Assessment of water supply and sanitation plans: history and outlook in the municipality of Belém, Brazil

Rafael Caldeira Magalhaesa and Léo Heller

Abstract

This analysis presents a historical assessment of water supply and sanitation plans for the municipality of Belém, Brazil. The spirit of the assessment recognizes the importance of studying change in relation to historical dynamics, in addition to critiques of normative rationalism’s inability to influence effective change in public policy. The research included interviews with social stakeholders, documentary analysis and direct observation. Three plans elaborated between 1980 and 2015 were studied. The results demonstrate that: (1) the emphasis of normative rationalism contributed to neglecting sanitation services; (2) the principles of intersectorality and social participation are fundamental to evolving from normative rationalism to strategic planning and communication on water supply and sanitation in Belém; (3) a large portion of local stakeholders are contrary to the privatization of sanitation services, while the most technically and economically powerful decision-makers in government defend that the State no longer has sufficient capacity to promote universal service coverage; and (4) a significant portion of civil society in Belém indicated their serious opposition to future scenarios for the water supply and sanitation sector that maintain technocracy in related public policies; however, such perspectives were not considered in the elaboration and implementation processes of government planning.

Keywords: Belém; Sanitation; Strategic planning; Water supply

Introduction

It is fundamental to study the planning of water supply and sanitation services in order to understand the aspects of those services as they are expressed in public policy. Since the 1970s, Brazil has experienced different attempts to universalize access to those services. For more than a decade, national guidelines established via Law (Lei) 11.445/2007 have set out requirements for access to drinking water and sanitation services. Recognizing government authorities’ nonfulfillment of the goal to
universalize access is necessary to introduce changes that give priority to the most neglected social
groups and areas.

In the spirit of public policy analyses, a consideration of the historical context in which the State has
deployed measures in this sector provides insight into the dependency of institutional trajectories. In
addition to this, the relationships between social actors and ways in which they coordinate – their desires
and power plays – are also a part of the analytic perspective of the present study’s consolidated and
complementary assessment, which situates itself between a pragmatic (Mertens, 2016) and rationalist
vision (Guyadeen & Seasons, 2016).

The process of assessing strategic planning and public policies, notably in the field of water supply
and sanitation, has the potential to highlight important progress in the effectiveness of State actions and
identify threats that obstruct the sustainable universalization of services. Further, in virtue of the com-
plementary vision of pragmatism and rationalism, such analytic processes also attribute essential value to
assessing social participation and the dynamic interaction between different groups and their particular
projects for power (Hadi, 2000; Nance & Ortolano, 2007; Moyo & Wehn, 2017).

Several studies reinforce how the history of planning is directly related to the identification of
advances and failures in different political circumstances, especially in the context of public policies
concerning infrastructure (Neuman & Smith, 2010; Todes, 2012; Wong & Webb, 2014; Tomory,
2015). Such contributions have contributed to accumulated theoretical and methodological knowledge
on the historical trajectory of government action, its ties to urban planning, and the way in which social
actors coordinate to attain their goals.

Debates on planning theories are not well known by technical and scientific experts in the field of
water supply and sanitation. This obscures the outlook for the future of universalized water and sani-
tation and the benefits that attaining this goal could represent for the environment and public health
and quality of life, especially in poor and developing countries. While studies on Brazil have contributed
to policy on water supply in small municipalities (Filho & Brown, 2009; Mayberry & Baker, 2011),
several works have emphasized political and institutional processes on a national scale or in large metrop-
olitan areas (Heller et al., 2014; Carvalho et al., 2015; Marques, 2016; Barbosa et al., 2016). However,
little attention has been directed to other experiences, such as the case of metropolises in the Amazon
region. The present article is aligned with the work of Olivier (2010), which, despite analyzing some
specific questions on water charges and consumption, also studies a municipality of Brazil’s North
region, Manaus. Alongside Belém, these two cities are the largest in the region.

In this paper, we analyze three distinct periods of planning for water supply and sanitation in the
municipality of Belém, between 1980 and 2015. The methodology made it possible to interpret the
accounts provided by different social actors regarding the elaboration and implementation of govern-
ment plans, forms of social participation, intersectorality and the privatization of service provision
for these essential public policies. In addition to offering a critical view of planning in the field of
water supply and sanitation, this analysis provides more depth to debates on the future for such
public policies in the most populated municipality in the East Amazonian region, where persistent
inequalities in access to water supply and sanitation services remain.

Initially theories on strategic planning that support the article’s analytical approach are reviewed,
highlighting the different rationales that can inform strategic planning. The methodologies adopted in
this research – suited for qualitative research – are then explained. Subsequently, results are examined
and the processes through which water supply and sanitation plans for Belém were elaborated and
implemented are discussed, and assessment is made of the corresponding institutional processes, the
principles of intersectorality and social participation, as well as the current context of service privatization. A summary of the findings and recommendations for decision-makers with an interest in developing countries are presented in the article’s final section.

