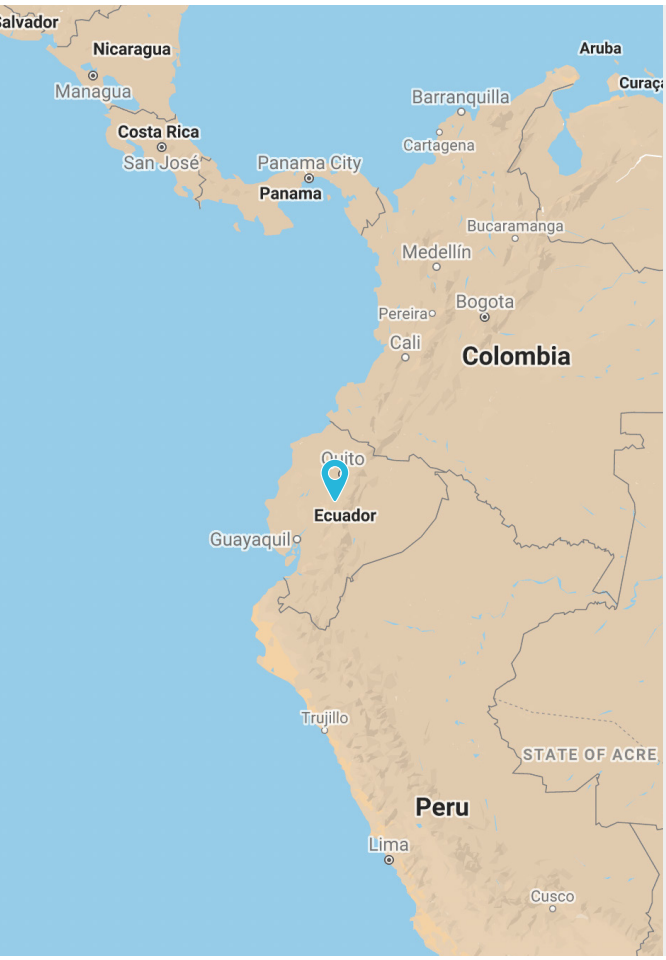
Ambato, Ecuador

Partner city

Status of the project: **Completed Sustainable Urban Mobility Plan**



Basic Information

Urban area: **1,009 km²**

Population: **329,856** | Growth rate: **0.78%**

Regional capital city

GDP per capita: **USD 12,652**

Formal public transport: **34%**

Informal public transport: **3%**

- Walking: 12%
- Cycling: 1%
- Private cars: 34%
- Private motorbikes or 2-wheelers: 3%
- Taxis: 9%
- Moto taxis: 0%
- Freight vehicles: N/A
- Other: 4%

National GHG emissions per capita: **3.82 (tCO_2eq)**

Exposure to climate change: **MEDIUM**

Context

Ambato is the capital of the Tungurahua province. It is in a mountainous region between 2,500 and 2,750 meters above sea level. The city has a complex topography characterised by ravines, slopes and depressions that make up several regular plains that limit urban development, especially road and transport planning. Ambato is also one of the most significant urban centres in the country. Its regional and national centrality makes the city a commercial, industrial, and connecting node between the Amazonian, coastal and highland regions. The benefits of being such a vital node have brought problems of air pollution, noise, mobility, and road safety. Ambato's rapid growth affects urban transport development, which faces traffic congestion and accidents.

In this context, there are four fundamental problems in mobility. The first is the rugged topography that makes it difficult to connect and use modes of transport such as bicycles. The second is a centralised urban structure, which requires that most trips have the urban centre as their destination, an area with insufficient infrastructure and public space to handle traffic flows. The third is the outdated Transport and Mobility Master Plan, which does not present proposals related to sustainable mobility. Finally, the increasing private car fleet causes noise, visual and environmental pollution, long travel times, high fuel consumption, and GHG emissions. The growth in private vehicle ownership is faster than the growth of the population. Today, the rate of car ownership is 180 cars per one thousand inhabitants. In comparison, the national rate is 133 cars per one thousand inhabitants.

