

# A REVIEW OF CADE'S CASE LAW IN THE WATER AND SANITATION SECTOR: A LACK OF CONSENSUS, THE SABESP'S CASE, AND WHAT TO EXPECT IN THE NEAR FUTURE<sup>1</sup>

*Revisão da jurisprudência do Cade sobre o setor de saneamento básico: ausência de consenso, o caso da Sabesp e o que esperar para o futuro próximo*

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## STRUCTURED SUMMARY

**Objective:** With the recent approval of the New Sanitation Legal Framework (Law No. 14,026/2020), the privatizations of Corsan in 2023 and Sabesp in 2024, and the prospect of several concession auctions in the next three years, it is expected that the Administrative Council for Economic Defense (Cade) will deepen its competitive analyses in the sector. This article examines Cade's case law on the Water and Sanitation sector since the enactment of Law No. 12,529/2011, focusing on three main aspects: (i) the structural characteristics of the sector; (ii) the definition of the relevant market, in its product and

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geographic dimensions; and (ii) the criteria commonly used for concentration analyses. Finally, the article also explores Sabesp's privatization and the outlook not only for coming auctions, expected to drive approximately BRL 115 billion in investments and benefit a total of 35.9 million people, but also potential new privatizations.

**Method:** A descriptive review of Cade's case law on the Water and Sanitation sector, based on cases from the agency's database.

**Conclusions:** Since 2012, Cade has reviewed 30 merger cases involving concession regimes in the sector, with 12 occurring after 2020, indicating a positive impact of the new regulatory framework. Only 12 cases involved some sort of concentration analysis. Cade has established consensus that the sector has natural monopoly characteristics, focusing on competition for the market rather than within the market. Regarding relevant market definition, Cade sometimes treats water supply and sewage treatment services as a single market and sometimes as distinct markets, though it consistently defines the geographic dimension as national. For concentration analyses, one can notice there is still no consensus since three methodologies have been applied: (i) population served; (ii) potentially served economies; and (iii) equivalent population. Considering the wave of mergers, acquisitions, and potential new market entrants on the horizon, this is a timely opportunity for Cade to adopt a clearer approach in order to enhance its capacity to safeguard competition and, ultimately, foster the expansion of W&S services as well as their recognized social benefits.

**Keywords:** water and sanitation; Cade; concentration analysis; privatization; Sabesp; auctions.

## RESUMO ESTRUTURADO

**Objetivo:** com a recente aprovação do Novo Marco Legal do Saneamento (Lei nº 14.026/2020), as privatizações da Corsan em 2023 e da Sabesp em 2024, e a perspectiva de diversos leilões de concessões nos próximos três anos, espera-se que o Conselho Administrativo de Defesa Econômica (Cade) aprofunde suas análises concorrenciais no setor. Este artigo examina a jurisprudência do Cade sobre o setor de saneamento básico desde a promulgação da Lei nº 12.529/2011, com foco em três aspectos principais: (i) características estruturais do setor; (ii) definição de mercado relevante, nas dimensões produto e geográfica; e (iii) critérios comumente utilizados para análises de concentração. Ao final, o artigo também explora a privatização da Sabesp e as perspectivas tanto para os próximos leilões no setor, que devem movimentar cerca de R\$ 115 bilhões em investimentos e beneficiar um total de 35,9 milhões de pessoas, quanto para possíveis novas privatizações.

**Método:** revisão descritiva da jurisprudência do Cade sobre o setor de saneamento básico, baseada em processos na base de dados do órgão.

**Conclusões:** desde 2012, o Cade analisou 30 Atos de Concentração (ACs) envolvendo regimes de concessão no setor, sendo 12 após 2020, indicando um impacto positivo do novo marco regulatório. Apenas 12 casos incluíram algum tipo de análise de concentração. Conclui-se que o Cade consolidou o entendimento de que o setor possui características de monopólio natural, focando na competição pelo mercado, em vez de no mercado. Em relação à definição de mercado relevante, o Cade ora considera os serviços de abastecimento de água e tratamento de esgoto como um mercado único, ora os analisa separadamente, mas há consenso na dimensão geográfica, entendida como nacional. Por fim, no que se refere à análise de concentração, nota-se que ainda não há consenso, uma vez que já

foram aplicadas três metodologias: (i) população atendida; (ii) economias potencialmente atendidas; e (iii) população equivalente. Considerando a onda de fusões, aquisições e potenciais novos entrantes no mercado, abre-se uma janela de oportunidade para o Cade passar a adotar uma abordagem mais clara, a fim de aprimorar sua capacidade de proteger a concorrência e, em última instância, fomentar a expansão dos serviços de saneamento, bem como seus reconhecidos benefícios sociais.

**Palavras-chave:** saneamento básico; Cade; análise de concentração; privatização; Sabesp; leilões.

**JEL Classification:** K21; K23; L40; L43; L95

**Summary:** 1. Introduction; 2. Cade's Case Law in the W&S Sector; 2.1. Overview; 2.2. Structural Characteristics of Natural Monopoly and Competition for the Market; 2.3. Definition of Relevant Market; 2.4. Methodologies for Concentration Analysis; 3. The Sabesp Privatization Case and Auction Prospects in the W&S Sector; 4. Conclusions; References; Appendix.

## 1 INTRODUCTION

Since the approval of Law No. 14.026/2020 (New Sanitation Legal Framework) (Brasil, 2020), the Water and Sanitation (or W&S) sector has gained increasing prominence in Brazil. With the establishment of a legal framework that encourages investments and greater competition, there has been a rise in private concession auctions, an increase in investment potential, and the entry of new players into the market.

According to a study produced by the Instituto Trata Brasil and GO Associados (2024), the New Sanitation Legal Framework aimed to contribute to legislation that encourages investments in the sector, with at least five important changes: (i) definition of goals for the universalization of services; (ii) increased market competition with a ban on new Program Contracts; (iii) greater legal security for the privatization processes of state-owned companies; (iv) encouragement of regionalized service delivery; and (v) creation of a prominent role for the National Water and Basic Sanitation Agency (ANA) in regulating services.

The regionalized service delivery was the model chosen in recent studies conducted by the National Bank for Economic and Social Development (BNDES) for the states of Alagoas, Rio de Janeiro, Amapá, and Ceará, which groups several municipalities under a single contract (BNDES, [202-]). Additionally, BNDES supported at least 13 major concessions and privatization projects, from which three have already been concluded, and the rest are either scheduled for auction or in the final stages of structuring. These projects combined represent a total of approximately BRL 115 billion in planned investments and are expected to benefit an estimated 35.9 million people (Campos Junior, 2024). The Public-Private Partnership (PPP) of the Paraná Sanitation Company (Paraná [...], 2024) involved 112 municipalities in the state and was won by Saneamento Consultoria, Acciona (who entered the market), and Iguá Saneamento (Iguá [...], 2024).

More investments in the sector imply significant multiplier positive effects on the economy. According to Trata Brasil and GO Associados (2024), the estimated annual investments of R\$ 46.3 billion



required for the universalization of services – the main goal of the New Sanitation Legal Framework – could generate GDP growth of around R\$ 58.1 billion annually.

Instituto Trata Brasil (2024) also points to several social benefits of access to canalized water such as: (i) negative correlation with the probability of gastrointestinal diseases such as diarrhea; (ii) negative correlation with respiratory diseases; (iii) increase in wages of about 3%; (iv) better scores at the National University Admission Exam (ENEM); (v) increase in real estate value in about 6%; (vi) increase in the number of employees in the tourism sector. Other studies seem to agree on the social benefits of sanitation<sup>6</sup>.

In this scenario, notable acquisitions have captured the attention of the national and international market, including large privatizations such as the one of Companhia Riograndense de Saneamento (Corsan) which took place in Rio Grande do Sul in 2023, and the one of Companhia de Saneamento Básico do Estado de São Paulo (Sabesp) which took place in São Paulo in 2024.

This recent trend involving the prospect of new privatizations and auctions over the next three years, suggests that the Administrative Council for Economic Defense (Cade in Portuguese) will need to deepen its competitive analyses in the sector, which has historically been characterized by low concentration, high rivalry, and a predominance of merger cases (concentration acts or ACs in Portuguese) judged through fast-track proceedings.

This article aims to analyze Cade's case law since the enactment of Law No. 12,529/2011 (Brazilian Competition Law) to understand its position on three main aspects. First, the structural characteristics of the W&S sector, which is regulated and regarded as a natural monopoly, with competition for the market instead of within the market. Second, the definition of the relevant market, in its product and geographic dimensions. Third, the criteria commonly used for concentration analyses.

