

MobiliseYourCity
**Global
Monitor**

2024

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Title: "MobiliseYourCity Global Monitor 2024"

Published and distributed: April 2024

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Implementing partners



Knowledge and Network Partners



In collaboration with



Foreword

Dear MobiliseYourCity Community,

It is with pleasure and a sense of accomplishment that we present the Global Monitor 2024. This year has been marked by significant achievements in terms of SUMP completion, methodological development, lessons learned and new funding, that will shape the trajectory of our Partnership.

In the past year, six cities successfully complete their Sustainable Urban Mobility Plans (SUMPs) with the support of AFD and GIZ. The cities of Abbottabad, Ahmedabad, Arequipa, Baixada Santista, Bouaké, and Dakar have brought our total completed MobiliseYourCity SUMPs to 19. 13 of 19 completed SUMPs and 4 of 6 completed NUMPs have been linked to finance and are moving into implementation. This milestone signifies not only the culmination of comprehensive mobility planning but also the exciting launch of a new phase dedicated to implementation.

From the completed SUMPs and the NUMPs we're learning what's working and what we can do better. That's the opportunity of this report – to share those lessons with you. For example, we've learnt how we need to be doing better on climate adaptation, that economic Transport Demand Management (TDM) was rarely included in our SUMPs, but Bus Rapid Transit (BRT) are as ubiquitous as that are difficult to initiate.

We are proud to have launched essential resources - the MobiliseYourCity Guidelines for Developing Sustainable Urban Mobility Plans (SUMP) in English, French, and Spanish, an updated Paratransit Toolkit, and three informative guides on transport modelling, paratransit contracting options, and integrating land-use and urban mobility planning. Our commitment to knowledge-sharing was reinforced through 19 training sessions engaging over 650 participants globally and two regional community meetings in Bogota and Manila. We continue to attract member cities and countries with our services. This year Phnom Penh, Cambodia, and Gambia joined our ranks, highlighting the relevance of our partnership to national and local governments. They bring the total MobiliseYourCity membership to 16 countries and 70 cities.

From the 13 SUMPS and 4 NUMPS that have already been linked to finance we're learning what's working and what we can do better. That's the opportunity of this report – to share those lessons with you.

As we look ahead, our primary goals and aspirations for 2024 are clear. Methodologically, we aim to integrate climate change adaptation into our methodological offerings, launch a groundbreaking toolkit on urban mobility governance, and release an online version of the Emission Calculator. Strategically, our commitment to transitioning SUMPs into actionable projects on the ground and advocating for additional resources to support cities decarbonise remain priorities.

We extend our gratitude to our partners and collaborators. The continued support from AFD, as evidenced by an additional 5 million euros and a renewed Memorandum of Understanding with ADB, reinforces the impact and importance of our work.

We are thrilled to announce that part of the funding secured—2.5 million euros from AFD—will finance three pilot projects supporting SUMP implementation and contribute to the Secretariat's operations for the next couple of years. This new figurative chapter in our journey signifies the continued growth of our newest service area – implementation support, which also is covered in the literal chapter 5 in this report.

To our current and prospective donors, development practitioners, and new member cities and countries, thank you. This annual report is a testament to our productivity and impact. To others, we invite you to join us on this journey, as together we strive to make lasting contributions to sustainable urban mobility.

Thank you for your interest in MobiliseYourCity and enjoy browsing the report.

Sincerely,

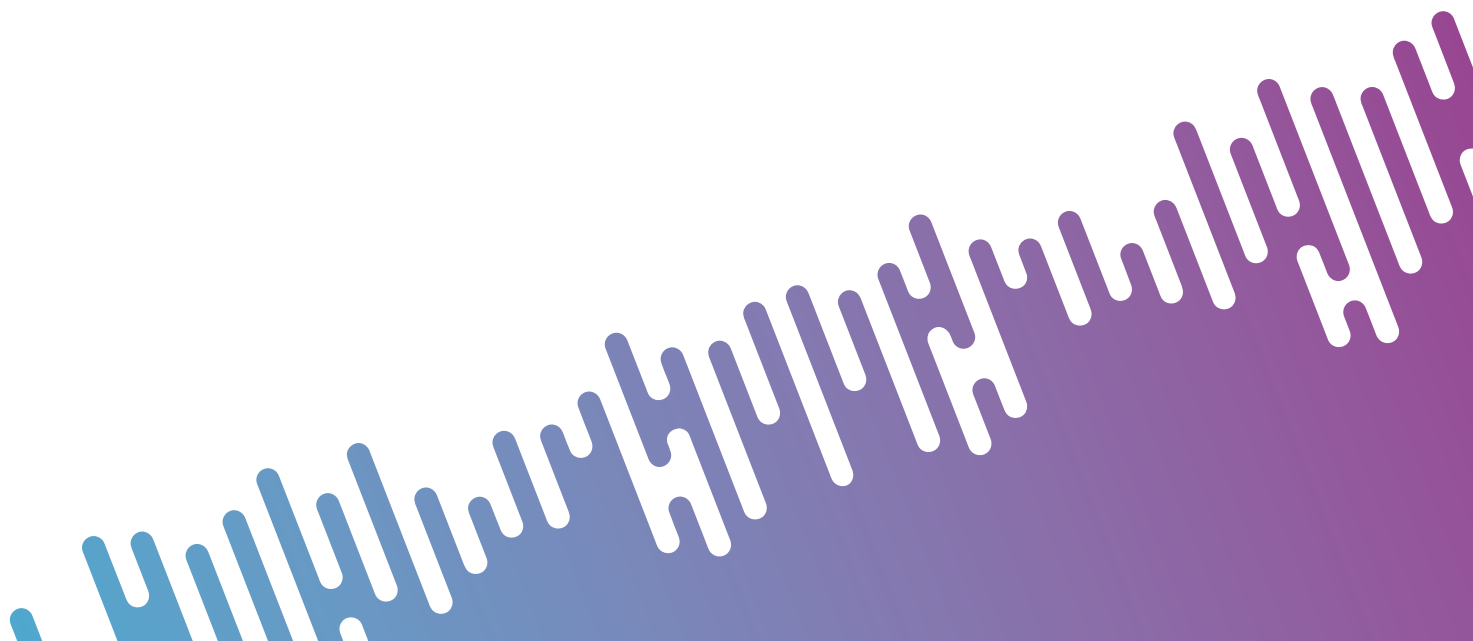
Sasank Vemuri

Coordinator of the MobiliseYourCity Partnership



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Executive Summary

Strategic mobility planning is facilitating the mobilisation of funds, paving the way for effective implementation. To date, with 54.7 million euros in grants from our donors, we have been able to support the preparation of 32 SUMP and 9 NUMP. There have been 19 completed SUMP and 6 completed NUMP, of which 13 and 4 respectively have moved into implementation, and following our support, our member cities and countries have been able to leverage 1.75 billion euros for implementation, the greatest part from international loans. The financed investments are primarily for public transport infrastructure, but also roads and public space, walking and cycling, and public transport vehicles.

Beyond projecting the impact of these investments on GHG emissions, access to public transport, the modal share of sustainable transport modes, road safety, and jobs, **we are now supporting implementation with pilot projects to deliver concrete results on paratransit reform, active modes promotion or governance strengthening.**

Our vision and mission are more than ever relevant, which is confirmed by the renewed commitment from our partners and growing membership. This year, AFD announced an additional funding of 5 million euros, including 2.5 million euros for Asia and 2.5 million for implementation of the SUMP globally and support to the Secretariat. The Partnership also welcomed two new members, the Gambia joined as a member country in October and the City of Phnom Penh in February.

Our core approach revolves around serving as a knowledge hub. **We empower member cities and countries by equipping them with tailored tools and methodologies, fostering the seamless exchange of insights and expertise.** MobiliseYourCity has undertaken a significant enhancement of its methodological offer, integrating the MobiliseYourCity guidelines to develop Sustainable Urban Mobility Plans. This enriched methodological framework, coupled with diverse toolkits and over 40 sets of training materials, has empowered practitioners in over 60 countries. The dissemination of these resources has been significantly facilitated by our new and updated Knowledge Platform, which attracted over 60,000 visitors last year. In 2023 alone, MobiliseYourCity conducted 15

online sessions, attracting participation from 555 individuals. Additionally, two in-person meetings brought together regional communities of practice in Asia and Latin America, fostering valuable exchanges and collaborative initiatives. The organisation's commitment to knowledge dissemination and capacity building continues to make a tangible impact on sustainable urban mobility practices worldwide.

Our Partnership's collaborative efforts were evident at nine key events in 2023, where MobiliseYourCity worked closely with various partners and member cities. Notably, at COP28, we highlighted the importance of sustainable transport, emphasising key areas like informal transport and multi-level action in addressing climate change. Regional advocacy efforts were also undertaken, with partnerships established with organisations such as EUROCLIMA, AFD, GIZ, and UNEP. Additionally, our collaboration with the EU allowed the common launch with DG MOVE of our guidelines for developing sustainable urban mobility plans and workshops on public transport governance, paratransit and finance with DG INTPA at the UITP summit.

Looking forward to 2024, we will develop specific guidance and tools to enhance climate change adaptation integration in urban mobility planning, with the support of ADEME. This will include identifying principles, creating guides, expanding toolkits, and organising awareness-raising activities. Additionally, we plan to launch a governance toolkit to address issues of fragmented services and resource deficiencies in urban mobility governance, providing insights for decentralisation processes. Furthermore, in view of the continuing success of our Emissions Calculator which has been viewed over 8,000 times, we will release an online version of the tool, improving accessibility and functionality for users to monitor greenhouse gas emissions in urban mobility planning.

These achievements are only possible thanks to the robust collaboration among our partners, each contributing their unique expertise to the Partnership and ensuring the delivery of the best services to our member cities and countries.





1

The MobiliseYourCity Global Partnership

Since being launched in December 2015 at COP21, the MobiliseYourCity Partnership has become the leading global Partnership for sustainable urban mobility planning, policy development, and increasing investment for sustainable transport in developing and emerging economies.

Our Implementing Organisations, primarily the Agence Française de Développement (AFD) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), are working with cities and countries across the world to develop scalable solutions to improve mobility in complex environments.

Today, the Partnership has 70 member cities with a combined population of over 129 million people in 33 countries. Thanks to the generous contributions of the European Union (EU), the Agence Française de Développement (AFD), the French Ministry for the Ecological Transition (MTE), the German Federal Ministry for Economic Cooperation and Development (BMZ), the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV) and the French Facility for Global Environment (FFEM), as of December 2023,

the Partnership has raised 54.7 million euros in grants to support 38 member cities and 8 member countries, 4 non-member countries and 7 non-member cities with technical assistance and project preparation, which has already mobilised additional loans for concrete sustainable urban mobility projects.

The Partnership was founded by Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME), Agence Française de Développement (AFD), Coopération pour le Développement et l'Amélioration des Transport Urbains et Périurbains (CODATU), Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement (Cerema) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. We are an international transport initiative under the UN Marrakesh Partnership for Global Climate Action and a member of the SuM4All Consortium.

Our vision

A climate compatible and socially just future mobility

We work together as partners to shape low-carbon mobility systems that contribute to economically vibrant, safe, and just cities for all urban residents of today and the future.

Our mission

Paving the way through collaborative planning and action

Our mission is to incubate scalable solutions, accelerate the adoption of proven approaches, and facilitate complex change processes to transform urban mobility.

We are a Partnership dedicated to enabling transformative change in urban mobility. By leveraging the unique core competencies of a wide range of organisations, we act as a knowledge hub and collaborate to generate solutions that exceed what we could do alone, helping make lasting positive change possible.



How we support cities and countries

The MobiliseYourCity Partnership supports member cities and countries through four main service areas. Already 54.7 million euros have been raised to fund projects in these four service areas.

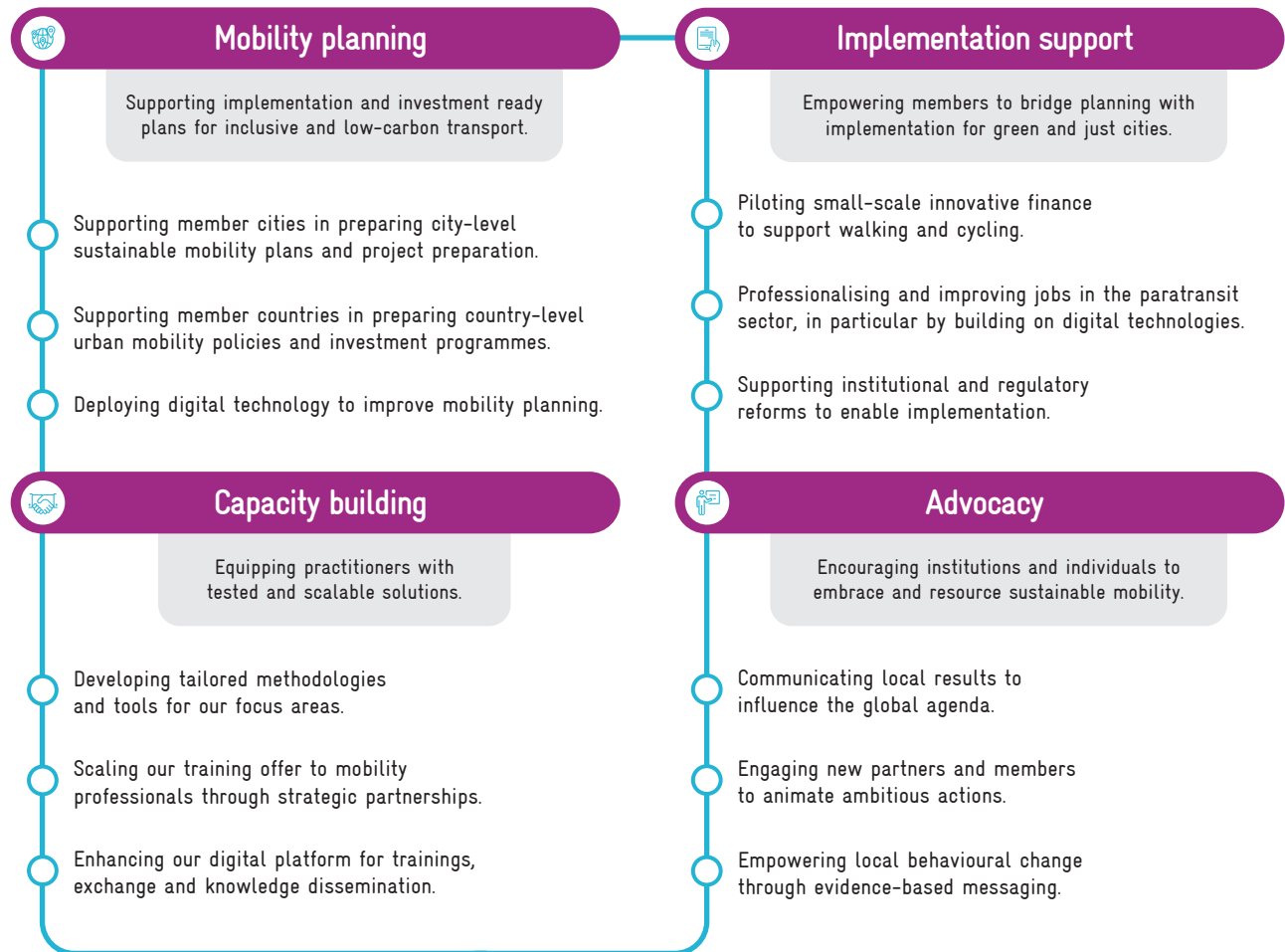


Figure 1. MobiliseYourCity's 4 service areas



"1.3 billion Asians lack proper access to urban transport, hindering progress in education and economy. Let's unite through the MobiliseYourCity Partnership to exchange knowledge and transform lives."

Jamie Leather

Chief of Transport Sector Group, Asian Development Bank

Mobility planning

Supporting implementation and investment ready plans for inclusive and low-carbon transport

Our Implementing Organisations, primarily the Agence Française de Développement (AFD) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), support our member cities and countries to shift from road-centric transport planning to mobility planning that focuses on meeting the needs of all people while balancing the needs of our planet. They are working with cities and countries all over the world to prepare implementation-ready mobility plans and finance-ready projects to improve mobility in complex environments. They support member countries in developing urban mobility policies and investment programs (NUMPs) and member cities to develop sustainable urban mobility plans (SUMP), encouraging the use of digital technology to improve mobility planning.

Facilitating access to finance

After receiving technical assistance for mobility planning and project preparation, member cities and countries are supported to identify accessible and affordable financing solutions by either directly financing certain parts of the SUMP and NUMPs in the case of our banking partners and/or linking investments to other potential financiers of mobility infrastructure and equipment.

Implementation support

Empowering members to bridge planning with implementation for green and just mobility

We offer targeted implementation support to bridge the implementation gap for small-scale and critical measures that is due to low local capacities to allocate finance and, generally, too small amounts to attract external financiers. We focus on three areas: walking and cycling, paratransit, and policy and regulatory reforms.

Capacity building

Equipping practitioners with tested and scalable solutions

Our partners work together to develop tailored methodologies and tools to develop the capacity to plan, finance and implement sustainable mobility solutions. We bring together global experts and local practitioners to generate ambitious, adaptable and achievable solutions. By acting as a knowledge hub, we ensure methodologies are constantly improved, knowledge is scaled, and insights are extracted from the SUMP.

Training and training materials: We offer our members access to webinars and training to develop their skills to improve mobility in their city or country. All the materials from the training that we offer are made available for anyone to deliver the training themselves.

An online knowledge platform: An online knowledge platform: To allow local partners access to the latest knowledge on sustainable mobility, our website offers a mobility library gathering resources on mobility from all our partners. The platform offers guidance to the most relevant resources for each step of the planning process.

Advocacy

Encouraging institutions and individuals to embrace and resource sustainable mobility

We advocate for a change in how cities and countries approach mobility by using the enable-avoid-shift-and-improve model (EASI), which puts people's need for connection and access at the forefront of mobility planning. Because we are convinced that this is a successful way of improving urban mobility and decarbonising transport, we advocate for increased resources for technical assistance to scale up this approach and the financial resources to implement it. Our advocacy work is grounded in our experience implementing this model through SUMP and NUMPs in our member cities and countries.

Who the Partnership brings together

The MobiliseYourCity Partnership brings together partners working to support cities and countries in advancing sustainable urban mobility. The modes of participation can be distinguished into four different partnership categories:

- ✓ Member cities and countries
- ✓ Donors
- ✓ Implementing partners
- ✓ Knowledge and Network Partners

City and country members

The MobiliseYourCity Partnership has 70 member cities and 16 member countries. Our Implementing Partners are supporting 32 cities and 9 countries in preparing SUMP and NUMPs, respectively.

	Member cities	SUMPs	Member countries	NUMPs
Worldwide	70	32 ¹	16	9 ²
Population	128 million people	73 million people	725 million people (urban population)	210 million people (urban population)
Africa	34	12	9	2
Asia	14	8	4	2
Latin America	18	9 ¹	3	6 ²
Eastern Europe	5	3	0	0

Table 1. City and Country members

¹ Two SUMPs supported in non-member cities

² Three NUMPs supported in non-member countries

Phnom Penh and The Gambia joined the Partnership in 2023

We are now nearly 102 partners strong, with 70 member cities and 16 member countries from the Global South.

Phnom Penh, the capital city of Cambodia, has joined MobiliseYourCity in February 2023, aiming to enhance sustainable urban mobility. With support from the Agence Française de Développement (AFD) and the Asian Development Bank (ADB), the Phnom Penh Capital Administration (PPCA) plans to reduce the city's carbon footprint and improve the quality of life for its 2.3 million residents. The focus is on promoting sustainable, low-carbon transport and modernising the public transport system. MobiliseYourCity will offer technical support, funded by an AFD grant, to help PPCA develop a strategic study for improving and modernising the existing bus network. The initiative also involves implementing integrated public transport systems and innovative solutions like dedicated bus lanes. The PPCA, with assistance from AFD and ADB, will lead the city's transition towards just and green mobility, setting an example for other Cambodian and Southeast Asian cities to join MobiliseYourCity.

The Gambia, officially the Republic of The Gambia, joined MobiliseYourCity in September 2023. Despite its small size, the Gambia faces major transport challenges related to road safety, the very rapid urbanisation of the Greater Banjul Area, poor road infrastructure, air pollution, high CO₂ emissions, and a high motorisation rate.

For those reasons, the Government wants to improve urban transport and land use planning, improve hierarchical road and integral drainage systems for the benefit of road users, particularly in the Greater Banjul Area. The government is considering to introduce a bus system for the Greater Banjul Area but first wants to strengthen its institutions. A big point of concern is the integration of the informal transport sector.

By joining MobiliseYourCity, the Ministry is hoping to receive support on capacity building for the Directorate of Transport, for the development of a Sustainable Urban Mobility Plan, to improve road safety.



The MobiliseYourCity Global Partnership

i Click on the city/country of your interest to be redirected to the factsheet.

Our members and donors

70 Cities

16 Countries

6 Donors

Latin-America and the Caribbean

Countries
Colombia
Dominican Republic
Ecuador

Cities
Córdoba, Argentina
Baixada Santista, Brazil
Belo Horizonte, Brazil
Brasília, Brazil
Curitiba, Brazil
Fortaleza, Brazil
Recife, Brazil
Teresina, Brazil
Ibagué, Colombia
Havana, Cuba
Santo Domingo, Dominican Republic

Ambato, Ecuador
Cuenca, Ecuador
Loja, Ecuador
Quito, Ecuador
Puebla, Mexico
Arequipa, Peru
Trujillo, Peru

Donors
European Union
France (AFD, FFEM, MTE)
Germany (BMUV, BMZ)

Eastern Europe

Cities
Chernivtsi, Ukraine
Lviv, Ukraine
Poltava, Ukraine
Vinnytsia, Ukraine
Zhytomyr, Ukraine

Africa

Countries
Burkina Faso
Cameroon
Ethiopia
Madagascar
Morocco
The Gambia
Togo
Tunisia
Uganda

Cities

Bobo Dioulasso, Burkina Faso	Fes, Morocco
Ouagadougou, Burkina Faso	Kenitra, Morocco
Douala, Cameroon	Khemisset, Morocco
Yaoundé, Cameroon	Khouribga, Morocco
Dire Dawa, Ethiopia	Marrakech, Morocco
Hawassa, Ethiopia	Oujda, Morocco
Kumasi, Ghana	Sefi, Morocco
Abidjan, Ivory Coast	Settat, Morocco
Bouaké, Ivory Coast	Maputo, Mozambique
Antananarivo, Madagascar	Windhoek, Namibia
Mahajanga, Madagascar	Niamey, Niger
Nouakchott, Mauritania	Dakar, Senegal
Agadir, Morocco	Mbour, Senegal
Al-Assima (Rabat Salé), Morocco	Thiès, Senegal
Beni Mellal, Morocco	Dodoma, Tanzania
Casablanca, Morocco	Lomé, Togo
El Jadida, Morocco	Sfax, Tunisia

Asia

Countries
India
The Philippines
Sri Lanka
Thailand

Cities
Yerevan, Armenia
Phnom Penh, Cambodia
Tbilisi, Georgia
Ahmedabad, India
Kochi, India
Nagpur, India
Medan, Indonesia
Mandalay, Myanmar
Abbottabad, Pakistan
Mingora, Pakistan
Peshawar, Pakistan
Kurunegala, Sri Lanka
Ankara, Türkiye

Figure 2. Our members and donors



Donors

Our funds to support cities and countries come from the European Union and the governments of France and Germany.



