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Divergent perspectives about water security: hydrosocial transformations in the metropolitan region of Montevideo (Uruguay)

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The Montevideo Metropolis, where more than half of Uruguay's population resides, is supplied with water from the Santa Lucía River (SLR), which faces increasing problems of water quality and quantity. In 2020, in the context of national government political changes, a hydraulic project (called Neptuno) involving the construction of a purification plant using water from the Río de la Plata estuary (close to the SLR basin), was proposed by a consortium of private companies. The aim of this paper is to analyze the arguments to support and oppose the Neptuno Project, as well as the hydrosocial transformations promoted by it in the SLR basin, including the scalar strategies adopted. Primary and secondary data (interviews, participant observation, and document analysis) were triangulated. Coalitions pro and against the greater involvement of the private sector with water supply services were identified. Our research shows that diverse perspectives of water security, related to different hydrosocial projects, reflect opposed interests and divergent objectives in a context of disputes within asymmetrical power relationships. This has been reactivating the coalition of the historic conflict against the privatization processes that preceded the constitutional reform in Uruguay in 2004. This coalition, against the Neptuno project, carried out a "jump scale," taking the issue from the local to the national scale.

KEYWORDS

right to water, hydrosocial imaginaries, power relationships, privatization, scalar struggles

1. Introduction

The hydrosocial approach involves the consideration of the different dimensions of water (e.g., material, political, economic, territorial, cultural, and ecosystemic). It also involves the analysis of the object from a critical perspective, to broaden the understanding of the (inseparable) relationships between nature, society, water, and technologies (Empinotti et al., 2021a; Dias Tadeu et al., 2022). The concept of hydrosocial territories is useful to understand the different imagined or materialized projections of the territorialization process from the dispute between different groups of actors. Hydrosocial (Hommes and Boelens, 2016, 2017; Dias Tadeu and Sinisgalli, 2019) territories can be defined as

spatial configurations of people, institutions, water flows, hydraulic technology, and the environment that revolves around water control (Boelens et al., 2016). Thus, the concept of hydrosocial territories contributes to the analysis of (asymmetric) disputes that occur between actors and result in the construction and configuration of territories, flows, rules, institutional models, and water control.

In this conceptualization of hydrosocial territories, the notion of geographic scale is central and must be understood as a historical construction, based on a deeply heterogeneous and always contested process (Swyngedouw, 2000). Therefore, it should be noted that the scale is socially constructed and reflects the interests of the actors that make it up (Delaney and Leitner, 1997). The scale can also be understood as a “socio-spatial level of analysis”, which makes it possible to understand that the territories are spatially organized at different interrelated and overlapping levels (Hoogesteger et al., 2016, 2017). Its definition is the result of disputes between different interests through regulations, rules, and relationships of scalar politics (Hoogesteger and Verzijl, 2015).

Water scarcity and water crises are vastly covered in the academic literature (Barlow and Clarke, 2003; Santos and Rodríguez-Garavito, 2005). Some authors have adopted a critical perspective to these topics, arguing that a catastrophic situation of water scarcity is not “inevitable” since water crises are often related to political decisions (Achterhuis et al., 2010; Zwartveen and Boelens, 2011; Boelens and Doornbos, 2022). These authors also point out that the conflict associated with the issue involves water access rights, participation in decision making, and control over the resources. Thus, water scarcity is about power relations between actors (individual or collective, communities, and public and private organizations) involved in the decision-making process of water management.

This topic is strongly related to the discussion on “water security.” Different conceptualizations of water security are used, discussed, and contested in the global political scenario (Cook and Bakker, 2012; Jepson et al., 2017; Hoekstra et al., 2018; Empinotti et al., 2021b; Shapiro, 2021) (see Table 1). This is also the case in Uruguay, where different actors adopt the term of water security in multiple ways and for different purposes, for instance, to justify proposals and hydraulic projects. In this country, there is a culture of “water abundance,” due to the great quantitative availability of surface water (Achkar et al., 2005). However, due to the intensification of land uses, especially agriculture and livestock production, problems related to eutrophication have become common (Bonilla et al., 2015; Goyenola et al., 2021).

