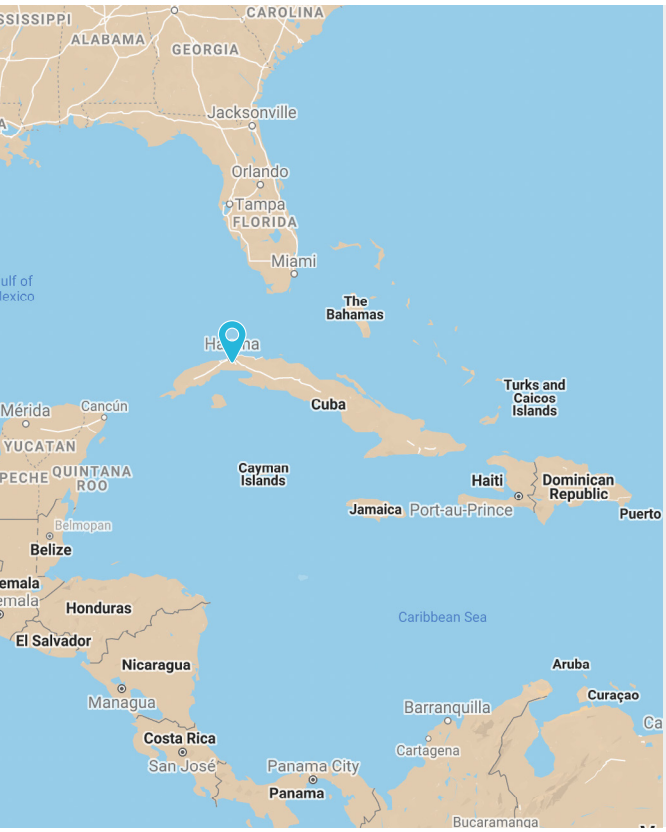
# Havana, Cuba

Partner city

Status of the project: **Completed Sustainable Urban Mobility Plan and ongoing pilot project**




## Basic Information

Urban area: **728 km²**

Population: **2,132,183** | Growth rate: **0.16%**

Type pf city: **Country capital city**

GDP per capita: **USD 9,499 (2020)**

Modal Share:

- **Formal public transport: 43,6%**
- **Walking: 46,2%**
- **Cycling: 1,1%**
- **Private cars: 6%**
- **Private motorbikes or 2-wheelers: 3,2%**
- **Taxis: N/A**
- **Moto taxis and Freight vehicles: N/A**

National GHG emissions per capita: **3.74 ($tCO_2eq$)**

Exposure to climate change: **HIGH**

## Context

Havana, the Cuban capital, occupies 728,26 km², representing 0.7% of the national area. With 15 municipalities, Havana is home to almost 20% of the country's population. The municipalities Centro Habana, Habana Vieja, Cerro, Plaza de la Revolución and Diez de Octubre are the most densely populated. Centro Habana stands out with a population density of 41,000 inhabitants/km² while the net density in the city's residential areas is around 18,000 inhabitants/km².

Havana has a polycentric structure, and its growth has preserved the oldest factories in some neighbourhoods. The axes that linked the old city with the periphery were the basis for the sprawl from the founding heart to the west, southwest, south, and southeast, which defined a tree-like pattern for transportation routes.

The bay, the main reason for the city's location, conditioned a slower pace in the city's expansion towards the east. The construction of the tunnel of the bay in 1958 allowed for the beginning of development in this direction. These aspects determined the current structure of the transportation system, which follows a territorial model with a central, an intermediate and a peripheral zone. Despite the development beyond the central area, the main concentration of jobs, cultural, tourism, and recreational infrastructure is in a narrow strip close to the sea, which conditions current mobility patterns. Today the capacity of the tunnel seems insufficient.

Despite being a polycentric city, metropolitan functions and most jobs are in Havana's so-called central areas. The remaining sub-centres have weakened, limiting their ability to offer service and employment to the population. This situation forces many people living far away from the centre to commute daily to access essential services (schools, hospitals, shops, etc.). The poor condition of the existing urban mass transport implies that citizens consume excessive time for transportation.

The city has a public transit system and an existing transport master plan or similar document. Havana has organised its public bus transportation (or guaguas) into two categories: a fleet of articulated buses with greater capacity for main routes, and conventional buses for approximately 100 secondary routes.

Both the secondary and primary routes are operated by the Havana Provincial Transportation Company, which operates 17 main routes and 104 secondary corridors and has 17 bus terminals for their operations. There are also bus services between Havana and other provinces (Viazul, Transtur, Transgaviota in CUC, and National Buses in CUP).