Theoretical remarks on planning

Among the various existing approaches to the concept of planning, this article discusses two theories – one normative and the other strategic and communicative. The aim of this method is to emphasize aspects that can contribute to future planning processes in the stages of creation and implementation.

For Matus (1987), in normative planning models, economic actors typically create predictable and quantifiable measures. Those measures are accompanied by simple variables such as: ‘me’ as the actor-subject that governs, plans and monopolizes the given measure’s creativity; and the ‘system’ as the object of planning efforts that encompasses all those actors.

Slaev (2016) corroborates that vision in emphasizing that actors plan in market economies; planning and the market are seen as mechanisms that coordinate social activities. For the author, ‘regulation’ would be the most appropriate surrogate term for planning. Alexander (2000) builds on this, asserting that substantive or instrumental rationality applies to planning. The normative logic behind such rationality and its methodological applications cooperate with formal decision theory. Accordingly, the ideal analytical model is fundamentally based on the self-interested, utilitarian actor who, despite his/her faults, has proven to be useful to the economy.

The normative theory of planning stipulates the way in which the world should be and should become, while also providing ideas on how to achieve this unique future. For Faludi (2004), it is difficult to transcend cultural, regional and national barriers when normative planning predominates. This theory supports the concept that norms and values belong to the realm of politics not only as an authoritative instrument, but as a way of concentrating political power under the auspices of a small social group to the detriment of public interest.

On the other hand, strategic approaches focus on coordinating planned action without separating economic considerations from politics. Matus (1989) asserts that power, understood as a scarce resource, plays a decisive role in understanding the problem of how to govern the uncertainties of the future. For Arendt (2001), power corresponds with the human ability not only to act, but to act in an orchestrated manner. Accordingly, power would not be the property of any one individual, but would belong to a group and continue to exist only so long as the group remains united. That approach is of particular interest for the ‘forever will-be’ concept of planning. In other words, authority is mobile, forged in the future and in this way is dedicated to making power live on forever.

For Rivera (2011), the basic focus of situational strategic planning, developed by Carlos Matus, introduces a communicative standpoint into the theory of planning. For the author, that theory has been dominated until recently by an economic and technocratic paradigm separated from politics. The theory of strategic planning emphasizes that social order is constituted both strategically through the calculation of economic and political utility, embodying the reification of its actors, and communicatively, through intersubjective and linguistically mediated understanding (Rivera & Artmann, 2010; Muller Neto & Artmann, 2012). The expression ‘strategic-communicative planning’ originates from the coordination between: (i) implementing strategic agreements in policies, programs and projects; and
(ii) collective decisions and common compromises related to the measures that have been agreed upon. Under this vision, the content of a given plan goes beyond strategies, policies, programs and projects. Rather, its basis is made up of interaction, communication, and the rhetorical patterns in policies and plans.

According to Habermas (2012), when a society’s starting point or fundamental concept is communicative action, it can be perceived as a ‘lifeworld’ of a social group’s members. In this sense, the concept of a ‘social order’ can be introduced through a theory of action and not in a functionalistic way. Alternatively expressed, this would be the concept of society as a self-controlled system. With the intention of protecting and spreading democracy, Habermas conceives of the ‘lifeworld’ (or public sphere) as separate and exterior from the ‘system’ of formal economy and government. Within the ‘lifeworld’, rational and inherently democratic human beings can reach a consensus and coordinate their actions through the communicative process (communicative rationality). Here, the ‘force of the better argument’ will determine the final validity of a particular position. Habermas recognizes that communication can be distorted in various ways and suggests a series of criteria – or a discursive ethic – to guide the processes of communication. If those processes are inclusive, empathetic and open, and if differences in power between the participants can be neutralized, the result of that process could be considered valid.

Healey (2003) believes that Habermas’ ideas on speech did not represent an apparently ideal situation in reality, but rather critical questions with which to assess moments of interaction in the public sphere. Flyvbjerg (2004) also refutes the idea that power, in Habermas’ view, is based on the concept of a utopian world revolving around an ideal speech situation. In such a situation, claims for validity would be based on consensus between participants and the distortionary, negative effects of power would not exist.

On the one hand, normative planning consists in a political group independently deciding the objectives and procedures to meet their goals. The logic behind that group’s actions has its foundations in pragmatism and incrementalism. Their theories are based on liberal market economies as solutions to social problems. On the other hand, the closeness between the strategic and communicative approaches to planning allows different individuals and social groups to interact in creating and implementing collective decisions and agreements through policies, programs and projects. Thus, the logic of action in such approaches is supported by argumentation. In this way, the corresponding theoretical reference combines the analysis of power and the public realm in social and institutional changes.

