Ambato, Ecuador

Partner city

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

Basic Information

Urban area: 1,009 km^2

Population: 329,856 | Growth rate: 0.78%

Region 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 Amazon, coastal and highland regions. The benefits of being such an important node have brought problems of air pollution, noise, mobility, and road safety. The rapid growth of Ambato is affecting the development of urban transport, which faces issues such as 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 definition, 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 The third is the outdated Transport and Mobility Master Plan, which does not present proposals related to sustainable mobility. And 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, and today the rate of car ownership is 180 cars per thousand inhabitants. In comparison, the national rate is 133 cars per thousand inhabitants.

The existing mass transit system is based upon privately operated buses that grew organically with little planning. The Municipality of Ambato, in 2022, 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 of the KfW for sustainable mobility; for international credit operations, the Municipality can access them with a national government warranty. The monitoring capacity of the Municipality will be strengthened during the first semester of 2023 via the 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 Ambato Canton with a focus on sustainable mobility. It includes optimising existing transport systems in the regional capital city and aims to improve mobility in urban and rural areas to enhance the citizen's quality of life. The project involved greater participation of the citizens, especially from vulnerable groups. Additionally, the project has enabled the local authority to present proposals to national and international agents able to 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 river rounds g. Environmental and landscape monitoring improvement plan through rescuing and protecting the landscape of the slopes and the river round	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 capacit. 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 of 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 situation 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 rural and specific populations' accessibility 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 citizen culture plan 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, 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 PM2.5) at road-based monitoring stations	No available data	7.48 µg/m³ of PM2.5	No available data	No available data
Modal share Increase of the modal shares of trips by public transport, walking and cycling	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 of 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 implementation

The SUMP will be submitted to the Municipal Council for approval by the first quarter of 2023

The SUMP will be submitted to the Municipal Council once the Mobility Directorate and the Mayor adopt the draft ordinance presented as part of the SUMP. Furthermore, GIZ's Intermediate Sustainable Cities II program will keep working in Ambato through a laboratory to support the SUMP implementation.

Insights from practice: lessons learned from the SUMP process

SUMP's gender and social inclusion analysis is the game changer in mobility

The gender and social inclusion analysis has revealed the problematic situation women, children, and the elderly 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 moved from funding to effective services.

Expectations must be continuously managed when developing the SUMP

When the SUMP development is underway, the public (directly involved in mobility and citizen stakeholders) demands information. The municipality and SUMP consultants must have 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.

Highlights in the past year

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 the adoption and implementation. Citizen participation was key to clearly identifying the inclusion gaps that need 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 use of public transport and private cars. However, the sustainable-mobility discussion promoted during SUMP development has taken root in citizens' mindsets. Sustainable, active mobility modes are becoming a steadfast citizen demand. 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 favoured access to finance for implementation

To fully implement the SUMP, the Municipality must integrate an MRV tool and the mobility observatory. The GIZ will support the Municipality in adopting these instruments and the institutional strengthening to execute the SUMP. 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.