To contextualize the Uruguayan case of struggle against a privatization wave, in 2004 social organizations promoted at the national level, a referendum that led to a Constitutional reform (of Article 47) which determined the State as the only responsible for water and sanitation services¹ (Taks, 2008; Lázaro et al., 2021;

Trimble et al., 2021). The State Sanitary Works Administration (*Obras Sanitarias del Estado* - OSE), a public company, has been responsible for supplying drinking water to the entire country, as well as providing sanitation services (except in the Department of Montevideo, where its government, at the subnational level, has this duty). In addition, through the National Water Policy (Law n° 18.610/2009), participatory boards with an advisory role (Regional Water Resources Councils and Basin Commissions) have been created at multiple scales, composed of representatives of the government, users, and civil society.

The Montevideo Metropolis, where more than half of Uruguay’s population resides, is supplied with water from the Santa Lucía River. The basin (Santa Lucía River Basin - SLRB) has a diversity of landscape units, geological characteristics, types of vegetation, and more than 90% of its area is used for productive activities (livestock, agriculture, forestry) (Achkar et al., 2012). Several studies indicate that the degradation of water quality is one of the main water problems in the basin, and this is closely related to the above-mentioned land-use practices (Arbeletche and Gutiérrez, 2010; Achkar et al., 2012; Aubriot et al., 2017; Gorgoglione et al., 2020). In 2011, the Regional Water Resources Council for the Río de la Plata Basin and its Maritime Front (“Regional Council”) was created, which covers the area of the SLRB. Two years later, in 2013, the Santa Lucía River Basin Commission was formed, triggered by an episode of cyanobacteria blooming that exceeded the water purification capacity, causing a bad smell and taste of the tap water (Aubriot et al., 2017).

In 2020, in the context of national government political changes, a hydraulic project called “Neptuno” (or “Arazati”) was proposed by a consortium of four private companies (Ciemsa, Berkes, Saceem, and Fast) named *Agua de Montevideo*, and supported by the national government (Seinco., 2022). The Neptuno Project (which does not include a desalination plant) involves the construction of a water treatment plant in Arazati (San José Department), using water from the Río de la Plata estuary, in an area next to the SLRB (see Figure 1). The hydraulic project is at the core of a socio-environmental conflict, defined by the grassroots movements and part of the academic sector as a process of water privatization. This contradicts the worldwide recognition of Uruguay for the inclusion of principles such as the “human right to water” and “State exclusivity of water supply services” in its Constitution. The aim of this paper is to analyze the arguments to support and oppose the Neptuno Project, as well as the hydrosocial transformations promoted by it in the SLRB, including the scalar strategies implied. The scalar disputes will be central to this analysis.

