Tietê Project

IBRD – Integrated Urban Water Management Study Tour

São Paulo – June 21, 2018
Agenda

1. SABESP
2. Tietê river and the SPMR
3. Tietê Project – Timeline
4. Progress of Sewage Treatment
5. Challenges to the success of the Program
6. Prospects for Stage IV
1. SABESP
State of São Paulo

248,219.63 km²
Total population: 43,674,533
Urban population: 42,090,776
645 municipalities

Reference: Seade Foundation, 2017

Sao Paulo Metropolitan Region (SPMR)
39 municipalities
Total population: 20,717,505
Urban population: 20,488,411

Reference: Seade Foundation, 2017
STATUS:
Established in 1973 as a corporation (*Government of the State of São Paulo, private shareholders and municipalities*)

NET WORTH:
R$ 17,5 billion*

EMPLOYEES:
13,901

* Referent to 30/12/2017
Sabesp is one of the largest water and sewage service providers in the world, based on the number of customers.

- Provides water to **24.9 million** people and sewage services to 21.6 million people.
- Also sells wholesale treated water to 5 municipalities (**3.0 million** people).
- Serves the City of São Paulo and **367** out of 645 municipalities in the State.
- Covers around **66%** of State's urban population, including the wholesale.

**MAIN OPERATIONAL INDICATORS**

<table>
<thead>
<tr>
<th></th>
<th>Water</th>
<th>Sewage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connections (million)</td>
<td>8.9</td>
<td>7.3</td>
</tr>
<tr>
<td>Coverage&lt;sup&gt;(2)&lt;/sup&gt; (%)</td>
<td>99</td>
<td>89</td>
</tr>
<tr>
<td>Service&lt;sup&gt;(3)&lt;/sup&gt; (%)</td>
<td>95</td>
<td>83</td>
</tr>
<tr>
<td>Treatment&lt;sup&gt;(4)&lt;/sup&gt; (%)</td>
<td></td>
<td>75</td>
</tr>
<tr>
<td>Billed Volume (m³ million)</td>
<td>2,075.9</td>
<td>1,617.2</td>
</tr>
</tbody>
</table>

<sup>(1)</sup> As of Dec 30, 2017  
<sup>(2)</sup> Service Available  
<sup>(3)</sup> Households connected  
<sup>(4)</sup> Consumer units connected to the sewage treatment
We are a mixed capital company, majority-owned by the State of São Paulo, with significant private ownership. State law requires the State of São Paulo to own at least 50% + 1 voting shares at all times. Currently the Government of São Paulo has 50.3% share.

- 100% common shares
- Market Cap: R$ 23.5 billion (as of December, 2017)
- Law nº 13.303/16 – Government-Controlled Companies Law

**OWNERSHIP STRUCTURE % (¹)**

- **State of São Paulo**: 50.3%
- **Private Ownership**: 29.7%
- **Listed on NYSE**: 20.0%

(¹) December/2017
2. TIETÊ RIVER AND THE SPMR
Tietê River | Watersheds

1. Upper Tietê
2. Middle Tietê
3. Piracicaba / Jundiaí
4. Tietê / Jacaré
5. Tietê / Batalha
6. Lower Tietê

Watershed: area drained by a river and its affluents

Fonte: www.rededasaguas.org.br
Macrometropole Paulista

- Campinas (4.8 million hab.)
- Sorocaba (1.5 million hab.)
- Jundiaí
- Baixada Santista (1.7 million hab.)
- São José dos Campos
- Upper Tietê
- RMSP (21 million hab.)
- Paraíba Watershed (1.8 million hab.)
- Rio de Janeiro
- Baixada Santista (1.7 million hab.)

8.051 km²
39 municipalities
Migration to peripheral areas and occupation of water sources - SPMR

SPMR (peripheral population): +vulnerable, +growth and –sanitation

Annual population growth rates 2000-2010

[Map showing distribution of population growth rates with markers for SPMR and water sources]

- 2.7 million people
- 1% population growth
- 1.7% water sources
"Formally Structured Regions"
- Consolidated infrastructure
- Lower population growth
- Higher per capita income
  - Higher per capita water consumption

"Peripheral Regions"
- Poor infrastructure
- Difficulties to install water and sanitation infrastructure
- Higher population growth
- Lower per capita income
  - Lower per capita average consumption
  - Occupation of areas of water sources
3. TIETÊ PROJECT

Stages I, II e III
Tietê Project | Timeline

Largest environmental sanitation program in Brazil

1995
Beginning of the works of Stage I

2010
Beginning of Stage III

2020
Conclusion of Stage III

Universalization

1992
- Social mobilization
- Planning

2000
Beginning of Stage II

2014
Beginning of Stage IV

Investments over time
Tietê Project – Stages I and II

Focus: Consolidation of the Sewer Master Plan

- Main Treatment System: 5 STPs
- Interception System Pinheiros
1992 to 2008

Investiments: **US$ 1.6 billion**

Sewage collection rate in the RMSP rises from 70% to 84%

Treatment of sewage rate in the MRSP rises from 24% to 70%

Increase in population with treated sewage: **8.5 million** people

Expansion of the collection and transportation of sewage
- 550 km of interceptors and trunk sewers
- 2,900 km of sewerage collecting system
- 1,010 thousand house connections

**Doubling of the Sewage Treatment Capacity** (from 8.5 to 18 m³/s)
- Construction of 3 STPs (ABC, Parque Novo Mundo and São Miguel) and Expansion of Barueri STP
Sewage Treatment Plants – SPMR

