Baixada Santista, Brazil

Sustainable Urban Mobility Plan — Completed

Basic information

Urban area	→	2,422 km²
Population	→	1,892,314
Growth rate	→	+1.24%
Region capital city		
GDP per capita	→	USD 16,771
Motorisation rate	→	155 vehicles per 1,000 inhab.
Modal share		
Public transport	→	24%
Walking	→	34%
Cycling	→	7%
Private cars/motorbikes	→	35%
National GHG emissions per capita	→	5.12 (tCO2eq)
Exposure to climate change	→	MEDIUM

Context

The Metropolitan Region of Baixada Santista (RMBS), established in 1996, comprises nine municipalities: Bertioga, Cubatão, Guarujá, Itanhaém, Mongaguá, Peruíbe, Praia Grande, Santos, and São Vicente. Despite covering less than 1% of the State of São Paulo's surface, the region accounts for approximately 4% of its population. It also accounts for 4% of the state's GDP and is recognised as one of Brazil's most significant metropolitan regions due to its harbour and strong industrial and tourism sectors.

In RMBS, 185,247 people travel daily, with 13.38% travelling to the Metropolitan Region of São Paulo (RMSP) and 77.95% within RMBS. Road, sea, and rail access to the port complex significantly limits the potential for cargo movement expansion, as outlined in an expansion Master Plan. The region has seasonal tourism activities that heavily impact the transport system.

By 2021, approximately 230,000 vehicles were registered in RMBS, and the private vehicle fleet was expanding faster than population growth. The metropolitan roads serve metropolitan bus transportation operated by São Paulo's Metropolitan Company of Urban Transport (EMTU). Still, they are often poorly integrated with the Light Rail Transit System (VLT) and the intermunicipal buses. Approximately 11% of regional travel is by bicycle, but integration with other modes is low.

Most metropolitan roads in the municipalities lack bicycle lanes. RMBS currently has about 220 km of bike lanes and cycle paths in place.

There was no transport master plan or similar document for the metropolitan region, although some municipalities have their own transport plans. Baixada Santista Metropolitan Agency (AGEM) does not have the mandate and responsibility to finance mass public transport infrastructure. Instead, mobility is managed by the Government of the State of São Paulo through the Secretariat of Metropolitan Transport (STM), the Secretariat of Logistics and Transport (SLT), and the Metropolitan Company of Urban Transport (EMTU). The state government has the authority to borrow from international financial sources. Some systems and procedures are partially in place to monitor, evaluate, and report on urban matters.

Baixada Santista received technical assistance to develop a regional urban mobility and logistics plan to guide actions and investments in the short, medium, and long term. The new plan should enable the expansion and integration of various modes of passenger transport to improve traffic flow and reduce travel times. The modal share of public transport and bicycles should both rise.

The technical assistance strengthened institutions by providing general guidelines and proposals for integrated transport solutions, including a comprehensive diagnosis of current mobility conditions and a prognosis of their evolution. It proposed actions to streamline the mobility system. It presented alternatives that maximise the sustainability potential of each transport mode to achieve adequate standards for the movement of people and freight in the region. Finally, it will help establish a Monitoring and Evaluation System (SIMA) with a set of sustainable mobility and logistics indicators to provide information for the Thematic Chamber of Mobility to monitor the outcomes of the proposed actions, thus contributing to the integrated management cycle of the region.

Support from the Partnership

Technical Assistance: Sustainable Urban Mobility Plan (SUMP)
Funded by: European Commision
Funding amount: EUR 500,000
Implemented by: Agence Française de Développement (AFD) through the EUROCLIMA+ Programme
Local counterpart: Baixada Santista Metropolitan Agency (AGEM)
Consultant(s) involved: Setec International; Setec Hidrobrasileira, Oficina Consultores Associados
Project start date: 2021 Q2
SUMP completion date: 2023 Q2
Final SUMP report: Baixada Santista SUMP - Final Report I MobiliseYourCity

Supported activities:

- Preparation of a Regional Urban Mobility and Logistics Plan for Baixada Santista, which guides actions and investments for the short (2022), medium (2026), and long-term (up to 2030).
- Mobility diagnosis (data collection, inventory, and evaluation)
- Definition of vision, objectives and strategies of SUMP
- Action and Financing Plan for SUMP implementation
- Participatory approaches and processes
- Monitoring and formal reception of PRMSL-BS and support for implementation.