The principles of intersectorality and social participation (Castro, 2016) are in dialogue with the rationality of strategic planning, since greater democratic processes and integration between different government sectors in turn enable greater proximity between communicative and strategic rationalities. These principles aim to bring together the conception, implementation and assessment of different planning rationalities. In this article, they are used as tools for the cooperative analysis of both approaches to planning: normative and strategic-communicative. In normative rationality, the tendency of having less prominent social participation reflects a process of power accumulation, while decreased intersectorality is represented through the isolation and technocracy of public policies for access to drinking water and sanitation.

On the other hand, strategic-communicative planning possesses the tendencies of greater coordination between the State’s internal institutions (such as those related to health, environment and urban planning) and external ones (such as councils with an aspect of civil society participation). On top of this, the knowledge, practices and experiences possessed by technical stakeholders – both governmental and non-governmental – add further detail to the dialogue between sectors. Therefore, intersectorality
manages to embody a participative model at the intragovernmental level. Moreover, social participation widens the debate on the actual problems in a municipality’s water and sanitation sector, as the populations affected by the planning process can present and discuss relevant issues.

Thus, in interpreting the rationality of planning, it is emphasized that there is a dependent relationship between these principles as they make it possible to analyze the interaction between governmental social actors from various sectors and scopes of governance. Further, the public realm is strengthened in these processes, making it possible to explore if society shares responsibility for the relevant public policies and planning of access to drinking water and sanitation services.

**Methodology**

This study focuses on the historical context behind the creation and implementation of municipal sanitation plans in the municipality of Belém. It applies an analytical approach based on primary data (interviews, direct observation) and secondary sources (documents). The data were collected using: (1) normative documents – formal documents were analyzed comprising Belém’s water supply and sanitation plans in the period 1980–2015; (2) direct observation of public hearings – one of the authors participated in two public hearings in 2014 and 2015; and (3) interviews with social actors – a script was prepared with open-ended questions related to the study (opinions on how the plans were created or implemented, on intersectorality, social participation, problems related to drinking water and sanitation). The study’s limits were determined by the criteria of representativeness, exhaustiveness and repetition, depending on the topics approached and the conditions of the technique used to process and analyze the data, as suggested by Miranda (2007).

Interviews were performed with 30 people that currently or previously had a direct role in the discussions related to Belém’s public policies for water supply and sanitation: 9 municipal and state government representatives; 10 civil society representatives; 4 municipal and state parliamentary representatives; 5 researchers; 1 representative of the Federal Public Prosecutor; and 1 independent worker. The anonymity of those individuals is protected in this article notwithstanding the codification of their affiliation to one of the above-mentioned categories: GovRep, CivSoc, Res, Parl, PubPro, Indep. The use of such instruments for data collection has been reported to be a favorable strategy for understanding the history of planning and assessing the processes of creation and implementation of such plans (Edwards, 2013; Christensen, 2015; Tighe & Opelt, 2016). The interviews were undertaken between May and September of 2015.

It is important to highlight that individuals were sought with experience in the processes of strategic planning for water supply and sanitation, and not only in recent times. In general, it was found that government representatives working in public policy for water supply and sanitation have a high level of education, such as post-graduate studies in engineering or law. In this way, they differ from leaders of civil society who, despite the level of their actions, do not possess such academic qualifications. Thus, the interviewee pool is composed not only of specialists, but also of political leaders who, owing to their experience in the history of access to water in Belém, play a vital role in the decision-making processes in the municipality.

The interpretation of the data was obtained via content analysis, which has been broadly applied in assessments of planning processes (Hudalah et al., 2010). For Bardin (2011), content analysis is organized in three phases: pre-analysis, exploration material (or coding) and treatment of results. Those
phases were codified in the present study by theme based on empirical categories. While some key themes were determined previously based on the study’s objectives, others that had not been initially planned on emerged when processing the empirical materials. The interpretive approach (Mason, 2002) was also used, allowing for a greater consideration of the participants – their interpretations, perceptions, knowledge and opinions – as a primary source of data. In the present article, the presentation of the accounts from subjects aims to evidence content from which subjective experiences may be transmitted.

The categories assessed in the planning processes for drinking water and sanitation services in Belém, from 1980 to 2015, were: rationality; the political and economic contexts behind the formulation of the plans; institutional trajectory; application of the principles of intersectorality and social participation. The specific category that addresses the privatization process of water supply and sanitation services was included in the study in accordance with the relative importance that the different social actors attributed to it.