Donors		Amount
The European Union		21.5 M€
	MobiliseYourCity India/AIF	3.5 M€
European Commission's Directorate-General for International Partnerships (DG INTPA)	MobiliseYourCity/Intra-ACP	3.0 M€
	EUROCLIMA+ Mobility Component	13.0 M€
	EUROCLIMA+ Country Dialogue	2.0 M€
France		16.5 M€
Agence Française de Développement (AFD)	MobiliseYourCity Africa	3.0 M€
	MobiliseYourCity Asia	5.0 M€
	MobiliseYourCity Global	2.5 M€
	MobiliseYourCity Asia II	2.5 M€
French Ministry of Ecological Transition (MTE)	MobiliseYourCity	1.5 M€
French Facility for Global Environment (FFEM)	MobiliseYourCity	2.0 M€
Germany		16.7 M€
The German Federal Ministry for economic cooperation and development (BMZ)	Transformative Urban Mobility Initiative (TUMI)	0.7 M€
	Contribution to EUROCLIMA+	9.0 M€
German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV)	IKI TRANSfer III	7.0 M€
TOTAL		54.7 M€

Table 2. Donors' contributions

Implementing partners

Implementing partners provide our city and country members with technical assistance to elaborate Sustainable Urban Mobility Plans and National Urban Mobility Policies or investment programmes.



Implementing partners	SUMPs supported	NUMPs supported	Total volume of projects
AFD	24 ³	3	23.8 M€
GIZ	7 ⁴	7 ⁵	30.0 M€ ⁶

Table 3. Implementing Partners

³ Including collaborations or subcontracting with ADEME, ADB, Cerema and CODATU.

⁴ Two in non-member cities

⁵ Three in non-member countries

⁶ Includes a 9.1M€ contribution from BMZ for SUMPs in Ukraine, prior to BMZ joining the Partnership. Specific MobiliseYourCity funding implemented by GIZ reached 20.9 M€.



The Agence Française de Développement (AFD) is the French public institution in charge of implementing France's policy in the areas of development and international solidarity. The AFD funds, supports, and accelerates the transition to a fairer and more sustainable world. The AFD has already supported the development of 12 completed or nearly completed SUMP⁷ and 3 completed NUMPs in Cameroon, Ecuador and Tunisia. With 23.8 million euros for implementing MobiliseYourCity-related related activities, AFD is currently supporting the development of SUMP^s and NUMP^s, as well as pilot projects and other technical assistance, in 33 cities and 5 countries, respectively.

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is Germany's leading provider of international cooperation services. As a federal enterprise, it supports the German Government in achieving its objectives in the field of international cooperation for sustainable development. GIZ supports the development of SUMP^s and NUMP^s and provides staff for the Secretariat of the Partnership. With 30 million euros for implementing MobiliseYourCity-related activities, GIZ is currently supporting the development of SUMP^s and NUMP^s in 7 cities and 7 countries, respectively, as well as 5 pilot projects or other technical assistance. On behalf of the German Federal Ministry of Economic Cooperation and Development, the GIZ also supported 3 MobiliseYourCity Member cities in Ukraine for the preparation of their SUMP^s.

The Asian Development Bank (ADB) assists its members, and partners, by providing loans, technical assistance, grants, and equity investments to promote social and economic development. ADB maximizes the development impact of its assistance by facilitating policy dialogues, providing advisory services, and mobilising financial resources through co-financing operations that tap official, commercial, and export credit sources. Together with AFD, ADB supports the development of SUMP^s in 4 MobiliseYourCity cities in Indonesia and Pakistan.

ADEME is a French public agency aiming at supporting the ecological transition. It is active in implementing public policy in the environment, energy and sustainable development.

Cerema is a French public institution supporting public policies, working under the authority of the French Ministry of the Ecological and Inclusive Transition and the Ministry of Territories' Cohesion and Relationship with Local and Regional Authorities.

CODATU (Cooperation for Urban Mobility in the Developing World) is an association with an international focus which works to promote sustainable urban mobility policies through training activities, scientific exchanges, technical assistance and advice to local and national authorities. CODATU provides staff to the Secretariat of the Partnership under a convention with the AFD. The CODATU members are local governments and transport authorities, training and research institutes, the private sector and individual experts.

The European Bank for Reconstruction and Development (EBRD) works across three continents to further progress towards 'market-oriented economies and the promotion of private and entrepreneurial initiative'.

KfW is a German state-owned development bank, based in Frankfurt. It promotes sustainable prospects for people, companies, the environment and society. It focuses on topics aligned with the UN's Sustainable Development Goals (SDGs).

Wuppertal Institute is a leading international think tank for sustainability research focused on impacts and practical application. The organisation's activities are centred on developing transformation processes aimed at shaping a climate-friendly and resource-efficient world.



"Our incentive for supporting MobiliseYourCity is that the Partnership allows AFD to link with cities and knowledge partners, develop state-of-the-art methodologies and develop advocacy on different levels. MobiliseYourCity Partnership is a way to enhance urban mobility projects."

Reda Souirgi

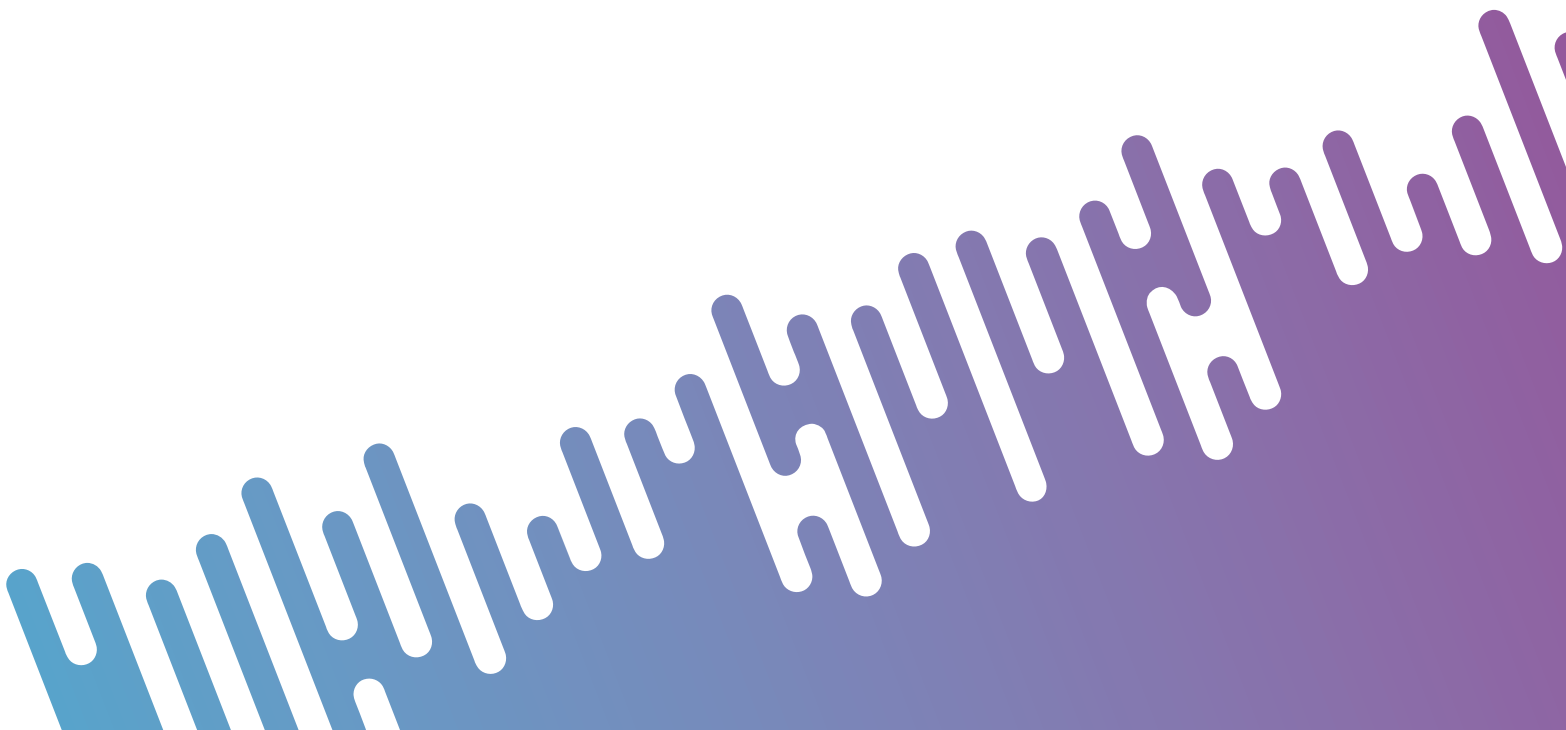
Head of Digital and Mobility Division, Agence Française de Développement

⁷ Medan, Indonesia; Dire Dawa, Ethiopia; Douala and Yaoundé, Cameroon; La Habana, Cuba; Santo Domingo, Dominican Republic; Tbilisi, Georgia; Arequipa, Peru; Bouaké, Ivory Coast.

The MobiliseYourCity Secretariat is resourced by donors and implementing partners

In this picture, from left to right, we have: Nicolás Cruz González, Sustainable Mobility Expert; Diana Ardila Luengas, former trainee in the framework of EUROCLIMA; Giuliana Ambrosino, Communications Officer; Sasank Vemuri, Coordinator

of the MobiliseYourCity Secretariat; Eléonore François-Jacobs, Partnerships and Outreach Manager and Deputy Coordinator of the Secretariat; Réka Carolina Aguilar, Junior Project Officer; Milnael Gómez, Climate Adaptation Expert.



Knowledge and Network partners

Knowledge and Network Partners are internationally- or regionally-operating or country-focused not-for-profit organisations, institutions, think tanks, affiliated technical assistance programs or other organisations associated with the MobiliseYourCity Partnership.



ITDP is a global organisation at the forefront of innovation, using technical expertise, direct advocacy, and policy guidance to mitigate the impacts of climate change, improve air quality, and support prosperous, sustainable, and equitable cities. They have worked with over 100 cities in more than 40 nations to design and implement transport and urban development systems and policy solutions that make cities more viable, fair, and liveable.

PLATFORMA is the pan-European coalition of towns and regions – and their national, EU and global associations – active in city-to-city and region-to-region development cooperation. They are a hub of expertise on European local and regional governments' international action and aim at boosting European local and regional governments' contribution to EU development cooperation policies and international frameworks.

UCLG, as a global network of cities and local, regional, and metropolitan governments and their associations, is committed to representing, defending, and amplifying the voices of local and regional governments to leave no one and no place behind.

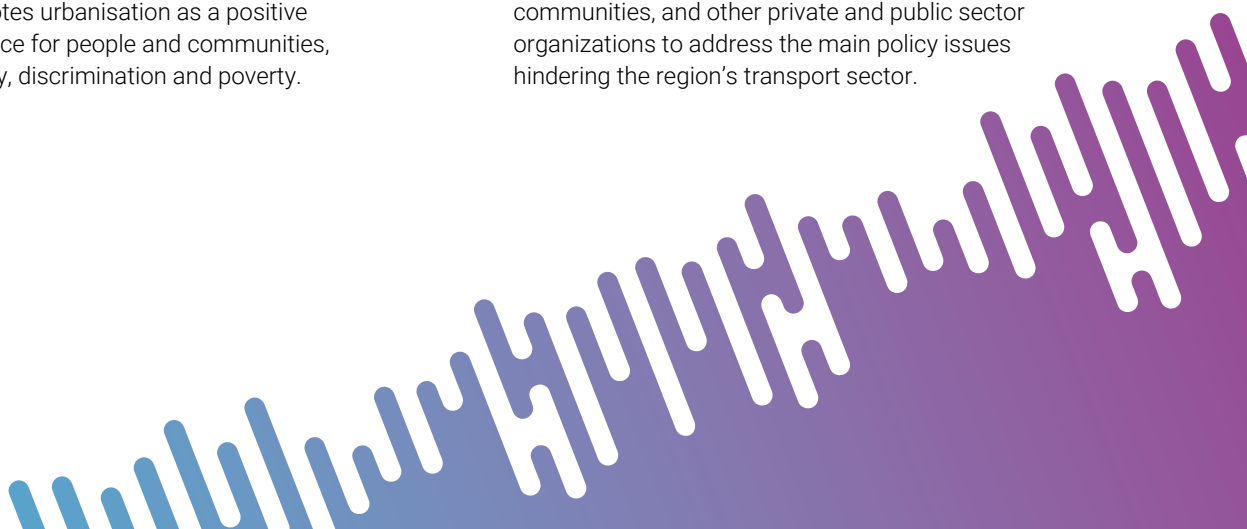
UN-Habitat works with partners to build inclusive, safe, resilient and sustainable cities and communities. UN-Habitat promotes urbanisation as a positive transformative force for people and communities, reducing inequality, discrimination and poverty.

The European Cyclists' Federation (ECF) has been the voice of European cyclists for nearly 40 years. As Europe's biggest pro-cycling federation, ECF represents organisations in 40 countries with over 500,000 active members. The ECF has pledged to ensure that bicycle use achieves its fullest potential to bring about sustainable mobility and public well-being. To achieve these aims, ECF seeks to change attitudes, policies and budget allocations at the European level. ECF stimulates and organises the exchange of information and expertise on bicycle-related transport policies and strategies as well as the work of the cyclists' movement.

The Global Partnership for Informal Transportation (GPIT) works hand-in-hand with informal urban transportation systems of the Global South to advance innovation, improve services, and change business models. By leveraging new technology and innovative policies, informal networks can confront climate change and make cities work for everyone.

Truffi Association is a non-profit NGO which works to improve access to public transportation through free geographical data and software.

SSATP actively partners with African member countries, development partners, regional economic communities, and other private and public sector organizations to address the main policy issues hindering the region's transport sector.



Our contribution to the SDGs

By assisting cities and countries in the planning and implementation of effective measures to decarbonise urban transport, the Partnership supports the goals set forth under the UNFCCC dialogue and many urban-related goals specified in the New Urban Agenda, as well as the Sustainable Development Goals (SDGs). We also support countries in meeting their Nationally Determined Contributions (NDCs) targets by reducing GHG emissions.

3 GOOD HEALTH AND WELL-BEING 


Ensure healthy lives and promote well-being for all at all ages

Targets

3.6 - By 2020, halve the number of global deaths and injuries from road traffic accidents

MobiliseYourCity Contribution

The member cities of Antofagasta, Bouaké, Dakar, Douala, Medan, and Trujillo have projected that the successful implementation of their SUMP will improve road safety and lead to saving together over 890 lives every year.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 

Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

Targets


9.1 - Develop quality, reliable, sustainable, and resilient infrastructure

9.a - Facilitate sustainable and resilient infrastructure development in developing countries through enhanced FA and TA

MobiliseYourCity Contribution

Developing reliable, sustainable, and resilient infrastructure is at the heart of the MobiliseYourCity Partnership. In just nine cities (Douala, Yaoundé in Cameroon, Santo Domingo in Dominican Republic, Lviv, Poltava and Zhytomyr in Ukraine, Casablanca in Morocco, Curridabat and Montes de Oca in Costa Rica, San Juan de Comalapa in Guatemala), 4 metro lines, 7 BRT corridors, 6 bus corridors, 6 tram lines, 1 cable car, and more than 34 transport hubs, stations and depots will be financed through mobilised investments by the Partnership.

54.7 million euros in TA provided by the Partnership has leveraged 1.75 billion euros to build quality, reliable, sustainable, and resilient infrastructure. An additional 16 billion euros in investments in infrastructure have been identified and are ready to be developed.

11 SUSTAINABLE CITIES AND COMMUNITIES 

Make cities and human settlements inclusive, safe, resilient, and sustainable

Targets

11.2 - By 2030, provide access to safe, affordable, accessible, and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations


11.6 - By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality

MobiliseYourCity Contribution

In just eight member cities, an additional 9.5 million people will benefit from improved access to safe, affordable, accessible, and sustainable Public Transport. MobiliseYourCity is directly supporting an additional 41 cities with a combined population of 78 million people.

In Santo Domingo, 600,000 US dollars have been secured for improving access to Public Transport for disabled persons. Another 600,000 US dollars will be invested in conducting a study to develop a tariff subsidy for the most vulnerable populations.

MobiliseYourCity contributes to improving air quality in cities. An MRV approach has been developed by the Partnership, but data is not yet available.

13 CLIMATE ACTION 

Take urgent action to combat climate change and its impacts

Targets

13.2 - Integrate climate change measures into national policies, strategies and planning

13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

MobiliseYourCity Contribution

MobiliseYourCity implementing partners are supporting 9 countries to integrate climate change measures into national policies through NUMPs.

Successful implementation of SUMP is expected to lead to annual GHG emissions reduced by an average of -16% (ranging from -3% to -38%), compared to business as usual. 6 cities with calculated projections will achieve a total reduction of annual GHG emissions of 3.79 Mt CO₂ in 2030, compared to business-as-usual (BAU).

MobiliseYourCity developed and supports its GHG Emissions Calculator, a free-to-use tool for transport-related emissions inventory, for BAU projection and for comparison with climate/SUMP/NUMP scenarios. 5 member cities and 2 member countries have already used it for their GHG emissions projections. In total at least 24 cities and 7 countries worldwide are using the Emissions Calculator.

17 PARTNERSHIPS FOR THE GOALS 

Strengthen the means of implementation and revitalize the global partnership for sustainable development

Targets

17.3 - Mobilise additional financial resources for developing countries from multiple sources

17.9 - Enhance international support for implementing effective and targeted capacity building in developing countries to implement all the sustainable development goals

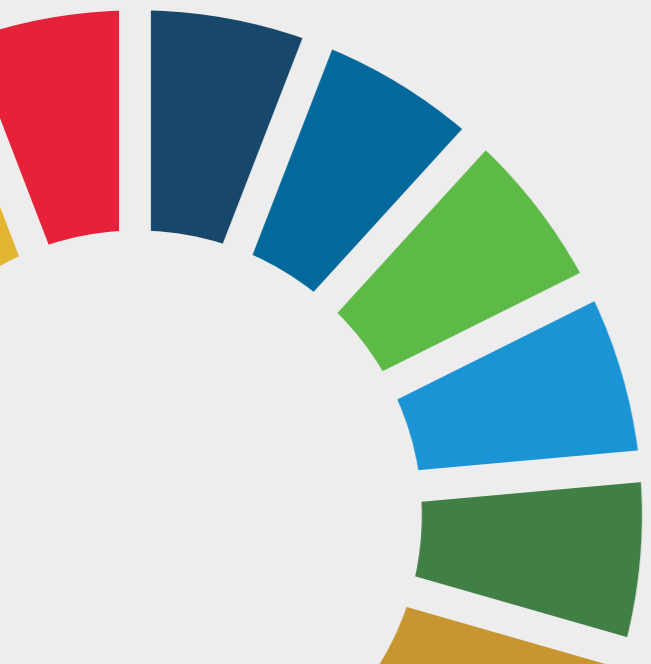
17.19 - Enhance the global partnership for sustainable development to share knowledge, expertise, technology and financial resources, to support the achievement of the SDGs

MobiliseYourCity Contribution

The technical assistance provided by the Partnership to the first completed SUMP and NUMPs has already leveraged 1.75 billion euros (secured finance) and is expected to leverage an additional 6.79 billion euros (planned finance).

MobiliseYourCity is a global partnership for sustainable development that mobilises and shares knowledge, expertise, technology, and financial resources to support the achievement of the SDGs in 16 member countries and 70 member cities.

The Partnership offers capacity building on sustainable urban mobility and shares training materials, tools and methodologies through a knowledge platform.



2

Mastering Mobility: Capacity Building and Methodologies

After centring Toolkits on the redesigned Knowledge Platform, there has been a 45% increase in visitors to MobiliseYourCity knowledge products

In early 2023, the MobiliseYourCity secretariat redesigned the website with the aim of making our knowledge products more accessible. The toolkits on our priority topics – SUMPS, NUMPS, GHG emissions modelling and MRV, and paratransit - are organised into four main sections:

1. Guidelines and methodologies,
2. Operational tools,
3. Training materials,
4. Case studies and sample documents.

The toolkits are meant to support cities, countries and partners in their endeavour to transform urban mobility by providing clear and adapted guidelines on comprehensive, transformative planning processes at different levels of government, sectors and areas of analysis.

The updated Knowledge Platform also has an additional 62 new products, bringing the total number of accessible knowledge products to 510+. These were viewed a total of 430,000 times, marking a 13% increase compared to 2022. This clearly reflects the knowledge hub role that MobiliseYourCity plays in the field of sustainable urban mobility.

Knowledge Platform Activity Overview

PROGRESS IN 2023

New products **62**

New views **50k**

MOST VISITED PRODUCTS

MobiliseYourCity Emissions Calculator

Developing Sustainable Urban Mobility Plans: Guidelines for MobiliseYourCity geographies

Global Monitor 2023

MOST VISITED ARTICLES

MobiliseYourCity Asia Regional Event: Urban Mobility for a Just and Low Carbon Transition

ADB, AFD and MobiliseYourCity discuss Sustainable Urban Mobility Planning in Phnom Penh (Cambodia)

Seven Strategies for Integrating Land Use Planning and Urban Planning

BIGGER VISITORS INCREASES

Cote d'Ivoire, Egypt, Burkina Faso

Figure 3. Knowledge Platform activity overview

Until 2023, MobiliseYourCity has worked primarily on four priority topics for the Partnership, as shown below:



SUMP Toolkit

Guidelines and Methodologies

Developing Sustainable Urban Mobility Plans – Guidelines for MobiliseYourCity Geographies [↓](#)

Topic Guide – Participatory processes in urban mobility planning [↓](#)

Topic Guide – Integrating land use and urban mobility planning [↓](#)

Topic Guide – Transport modelling for mobility planning [↓](#)

Core indicators and monitoring framework [↓](#)

Sustainable Urban Mobility Plans FAQs [↓](#)

Completed SUMPs and Case Studies

Yaoundé SUMP [↓](#)

Santo Domingo SUMP [↓](#)

Trujillo SUMP [↓](#)

Dire Dawa SUMP [↓](#)

Ambato SUMP [↓](#)

Mebidangro SUMP [↓](#)

Antofagasta SUMP [↓](#)

Baixada Santista SUMP [↓](#)

Dakar SUMP [↓](#)

Modelar y planificar la movilidad urbana en tiempos de crisis [↓](#)

Training Materials

Introducing Sustainable Urban Mobility Plans [↓](#)

Data types and data collection methods for an urban mobility diagnosis [↓](#)

Transport modelling for mobility planning [↓](#)

Introduction to walkable and cyclable cities [↓](#)

Conducting a diagnosis of active mobility [↓](#)

Securing finance for walking and cycling [↓](#)

Conducting a financial assessment of your city [↓](#)

Introduction to gender and its relevance for urban mobility planning [↓](#)

Integrating gender perspectives into SUMPs and NUMPs [↓](#)

Understanding air quality and its role in urban mobility [↓](#)

Defining scenarios and identifying measures to reach urban mobility goals [↓](#)

Innovation in urban transport for future cities [↓](#)

Tools to Operationalise the Methodologies

MobiliseYourCity SUMP Model Terms of Reference [↓](#)

Annotated Table of Contents for Sustainable Urban Mobility Plans [↓](#)





Paratransit Toolkit

Guidelines and methodologies

Understanding Paratransit – Global Overview and local challenges [↓](#)

Conducting a paratransit diagnosis – A practical guide with 6 key questions [↓](#)

Tools to Operationalise the Methodologies

Reforming Paratransit – Catalogue of practical measures [↓](#)

Topic Guide – Paratransit contracting options [↓](#)

Training Materials

Introduction to paratransit [↓](#)

Mapping paratransit services [↓](#)

Contracting options for paratransit reform [↓](#)

Case Studies

Paratransit in Asia: Scalable Solutions to Reform, Modernise and Integrate [↓](#)

Recommendations to Abidjan for paratransit reform [↓](#)

Examples of paratransit reform – Case studies: Dakar [↓](#), Kigali [↓](#) and Cape Town [↓](#)





NUMP Toolkit

Guidelines and Methodologies

National Urban Mobility Policies and Investment Programmes (NUMP) Guidelines [↓](#)

Topic Guide – Participatory processes in urban mobility planning [↓](#)

Topic Guide – Integrating land use and urban mobility planning [↓](#)

Core indicators and monitoring framework [↓](#)

Tools to Operationalise the Methodologies

MobiliseYourCity NUMP Model Terms of Reference [↓](#)

Completed NUMPs and Case Studies

Cameroun NUMP [↓](#)

Philippines NUMP [↓](#)

Ecuador NUMP [↓](#)

Training Materials

Data types and data collection methods for an urban mobility diagnosis [↓](#)

Introduction to walkable and cyclable cities [↓](#)

Conducting a diagnosis of active mobility [↓](#)

Securing finance for walking and cycling [↓](#)

Conducting a financial assessment of your city [↓](#)

Introduction to gender and its relevance for urban mobility planning [↓](#)

Integrating gender perspectives into SUMP and NUMPs [↓](#)

Understanding air quality and its role in urban mobility [↓](#)

Establishing a transport authority [↓](#)



GHG Emissions Calculator & MRV Toolkit

Tool for emissions scenario modelling

MobiliseYourCity Emissions Calculator [↓](#)

Guidelines for GHG Scenario Modelling

MobiliseYourCity Monitoring and Reporting Approach for GHG Emissions [↓](#)

User Manual for the MobiliseYourCity emissions calculator [↓](#)

Training Materials

Introduction to GHG emissions accounting for urban mobility [↓](#)

Estimating the GHG emissions impact of a SUMP [↓](#)

Case Studies

GHG emissions report of Ambato's SUMP [↓](#)

GHG emissions report of Antofagasta's SUMP [↓](#)

GHG emissions report of Guadalajara SUMP [↓](#)

GHG emissions report of Chile's NUMP [↓](#)

GHG emissions report of Uruguay's NUMP [↓](#)

Figure 4. Our full methodological offer

The Partnership launched our cornerstone methodology: 'Developing Sustainable Urban Mobility Plans – Guidelines for MobiliseYourCity Geographies' together with other key publications



Developing Sustainable Urban Mobility Plans – Guidelines for MobiliseYourCity Geographies

In 2023, MobiliseYourCity introduced its new publication, "[Developing Sustainable Urban Mobility Plans – Guidelines for MobiliseYourCity Geographies](#)," adapting the EU-proposed methodology to address the specific challenges of cities in Africa, Asia, Eastern Europe, and Latin America. These new guidelines contribute to addressing the systematic transformation of sustainable urban mobility by tackling diverse but common challenges present in our geographies: the need to increase technical capacities, challenges with governance and institutional frameworks of local governments, low levels of private motorisation, a high modal share of active modes and public transport, and paratransit as the main, if not the only, public transport service available. We have leveraged European knowledge in sustainable urban mobility planning while bringing insights and lessons learned from its practical implementation worldwide.