Completed outputs:

- Project initiation
- Phase 0: Preliminary information
- Phase 1: Diagnosis
- Phase 2: Definition of vision, objectives, and strategies
- Phase 3: Action and financing plan
- Phase 4: Participatory approaches and processes
- Phase 5: Monitoring and formal reception of PRMSL-BS

SUMP key measures and cost estimates

The following table highlights the most significant measures identified in the SUMP.

Measure/Investment	CAPEX Estimates (EUR)
Upgrading the Cycling Network in the Municipalities	5,690,000
Expansion of the Metropolitan Cycling Network	6,640,000
Expansion of the Cycling Network of Metropolitan Interest (Secondary Network)	7,580,000
Expansion of Cycling Connections in Municipalities	6,160,000
Implementation of Bicycle Stations in Terminals with a capacity of 50 bicycles	950,000
Installation of Paracycles	320,000
Installation of directional signs on the Baixada Santista Metropolitan Region's cycle network	470,000
Implementation of a Monitoring System on the Cycling Network of the Baixada Santista Metropolitan Region	470,000
Structural Public Transport Corridors	16,120,000
Implementation of the BRT	7,110,000
Tram Expansion	252,170,000
Public Transport Road Hubs Stopping Points	10,430,000
Urban Transport Integration Facilities	3,790,000
Integration of public transport networks (study)	790,000
Reducing emissions from the bus fleet	470,000
Information and dissemination of public transport	470,000
Southern Mobility Hub	70,470,000
Metropolitan Road System	25,440,000
New road links	12,320,000
Road extensions/ additions and improvements	7,740,000
Road safety program, pedestrians and cyclists at the crossings of axes of metropolitan interest	43,290,000
Program to support institutional strengthening for mobility management in Baixada Santista municipalities	180,000
Project to unify the metropolitan concession of stops and shelters in the RMBS	190,000
Baixada Santista public transport integration project	790,000
Intersectional gender program	1,110,000
Baixada Santista Metropolitan Urban Mobility Pact	
Technical studies for the preparation of a Navigation Program in Baixada Santista	90,000

The following table summarises the total capital expenses (CAPEX) estimates for different measures in the SUMP.

Urban transport investment measures	CAPEX Estimate (EUR)
Public transport and NMT	383,624,000
Street shaping urban roads and traffic management	159,264.000
Other measures	2,191,460
Total	545,079,460

Projected impacts

Indicator	Baseline – 2019
Total annual GHG emissions (Mt CO_2eq)	38.87 Mt CO2eq
Annual transport-related GHG emissions per capita (kg CO_2eq/capita)	34.367 kg CO2eq / capita
Air pollution Decrease in the mean urban air pollution of particulate matter (in µg PM2.5) at road-based monitoring stations	34.367 kg CO2eq / capita

Finance leverage

Associated financing (independently secured financing for measures related to the SUMP)

Description	Source of financing	Status	Amount (EUR)
Construction of the Santos–Guarujá Tunnel[1]	Public Financing (R$5.1 billion split equally between the São Paulo state government and the federal government)	Secured	~1,000,000,000
Santos Urban Development: 18 km of roads, traffic lights and systems[2] The highways of the coastal lot, connecting municipalities in Alto Tietê (Greater São Paulo) to the Baixada Santista and Vale do Ribeira, are undergoing a major package of improvements following the concession granted by the Government of São Paulo in 2024.	CAF Public (Government of São Paulo)	Secured	~690,000,000

[1] https://www.ppi.sp.gov.br/en/santos-guaruja-tunnel-imigrantes-third-lane-and-the-coastal-lot-sao-paulo-state-government-investments-trans-form-mobility-in-the-baixada-region/
[2] https://www.ppi.sp.gov.br/en/santos-guaruja-tunnel-imigrantes-third-lane-and-the-coastal-lot-sao-paulo-state-government-investments-trans-form-mobility-in-the-baixada-region/

Perspectives for implementation

Political buy-in for approval must start from the outset, involving all key stakeholders.