In addition, the article presents the outlook for auctions in the sector in the post-Sabesp privatization scenario, which are expected to generate around BRL 115 billion in investments and benefit a total of 35.9 million people (Campos Junior, 2024). Other privatizations might take place in the coming years, such as the one of Companhia de Saneamento of Minas Gerais (Copasa). The aim is to elucidate to market agents and those interested in pursuing new mergers and acquisitions in the W&S sector how Cade's analyses have taken place so far.

To address all these points, the article is structured into four sections, with the first being this Introduction. Section 2 presents Cade's case law in the W&S sector. Section 3 discusses in more detail the case of Sabesp's privatization<sup>7</sup>, which was approved without restrictions in August 2024, and presents the privatization and auction prospects in the sector in the coming years. The final section provides concluding remarks.

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6 For instance, according to Galiani, Gertlet and Schargrodsky (2005) and Fujiwara (2005), more investments in the sector reduced child mortality both in Argentina and Brazil, respectively.

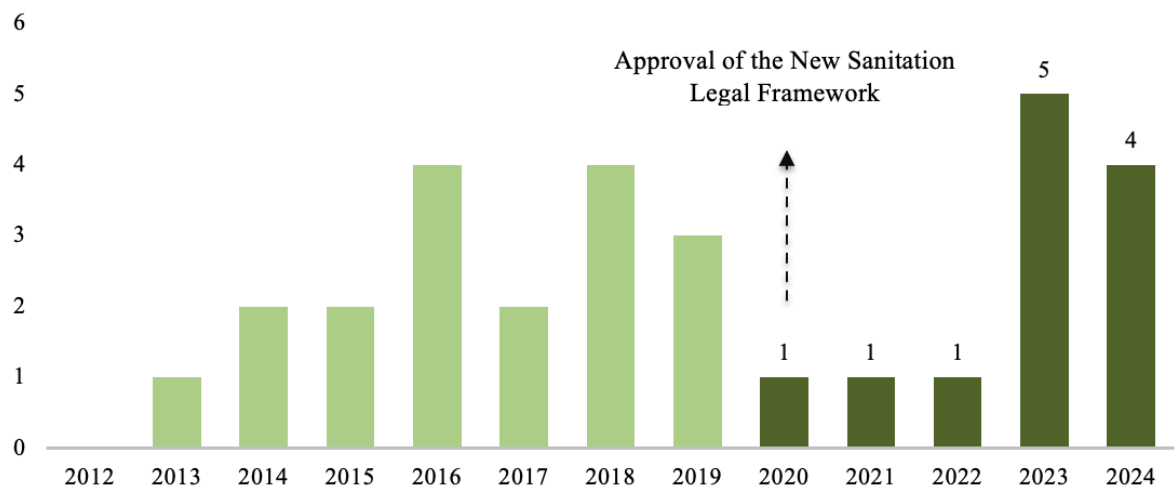
7 Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96. All Cade public proceedings mentioned in this article can be consulted at: <https://x.gd/GVzoO>.

2 CADE’S CASE LAW IN THE W&S SECTOR

2.1. Overview

Cade’s case law concerning the W&S sector is relatively extensive. Since 2012, when the Brazilian Competition Law came into effect, 30 merger cases involving concession regimes in the sector have been judged<sup>8</sup>. As shown in Graph 1, of this total, 12 cases were notified after 2020, suggesting a positive effect from the New Sanitation Legal Framework. In 2023 and 2024 alone (up to August), disregarding the worst years of the Covid-19 pandemic, eight cases were notified. As discussed later, the recent trend points to an increase in new entries and investments in the coming years.

**Graph 1** - Number of mergers in the W&S Sector per year since the Brazilian Competition Law



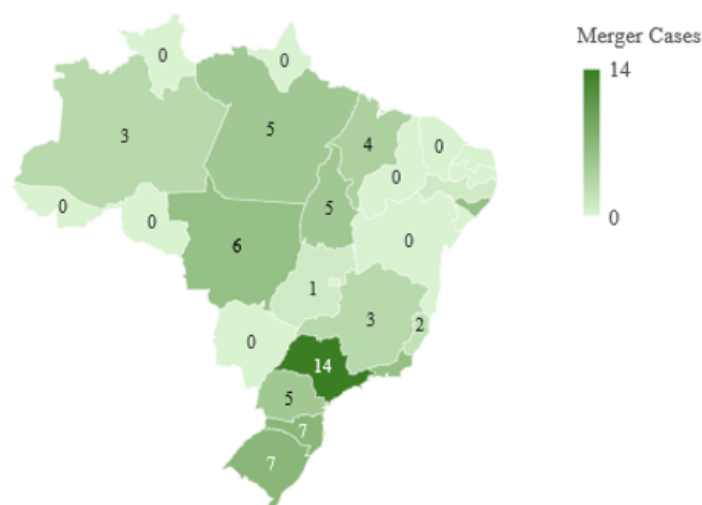
**Source:** Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96. Prepared by the authors.

Regarding the geographical distribution of ACs analyzed by Cade, one can observe a predominance in the Southeast and South regions: the state of São Paulo leads with 14 cases, followed by Rio Grande do Sul and Santa Catarina with seven each. Alagoas, Mato Grosso, and Rio de Janeiro follow, each with six cases (Graph 2). Finally, 11 states (mostly in the North and Northeast) were not affected by the analyzed operations.

<sup>8</sup> This period extends until August 2024, the date of the last consultation for this article. The list excludes cases involving water and effluent treatment solutions for industrial clients, focusing only on municipal-level water supply and sewage services under concession regimes. For industrial treatment solutions, see, for example: AC No. 08700.001437/2024-61, AC No. 08700.001424/2024-91, AC No. 08700.004875/2020-57, AC No. 08700.007552/2016-39, AC No. 08700.006646/2016-91, and AC No. 08700.010354/2013-00, among others.



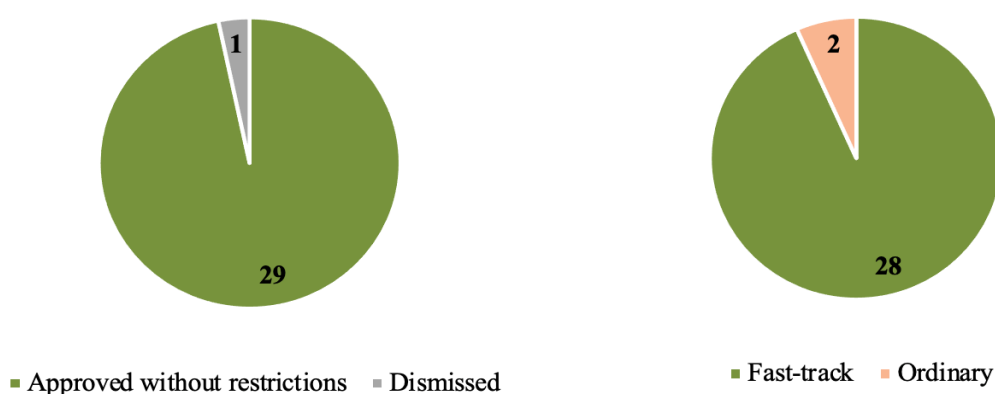
**Graph 2 - Geographic Distribution of Mergers in the W&S Sector Analyzed by Cade by Target Company's State of Operation**



**Source:** Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96. Prepared by the authors.

As for Cade's decisions, with only one exception (in which the merger case was not acknowledged), all cases were approved without restrictions (Graph 3). Furthermore, 28 of the 30 merger cases were analyzed under fast-track proceedings. The two cases under ordinary proceedings were notified in 2018 and involved Aegea Saneamento e Participações S.A. (Aegea)<sup>9</sup>. In these cases, the ordinary proceedings were adopted because Cade decided to be conservative and considered the market shares of only private companies. In this scenario, Aegea's market share exceeded the threshold of 20% of Cade Resolution No. 33/2022<sup>10</sup>. At the end, however, Cade concluded that: (i) there were lots of competitors in the market; (ii) competition happens for the market (ex-ante); (iii) there were low entry barriers to participate in bidding processes; and (iv) there was a lack of W&S coverage in Brazil, which implied large space for competitors and new entries.

**Graph 3 - Decisions and Review Procedure at Cade for Mergers in the W&S Sector**



**Source:** Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96. Prepared by the authors.

<sup>9</sup> AC No. 08700.001557/2018-10 and AC No. 08700.002516/2018-41.

<sup>10</sup> Opinion No. 4/2018/CGAA4/SGA1/SG, Case No. 08700.001557/2018-10 and Opinion No. 7/2018/CGAA4/SGA1/SG, Case No. 08700.002516/2018-41.

The fact that most cases were analyzed under fast-track proceedings reveals the low concentration in the sector, which is historically marked by a high number of players nationwide and a high level of competition for the market. However, it is worth noting that concentration analysis – which involves evaluating market shares of the applicants before and after the transaction – has become relatively more frequent in recent years.