Main System

- Barueri STP: 9,500 L/s
- São Miguel STP: 1,500 L/s
- ABC STP: 3,000 L/s
- Pq. Novo Mundo STP: 2,500 L/s
- Suzano STP: 1,500 L/s

Focus of Stage II

- Tietê River
- Pinheiros River
- Tamanduatei River
- Taiaçupeba Reservoir
- Guarapiranga Reservoir
- Cotia River
- Billings Reservoir
Tietê Project | Pinheiros Sewer System
from Billings/Guarapiranga (Water Sources) to Barueri STP – along the Marginal Pinheiros
Tietê Project | Pinheiros Sewer System
from Billings/Guarapiranga (Water Sources) to Barueri STP – along the Marginal Pinheiros
Tietê Project – Stage III

Focus: Expansion of the Sewage System

*(including small and local treatment systems)*
**Objective:** expansion of the sewage collection and treatment system in the Upper Tietê Basin (SPMR)

**Time:** 2010 – 2020

**Expected Results**
- Sewage Collection rate in the SPMR: 87%
- Treatment of sewage collected rate in the SPMR: 84%
- Increase in treated sewage: 8 m³/s
- Increase in population with treated sewage: 5 million

**Investimento Estimado:** US$ 2 bilhões

**Financial Composition**
- BID: 34%
- BNDES: 33%
- CEF: 2%
- SABESP: 31%
### Tietê Project | Stage III - Summary of the Works Program

<table>
<thead>
<tr>
<th>Components</th>
<th>Goal</th>
<th>Advance</th>
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<tbody>
<tr>
<td>Trunk Sewers and Interceptors (km)</td>
<td>580</td>
<td>384</td>
</tr>
<tr>
<td>Sewage Collection System (km)</td>
<td>780</td>
<td>547</td>
</tr>
<tr>
<td>Service Connections (units)</td>
<td>200 mil</td>
<td>678 mil</td>
</tr>
<tr>
<td>STPs (increase of capacity L/s) (*)</td>
<td>9.300</td>
<td>60%</td>
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</table>

(*) Expansion of 3 STPs of Main System (ABC, Parque Novo Mundo and Barueri) and Implementation of 5 new STPs in Localized Systems (Far North of SPMR)

**Overall Advance: 67,7%**
Tietê Project | Stage III - Increasing of the capacity of Barueri STP

$Q=12 \text{ m}^3/\text{s}$: completed and $Q=16 \text{ m}^3/\text{s}$: in phase of completion / pre-operation
4. PROGRESS OF SEWAGE TREATMENT

Results achieved – Challenges Stage III
There was an increase of 300% of the treated sewage flow resulting from the Stages I and II of the Tietê Project.
Progress of Sewage Treatment *(situation 2008)*
Progress of Sewage Treatment (situation 2017)
Tietê Project | Progress of the Collection and Treatment Rates
challenge: deficit recovery and growth *(peripheral + water supply)*

- **1992**
  - pop: 15.4 milhões
  - 70% Coletado
  - 24% Total de esgoto gerado na RMSP
  - 6% Tratado

- **2002**
  - pop: 17.9 milhões
  - 80% Coletado
  - 62% Total de esgoto gerado na RMSP
  - 18% Tratado

- **2008**
  - pop: 19.2 milhões
  - 84% Coletado
  - 70% Total de esgoto gerado na RMSP
  - 24% Tratado

- **2020**
  - pop: 21.1 milhões
  - 87% Coletado
  - 84% Total de esgoto gerado na RMSP
  - 87% Tratado

+ 5.7 milhões de pessoas *(1992-2020)*
5. CHALLENGES TO THE SUCCESS OF THE PROGRAM
Challenges to the Success of the Program

- Interface with Housing, Urbanization and Drainage
  Programs of the Municipalities and the State
  
  *(regularization, redevelopment, unoccupying of valley funds)*

- Interferences and Releases - Highway System, City Halls and Concessionaires

- Environmental and Domain Permits

- Accession of the population to the sewage network
  
  *(network connection)*

- Level of efficiency of suppliers and builders
6. PROSPECTS FOR STAGE IV
**Objective:** Universalization of the collection and treatment of sewage in the Metropolitan Region of São Paulo

**Estimated investments: US$ 2.5 billion**

- US$ 400 million – *CEF-FGTS*
  
  *Works started (ITi.7, Várzeas do Tietê e SES Laranjeiras)*

- US$ 500 million – *program under negotiation with the IDB*

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<td>Trunk Sewers and Interceptors (km)</td>
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<td>Sewage Collection System (km)</td>
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- Área Operated by Sabesp
- Financing CEF: 180 km of trunk sewers and interceptors
Tietê Project | Expansion of the SPMR Main Sewerage System

Pre-existing
Stages I and II Pre-existing Expansion of the SPMR Main Sewerage System
Tietê Project | Expansion of the SPMR Main Sewerage System

Pre-existing

Stages I and II

Stage III
Tietê Project | Expansion of the SPMR Main Sewerage System
Tietê Project | Expansion of the SPMR Main Sewerage System

- **Stage IV CEF**
- **Stage III**
- **Stages I and II**
- **Pre-existing Stage IV IDB**
- **Tietê Project**
- **Expansion of the SPMR Main Sewerage System**
Tietê Project | Expansion of the SPMR Main Sewerage System

- Pre-existing
- Stages I and II
- Stage III
- Stage IV CEF
- Stage IV IDB
- Stage IV to finance
THANK YOU!

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