actors, enables moving from 'sanitation sector governance' to socio-environmental governance, in order to interweave material, socioeconomic and political-institutional fixes. The orchestrator of this interweaving is the technological-scientific dimension. The trajectory of Brazilian public health has been permeated by ideological disjunctions (Hochman and Silva, 2014), particularly the exclusive reverence for scientific knowledge anchored in racist and colonising practices. 'Indigenous people, *caboclos* and *sertanejos* were the *objects* of the scientists' gaze (...) These characters were the *new others*, foreigners in their own land' (2014: 88,89; emphasis added).

Interweaving these fixes under the 'universalist' perspective – generic and homogenising – that historically excluded and hierarchised knowledge (Carneiro, 2005) reproduces colonial actions in the face of different social identities in Brazil. Positioning socio-environmental governance in a field in which historically invisible subjects are the formulators and implementers of public health, sanitation, environmental, territorial, cultural, scientific and technological policies, as well as the executors of infrastructure projects, is to open the way for the 'pluriversalisation' (Njeri, 2020) of public services.

22 See: <https://cpisp.org.br/orcamento-incra-inviabiliza-titulacao-de-terras-quilombolas/>

23 See: <https://g1.globo.com/politica/noticia/2022/05/14/incra-suspende-atividades-e-cancela-eventos-externos-por-falta-de-verbas.ghtml>

24 See: <https://g1.globo.com/df/distrito-federal/noticia/2019/12/05/movimento-negro-faz-ato-em-brasilia-e-pede-suspensao-definitiva-do-presidente-da-fundacao-palmares.ghtml> and <https://www12.senado.leg.br/noticias/materias/2021/09/02/para-debatedores-fundacao-palmares-passa-por-desmonte-e-e-usada-para-pratica-de-racismo>

25 See: <https://www.cartacapital.com.br/politica/apib-pede-o-afastamento-imedi-do-presidente-da-funai/>

Conclusions

According to Susan Star (1999: 382), the spotlight on water supply infrastructure in the context of the COVID-19 pandemic is explained by one property of infrastructures: they become ‘visible upon breakdown’. From the narratives analysed, it is evident that the global emergency in public health has impacted the provision of the service of supplying water. For Star (1999), these impacts make the infrastructure visible and demand fixes. However, how do you fix an unequal infrastructure in the short term? What were the strategies proposed by public institutions to ensure that vulnerable populations could ‘wash their hands’?

Through an ethnographic study, this paper sought to analyse the movements of strategic actors in sanitation governance in Brazil, in order to characterise their positions and indicate the actions that were being put into effect within the scope of the provision and regulation of water supply services. Browsing the debates and virtual forums, the analysis was expanded to non-governmental actors active in the major areas of public health, the environment, territory and culture. In the midst of the consensus surrounding the ‘natural antidote’, disputes over the concepts of ‘crisis’ and ‘emergency’, and over the different solutions proposed for the ‘infrastructure problem’, shaped the scenario of political-institutional and epistemological conflict in which the guarantee of basic needs are encountered.

Strategies proposed by legislative and executive actors at the federal level, together with representatives of regulatory agencies and public companies providing the service, were aimed at guaranteeing tariff adjustments, contractual adaptations and changes in legal instruments, such as the approval of the New Sanitation Legal Framework. Faced with a scenario of an ‘economic crisis’ and a ‘health crisis’, they produced ‘emergency’ fixes for this ‘now visible’ infrastructure.

‘How to see? Where to see from? What limits to vision? What to see for? Whom to see with?’ (Haraway 1988: 587). The vision of the sanitation sector actors – or the vision of the experts – is not ‘infinite’. Even with the spotlight turned on by the pandemic, the sector’s view is ‘partial’. In defence of situated knowledges, that is, those constructed by different subjects and from different territories, Haraway (1988) and Nowotny (2003) signal the need to interweave knowledges. Research in different disciplinary fields and in different countries elucidates the flaws in basic sanitation systems that are not constructed through local articulation (Machado, 2019; Figueiredo, 2019; Pena et al., 2019; Hueso, 2013; Clasen, 2014). In the current scenario and in the post-pandemic period, the emphasis on local specificities and the participation of different actors proves to be even more necessary. As raised by Telma Rocha: ‘COVID invites us to think systemically’ (Director of the Avina Foundation, Event 2).

In this sense, overcoming the historical and unequal deficit of water supply in the short term was not observed. Specific actions for the distribution of water tanks, hygiene kits, and tariff adjustments did not establish institutional structures capable of guaranteeing continued provision for the diversity of territories in Brazil²⁶. Moreover, the weakening of institutions of the federal executive branch that enable the consolidation of a sanitation policy interweaved with environmental, territorial, cultural, science and technology policies, in addition to gutting councils and participatory commissions, deconstructs the pillars of socio-environmental governance. On the other hand, ‘market governance’ (Backstrand et al., 2010) is strengthened with the growing discourse in favor of privatization, deregulation and market mechanisms.

²⁶ The *Instituto Água e Saneamento* [Water and Sanitation Institute] maintains the bureau tasked with overseeing the implementation of the new legal framework, indicating advances and challenges in states and municipalities: <https://marcolegal.aguaesaneamento.org.br/>

The answer to the question – how can we overcome this historical deficit or how do we guarantee the fulfilment of basic needs in the current political conjuncture? – can be reinforced by a stratum on how to monitor the fulfilment of basic needs in the current political conjuncture. Nader (1972: 294) reminds us that citizens need to have access to information and knowledge concerning the main institutions, government or otherwise, that affect their lives. The ethnographic commitment of Brazilian researchers has enabled and continues to enable the description, analysis and monitoring of public institutions (Teixeira et al, 2019). ‘It is in the search for ways out and to escape from the plot that entangles us in the current historical moment that it is necessary to continue, to expand and to probe deeper (...) A lot of work is done, and much more is left to do’ (Lima and Facina, 2019: 474). As Biko Rodrigues concludes: ‘it’s important that we’re always united, because what lies ahead, the post-pandemic, is going to cause even more difficulties for our people’ (CONAQ Representative, Event 7).

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