Since the enactment of the Brazilian Competition Law, out of the 30 cases analyzed, 12 cases involved some sort of concentration analysis. Out of these 12, eight were notified after the New Sanitation Legal Framework, and six were notified between 2023 and 2024 (up to August). In addition, in eight of the 12 cases with concentration analyses, Cade assessed both private and public companies' market shares, indicating another recent trend.

Table 1 provides a summary with relevant information on the 12 cases with concentration analyses. In cases where the calculated share exceeded the legal threshold of 20%, the sector's competitive rivalry was deemed sufficient by Cade to reduce the likelihood of market power being exercised.

The geographical relevant market was considered national in all cases, while in the product dimension, water and sewage services were sometimes considered together and sometimes as separate markets. It is worth highlighting the lack of consensus in Cade's decisions regarding methodologies for concentration analyses. As further explored below, three approaches have been considered: (i) served population, (ii) potentially served economies, and (iii) equivalent population.

**Table 1** - Summary of the 12 Merger Cases with Concentration Analyses

#	Case No.	Applicants	Relevant Market (Product)	Relevant Market (Geographic)	Concentration Analysis	Methodology
1	08700.007545/2016-37	Aegea and Construtora Aterpa	Water and sewage (joint)	National	Combined share below 20%	Potentially served economies
2	08700.001278/2018-56	Aegea and Construtora Aterpa	Water and sewage (joint)	National	Combined share above 20% (but presence of rivalry)	Potentially served economies
3	08700.001557/2018-10	Aegea and Solví	Water and sewage (joint)	National	Combined share above 30% (but presence of rivalry)	Potentially served economies
4	08700.002516/2018-41	Aegea, Sagua and OAS Soluções Ambientais	Water and sewage (joint)	National	Combined share above 30% (but presence of rivalry)	Potentially served economies
5	08700.003895/2020-19	BRK Ambiental and FI-FGTS	Water and sewage (joint)	National	Combined share below 20%	Potentially served economies
6	08700.008273/2022-31	Servy Investments and N Saneamento FIP-IE	Water and sewage (separate)	National	Combined share below 10%	Served population

#	Case No.	Applicants	Relevant Market (Product)	Relevant Market (Geographic)	Concentration Analysis	Methodology
7	08700.000339/2023-25	Corsan, Parsan and Saneamento Consultoria	Water and sewage (joint)	National	Combined share below 20%	Potentially served economies and Equivalent population
8	08700.005128/2023-89	Norte Saneamento, Iguã Saneamento, Esap, Itapoã Saneamento and Tubarão Saneamento	Water and sewage (separate)	National	Combined share below 20%	Served population
9	08700.007167/2023-11	Duane do Brasil, Tubarão Saneamento and Iguã Saneamento	Water and sewage (separate)	National	Combined share below 20%	Served population
10	08700.000233/2024-11	Terracom and Saneamento Ambiental Águas do Brasil	Water and sewage (separate)	National	Combined share below 10%	Served population
11	08700.003394/2024-58	Canada Pension Plan Investment Board and Iguã Saneamento	Water and sewage (separate)	National	Combined share below 10%	Served population
12	08700.005228/2024-96	Equatorial Energia and Sabesp	Water and sewage (joint)	National	Combined share below 20%	Potentially served economies and Equivalent population and Served population

**Source:** Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96. Prepared by the authors.

In the next subsections, Cade's perspective on the W&S sector in Brazil will be detailed, focusing primarily on the 12 cases mentioned above where there was a relatively deeper competitive analysis. Subsection 2.2 provides more details on the authority's case law regarding the structural characteristics of the sector, which is marked by a natural monopoly regime and competition for the market. Subsection 2.3 addresses the definition of the relevant market in its product and geographic dimensions. Subsection 2.4 demonstrates the existing lack of consensus on the most appropriate methodology for the concentration analysis.



## 2.2 Structural Characteristics of Natural Monopoly and Competition for the Market

Cade's case law is well-established in affirming that the W&S sector is characterized by a natural monopoly regime at the municipal level, given its high fixed costs and low marginal costs. In this context, services are exclusively provided by a specific concessionaire, in accordance with the limits defined by the granting authority in concession contracts. This understanding is settled in Cade's case law, as revealed by Opinion No. 452/2023 recently issued by the General Superintendence (GS) in the context of AC No. 08700.007167/2023-11:

*In previous decisions, Cade recognized that services related to sanitation (water and sewage services) are considered a natural monopoly. In this sense, the activity is exclusively carried out by the concessionaire, within the limits of the concession granted by the Public Authority. This is because the specific characteristics of these activities make it economically unfeasible for more than one concessionaire to be established and operate in the same locality (Free translation; emphasis added).*

Therefore, unlike what occurs in unregulated markets, there is no competition within the market in this sector, but rather competition for the market, at the public bidding, that is, *ex ante*, before the beginning of the operations by the concessionaires. This understanding is also highlighted in the GS's opinion:

*16. [...] By adopting the municipal dimension, it is considered that, as it is a **natural monopoly involving high fixed costs and low marginal costs**, only one company can operate efficiently in each locality.*

*17. However, as it is a natural monopoly, there is competition promoted through concessions by the Public Authority, which occurs for the market, at the time of public service bidding, and not within the market [...]* (Free translation; emphasis added).

These statements by the GS reinforce the understanding that, in the W&S sector, competition takes place *ex ante* through bidding procedures rather than in the market itself. This institutional structure directly shapes how relevant markets are defined and how competitive dynamics should be assessed. The next section explores how Cade has approached the definition of relevant market in merger cases, focusing on its product and geographic dimensions.

## 2.3 Definition of Relevant Market

The relevant market represents the set of agents that effectively respond to the strategies (e.g., pricing or quantity adjustments) of the resulting company in a given transaction. It is divided into two dimensions: product and geography. The product dimension, from a supply perspective, encompasses goods or services produced by companies that, using the same facilities and resources, can meet the same demand. The geographic dimension, in turn, includes the area where companies compete (Cade, 2016).



According to the Brazilian Ministry of Regional Development, sanitation services primarily include the supply of drinking water and sewage treatment<sup>11</sup>, although some companies in the sector also operate in related areas such as raw water production projects, industrial sanitation market, urban cleaning and solid waste management, and urban stormwater drainage and management (Brasil, 2020).

Cade, however, considers that related activities such as the capture and treatment of water and industrial effluents, as well as the development of private solutions for industries, do not align with sanitation services<sup>12</sup>. Thus, in the product dimension, the market is typically defined by the Brazilian authority as water supply and/or sewage treatment services. Water and sewage networks are considered together since “their operators generally engage in both activities, which eliminates the need for segmentation into multiple markets”<sup>13</sup>, however, there are precedents where water and sewage services were analyzed separately<sup>14</sup>.

Although case law is not consolidated on this matter, the approach of treating water and sewage services jointly seems to be reasonable. The same concessionaires usually provide both services, unlike waste and drainage services, which are typically performed independently. Moreover, there is a strong integration between the two activities, especially commercially since water and sewage charges are billed on the same account.

Considering that it is a market of service provision, rather than the production and commercialization of a product, and that there are no geographical limits in terms of operations — a company with the know-how for providing these services can easily develop projects in any region — competition for the market usually involves players throughout the national territory and, depending on the bidding conditions, international players.

As highlighted by Cade: “[A]ccording to precedents, the geographic dimension of the market in question can be seen in a broader, national scope, which may even include the participation of international players”<sup>15</sup>. Additionally, in general, Cade recognizes that water and sewage services in a given concession can be performed by both public and private companies, which justifies the recent trend toward preferring concentration analysis involving more players.

Thus, concerning the geographic dimension, when considering competition within the market, Cade defines the market at the municipal level, where — being a natural monopoly—only one company operates in each municipality. However, as the focus is on competition for the market, the geographic dimension for competitive analysis is defined as national, as it involves competition in bids where a variety of players, including public and private, national, and international, can participate. Table 2 summarizes the two dimensions of the relevant market considered by Cade in merger cases involving the W&S sector.

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11 As stated in the report Diagnóstico Temático Serviços de Água e Esgoto, this service consists of “the activities and the provision and maintenance of the infrastructure and operational facilities necessary for the public supply of drinking water, from collection to household connections and their measuring instruments” (Brasil, 2023, p. 6).

12 See, for example: AC Nos. 08700.001437/2024-61, 08700.001424/2024-91, 08700.004875/2020-57, 08700.007552/2016-39, 08700.006646/2016-91, and 08700.010354/2013-00.

13 Opinion No 452/2023/CGAA5/SGA1/SG. Case No 08700.007167/2023-11.

14 See, for example: AC Nos. 08700.008273/2022-31, 08700.005128/2023-89, 08700.007167/2023-11, 08700.000233/2024-11, and 08700.003394/2024-58.