MobiliseYourCity developed these Guidelines through a participatory process in which we asked city members to share their experiences developing a SUMP. We brought experiences from Ahmedabad, India; Ambato, Ecuador; Antofagasta, Chile; Arequipa and Trujillo, Peru; Bouaké, Ivory Coast; Córdoba, Argentina; Dakar, Senegal; Guadalajara, Mexico; Havana, Cuba; Kumasi, Ghana; Kurunegala, Sri Lanka; Lviv, Poltava, and Zhytomyr, Ukraine; Maputo, Mozambique; Peshawar, Mingora, and Abbottabad, Pakistan; and Tbilisi, Georgia. We thank all our partners and members involved in the process, and we hope the MobiliseYourCity Guidelines to develop Sustainable Urban Mobility Plans will facilitate the endeavour of developing SUMP worldwide.

[↓ ENGLISH](#)
[↓ FRANÇAIS](#)
[↓ ESPAÑOL](#)


Topic Guide: Integrating Land-Use and Urban Mobility Planning (EN)

Tailored for practitioners, from local authorities to mobility experts and consultants, this topic guide explores the link between land use and urban mobility planning. Backed by diverse sources including scholarly literature and real-world case studies spanning African, Asian, and Latin American cities, our guide is a testament to the potential of harmonising land use and urban mobility. Rather than providing one-size-fits-all solutions, the guide proposes a methodology for crafting context-specific Sustainable Urban Mobility Plans (SUMP) that effectively merge land use and mobility considerations.

[↓ DOWNLOAD](#)


Topic Guide: Transport modelling for Urban Mobility Planning (EN)

This topic guide aims to support practitioners (local authorities, mobility experts, consultants, and international development officials) in deciding the best solution to implement transport modelling when preparing a Sustainable Urban Mobility Plan (SUMP).

Desk review and the experience of some MobiliseYourCity city members constitute the basis of the content presented. This topic guide provides insights into transport modelling and its pertinence and suggests a step-by-step guide to integrate this analysis tool when preparing a SUMP. It proposes a set of questions to ask oneself to build a coherent, realistic, and locally based transport model if needed.

[↓ DOWNLOAD](#)

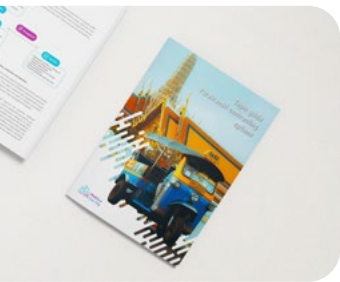


Paratransit Toolkit 2.0

This toolkit is aimed at decision-makers, experts, consultants and policy-makers responsible for integration in the urban transport sector, working to promote sustainable, inclusive, efficient, and high-quality mobility systems. Its aim is to help stakeholders consider paratransit in these systems in a coherent and integrated manner.

Improving the integration of paratransit means meeting three key challenges for the sector, which can sometimes be contradictory: optimising the efficiency and quality of the service provided; improving working conditions for operators; and controlling negative externalities, particularly in terms of environmental impact and road safety.

This publication therefore aims to provide decision-makers and experts with practical tools for planning and implementing paratransit reforms. The Paratransit toolkit includes four documents: Understanding Paratransit, Making a Diagnosis on Paratransit, Reforming Paratransit, and Examples of Paratransit Reforms.

[↓ FRANÇAIS](#)
[↓ ENGLISH](#)
[↓ ESPAÑOL](#)


Topic Guide: Paratransit Contracting Options (EN)

This topic guide was produced within the scope of light technical and advisory support aimed primarily at accompanying Abidjan's mobility authorities in their current paratransit sector reform efforts. It includes several references to Abidjan's process, but its general content can be used in other contexts. The primary objective of the document is twofold: first, to describe the current characteristics of paratransit operations, and second, to provide a general definition of the different contracting options (including advantages and obstacles) between transport authorities (or any other institutions in charge of managing mobility) and the paratransit sector.

[↓ DOWNLOAD](#)


Studies of Informal Passenger Transport Reforms in Sub-Saharan Africa: Kigali, Dakar, and Cape Town (EN)

The series comprises three case studies addressing paratransit reform in different African cities. The first case study examines Dakar, Senegal, highlighting its ongoing paratransit fleet renewal programs initiated in the early 2000s and detailing the comprehensive reform process and outcomes until 2022.

The second case study delves into the recent history of public transport in Kigali, Rwanda, emphasising the role of private-sector involvement as a catalyst for reform, with a focus on corporatisation and regulatory framework changes until 2022.

The third case study, set in Cape Town, South Africa, written in July 2021, centers on the reform efforts aimed at the minibus-taxi sector, initially structured around Bus Rapid Transit implementation. This report provides a comprehensive overview of the reform process, incorporating previously unpublished data and analysing outcomes related to regulation, socioeconomic performance, externalities, and labour-force issues.

[↓ CAPE TOWN](#)
[↓ KIGALI](#)
[↓ DAKAR](#)

The MobiliseYourCity emissions calculator continues to evolve to meet the needs of cities and countries

The MobiliseYourCity Emissions Calculator was used in the framework of a light technical assistance to Sousse, Tunisia, in partnership with the EU-funded EuroMed-Transport Support Project. The overall objective of the project was to assess the impacts of the SUMP of Sousse regarding the reduction of GHG by applying the MobiliseYourCity's Emissions Calculator and disseminating results to Euromed and MobiliseYourCity cities.



Support in the evaluation of the impact of the implementation of the Urban Transport Plan (PDU) of the Grand Sousse in terms of greenhouse gas emissions (FR)

↓ DOWNLOAD



Recording of Greenhouse gas emissions impact assessment of an Urban Mobility Plan

↓ ENGLISH

↓ FRANÇAIS

The MobiliseYourCity Emissions Calculator continues to be the most successful tool made available by the Partnership. With more than 8,000 downloads from the Knowledge Platform, the calculator has supported the GHG emissions calculations and analysis of 26 cities and 7 countries worldwide. In 2023, MobiliseYourCity completed version 1.5 of this tool, incorporating feedback from practical implementation.

The new version of the MobiliseYourCity emissions calculator:

- Allows the inclusion of different vehicle and fuel types according to local categories.
- Includes orientation values to be used as defaults in case of lack of data.
- Adds automatic corrections to limit the chance of error caused by data input.
- Improves the user interface to make easier the inclusion of input data.

Join our LinkedIn group for users of the MobiliseYourCity Emissions Calculator to engage in peer exchange and share experiences.

in LINKEDIN GROUP

By using our training materials, we increased the efficiency of training sessions preparation and delivery to support partners' capacity development activities

With nearly 40 sets of training materials, MobiliseYourCity has a full capacity development offer ready to be used to replicate and scale up training sessions in different languages. The complete list of training materials is available in our [MobiliseYourCity training materials catalogue](#). The catalogue provides a description of each module and its content and presents the way MobiliseYourCity can support the use of the materials at the local level.

MobiliseYourCity constantly delivers training sessions for sustainable urban mobility practitioners worldwide, either online or in person.

Euroclima used the MobiliseYourCity training materials to hold online training sessions on gender, active mobility, and financial assessment in Spanish. The Secretariat complemented the series with two sessions on sustainable urban mobility and land use planning. This series of trainings took place due to the launch of the SUMP Guidelines in Spanish.

The training materials also supported a series of training sessions jointly prepared by CODATU and the MobiliseYourCity Secretariat in the framework of the FEXTE technical cooperation financed by AFD for the Peruvian government. In 4 days, 30 employees from Promovilidad, a group from the Peruvian Ministry of Transport, participated in 4 training sessions on sustainable urban mobility, active modes, gender, and paratransit. Through this initiative, we aimed at introducing Promovilidad to the MobiliseYourCity training materials to potentially replicate such training sessions for the 26 secondary cities in Peru.

What is the difference between a training session and a training material set?

While a training session constitutes an event in which one or several speakers explain a topic relevant to MobiliseYourCity, the training materials are a set of resources aiming at facilitating the replication of the training sessions. The MobiliseYourCity training materials include mainly the annotated slide deck, draft agenda, proposed exercises and a list of additional literature to support capacity development activities in different geographies. The modules intend to facilitate the task of implementing partners, consultants, and experts in building the capacities of local and national authorities.

Access all MobiliseYourCity materials

MobiliseYourCity makes all session recordings available on its [YouTube channel](#), as well as all used materials in the [Knowledge Platform](#).

▶ [YOUTUBE CHANNEL](#)

📖 [KNOWLEDGE PLATFORM](#)



"The SUMP must have a timeframe for development, completion and updating. And give the points to watch for updates. This is a very good transport document, and congratulations to the presentation team."

Abdoul-Rahim

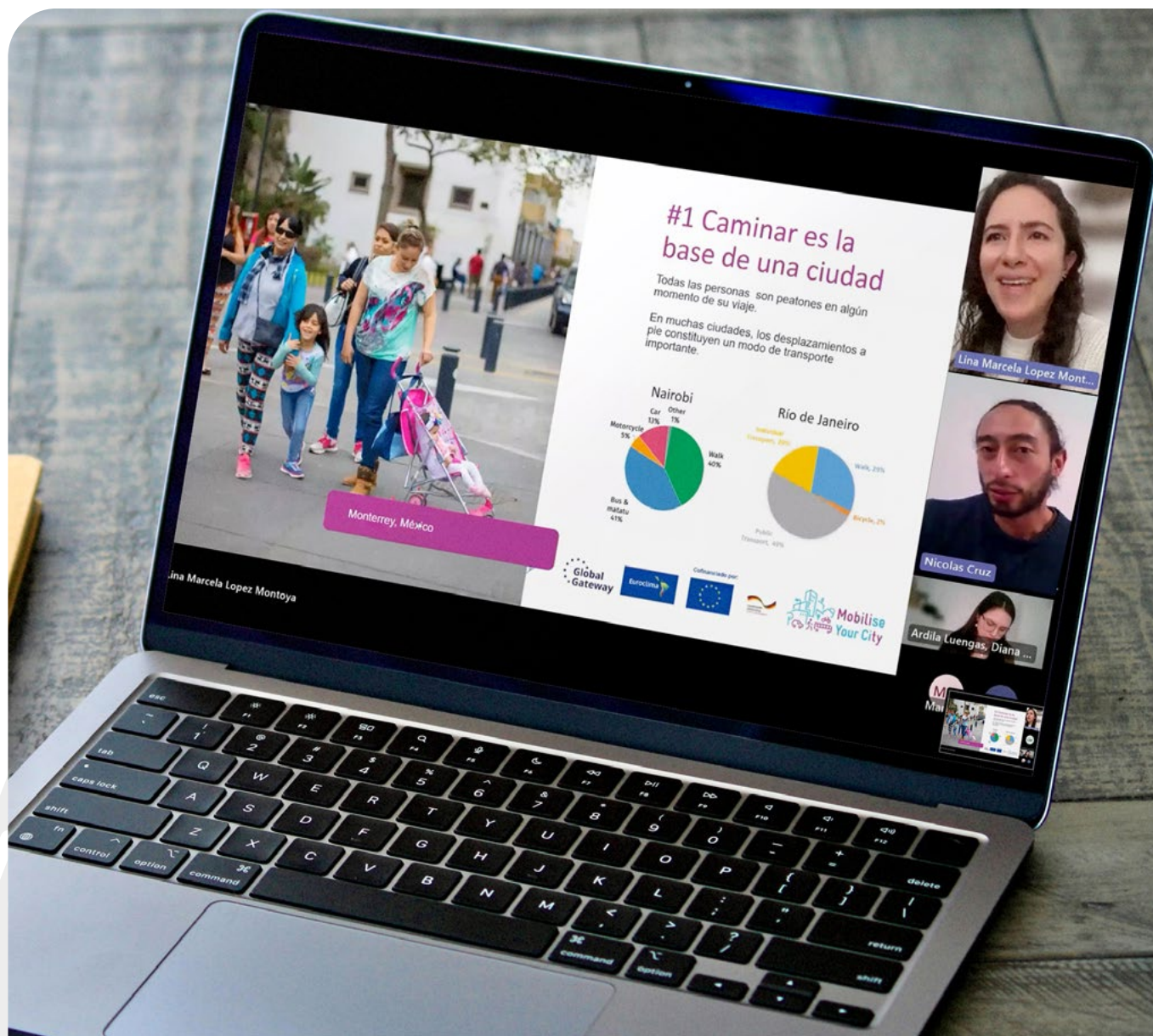
SAVADOGO, Head of the Foresight and Project Engineering Department, Greater Ouagadougou Transport Council, Ouagadougou Municipality, Burkina Faso

Through 15 online training sessions, 555 urban mobility practitioners were trained on different topics around the SUMP cycle

In 2023, with the launch of the MobiliseYourCity SUMP Guidelines, the Secretariat held series of trainings diving deeper into the content of this publication. The series of webinars aimed to go through the SUMP phases and steps proposed, the MobiliseYourCity implications for the core SUMP principles, and the main features of a modern and sustainable urban mobility system.

People from at least 63 African, Asian, European, and Latin American cities joined the Mastering Mobility sessions. In 2023, these were offered in French, Spanish and English, with one session having been held in Portuguese.

We mobilised our organisational partners and the consultants who have been working on SUMPs throughout the world to deliver practical, experience-based, and tailored training sessions for our members. We delivered training sessions on transport modelling and GHG emissions impact of a SUMP. Sessions also covered measure selection, mass transit options, mobility observatories, active modes, gender, and land use planning.



Global attendance at the Mastering Mobility Series

Training sessions 2020 **8** 2021 **20** 2022 **16** 2023 **15**



Figure 5. Mastering Mobility Series

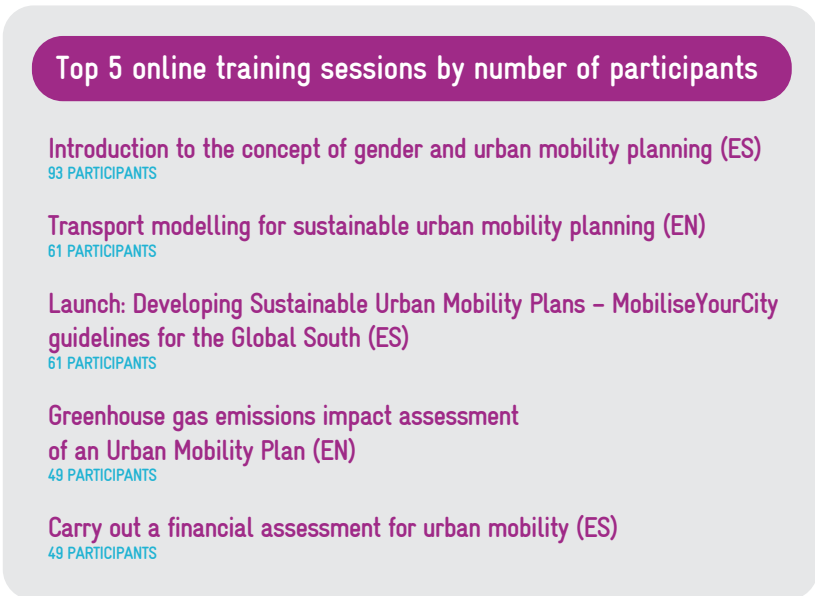


Figure 6. Most attended training sessions in 2023

The MobiliseYourCity Asia and Latin America Communities of Practice convened at regional events to share experiences and acquire knowledge

With a definitive return to in-person events this year, the partnership members gathered on different occasions. The CODATU Regional Forum in Bogota was the chance to meet representatives from the African and Latin American communities of practice (CoP); the Regional Asia CoP meeting with AFD and ADB in November gave us the opportunity to meet the Asian Community of Practice for the first time. These occasions are precious for us to understand the needs and achievements of our member cities.

MobiliseYourCity reunites for the first time the Asian Community of Practice (CoP)

The inaugural MobiliseYourCity event in Asia in the last quarter of 2023, co-organised by the Asian Development Bank (ADB), the Agence Française de Développement (AFD), and the Global Secretariat, convened more than 80 decision-makers, government officials, mobility practitioners, experts, and partners in Manila for a three-day gathering.

The event focused on presenting and discussing innovative sustainable urban mobility planning supported by the Partnership, aiming to facilitate a shift towards low-carbon transport solutions in the region. Challenges such as insufficient investment in sustainable transport infrastructure and a lack of public awareness regarding the necessity for new travel behaviours were highlighted. Various sessions addressed practical solutions, including small-scale transport, active modes (walking, cycling), and the integration of urban planning and mobility.

The event also featured training sessions on Sustainable Urban Mobility Plans (SUMP) and urban mobility governance. Importantly, it served as a platform for signing a new memorandum of understanding between AFD and ADB, reaffirming

their commitment to collaborate in encouraging Asian cities to embrace sustainable urban mobility plans. Ultimately, the gathering of the Asia CoP is fostering the development and financing of projects promoting active transportation and accessible public transport networks.



“Transportation, once hailed as the lifeblood of a thriving city, now stands at a crossroads. The choices we make today regarding transportation in our urban centers hold the key to our collective future. As we gather here to deliberate over the achievements of the MobiliseYourCity Partnership in Asia, we must recognize the urgency and imperativeness of our mission for a just and low-carbon urban mobility.”

Umar Arshad Khan

Secretary of the Regional Transport Authority of the Khyber Pakhtunkhwa Province, Pakistan

MobiliseYourCity Latin American and Caribbean members and Community of Practice meeting

In the framework of the [CODATU Regional Forum on Sustainable Urban Mobility 2023](#) that took place in Bogota, Colombia, MobiliseYourCity gathered representatives from city and country members to allow a regional meeting of the Partnership. This provided an opportunity to train members through capacity development sessions and facilitate peer exchanges, sharing lessons learned from sustainable urban mobility projects. This provided an opportunity to train members through capacity development sessions and facilitate peer exchanges, sharing lessons learned from sustainable urban mobility projects.

Together with the GIZ, AFD, and Despacio, 14 local governments and 3 national governments joined the activities proposed by MobiliseYourCity, including their participation in the official programme of the CODATU Regional Forum, [training sessions](#), technical visits, and the Community of Practice meeting. Technical visits showcased innovative transport projects in Bogotá, including TransMiCable, Laguna bus and BRT depots, and urban planning initiatives in the San Felipe district, Laguna bus and BRT depots, and urban planning initiatives in the San Felipe district.

Cusco, Arequipa, Huamanga, Piura - Peru; Buenos Aires and Rosario - Argentina; Cuenca and Quito – Ecuador; Bogota and Tunja - Colombia; La Paz, Bolivia; Puebla, Mexico; Niteroi, Brasil; Montevideo, Uruguay represented local governments and Colombia, Ecuador, and Peru representing national governments.

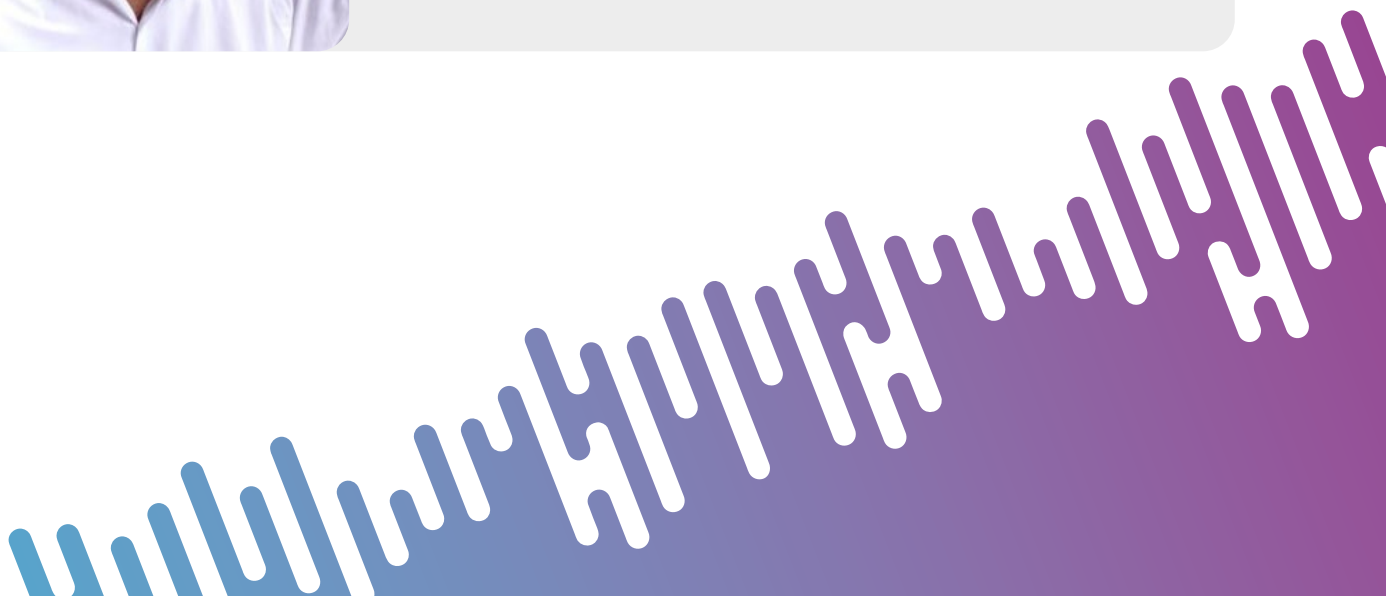
Participants in the event are members of MobiliseYourCity, and beneficiaries from [Euroclima](#), [ProMOVIS](#), [SolutionsPlus](#), and [FEXTE](#) (French cooperation fund).