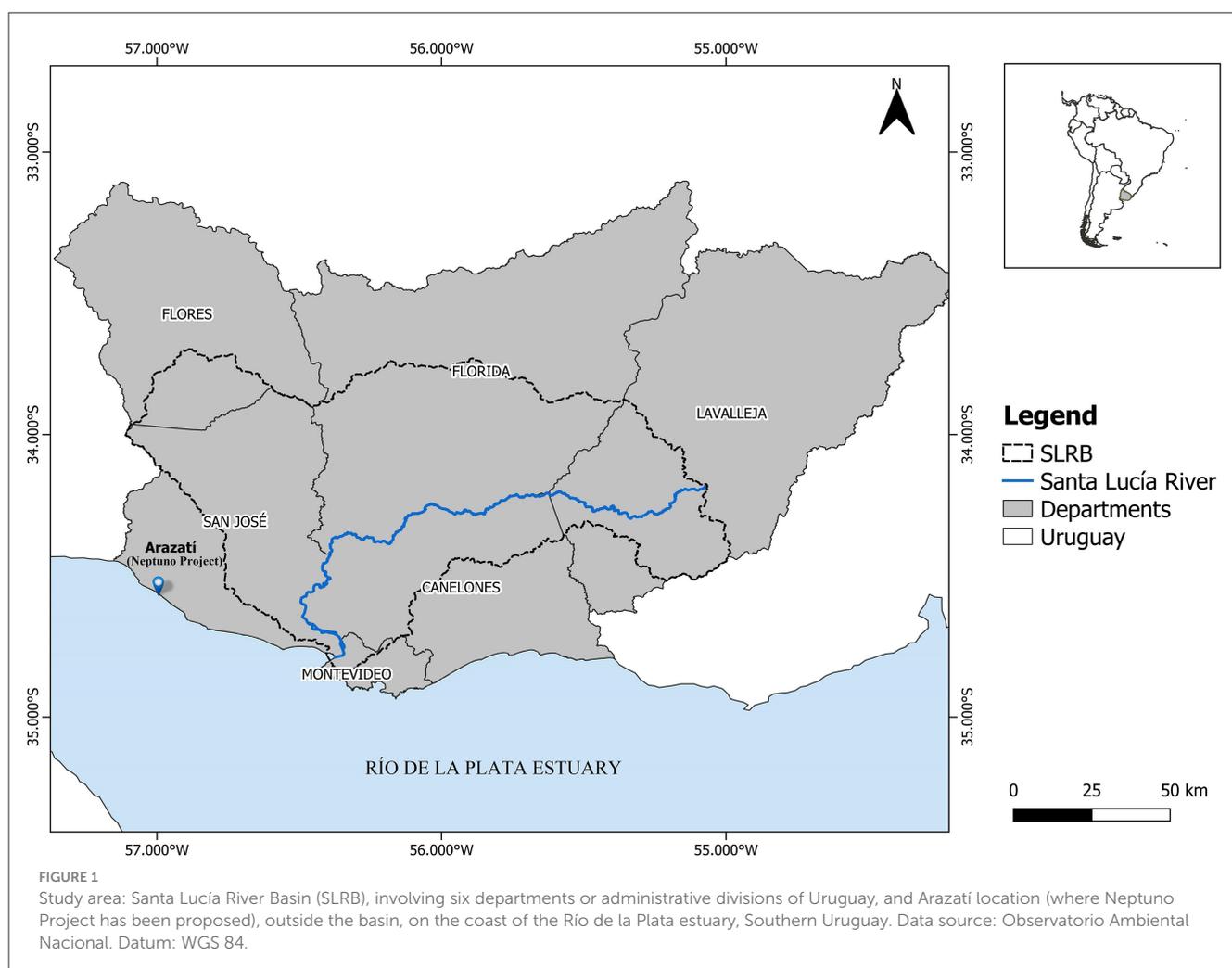
2. Methods

Data collection included primary (interviews, participant observation) and secondary (document analysis) sources. From November 2020 to September 2021, semi-structured interviews were conducted with 44 actors directly involved with water issues and/or water management in the basin. The snowball method was applied to identify relevant actors from different levels (national, departmental or subnational, and local) and from different sectors (social organizations, academic sector, governmental actors, and

1 [...] “Water is an essential natural resource for life. Access to drinking water and access to sanitation constitute fundamental human rights. [...] Users and civil society will participate in all instances of planning, management and control of water resources. [...] The public sanitation service and the public water supply service for human consumption will be provided exclusively and directly by state legal persons.” (URUGUAY., 1967; Art. 47).

TABLE 1 Some water security definitions and divergences.

Definitions	References
“Availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production, coupled with an acceptable level of water-related risks to people, environments and economies”. Definition focused on investment recommendations in infrastructure and the strengthening of institutional bases	Grey and Sadoff, 2007, p. 548; definition also adopted by World Bank. (2021)
This definition focuses on the capacity to guarantee the water to meet the needs of agricultural production even in the driest regions of the world.	FAO., 2000
“... the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human wellbeing, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability”	UN-Water., 2013, p. vi
It adopts the definition proposed by UN-Water., 2013 and adds the importance of “good governance”, “transboundary cooperation”, and “financing”, relating these to the United Nations Sustainable Development Goals.	United Nations Educational, Scientific and Cultural Organization (UNESCO), 2019, p. 23
“Water security, at any level from the household to the global, means that every person has access to enough safe water at affordable cost to lead a clean, healthy and productive life, while ensuring that the natural environment is protected and enhanced”.	GWP., 2000, p. 12; definition also adopted by the World Water Council., 2000
Water security should not be understood merely as a guarantee of (physical) water supply, but also as a tool to change social relationships through which water is governed (Political Ecology perspective)	Jepson et al., 2017; Empinotti et al., 2021b



productive sector). In addition to the interviews, we collected and analyzed secondary data for another 11 actors involved with the Neptuno Project (Supplementary Annex 1). Moreover, participant observation was carried out from August 2021 to January 2023 during the meetings of the Santa Lucía River Basin Commission and the Regional Council. Document analysis was carried out based on the review of technical reports, minutes of meetings of these two boards, legislation, and press releases, among others.