Results and discussion

The municipality of Belém is located in the State of Pará in Brazil’s North region. It has a population of 1,381,475 inhabitants (eleventh most populous city in Brazil) of which 11,924 live in rural areas composed of 39 islands (IBGE, 2011). Population density is 1,315.26 inhabitants/km², Gross Domestic Product per capita is BRL 20,340.21 (equivalent to approximately USD 6,250.00). The average mortality rate in the city is 15.3 per 1,000 live births and there exist 3 diarrhea-related hospitalizations for every 1,000 inhabitants, placing Belém at the positions 1,960 and 1,115, respectively, among Brazil’s 5,570 municipalities. Coverage for water supply services is 90.89% compared with 12.70% coverage for waste water collection networks (SNIS, 2016).

History and rationality of water supply and sanitation plans in Belém (1980–2015)

The municipal plan, Plano Belém 2000, created in 1980 and implemented until 2003, was a governmental strategy of high impact from a political, institutional and economic viewpoint. Based on the analysis of one interviewee’s account, who participated directly in the formulation and implementation of that plan, it is clear that the water supply policy was fragmented, dependent on scarce political resources, and implemented with a high degree of obedience to Brazil’s then-reigning military regime.

‘The PLANASA [National Water Supply and Sanitation Plan] was implemented from the beginning of the, quote, ‘revolution of ’64’. Before then, [government] institutions struggled greatly because they depended on resources that were destined for governors’ (Government Representative 8, from now on GovRep8).

The analysis of the Plano Belém 2000, composed of engineering projects and technical reports, revealed that the National Water Supply and Sanitation Plan (PLANASA; the guiding instrument for investments in water supply and sanitation in Brazil between 1970 and the end of the 1980s), was an important initiative for water supply and sanitation in the history of Belém. However, it possessed significant gaps regarding sanitation services. The measures originating from that plan privileged the water
supply sector and, in particular, abstracting raw water from the Guamá River, installing mains, and building water treatment stations. The *Plano Belém 2000* gave birth to projects that were financed through the Federal Government by the National Housing Bank (BNH) and other multilateral organizations, such as the World Bank.

The arrangement established by the PLANASA made State Water and Sanitation Companies (CESB in Portuguese) the main service providers across the country. Brazil’s federal government level is responsible for establishing national directives and coordinating a large portion of financial investments. States possess political power represented through the CESBs, which are either public or mixed capital companies that act as concessionaires of those public services. Finally, municipalities possess the legal rights to these services but have little influence in decision-making processes.

Beyond possessing a natural monopoly in large cities, between 1980 and 2015, CESBs have benefited from several favorable characteristics which allow them to retain their power. Regarding technology, they operate large-scale systems that entail significant learning processes, coordination and adaptation. Politically and economically, the culture of service provision at a government level has been characterized by parliamentary influence and partisan politics, which has provided the companies with significant power and set the tone for the mixed capital companies’ main investments. Those companies gained broad powers that allowed them to become entirely responsible for establishing their priorities, the technologies used and their expansion strategies. This setup remained unchanged after the PLANASA was finalized and after the country’s redemocratization in the 1980s (Sousa & Costa, 2013). An interview with a government representative validated the pragmatic sentiment of this assessment, albeit a good deal of the literature has critiqued this vision (Maiello et al., 2013; Gomes et al., 2014).

‘The PLANASA marked the golden age for water supply and sanitation in Brazil […]. In that age, we had the ability to invest resources in infrastructure and institutional development. If it weren’t for the Plano Belém 2000, today it would be chaos for service provision [in the water and sanitation sector]’ (GovRep7).

Several phenomena were responsible for the eventual decline of the sector. The international debt crisis; the failing resources of the country’s main financial institution for policies on housing, water supply and sanitation, the FGTS (Employee’s Severance Guarantee Fund – *Fundo de Garantia por Tempo de Serviço* in Portuguese); and high rates of national unemployment in the 1980s contributed to diminishing the power of the National Housing Bank, which affected the capacity to execute the PLANASA’s goals. Brazil’s economic crises always directly influenced states’ behavior regarding water supply and sanitation.

The *Plano Belém 2000* was responsible for implementing a hierarchical power structure. Service provision was based on criteria that provided service to social groups benefiting from political and economic privileges, in addition to territorial areas with the specific purpose of reproducing real estate capital and, in doing so, attempting to elevate the city to a status of modernity.

The Metropolitan Region of Belém’s Master Plan for Water Supply and Sanitation, created in 2004, represents another important moment in the process of planning for those services in the region. Being a master plan, it possesses a greater territorial scope and greater technical and budgetary foundation. The Plan was financed by the State of Pará’s Water and Sanitation Company (COSANPA) and needed to coordinate the needs of the metropolitan region’s five municipalities. The process of elaborating the Plan also benefited from technical support of institutions such as the Federal University of Pará.
In a certain way, the Plan embodies Matus’s (1989) rationality of strategic-situational planning. It possesses five volumes: characteristics of the metropolitan region of Belém; a diagnostic of the region’s water supply and sanitation systems; a projection of population growth and demand for water; options to universalize water supply services; and directives for system expansion (Cosanpa, 2004). A manager of the Plan’s creation emphasized the innovative nature of the process:

‘We had to create a plan with technical directives since decisions were subject to political pressure in certain areas. It was a large group made up of technicians and we would go out to local neighborhoods to talk with the public. There was a conflict between the operations engineers and the neighborhood associations, but it was good for the public policy since it made the technical-political process closer to real life’ (GovRep6).