“As civil servants, we must propose, promote, work, fight, and implement mobility policies that achieve healthier cities, with quality of life and safety from the point of view of road safety.”

Alfredo Aguilar Arizaga

Coordinador General de Movilidad, Cuenca, Ecuador



3

Mobility Planning: Supporting SUMPs and NUMPs

The essence of our offer to member cities and countries is to provide support for the implementation and development of investment-ready plans aimed at creating inclusive and low-carbon urban mobility systems. MobiliseYourCity supports member cities in preparing city-level sustainable mobility plans (Sustainable Urban Mobility Plans - SUMPs) and project preparations and aids member countries in preparing country-level urban mobility policies and investment programmes (National Urban Mobility Policy or Investment Programmes - NUMPs). We encourage the deployment of digital technologies to improve urban mobility.

Our Implementing Partners, particularly the Agence Française de Développement (AFD) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), are working with 32 local and nine national governments around the world to prepare implementation-ready mobility plans and finance-ready projects. In addition to supporting planning and project preparation, the Partnership also supports 24 cities in designing and implementing a diverse set of pilot projects, from introducing low-speed zones around schools to setting up shared e-bicycle schemes.

In 2023, MobiliseYourCity city and country members successfully completed 6 SUMPs and 2 NUMPs with the support of technical assistance projects implemented by AFD and GIZ. The cities benefiting from these transformative plans include Abbottabad, Pakistan; Ahmedabad, India; Antofagasta, Chile; Baixada Santista, Brazil; Bouaké, Ivory Coast; and Dakar, Senegal, while Chile and Ecuador are the countries with finalised NUMPs. This year's results

bring the number of completed SUMPs and NUMPs, respectively, to 19 and 6. Of these, 13 SUMPs and 4 NUMPs have been linked to finance and are moving into implementation.

The completion of such SUMPs and NUMPs is a successful proof of MobiliseYourCity's dedication to assisting local and national governments in linking sustainable urban mobility with decisive climate action, which is the ultimate objective of the Partnership established at COP21. This effort culminates in the development of a robust roadmap, strategically outlining a series of projects aimed at transforming urban areas towards a sustainable future in the short, medium, and long term.

The preparation of SUMPs and NUMP has helped mobilise more than 1.75 billion euros

In 2023, MobiliseYourCity saw an additional 58 million euros leveraged by the adoption of SUMP and NUMP, resulting in a total of 1.75 billion euros for the implementation of sustainable urban mobility projects in our city and country members. Leveraged financing refers to all secured finance for project implementation that results from or enabled by MobiliseYourCity support. Several notable secured leveraged finance initiatives in 2023 encompassed projects such as the development of Project Yaoundé Cœur de Ville, establishment of a Public Transport and Soft Mobility Unit in Yaoundé, and capacity building for CUY staff in Douala, all situated within Cameroon. Without a shift in mindset, investments in urban transportation often favour assets that perpetuate unsustainable urban expansion. SUMP and NUMP facilitate this shift by effectively pinpointing and initiating projects that promote more sustainable urban transportation practices with a systemic approach.

As in previous years, the finance leveraged continues to be dominated by investments in public transport infrastructure, representing 45% of the total identified investment need by SUMP and NUMP and 61% of the total leveraged finance. More than 1 billion euros have been secured for public transport investments identified through SUMP and NUMP. These investments include the first Bus Rapid Transit (BRT) line in Medan, Indonesia; funding for tramway expansions T3 and T4 in Casablanca; and an investment initiative in Trujillo, Peru, aimed at constructing a north-south corridor and complementary roads. As for National Urban Mobility Plans (NUMP), examples include the Filipino government's backing for local production of public transport vehicles and Colombia's restructuring of funds to support the renewal of electric bus fleets.

What is a NUMP?

A National Urban Mobility Policy or Investment Programme (NUMP) is a strategic, action-oriented framework for urban mobility developed by national governments, enacted to enhance the capability of cities to plan, finance, and implement projects and measures designed to fulfil the mobility needs of people and businesses in cities and their surroundings sustainably.

What is a SUMP?

A Sustainable Urban Mobility Plan (SUMP) is a strategic plan developed in a participatory and integrated way to meet people's and businesses' mobility needs in cities and to harmonise and integrate existing planning approaches. It sets cities on a sustainable course regarding land use and urban mobility. Because each city is starting with a different baseline of transport plans, the MobiliseYourCity implementing partners and city members work together to adapt the SUMP process for local needs.



"Today one of the important elements to support Urban Transportation sectors, particularly informal sectors, is a question of funding. [...] The fact that we have funding and that we are able to work with partners like MobiliseYourCity, that we have support for funding of the planning documents and for the organisation of the sector, has really allowed us to boost other kinds of funding. If these preconditions are not met, then it is very difficult to find further funding."

Gora Sarr

Senegal, Coordinateur of the BRT Project at Conseil Exécutif des Transports urbains de Dakar - CETUD

This also includes expanding service coverage, increasing service frequency, and modernising facilities, accounting for approximately 66.4% of the overall estimated expenses.

In addition to investments in public transport, SUMP have also identified the need for 2.5 billion euros to improve the road infrastructure, nearly 800 million euros for dedicated walking and cycling facilities, and around 40 million euros to support port-area logistics investments.

Moreover, SUMP or NUMP, serving as a strategic roadmap, not only help local and national governments to develop sustainable urban mobility and achieve Sustainable Development Goals, but also enable additional financing by providing new arguments to donors and international financial institutions for investment in the sector. These plans result from a concerted planning process, assuring donors that

financing a project within its action plan is framed under a long-term policy strategy for urban mobility that transcends government terms. For instance, the existence of Ambato SUMP has improved its funding favourability from the Ecuadorian Development Bank and KfW. Similarly, the existence of the Yaoundé SUMP has improved the city’s funding favourability from both domestic and international sources, catalysing the implementation of measures included in the SUMP’s action plan. Additionally, the SUMP in Cameroun have led to the commitment from various donors including the European Union and AFD in Yaoundé, and the World Bank in Douala. Following the adoption of the NUMP in Tunisia, the government has established a dedicated fund for urban transport investment aimed at supporting innovative small-scale projects that catalyse further action.

Evolution of secured financing leveraged through mobility planning

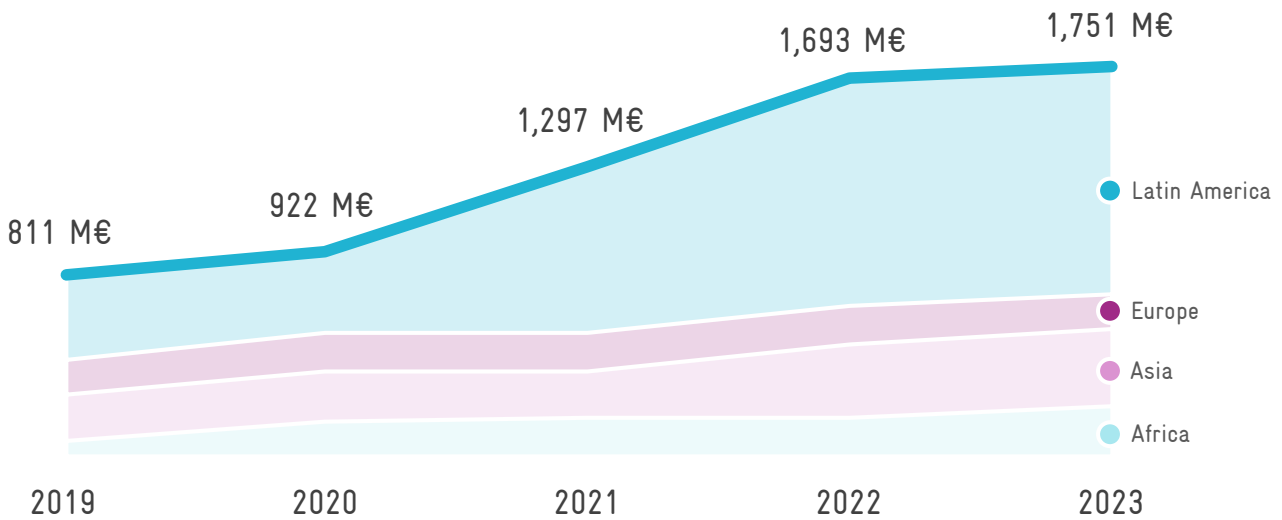
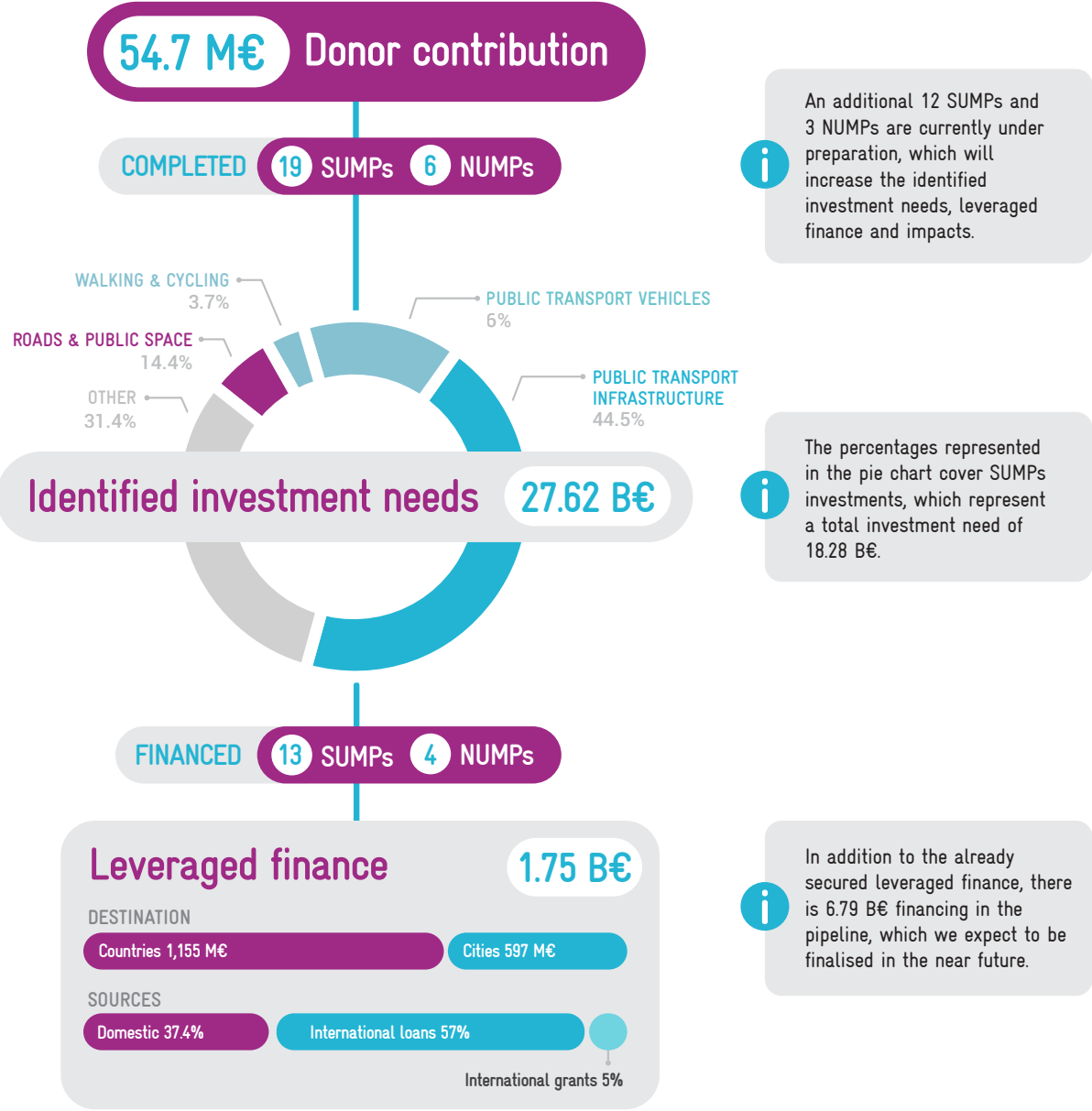


Figure 7. Evolution of Leveraged Financing

Leveraging finance from SUMP and NUMP

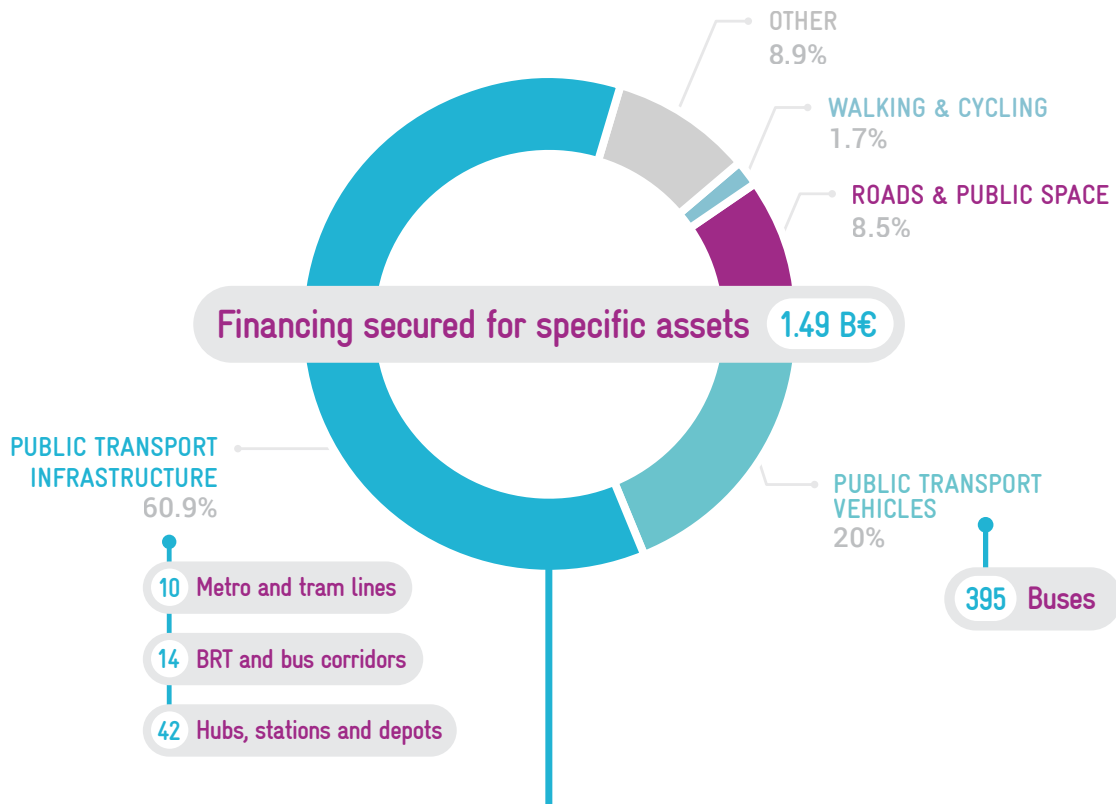


Mobility plans are key in securing financing

SUMPs and NUMPs help our city and country members identify the right projects or programmes for their needs, and we are able to identify the selected measures with cost estimates.

Figure 8. Leveraging Finance from SUMP and NUMPs

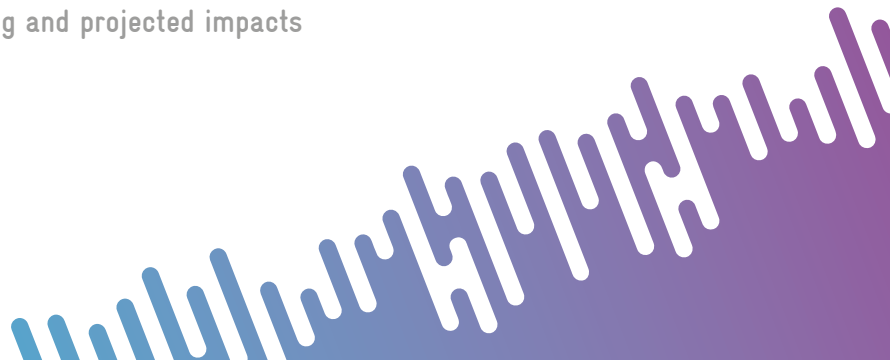
Investments and projected impacts



Contributing to low-carbon, safe, and just cities

- Annual GHG emissions in 2030 will be 15.56 MtCO₂ lower (compared to BAU)
- SUMP implementation will enable cities to cut 16% of their annual emissions by 2030
- 10.5 million additional people will have access to public transport
- +5% modal share of sustainable transport modes (compared to BAU)
- 841 lives saved annually through better road safety
- Improved job quality for transport workers

Figure 9. Investments with secured financing and projected impacts



11 of 19 finalised MobiliseYourCity SUMPs embrace Bus-Rapid Transit systems

MobiliseYourCity-supported SUMPs prominently feature Bus Rapid Transit (BRT) systems as the cornerstone of urban mobility. These plans strategically propose BRT systems as a cost-effective, efficient, and flexible mass transit option. Proposing BRT systems is a flagship measure in MobiliseYourCity SUMPs, contributing to addressing the infrastructure gap in some cities while increasing road capacity and reallocating street space from cars to prioritise public transport.

Due to their cost-effectiveness and potentially rapid implementation, preparing BRT projects contributes to solidifying the governance and decision-making processes of early transport authorities, consolidating urban mobility authorities that have recently adopted their SUMPs. Therefore, BRT serves as an entry point for cities undertaking actions to transform mobility, preparing them for future, more complex urban transport projects and solutions. BRT combines the efficiency and quality of metros with the flexibility and relatively low cost of buses while offering many social and environmental benefits.

This demonstrates the efficiency of investing in BRT projects, which has proven particularly suitable for cities without a long history of public transport management. For travel demand of up to 40,000 passengers per hour per direction BRT emerges as a cost-effective and flexible solution to provide public transport supply. Above these travel volumes a metro could be considered. MobiliseYourCity SUMPs have identified the need for 9,303 million euros for the development of 3 metro lines in Santo Domingo and 790 million euros for 7 BRT lines in 6 other cities.

Transforming the paratransit sector can be undertaken as part of BRT implementation, aiming to include paratransit owners, drivers, and other workers in the renovated operational framework of the BRT system. Paratransit is pivotal in the MobiliseYourCity SUMPs, with a significant financial allocation earmarked for reform initiatives. The Partnership recognises the importance of formalising and regulating the paratransit sector, contributing to a more organised urban transport landscape.



Transport Demand Management (TDM) measures are ubiquitous in SUMP

Transport Demand Management (TDM) encompasses a set of strategies and policies aimed at promoting sustainable urban mobility by promoting efficient travel modes (those that consume less roadway space per passenger-kilometre) to increase the effective capacity of existing infrastructure; and by shifting travel by inefficient modes to off-peak periods to reduce congestion. For maximum effectiveness and benefits, a comprehensive TDM strategy needs both positive (“pull”) incentives, mostly related to urban planning, and hindrances (“push”), such as road and parking pricing. Measures aimed to such objectives are integrated in all MobiliseYourCity SUMP.

One approach for pull-TDM integration is mixed-use zoning, which encourages the development of areas where residential, commercial, and recreational activities are co-located, thereby reducing the need for long-distance travel and promoting walkability. Integrating land use and transportation planning to create mixed-use developments reduces the need for long commutes and promotes the accessibility of services within neighbourhoods. For example, Ambato, Ecuador, has a detailed set of interventions to develop a transport demand management plan, including technological, administrative, economic, and legal

measures for reducing congestion and optimising the use of private cars and motorcycles. Abbodabat, Pakistan; Santo Domingo, Dominican Republic; and Dire Dawa, Ethiopia; have proposed demand management action plans to be developed as part of their SUMP.

Another approach is Transit-Oriented Development (TOD) which fosters higher-density, mixed-use developments around public transportation hubs to encourage public transit usage and minimising reliance on private cars. TOD is strongly supported in the Dire Dawa, Ethiopia and Dakar, Senegal SUMP. The Dakar SUMP proposes a study to identify opportunities for TOD projects in a specific area. In Dire Dawa, the SUMP proposes measures not only for TOD project opportunities but also for project preparation and development guidelines.

Park-and-Ride Facilities are included in both the Douala and Kurunegala SUMP, providing convenient parking facilities at key transit hubs to facilitate the combination of private and public transportation. Hereby, they encourage individuals to park their vehicles and use public transportation for the remainder of their journey, reducing the reliance on private cars within city centres.



Despite local efforts to implement TDM measures, some of the most impactful measures are not under the authority of city governments and are absent from MobiliseYourCity SUMP. This includes promoting flexible work hours to stagger commute times, alleviating peak-hour congestion and encouraging businesses to allow employees remote work options, reducing the need for daily commuting. Nonetheless, some NUMPs have progressed in orienting cities in such directions.

At the national level, the Thailand NUMP proposes congestion charging as a pillar of the Thai Mobility Clean Mobility programme, with a proposed investment of over 600 million euros to implement the programme

in Bangkok. Political barriers remain for project implementation as congestion charges are not popular. However, pre-feasibility studies show that implementing the project could decrease congestion and air pollution while increasing travel speed and public transport usage. Similarly, the Chile NUMP includes TOD measures, urban mobility planning with a territorial approach, push measures to reduce the use and ownership of polluting vehicles, and strategies to reduce travel needs, including home office and online services.

Measures aimed at reducing congestion, such as congestion pricing and pricing mechanisms during peak hours, are absent in MobiliseYourCity SUMP.

Investing in Walking and Cycling: A Catalyst for Sustainable Urban Mobility Development

The MobiliseYourCity Partnership underscores the key role of prioritising walking and cycling as primary and influential components for the transformation of urban mobility. Unfortunately, walking and cycling are somewhat overlooked by decision-makers, rendering them somewhat invisible and neglecting their potential positive impact on the urban environment. Recognising this oversight, the Partnership has

promoted the allocation of resources for walking and cycling throughout the planning cycle. This strategic approach facilitates comprehensive data collection on walking and cycling patterns, the development of SUMP action plans that elevate these modes, and the implementation of projects incorporating dedicated measures for walking.