Data triangulation was carried out to increase the validity of the findings, and to contemplate different aspects of the same subject. For the analysis of hydrosocial transformations, we identified the main hydrosocial imaginaries, that is, the main projects or proposals with impacts on water and/or the territory, which were present in the positions of the different actors (Hommes and Boelens, 2016, 2017; Dias Tadeu and Sinisgalli, 2019). We identified and analyzed the actors involved with the hydraulic project, their positioning with respect to the constitutional reform, and the different groups' articulations. We then investigated the scalar implications of the Neptuno Project (Hoogesteger and Verzijl, 2015; Hoogesteger et al., 2016, 2017), that is, their influence on the transformation of the hydrosocial territories in the basin and on the administrative and hierarchical relationships related to decision-making processes.

3. Water privatization in Uruguay: tensions, resistance, and social mobilization

The conflicts around the privatization processes involving water and sanitation services in Uruguay precede the Neptuno Project. From 1985 to 2004, the national governments, led by right-wing parties (*Partido Nacional* and *Partido Colorado*), promoted various privatization measures (Gonzalez Candia and Zapata Schaffeld, 2015). The first cases of privatization of water supply services occurred in the 1990s (Achkar et al., 2005; Bascans et al., 2022), with a concession to the companies *Aguas de la Costa* and *URAGUA*, subsidiaries of the transnational companies Suez and *Aguas de Bilbao* (Domínguez and Achkar, 2019). In the late 1990s and early 2000s, the World Bank (WB) and the International Monetary Fund (IMF) conditioned a context for the expansion of private concessions and facilities for greater involvement of the private sector in Uruguay (Taks, 2008).

In response to the expansion trend of the private model, which had been presenting a series of problems and generating strong socio-environmental conflicts (Santos, 2010), in 2000 a social organization called Commission in Defense of Water and Sanitation of Costa de Oro and Pando (*Comisión en Defensa del Agua y el Saneamiento de la Costa de Oro y Pando*) was formed, made up of various neighbors' organizations and social groups in Canelones Department. This organization worked jointly with the NGO Social Ecology Network-Friends of the Earth (REDES-Amigos de la Tierra) and a union of employees of OSE (*Federación de Funcionarios de O.S.E.- FFOSE*) (Achkar et al., 2005). This first articulation formed the basis for the creation of a national-level social organization called National Commission in Defense of Water and Life (*Comisión Nacional en Defensa del Agua y la Vida - CNDAV*), which led the mobilization to collect signatures

to hold the “water referendum” in 2004. The constitutional reform, in which Article 47 was amended, was supported by ~65% of the voters of Uruguay (Achkar et al., 2005; Domínguez et al., 2015). This reform, in addition to mandating the “human right to water”, determined that the services of water provision and sanitation would be in charge of the State exclusively. Also, the reform established that users and civil society would participate in all instances of planning, management, and control of water resources, among other issues (Taks, 2008; Lázaro et al., 2021; Trimble et al., 2021). During the social mobilization for the referendum, other social movements, unions, and fractions of political parties were articulated around the CNDAV (Taks, 2008; MSC-Uruguay., 2020). The opposition to water privatization processes and the promotion of social participation were among the common objectives of these actors.