The Ministry of Transportation (MITRANS) is responsible for organising the transportation sector in Cuba, and the General Directorate of Provincial Transportation of Havana (DGTPH) is responsible for managing the transportation sector in Havana. DGTPH, the local counterpart, has the mandate and responsibility to finance mass public transport infrastructure. It does not have the authority to borrow from international finance sources. Systems and procedures are partially in place to monitor, evaluate and report on urban transport.

The technical cooperation seeks to formulate a Sustainable Urban Mobility Plan (SUMP) in Havana, allowing for a diagnosis of the city's mobility, and sponsoring working sessions with the Convention of Territorial Planning and Urbanism and the Scientific Convention of Engineering and Architecture. The SUMP will generate proposals implying a change in modal distribution and improving transit, public transport, cycling, and pedestrian mobility. In turn, the pilot project seeks to recover the Eje de Galeano to guarantee high pedestrian flow and thus provide better public pedestrian spaces that ensure accessibility.

The transformation of the pedestrian heavy Eje de Galeano will be an example of a pro-sustainable urban mobility transformation with an impact on improving the urban environment and a great impulse for the reception of the SUMP. This pilot project expects to decrease the pollution load, increase pedestrian safety on the axis, and improve access to public space, social resources, and cultural facilities.

# Support from the Partnership

**Technical Assistance:** Sustainable Urban Mobility Plan (SUMP) and pilot project

**Funded by:** European Commission

**Funding amount:** EUR 600,000

**Implemented by:** AFD through the EUROCLIMA+ Programme

**Local counterpart:** General Directorate of Provincial Transport of Havana (DGTPH)

**Supported activities (SUMP):**

- Development of a SUMP for the city of Havana

**Supported activities (Pilot Project):**

- Creating and preparing a pilot project to improve sustainable mobility in the city. The project improves public spaces in the Eje de Galeano to guarantee pedestrian flux and accessibility.
- Definition and preparation of a project to improve mobility on the 10 de Octubre corridor, Havana.

# Status of SUMP development

**Project start:** 2021 Q1

**Project completion:** 2022 Q2

**Completed outputs:**

- Diagnosis and evaluation: inventory and analysis of the current situation
- Vision and strategic goals
- Action plan
- Monitoring, Reporting and Verification (MRV) Plan
- Final approved Sustainable Urban Mobility Plan (SUMP)

# Status of implementation (Pilot Project)

**Project start:** 2022 Q1

**Project completion:** Closed 2022 Q1

**Expected outputs:**

- Diagnostic proposal and perimeter of the sustainable mobility Pilot Project
- Preliminary design and technical specifications of the Pilot Project

# SUMP key measures and cost estimates

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

| Total | 1,093,466,924 USD[1] |
|---|---|

| Measure | Cost Estimate |
|---|---|
| **1. Pedestrian mobility** | **32,539,332 USD** |
| Establish regulation on pedestrian infrastructure and plan its application | 10,500 USD |
| Adapt and preserve sidewalks | 25,836,089 USD |
| Widen sidewalks | 5,000,533 USD |
| Generate more walking and shared-use streets | 1,692,210 USD |
| **2. Cycling mobility** | **7,203,513 USD** |
| Elaborate a Cycling Director Plan for Havana | 10,418 USD |
| Awareness-raising campaign about cycling | 104,178 USD |
| Develop a network for buying, selling, and repairing bicycles | 10,418 USD |
| Create safe cycling infrastructure, including parking spaces | 4,136,324 USD |
| Extend the bike-sharing system | 2,942,175 USD |
| **3. Public transport and intermodality** | **942,590,406 USD** |
| Improve gender equality in the public transport system | 10,417 USD |
| Implement the fleet renewal plan and guarantee the fleet's sustainability | 631,292,963 USD |
| Plan the public transport network restructuring | 266,802 USD |

[1] Originally, the budget was split into two sections. A number of measures' costs were calculated in the local currency (CUP) and the remaining ones in euros. This division was proposed to link the measure with potential sources of finance available (domestic or international). The table shows the total cost for each measure converted into USD.

