



# Project Information Document (PID)

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Concept Stage | Date Prepared/Updated: 26-Aug-2019 | Report No: PIDC26910



**BASIC INFORMATION**

**A. Basic Project Data**

Country Uruguay	Project ID P168624	Parent Project ID (if any)	Project Name Uruguay Efficiency and Resilience Water and Sanitation Project (P168624)
Region LATIN AMERICA AND CARIBBEAN	Estimated Appraisal Date Oct 15, 2019	Estimated Board Date Dec 19, 2019	Practice Area (Lead) Water
Financing Instrument Investment Project Financing	Borrower(s) Obras Sanitarias del Estado (OSE)	Implementing Agency Obras Sanitarias del Estado (OSE)	

**Proposed Development Objective(s)**

The two-part Project Development Objective (PDO) is to support OSE in (i) improving the efficiency of water supply operations; and (ii) pilot innovative technologies for improved resilience.

**PROJECT FINANCING DATA (US\$, Millions)**

**SUMMARY**

<b>Total Project Cost</b>	25.00
<b>Total Financing</b>	25.00
<b>of which IBRD/IDA</b>	25.00
<b>Financing Gap</b>	0.00

**DETAILS**

**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	25.00
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Environmental and Social Risk Classification  
Moderate

Concept Review Decision  
Track II-The review did authorize the preparation to continue



Other Decision (as needed)

## B. Introduction and Context

### Country Context

Since the initiation of the Frente Amplio's third consecutive mandate in March 2015, the Government of Uruguay (GoU) has prioritized education, infrastructure, early childhood development and security, as well as sustainable growth. There is consensus among government, analysts, and opposition members alike, that closing the deficit in infrastructure and the need for further progress in secondary education outcomes are the main challenges faced by the country nowadays.

The Uruguayan economy has averaged 4.1 percent growth between 2003 and 2018 and has recently shown significant resilience in maintaining positive growth, while its neighbors were entering into recession in 2017 and 2018. This represents a break with historical trends when Uruguay's economic performance was highly correlated with that of Argentina and Brazil. Prudent macroeconomic policies, strong institutions and the commitment to diversify markets and products within the dominant sectors of agriculture and forestry, have increased Uruguay's capacity to buffer negative regional shocks.

Uruguay's achievements in poverty reduction and shared prosperity are in good part a function of its social contract, which reflects a high value placed on the reduction of poverty, on equity and decent labor conditions, on a strong social welfare system and an important role for the State in service delivery. Moderate poverty declined from 32.5 percent in 2006 to 8.1 percent in 2018, and extreme poverty has practically disappeared, with 0.1 percent in 2018. In addition, between 2012 and 2017, income levels among the poorest 40 percent of the Uruguayan population have increased much faster than the average growth rate of income levels of the entire population, with growth in the bottom 40 at 3.2 percent, compared with overall per capita income growing at 2.6 percent. Nevertheless, certain significant differences persist, with the proportion of the population below the national poverty line still significantly higher in the North of the country, as well as among children and youth with 17.2 percent among children younger than 6, and 15.0 and 13.9 percent among the age groups 6 to 12 and 13 to 17, respectively. In addition, new development challenges have emerged (climate change, pollution, external financial crisis, aging population, among others), and structural reforms are needed to safeguard and advance the socio-economic achievements of the last decade.

According to the most recent estimates (2014), Uruguay has a population of 3,404,000 inhabitants. The majority is concentrated in urban areas with 94.7 percent, and 5.3 percent in rural areas. Following global trends, the country continues to show a densification pattern in the coastal zone, being 63 percent of the population concentrated there, especially on the coast of the Rio de la Plata.

*Post-capital increase requirements and World Bank business model in high-income countries (HICs).* Uruguay is among the highest income borrowers of the World Bank, with a gross national income per capita of US\$15,000, equivalent to double the threshold for initiating graduation, i.e. US\$6,795. In this path towards graduation, new operations should discuss and focus on, to the extent possible, the following criteria: (i) closing the institutional gaps by focusing on capacity strengthening and reforms; (ii) delivering global public goods; and (iii) opening/accessing capital markets. In addition, in the specific case of Uruguay, new operations should empower Uruguayan state-owned enterprises to share lessons learned and create knowledge for other countries in the region and across the globe.



*Presidential elections, and project preparation timeline, amount and content.* Uruguay will hold presidential elections in October 2019 and while the current administration had stated that no projects would be discussed until the new government is sworn in, OSE and the Ministry of Finance (MEF) have nevertheless shown interest in preparing a new Water and Sanitation operation before the new administration takes seat, provided it reflects the current political environment, as well as OSE's current debt situation. In that sense, and following discussions held with OSE and MEF during the last preparation mission in May 2019, this Project Concept Note (PCN) presents the options selected by OSE, the MEF and the CMU in terms of preparation timeline, amount and content.