15 Supra note 8.

**Table 2** - Summary of the Relevant Market in Mergers Involving the W&S Sector

Mode of Competition	Product Dimension	Geographic Dimension
Within the market	Water supply and/or sewage treatment services	Municipal
For the market	Water supply and/or sewage treatment services	National

**Source:** Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96. Prepared by the authors.

## 2.4 Methodologies for Concentration Analysis

The structural characteristics of the W&S sector and the dynamics of competition for the market imply a dispersed market at the national level, which explains the low concentration levels and low probability of competitive risks arising from mergers notified to Cade. As a result, Cade's precedents do not show in-depth analyses or consolidated guidelines regarding, for example, the methodology for market share analysis, even in the two merger cases assessed under ordinary proceedings.

As presented in Table 1, Cade has adopted three distinct methodologies for concentration analysis in cases notified since the enactment of the Brazilian Competition Law: (i) served population; (ii) potentially served economies; and (iii) equivalent population. Each of these methodologies will be presented below, including the respective calculation methods and the indicators from the National Sanitation Information System of the Ministry of Cities (SNIS in Portuguese) used as the basis for the calculations.

### *Served Population*

The market share of a given player  $p \in \{1, \dots, P\}$  is calculated by dividing the served population variable for this specific player by the total population served by all  $P$  players in the market:

$$\text{Market Share}_p = \frac{\text{Served Population}_p}{\sum_{p=1}^P \text{Served Population}_p}$$

The variable  $\text{Served Population}_p$  is constructed for water or sewage services based on indicators AG001 (total population served with water supply) and ES001 (total population served with sewage treatment) from SNIS, respectively:

$$\text{Served Population}_p = \sum_{n=1}^N \text{AG001}(\text{mun}_n) \times \text{Equity Share}_{np}$$

or

$$\text{Served Population}_p = \sum_{n=1}^N \text{ES001}(\text{mun}_n) \times \text{Equity Share}_{np}$$



Where  $n \in \{1, \dots, N\}$  represents each municipality in the country mapped in the SNIS database. The  $Equity Share_{np}$ , which represents the equity share of player  $p$  in the water and/or sewage concession in municipality  $n$ , can be included in the calculation to account for the possibility of consortia formed by more than one player. However, this variable is not typically used or explicitly mentioned in Cade's precedents that use this methodology.

It is worth noting that the served population methodology considers the population effectively served by water or sewage networks, as they are distinct indicators extracted from the SNIS database. Since this number is not necessarily the same for both networks, the analysis is conducted separately for each of these markets, which contrasts with the more commonly used relevant market definition in the product dimension that includes both services in an integrated manner.

Another limitation of this methodology is that, by considering the population effectively served, it only accounts for the existing coverage in the municipalities, not reflecting the potential market of each player in their concessions. Nonetheless, Cade's case law reveals that this is the most used metric in cases involving the W&S sector<sup>16</sup>.

### *Potentially Served Economies*

Similarly, the market share of a given player  $p$  is calculated by dividing the potentially served economies of this specific player by the total potentially served economies in the entire market:

$$Market Share_p = \frac{Potentially Served Economies_p}{\sum_{p=1}^P Potentially Served Economies_p}$$

The variable  $Potentially Served Economies_p$  (or  $PSE_p$ ), in turn, is constructed from the SNIS indicator AG003 (number of active water connections):

$$PSE_p = \sum_{n=1}^N [AG003(mun_n) \times Service_n] \times Equity Share_{np}$$

Where  $Service_n$  in municipality  $n$  is a binary variable equal to 1 if only water or sewage services are provided in that municipality, and equal to 2 if both are provided. As with the served population methodology,  $Equity Share_{np}$  can be included in the equation to represent player  $p$ 's equity in the concession in municipality  $n$ , although it is not commonly used or explicitly mentioned in Cade's precedents.

It should be noted that the AG003 indicator is used for both water and sewage services, because the services are sometimes considered similar or integrated, so that the level of water market coverage is considered a proxy for the potential sewage market<sup>17</sup>. Thus, in municipalities where only water is granted or only sewage is granted, the equation for potentially served economies for a given player becomes ( $Service_n=1$ ):

<sup>16</sup> Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96.

<sup>17</sup> However, in AC No. 08700.003895/2020-19, the variables AG003 and ES003 (number of active sewage connections) were used separately for the analysis of potentially served economies. In this case, for municipalities where both water and sewage concessions existed, the variables AG003 and ES003 were added instead of multiplying the variable AG003 by 2.

$$PSE_p = \sum_{n=1}^N AG003 (mun_n) \times Equity Share_{np}$$

And in municipalities where both water and sewage are granted, the equation for potentially served economies for a given player is given by ( $Service_n=2$ ):

$$PSE_p = \sum_{n=1}^N AG003 (mun_n) \times 2 \times Equity Share_{np}$$

SNIS defines economies as “dwellings, apartments, commercial units, office rooms, industries, public agencies, and the like [...] that are served by water supply and/or sewage services”. Active economies are defined as those economies that were connected and served by the water or sewage network, as applicable, in the reference year. (Brasil, 2020).

The use of the active economies indicator is justified because economies — not people — are the units directly served by the players in the W&S sector. However, like the served population methodology, this approach also does not consider the potential demand that could be met by new entrants or by the expansion of services of existing players in their respective concessions. Thus, the term potentially in “potentially served economies” only refers to the potential sewage demand compared to the existing water demand in that market, as the AG003 indicator (active water connections) is used for both water and sewage<sup>18</sup>.

### *Equivalent Population*

As in the other methodologies, the market share of a given player  $p$  is calculated by dividing the equivalent population of this specific player by the total equivalent population of all  $P$  players in the market:

$$Market Share_p = \frac{Equivalent Population_p}{\sum_{p=1}^P Equivalent Population_p}$$

The variable *Equivalent Population<sub>p</sub>* is constructed from the “POP\_URB” indicator (urban population of the municipality in the reference year) calculated by the Brazilian Institute of Geography and Statistics (IBGE in Portuguese) and available in the SNIS database. This variable includes the entire urban population of the municipality, meaning both those served and not served by sanitation services.

The choice of urban rather than total population (i.e., urban, and rural population) considers the fact that most existing contracts in the W&S sector cover only urban areas. Public water supply services (water and sewage systems, including networks), thus, cover only urban areas. In rural areas, solutions tend to be individual (such as wells or septic tanks). Therefore, urban population data provide a more accurate representation of the areas serviced under concession contracts in the W&S sector.

18 Opinion No. 7/2018/CGAA4/SGA1/SG. Case No. 08700.002516/2018-41.



Mathematically, the equivalent population variable *Equivalent Population<sub>p</sub>* can be described as:

$$Equivalent\ Population_p = \sum_{n=1}^N [POP\_URB(mun_n) \times Service_n] \times Equity\ Share_{np}$$

Where, as with potentially served economies, *Service<sub>n</sub>* in municipality represents a binary variable equal to 1 if only water or sewage services are provided in that municipality, and equal to 2 if both are provided. *Equity Share<sub>np</sub>* may represent the equity share of player *p* in the concession of municipality *n*.

Since the equivalent population methodology relies on the municipality's urban population to estimate each player's market and considers water and sewage services in an integrated manner (as the potentially served economies methodology), this approach captures the potential market for both water and sewage services available in each municipality. Table 3 summarizes the main characteristics of the three methodologies considered by Cade.

**Table 3** - Summary of the Main Characteristics of the Three Methodologies for Concentration Analysis at Cade

Methodology	Considers National in Geographic Dimension?	Considers Water and Sewage in Product Dimension?	Considers Potential Market?
Served Population	Yes	No	No
Potentially Served Economies	Yes	Yes	No (for sewage assumes water as reference)
Equivalent Population	Yes	Yes	Yes

**Source:** Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96. Prepared by the authors.

The consideration of the potential market makes sense in the W&S sector in Brazil for two main reasons. First, although sanitation concession contracts do not necessarily mandate the service of the entire population of a given municipality within a specific period, they usually allow concessionaires to accelerate service provision up to the full municipal population during the contract's term.

Second, in addition to a concessionaire's right to full-service coverage, the New Sanitation Legal Framework set service targets of 99% of the population with drinking water and 90% of the population with sewage collection and treatment by December 31, 2033, implying a trend of incorporating universalization goals in concessions equal to or exceeding those of the New Sanitation Legal Framework.

For the sake of illustration, examples of market share calculations in the sector based on the equivalent population methodology are presented below.

#### *Example of Equivalent Population Calculation for Each Service Provider*

The first steps in calculating market share using the equivalent population methodology involve selecting the municipalities with water, sewage, or both types of concessions listed in the SNIS database and gathering the respective POP\_URB data. Once these steps are completed, the next step is to identify the respective service provider(s). An illustrative example is provided below.