Among four options, the service provider established targets that would define new priorities for its reorganized systems: progressive reduction of water losses; increasing the capacity of systems in terms of production, treatment and storage; and increasing the number of sectors receiving groundwater. Few points directly addressed sanitation services, meaning that this crucial public service continued to be neglected at a municipal and metropolitan level. This vision was validated by an interviewee:

‘The water plan applied to the period of 2005–2025. The sanitation plan applied to the period of 2010–2030. An investment of 800 million [Brazilian reals] was planned for water supply. The investment planned for sanitation was higher because we do not receive any [of those] services’ (Researcher 2, from now Res2).

According to another researcher that participated in the creation of the metropolitan plan, two political circumstances were determinant in solidifying the future for water and sanitation in Belém. A summary of the implementation processes for plans Plano Belém 2000 and the Metropolitan Region Master Plan can be observed in Figure 1. This figure details the timeline of local and national political contexts that influenced rationality, the management model and political disputes concerning the provision of water supply and sanitation services. The process of creating the Master Plan, in 2004, did not benefit from broad civil society participation. Yet it did evolve from a style of strictly normative rationality towards a strategic approach with a vision for the future and recognition of the uncertainties of Belém’s public policies for the sanitation sector. The implementation of the Metropolitan Plan coincided with the federal government’s execution of the PAC, which contributed to the former becoming partially effective. However, there existed few initiatives to monitor and evaluate that instrument.

For the vast majority of interviewees, be they government or civil society representatives, the process behind the design of Belém’s most recent Municipal Water Supply and Sanitation Plan, created in 2015, was intimately tied to normative rationality in its attempt to comply with national legislation. Government and civil society representatives demonstrate this in their accounts:

‘[The Plan] was created as a requirement. Either it would be created or Belém would not have access to any resources. So, as I see it, that was the main obligation’ (GovRep1).

‘[The Plan] obeys the law! It has all the requirements, but it could be clearer in terms of its targets, procedures, and the technology to be adopted for water and sanitation services, mainly as concerns treatment’ (GovRep3).
In addition, the content in the official Municipal Plan, which was elaborated in 2015, reveals a prominence of technical language that overshadows any understanding of possibly guaranteeing the equitable universalization of water supply and sanitation services. Moreover, the propositions of civil society organizations were manifestly not considered important in light of their absence in that document.

The conceptual bases of Belém’s current Municipal Water Supply and Sanitation Plan clearly reflect normative characteristics. However, both the Plano Belém 2000, created in the 1980s, and the Metropolitan Master Plan for Water Supply and Sanitation, created in the 2000s, were motivated by problems in guaranteeing service provision amidst population and economic growth in the municipality of Belém.

For Lisboa et al. (2013), the type of planning applied to water and sanitation services may be influenced by the plan’s intended purpose. It may be geared simply towards complying with legal requirements or instead may consciously prioritize planned measures and the corresponding benefits of improving services.

Table 1 presents the main elements analyzed in the three periods in which there existed planning initiatives for access to drinking water and sanitation services in the municipality of Belém. Table 1 also shows evolution in the conceptualization and discussion processes behind the Metropolitan Plan owing to application of the concept of strategic planning.