## Sectoral and Institutional Context

The Constitutional reform of 2004 resulted in the declaration the access to water as a human right. Consequently, water and sanitation services (WSS) should be guaranteed and their provision governed by a social reason before an economic interest. From the amendment's regulation later in 2009 onwards, Uruguay initiated a series of institutional reforms aimed at dividing policy-making, regulation and operational functions in the water sector, while aiming an integrated management of water resources. The Ministry of Housing, Land and the Environment (MVOTMA) is in charge of policy making, and its National Water Directorate (DINAGUA) is responsible for formulating policies on WSS and water resources management, and MVOTMA's National Directorate for the Environment (DINAMA) is responsible for the supervision of the water quality of water streams and control of wastewater discharge. The Regulator of Energy and Water Services (URSEA), a technically autonomous and decentralized executing unit, regulates the provision of power, fuels, and WSS services. Its functions include regulating water prices and quality.

Obras Sanitarias del Estado (OSE), the state-owned operator, is responsible since 1952 for providing drinking water services to the entire country and sanitation services to the entire country, except for Montevideo. The service provided by OSE does not receive any type of state subsidy or tax exemption, and revenues from tariffs are sufficient to cover all of the utility's operation and maintenance (O&M) costs, to service its debt and to contribute towards new capital investments. OSE has been able over the course of recent years to transition from a slow-moving public utility to one of the most advanced utilities in the region, and the World Bank, through a series of operations since the early 2000's, has been instrumental in supporting this evolution, with investments in capacity building, financial reforms, and infrastructure. The World Bank's support, along with other development partners, helped strengthened OSE's creditworthiness and its ability to secure private capital financing, and its improved financial performance over the course of these years earned OSE the favorable investment grade credit rating of BBB+ that enabled it to tap capital market financing through 22-year bonds in 2017. A year later, in April 2018, OSE's credit rating had improved to A-, and on May 23, 2019, OSE issued two new series of bonds worth close to US\$30 million.

**Water resources management.** The 2017 National Water Plan (Plan Nacional de Aguas), developed under the coordination of DINAGUA, establishes the general framework for the integrated and sustainable management of water resources throughout the territory, and highlights the participation of all water users, the incorporation of risk in planning and management of water resources, innovation, capacity building and environmental education as key cross-cutting themes to achieve water security. The document proposes specific objectives aligned with the national water resources policy, while setting the foundation for the formulation of national, regional and local water management plans, including Water Security Plans (WSP), which the National Water Plan calls to develop for 52 drinking water systems by 2025.

In 2013, a severe water degradation event in the Santa Lucia River resulted in a deterioration of drinking water quality (smell and taste) for the population of Montevideo, raising a number of red flags around the structures and policies



in place to manage water resources and their link with agricultural practices in the country. A similar event occurred in the summer of 2015 affecting the Laguna del Sauce, the drinking water source of one of the most touristic destinations of Uruguay (coast of the Maldonado Department), further highlighting the need for action. This resulted in the development of the “Santa Lucía River Basin Water Quality Improvement Action Plan” and the definition of a number of critical measures in June 2015 and December 2018 (the so-called “Second Generation Measures”), including diversifying water supply sources for the Montevideo Metropolitan Region, and incorporating early warning systems for water quality within OSE’s operation of Montevideo’s Aguas Corrientes drinking water treatment plant (WTP). This has further sparked the expansion of such plans to the rest of the territory, the latest of which covering the Rio Negro River Basin was established by decree in September 2018.

**Water supply services.** Uruguay has one of the highest water supply coverage in the region, with 98.4 percent of the population having access to improved water sources inside or outside the home and 96.0 percent with access to drinking water through supply networks (INE, 2011). The challenge of achieving universal access to drinking water lies with reaching out to the most vulnerable population of small rural communities and dispersed population, representing 2.6 percent of the population. While OSE is today considered to be a regional example for best operational, financial, and institutional practices, it still struggles with high levels of non-revenue-water (NRW), with about 50 percent at the national level. The utility has started a program for the reduction of NRW in several urban areas, including Rivera, Salto, and Montevideo among others, but progress has been slow and the strategy needs to be expanded. In addition, OSE faces challenges of water quality at the source, with various incidents of algal blooms registered over the course of recent years having an impact on its drinking water operations and public image, and is looking for ways to diversify water supply sources, as well as to build in resilience in its operations.