| Measure | |
|---|---|
| Develop social networks for electric three-wheelers | 4,736,641 USD |
| Implement mass-transit axes and structure public transport networks | 118,715,163 USD |
| Integrate the public transport system's operations, information, technology and fares | 20,488,098 USD |
| Physical integration: Develop Urban Passenger Stations | 167,080,322 USD |
| **4. Urban logistics** | **77,216 USD** |
| Create on-loading and off-loading zones | 66,798 USD |
| Strengthen the freight transport management policy and relocate the stores | 10,418 USD |
| **5. Mobility management and road safety** | **4,896,356 USD**[2] |
| Make a Road Safety Plan with a Zero Vision focus | 10,418 USD |
| Reduce speed limits on roads with the most traffic violence | 10,418 USD |
| Design safe road crossings with signalling and traffic lights | 781,333 USD |
| Reorganise road space and generate low-traffic zones | (already contained in other measure's costs) |
| Improve road maintenance and connectivity | 4,083,769 USD (per year) |
| Parking policy | 10,418 USD |
| **6. Electric mobility and transport decarbonisation** | **4,034,883 USD** |
| Develop an electric mobility action plan | 10,418 USD |
| Decarbonise the omnibus fleet | 4,003,629 USD |
| Promote electric mobility | 10,418 USD |
| Decarbonise urban logistics and promote intermodality | 10,418 USD |

**The following table summarises the total capital expenditure (CapEx) estimates for different types of measures in the SUMP.**

| Urban transport investment measures | CapEx Estimate (USD M) |
|---|---|
| Public transport and NMT | 961,432,420 USD |
| Street shaping urban roads and traffic management | 4,083,769[3] USD |
| Other measures (Transport electrification) | 4,003,689 USD |
| **Total** | **969,519,818 USD** |

[2] This total includes only one year of the 'Improve road maintenance and connectivity' measure to simplify calculations

[3] Cost estimate per year

# Projected impacts

| Indicator | Impact 2030 (SUMP vs BAU) | Baseline - 2021 | Projected 2030 BAU | Projected 2030 SUMP scenario |
|---|---|---|---|---|
| **Total annual GHG emissions** (Mt $CO_2eq$) | Not quantified | 1,72 Mt $CO_2eq$ | Not quantified | Not quantified |
| **Annual transport related GHG emissions per capita** (kg $CO_2eq$) | Not quantified | 805 kg $CO_2eq$[4] / capita | Not quantified | Not quantified |
| **Modal share**<br>Increase of the modal shares of trips by public transport, walking and cycling | TOTAL: +0.86% | Formal public transport: 43.6%<br>Walking: 46.2%<br>Cycling: 1.1%<br>**TOTAL: 90.9%** | Formal public transport: 43.8%<br>Walking: 46.2%<br>Cycling: 1.1%<br>**TOTAL: 91.1%** | Formal public transport: 44.5%<br>Walking: 46.2%<br>Cycling: 1.1%<br>**TOTAL: 91.8%** |

# Perspectives for implementation

## The SUMP development enabled the participation of both institutions and citizens.

The development of the SUMP was a collaborative effort that involved various stakeholders, including a Technical Committee and the city's residents. The Technical Committee, a consultative and executive body comprising experts from different fields, provided invaluable support in making strategic decisions. To ensure the plan reflected the needs and aspirations of the city's residents, a range of participatory activities were organised. These included work meetings, participatory workshops, discussion tables, interviews, and focus groups. These initiatives gave the citizens a voice, allowing them to actively contribute to developing a more sustainable and inclusive transportation system for their city.

# Insights from practice: lessons learned from the SUMP process

## Immense financial contributions are needed to ensure SUMP implementation

Havana's SUMP, completed in June 2022, aims to improve the city's transport system by expanding public transport services, promoting cycling and walking, and optimising traffic flow. It is expected to address various city challenges, such as traffic congestion, air pollution, and inadequate public transportation services. The successful adoption and implementation of the SUMP are expected to improve the quality of life for Havana's residents and enhance the city's economic competitiveness.

Implementing the SUMP requires a significant investment that exceeds the previous 20 years' level, with a more robust national contribution in foreign and national currency. Achieving this effort involves a structural change in financing in the transport sector and a well-defined national contribution to the SUMP action plan, including infrastructure and road safety.

# Highlights in the past year

## Neomovilidad project finishes successfully in December 2024

The Neomovilidad project, funded by UNDP and GEF, has transformed transportation in Havana with an ecological, inclusive, and gender-equity approach. Achievements include a pilot public bike rental station, logging over 13,000 services and significantly reducing carbon emissions. Additionally, three routes with 25 electric tricycles were introduced in peripheral areas, offering affordable fares and promoting women as drivers.

*Updated in December 2024*

[4] Estimation by the MobiliseYourCity Secretariat based on SUMP deliverables.