Suppose that in the municipality of Timon, located in the state of Maranhão (MA), the provider, Company A, is a private company responsible for both water and sewage services. As both services are provided, we consider  $Service_n = 2$ . Thus, according to SNIS data, with 2021 as the reference year, the total equivalent population in this municipality for Company A is calculated as  $148,917 \times 2 = 297,834$ .

In the case of Blumenau, located in the state of Santa Catarina (SC), the provider is Company B, a private company that exclusively provides sewage services. Water services in this municipality are handled by Company C, a public company. Since Company B only provides sewage services, we consider  $Service_n = 1$ . Therefore, the total equivalent population in this municipality for Company B is calculated as  $366,418 \times 1 = 366,418$ . This same calculation applies to Company C. This illustrative example is summarized in Table 4.

**Table 4** - Hypothetical Example of Equivalent Population Calculation

Municipality (State)	Reference Year	Provider	Type of Provider	Service	Urban Population	Equivalent Population
Timon (MA)	2021	Company A	Private	Water and Sewage	148,917	297,834
Blumenau (SC)	2021	Company B	Private	Sewage	366,418	366,418
Blumenau (SC)	2021	Company C	Public	Water	366,418	366,418

**Source:** SNIS, 2021. Prepared by the authors.

However, there might be cases where the operator responsible for the sanitation service concession in the municipality has more than one partner, either through a consortium formed at the time of bidding or through the future acquisition of equity in the concessionaire. Thus, to distinguish the total equivalent population served by each player, if market data is available, it is also possible to create scenarios by weighing the total calculated for each municipality by the equity stake in each concessionaire<sup>19</sup>.

Table 5 presents an example of a municipality with more than one controller, Água Santa, located in the state of Rio Grande do Sul (RS), and compares it to the case of Timon (MA) mentioned previously. Following the transaction involving Aegea, Perfin, and Kinea during the privatization of Corsan, the shares in the concession of the municipality of Água Santa (RS) were distributed as 75% to Aegea, 20% to Perfin, and 5% to Kinea<sup>20</sup>. Since the concession includes both water and sewage services, the urban population is multiplied by 2 to find the equivalent population. Finally, the result is weighted according to each player's stake. Thus, the municipality has an equivalent population of  $1,453 \times 2 = 2,906$ , of which 75% corresponds to Aegea (2,179.5), 20% to Perfin (581.2), and 5% to Kinea (145.3).

<sup>19</sup> Such breakdown can be performed for all controllers holding stakes in any concessionaire in Brazil, including financial market players such as investment funds. However, Cade usually prioritizes more conservative approaches in terms of competition risks.

<sup>20</sup> Opinion No. 43/2023/CGAA5/SGA1/SG. Case No. 08700.000339/2023-25.



**Table 5** - Example of Equivalent Population Calculation in a Concession with More Than One Controller

Municipality (State)	Reference Year	Providers	Type of Provider	Service	Share	Urban Population	Equivalent Population
Timon (MA)	2021	Company A	Private	Water and Sewage	100%	148,917	297,834
Água Santa (RS)	2021	Aegea	Private	Water and Sewage	75%	1,453	2,179.5
Água Santa (RS)	2021	Perfin	Private	Water and Sewage	20%	1,453	581.2
Água Santa (RS)	2021	Kinea	Private	Water and Sewage	5%	1,453	145.3

**Source:** AC No. 08700.0003339/2023-25 based on SNIS and Aegea, 2023. Prepared by the authors.

In the case of Corsan's privatization, the company was acquired by a consortium formed by non-operational vehicles owned by Aegea (75%), Perfin (20%), and Kinea (5%). Using the consortium's shares and the 2021 SNIS database, the equivalent population methodology was applied, yielding the results shown in Table 6. As the resulting concentration was below 20%, the transaction was classified as a fast-track procedure and approved without restrictions by Cade<sup>21</sup>.

**Table 6** - Market Shares in the Corsan Privatization Case

Providers	Equivalent Population		Market Share	
	Pre-Operation	Post-Operation	Pre-Operation	Post-Operation
Corsan	11,202,837	0	3.12%	0.00%
Aegea	37,992,667	46,394,795	10.58%	12.92%
Perfin	0	2,240,567	0.00%	0.62%
Kinea	0	560,142	0.00%	0.16%

**Source:** Opinion No. 43/2023/CGAA5/SGA1/SG. Case No. 08700.0003339/2023-25. Prepared by the authors.

### Bottom Line

As indicated above, the equivalent population methodology has the advantage of incorporating the potential market each player could access within their respective water and/or sewage concessions into the market share analysis. By considering the potential market, this methodology aligns not only with Cade's relevant product market definition but also with the service delivery model and universalization objectives characteristic of the W&S sector.

However, this approach alone has limitations. While it captures the potential market, it does not necessarily reflect the actual service provision and, consequently, the actual market shares, which is important for the competition authority to take into consideration. For that matter, an approach that relies on active economies would be a better fit, since these are the units who are effectively connected to and served by the water or sewage network. Therefore, a combination of methodologies may be beneficial, allowing Cade to analyze different market scenarios.

21 Supra note 15.



This need for a dual perspective is aligned with Benitez and Estache's (2005) assessment for the World Bank on market concentration in infrastructure sectors. In their analysis of water and sanitation markets, they propose two proxies for market share calculation: the population covered and the total population. The population covered represents an upper bound, reflecting the maximum concentration among existing providers, while the total population serves as a lower bound, capturing potential competition and expansion opportunities in underserved areas.

Similarly, PSI & PRACTICA Foundation Practices, Research and Operations in Water, Sanitation and Hygiene (Pro-Wash, 2021), assessed the size of a sanitation market for investment purposes, emphasizing the importance of considering both the potential market and the actual service units. They recommend using demographic data, such as total population and population growth rate, as key indicators of market potential, while also refining this proxy by considering households as the actual service units in the sanitation sector. This distinction ensures a clearer picture of both theoretical market expansion and existing service provision, offering a more robust basis for market analysis and investment decisions.

As discussed before, on one hand, the equivalent population methodology captures the potential market, but it may overestimate service reach. On the other hand, the potentially served economies methodology measures actual service units connected and paying for sanitation, but it does not consider the potential market. A dual approach might enable Cade to evaluate competition dynamics more effectively in the W&S sector, ensuring that consolidation does not compromise service quality or access.

In any case, it is important to note that all existing methodologies have limitations, such as the reliance on self-reported data in the SNIS survey. This data may not cover all municipalities and W&S service providers, potentially introducing some noise. Nevertheless, this limitation is somewhat mitigated by the representativeness of the database. According to a SNIS report of 2022, the survey covered 97.9% of municipalities and 99.3% of the Brazilian population (Brasil, 2023).

Additionally, since the sanitation sector involves competition for the market, there could be a multitude of potential new players not accounted for in the market share analysis (who may operate not only in other infrastructure sectors but also in the financial market) and who would be fully capable of participating in future bids. This tends to overestimate the perceived market power of incumbent players more than in unregulated markets with competition within the market.

### 3 THE SABESP PRIVATIZATION CASE AND AUCTION PROSPECTS IN THE W&S SECTOR

Sabesp has been in existence for 50 years and operates in all regions of the state of São Paulo, serving a total of 375 municipalities and 28 million people in water distribution, sewage collection, and treatment (São Paulo, 2023). It is the largest water and sewage company in the Americas, ranks among the five largest globally in terms of revenue, and is the leading investor in W&S in Brazil, accounting for 33% of total investments, considering the 2011-2020 SNIS average.

Given the changes brought by the New Sanitation Legal Framework and the need to reposition the company following the expiration of the so-called "Contratos de Programa"<sup>22</sup>, the state government

of São Paulo decided to privatize Sabesp to achieve: (i) an increase in investments to BRL 66 billion to accelerate the universalization of sanitation to 2029, including rural areas and irregular urban areas currently unserved (as opposed to BRL 56 billion by 2033 in the original plan); (ii) a reduction in water tariffs; and (iii) strengthening and leveraging the company so it can operate nationwide and internationally.

Thus, on July 22, 2024, following studies conducted by the International Finance Corporation (IFC) to assess the best business model for the privatization, the company’s public share offering was finalized. Equatorial Energia S.A. (Equatorial) was the sole participant<sup>23</sup> and won the bid, acquiring a 15% stake in Sabesp’s capital stock (Napoli, 2024).

On July 23, the transaction was notified to Cade. It is worth noting that this privatization falls under the type of merger case described in item II of article 90 of the Brazilian Competition Law. Moreover, the Sabesp case fits under letter (a) of item II of article 10 of Cade Resolution No. 33/2022, which mandates notification for cases where the acquisition results in a direct or indirect stake of 5% or more in the voting or equity capital of a competing company<sup>24</sup>.