**Sanitation services.** At the national level, sanitation coverage reaches 94 percent of households, with 59 percent of the population connected to a sewage network. In addition, important gaps continue to exist between Montevideo, other urban areas, as well as small towns and rural areas in terms of sanitation coverage and solutions in place. For instance, while in Montevideo, 85 percent of households in the department are connected to a sewage network, this proportion dramatically drops to 41 percent in the interior of the country, particularly 55 percent in towns with more than 10,000 people, and close to 4 percent in towns and areas with less than 10,000 people. This leaves a large proportion of the population in the interior of the country using individual sanitation solutions such as cesspits and septic tanks, with no guidelines or regulation in place to ensure their safe usage and compatibility with the environmental and public health concerns of deteriorating water quality. OSE is responsible for providing sanitation services, through sewage networks, to the population of Uruguay, except for the population of Montevideo for which the Municipality holds the mandate. In addition, departmental governments are responsible for on-site sanitation systems and are meant to play an increasingly important role in the universalization of adequate sanitation by 2030, a GoU objective attached to the National Sanitation Plan being developed under the coordination of the National Environment, Water and Climate Change Secretariat (SNAACC).

Even after jointly developing the National Connection Plan to Sanitation Networks with the MVOTMA, OSE continues to struggle with achieving high connectivity levels to the sanitation network, with an estimated 16 percent of households with a sewage network installed in front of their homes unable or unwilling to connect. The National Connection Plan includes measures to provide economic support to low-income households for the execution of the necessary intradomiciliary works to connect to the network, but progress has stalled, resulting in the partial realization of economic, financial and environmental benefits associated with investments in sanitation. The Montevideo Municipality also struggles with the issue of connecting households to the sewage network, although to a lesser extent, with 4 percent of households unconnected.



**Wastewater and septage management.** Since the 1990's, OSE has been focusing on improving the quality of effluent discharges from urban centers, with approximately 80 percent of sewage collected reaching a wastewater treatment plant (WWTP). However, most of the cities located along the rivers of Uruguay, Negro and De La Plata, still discharge into these water bodies with only a pre-treatment. OSE has experience operating WWTP with different technologies, and due to the significant costs associated with wastewater treatment, the utility aims to increase treatment cost efficiency, including energy efficiency and sludge management. In the case of the latter, due to stringent environmental regulations in place, the cost of managing and safely disposing of sludge and its by-products is high, and although a sludge management strategy has been recently developed under the ongoing "OSE Sustainable and Efficient Project" (P118064), it has yet to be put into practice.

*Regional Experimental Center for Wastewater Technology (Centro Experimental Regional de Tecnologías de Saneamiento or CERTS).* This initiative, under the leadership of DINAGUA, aims at creating a space for research and knowledge exchange, technological development and experience in sustainable sanitation technologies, particularly for small communities and individual solutions. In June 2018, the CERTS was approved to function under the auspices of UNESCO, as a Category 2 Center, and similar centers are being created in Costa Rica and Bolivia, with the potential to create North-South and South-South networks to improve and share knowledge on new and innovative water and sanitation technologies. The CERTS will be located on the premises of OSE's Canelones WWTP, with OSE represented in the Board of Directors. OSE is particularly interested in diversifying its menu of technical options to serve small populations (up to 10,000 inhabitants), and this initiative could be the stepping stone towards improved sanitation coverage in the Interior of the country, as well as globally, as small town sanitation is increasingly seen as the next sanitation challenge.

With significant progress in terms of water and sanitation coverage, as well as in creditworthiness, OSE has shown that is on the right path to sustaining investments towards universal water and sanitation access. Nevertheless, limitations in terms of efficiency and developing the know-how and tools to tackle new challenges, such as the ones posed by water quality and climate change, point to looking beyond the region and seeking partnerships with similar, modern, OECD-level utilities which have experience in tackling these challenges.

#### Relationship to CPF

OSE's higher level objective is to contribute to health protection and improvement of people's quality of life by providing efficient and sustainable water and sanitation services. This vision is consistent with one of the three pillars of the World Bank Group's Country Partnership Strategy for the Republic of Uruguay 2016-2020 (Report No. 97063-UY) discussed by the Executive Directors on December 21, 2015, namely building resilience to economic and weather vulnerabilities, with a focus on state owned enterprises, investment prioritization and improved management of water and soil resources. The successful implementation of this project would also allow OSE to position itself as an example for other utilities in the region. Key lessons learned would be also shared across regions, facilitating South-South and North-South knowledge exchanges, thus supporting the Bank's LAC Regional strategy to contribute to the promotion of global knowledge.