3.1. Neptuno: a hydraulic project involving the private sector and divergent positions

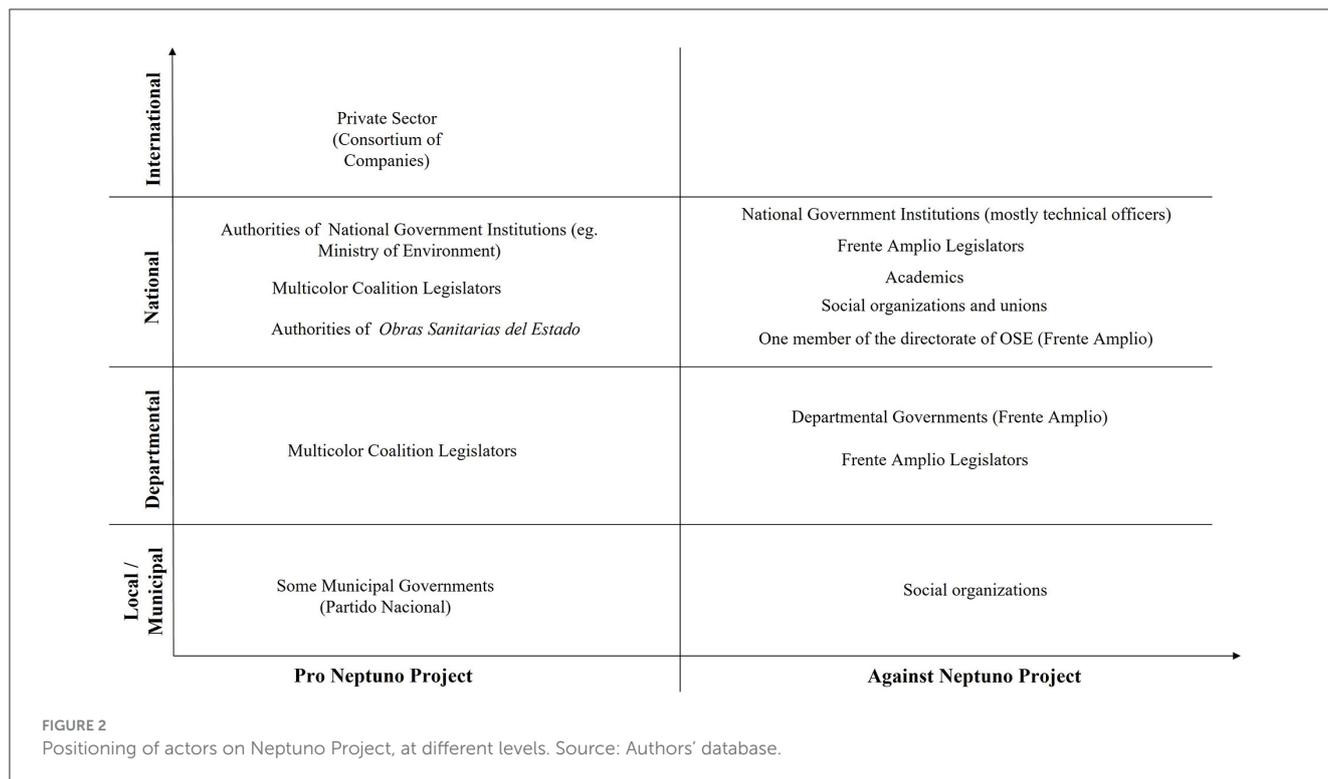
The national governments of 2010-2015 and 2015-2020 (led by the left-wing party *Frente Amplio*) prioritized the consideration of hydraulic projects within the Santa Lucía River Basin, such as the construction of a dam on the Casupá Stream (which has not been implemented) and the expansion of the main purification plant (in Aguas Corrientes). Also, an Action Plan led by the National Environment Directorate, with management measures focused on improving water quality and quantity in the basin, has been under implementation since 2013 [*Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente (MVOTMA)*, 2013, 2018].

After the change of national government in 2020, when the right-wing Multicolor Coalition² was elected (led by *Partido Nacional*, in coalition with *Partido Colorado*, *Partido de la Gente*, *Partido Independiente*, and *Cabildo Abierto*, INFOBAE., 2020), the hydraulic project called “Neptuno - Improvement of Water Quantity and Quality in the Metropolitan Area of Montevideo” gained strength. The government program for the electoral political campaign of the current president of Uruguay already mentioned his interest in alternatives that considered the use of drinking water sources from outside the basin. However, the involvement of the private sector was not mentioned at the time. The Neptuno Project, proposed by the consortium *Aguas de Montevideo*, implies water extraction from the Río de la Plata estuary, followed by its purification in a new plant to be built to supply Montevideo and part of San José and Canelones departments, via an 80 km pipeline (Figure 1) (Seinco., 2022).