Table 7 provides an estimate of market shares in the sanitation sector prior to Sabesp’s privatization, using data broken down by company during the privatization of Corsan, the most significant recent transaction in the sector before Sabesp. The post-Corsan transaction data were provided by the applicants (Aegea, Perfin, and Kinea) based on the 2021 SNIS database and consider the equivalent population approach.<sup>25</sup>

The data show that Sabesp ranked first with a 16.90% share of the national market, while Equatorial held only 0.34%, according to 2021 SNIS estimates. Following the privatization, the combined market share would be 17.24%, remaining below Cade’s 20% threshold for horizontal mergers. Additionally, the Herfindahl-Hirschman Index (HHI) variation was less than 100, classifying the transaction as a “small change in concentration,” which, according to Cade, is unlikely to result in adverse competitive effects (Cade, 2016).

**Table 7 - Market Share Based on Equivalent Population**

Provider	Share
Sabesp	16.90%
Aegea	12.92%
Copasa	7.65%
Embasa	5.36%
Sanepar	5.17%
BRK Ambiental	3.58%
Compesa	3.09%

tion services) and State Basic Sanitation Companies (CESB), established without a bidding process. For more details on these agreements, see, for example, Loureiro (2020).

23 More information about Aegea’s withdrawal is available at Napoli (2024).

24 Under Article 89 of the Brazilian Competition Law, Cade regulates the prior analysis of concentration acts for auctions, tenders, and public stock acquisitions. However, per Article 108 of Cade’s Internal Regulations, public offerings are not subject to prior approval. Paragraph 1 clarifies that the exercise of political rights linked to the acquired stake is prohibited until Cade approves the transaction. Thus, while Cade does not analyze public offerings in advance, as in Sabesp’s case, political rights related to the acquisition may require approval depending on the stake acquired (Brasil, 2011).

25 Opinion No. 43/2023/CGAA5/SGA1/SG. Case No. 08700.000339/2023-25.

Saneago	3.07%
Cagece	2.14%
Águas do Brasil	2.00%
Caema	1.77%
Caesb	1.66%
Cagepa	1.64%
Perfin	0.62%
Kinea	0.16%
Corsan	0.00%
Equatorial	0.34%
Others*	31.91%
Total	100%

**Source:** Opinion No. 43/2023/CGAA5/SGA1/SG. Case No. 08700.000339/2023-25. Adapted by the authors to consider only the post-operation scenario of Corsan. (\*) The “Others” category includes all market players with a share below 1.64%, excluding Perfin and Kinea (as the applicants’ calculations accounted for the different players in the Aegea consortium that won the bid), as well as Equatorial (whose estimated 0.34% share was subtracted from the original “Others” total of 32.25% and specified separately in the table).

In the notification form for the acquisition of Sabesp shares by Equatorial, market shares in the W&S sector<sup>26</sup> were presented based on 2022 SNIS database using the three previously discussed methodologies: (i) served population; (ii) potentially served economies; and (iii) equivalent population.<sup>27-28</sup> As expected, Tables 8 and 9 show that the combined shares reported by the applicants ranged between 10% and 20% for the three methodologies, except in the case of sewage using the served population approach, which fell within the 20-30% range. However, according to the GS: “[...] above 20%, but below 50%, and with an HHI variation of less than 200 points, which allows us to rule out a causal link between this transaction and potential adverse competitive effects”<sup>29-30</sup>.

**Table 8 - Market Shares of Equatorial and Sabesp (Served Population)**

Company	Served Population (Water) (2022)	Share	Served Population (Sewage) (2022)	Share
Equatorial Group	Restricted Access	0-10%	Restricted Access	0-10%
Sabesp	28,000,000	16.3%	24,700,000	22.06%
Combined	Restricted Access	10-20%	Restricted Access	20-30%

26 The transaction also involved overlaps in the electricity generation market (Equatorial: 0.87%; Sabesp: 0.01%, based on 2023 installed capacity data) and the electricity distribution market (Equatorial: 0.13%; Sabesp: 0.10%, based on 2023 data).

27 Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96.

28 As shown in Table 3, the relevant market considered consists of water supply and sewage treatment services, analyzed separately for the served population and integrated in other cases. The geographic dimension is municipal for competition in the market and national for competition for the market.

29 Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96

30 Cade Resolution No. 33/2022, in item V of article 8, allows a transaction to be approved through a fast-track procedure when horizontal mergers result in an HHI variation of less than 200 points, provided the transaction does not lead to control of more than 50% of the relevant market.

Total	171,000,000	100%	112,800,000	100%
ΔHHI	Restricted Access	Restricted Access	Restricted Access	Restricted Access

**Source:** Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96. Prepared by the authors.

**Table 9** - Market Shares of Equatorial and Sabesp (Potentially Served Economies and Equivalent Population)

Company	Potentially Served Economies (2022)	Share	Equivalent Population (2021)	Share
Equatorial Group	Restricted Access	0-10%	Restricted Access	0-10%
Sabesp	Restricted Access	10-20%	Restricted Access	10-20%
Combined	Restricted Access	10-20%	Restricted Access	10-20%
Total	140,339,028	100%	180,824,439	100%
ΔHHI	Restricted Access	Restricted Access	Restricted Access	Restricted Access

**Source:** Opinion No. 385/2024/CGAA5/SGA1/SG. Case No. 08700.005228/2024-96. Prepared by the authors.

Thus, as with the vast majority of Cade precedents involving the W&S sector, there was no in-depth competitive analysis, and the privatization of Sabesp was approved without restrictions.

Following the completion of Sabesp's privatization, the W&S shifted its focus to other concessions and PPPs. As of July 2024, at least 13 major projects were in the pipeline, either scheduled for auction or in the final stages of structuring, representing a combined total of approximately BRL 115 billion in planned investments (Campos Junior, 2024). According to Instituto Trata Brasil and GO Associados (2024), these projects are expected to benefit an estimated 35.9 million people. The largest coming auctions in the sector are in Pará (BRL 26 billion in planned investment) and Pernambuco (BRL 24.8 billion).

Since then, as shown in Table 10, three of the 13 auctions scheduled to take place in the sector post-Sabesp privatization have already occurred: Sergipe, an auction involving 74 municipalities won by Iguá Saneamento (Iguá [...], 2024); Piauí, an auction involving 224 municipalities won by Aegea (the sole bidder) (Aegea, 2025); and the PPP of the Paraná Sanitation Company (Sanepar), involving 112 municipalities in the state and won by Saneamento Consultoria, Acciona (who entered the market), and Iguá Saneamento.

**Table 10** - Pipeline Projects in the W&S Sector Post-Privatization of Sabesp

Project	State	Type	Services	Estimated CAPEX (BRL million)	Population (million)	Expected Date
Pernambuco	PE	Concession	Water and Sewage	24.7	9.2	1T/2025
Pará	PA	Concession	Water and Sewage	26	6.1	3T/2025
Maranhão	MA	Concession	Water and Sewage	18.7	4.8	2T/2026
Sergipe	SE	Concession	Water and Sewage	6.3	2.3	3T/2024*
Paraíba	PB	Concession	Water and Sewage	5.7	2.2	1T/2025

Piauí	PI	Concession	Water and Sewage	8.6 <sup>31</sup>	1.8	4T/2024*
Rio Grande do Norte	RN	Concession	Water and Sewage	3.2	1.6	1T/2026
Porto Alegre	RS	Concession	Water and Sewage	5.2	1.5	4T/2024
Rondônia	RO	Concession	Water and Sewage	5.8	1.5	1T/2025
Goiás	GO	PPP	Sewage	6.6	1.4	4T/2025
Bloco de Referência do Vale do Jequitinhonha	MG	Concession	Water and Sewage	Not available	1.4	2025/26
Sanepar	PR	PPP	Sewage	2.9	1.0	4T/2024*
Feira de Santana e Região	BA	PPP	Sewage	Not available	0.859	2025/26
Total (approximate)				114.0	35.9	

**Source:** Instituto Trata Brasil and GO Associados, 2024. Prepared by the authors. (\*) auctions that have already taken place by the date of preparation of this article.

The Sabesp's case and the listed projects in the BNDES's pipeline (BNDES, [202-]), reveals what should the agents in the market to expect in the near future. The listed projects, when combined with the privatization of Sabesp, have the potential to impact more than 66 million people and are expected to be completed within the next three years. As with the Sanepar case, these projects may lead to the entry of new players into the market (like Acciona) or an increase in the market power of incumbent players, such as Iguá Saneamento and Aegea, the winners of the Sergipe and Piauí auctions (Pedrosa, 2024.)

Finally, the W&S sector in Brazil might also face new privatizations in the coming years. The state-owned W&S company from the state of Minas Gerais, Copasa, is the most likely to be the first after Sabesp<sup>32</sup>. Since the company accounts for approx. 7,65% of the national market, the current third largest player, its sale will undoubtedly have a significant impact on the sector. There are rumors that Aegea might be one of the interested parties<sup>33</sup>.