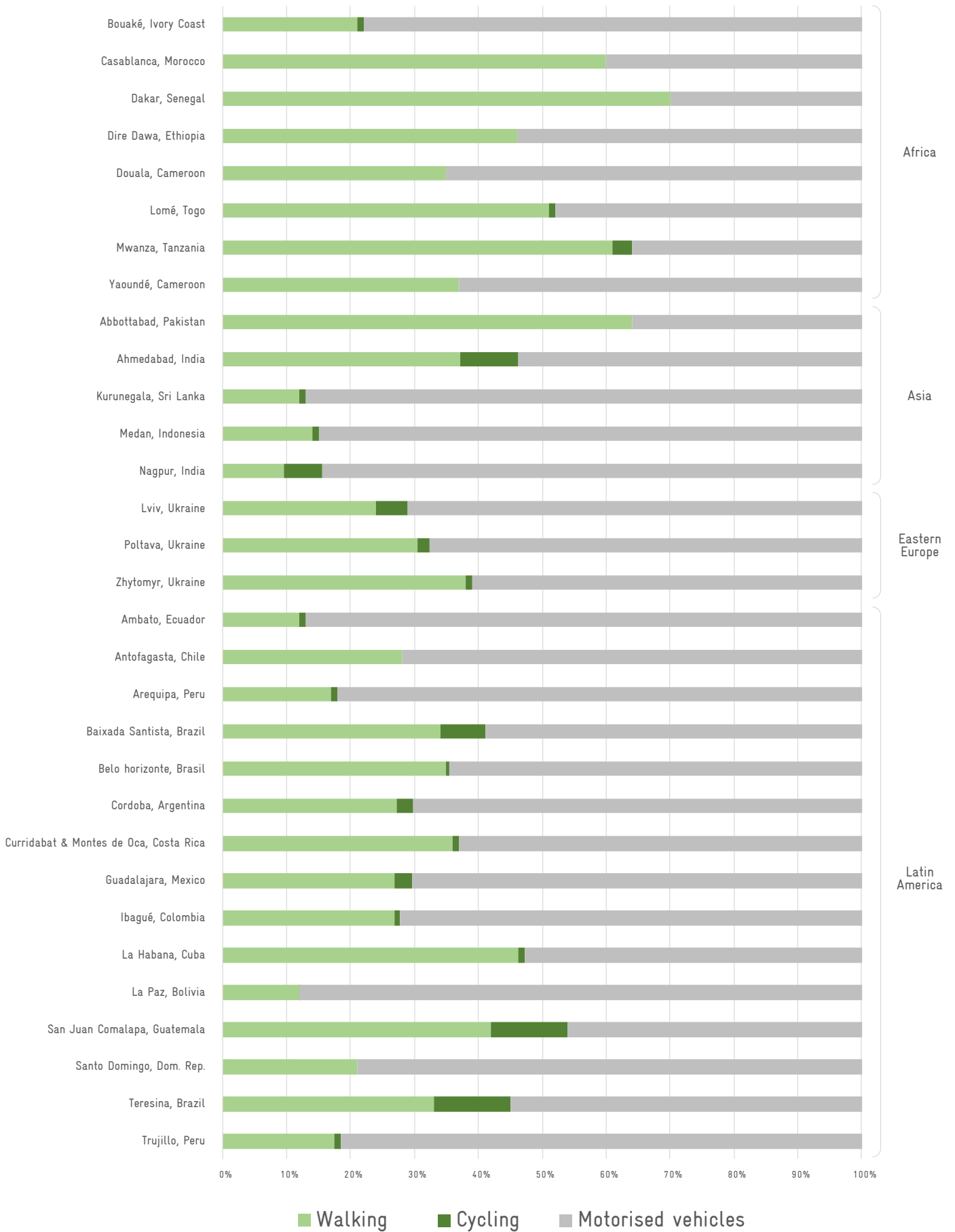


Figure 10. Modal share of walking and cycling in MobiliseYourCity member cities

Member cities of MobiliseYourCity have improved data availability on walking and cycling, demonstrating the important role these modes have for people's mobility. 32 of our member cities have some level of information on modal share, of which 26 have data specific to walking and cycling. Although the motorisation rate is 190 cars per 1,000 inhabitants, more than a quarter of daily trips are made by private vehicles (motorbikes, cars). Paratransit and private motorbike and car trips are the primary sources of greenhouse gas emissions in the urban transport sector.

MobiliseYourCity has supported a series of walking and cycling interventions to strengthen institutional arrangements at the local level to implement walking and cycling solutions. These projects train transport planners who traditionally are not well equipped to carry out walking and cycling interventions, as considerations are needed beyond levels of services and road capacity centred in traffic. MobiliseYourCity, through the Euroclima+ programme, has supported Havana, Cuba; La Paz, Bolivia; Puebla, Mexico; Ibagué, Colombia; Curridabat and Montes de Oca, Costa Rica to implement pilot projects on walking and cycling, including cycling parking, cycling lanes, bike sharing systems, and improving accessibility to public spaces for pedestrians.

The Partnership keeps on encouraging other member cities and countries in developing SUMP with a strong focus on walking and cycling, considering the high modal share such modes have, especially in Africa and Latin America. For instance, the AFD has allocated 10 million euros to finance a walking and cycling programme supporting the Commune Urbaine d'Antananarivo. The programme includes upgrading 50 km of urban roads to improve walkability and safety, enhancing business areas and school accesses, upgrading paratransit stops and related accesses, improving public spaces through tactical urbanism, constructing cycling lanes, developing a SUMP for Antananarivo, and building capacities for the local authorities.

In the framework of MobiliseYourCity SUMP implementation, local authorities have taken action to carry out walking and cycling projects, often with the support of the Partnership and other international development institutions. As part of the AIPMUS project in Santo Domingo, Dominican Republic (technical assistance to implement the SUMP), the city is developing more than 40 km of cycling lanes and a bike-sharing system to increase public transport demand. In Yaoundé, Cameroon, following the SUMP adoption and with the support of MobiliseYourCity, local authorities expect to reallocate road space to develop segregated, safe and continuous sidewalks connected to increase accessibility to public transport. Safe pedestrian crossings with refuges will be implemented, and organised taxi pick-up/drop-off zones will be piloted.



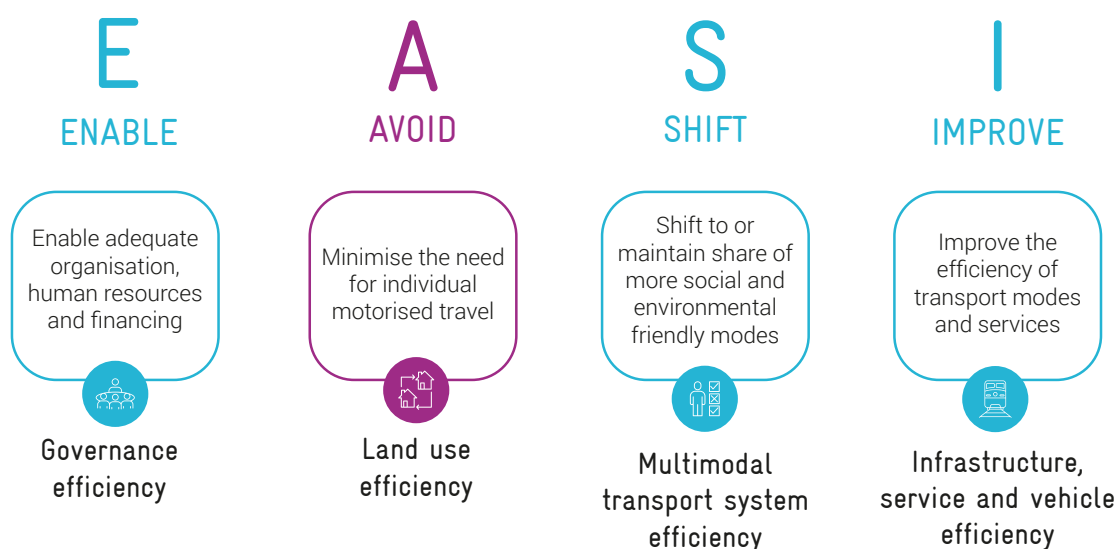
National governments can complement local efforts through NUMP preparation and implementation

Urban mobility is a matter of national concern, considering its relationship with economic development and human well-being. Cities are primarily responsible for implementing sustainable urban mobility measures, but many local governments face limitations in authority and resources to implement sustainable urban mobility planning thoroughly. To address this, national authorities can develop plans and policies to support local governments in comprehensively planning and implementing sustainable urban mobility projects.

NUMPs, promoted by MobiliseYourCity, could propose complementary measures to pursue the objectives established by local authorities in NUMPs. Nationally led measures government include the implementation of home-office solutions and the alleviation of peak hours. Such measures fall within the *Avoid* section of the EASI framework. National governments can also promote the improvement of vehicle and fuel efficiency, while cities can focus on *Improve* actions. Fiscal measures are also in the competences of national governments to allow the implementation of pricing mechanisms to discourage motorised private vehicle usage in cities.

MobiliseYourCity countries developing and implementing NUMPs have started to showcase good examples of national policy frameworks that allow efficient horizontal coordination across ministerial departments and practical support from the national to the subnational level. These policy efforts can serve as a source of inspiration for other countries. Therefore, it is essential to disseminate them and support peer learning on NUMP design and implementation to keep extending the positive footprint of these good planning practices in the region.

The Santo Domingo SUMP was possible thanks to the adoption of the National Law 63 of 2017, a groundbreaking legal framework that defined the Dominican Republic's long-term vision for urban mobility. This law marked a paradigm shift regarding urban mobility, introducing principles such as accessibility, human and urban development, road safety, environmental sustainability, and social engagement. This law also enabled the creation of INTRANT, which leads urban mobility planning processes in the Dominican Republic. In the framework of the Moroccan NUMP, the national government has recently launched Guidelines for SUMP elaboration, intending to support local authorities in preparing their planning process for urban mobility.



The EASI conceptual framework is an acronym of four pillars for improving urban mobility systems. The four pillars are: *Enable*, seeking governance efficiency; *Avoid*, seeking land-use efficiency; *Shift*, seeking multimodal transport system efficiency; and *Improve*, seeking infrastructure, services and vehicle efficiency.

Figure 11. EASI conceptual framework

Counting Commitments: NDCs, Targets, and the Urgency of Urban Transport Decarbonisation in MobiliseYourCity Geographies

As the urgency to combat climate change intensifies, it is imperative to implement more robust measures for urban transport decarbonisation to effectively limit global warming to the threshold of 1.5 degrees Celsius. Transportation is a significant contributor to greenhouse gas emissions, mainly through the combustion of fossil fuel in vehicles.

Most measures required to decarbonise transport must be implemented in urban areas, putting cities at the forefront of climate action. Climate-driven SUMP, under initiatives like MobiliseYourCity, prioritise sustainable urban mobility and ensure their compatibility with climate objectives. However, a noteworthy challenge lies in bridging the political and methodological gap that prevents the practical accounting of mitigation efforts at the national level. Despite cities taking proactive measures through SUMP, a stark omission exists in Nationally Determined Contributions, which predominantly focus on electrification rather than embracing comprehensive *Shift* and *Avoid* measures. Without adequate support from cities, countries struggle to fulfil their commitments.

National Urban Mobility Policies or Investment Programmes (NUMPs) can be a significant support mechanism for climate action on transport, coordinating and enabling multi-level efforts. The current status lacks emphasis on the holistic strategies needed for sustainable urban mobility.

MobiliseYourCity supports projects in more than 35 countries worldwide, and all 35 of these have submitted NDCs. Of these first- and second-round Nationally Determined Contributions (NDCs) submitted, 26 have national targets related to transportation. Of all the transport targets, urban and otherwise, 23 had any quantified targets. Only 17 mention mitigation actions in urban transport.

An analysis carried out by SLOCAT⁸ compared the transport content of the commitments expressed by the NDCs and LTSs of seven countries (Barbados, Colombia, Costa Rica, Guatemala, Peru, Surinam, Uruguay) in the LAC region with the transport content of their national and subnational planning instruments. Although coherence between the different levels exists in most countries, the analysis also finds cases in which the measures proposed at the national and subnational levels differ among themselves and with their climate commitments.

The NDC measures promoting compact cities, incorporating transit-oriented measures in land use and transport master plans, promoting walking and cycling as modes of transport, introducing mass rapid transit lines, expanding bus routes and metro rail lines, introducing ITS systems and automatic fare collection, electrifying buses, taxis, private cars and motorcycles, implementing biofuel-powered transportation, introducing fuel-based carbon taxes, and establishing sustainable logistics models. Such measures are also included in SUMP from MobiliseYourCity city members, but to our knowledge, they are not systematically fed up with their corresponding NDCs.

From the countries that include NDC targets related to urban transport. Ghana is an example. The country has a conditional NDC policy action that states, "Scale up Sustainable mass transportation. Programme of Action: Expansion of inter and intra city mass transportation modes (Rail and bus transit system) in 4 cities," which they expect would result in an emission reduction of 109.9 kt⁹. Expected impacts include an increase in public transport trips by 10% in the four cities, an increase in walking and cycling trips by 5%, and a reduction of travel time by at least 8 minutes per trip by public transport. In this line, MobiliseYourCity supported the elaboration of the Kumasi SUMP whose action plan was adopted in late 2023. This action plan proposes several BRT lines for the city, and the World Bank is already financing a BRT project on one of the identified priority corridors, in collaboration with the Ghanaian Department of Urban Roads and the Kumasi Metropolitan Assembly.

The Philippines NUMP set the goal to decarbonise the road-based public transport system in the country, characterised by a large number of on-street competing operators for jeepneys, buses, Asian Utility Vehicles (AUVs) and tricycles. To contribute to meeting the Philippine NDC, one of the top priorities set is the Public Utility Vehicle Modernisation programme, which includes the improvement of policy and regulatory framework for public transport, re-organisation of institutional set-up, and the establishment of a national financial support mechanism for low carbon public transport vehicles.

⁸ To find out more, please consult the [brief](#) on NUMPs and climate action in Latin America prepared by SLOCAT and MobiliseYourCity.

⁹ Ghana Updated NDC, 2021 https://unfccc.int/sites/default/files/NDC/2022-06/Ghana%27s%20Updated%20Nationally%20Determined%20Contribution%20to%20the%20UNFCCC_2021.pdf

Modelling GHG emissions of urban mobility is effortful, but MobiliseYourCity tools can contribute to overcome this challenge

It is crucial to model the expected impact of the measures proposed in a SUMP or a NUMP in terms of motorised trip avoidance, shifting to sustainable modes, fuel efficiency and fleet improvements. To achieve this, MobiliseYourCity has developed an emissions calculator that has been used in many cities for GHG emissions modelling, including Antofagasta in Chile, Ambato in Ecuador and Guadalajara in Mexico. The use of this tool has shown that *Avoid*, *Shift*, and *Improve* measures exhibit complex intrinsic interactions during modelling. Because of these interactions, it is not possible to determine the potential separate effect for each set of measures. Therefore, the effects of the SUMP or NUMP measures need to be considered as a whole, with the understanding that the desired GHG reductions will only be achieved if the plan is properly implemented.

An example of this is Antofagasta in Chile, which has modelled the expected impact of implementing its SUMP, and identified the reduction in GHG emissions. According to the modelling, the city intends to reduce GHG emissions from passenger transport by more than 55% by 2050 compared to the Business as Usual (BAU) scenario, changing from 365 to 158 thousand tonnes of CO₂eq. This approach increases the reliability of the modelling of the expected GHG reductions, and highlights the importance of aligning ambitious targets with the implementation of the plan.

Another element to consider when identifying objectives and expected impacts is the role of other key stakeholders. For instance, the transition of the fleet to electric or less polluting vehicles may depend on support from the national government. One example is Uruguay, where the NUMP emissions calculator models a 20% improvement in fuel efficiency by 2050, even though the country's policies focus on phasing out new gasoline-powered passenger cars by 2035 and all new freight vehicles by 2045, implying a shift in the fleet rather than an improvement in fuel efficiency.

As shown in the examples above, the MobiliseYourCity emissions calculator tool is valuable in assessing the implementation of SUMPs and NUMPs. It can highlight differences between actual implementation outcomes, considering delays or variations in impacts. The emissions calculator is therefore, a cornerstone of the monitoring, reporting, and verification (MRV) process during the implementation phase of SUMP and NUMPs.



Including Climate Change Adaptation in SUMP and NUMP could enhance the sustainability of such plans in the long term

The number of people expected to live in urban areas highly exposed to the impacts of climate change has increased. Rising sea levels, intensified storm surges from tropical cyclones, and more frequent and intense extreme precipitation events are expected to increase the likelihood of flooding in low-lying cities and settlements, putting more than a billion people at risk by 2050. Additionally, the combination of global warming and population growth in warm urban centres is the main driver of increased heat exposure, increasing the number of people exposed to heat waves. Severe droughts are expected to threaten 350 million at 1.5°C of warming and 410.7 million people at 2°C of warming due to water scarcity in urban areas (Li & Bergen, 2018).

In the regions where MobiliseYourCity operates, cities and countries face increased vulnerability to the impacts of climate change, requiring additional measures to effectively adapt. For instance, Santo Domingo in the Dominican Republic is particularly vulnerable to hurricanes, and climate change is expected to amplify the intensity of extreme rainfall events by 20%. Meanwhile, in Medan, Indonesia, the city has experienced an increased rainfall risk and drier warm seasons, leading to more frequent and intense floods and landslides over the past two decades. Finally, Dire Dawa in Ethiopia experiences two heavy rainfall seasons, peaking in April and August, leading to significant flooding and an intense dry season that causes drought. Further action is urgently needed to improve adaptation strategies in these vulnerable locations.

As mentioned before, MobiliseYourCity has supported the development of 19 SUMP that have been finalised in cities across Africa, Asia, the Americas, and Europe. Additionally, the partnership has supported the formulation of 6 NUMP in Cameroon, Chile, Colombia, Ecuador, the Philippines, and Tunisia. A comprehensive analysis of the completed MobiliseYourCity SUMP and NUMP was conducted to assess the extent to which they included the climate change adaptation component in their diagnosis, formulation, and proposed actions. The main finding highlights the opportunity to include climate change adaptation in MobiliseYourCity SUMP and NUMP.

For example, out of the 19 completed SUMP, only four include a section on diagnosing city's climate vulnerability and risks, and only one SUMP includes climate change adaptation into its proposed actions. Regarding the NUMP, only one of the six formulated includes actions related to climate change adaptation. Areas identified for potential inclusion of climate change adaptation include public transport, non-motorised transport, road infrastructure, and logistics.

Recognising the urgency of this issue and its significant potential, MobiliseYourCity is actively working to promote the implementation of climate change adaptation in the SUMP and NUMP processes. We aim to ensure that proposed actions and infrastructure are resilient in the face of the challenges posed by climate change.



The Partnership has improved the quality of data collected and has implemented mechanisms to continue closing our data gap

The annual data collection exercise reveals interesting facts and trends, such as Africa's lower per capita GHG emissions than Latin America. Although most conclusions and recommendations derived from the data are consistent with other sources of knowledge, there are still some limitations in data collection, especially due to the limited sample size and the low quality of locally available data.

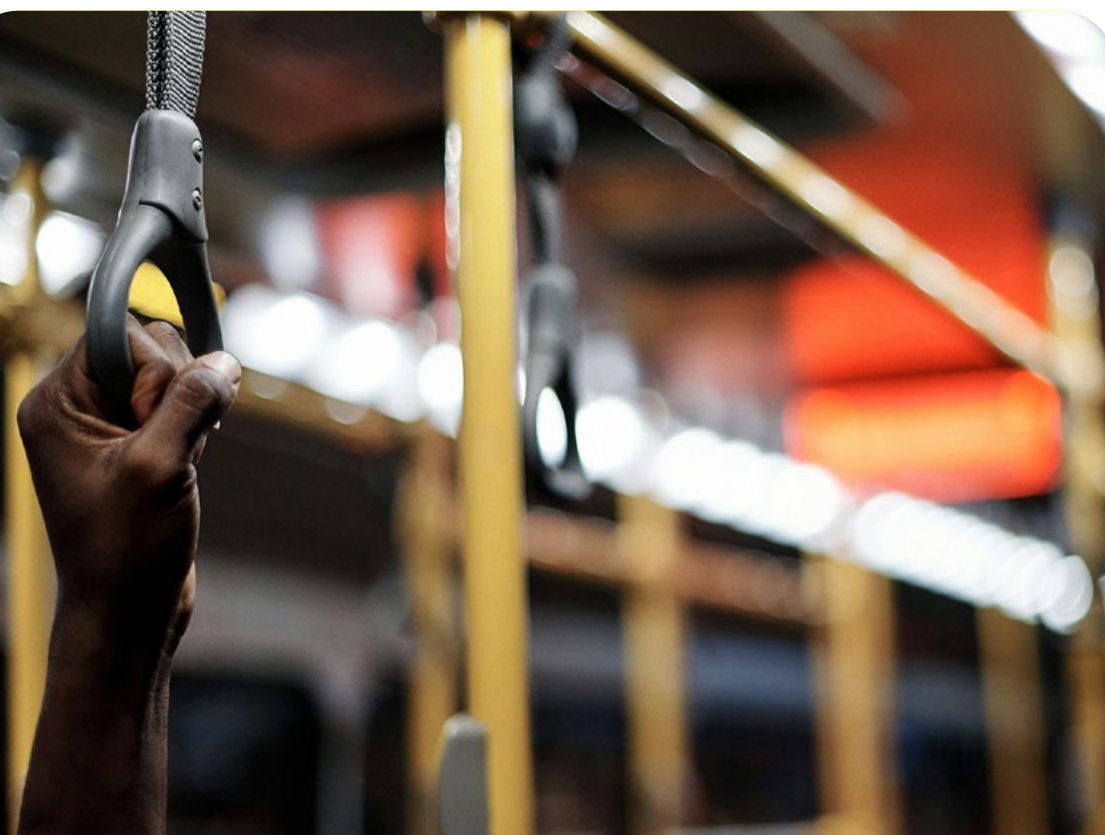
Nonetheless, the Partnership has strived for significant actions to improve. With more detailed diagnoses delivered, reaching 25 in 2023 compared to 20 last year, besides 19 SUMP action plans available, our aggregated data become more representative. Our partners have access to an increased pool of examples, lessons learned and information that is strategic for coordinating future projects.

Moreover, the MobiliseYourCity GHG emissions calculator has been successfully updated to make it more flexible and adaptable for local contexts. It demonstrates MobiliseYourCity's willingness to ease the work of local authorities and international partners for urban mobility transformation. While local data availability is the main barrier to using this calculator, providing orientation or default data based on ongoing research should activate a virtuous circle and make this tool increasingly accessible.

Other future improvements are expected as mobility observatories emerge in our member cities and countries. These information platforms enable citizens and partners to access and follow the relevant mobility data but also serve as a driver to deliver better information on urban mobility. Three Indian cities have published online urban mobility observatories, and Antofagasta, Chile, has also published an online tool to track urban mobility indicators to follow up on SUMP's implementation. The experience of the three Indian cities was shared with other urban mobility practitioners through a dedicated series of webinars about how to design and establish urban mobility observatories.

Additionally, while MobiliseYourCity continues supporting the improvement of mobility data availability through technical assistance and the preparation of SUMP and NUMP, the Partnership also tackles this challenge by publishing data-focused methodological tools, organising webinars and disseminating training modules.

MobiliseYourCity will continue to enhance the availability and quality of information coming from technical assistance to support data-driven decision-making at the local level and to keep partners and city and country members accountable for the actions to transform urban mobility in their contexts.



Advocacy and outreach: connecting and communicating for a systems' transformation

Through our Advocacy and Outreach service area, we encourage institutions and individuals to embrace and resource sustainable urban mobility. We communicate local results to influence the global agenda, engage new institutional partners, and enlist city and country members to animate ambitious action.

We do advocacy better with our partners

The results of our Partnership are proof that we are stronger together, especially when doing advocacy. In all nine events where MobiliseYourCity was present in 2023, the Secretariat was able to collaborate with at least one and often several partner organisations and member cities and countries. This collaboration maximises the use of our resources and delivers the most impactful messages.

This year at COP28 we worked with multiple member cities and partners to raise the importance of sustainable transport – in particular, highlighting the importance of informal transport, pilot projects and multi-level action in the fight against climate change. Because the challenges but also the solutions vary from region to region, we also advocate at the regional level. This year we worked with EUROCLIMA, AFD, GIZ, and UNEP to organise two side events at the Latin America and Caribbean Climate Week.

We also worked hand in hand with the EU to offer the best services to our member cities and countries. We launched the MobiliseYourCity guidelines for developing sustainable urban mobility plans together with the Directorate General for Mobility and Transport (DG MOVE), to present the adaptation of the European SUMP methodology to MobiliseYourCity cities' specific context. At the UITP summit, 40 representatives from African and Latin American local and national governments (including MobiliseYourCity members) joined an EU Commission-organised workshop on public transport governance, integration, and paratransit capacity building. Together with EUROCLIMA and SSATP, MobiliseYourCity was among the three EU-funded projects showcased at the event and co-organising the workshop.