From the data analyzed, it was possible to identify a clear division of positions between those who support the Neptuno Project and those who are against it (Figure 2). Due to the lack of data, some actors did not have their position taken into account, so the absence of a position may indicate impartiality/neutrality and/or the absence of data to assign a position (see Supplementary Annex 1).

The actors supporting the project included members of government institutions at the national level (Ministry of

² It is interesting to point out that this political coalition involves parties that promoted a process of privatization of water supply services in the past.



the Environment, Presidency of Uruguay, and the President and General Manager of OSE), at least one actor from a municipal government, legislators at national and departmental levels [Junta Departamental de San José (JDSJ), 2021; Cámara De Representantes, 2022], and the consortium of companies (proponents of the project). Most of the identified actors were articulated among themselves by the electoral coalition of 2020, and the project is seen as a legacy of the current government.

From 2020 to 2023, Uruguay was affected by a meteorological drought, which was more intense than previous ones (INUMET., 2023). This fact was used to support the need for the Neptuno project. Among the main arguments put forward by the Ministry of the Environment, the Presidency of Uruguay, and a fraction of OSE Directorate is that it is necessary to diversify the water sources that supply the Montevideo Metropolis (since the region is supplied mainly by one treatment plant in the Santa Lucía River). In a meeting of the Regional Water Resources Council in which the Minister of the Environment participated, he stated that “we are defenders of the project in general terms, we believe that it is a virtuous project”. Regarding the problem of water scarcity, he added, “...all the studies indicate that this problem will continue to increase and this (Neptuno Project) is part of a much more powerful solution, that is, a solution that has other elements to ensure drinking water quantity for Montevideo” (Regional Council September 8, 2022). Especially in the context of drought, Neptuno has been defended as an important complementary source of drinking water to guarantee the water security of the Montevideo Metropolis (CRRPFM CCRSL., 2022, 2023a,b,c).

On the other hand, a diversity of actors were identified in opposition to the project: social organizations (CNDAV, REDES-AT, *Movimiento por un Uruguay Sustentable, Asamblea por el*

Agua del Río Santa Lucía, Colectivo Tucu-Tucu), academics (Universidad de la República and Instituto Clemente Estable), and actors involved with government and/or legislative institutions (*Institución Nacional de Derechos Humanos y Defensoría del Pueblo*, national deputies and actors from the San José Departmental Board - Subnational Legislature). Several of these actors and their organizations were directly involved with the constitutional reform of 2004, or supported it.

From the primary and secondary data analyzed, the main arguments of the actors articulated in opposition to the Neptuno Project, regarded the quality of the drinking water in case of algal blooms (cyanotoxin) in the Río de la Plata estuary, which occur often, and the risk of unavailability of drinking water in times of increased salinity in the region of the raw water intake. In one of the joint sessions between the Basin Commission and the Regional Council in January 2023, an actor from the CNDAV stated that “...the issue here is that salinity or the concentration of chlorides is not the only parameter to take into account, neither are cyanobacteria, but rather toxins” (Regional Council and Basin Commission January 18, 2023). Also, in a document prepared by academics, they mentioned that “the Río de la Plata is not, and cannot be considered, an infinite source of water for purification” (Fcién CURE., 2022; p.3).

Other arguments posed by actors opposing the Neptuno Project included (CRRPFM CCRSL., 2022, 2023a,b,c; Fcién CURE., 2022): the high cost of the project, which can generate an increase in the rate paid by citizens (Elpopular., 2021; Universal., 2022), with the associated risk of producing inequality in access to drinking water (LaDiaria., 2022); OSE’s indebtedness and the risk of reduced investment in infrastructure and maintenance of OSE’s aging infrastructure; the lack of social participation in the different stages

of the project (PIT-CNT., 2022)³ (i.e., planning, management, and control of water resources, as determined by the constitutional reform); the involvement of the private sector with the water and sanitation services (LaSemana., 2021). The non-consideration of alternatives (e.g., hydraulic projects in other localities, measures to improve water quality in the SLRB, investment to reduce the loss of drinking water in its distribution, etc.), and the risk of reduced attention and control of existing management measures in the basin (such as the Action Plan) - once an alternative water source exists, were additional arguments posed by actors opposing the Neptuno Project. In response to the privatization's argument, the original Neptuno proposal was revised to make OSE responsible for the operation of the water treatment plant. After public bidding, in August 2023 it was awarded to *Aguas de Montevideo* consortium at 304 million dollars; the total cost for OSE (paid over 20 years) will be about 890 million dollars (M24, 2023; Magallanes, 2023).