## 4 CONCLUSIONS

This article analyzed Cade's case law since the enactment of Brazilian Competition Law to understand the Brazilian competition authority's stance on the W&S sector. In light of the approval of the New Sanitation Legal Framework in 2020, the recent privatizations of Corsan and Sabesp, and the prospect of a series of concession and PPP auctions in the sector over the next three years, as well as potential new privatizations, it is expected that the authority will have to deepen its competitive analyses in the near future.

Since 2012, Cade has analyzed 30 cases involving concession regimes in the sector, 12 of which occurred after 2020, suggesting a positive impact of the new regulatory framework. These cases predominantly involve the Southeast and South regions, particularly São Paulo (14 cases), Rio Grande do Sul, and Santa Catarina (7 each). The new auctions in the sector somewhat counterbalance this

31 Updated after the auction concluded on 30/10/2024.

32 More information about Minas Gerais' state government plan to privatize the company is available at Arbex (2024) or Purchio (2024).

33 See, for instance, Bethônico (2024).



finding, as most are expected to occur in the Northeast and North regions.

Regarding Cade's decisions, with only one exception (where the case was dismissed), all cases were approved without restrictions, and 28 cases were analyzed under a fast-track procedure. High rivalry in the sector was used by Cade as an argument to mitigate competition risks in the only two cases that exceeded the 20% horizontal concentration threshold.

Although most cases have been analyzed under the fast-track procedure - indicative of the sector's historically low concentration - concentration analyses have become increasingly frequent in recent years. Of the 30 cases reviewed since 2012, 12 involved some sort of concentration analysis, with eight occurring after the new framework's enactment, and six being notified between 2023 and August 2024. These cases allowed a more in-depth evaluation of Cade's position on competitive dynamics in the sector, particularly concerning three aspects: (i) structural characteristics of Brazil's sanitation sector; (ii) definition of the relevant market, in its product and geographic dimensions; and (iii) criteria commonly used for concentration analyses.

Regarding the structural characteristics of W&S, it was shown that, given the high fixed costs and low marginal costs, Cade has established the understanding that the sector exhibits characteristics of a natural monopoly, at the municipal level. Unlike unregulated markets, Cade understands that competition exists "for the market" rather than "within the market", during the bidding for services, that is, *ex-ante* to the beginning of the concessionaire operations.

Cade's approach to defining the relevant market is more consistent in its geographic dimension than its product dimension. Considering that this is a service provision market rather than a production and commercialization of goods, and with no geographic operational boundaries, competition for the market typically involves players across the national territory, and, depending on the bidding conditions, international players. Thus, Cade has focused its competitive analyses on the national geographic dimension.

For the product dimension, Cade understands that activities related to water and industrial effluent capture and treatment, as well as the development of private solutions for the industry, do not align with sanitation services. Cade generally includes only water supply and/or sewage treatment services in the relevant market. That is, there are precedents where water and sewage networks are considered together, while in others, water and sewage services are analyzed separately.

Regarding concentration analyses, Cade has already employed three methodologies: (i) population served; (ii) potentially served economies; and (iii) equivalent population. The latter is the only one that simultaneously considers the relevant market's geographic dimension as national, the product as integrated water and sewage services, and, in line with the goals set by the New Sanitation Legal Framework, the potential market to be served by the concessionaire.

However, this approach alone has limitations. While it captures the potential market, it does not necessarily reflect the actual service provision and, consequently, the actual market shares, which is important for the competition authority to take into consideration. Therefore, and in line with the literature, a dual approach that considers both potential and actual market shares would enable Cade to evaluate competition dynamics more effectively in the W&S sector, ensuring that consolidation does not compromise service quality or access.

The case of Sabesp's privatization in July of 2024 marked a milestone in this discussion as it involves the company that previously held the largest market share in the sector. Having been acquired by Equatorial (and not by Aegea, the largest private player in the sector and initially among the candidates to acquire Sabesp shares but who withdrew before the auction), which held only about 0.34% of the market, the case did not exceed the 20% horizontal merger threshold and, therefore, did not require in-depth competitive analysis.

Looking at the near future, the concession and PPP auctions in the sanitation pipeline suggest that the coming years will be dynamic. The listed projects, when combined with Sabesp's privatization, have the potential to impact more than 66 million people. These auctions may lead to the entry of new players or further market consolidation, increasing the likelihood of cases qualifying for ordinary review procedures. In this context, Cade will be called upon to deepen its competitive analysis. The expected privatization of Copasa – currently the third-largest player with 7.65% of the national market – might be an opportunity for adopting a more rigorous analytical framework.

In this evolving landscape establishing clearer methodological guidelines will be essential to ensure that market dynamics remain aligned with the goals of universalization and improved service quality. While the population served methodology has provided a useful snapshot of the current market structure, it may fall short in capturing competition risks in a rapidly changing sector.

To better reflect both service provision and market potential, Cade should consider institutionalizing a dual, more comprehensive approach, combining potentially served economies (which reflect actual service connections) with the equivalent population metric (which considers the potential market).

Such a framework could enhance Cade's ability to capture the dynamics of this sector, complementing regulatory efforts to prevent harmful consolidation that could limit access or undermine service quality – key concerns as Brazil advances toward its universalization targets. Considering the wave of mergers, acquisitions, and potential new market entrants on the horizon, this is a timely opportunity for Cade to adopt a clearer and more robust approach to market share analysis in the sector. By doing so, it could enhance its capacity to safeguard competition and, ultimately, foster the expansion of W&S services as well as their recognized social benefits.

## REFERENCES

AEGEA assina contrato de concessão para prestação de serviços de saneamento básico no Piauí que beneficiará cerca de 1,85 milhão de pessoas. **Aegea**, Jan. 10, 2025. Available at: <https://x.gd/Z00O1>. Accessed on: May 6 2025.

ARBEX, Pedro. O plano de Minas para privatizar a Cemig e a Copasa. **Brazil Journal**, [S. l.], Nov., 2024. Available at: <https://x.gd/XeSZB>. Accessed on: Dec. 23, 2024.

BANCO NACIONAL DE DESENVOLVIMENTO ECONÔMICO E SOCIAL (BNDES). Hub de Projetos, **BNDES**, [S. l.], [202-]. Available at: <https://x.gd/exWKx>. Accessed on: Feb. 25, 2025.

BENITEZ, Daniel A.; ESTACHE, Antonio. **How concentrated are global infrastructure markets?** Washington, D.C.: World Bank, 2005. (World Bank Policy Research Working Paper, n. 3513). Available at: <https://x.gd/cZzNi>. Accessed on: Dec. 23, 2024.





BETHÔNICO, Thiago. Aegea já mira privatização da Copasa e vê IPO na bolsa saindo ‘mais cedo que tarde’. **Folha de São Paulo**, São Paulo, Dec. 3, 2024. Available at: <https://x.gd/U3pzd>. Accessed on: Dec. 23, 2024.

BRASIL. **Lei nº 12.529, de 30 de novembro de 2011**. Estrutura o Sistema Brasileiro de Defesa da Concorrência; [...] e dá outras providências. Brasília, DF: Presidência da República, 2011. Available at: <https://tinyurl.com/2o94bhj2>. Accessed on: Dec. 15 2024.

BRASIL. **Lei nº 14.026, de 15 de julho de 2020**. Atualiza o marco legal do saneamento básico e altera a Lei nº 9.984, de 17 de julho de 2000, para atribuir à Agência Nacional de Águas e Saneamento Básico (ANA) competência para editar normas de referência sobre o serviço de saneamento, [...]. Brasília, DF: Presidência da República, 2020. Available at: <https://x.gd/4KUd5>. Accessed on: Nov. 14 2024.

BRASIL. Ministério das Cidades. Secretaria Nacional de Saneamento Ambiental. **Diagnóstico Temático: serviços de água e esgoto: visão geral**. Brasília: Ministério das Cidades, 2023. Available at: <https://x.gd/eNjlk>. Accessed on: Dec. 23, 2024.

BRASIL. Ministério das Cidades. Sistema Nacional de Informações sobre Saneamento. **Glossário de Indicadores – Água e Esgoto**: indicadores econômico-financeiros e administrativos. Brasília: Ministério das Cidades, 2022. Available at: <https://x.gd/fosFw>. Accessed on: Dec. 23, 2024.

BRASIL. Ministério do Desenvolvimento Regional. Secretaria Nacional de Saneamento. Sistema Nacional de Informações sobre Saneamento (SNIS). **25º diagnóstico dos serviços de água e esgotos**. Brasília: Ministério do Desenvolvimento Regional, 2020. Available at: <https://x.gd/YrlkB>. Accessed on: Dec. 23, 2024.