Because access to finance remains a major challenge for our member cities and countries across the world, we co-organised a session with AFD and KfW to discuss the role of national development banks in leveraging finance for sustainable low-carbon transport at Transforming Transportation.



Transport Day by Climate Compatible Growth at COP28

4 December 2023 – Dubai, UAE

In a panel discussion entitled 'Climate Action in Informal Transport: Curating Data for Emissions Reduction and Service Improvement' we presented our solutions to collect data about the informal transport sector, which represents the largest form of public transport in most of the places we work with. We highlighted the lack of resources to reform this complex sector despite its important contribution to GHG emissions in cities of the Global South. Other high-level speakers pointed to the lack of inclusion of the informal transport sector in Nationally Determined Contributions (NDCs). They urged the transport community to address this issue in the coming years. The finance gap for the transition was also extensively debated, although some were encouraged to work on improving the channelling of existing resources and organising projects differently to better tap into climate finance.

"How can we work together to include informal transport in the next NDCs?"

Felipe Ramirez

Urban Mobility Director at the World Resources Institute



Side-event 'The Transformative Power of Participatory Living Labs' at COP28

5 December 2023 – Dubai, UAE

We discussed with UNEP and a representative from the City of Kathmandu, Nepal, the [transformative power of pilot projects and Living Labs](#) in this side event we co-organised with SOLUTIONSplus. All speakers called for changing the perspective on pilot projects to consider them as a testing phase or preparatory project for a scaled-up version. Too often, however successful, pilot projects end without leading to anything bigger, despite the city's need for a change in scale.

[▶ WATCH THE EVENT](#)



Side events 'La mobilité urbaine durable à Nouakchott: défis et solutions pour renforcer la résilience d'une ville vulnérable' and 'Local authorities and the promotion of sustainable urban mobility' at COP28

6 December 2023 – Dubai, UAE

At the Mauritanian and Moroccan pavilions, we were invited to join panel discussions to support local and regional governments in demonstrating to national governments their commitment to the fight against climate change and their large contribution to reducing GHG emissions. Cities and regions need not only resources from national governments to be able to take action at scale, but they also need better coordination and recognition of their important contributions.



Accelerating urban transition towards low carbon, safe and multi-modal transport systems at COP28

6 December 2023 - Dubai, UAE

We continued making the case for multilevel action at the [Multi-Level Action and Urbanisation pavilion, together with the Mayor of Quelimane, UN-HABITAT, UITP, the Urban Living Lab Center, and ICLEI](#). Each speaker tried to identify the policies and actions with the highest potential to shift people towards sustainable and low-carbon mobility. In the MobiliseYourCity Partnership, this question is our highest concern. This is why we work with data and modelling. We know cities have limited resources and need help identifying the most impactful policies. The combination of our diagnosis and our Emissions Calculator, which allows us to compare scenarios, allows cities to identify precisely the policies with the highest potential to enable that shift. This then needs to be followed by strategic planning, and cities need the right framework to do so. This is why we also work with national governments to develop National Urban Mobility Policies or Investment Programs.

▶ WATCH THE EVENT



Latin America and Caribbean Climate Week

23-27 October 2023 - Panama City, Panama

The Secretariat engaged in two side events at [the Latin America and Caribbean Climate Week: 'Reflecting on NDC Challenges in Urban Mobility'](#), addressing climate targets and inclusivity in the transport sector, and, ['Articulating Ecosystems for Climate Action'](#), fostering collaboration between government, civil society, and the private sector for sustainable mobility. In collaboration with Euroclima, AFD, GIZ, and UNEP, we proposed innovative solutions, shared success stories, and forged partnerships to decarbonise urban mobility in the region.

▶ WATCH THE EVENT



Launch of MobiliseYourCity Guidelines for Developing Sustainable Urban Mobility Plans at the EU InfoPoint

28 February 2023 - Brussels, Belgium

Responding to specific urban mobility challenges in Africa, Asia, Eastern Europe and Latin America, we launched, together with the European Commission Directorate-General for International Partnership and the Directorate-General for Mobility and Transport, the MobiliseYourCity SUMP Guidelines. Based on the European 'Guidelines for developing and implementing a Sustainable Urban Mobility Plan', the MobiliseYourCity's publication complements European knowledge in sustainable urban mobility planning with insights and lessons learned from practical implementation in MobiliseYourCity geographies. The InfoPoint has been followed by a series of webinars over March and April 2023 to dive into more technical aspects addressed to urban mobility practitioners.

▶ WATCH THE EVENT



UITP Summit

4 to 7 June 2023 - Barcelona, Spain, 40 delegates from Latin America and Africa and over 17K visitors

On the occasion of the UITP Summit 2023, the EU Commission has invited a delegation of 40 local and national government representatives from Africa and Latin America to join a knowledge exchange workshop entitled “Public transport governance, integration, and paratransit capacity building: lessons from Africa and Latin America”. The objective of the workshop was to enable these cities and countries to get access to the world’s leading conference and exhibition which brings together all stakeholders associated with public transport, but also to allow networking and knowledge exchange among the cities and to highlight the EU support offered through EUROCLIMA, SSATP and MobiliseYourCity under the Global Gateway strategy. This workshop stressed how critical it is for cities in Africa and Latin America to get support on urban mobility governance and paratransit professionalisation. Despite great efforts on these matters and the determination of some governments to transition to sustainable urban mobility, they expressed a need for more capacity development and support to mobilise finance.

▶ STRATEGIES TO ACCELERATE ELECTRIC MOBILITY WORKSHOP

▶ PUBLIC TRANSPORT SECTOR INTEGRATION WORKSHOP

▶ PARATRANSIT CAPACITY BUILDING AND FLEET RENEWAL PROGRAMS IN THE LAC AND AFRICA REGIONS WORKSHOP

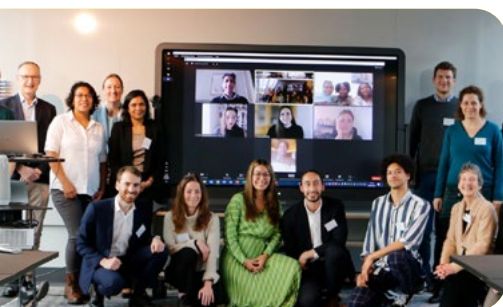


Leveraging finance for sustainable low-carbon mobility – The key role of national development banks addressed at Transforming Transportation 2023

15 March 2023 - Washington DC, United States of America

Together with AFD and KfW, we brought together representatives from the local government in Dakar and the National Development Bank in Colombia, both of which are leading the way on sustainable urban mobility. Together, they discussed the linkages between mobility planning and financing for sustainable urban mobility, exploring, in particular, the role of public, national development banks in mainstreaming climate and just transitioning into their investments.

▶ WATCH THE EVENT



Youth on the Move: Young people and transport in the 21st Century

18 to 19 April 2023 - Karlsruhe, Germany

MobiliseYourCity took part in the workshop “Youth on the Move: Young people and transport in the 21st Century”, organised by the International Transport Forum and the OECD. It stressed the close relationship between young people’s development and mobility. The workshop explored obstacles and opportunities related to youth and transport.

With 25% year on year growth and more than 6,200 followers on our social media in 2023, we are cultivating connections and reaching practitioners worldwide



Figure 12. Nearly 25% growth on our social media yearly

Our social media proves to be a window into the world of practitioners, city representatives, and the work of the communities of practice. In 2023, our cross-channel communication continued flourishing, and we grew in numbers, with a total of 1,565 new followers.

The data represents an increase of 26% from 2022, meaning that we are on sustained growth, and our content is meaningful for our audience.

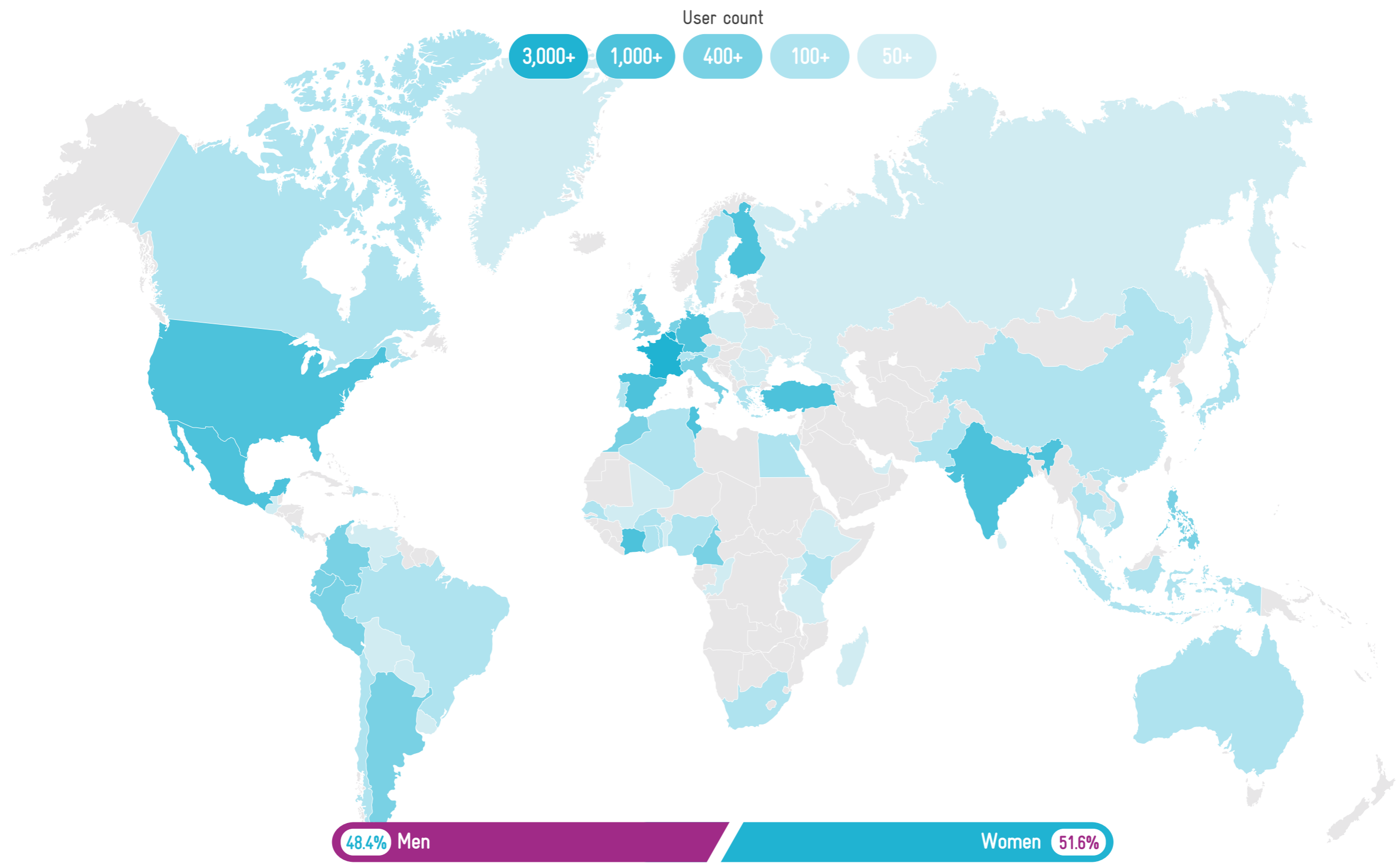
The engagement on social media also implied an increased participation in our training courses since more people are aware that these are happening. Finally, sharing our knowledge products on social media enables us to reach more people and helps keep the number of downloads high.

The new and updated Knowledge Platform is serving as a better window to the Partnership

MobiliseYourCity.net had more than 60,000 visitors in 2023. At the outset of the year, we completely renewed the website, marking a significant evolution in our digital presence. Our website not only embraced a fresh and modern design but also introduced a more structured and user-friendly layout. Navigating through the site has become a seamless experience, with content now organised in a more intuitive manner. With this renewal, we aimed at enhancing accessibility, ensuring that users can easily reach our tools and methodologies. This has led to more people returning to the website and spending more time using it than last year.

In 2023, France, Germany, Belgium, and the United States maintained their status as the nations experiencing the highest influx of visitors to the MobiliseYourCity Knowledge Platform. Nevertheless, there has been a notable surge in visitors from the Global South, primarily attributed to regional events and the provision of toolkits and methodologies by MobiliseYourCity over the past year. Notable among these countries are Cote d'Ivoire, Egypt, and Burkina Faso.

Knowledge Platform users by country and gender



32k total users from 1st January 2023 to 31st December 2023

Figure 13. Knowledge platform users by country and gender

5 Implementation support

With the new strategy adopted end of 2020, implementation support has been the latest addition to MobiliseYourCity’s service areas. It aims to bridge planning and implementation, focusing on three topics where the Partnership identified a financing gap, namely the promotion of active modes, paratransit reform, and governance strengthening.

While we are proud to see SUMPs and NUMPs leading to finance (see [figure 8. – Leveraging finance from SUMP and NUMPs](#)), MobiliseYourCity partners have noticed a finance gap on three particular topics which require specific support. The Partnership has decided to offer implementation support by developing specific resources on these topics when needed (i.e. the Paratransit Toolkit, the upcoming Governance Toolkit) and by developing pilot projects where it is relevant and possible.

The table below lists the projects that qualify as ‘implementation support’, i.e. projects that meet the following three criteria:

- Be financed by a MobiliseYourCity donor
- Be implemented by a MobiliseYourCity implementing partner
- Implement measures that have been identified in a SUMP or NUMP

Project	Location	Donor	Amount	Implementing Partners
Mobilité Verte (MoVe) Yaounde and preparation of the North South BRT Line	Yaoundé, Cameroon	EU Delegation Cameroon	EUR 9,800,000	GIZ, AFD
		BMZ	EUR 574,528	
		AFD	EUR 500,000	
Mobilité Verte (MoVe) Senegal	Dakar, Senegal	BMZ	EUR 5,000,000	GIZ
Mass Transit Program Support Project (MASTRAN)	Medan, Indonesia	World Bank	USD 224,000,000	AFD
		AFD	USD 40,000,000	
Assistance for the Implementation of the Sustainable Urban Mobility Plan (AISUMP)	Santo Domingo, Dominican Republic	EU	EUR 10,000,000	AFD
		AFD	EUR 400,000	

Table 4. Implementation Support projects

Green Mobility (MoVe) Yaoundé and preparation of the North South BRT Line - Yaoundé, Cameroon

Technical Assistance: Pilot project

Funded by: EU, BMZ, AFD

Funding amount: EUR 10,874,528

Implemented by: GIZ, AFD

Local counterpart: Ministry of Housing and Urban Development of Cameroon and Commune Urbaine de Yaoundé

Description:

The Mobilité Verte (MoVe) Yaoundé (Green Mobility in Yaoundé) Project is co-financed by the European Union (EU), the BMZ, and implemented by GIZ. The objective of the project is to improve the overall access of the population, particularly women and other marginalised groups, to safe, efficient and sustainable transport by changing mobility patterns in Yaoundé; from a congested, car-focused city to a resilient, people-focused city, where active mobility and public transport are at the heart of the metropolitan vision. It will include upgrade of mobility facilities in Yaoundé city centre and implementation of a program to support paratransit sector upgrade and preparatory studies for Yaoundé BRT project.

The project is developed in close collaboration with the Ministry of Housing and Urban Development of Cameroon (MINHDU) and the Urban Community of Yaoundé (CUY), in collaboration with EU partners and the French Development Agency (AFD).

This project is part of a comprehensive programme on Yaoundé mobility that is currently in preparation, based on the SUMP recommendations and priorities.

This programme also includes a North-South Bus Rapid Transit line, identified in the SUMP as a priority project for Yaoundé. A feasibility study for this project was conducted in 2020-2023, with financing support of EU, AFD and SECO through CICLIA facility. Following the completion of this study, further preparation studies as well as setup of a dedicated PIU in CUY and technical assistance to this PIU is foreseen, with 3.5 M EUR grant from the EU to be delegated to AFD by end of 2023 and 0.5 M EUR grant from AFD.



Mobilitéé Verte (MoVe) Senegal (Green Mobility in Senegal) - Dakar, Senegal

Technical Assistance: Bilateral project

Funded by: BMZ

Funding amount: EUR 5,000,000

Implemented by: GIZ

Local counterpart:

- **Political partner:** Ministère des Infrastructures et des Transports Terrestres et du Désenclavement (MITTD)
- **Implementing partner:** Conseil Exécutif des Transports Urbains Durables (CETUD)

Description:

Mobilitéé Verte (MoVe) Senegal (Green Mobility in Senegal) is a significant initiative in Dakar, Senegal, aimed at fostering sustainable transportation solutions. This bilateral project, funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), is being implemented by the German International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH). Working in collaboration with local partners, the Ministry of Infrastructure, Land Transport, and Decentralization (MITTD) serves as the political counterpart, while the Executive Council for Sustainable Urban Transportation (CETUD) plays a crucial role as the implementing partner.

Through this partnership, the project endeavors to meet the increasing transport demand with sustainable modes of transport. By establishing active mobility as an integral element of transport planning in the Dakar metropolitan region, the mobility conditions of active mobility users will be significantly improved.

Mass Transit Program Support Project (MASTRAN) - Medan, Indonesia

Technical Assistance: Mass Transit Program

Funded by: AFD, World Bank

Funding amount: USD 264,000,000

Implemented by: AFD

Local counterpart: Government of Indonesia, Cities of Medan and Bandung

Description:

The Government of Indonesia and the Agence Française de Développement (AFD) have signed a Credit Facility Agreement worth USD 40 million for the MASTRAN project, joining forces with the World Bank in a co-financing effort totalling USD 264 million. This initiative aims to tackle Indonesia's urban transport challenges by enhancing mobility and accessibility through the implementation of Bus Rapid Transit (BRT) systems and bolstering institutional capacity for mass transit development.

Indonesia, with a majority of its population residing in urban areas, grapples with poor transport services and significant traffic congestion, which costs the country nearly USD 5.6 billion annually and contributes substantially to greenhouse gas emissions, particularly in cities.

The MASTRAN project targets sustainable urban development in Bandung and Medan metropolitan areas, aiming to benefit approximately 2.4 million inhabitants by improving access to sustainable transport. It is anticipated to reduce CO₂ emissions by around 16,000 tons per year, alleviate road congestion, and enhance air quality. Additionally, the project focuses on creating stable employment opportunities, formalising informal transport operators, and ensuring equitable access for women to the new public transport system and related job opportunities. With components including institutional development, capacity building, technical assistance, and demonstration mass transit systems, the project aligns with France's contribution to the European Global Gateway Strategy in ASEAN, emphasising sustainable connectivity and holds potential for replication in other Indonesian cities.

Assistance for the Implementation of the Sustainable Urban Mobility Plan (AISUMP) - Santo Domingo, Dominican Republic

Technical Assistance: Assistance for the Implementation of the Sustainable Urban Mobility Plan (AISUMP)

Funded by: EU, AFD

Funding amount: EUR 10,400,000

Implemented by: AFD

Local counterpart: INTRANT

Description:

Since the adoption of the Sustainable Urban Mobility Plan (SUMP) in 2019, implementation efforts have begun, notably with a Technical Assistance support from the European Union through the Caribbean Investment Facility, totalling 10 million euros. This support, known as Assistance for the Implementation of the Sustainable Urban Mobility Plan (AISUMP), is being implemented by AFD and focuses on two main components:

- Strengthening service capacity related to the National Urban Mobility Plan in the Dominican Republic, with a focus on non-motorised transport, public transit, smart mobility, and institutional strengthening.
- Implementing the SUMP in Gran Santo Domingo, including pre- or feasibility studies and pilot projects.

This technical assistance is provided to INTRANT for four years to support the implementation of SUMP actions, oversee contract execution, and reinforce technical capacities. The aim is to help the city transition from the SUMP planning process to the implementation phase. The AISUMP defines concrete short-term actions to advance implementation, complementing the general vision outlined in the SUMP. Key early projects in Santo Domingo include transforming the public transport system, deploying electro mobility, promoting active mobility, managing traffic, and urban logistics. Eighteen high-priority projects for the first year of technical assistance are underway or about to start, with fifteen additional studies or pilot projects to be considered later on.

In addition to the European Union funding, AFD (Agence Française de Développement) provided a grant of 0.4 million euros for several studies aimed at further supporting the implementation of the Sustainable Urban Mobility Plan (SUMP). These studies include establishing an urban mobility observatory, conducting a feasibility study for an e-mobility program, and conducting a strategic study on the environmental and social impacts of urban mobility policies.

Regarding the implementation of SUMP priority projects, significant financing has already been secured since the plan's adoption in 2019:

5. AFD allocated a loan of 142 million euros in 2019 to finance the extension of Metro Line 1, supplemented by a 22 million euro contribution from the Government of the Dominican Republic.
6. In 2021, AFD provided an 86 million euro loan for works and the acquisition of rolling stock to increase the capacity of Line 1 of the metro, along with a 7 million euro contribution from the Dominican government.
7. A budget sector program for urban transport, jointly funded by AFD and IDB (Inter-American Development Bank), received a total allocation of 477 million euros in 2019 for its first phase. A second phase of the program, with an additional allocation of 380 million euros, was allocated in 2022.

Additionally, there are considerations for financing to increase the capacity of Metro Line 2.



6 Looking Forward

We will integrate climate change adaptation in our methodological offer

MobiliseYourCity has played a pivotal role in assisting the development of 19 SUMP and 6 NUMP worldwide. However, an adaptation-focused analysis revealed that climate change adaptation is not consistently integrated into these plans. Only a limited number of finalised SUMP and NUMP consider climate vulnerability and risks, presenting an opportunity to enhance their inclusion in the mobility planning process.

In 2024, MobiliseYourCity, with financial support from ADEME, will collaborate with Resilliance to develop new guidance for integrating climate change adaptation into the urban mobility planning process. The related outputs will include identifying guiding principles, creating a topic guide for SUMP and NUMP, expanding the paratransit toolkit, training materials, and organising awareness-raising activities.



“It is anticipated that a growing number of South African cities and towns will be exposed to the impacts of weather-induced hazards such as flooding, heatwaves, droughts, wildfires, and storms. This is partly due to the projected increase in the frequency and intensity of weather-related hazards but also due to the high socioeconomic vulnerability inherent within communities, poor land-use practices, growing informality, and a failure to rapidly deploy resilient infrastructure associated with accommodating a growing urbanising population. It is undeniably the poor and vulnerable communities that will experience the most severe setbacks from the impacts of climate change, eroding their livelihoods, and thus threatening their resilience”

South Africa's First NDC

South Africa's First NDC, 2020/21 Update, pg. 7

We will launch a new toolkit on urban mobility governance

Urban mobility often suffers from incoherencies and resource deficiencies, leading to fragmented services. Mandates for urban mobility are dispersed across institutions, resulting in uncoordinated services and a lack of synergy between various transport modes. This issue extends to a lack of coordination between regulatory bodies and infrastructure implementers versus operational entities. Insufficient financial and human resources further hinder effective urban mobility services, especially at the local level.

To address these issues, MobiliseYourCity has developed a Governance Toolkit, pending publication, and undertaken projects emphasising governance framework strengthening. Aligned with Sustainable Urban Mobility Plans (SUMPs), these efforts aim to provide valuable insights for ongoing or future decentralisation processes, informing the establishment or improvement of local and metropolitan transport institutions while building local capacities for sustainable urban mobility solutions.