From the perspective of the actors supporting Neptuno, the project is based on a concept of water security that considers the material dimension of water, since it is focused on the expansion of the quantitative availability of water for supply. It is a measure based on the hydraulic paradigm of transformation of water flows, which according to the arguments in defense of the project, would reduce the risk of shortages in the Montevideo Metropolis. Access to information and decision making have been centralized by the political-economic sector (government, private companies in the consortium, and OSE). On the contrary, social demands against Neptuno are framed within another model of water security, based on water justice and hydrosocial perspectives (Zwarteveen and Boelens, 2011; Jepson et al., 2017; Empinotti et al., 2021b), which claims to consider more than just the material dimension of water. In this sense, water security would not only seek to meet the quantitative demand, but also the environmental quality of the basin, in addition to enabling greater social involvement and participation in all stages of water planning, management, and control.

3.2. Disputes and multi-scale strategies around the neptuno project

By adopting the scale as a socio-spatial level of analysis, it was possible to identify the overlap between different territorialization projects. Neptuno implies an expansion of the territory and its hydrosocial relations since it broadens the area of the SLRB for the purpose of water supply to the Montevideo Metropolis. This project has largely concentrated the information and decision-making power on government actors at the national level in coordination with the private sector. Departmental governments apparently were neither consulted nor had considerable access to information. What has been observed around the Neptuno Project can be conceptualized as a dispute between different hydrosocial imaginaries that promote changes in the hierarchy

of the administrative organization and power in decision making among local, departmental, and national actors, from different sectors (but decisions have not been discussed in participatory committees, as will be shown in what follows).

The hydraulic project has involved political actors, high-ranking managers, and directors of public institutions, who entered the subsystem of supply and sanitation policies after the change of national government and have been defending the project, with the consortium of private companies. From the "scalar politics," the scalar strategy used by the Ministry of Environment (top-down) was not to include the discussion about Neptuno in the agenda of the existing participatory boards (SLRB Commission and Regional Council). For example, authorities of the national government argued that the project did not need to be discussed at the Basin Commission because it was outside its borders, not recognizing the relationship between these territories. The argument given was that due to the transfer of water between basins, the impact was no longer local (or at basin scale) but regional. However, instead of including the Neptuno topic in the regular agenda of the Regional Council, the government (Ministry of Environment) proposed to create a new space of discussion (similar to a Working Group), which was questioned by multiple actors (such as social organizations and academics) and in the end was not formed. Finally, in response to the increasing demand for social participation with regards to Neptuno, the national government convened four joint sessions between the Basin Commission and the Regional Council. The agenda of these sessions was set by the Ministry of the Environment (apparently in coordination with OSE) and was focused on specific topics about the Neptuno Project, not allowing to address broader themes (e.g., alternative projects or initiatives). The meetings included long presentations by the main actors defending the project, and some time for questions and answers (when multiple criticisms were raised, both about the project and its creation process).

On the other hand, from the "grassroots scalar politics" notion (Hoogesteger et al., 2017), it was possible to identify articulations of local-level actors, for instance between social organizations of Arazatí and social organizations from other areas. One of the former organizations acts locally on the Santa Lucía River Basin and its members participate in the SLRB Commission. Others operate at the national level and participate both in this Basin Commission and in the Regional Council of the Río de la Plata. From this articulation between social organizations at multiple levels, local and national protests as well as sessions in the Chamber of Deputies were coordinated. Greater visibility of the issue in mass media was also promoted. Furthermore, a new articulation between a local organization (from the affected area) with academic actors was facilitated. At the same time, actors from local organizations also sought to liaise with national deputies from their department (San José) to request more information about the project, as well as to increase the pressure to oppose the project. This social and political articulation has involved social organizations, unions, researchers, and political parties, all of which were involved with, or supported, the constitutional reform. Some actors from the academic sector, who had quit the Basin Commission and Regional Council for multiple reasons (including drawbacks of these boards), resumed their participation in these and other spaces.