CAMPOS JUNIOR, Geraldo. Novos leilões de saneamento devem contratar R\$ 115 bilhões. **Poder360**, [S. l.], July 29, 2024. Available at: <https://x.gd/3Olxq>. Accessed on: Dec. 23, 2024.

CONSELHO ADMINISTRATIVO DE DEFESA ECONÔMICA (Cade). **Guia para análise de atos de concentração horizontal**. Brasília: Cade, 2016. Available at: <https://x.gd/bgGUD>. Accessed on: Dec. 23, 2024.

FUJIWARA, Thomas. A privatização beneficia os pobres? Os efeitos da desestatização do saneamento básico na mortalidade infantil. In: ENCONTRO NACIONAL DE ECONOMIA, 33., 2005, Niterói, **Proceedings** [...]. Niterói: Associação Nacional dos Centros de Pós-Graduação em Economia, 2005. Available at: <https://x.gd/Jo65Y>. Accessed on: Dec. 23, 2024.

GALIANI, Sebastian; GERTLER, Paul; SCHARGRODSKY, Ernesto. Water for life: The impact of the privatization of water services on child mortality. **Journal of Political Economy**, Chicago, v. 113, i. 1, p. 83-120, 2005. Available at: <https://x.gd/QrGf8>. Accessed on: Dec. 23, 2024.

IGUÁ vence leilão de concessão parcial de serviços de saneamento de 74 municípios de Sergipe. **Agência BNDES de Notícias**, [s. l.], Sept. 4, 2024. Available at: <https://x.gd/v3f2D>. Accessed on: Dec. 23, 2024.

INSTITUTO TRATA BRASIL. **Benefícios Econômicos da Expansão do Saneamento em Sergipe**: ex ante consultoria econômica agosto 2024. São Paulo: Instituto Trata Brasil, 2024. Available at: <https://x.gd/udlaL>. Accessed on: Feb. 25, 2025.

INSTITUTO TRATA BRASIL; GO ASSOCIADOS. **Estudo sobre os avanços do novo marco legal do saneamento básico no Brasil de 2024 (SNIS, 2022)**. São Paulo: Instituto Trata Brasil, 2024. Available at: <https://x.gd/iWHqG>. Accessed on: Dec. 23, 2024.

LOUREIRO, Gustavo Kaercher. Observações sobre a prorrogação de contratos de programa sob o



Marco do Saneamento. Rio de Janeiro: Fundação Getulio Vargas, 2020. Available at: <https://x.gd/D5cAY>. Accessed on: May 6th, 202

NAPOLI, Eric. Aegea desiste de apresentar proposta pela Sabesp. **Poder 360**, [S. l.], Jun. 27, 2024. Available at: <https://x.gd/q5sse>. Accessed on: Dec. 23, 2024.

PARANÁ conclui mais uma PPP da Sanepar que garantirá investimentos de R\$ 2,9 bilhões. **Agência Estadual de Notícias**, Curitiba, 20 sept. 2024. Available at: <https://x.gd/EvBNJ>. Accessed on: Nov. 20 2024.

PEDROSA, Robert; MEDEIROS, Lívia. Aegea vence leilão para concessão dos serviços de água e esgoto e investirá R\$ 8,6 bilhões no Piauí. **Governo do Piauí**, Teresina, Oct. 30, 2024. Available at: <https://x.gd/JYXLV>. Accessed on: Dec. 23, 2024.

PRACTICES, RESEARCH AND OPERATIONS IN WATER, SANITATION AND HYGIENE (Pro-Wash). How to Assess the Size of a Sanitation Market and Segment It. [S. l.]: Pro-wash, 2021. Disponível em: <https://x.gd/eHJ1Y> . Acesso em: Dec. 23, 2024.

PURCHIO, Luisa. Governo Zema encaminha propostas para privatização de Cemig e Copasa. **Gazeta do Povo**, Curitiba, nov. 18, 2024. Available at: <https://x.gd/m96sX>. Accessed on: Dec. 23, 2024.

SÃO PAULO (Estado). Secretaria de Meio Ambiente, Infraestrutura e Logística. **Desestatização da Sabesp**: guia informativo setembro/ 2023. São Paulo: Secretaria de Meio Ambiente, Infraestrutura e Logística, 2023. Available at: <https://x.gd/C4jcL>. Accessed on: Dec. 23, 2024.

## APPENDIX

Table 11 includes all mergers analyzed by Cade involving the W&S sector since the Brazilian Competition Law came into effect in 2012 up to August 2024.

**Table 11** - Merger Cases in the W&S Sector (under the Brazilian Competition Law)

#	Case No.	Notification Date	Applicants	Procedure	Decision
1	08700.005308/2013-99	06/17/2013	OAS Soluções Ambientais and Sanear Saneamento de Araçatuba	Fast-track	Approved without restrictions
2	08700.006940/2014-30	08/21/2014	SAAB and Águas de Itu	Fast-track	Approved without restrictions
3	08700.011551/2014-27	12/17/2014	CSN, SAAB and Solví	Fast-track	Approved without restrictions
4	08700.012152/2015-64	12/11/2015	GS Inima and OAS Soluções Ambientais	Fast-track	Approved without restrictions
5	08700.012223/2015-29	12/14/2015	I-Ambiental and Queiroz Galvão	Fast-track	Approved without restrictions
6	08700.001301/2016-41	02/25/2016	Serrana Águas and Aegea	Fast-track	Approved without restrictions
7	08700.004506/2016-88	06/16/2016	Odebrecht Ambiental and Campo Novo RJ	Fast-track	Approved without restrictions
8	08700.007491/2016-18	11/09/2016	BR Ambiental, Brookfield and Odebrecht	Fast-track	Approved without restrictions
9	08700.007545/2016-37	11/11/2016	Aegea and Construtora Aterpa	Fast-track	Approved without restrictions



#	Case No.	Notification Date	Applicants	Procedure	Decision
10	08700.002198/2017-37	04/10/2017	BR Ambiental and Faria Lima 1355 FIP	Fast-track	Approved without restrictions
11	08700.006569/2017-50	10/19/2017	Developer and Queiroz Galvão	Fast-track	Approved without restrictions
12	08700.001278/2018-56	02/27/2018	Aegea and Construtora Aterpa	Fast-track	Approved without restrictions
13	08700.001557/2018-10	03/07/2018	Aegea and Solví	Ordinary	Approved without restrictions
14	08700.002516/2018-41	04/18/2018	Aegea, Sagua and OAS Soluções Ambientais	Ordinary	Approved without restrictions
15	08700.004803/2018-95	08/06/2018	Iguá Saneamento and Alberta Investment	Fast-track	Approved without restrictions
16	08700.001267/2019-57	03/01/2019	Marubeni and AGS	Fast-track	Approved without restrictions
17	08700.002965/2019-70	06/06/2019	GS Inima and BRK Operações Industriais	Fast-track	Approved without restrictions
18	08700.003363/2019-30	07/02/2019	South American Waste Investments, Green Partners, Americas Waste Management and Solví	Fast-track	Approved without restrictions
19	08700.003895/2020-19	08/19/2020	BRK Ambiental and FI-FGTS	Fast-track	Approved without restrictions
20	08700.001498/2021-85	03/22/2021	Canada Pension Plan Investment Board and Iguá Saneamento	Fast-track	Approved without restrictions
21	08700.008273/2022-31	10/21/2022	Servy Investments and N Saneamento FIP-IE	Fast-track	Approved without restrictions
22	08700.000169/2023-89	01/05/2023	Norte Saneamento and BRK Ambiental	Fast-track	Not received
23	08700.000339/2023-25	01/11/2023	Corsan, Parsan and Saneamento Consultoria	Fast-track	Approved without restrictions
24	08700.001893/2023-20	03/14/2023	Acciona Água, N. Saneamento FIP-IE and aQuali	Fast-track	Approved without restrictions
25	08700.005128/2023-89	07/17/2023	Norte Saneamento, Iguá Saneamento, Esap, Itapoã Saneamento and Tubarão Saneamento	Fast-track	Approved without restrictions
26	08700.007167/2023-11	10/11/2023	Duane do Brasil, Tubarão Saneamento and Iguá Saneamento	Fast-track	Approved without restrictions
27	08700.000233/2024-11	01/10/2024	Terracom and Saneamento Ambiental Águas do Brasil	Fast-track	Approved without restrictions
28	08700.001306/2024-83	02/27/2024	Acciona Água and Norte Saneamento	Fast-track	Approved without restrictions
29	08700.003394/2024-58	05/17/2024	Canada Pension Plan Investment Board and Iguá Saneamento	Fast-track	Approved without restrictions
30	08700.005228/2024-96	07/23/2024	Equatorial Energia and Sabesp	Fast-track	Approved without restrictions

**Source:** Cade. Prepared by the authors.