Governance Toolkit

Understanding urban mobility governance

Diagnosing urban mobility governance

Enhancing urban mobility governance

Who pays what for urban mobility

Urban mobility governance case studies

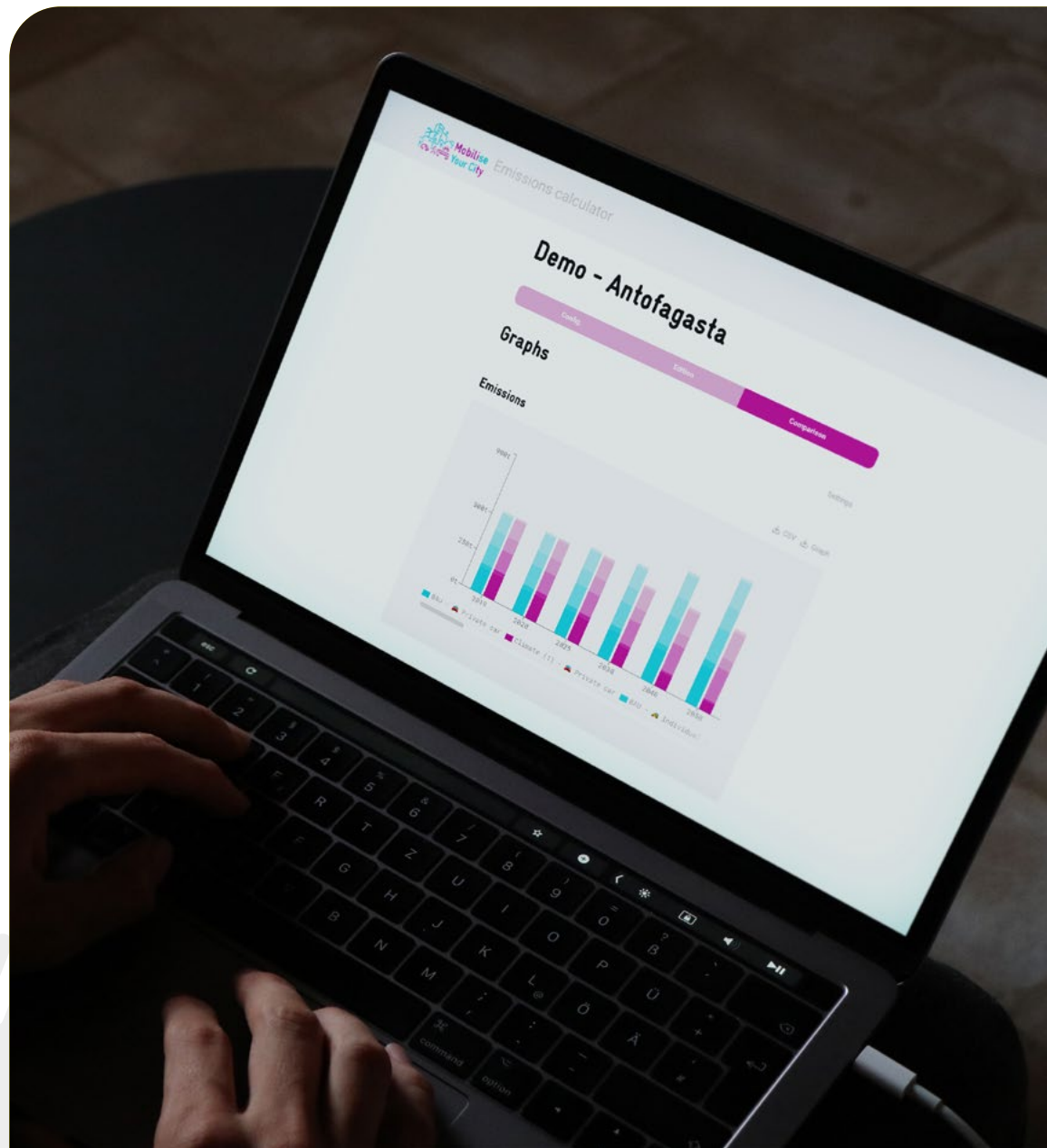


We will release an online version of the Emission Calculator

MobiliseYourCity has been working with La Fabrique des Mobilités, IFEU and AFD to develop an [online version](#) of our most popular tool, the Emissions Calculator. The tool has so far existed only as an Excel file which allowed users to do an inventory of GHG emissions, model and compare business-as-usual scenarios versus SUMP scenarios. It can also be used during and after implementation of the measures to monitor their actual impact on emissions.

The upcoming online version will be entirely open-source, will maintain all the same functionalities, will improve the visual presentation of the results with new graphs, and will otherwise maintain all the same functionalities. Users can download all data, and graphs can be exported as images.

The two tools, online and Excel-based, will remain available for users, each presenting different advantages for different audiences. MobiliseYourCity has found that, for some users with poor internet connections, the Excel-based tool is more reliable, while other users benefit from the ability to compare their data to other cities in the online version. In the online version, users can create their own profile and projects, making results available to all by validating their projects.



7 City and Country Factsheets

The MobiliseYourCity Partnership has 70 partner cities and 16 partner countries. Our Implementing Partners are supporting 32 cities and 9 countries in preparing SUMP and NUMP respectively.

32 Supported SUMPs

9 Supported NUMPs



The MobiliseYourCity Global Partnership

Status of technical assistance

32 Supported SUMP

14 Cities with non-SUMP technical assistance

9 Supported NUMP

2 Countries with non-NUMP technical assistance

Latin-America and the Caribbean

Completed

- Baixada Santista, Brazil
- Belo Horizonte, Brazil*
- Teresina, Brazil*
- Chile
- Antofagasta, Chile
- Colombia
- Ibagué, Colombia*
- Curridabat & Montes de Oca, Costa Rica*
- Havana, Cuba
- Santo Domingo, Dominican Republic
- Ecuador
- Ambato, Ecuador
- San Juan Comalapa, Guatemala*
- Guadalajara, Mexico
- Arequipa, Peru
- Trujillo, Peru

Ongoing

- Córdoba, Argentina
- La Paz, Bolivia*
- Puebla, Mexico*
- Paraguay
- Uruguay

Eastern Europe

Completed

- Chernivtsi, Ukraine*
- Lviv, Ukraine
- Poltava, Ukraine
- Vinnytsia, Ukraine*
- Zhytomyr, Ukraine

Africa

Completed

- Cameroon
- Douala, Cameroon
- Yaoundé, Cameroon
- Dire Dawa, Ethiopia
- Bouaké, Ivory Coast
- Morocco*
- Dakar, Senegal
- Tunisia

Ongoing

- Kumasi, Ghana
- Antananarivo, Madagascar*
- Al-Assima (Rabat-Salé-Temara), Morocco
- Casablanca, Morocco
- Khouribga, Morocco
- Maputo, Mozambique
- Mwanza, Tanzania
- Lomé, Togo

Asia

Completed

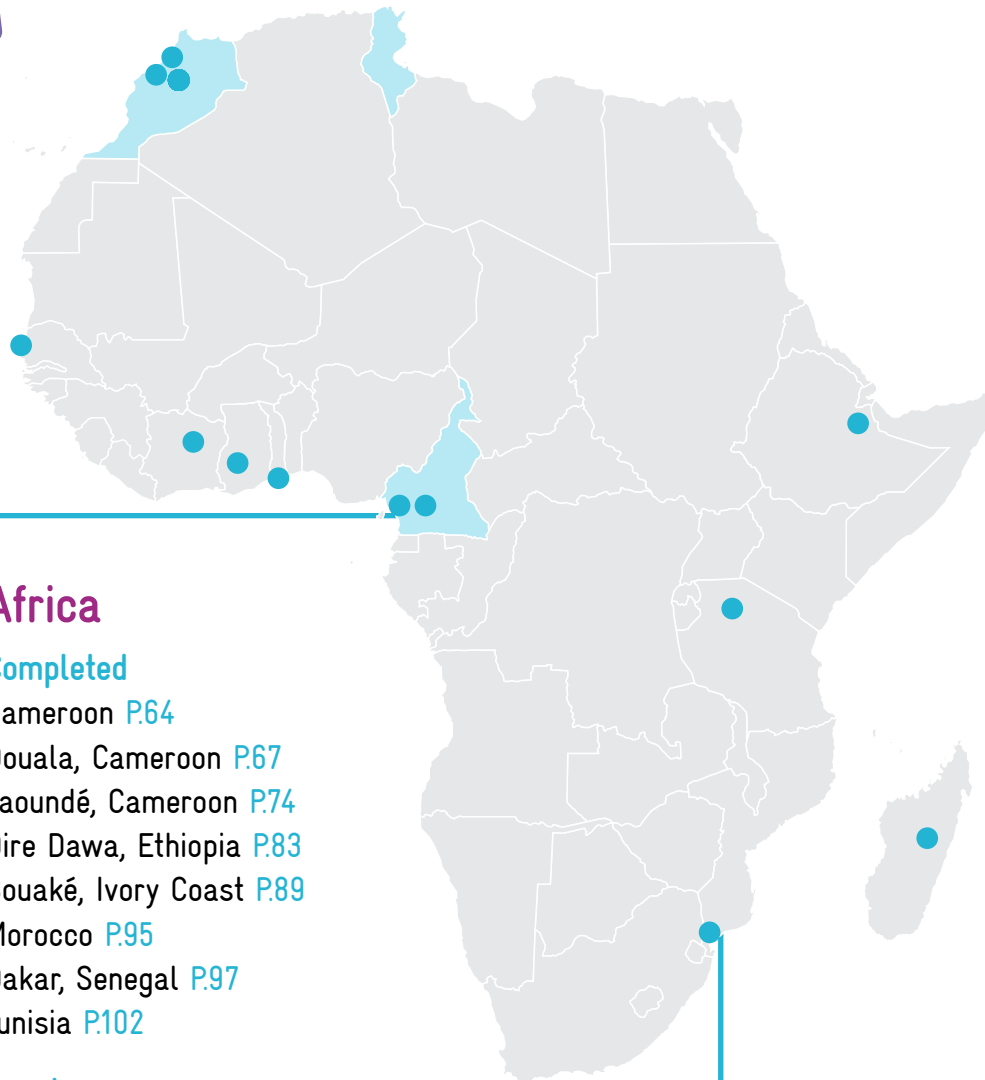
- India*
- Ahmedabad, India
- Kochi, India*
- Nagpur, India*
- Medan, Indonesia
- Abbottabad, Pakistan
- The Philippines

Ongoing

- Tbilisi, Georgia
- Mingora (Swat District), Pakistan
- Peshawar, Pakistan
- Kurunegala, Sri Lanka
- Thailand

*Supported with non-SUMP/NUMP technical assistance or pilot project

Africa



Africa

Completed

- Cameroon [P.64](#)
- Douala, Cameroon [P.67](#)
- Yaoundé, Cameroon [P.74](#)
- Dire Dawa, Ethiopia [P.83](#)
- Bouaké, Ivory Coast [P.89](#)
- Morocco [P.95](#)
- Dakar, Senegal [P.97](#)
- Tunisia [P.102](#)

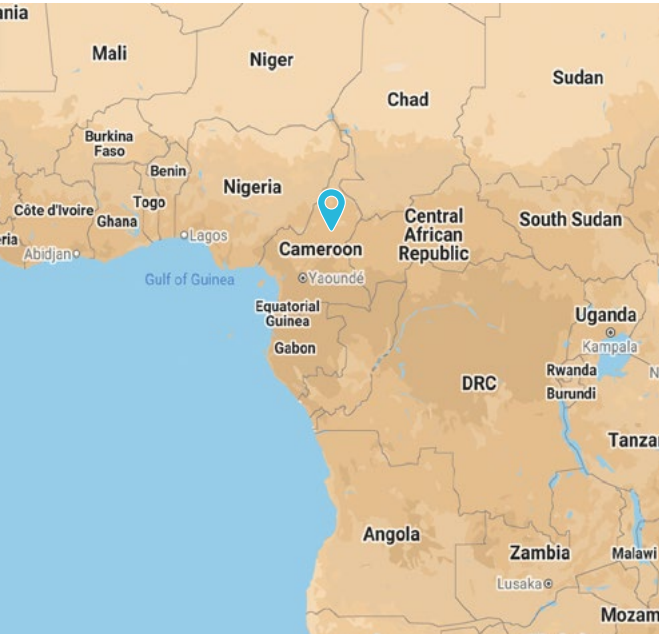
Ongoing

- Kumasi, Ghana [P.108](#)
- Antananarivo, Madagascar [P.112](#)
- Al-Assima (Rabat-Salé-Temara), Morocco [P.114](#)
- Casablanca, Morocco [P.116](#)
- Khouribga, Morocco [P.119](#)
- Maputo, Mozambique [P.121](#)
- Mwanza, Tanzania [P.124](#)
- Lomé, Togo [P.126](#)

Cameroon

Partner country

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



Basic Information

Population: 27,744,989 | Growth rate: 2.54%

Percentage of urban population: 57%

GDP per capita: USD 1,498

Percentage of the population living below the national poverty lines: 69%

Nationally Determined Contribution (NDC): no quantified transport related NDC

National GHG emissions per capita: 0.4 (tCO₂eq)

Proportion of transport related GHG emissions: 53%

Exposure to climate change: HIGH

Context

Cameroon is undergoing a rapid population growth. With over 55% of the population living in cities, it is the most urbanised country in Central Africa, and it is expected that the urban population will reach 22 million by 2035. The geographical, economic, and social context of the country is complex and diversified but is largely dominated by two major cities, Douala, economic capital and Yaoundé, administrative capital.

Yet the quality and efficiency of urban mobility systems, and ultimately its performance is not satisfactory. Growing congestion in cities and the unpredictability of traffic are the most visible signs of these problems. The slowness, cost and discomfort of, mostly, informal public transport also greatly affects populations who have no other choice for their journeys. Walking is particularly neglected in Cameroonian cities. The high number of accidents and victims, often pedestrians, calls for emergency measures. Finally, Cameroon's greenhouse gas emissions from urban transport, although very low in absolute terms, could be better addressed.

Generally speaking, and with the notable exception of Douala, urban communities have neither the institutional nor the human resources to carry out some of the essential tasks entrusted to them by law, in particular the organisation and management of public transport and traffic management. Urban communities also do not fulfil their role of continuous monitoring of urban mobility, its performance and the service provided to citizens by urban transport infrastructure and systems.

In this context, and as Sustainable Urban Mobility Plans were being developed for Douala and Yaoundé, it appeared necessary for Cameroon to have a National Urban Mobility Policy (NUMP) that facilitates and guides local actions and is shared and appropriated by all actors, whether at the level of cities or the State.

The NUMP was delivered and presented in September 2019 during the MobiliseYourCity Africa Mobility Conference organised in Yaoundé.

Support from the Partnership

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

Type of NUMP: Policy NUMP

Funded by: European Union

Funding amount: EUR 500,000

Implemented by: AFD through the MobiliseYourCity Africa Program

Local counterpart: Ministère de l'Habitat et du Développement Urbain

Main purpose of the NUMP: Offer cities a general enabling framework for SUMP

Objectives:

The NUMP for Cameroon provides guidance and actions recommendations focusing on four main targets:

- Reinforcement of urban mobility governance
- Increase of financing resources for urban mobility
- Restructuration and modernisation and public transport
- Better use of state-of-the-art technologies for transport

Status of implementation

Project start date: 2018 Q1

NUMP adoption date: 2019 Q3

Completed outputs:

- National Urban Mobility Policy: Diagnosis, national vision, and strategic measures for its realisation

NUMP key measures and cost estimates

The following list highlights the most significant measures and recommendations identified in the NUMP.

Measure	Cost Estimate
1. Strengthen the governance of urban mobility <ul style="list-style-type: none"> Strengthen the capacity of urban communities Better integrate the activities of all urban mobility stakeholders Strengthen MINHDU Develop human resources and capacities at all levels Develop governance tools Develop an approach for the metropolitan governance of urban governance of urban mobility 	Not quantified
2. Improve the financing of urban mobility <ul style="list-style-type: none"> Increase planning and spending capacities of urban communities on urban mobility Strategic area: The State must continue to finance urban mobility while optimising its contributions 	Not quantified
3. Restructure and modernisation of public transport <ul style="list-style-type: none"> Introduce in Yaoundé and Douala strong public transport axes by bus, starting with the congested roads Organise and professionalise the motorbike taxi sector by building on existing structures to drive organisation Organise and professionalise taxi services in the main cities and encourage the development of new taxi services 	Not quantified
4. Better use of transport technologies <ul style="list-style-type: none"> Gradually improve the vehicle fleet Improve road maintenance technologies Develop knowledge of the issues and institutional capacities in the digital field, and promote pilot projects 	Not quantified

Finance leverage

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

As a prerequisite to the adoption of sustainable urban mobility plans in Yaoundé and Douala, the national urban mobility policy in Cameroon has indirectly enabled securing financing, including nearly 75 million euros in grants or similar, for investments and further technical assistance in these two cities. This is presented in detail in the factsheets or SUMP summaries of Douala and Yaoundé.

Douala, Cameroon

Partner city

Status of the project: Completed Sustainable Urban Mobility Plan



Basic Information

Urban area: 923 km²

Population: 3,663,227 | Growth rate: 3.6%

Region capital city

GDP per capita: USD 2,952

Modal Share:

Minibuses (paratransit): 1%

Walking: 35%

Private cars: 5%

Private motorbikes or 2-wheelers: 4%

Taxis (paratransit): 12%

Moto taxis (paratransit): 40%

Other: 3%

National GHG emissions per capita: 0.4 (tCO₂eq)

Exposure to climate change: HIGH

Context

The port city of Douala, the main economic hub of Cameroon, lies on a low coastal plateau, with many natural drains and flood-prone valleys. With a population of more than 3.6 million inhabitants, which is anticipated to increase to 4 million by 2023, Douala is a dynamic, fast-growing city. Douala's rapid growth is particularly pronounced on the outskirts, where access to formal public transport services is very low or non-existent. Urban sprawl is forcing people to travel further distances to access jobs, markets, health, and education. The low quality and inadequacy of infrastructure for walking and cycling add to the low provision of public transport services.

This combination of factors pushes travellers to rely on informal motorcycle taxis and mini-bus services, instead of more sustainable modes such as walking, cycling and higher capacity public transport. Informal transport services have taken an increasingly large modal share in outlying areas but also in the city centre. This entails threats to the citizen health, safety, and comfort, as the precariousness of working conditions and high competitiveness of paratransit services are associated with a higher risk of traffic accidents and sexual harassment toward women. Aging or badly maintained vehicles also lead to a significant increase in air and water pollution, and in greenhouse gas emissions.

Regulating and supervising urban development are major challenges for the public authorities, as a large percentage of the urban territory is subject to unsanctioned land use, associated with the isolation of working-class neighbourhoods, the lack of tertiary roads, saturation of industrial zones and growing informal settlements on often unsuitable land.

In addition to this, the lack of dialogue between the land-use planning, on the one hand, and mobility planning authorities, on the other, exacerbates the urban transport problem. Above all, it is necessary to create the conditions for viable integration between urban and transport planning. This diagnosis has led to the recognition of the need to initiate a planning approach that is more operational than those previously at work, in order to be able to respond to the challenges resulting from the rapid development of the metropolitan areas.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: European Commission and FFEM

Funding amount: EUR 400,000

Implemented by: AFD through the MobiliseYourCity Africa Program

Local counterpart: Urban Community of Douala

Finance leverage: EUR 422,000,000

Supported activities:

- Organisation of Mobilise Days, in conjunction with Yaoundé, to officially launch SUMP development and raise awareness
- Preparation of a Sustainable Urban Mobility Plan for Douala, with three main objectives:
 - » Enhancing citizens' access to destinations, activities and services offered in Douala;
 - » Enhancing the urban environment in Douala;
 - » Renewing the governance of Douala, its mobility, and projects.

Status of the SUMP process

Project start: 2018 Q1

Project completion: 2019 Q3

Completed outputs:

- Sustainable Urban Mobility Plan
 - » Diagnosis
 - » Vision and goals
 - » Action and financing plan

SUMP key measures and cost estimates

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

Measures	Cost estimates in M€	Proposed Financing Source	Implementation by
Physical investments (infrastructure, rolling stock, etc.)	508 M€		
Road infrastructure projects	107 M€	Domestic financing	2021
Purchase of 283 Bus 12m 2021: 150 2024: 133	66 M€ 2021: 33 M€ 2024: 33 M€	World Bank & Domestic Financing	2021 2024
Bus facilities (stations)	24 M€ 2021: 4 M€ 2024: 20 M€	World Bank & Domestic Financing	2021 2024
Purchase of 164 BRT 18m 2021: 50 2024: 75 2029: 39	66 M€ 2021: 20 M€ 2024: 30 M€ 2029: 16 M€	World Bank & Domestic Financing	2021 2024 2029
BRT facilities (stations)	92 M€ 2021: 18 M€ 2024: 49 M€ 2029: 25 M€	World Bank & Domestic Financing	2021 2024 2029
Cable Car line	26 M€	World Bank & Domestic Financing	2024
Development of 5 major multimodal interchange centres and 15 transfer points	15 M€ 2021: 4 M€ 2024: 6 M€ 2029: 5 M€	World Bank & Domestic Financing	2021 2024 2029
Walking plan	15 M€ 2021: 3 M€ 2024: 7 M€ 2029: 5 M€	World Bank & Domestic Financing	2021 2024 2029
Investments for cycling	5 M€ 2024: 1 M€ 2029: 4 M€	World Bank & Domestic Financing	2024 2029
Reinforcement of river links to Manoka	4 M€	Domestic financing	2021
Development of river and rail transport infrastructure	5 M€	Domestic financing	2029
Centralised Control Centre	10 M€ 2021: 3 M€ 2024: 4 M€ 2029: 3 M€	World Bank & Domestic Financing	2021 2024 2029
Project management, call for interest and contingency provision	63 M€ 2021: 15 M€ 2024: 37 M€ 2029: 11 M€	Domestic financing	2021 2024 2029

Measures	Cost estimates in M€	Proposed Financing Source	Implementation by
Development of logistical hubs and truck parking spaces	11 M€ 2024: 7 M€ 2029: 4 M€	Domestic financing	2024 2029
Complementary actions and policy reforms in three phases	38 M€ 2021: 10 M€ 2024: 10 M€ 2029: 38 M€		
Technical (studies, plans, designs, etc.)			
Short term complementary studies and strategy setting			2021
Guidelines for logistics platforms and trucks parking			2021
Concerted plans and strategies for <ul style="list-style-type: none"> • Upkeep and maintenance of the road network • Valorisation/distribution of the public space • Tariff and ticketing of public transport 			2021
Integration of mobility and other urban networks (water, sewage, energy, waste)			2024
Municipal traffic and parking plans			2024
Anticipation of future plans after the SUMP			2029
Policy & regulation			
Informal transport project			
Continuous formalisation of motorcycle taxis and informal buses, through the establishment of a new institution responsible for vocational training, schedules regulation, and administrative formalisation		European Union	2024
Implementation of a digital action plan <ul style="list-style-type: none"> • Open data policy • Support the development of information and service platforms • Mobility Observatory 			2024
Strengthening the capacity of police officers in relation to mobility			2024
Adaptation of public transport service and recruitment policy to tackle gender-related issues			2024
Improved road upkeep and maintenance			2024
Improved road signage			2024
Creation of a transport organising authority		European Union	2029
Monitoring and reporting on air quality and water pollution			2029
Emergence of new public transport operators			2029
Public support for the adoption of clean vehicles through financial incentives			2029
Optimised integration of port activities and reconversion of industrial disused sites			2029

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

Urban transport investment measures	CapEx Estimate
Public transport and NMT	328 M€
Street shaping urban roads and traffic management	107 M€
Other measures	74 M€
Total	509 M€

Finance leverage

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

Description	Source of financing	Amount
International loan for the BRT and other investments (associated)	World Bank	370 M€
Domestic contribution to the BRT and other investments (associated)	Government of Cameroon	50 M€
Grant for the implementation of SUMP soft measures	European Union	2 M€

Projected impacts

Indicator	Impact 2030 (SUMP vs BAU)	Baseline - 2019	Projected 2030 BAU	Projected 2030 SUMP scenario
Total annual GHG emissions (Mt CO₂eq)	-0,19 Mt CO ₂ eq -20%	0.548 Mt CO ₂ eq	0.95 Mt CO ₂ eq	0.76 Mt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	-36 kg CO ₂ eq / capita -20.7%	161 kg CO ₂ eq / capita	174 kg CO ₂ eq / capita	138 kg CO ₂ eq / capita
Access Increase in the proportion of the population living within 500 meters or less of a public transport stop	Improved but not quantified	Not quantified	Not quantified	Not quantified
Air pollution Decrease in mean urban air pollution of particulate matter (in µg PM _{2.5}) at road-based monitoring stations	Improved but not quantified	Not quantified	Not quantified	Not quantified
Modal share Increase in the modal shares of trips by public transport, walking and cycling	Formal public transport: +5% Informal public transport: 0% Walking: +6% Cycling: 0% TOTAL: +6%	Formal public transport: 2% Informal public transport: 1% Walking: 35% Cycling: 0% TOTAL: 38%	Formal public transport: 1% Informal public transport: 0% Walking: 34% Cycling: 0% TOTAL: 35%	Formal public transport: 6% Informal public transport: 0% Walking: 40% Cycling: 0% TOTAL: 46%
Road safety Decrease in traffic fatalities in the urban area, per 100,000 inhabitants	Improved but not quantified	Not quantified	Not quantified	Not quantified

Perspectives for implementation

A research-action pilot project aimed at enhancing moto-taxi services in Douala

Identified soon after the adoption of the Douala SUMP in 2019, a pilot project for moto-taxi professionalisation is set to be implemented by Codatu to start in 2023. The objective of the project is to implement measures to improve the services provided by moto-taxis for both drivers and users, while also providing the public authorities with a knowledge base to regulate the system. Employing a research-action approach, the project will utilize a mixed methodology to gather data on the supply (drivers) and demand (users) of moto-taxis through GPS trackers, semi-directive interviews, questionnaires, and direct observation.