³ Resolution N° 1157/2022 from the National Institution of Human Rights and Defense of the People (INDDHH., 2022), and subsequently, Resolution No. 1195/2023 (INDDHH., 2023).

One of the scalar strategies used by a local social organization (Tucu-Tucu) was the request (not fulfilled) of the formation of a new Basin Commission for *Arroyo del Sauce* (Sauce Stream), corresponding to the area that would be affected by the project, increasing the possibility of raising local voices. The wide articulation that was found in opposition to Neptuno, involving actors from different levels (local, departmental, national) and sectors (academic, political, administrative, social), allowed for a “jump scale”, expanding the visibility of the conflicts associated to the project through protests and the media (television and written press) to insert this discussion in the public agenda.

Another strategy observed involved litigation: social organizations and the Departmental Government of Montevideo (subnational level) entered with several legal procedures requesting the annulment of the bidding process and the continuity of the Neptuno Project. Despite this, the bidding process was carried out and two consortiums of private companies submitted proposals (LaDiaría, 2023). Actors of the coalition pro-Neptuno claimed that the opposition’s arguments were merely political and lacked a strong foundation.

The different scales disputed in this conflict (multilevel or concentrated at the national level) involve diverse and opposing interests. On the one hand, there is interest in greater involvement of the private sector, despite the constitutional reform that imposed limits on this practice. On the other hand, there is a claim for greater social participation (at all stages), new Basin Commissions, and greater decentralization of power and transparency in decision making, from the early stage of the conception of a proposal, and not only in a consultative way.

4. Final considerations

This research has shown the existence of coalitions pro and against processes of greater involvement of the private sector with water supply services in Uruguay. Changes identified in external conditions to the public policy subsystem of the water and sanitation sector, such as the national political context and the change of government, favored the strengthening of proposals that were dormant, such as the Neptuno Project. Also, the context of the drought was used to strengthen the defense of this hydraulic project, as observed in other studies in the country (although without involvement of the private sector, Dias Tadeu et al., 2022).

Amidst the conflict around the Neptuno Project, it was possible to observe that the strategy of decentralization by hydrographic basins is being used by the opposition, along with other strategies, to increase the power of local and subnational actors, both governmental and non-governmental. At the same time, however, there is a certain level of deterioration in the participatory boards, due to different strategies adopted by the convening organization. These include not considering in the agenda projects with potential impact on the basin (i.e., bypassing the Basin Commission and Regional Council), and limiting social participation to consultation and complaints, not fulfilling the advisory role of these boards. These drawbacks can also be observed in the 2023 water crisis which is affecting the Metropolitan Region.

The confrontation between two perspectives of water security was identified. On the one hand, the perspectives of Neptuno

Project advocates are based on the material dimension of water and explore different formats of private sector involvement to circumvent the constitutional definition. On the other hand, opponents of the project aim at another perspective of water security, which seeks to achieve the human right to water, alerts to the risk of producing inequality in access to drinking water, and claims to guarantee the environmental quality of the watershed, and effective social participation, as provided for in the Constitution.

The coalition against privatization processes (and greater involvement of the private sector) was broad, and it was composed of a diversity of actors (social, academic, political) with different power resources (social mobilization, the possibility of promoting referendums, diffusion for media, production of academic knowledge, access to litigious and political resources). As shown by the Neptuno case, these resources can be quickly activated in front of proposals involving the private sector. This articulation, for some time, seemed disjointed. Some actors who no longer participated in the Santa Lucía River Basin Commission and in the Regional Council, rearticulated and acted through various fronts, expanding the opposition pressure and carrying out a “jump scale” (taking the issue from the local to the national scale). Moreover, the constitutional statement of social and user participation “in all stages of planning, management, and control of water resources” became again at the core of public discussions.

Data availability statement

The original contributions presented in the study are included in the article/Supplementary material, further inquiries can be directed to the corresponding authors.

Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements. Oral consent was given in the recorded interviews.

Author contributions

ND and PV collected complementary secondary data for this article. ND, MT, ML, and PV performed data analysis and the writing of the article (led by the ND). MV contributed with final revisions. All authors carried out primary data collection and coding processes.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/frsc.2023.1207652/full#supplementary-material>

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