Paraguay

Partner country

Status of the project: **Ongoing National Urban Mobility Policy**

Basic Information

Population: **6,109,903** | Growth rate: **3.7% (projection 2022)**

Percent of urban population: **68.98% (2022)**

GDP per capita: **USD $ 4 949 (2020)**

Percentage of the population living below the national poverty line: **23.5%**

Annual average infrastructure expenditures as a per cent of GDP: **2.25%**

Nationally Determined Contribution (NDC): **no mobility/ transport-related NDC**

National GHG emissions per capita: **8.77 (tCO_2eq)(2019)**[1]

Proportion of transport-related GHG emissions: **20% (2019)**[2]

Climate change risk: **Very Low**

Context

Paraguay is a landlocked country in South America, bordered by Brazil to the east, Argentina to the south and west, and Bolivia to the north. Paraguay has 6.1 million inhabitants; Asunción is the capital and largest city with 522,000 inhabitants. The official languages are Guarani and Spanish. Paraguay has an economy characterised by a large informal sector. Since the beginning of 2000, Paraguay has experienced a substantial poverty reduction and shared prosperity. Paraguay is the fifth largest soybean producer in the world. Since 2014, the Paraguayan economy has grown at an average annual rate of 4% due to strong soybean production and high world prices, at a time when other countries in the region have contracted. The country faces essential challenges to sustain and expand its social achievements. Most of the rural population depends on family farming, which places them at a higher risk of poverty. There has been a migration process from rural areas to the country's urban centres in search of better education and employment opportunities.

As a landlocked state, Paraguay depends on its transport and logistics infrastructure, which connects it to regional markets and international seaports. River transport is concentrated on the Paraguay River, where 60% of the country's foreign trade transits. Paraguay's railway system consisted mainly of a 376 km standard gauge main line. All rail traffic has been suspended, except for weekly tourist steam trains and short cross-border freight trains with Argentina. The bus network serves public passenger transport. The urban transport network is extensive and has relatively good population coverage. Cargo transportation is covered by trucks, trailers and other diesel fuel-consuming modes.

Regarding the vehicle fleet size, data from the Directorate of the Registry of Motor Vehicles shows that vehicles have increased by more than 30% in 5 years to 2,684,358 in 2021, leading to a motorisation rate of 439 cars per 1,000

[1] MADES-DNCC/PNUD-FMAM. 2024. Informe del Inventario Nacional de Gases de Efecto Invernadero de Paraguay, serie 1990-2019. Proyecto CCNeIBA3. Asunción, Py. 645. https://unfccc.int/sites/default/files/resource/IIN_INGEI1990-2019_PARAGUAY_vf%5B1%5D.pdf

[2] MADES-DNCC/PNUD-FMAM. 2024. Informe del Inventario Nacional de Gases de Efecto Invernadero de Paraguay, serie 1990-2019. Proyecto CCNeIBA3. Asunción, Py. 645. https://unfccc.int/sites/default/files/resource/IIN_INGEI1990-2019_PARAGUAY_vf%5B1%5D.pdf

inhabitants. This vehicle fleet growth is related to increased GDP per capita, urbanisation and population growth. Another characteristic of the Paraguayan automotive sector is the second-hand used vehicle imports part of the automotive fleet. The transportation sector is the largest consumer of petroleum products in Paraguay. Sectoral consumption doubled between 2007 and 2017. Regarding the fuel used, about 71% is Diesel. Both gasoline and diesel fuels must be mixed; the first is ethanol, and the second is biofuels. Gasoline prices are among the highest in Latin America.

Paraguay is the largest generator of hydroelectric power per capita in the world, and 20% of its electricity generation is destined for internal consumption. Electricity fares are among the lowest in the region. Almost 100% of oil products are imported, explaining the high costs. For these reasons, Paraguay has a very high potential for electric mobility. Public transport has a strategic potential to spearhead electric mobility through electric buses. This project prioritises electric mobility in multimodal urban public transport on the Paraguayan political agenda. The project's main product was the consolidation of a Master Plan for Urban, Electric and Multimodal Public Transport that incorporates all actions related to electromobility in the transport sector, including public passengers and cargo transport. Training activities will strengthen the development of the plan, the involvement of non-state actors, regional exchange, and the identification and management of appropriate financial resources for its implementation.

Support from the Partnership

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

Type of NUMP: Policy NUMP

Funded by: European Commission

Funding amount: EUR 300,000

Implemented by: GIZ through the EUROCLIMA+ Program

Local counterpart: Ministerio de Obras Públicas y Comunicaciones – Viceministerio de Transporte (MOPC VMT); Ministerio del Ambiente y Desarrollo Sostenible (MADES).

The primary purpose of the NUMP

- Promoting electric mobility in multimodal urban public transport in Paraguay to reduce GHG and achieve Nationally Determined Contributions (NDCs).
- Prioritisation of electric mobility in multimodal urban public transport in the Paraguayan political agenda.

Supported activities:

- Develop a Master Plan for Urban, Electric and Multimodal Public Transport and a Monitoring, Reporting and Verification (MRV) scheme.
- Strengthen public sector capacities for implementing electric transport systems and establish regional cooperation.
- Involve non-state actors in implementing electric transport systems promoted by the Master Plan.
- Identify strategic electric mobility pilot projects and potential funding sources.

Status of implementation

Project start date: 2021 Q3

NUMP completion date: 2023 Q4

Completed outputs:

- Development and validation of the EC+ project concept
- Pre-study in preparation for the NUMP
- Recruitment of consultancy for the elaboration of the NUMP
- Master Plan for Urban, Electric and Multimodal Public Transport and Logistics
- Monitoring, Reporting and Verification Scheme (MRV)
- Capacity development and training courses with local counterparts
- Information and awareness campaign on sustainable urban mobility and electrification of transport, including implementation of a website platform
- Roadmap for the implementation of strategic pilot projects

Finance leverage

Description	Source of financing	Secured	Amount
Grant TASK Centre	South Korea ODA	Secured	EUR 15,000,000

Core impact indicators baselines

Indicator	Baseline - 2019
Total annual transport-related GHG emissions (Mt CO_2eq)	7.13 Mt CO_2eq
Annual transport-related GHG emissions per capita (kg CO_2eq)	1,166 kg CO_2eq / capita
Air pollution Mean urban air pollution of particulate matter (in µg $PM_{2.5}$) at road-based monitoring stations	10 µg/m³ of $PM_{2.5}$
Road safety Annual traffic fatalities in the urban area per 100,000 inhabitants	21 fatalities / 100,000 hab

Insights from practice: lessons learned from the NUMP process

Paraguay has a unique opportunity to lead electric mobility in the region.

The NUMP is an unprecedented national effort developed through participatory workshops with high-level representatives and technical experts from key institutions, ensuring comprehensive feedback and validation of its commitments.

With abundant renewable energy from its major hydropower plants, Itaipú and Yacyretá, Paraguay has a unique opportunity to lead the region in electric mobility, aiming to become a benchmark in Latin America by 2040.

Highlights in the past year

Paraguay strengthens urban mobility with new technical assistance from Korea.

In 2024, the Paraguayan Congress approved a memorandum of understanding for creating the TASK Centre, a joint initiative with South Korea to develop the automotive industry—particularly auto parts manufacturing—and a pilot electric mobility plan.

South Korea will contribute $15–18 million in non-reimbursable development assistance for advanced equipment and expert deployment in key areas like automotive production, technical education, and electric mobility. At the same time, Paraguay will provide infrastructure and cover operational costs as part of its 2030 National Development Plan.

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