The existing mass transit system is based upon privately operated buses that grew organically with little planning. In 2022, the Municipality of Ambato fully assumed the constitutional and legal responsibility to manage mobility within the urban and rural limits. Because of this, the Municipality has continuously prepared itself to manage this sector. Updating the 2013 Transport and Mobility Master Plan through a SUMP process was the first and most significant step in this direction. The SUMP process has enabled the Municipality to access funding from the Ecuadorean Development Bank, which will execute a credit operation from the KfW for sustainable mobility. The Municipality can access international credit operations with a warranty from the national government. The monitoring capacity of the Municipality will be strengthened during the first semester of 2023 via GIZ's Intermediate Sustainable Cities II program.

The objective of the technical assistance in Ambato was to update the Transportation and Mobility Master Plan for the Ambato Canton with a focus on sustainable mobility. It included optimising existing transport systems in the regional capital city and aimed to improve mobility in urban and rural areas to enhance citizens' quality of life. The project involved greater participation from citizens, especially from vulnerable groups. Additionally, the project enabled the local authority to present proposals to national and international agents, who could provide further technical assistance and funding under the new umbrella of sustainable mobility.

Support from the Partnership

Technical Assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: European Commission

Funding amount: EUR 500,000

Implemented by: GIZ through the EUROCLIMA+ Programme

Local counterpart: Decentralised Autonomous Government Municipality of Ambato – Directorate of Transit, Transportation and Mobility

Supported Activities:

- Optimisation of the Transport systems
- Update of the Transportation and Mobility Master Plan for Ambato Canton
- Development of a specific portfolio of mitigation programmes and projects in urban mobility, demand management for private transport, improvement of public transport, and promotion of active transport

Finance leverage: USD 52,850,000

Status of the SUMP process

Project start date: 2018 Q2

SUMP adoption date: 2023 Q1

Completed outputs:

- Prospective diagnostic
- Technical vision, objectives and measures proposed
- Participatory vision, objectives and measures development
- Capacity development strategy
- Communication strategy
- Draft ordinance for enforcing SUMP

Next expected outputs

- MRV follow-up tool

SUMP key measures and cost estimates

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

Measure	Cost Estimate
Urban interventions plan for sustainable mobility: a. Urban intervention plan in three main urban corridors b. Special urban plan for the previous *Terminal Terrestre* (city centre) c. Special urban plan for the downtown market area	USD 7.77M to 9M
Public space and landscape plan: a. Renovation of Cevallos Park and its area of influence b. Public space planning - Peri-urban influence centrality, Wholesale Food Market c. Special urban plan for **Terminal Terrestre** Sur d. Urban landscape and mobility planning along the Ambato River e. Programme for the implementation and improvement of air quality and noise control and monitoring capacity f. Programme of creation and restoration of green areas through tree planting, the rescue of green areas and the river g. Environmental and landscape monitoring improvement plan: rescuing and protecting the landscape of the slopes and the river	USD 12.9M to 15M
Demand management plan: a. Legal, technological, administrative, and economic plan for congestion reduction and optimisation of car and motorcycle use b. Feasibility studies for implementing a logistics activity zone (ZAL, for its acronym in Spanish). c. Update of the specific regulations to organise circulation and schedules of freight vehicles according to their capacity d. Construction of the ZAL e. Application of the new regulations for the circulation of freight vehicles in urban areas	USD 3.9M to 4.5M
Programme for an accessible, clean, low-carbon public transport: a. Project: Public transport service in the historical centre through a cable car from Pinillo Central Park to Ambato's city centre (2 km) b. Reorganisation of urban and rural public transport services c. Universal accessibility to public transport for people in situations of disability and vulnerable groups d. Implementation of an integrated transport system	USD 25.9M to 30M
Sustainable-mobility infrastructure plan a. Network of bikeways b. Pedestrian road network c. Pacification of the motorised sub-system in cross-roads	USB 28.5M to 33M
Programme for reducing GHG emissions from transport a. GHG monitoring plan b. E-vehicles promotion plan (cars, motorcycles) c. Urban-logistics e-vehicles promotion plan	USD 6.5M to 7.5M