The quality of normative rationality is particularly notable in Belém’s Municipal Water Supply and Sanitation Plan that was created in 2015. Retrocession is observed in as much as the Plan’s creation excluded civil society, possesses strongly technical language and does not consider alternative scenarios to attain the goal of service universalization. On the other hand, a positive aspect is that, for the first time in the history of planning for water supply and sanitation in Belém, the municipality’s rural areas were contemplated. That demonstrated a direct preoccupation with populations that were traditionally neglected in such policies.
<table>
<thead>
<tr>
<th>Period</th>
<th>Actors</th>
<th>Content</th>
<th>Product</th>
<th>Rationality</th>
<th>Creation</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plano Belém</strong> 2000</td>
<td>State Government, COSANPA, engineering firms, BNH and World Bank.</td>
<td>Conception of Belém’s water supply system.</td>
<td>Engineering designs and technical reports on physical-financial execution</td>
<td><strong>Normative</strong></td>
<td>Strictly technical. The COSANPA hired an engineering firm for project support.</td>
<td>Brute water abstraction and pumping from Guamá River; pipes; Água Preta and Bololha Lakes; Lifting stations; Water treatment stations; Water distribution to central neighborhoods.</td>
</tr>
<tr>
<td>Year of creation: 1980</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Metropolitan Region of Belém Master Plan for Water Supply and Sanitation</strong> 2004</td>
<td>State Government, SAAEB*, COSANPA, GPHS**/UFPA, Community and professional associations.</td>
<td>Description of metropolitan region; System diagnostic; Projection of growth in population and water demand; Options and directives to expand the water supply system.</td>
<td>Five volumes of more than one thousand pages; Engineering designs; maps.</td>
<td><strong>Strategic-Situational</strong> Coordination between social actors was considered fundamental for the plan’s technical and political conception.</td>
<td>A group was formed of 15 technicians from COSANPA, 15 researchers from UFPA and partial participation of civil society.</td>
<td>Water supply management by zones and sectors; Rationalization of water resources between surface and ground sources. Scenarios with time span of 20 years.</td>
</tr>
<tr>
<td>Year of creation: 2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Belém Municipal Water Supply and Sanitation Plan</strong> 2015</td>
<td>Municipal Government, COSANPA, SAAEB, AMAE***, consultancy firm, GPAC****/UFPA.</td>
<td>Description of municipality; Description of water supply and sanitation system; Proposition to extend those services to rural areas.</td>
<td>Two volumes of 300 pages. Creation of targets for the municipality’s rural areas.</td>
<td><strong>Normative</strong></td>
<td>The Plan is of a strictly technical nature. There was no direct participation from civil society. Its targets are incoherent with political and economic circumstances.</td>
<td>Being created between 2014 and 2015, it is not yet possible to measure the Plan’s implementation.</td>
</tr>
<tr>
<td>Year of creation: 2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Intersectorality and social participation

Amid the institutional changes that occurred between 1980 and 2015, planning for the development of water supply and sanitation services was strongly aligned with normative rationality, except the Metropolitan Plan, which followed a more strategic approach.

Is another approach possible for water supply and sanitation plans for Belém? Interviewees highlighted the change from rationality to strategic and communicative planning as a necessary transition from the PLANASA’s spirit. The tradition established by the plan was one of intense hierarchy, a concept for water and sanitation services founded in infrastructure, detachment from public health initiatives and politics of patronage. In opposition to those characteristics, new concepts emerged in the research that, for example, recognize access to safe drinking water and sanitation as a basic human right; expand social participation in broader forms of democracy; give greater consideration to political, social, economic and cultural factors; and, mainly, are increasingly integrated with policies from other sectors in attempting to promote service universalization.

The government representatives that were interviewed for the research attested to a lack of understanding regarding the term and concept of intersectorality, which is illustrated by one interviewee’s comments:

‘The systems have to be independent, because if electricity is lacking in a certain area, the entire city will be left without water. So, I think that is a case of working in the city with intersectorization’ (GovRep6).

It is notable that the government representative cited above does not recognize the need for integration between the diverse public sectors to strengthen the public policy for water supply and sanitation. However, that individual’s understanding of ‘intersectorization’ – an amply present engineering concept in the Metropolitan Plan, establishing the feasibility of distributing the public water supply through interdependent sectors – hinders the possibility of transitioning to a new outlook for planning in that sector.

In the discourses of civil society representatives, intersectorality as a term and concept strongly appeared to be understood as an integrated public policy:

‘Intersectorality is the need for various areas of knowledge, areas of understanding, to come together for a given need to be transformed into a public policy’ (CivSoc1).

For Rezende & Heller (2008), the history of water supply and sanitation is not self-contained nor is it self explanatory. There are many interfaces of the politics related to the water supply and sanitation sector that, at the same time, both exercise influence and are subject to influence. For that reason, one must see that sector while simultaneously taking into account these different relationships. Britto et al. (2013) adopt a vision of water supply and sanitation based on that sector’s relationship with other sector policies. The authors assert that governments are often unable to treat subjects in a way that contemplates their complexity and multidimensionality, which can possibly impact on the effectiveness of related decisions and interventions.

A parliamentary representative expressed that public policy for water supply and sanitation in Belém – especially the idea of intersectorality – plays a central role in promoting public health via improved access to safe drinking water and sanitation services.
'There are many settlements in non-productive parts of the city, from an urban point of view. A social function being carried out in those properties, since if you do not have water and sanitation, you do not have good health or decent housing either. They are inter-related sectors [...] and the government has not been capable of solving such problems' (Parl4).

Developing strategies and intersectoral action involves different subjects and social services. With assembled knowledge, capabilities and advantages, complex problems may be solved and a new concept of planning, implementation and control of services may be designed based on the principle of equity. However, intersectorality must encompass not only managers, but also members of civil society that formulate propositions to orient future action.