### C. Proposed Development Objective(s)

The two-part Project Development Objective (PDO) is to support OSE in (i) improving the efficiency of water supply operations; and (ii) pilot innovative technologies for improved resilience.

#### Key Results (From PCN)



#### Reduction in NRW levels

Ozonation module in the Laguna de Sauce water treatment plant is operational. This indicator could also focus on improvements in removal efficiency of problematic compounds, such as taste and odor compounds or toxins associated with harmful algal blooms

#### Number of Project Beneficiaries (core)

In addition, and as activities under the project components are better defined, intermediate indicators could focus on the implementation of institutional upgrades, including: (i) "Water quality data available to inform OSE's water supply operations based on remote sensing technology", (ii) "Integrated system to monitor water networks and control water losses is operational", (iii) "Asset management strategy is operational", and (iv) "Integrated risk management system is operational".

### D. Concept Description

The project would comprise the following two components:

**Component 1. Institutional modernization and integration of OSE's systems (US\$15 million TBC).** This component could include, inter alia:

- (a) *Upgrading and integrating the current systems used by OSE's departments to monitor water networks and control water losses.* This would include financing the design and implementation of an integrated platform which would allow OSE to reduce NRW, and improve network O&M, replacement planning, as well as energy efficiency.
- (b) *NRW and energy efficiency.* This would include the implementation of innovative performance-based contracts for reduction of NRW, as well the development of an energy efficiency masterplan.<sup>1</sup> The upgrading and integration of OSE's systems will also help improve the internal capacity of the company to collect and process data, as well as make decisions regarding reduction of NRW, following best practices.
- (c) *Development of an asset management strategy and operational plan.* This could include a diagnosis of the current situation (inventory, maintenance management, inspections, integration of information with SAP, etc.), assistance in the development of an asset management strategy and operational plan, development of a pilot to operationalize the basic steps of an asset management policy (inventory compilation, asset inspection, assessment of the actual situation), as well as the related training.
- (d) *Development of an integrated risk management system.* This would build on an ongoing consultancy charged with providing a diagnosis of the actual situation, and include assistance in establishing a governance model for risk management in the organization, assistance in the operationalization of an integrated risk management system, as well as related training.

Implementation arrangements for this sub-component could be done through a North-South exchange or partnership.

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<sup>1</sup> The Energy Sector Management Assistance Program (ESMAP) has tentatively accepted to provide financing for the development of this masterplan.



**Component 2. Technical innovation in drinking water treatment (US\$10 million TBC).** This component could include:

- (a) *Design and construction of the Laguna del Sauce WTP ozonation module.* As part of the Water Security Plans developed as a risk assessment tool for each drinking WTP, OSE is looking for ways to adapt to the reality of deteriorating water quality – itself impacted by climate change – and is testing different water treatment technologies at a pilot scale in its *Aguas Corrientes* WTP. The Project would provide funding to support this initiative and contribute to identifying technical innovation opportunities in water operations, including specifically the design and construction of an ozonation module in the Laguna de Sauce WTP. This would be the first ozone module in the LAC region and would contribute to better preparing OSE to events which can affect the quality of the water it produces and distributes (this includes taste and odor, but also toxins related to harmful algal blooms). The World Bank has helped mobilize just-in-time technical expertise to evaluate and refine the technical specifications prepared by OSE’s technical teams, and the procurement package is planned on being completed in the first quarter of FY20.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

The activities that would be implemented under the Project are not expected to have any significant negative environmental or social impact.

**Note** To view the Environmental and Social Risks and Impacts, please refer to the Concept Stage ESRS Document.

**CONTACT POINT**

**World Bank**

Jean-Martin Brault, Maria Catalina Ramirez  
Senior Water Supply and Sanitation Specialist

**Borrower/Client/Recipient**

Obras Sanitarias del Estado (OSE)  
Natan Wajner  
Gerente de Programas con Financiamiento Externo  
nwajner@ose.com.uy

**Implementing Agencies**





Obras Sanitarias del Estado (OSE)  
Natan Wajner  
Gerente de Programas con Financiamiento Externo  
nwajner@ose.com.uy

**FOR MORE INFORMATION CONTACT**

The World Bank  
1818 H Street, NW  
Washington, D.C. 20433  
Telephone: (202) 473-1000  
Web: <http://www.worldbank.org/projects>

**APPROVAL**

Task Team Leader(s):	Jean-Martin Brault, Maria Catalina Ramirez
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**Approved By**

Environmental and Social Standards Advisor:		
Practice Manager/Manager:		
Country Director:		