Measure	Cost Estimate
Programme to reduce inequality, poverty and gender gaps in mobility a. Qualitative and quantitative characterisation with a gender approach b. Cross-cutting incorporation of the gender approach to mobility projects • Inclusion of the gender approach in communication strategies • Promotion of active mobility with a gender perspective c. Risk management with a gender perspective d. Promoting safety and women's protection in public spaces e. Citizen participation aimed at the effective engagement of women's organisations	USD 7.8M to 9M
Programme to improve the accessibility of rural and specific populations a. Technical and economic feasibility study for a sustainable suspended public transport system b. Intersectoral articulation between regulations and instruments of urban, mobility, transport and transit planning c. Plan to improve accessibility to the rural areas	USD 13M to 15M
Road/pedestrian safety, perception and "*cultura ciudadana*" a. Update of the existing strategic road safety plan b. Special attention to road violence increase due to motorcycle use c. Road safety campaigns	USD 13M to 15M
Institutional, technical, financial and legal strengthening a. Observatory for the generation and processing of data on urban mobility and GHG emissions b. Optimisation study of the municipal and institutional structure dedicated to mobility and coordination for its implementation c. Implementation of the Capacity Building Plan d. SUMP Financing Plan	USD 10.4M to 12M

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

Urban transport investment measures	CAPEX Estimate (€M)
Public transport and NMT	USD 74,500,000.00
Street shaping urban roads and traffic management	USD 24,450,000.00
Other measures	USD 51,050,000.00
Total	**USD 150,000,000.00**

Finance leverage

Leveraged financing (resulting or enabled by the SUMP preparation process)

Description	Source of financing	Secured	Amount
Loans and PPPs for public transport and NMT measures	Ecuadorean Development Bank (BdE) and private sector (operators)	Planned	USD 52,150,000
Loans for shaping road and traffic management	Multilateral banks	Planned	USD 17,115,000
Loans and international cooperation for plans, municipal strengthening, studies	Multilateral banks, BdE (KfW) and cooperation agencies	Planned	USD 35,674,500
Cooperation for Urban Mobility Observatory	GIZ	Secured	USD 30,500
Cooperation for MRV system implementation	Euroclima+ GIZ	Secured (both)	USD 7,000 USD 23,000

Projected impacts

Indicator	Impact 2030 (SUMP vs BAU)	Baseline – 2020	Projected 2030 BAU	Projected 2030 SUMP scenario
Total annual GHG emissions (Mt CO_2eq)	No available data	0.611 Mt CO_2eq	0.756 Mt CO_2eq	No available data
Annual transport-related GHG emissions per capita (kg CO_2eq)	No available data	3,43 kg CO_2eq / capita	4,25 kg CO_2eq / capita	No available data
Access Increase of the proportion of the population living 500 meters or less of a public transport stop	+3%	65%	65%	68%
Air pollution Decrease in mean urban air pollution of particulate matter (in µg $PM_{2.5}$) at road-based monitoring stations	No available data	7.48 µg/m³ of $PM_{2.5}$	No available data	No available data
Modal share Increase in the modal shares of public transport, walking and cycling trips.	Formal public transport: 4% Informal public transport: -1% Walking: 1% Cycling: 1% **TOTAL: 7%**	Formal public transport: 47% Informal public transport: 1% Walking: 13% Cycling: 1% **TOTAL: 62%**	Formal public transport: 48% Informal public transport: 1% Walking: 13% Cycling: 1% **TOTAL: 63%**	Formal public transport: 51% Informal public transport: 0% Walking: 14% Cycling: 2% **TOTAL: 67%**
Road safety Decrease in traffic fatalities in the urban area per 100,000 inhabitants	-2.9 fatalities/100 000 hab	18.9 fatalities/100 000 hab	18.9 fatalities/100 000 hab	16 fatalities/100 000 hab
Affordability of public transport Percentage of disposable household income spent on public transport for the second quintile household income group.	No available data	No available data	No available data	No available data

Perspectives for SUMP implementation

The SUMP as a catalyst for Ambato's new Mobility Master Plan

The SUMP will complement the development of the Ambato Mobility Master Plan, an instrument that will outline the roadmap and be adopted as public policy. This will develop the vision and mission of the Public Mobility Agency, which will be created with the technical support of GIZ under the CISII programme as the new transport authority for Ambato.