A civil society representative that was interviewed for the research articulated the idea that intersectorality is fundamental in coordinating a systemic and comprehensive approach to planning interventions with greater effectiveness. Hukka & Katko (2003) emphasize that both comprehensiveness and intersectorality could be guiding forces in structuring programs, policies and systems, as well as in organizing institutions and services.

‘In this day and age, we are currently trying to apply solutions that have already been identified and should have been implemented by now. That is why I think there is not one sole solution to the complex problem that is [ensuring access to] water supply and sanitation’ (CivSoc7).

The political environment in Belém at the time of the Municipal Water Supply and Sanitation Plan’s creation (2014–2015) was expressive of the difficulty faced by the municipal government in dealing with opposing visions of planning for the sector. In that respect, the views offered by some interviewees were notable, such as those who had been in coordination roles for the creation of water and sanitation policies in a time when social participation in such processes was increasing. In this case, those individuals affirmed that a model of municipal management that gave priority to social inclusion already existed:

‘Between 1997 and 2004, Belém City Hall built up and strengthened civil society participation in local, participative budget auditing councils: the city council, sector councils, thematic and territorial councils with elected members’ (Parl2).

Through direct observation in two public hearings organized as a part of the Municipal Water Supply and Sanitation Plan (approved in 2015), it was evident that the proceedings did not favor civil society participation. In particular, no information had been made previously available to interested stakeholders, there were few inscriptions on the part of the parties present to share their opinions, and there was little social and interinstitutional mobilization. This assessment was corroborated by one interviewee of particular relevance to the discussions of planning for the water and sanitation sector:

‘What use is it to invite people to a public hearing on water and sanitation? Any citizen going wouldn’t have a bare minimum amount of knowledge, prior preparation or capacity to make any decisions. That citizen would realize that his/her participation is useless’ (Indep1).

Social participation constitutes a marked duality in two phases of public policy formulation for water and sanitation, especially in the planning processes. For Sintomer et al. (2012), participative democracy
is characterized by an alliance between two elements: when participants have effective decision-making power separate from judicial, legislative and executive powers; and when autonomously organized civil society leads to people becoming empowered and to cooperative methods of conflict resolution. In the period between 1997 and 2004, traditional government mechanisms (in this case, based on normative concepts) were modified. So too the logic of a weaker civil society changed in favor of greater independent social organization, revealing greater willingness to cooperate with local government.

Here it is appropriate to discuss the concept of power (Arendt, 2001) as applied to Belém’s water and sanitation planning. While there was greater civil society participation in the period between 1997 and 2004, the political group in power at the municipal level was unable to implement mechanisms to ensure effective participative democracy. However, from 2005 to the period in which the current research was carried out, planning processes with a basis in greater efficiency and effectiveness of government action appeared to strongly integrate the myth of modernization (Healey, 2013). In this case, social participation was treated as an instrument to attaining legal and normative requirements defined by the federal government. This is particularly true of Law No. 11.445/2007 (Government of Brazil, 2007), which outlines the current regulation on national directives for access to safe drinking water and sanitation in Brazil.

Context surrounding service privatization

Recent federal regulatory measures are relevant for the debate on the future of water supply and sanitation in Brazil, particularly for the municipality of Belém. The Investment Partnership Program (Programa de Parceria de Investimentos – PPI), decreed in 2016 by the government of interim president Michel Temer, aims to expand the participation of private enterprise in related public investments in infrastructure. In addition to this, Law 11.445/2007 was responsible for creating the Special Incentive Regime for the Development of Water Supply and Basic Sanitation (Regime Especial de Incentivos para o Desenvolvimento do Saneamento Básico – REISB). This measure aims to provide stimulus to legal entities that are empowered to provide such services and increase their volume of private investments through tax credits.

The Water Supply and Sanitation Company of Pará (COSANPA), which was part of the PPI, possesses the powers to execute concessions for the provision of water supply and sanitation services. Financing for infrastructure projects are eligible to receive at least 20% of resources from investors and the remaining share from public banks. In Belém, service provision for water supply and sanitation collection and treatment is set to be conceded to private entities by 2017 (Government of Brazil, 2016).

Interviewees had divided opinions regarding the circumstances of Belém’s public policy environment for water supply and sanitation, especially regarding the issue of privatization. For one representative of the Federal Government’s Public Prosecutor, caution is to be exercised:

‘For me, privatization does not seem to be a good path. We are talking about a public service that should be provided without generating profits, or with the least amount possible to ensure that the population is receiving the best possible service. However, if society and the authorities in charge do not speak up, and on top of that the services are not functioning, the idea may take root that it could be better if the services were privatized’ (FedPro1).

For Swyngedouw (2005), there are two distinct sides to governance. While new citizenship arrangements are in the process of emerging, market forces may coopt such innovations. Applied to this case,
just as the State may adopt forms of governance that incorporate civil society’s participation, it can also be inclined to incorporate market mechanisms into its public policies.

