

Ecuador

Partner country

Status of the project: Completed National Urban Mobility Policy or Programme



Basic Information

Population: 17,084,358 | Growth rate: 1.8%

Percentage of urban population: 64%

GDP per capita: USD 6,346

Percentage of the population living below the national poverty line: 21.5%

Annual average infrastructure expenditures as percentage of GDP: 1.63%

Nationally Determined Contribution (NDC): general e-mobility transport related NDC

National GHG emissions per capita: 2.43 (tCO₂eq)

Proportion of transport related GHG emissions: 21%

Exposure to climate change: MEDIUM

Context

Ecuador is located on the west coast of South America with a population of 17 million people, of whom 64% reside in urban areas, notably Quito, Guayaquil, and Cuenca. The Andes range divides the country into three primary geographical regions: the Coast, the Sierra, and the Amazon. Between 2009 and 2015, the Multidimensional Poverty Index fell by 10.2%, signifying that 1.9 million Ecuadorians overcame poverty in that period. The Gini Coefficient index, a measure of income inequality, stands at 0.447%. Besides the oil industry, other significant economic sectors include manufacturing, retail, construction, agriculture, and services.

The absence of planning instruments has led to a dispersed urban expansion in the country. The rapid urbanisation process has resulted in the emergence of vulnerable urban areas. As of 2018, the transport sector's GHG emissions accounted for 48.5% of the total energy-related emissions in Ecuador, with road transport constituting 94.4% of the total transport demand. The most widely utilised transportation services in the country are buses, trolleybuses, and taxis. The three main Ecuadorian cities have implemented low-carbon mass transit projects: Quito has a 22-km metro line, Guayaquil has implemented a 4-km cable car, and Cuenca operates a 11-km tramway. Additionally, some other Autonomous Decentralised Governments have undertaken actions on sustainable mobility, including electromobility and active modes.

The Ministry of Transport and Public Works (MTOP - its acronym in Spanish), the governing entity of the National Multimodal Transport System, encompasses road, air, sea, and non-motorized transport. Its vision is to formulate, implement and evaluate policies, regulations, plans, programmes and projects that ensure a safe and competitive transport network, minimising environmental impact and contributing to the social and economic development of the country. In turn, the Autonomous Decentralised Governments are responsible for planning, regulating, and controlling land transport, transit, road safety, commercial, and collective transport services, among others.

The objective of this project is to define a national strategy for low-carbon mobility applicable to all the Decentralised Autonomous Governments of the country, allowing for a considerable reduction of greenhouse gases while maintaining levels of equity and accessibility.

Ecuador's National Urban Mobility Policy (NUMP) focuses on improving buses and trucks, enhancing knowledge of routes, frequencies, and unit locations, promoting non-motorised transport, providing economic incentives to reduce greenhouse gases, and planning for land use and urban mobility.

Support from the Partnership

Technical Assistance: National Urban Mobility Policy or Program (NUMP)

Type of NUMP: Mixed NUMP (Sectoral strategies and support or investment programme)

Funded by: European Union

Funding amount: EUR 500,000

Implemented by: AFD through the EUROCLIMA+ Program

Local counterpart: Ministry of Transportation and Public Works (MTOP)

Main purpose of the NUMP

The main purpose of the National Urban Mobility Policy is to:

- Offer cities a general enabling framework for SUMP formulation
- Provide regulation on a specific set of technical issues
- Provide regulation on a wide range of technical issues
- Provide technical guidance on a specific set of technical issues
- Provide technical guidance on a wide range of technical issues
- Define a national strategy for low-carbon mobility that is applicable to all Decentralised Autonomous Governments in the country and that allows for a considerable reduction in greenhouse gases while maintaining levels of equity and accessibility

Supported activities:

- Preparation of a Low-Carbon Urban Mobility Policy, including policies and strategies for the reduction of greenhouse gases.
- Preparation of technical guidelines for decentralised autonomous governments for the implementation of the strategy at the local level.

Status of implementation

Project start date: 2021 Q1

NUMP completion date: 2023 Q1

Completed outputs:

The following deliverables have been provided by the consultant:

- Diagnostic support document
- Scenario construction and evaluation criteria
- Methodology for the participatory strategy phase
- Vision, strategy and objectives
- NUMP Action Plan
- Measurement, reporting, and verification plan for the National Urban Mobility Policy
- Final content of three cross-cutting guidelines
- A sustainable urban transport financing strategy
- A legislative reform proposal document

NUMP key measures and cost estimates

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

Measure	Cost Estimate
Implementation of the Sustainable Urban Mobility Information System (SIM) to make it accessible to public and private actors (2030)	USD 2,000,000.00
Structuring and implementation of the comprehensive Urban Mobility Research System (SIIV) based on the participation of the Academy and the sustainable operation of SUM Observatories.	USD 9,952,000.00
Institutionalise the SUM Planning System (SIPLAN), which establishes criteria, parameters and methodologies to ensure the quality, coherence, and articulation of the national and urban SUM instruments.	USD 4,925,000.00
Technical support to the Municipalities (GAD) for the promotion of sustainable mobility	USD 150,000.00
Promotion of the development of Sustainable Urban Mobility Plans (SUMP) and Transport Plans to Work (PTT)	USD 825,000.00
Strengthening municipal finances	USD 560,000.00
Financial education SUM - with a focus on co-benefits	USD 100,000.00
Creation of the NUMP monitoring and evaluation system	USD 100,000.00