Strengthening Governance for Sustainable Urban Mobility[1]

For Ambato's Sustainable Urban Mobility Plan (SUMP) to succeed, it is crucial to address key governance challenges from the outset. Strengthening stakeholder coordination through a dedicated urban mobility body can ensure continuity in planning and management. Enhancing officials' technical and administrative capacities will improve decision-making and implementation while adopting change management mechanisms to help navigate challenges in project execution. Public participation is also essential to ensure that mobility policies reflect citizens' needs, which can be achieved through consultations and engagement spaces. Additionally, prioritising sustainable mobility by investing in infrastructure for non-motorized transport, such as bike lanes and sidewalks, will contribute to a more livable city. Since SUMP implementation is long-term, strong political and financial commitment from municipal authorities is necessary. Ensuring administrative stability will be key to maintaining progress and achieving the plan's objectives.

Insights from practice: lessons learned from the SUMP process

The SUMP's gender and social inclusion analysis was a game-changer in mobility

The gender and social inclusion analysis revealed the problematic situation women, children, and older people had to deal with to move around the city. By showing the situation, mobility agents became aware of the need to implement changes in the mobility system to serve citizens better. The public transport debate hereby moved from funding to effective services.

Expectations must be continuously managed when implementing Ambato's Mobility Master Plan.

During the implementation of the Mobility Master Plan, which will contain the SUMP, the public, who is directly involved in mobility and citizen stakeholders, will demand information. The municipality must design a strategy to communicate the process and moderate expectations that rise spontaneously if not managed. It is crucial to maintain regular communication with the media.

Challenges in Ambato's SUMP Development

Ambato faced two significant challenges in developing its Sustainable Urban Mobility Plan (SUMP): a shortened timeline and administrative changes. The process was completed in nine months, far less than the typical three years, requiring efficiency measures. Additionally, the city had four different directors of Transit, Land Transport, and Road Safety between 2018 and May 2023, causing instability and bringing new perspectives and experiences.

[1] To know more about lesons learned on Ambato's SUMP development process, and the Euroclima Urban Mobility component at large please consult https://despacio.org/portfolio/movilidad-urbana-euroclima-resultados-y-lecciones-2018-2024/

Highlights from the past years

Ambato has completed its SUMP development process.

In 2022, the SUMP development process was in complete execution. Despite time constraints from previous delays, Ambato has finalised the SUMP and is preparing for its adoption and implementation through its Mobility Master Plan. Citizen participation was key to clearly identifying the inclusion gaps that needed to be addressed by the city's mobility system.

Sustainable modes of transport have been positioned as a feasible solution for citizens.

After almost a year of post-pandemic normality, the diagnosed modal distribution has changed towards retaking previous transport behaviours, e.g., increased public and private car use. However, the sustainable mobility discussion promoted during the SUMP development has taken root in citizens' mindsets. Sustainable, active mobility modes are becoming a steadfast demand for citizens. Furthermore, the municipal mobility authorities are now aware of the new perceptions and needs that must be satisfied through sustainable and inclusive measures.

Though monitoring systems are needed, the SUMP has increased access to finance for implementation.

To fully implement Ambato’s Mobility Master Plan, the Municipality must integrate an MRV tool and the mobility observatory. GIZ could continue supporting the Municipality in adopting these instruments and strengthening institutions to execute them. Finally, the availability of the SUMP has allowed the city to be highly and favourably considered for funding from the Ecuadorean Development Bank and the KfW.

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