While government representatives conveyed the intention to promote the privatization of water supply and sanitation services, a significant proportion of civil society expressed its discontent with that posture:

‘Quite often, a private service would not address social aspects in the way that a public office would. Water, as an essential element of life, often must not involve financial services. So, privatization is not the best’ (CivSoc4).

Part of civil society’s role in public policy for the sector has focused mainly on the quality of service provision:

‘We understand that [the service provider] is not providing a quality service. However, the privatization of water in Amazonia is a grave mistake, and for that reason we have mobilized considerable opposition against that initiative’ (CivSoc8).

The discourse of CivSoc8 converges with the critique against the commercialization of water and sanitation services expressed by Swyngedouw (2013) and Masjuan et al. (2008). In their perspective, water and sanitation services must be treated as a human and social right. Moreover, private enterprises apparently have no capacity or interest in service universalization and are particularly apt to neglect sanitation services.

Conclusions

The discourse that dominates circles of influence in local politics makes one believe that it would be difficult to achieve any rapid change in the institutional trajectory of the water supply and sanitation sector in Belém, certainly for the goal of attaining the sustainable universalization of those services. Granted, the planning approach to those services between 1980 and the mid-2000s embodied the spirit of normative rationality and achieved quantitative advances in coverage for water supply. However, overall that period made public policies for the sector isolated and technocratic and contributed to inequalities in access to those services.

The accounts of interviewees that addressed intersectorality and social participation reveal programmatic-normative characteristics that echo precise guidelines established by Law 11.445/2007. Yet, the corresponding interventions in the water supply and sanitation sector, as well as the Belém municipal government’s planning, are in fact ineffective. Such bases are barriers to evolving, as proposed in the present article, to apply a strategic and communicative approach to planning. This was especially true in the period between 2005 and 2015, when municipal powers’ decisions contributed to social exclusion.

Two historical periods can be considered as windows of opportunity for institutional change in Belém. The first was the political environment that permeated the city in the period between 1997 and 2004. The electoral and legislative processes were geared toward state actions prioritizing integration between urban development and the water supply and sanitation sector, which incorporated direct public participation in government decisions. The second period was the national climate of public policy for water supply and
sanitation, especially between 2007 and 2014, when National Law 11.445/2007 and the National Water Supply and Sanitation Plan (Plano Nacional de Saneamento Básico – Plansab) were discussed, elaborated and approved (Heller et al., 2014). The latter instrument proved to constitute a rich process in which ideas for new paradigms and programs were debated that would be dispersed throughout the country, making it especially representative of strategic-communicative planning.

The assessment of Belém’s water supply and sanitation plans between 1980 and 2015, particularly with its basis in the analysis of interviewees’ accounts and an interpretative approach, proved to be an appropriate methodology for the present study. In this way it was possible to identify and critique the normative rationality that was inherent to different moments in the history of planning for access to water and sanitation services in the municipality of Belém.

This article suggests a series of recommendations for decision-makers in strategic planning for water supply and sanitation services in developing countries. Firstly, historical precedents are fundamental for the future vision of policies as infrastructure systems are built to provide services to a given population for decades. Plans of large cities are not elaborated ‘on a blank slate’. They are guided by previous plans in which several other systems are interconnected, such as those dealing with urban mobility, rainwater management and housing. Additionally, understanding political and electoral contexts, as well as previous experiences in elaborating and implementing plans, can also contribute to adopting strategic and communicative rationalities in the planning process. This could potentially lead to a more participative environment with space for multi-sectorial collaboration that manages to respond to users’ requirements and make planning more effective.

In contrast to that process, local civil society possessed a rooted dynamic of its own. Diverging from the normative logic contained in the municipal authorities’ planning and maintained by the water and sanitation service provider, civil society assimilated and disseminated the principles of intersectorality and social participation.

Faced with this situation, civil society has been confronting the municipal government in a bid to reconfigure the status quo approach to attaining the universalization of services, which has been marred by technocracy and neglect of the sanitation sector. Civil society also aims to give greater prominence to intersectorality in an effort to provide clarity for the apparently murky, pessimistic future that is associated with the current government’s action plan in the water and sanitation sector. As the predominant views on service universalization for Belém seem to indicate, several limitations must be tackled in order to attain the changes desired by civil society. This appears to be especially true for the forces that have coordinated to privatize the provision of water supply and sanitation in the state’s capital, which have their origin in measures implemented by the federal government.

It is fair to suggest that the debates on intersectorality and social participation should be recognized for their capacity to provide greater conceptual and practical depth. In particular, these concepts could contribute to the research agenda on the difficulties involved in planning for improved health through the provision of water supply and sanitation services.

References


Received 24 June 2017; accepted in revised form 11 June 2018. Available online 9 July 2018