As this is a regional plan, the approval must involve all nine municipalities in the metropolitan region. The SUMP development process included municipalities' participation through the Mobility and Logistics Technical Chamber, with periodic meetings where the consultant presented project updates and key documents. Financing for prioritised actions will potentially come from the National Government and a new framework for public transportation.

Insights from practice: lessons learned from the SUMP process

The SUMP was delivered and finalised on March 30, 2023. At the Council meeting on February 28, 2023, a Working Group in the Sustainable Mobility and Logistics Thematic Chamber was approved to draft a proposal to establish the Baixada Santista Sustainable Mobility Observatory.

Metropolitan areas manage urban mobility differently.

In the case of Baixada Santista, the metropolitan entity that brings together all the metropolitan municipalities was responsible for leading the development of the Plan. One of the key strengths of this institutional framework was its independence from local administrations, allowing for a more comprehensive metropolitan vision and urban development approach. Additionally, its distance from the daily challenges and urgent matters faced by municipal governments contributed to a more strategic, long-term planning process.

It is essential to consider that regional plans differ from SUMPs for a single city. In these cases, many actors and municipalities must coordinate. For Baxiada Santista, the consultant had to coordinate data collection across nine municipalities; the final diagnosis was an 800-page document. It would be good to leave a page limit for deliverables in cases like this.

Integrating gender and inclusion in mobility planning requires both internal capacity-building and targeted awareness-raising for decision-makers[3]

Additionally, it is recommended that the gender approach be included and mainstreamed. It is not enough to include the gender issue as another section; it must be mainstreamed into all processes and deliverables of the plans.

To ensure that gender and inclusion were recognised as cross-cutting issues to be addressed technically, the gender and mobility consultancy within the Baixada Santista Regional Sustainable Urban Mobility and Logistics Plan (PRMLUS-BS) prioritised knowledge-sharing among technical team members. This was done informally through written exchanges, shared resources, and discussions in project meetings. Additionally, raising awareness among public officials was essential, achieved through concise presentations with space for questions during general project follow-ups.

[3] To know more about lessons learned of Euroclima's Urban Mobility component visit https://despacio.org/portfolio/movilidad-urbana-euroclima-resultados-y-lecciones-2018-2024/

Clear communication and integration of public input into decision-making processes are essential for meaningful civil society participation in mobility planning.

In the Baixada Santista Regional Sustainable Urban Mobility and Logistics Plan (PRMSL-BS), civil society participation played a crucial role in shaping the plan through qualitative research and public consultations. Sectoral listening sessions allowed for the collection of diverse perspectives from specific social groups, enriching the diagnostic phase with valuable insights. However, a key challenge in participatory processes is maintaining public engagement, as communities often struggle to see the direct impact of their contributions. Strengthening communication strategies and linking participatory research with validation processes can enhance transparency and demonstrate the real influence of civil society in urban mobility planning.

The SUMP proposes measures with potential national spillover.

In addition, it should be noted that the SUMP have three innovative approaches that could be replicated and scaled in the country: The metropolitan cycle-infrastructure network, the management of measures for the regional integration of mobility, with special emphasis on tariff integration, and the inclusion of gender category in the OD survey that was done for cyclists.

Highlights in the past year

CAF and Santos City Hall signed a loan agreement in August 2024, for US$ 105 million, the largest loan in the city's history, for the Santos Macrodrainage, Accessibility, Innovation and Sustainability Program[4].

Urban mobility is being addressed by upgrading approximately 18 kilometres of roads and by acquiring road signalling and guidance equipment, traffic light control systems, and car detection systems.

Urban development will also expand monitoring capacity by installing 1,500 cameras integrated into the municipal Operational Control Centre.

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