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

Urban transport investment measures	CAPEX Estimate (€M)
Public transport and NMT	USD 30,500,000.00
Street shaping urban roads and traffic management	USD 28,550,000.00
Other measures	USD 18,612,000.00
Total	USD 77,662,000.00

Finance leverage

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

Description	Source of financing	Secured?	Amount
Promotion of the creation of high-quality and safe pedestrian and cycling routes.	CAF	Planned	USD 450,000.00
Promotion of intermodality between non-motorised modes and public transport	BID	Planned	USD 10,000,000.00
Support for the creation of low emission zones and restrictions on the use of the most polluting vehicles.	AFD	Planned	USD 1,000,000.00
Support for the renewal of fleets with less polluting vehicles	GIZ	Planned	USD 10,000,000.00
Support for the optimization of urban public transport systems	BID	Planned	USD 5,000,000.00
Creation of bus lanes and HOV	BM	Planned	USD 8,500,000.00
Improvement of traffic management systems	GIZ	Planned	USD 10,000,000.00
Parking management	AFD	Planned	USD 3,000,000.00

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

Description	Source of financing	Secured?	Amount
Support for the renewal of public transportation fleets with 100% accessible vehicles	AFD	Planned	USD 10,000,000.00
Support and incentives for the professionalization of public transport companies	AFD	Planned	USD 50,000.00
Technical support to the GAD in relation to urban logistics and the urban distribution of goods (DUM)	AFD	Planned	USD 1,000,000.00
Improve the quality of transport for all users, especially women and the most vulnerable.	AFD	Planned	USD 50,000.00

Projected impacts

Indicator	Impact 2030 (NUMP vs BAU)	Baseline - 2020	Projected 2030 BAU	Projected 2030 NUMP scenario
Total annual GHG emissions (Mt CO ₂ eq)	- 0.5 Mt CO ₂ eq	15.07 Mt CO ₂ eq	16.01 Mt CO ₂ eq	15.48 Mt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO ₂ eq)	- 27 kg CO ₂ eq/capita	243 kg CO ₂ eq/capita	258 kg CO ₂ eq/capita	231 kg CO ₂ eq/capita
Access Increase of the proportion of the population living within 500 meters or less of a public transport stop	+ 10 %	65 %	70 %	80 %
Air pollution Decrease in mean urban air pollution of particulate matter (in µg PM _{2.5}) at road-based monitoring stations	- 1.7 µg/m ³ of PM _{2.5}	18 µg/m ³ of PM _{2.5}	18 µg/m ³ of PM _{2.5}	16.3 µg/m ³ of PM _{2.5}
Modal share Increase of the modal shares of trips by public transport, walking and cycling	Formal public transport: +10% Informal public transport: -3% Walking: +2% Cycling: +2% TOTAL: +11%	Formal public transport: 54% Informal public transport: 5% Walking: 18% Cycling: 0% TOTAL: 77%	Formal public transport: 50% Informal public transport: 5% Walking: 18% Cycling: 1% TOTAL: 74%	Formal public transport: 60% Informal public transport: 2% Walking: 20% Cycling: 3% TOTAL: 85%
Road safety Decrease in traffic fatalities in the urban area, per 100,000 inhabitants	- 5 fatalities/100,000 hab	33 fatalities/100,000 hab	32 fatalities/100,000 hab	27 fatalities/100,000 hab
Affordability of public transport Percentage of disposable household income spent on public transport for the second quintile household income group	- 4.6%	14.6%	14.6%	10%

Insights from practice: Lessons learned from the NUMP process

A thorough baseline study is essential to tailor policies to each municipality's specific needs, despite common guiding parameters.

At the beginning of the policy formulation process, it is important to conduct an adequate baseline study which determines the specific needs of each municipality. Although there are common parameters with which a policy can be built, an in-depth study of local needs and available information for each case and municipality is essential.

Regulated participatory processes build trust, and virtual adaptations during COVID-19 increased engagement in NUMP workshops.

Participatory processes involving key stakeholders should be regulated activities aimed at achieving consensus in decision-making, and agreements reached must be honoured to foster trust in future endeavors. The methodology for data collection and event organisation was adapted to accommodate the COVID-19 health crisis. Transitioning events to virtual platforms allowed for increased attendance at NUMP workshops, surpassing the initial attendance goals set at the beginning of the project's outset.

Perspectives for implementation

The NUMP development concluded on June 21, 2023, culminating in the launch event of the “Política Nacional de Movilidad Urbana del Ecuador” (PNMUS), attended by the Ministry of Transportation and Public Works of Ecuador and representatives of the French Agency Development, the European Union and the Euroclima program. During this event, the transversal guides, synthesis, and general document of the PNMUS were publicly released. An extension was granted to the initial contract of the project to allow the consultant to satisfactorily finalise all consultancy deliverables.

Updated in December 2024