Insights from practice: lessons learned from the SUMP process

The three key strengths of Douala SUMP: it is integrated, realistic, and inclusive

It links mobility and urban planning, includes existing actors and modes of transport, and proposes innovative solutions beyond road infrastructure, such as the construction of a cable car line.

The SUMP's Action, Financing and Governance Plan is fully fundable through a mix of already available financial resources, newly identified resources, and international finance. It is based on a transport investment plan from the previous decade, with additional revenues generated from heightened taxation of fuel, car ownership, and parking. Funding is sourced from the public budget, resulting in a positive revenue-to-expenditure ratio for the operation of the public transport network. The SUMP is also tailored to the context, location, and specificities of the area, ensuring a progressive and realistic implementation of the plan.

The Douala SUMP is inclusive, facilitating information workshops and thematic focus groups that include young people, women, and actors from both modern and informal private sectors. This participatory process identifies overlooked issues related to population groups and devises adequate solutions. Notably, these public and stakeholder consultations mobilised new actors to get involved in organising a car-free day.

Significant governance and institutional reforms are prerequisites to SUMP implementation

Although the Douala Sustainable Urban Mobility Plan (SUMP) has its strengths and opportunities, there are still structural and urban limitations that need to be acknowledged. The liberalisation of the economy and decentralisation have led to a proliferation of actors with different interests, sometimes conflicting with the existing laws and regulations, complicating the organisation of the transport sector.

The management of regulatory urban planning poses a significant challenge in Douala and other African cities of similar size, given the creation of new districts on the outskirts, which necessitate new infrastructure and improvements in urban transportation. However, these may not be sustainable, given the city's current investment and management capacity.

Additionally, mobility data is often outdated and unavailable in a format suitable for long-term urban planning. Institutional reforms are necessary, including the establishment of a Transport Organising Authority, an Urban Planning Agency, and a mobility observatory to improve coordination between urban planning and mobility. These institutions should prioritise the representation of women and consider vulnerable groups, such as children and the elderly, who face systemic mobility challenges such as safety and lack of suitable infrastructure, as identified by the diagnostic.

Highlights from the past year

At this stage, progress with CUD in project preparation is advancing to start the implementation of the project as soon as financing agreements are signed, expected before June 2, 2024, following the completion of the national maturation process. Project implementation is progressing well towards meeting the effectiveness conditions, complying with dated covenants, and finalising bidding documents and all safeguard instruments. Specifically, detailed designs for the BRT infrastructures and feeders are well advanced and will be completed during the first quarter of 2024.

Yaoundé, Cameroon

Partner city

Status of the project: Completed technical assistance



Basic Information

Area: Administrative limits: 304 km²

Urbanised area: 183 km²

Population: 4.1 million (2020, functional urban area)

GDP per capita: USD 1,529 (2018, Cameroon)

Key facts

City, Country	Yaoundé, Cameroon
Population	4.1 million (2020, functional urban area)
Growth rate	3.5%
Land area	Administrative limits: 304 km ² Urbanised area: 183 km ²
GDP per capita	USD 1,529 (2018, Cameroon)
Baseline motorisation rate¹	58 cars per 1,000 inhabitants 18 motorbikes per 1,000 inhabitants
Annual transport emissions per capita²	241 kg CO ₂ eq
Local Partner (organisation)	Urban Community of Yaoundé (CUY)
Implementing partners	Agence Française de Développement (AFD), Codatu
Donors supporting technical assistance for SUMP	French Facility for Global Environment (FFEM)
Amount in technical assistance	Approximately €350,000 ³
SUMP implementation timeline	Joined MobiliseYourCity in November 2016 MobiliseDays in June 2016 Start of SUMP in March 2018 SUMP completed and approved in September 2019

¹ For comparison with motorisation rates in European capital cities, Berlin has a motorisation rate of 330 cars per 1,000 inhabitants, and other capital cities in Austria, Belgium, Denmark, France, Hungary, Ireland, and the Netherlands have a motorisation rate under 450 cars per 1,000 inhabitants. Source: Eurostat Regional Yearbook 2020.

² For comparison, the annual transport (except air travel) emissions per capita in Germany are 1.61 tCO₂eq. Source: Die Umweltwirtschaft in Deutschland: Entwicklung, Struktur und internationale Wettbewerbsfähigkeit. www.umweltbundesamt.de

³ From a FFEM envelope of 2 M€

City, Country	Yaoundé, Cameroon
SUMP Vision	No concise vision formulated
	CAPEX by term <ul style="list-style-type: none"> • 298.1 M€ (2025) / 554.7 M€ (2035)
	Yearly OPEX to term <ul style="list-style-type: none"> • 15 M€ (2035)
Approximate Total SUMP Investment Requirement (CAPEX/OPEX)	Total CAPEX & OPEX requirements by 2030 <ul style="list-style-type: none"> • CAPEX: 550 M€ • OPEX: 151 M€ • Total CAPEX and OPEX: 701 M€

Diagnosis: Urban Mobility in Yaoundé

Like many other major cities in Sub-Saharan Africa, Yaoundé is experiencing rapid population growth. The metropolis suffers from a lack of mobility infrastructure and the financial resources to properly maintain what it has, whether it is the public transport network, the organisation of small-scale transport offer, parking facilities or even simply roads and pedestrian areas. The economy of the city suffers from the lack of infrastructure, and struggles to attract investors.

Following the current evolution of rapid urban growth, the population will reach 5.5 million inhabitants in 2035, and the urban area will reach a radius of 25 km by the end of the century. The increase in the demand for travel, and in the rate of motorisation accompanying the rise in income, may rapidly lead to the saturation of the existing system. Hence, travel times will increase significantly along with the overall cost of travel, due to the consumption of more fuel by private vehicles and taxis.

Existing mobility and transport services

The transport system in Yaoundé, while being relatively fluid, is accident prone, uncomfortable, polluting, and expensive for the population.

There are about 8 million of trips travelled every day, from which one third are short distance trips travelled by walking or by moto-taxis. For longer trips, taxis, motorbikes, and cars are the main modes of transport. Official bus service and informal minibuses currently only play a minor role.

All these modes of transport use the same poorly maintained road network, where only 300 km of 2,700 km of roads are asphalted. The state of the road network limits both private and public transport. In particular, it suffers from the following problems:

- Most of the secondary and local roads are unasphalted
- Main and metropolitan roads are not optimally laid out and do not provide for the sharing of the road network between low-capacity modes and high-capacity modes (bus) and soft modes
- Degraded road surfaces or unmanaged intersections create traffic bottlenecks
- Vehicles, including freight vehicles, are parked on the road
- Geographical elements and neighbourhoods that are densely built on several km² without wide roads constitute obstacles to transit traffic of cars and public transport

Walking: 4 million trips travelled every day by pedestrians and walking is the main mode of transport. However, the lack of sidewalks combined with a chaotic traffic poses a threat to pedestrians' safety, and they are particularly exposed to traffic accidents.

Taxi service: Less than 5% of vehicles are taxis, but they have a 38% share of the modal split by distance. They transport all categories of the population, and with an average occupation rate of 3 passengers, they are the main motorised mode of transport. Taxis, even used collectively, are relatively expensive: for one passenger out of four, taxi fares only represent over 15% of their household income.

Moto-taxis: Moto-taxis are particularly present in the outlying districts. Their flexibility and agility allow them to use roads that are unpracticable for other vehicles, due to the poor state of the pavement or the narrowness of the road. Moto-taxis, often operated informally by very young drivers, are notably resistant to any regulation, which is nevertheless necessary to address the safety issues associated with this mode of transport.

Private cars: Cars are handicapped by the state of the road network and only 10% of trips are made by private cars. The car ownership rate, which is highly dependent on household income, is nevertheless increasing along with the standard of living.

Informal minibuses: Informal minibuses are of lesser importance in comparison to other African cities. In Yaoundé, they are mainly used for transport between the centre and the periphery, following fixed routes and departing from bus stations.

Formal buses: A formal bus service is available through the private company Stecy and is growing, but remains a minority element in the current mobility landscape. No facilities are in place to encourage this mode of transport. Buses travel on the same roadway as other vehicles and suffer from congestion and low commercial speed.

Environmental challenges

The vehicle fleet is very old (20% of vehicles are over 20 years old) and is very polluting, emitting large amounts of greenhouse gases and air pollutants.

Internal trips within the CUY emit the equivalent of 635 ktCO₂ per year. Along with distances travelled by vehicles, emissions follow a strong growth. Unfortunately, the gradual improvement in the performance of the vehicle fleet linked to its renewal does not counterbalance this trend.

In a list of 54 countries, Cameroon ranked 15th among the most polluted countries in Africa in 2017. While the average concentrations of pollutants are not sufficiently documented, punctual measurements have observed peak concentrations of fine particulate matter PM2.5 that were one hundred times higher than the WHO standard.

Safety and comforts are key issues to be addressed

Safety is a major issue for mobility in Yaoundé, where accidents cause around 1,000 deaths and 5,000 serious injuries per year. A specific study on a sample of taxi drivers revealed that 73% of them had an accident in the two previous years. In addition to accidents, inquired passengers raised the issue of the risk of assault in taxis.

Comfort is also often a problem: long waits in hot or rainy environments, difficulty in finding an available taxi in certain areas, or vehicles overloaded with passengers and goods.

Gender disparities: women travel less and use less comfortable modes of transport

The diagnosis describes a slight difference in the number of journeys made by women, which can be linked to significant disparities in terms of full-time formal employment (15% of women compared to 27% of men). Compared to men, women in Yaoundé make half as many journeys using private cars but travel more by foot or on moto-taxis.

The high cost of transport puts low-income users under pressure

After housing and food, transport is the third largest item of expenditure for Yaoundé residents and accounts for more than 11% of household spending. This is particularly critical in this city where inequalities are extremely high, and the highest 20% of incomes are on average more than 7 times higher than the bottom 20%.

The high cost of transport is attributed to the low efficiency of minibuses, taxis, and motor taxis, linked with a poor road network, and the weakness of public transport offer.

Institutional and financial capacity of the CUY: a gap remains between mandate and resources

The Urban Community of Yaoundé is the transport organising authority, both legally and in practice.

However, in spite of notable capacities, the CUY does not currently have the institutional means nor the adequate human resources to perform some of the essential tasks assigned to it by law, including the following: (i) the organisation and management of public transport, (ii) the traffic and parking management, and (iii) continuous monitoring of performance the urban transport system and the quality of service provided to citizens.

As the majority of the city will develop outside the administrative boundaries of the CUY by 2035, the municipal authorities, i.e. the CUY and the peripheral municipalities, will have to develop together an integrated organisation for public transport and define a structuring infrastructure network and priority multimodal investment plans on the scale of the future large conurbation.

In total, financial resources allocated to the construction and maintenance of roads, nearly 40 M€ per year, are in line with expectations based on the economic status of the city and country. However, the CUY has an insufficient share of these resources in perspective of its mandate. The national level compensates financially with its much greater resources and the support of international donors, but coordination is insufficient between the city and the ministries responsible for urban development and public works.

The SUMP preparation process and stakeholder involvement

In order to take the future urban development into account, the perimeter of the study covers a surface of about 700 km², from which 304 km² are within the administrative boundaries of the city.

Throughout the process of developing the SUMP, the various stakeholders involved in mobility were associated through technical committees, specific exchange workshops, and bilateral meetings.

The technical committees gathered the Yaoundé Urban Community, the Ministries of Urban Development, Transport, Public Works, Economy and Planning, Environment, the Police, the various taxi, and motorbike taxi unions, the Stecy bus company and the Agence Française de Développement (AFD).

Specific workshops in small groups linked representatives of the technical committee with academics, officials from the local districts, rail transporters, and managers of places that generate large amounts of travel, such as markets. These workshops enabled the different actors to take sufficient ownership of the approach.

In addition to the members of the technical committee, the team in charge of developing the SUMP also met bilaterally with international donors and representatives of the local districts.

Three time-horizons were considered:

- E. The very short term: horizon of 1 to 2 years in order to highlight quick wins
- F. The medium term: horizon of 5 to 7 years in order to observe the effects of the first SUMP measure
- G. The long term: horizon of 15 years to aim at significant results, to anticipate possible needs for reorientation

Vision setting and definition of scenarios

Strategic Vision

The SUMP of Yaoundé does not propose clear vision and goals for urban mobility in the city. However, it fully adopts the EASI framework and puts a strong emphasis on identifying challenges and solutions. Challenge-related objectives of the SUMP are:

- Improving traffic conditions by developing a network of roads beneficial to all
- Reducing the cost of mobility supported by households
- Improving the quality of life in the city with a less dangerous and less polluting system

How does the SUMP adopt the EASI framework?

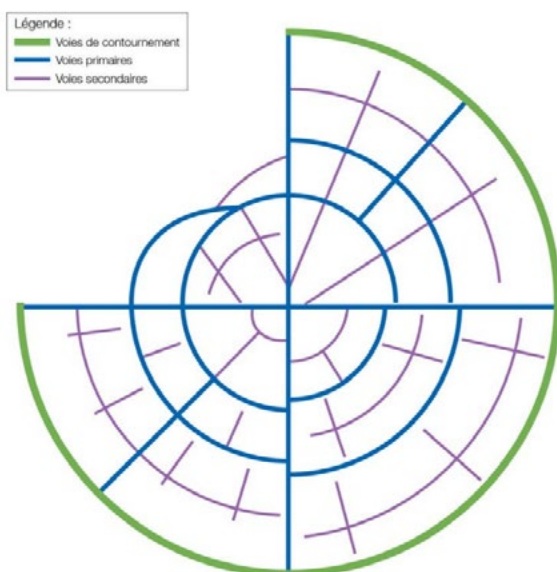
ENABLE - Improvement of steering and financing

AVOID - Transit oriented urban development, urban densification, densification around developing mass transit routes

SHIFT - Multimodal transport scheme, complementarity of transport modes

IMPROVE - Optimisation of the road network and improvement of the vehicle fleet

- Developing main roads
- Sharing space
- Traffic regulation
- Renewing the vehicle fleet towards less polluting and lower emissions



The SUMP develops the concept of coherent road network: The Cross.

The network builds up on existing roads and makes use of north-south and east-west metropolitan axes, and of multiple hierarchical levels of roads.

The road infrastructure will provide an efficient inclusion of the bus offer, for example with reserved lanes on congested sections.

Test scenarios and selected scenario

Three specific scenarios were defined in order to assess the impact of the SUMP by 2025 and by 2035, each one developed with a different level of ambition.

Baseline scenario: No SUMP implementation takes place, but existing laws and regulations are implemented. Private car ownership will increase, and the modal share of public transport will decrease. Travel times are expected to increase sharply, especially due to the increasing congestion in the capital.

Central scenario: This scenario provides immediate solutions to issues related to the road network. It is an ambitious infrastructure project focused on increasing the capacity of the roads to accommodate increased private vehicle traffic. However, with the appropriate road layout and the establishment of mass transport lines, this scenario allows for a significant shift to public transport, whose modal share is expected to evolve positively.

Ambitious scenario: The ambitious scenario also includes an important road infrastructure component in the short term, but focuses more on the creation of mass transport lines, including a train-tram project by 2035.

The scenario finally selected is the **Central scenario**. This scenario aims at the completion in the short term (2025) of a more efficient, adequate, and structuring road network. A public transport offer will also be put in place, but on a reduced number of lines, aiming at a good level of service and reliability, an offer that is affordable for the user and financially balanced. After having proven its effectiveness and relevance and gotten the adhesion of users, the public transport offer can be extended and replicated on a larger scale according to a level of ambition yet to be defined. Indeed, the current measures respond to imperative needs but will not make it possible to meet all the long-term challenges, particularly the reduction of greenhouse gas emissions. The SUMP, therefore, recommends a reassessment in 2025 and envisages an increase in ambition in terms of public transport in the long term.

Key SUMP measures

Measure	Cost estimates in M€	Proposed Financing Source	Implemented by
Total cost	891.9 M€		
Physical investments, infrastructure and rolling stock	SUBTOTAL: 852.8 M€		
Bypass roads	2025: 157 M€ 2035: 304 M€	Domestic financing / No international financing identified	2025 2035
Primary roads	2025: 29.7 M€ 2035: 94.5 M€	Domestic financing / No international financing identified	2025 2035
Secondary roads	13 M€	Domestic financing / No international financing identified	2035
Intersections and road measures	2025: 51.5 M€ 2030: 19.8 M€	AFD	2025 2030
Space for pedestrians, including the pilot neighbourhood "Coeur de Ville"	2020: 5 M€ 2035: 1.4 M€/year	AFD	2020 2035
Public transport lines (bus and minibus) and related road facilities	2025: 54.9 M€ 2035: 102.4 M€	Domestic financing / No international financing identified	2025 2035
Additional studies and plans	SUBTOTAL: 28.7 M€		
Studies and support reorganisation plan for bus lines	2025: 9.7 M€ 2035: 19 M€	Domestic financing / No international financing identified	2025 2035
Regulation, institution and policy reforms	SUBTOTAL: 10.4 M€		

Measure	Cost estimates in M€	Proposed Financing Source	Implemented by
Informal transport project			
Reform of the taxi and moto-taxi systems			
Continuous formalisation of moto-taxis and informal buses through the establishment of a new institution responsible for vocational training, schedules regulation, the administrative formalisation	4.5 M€	European Union	2024
Institutional reforms: creation of a local commission and a technical service for mobility	2.1 M€	Domestic financing / No international financing identified	2020
Control and training centre for mobility and transport	3.8 M€	Domestic financing / No international financing identified	2023

Projected results and impact

The implementation of the measures identified in the SUMP is expected to lead to a significant impact in terms of GHG emission reduction, improvement of the modal share of sustainable transport modes, and more. The following table presents the expected results and impact.

Impact Area	Expected Impact						
GHG emission (SDG 11)	Projected emissions in absolute value:						
		Baseline 2018	BAU 2025	SUMP 2025	BAU 2035	SUMP 2035	SUMP vs BAU 2035
	Per capita	241 kg CO ₂ eq	284 kg CO ₂ eq	251 kg CO ₂ eq	367 kg CO ₂ eq	271 kg CO ₂ eq	-26.16%
	Total	0.78 Mt CO ₂ eq	1.14 Mt CO ₂ eq	1.01 Mt CO ₂ eq	2.00 Mt CO ₂ eq	1.48 Mt CO ₂ eq	-26.00%
Accessibility (SDG 11)	Projected increase of annual GHG emissions by 2029, in percentage of the baseline:						
	<ul style="list-style-type: none"> • Business-as-usual scenario: +101% • SUMP scenario: +59% 						
		Baseline 2018	BAU 2025	SUMP 2025	BAU 2035	SUMP 2035	
	Total population covered	2,212,283	4,028,557	4,028,557	5,599,757	5,599,757	
Population at 500m or less of public transport stops	1,350,000	1,415,700	1,405,500	1,528,900	1,888,600		
% Access	42%	35%	35%	27%	34%		
Air pollution (SDG 11)	Improved but not quantified						
Modal share	Percentage of total trips being realised with Public Transport						
		Baseline 2018	BAU 2025	SUMP 2025	BAU 2035	SUMP 2035	
	Modal share of Public Transport	2%	1%	9%	2%	19%	
	Modal share of walking and cycling	32%	31%	34%	29%	35%	
	Total	34%	32%	43%	31%	54%	

Impact Area	Expected Impact			
		Baseline 2018	SUMP 2025	SUMP 2035
Road safety (SDG 3)	Deaths	1,000	800	500
	Heavily wounded	5,000	4,000	2,500
Mobilised finance (SDG 17)	<ul style="list-style-type: none"> • 66 M€ - Secured international grant from AFD for “Yaoundé Coeur de Ville” project • 2 M€ - Secured grant for the implementation of SUMP governance measures, including the creation of a Transport Organising Authority, an Urban Planning Agency, and the formalisation of moto-taxis and informal buses through outreach (European Union) 			
Expected institutional impact	The measures identified in the SUMP are complemented with a National Urban Mobility Policy, adopted in parallel to the SUMP process			

Lessons learned

On the occasion of the 3rd MobiliseYourCity conference in Yaoundé in 2019 and the official presentation of the SUMP, a reflection group⁴ composed of different stakeholders proposed areas for improvement for future SUMP, particularly on the African continent.

I. Placing the project owner at the centre of the SUMP process is important: authorities responsible for mobility should lead the planning process, with the support of MobiliseYourCity partners.

Recommendation: When drafting the ToRs, clearly state the role of the responsible local authorities in project ownership and ensure their capacity to monitor the process.

II. Ambitious surveys such as “household travel surveys” are expensive, are sometimes not adapted to the local context and available resources, and can produce unreliable data.

Recommendation: Demographic surveys (with car and two-wheeler motorisation rates) can be carried out on the basis of existing national surveys. They should be supplemented by origin-destination surveys (such as a simplified household survey, or road corridor and public transport network surveys) and qualitative socio-anthropological fieldwork to better capture the individual and collective factors behind the behaviour of respondents in terms of urban mobility. These two methodologies can be complementary and origin-destination surveys would allow the rapid identification of large masses of journeys.

III. Predictive traffic models are expensive to develop, can create the illusion of a “scientific” approach and may generate a gap between their results and their real appropriation by technicians and local elected officials.

Recommendation: Limit the use of models, base them on the observation and expertise of local counterparts and consultants (expert opinion). The SUMP must help identifying “strong lines”, a concept that does not necessarily lead to the choice of one mode rather than another, and to use the models in a second stage, like during pre-feasibility studies.

IV. The link between transport and urban planning is insufficiently considered, even though transport planning documents can be used as a lever for the implementation of other types of plans.

Recommendation: Strengthen local project management, institutional structuring, and governance, build capacities of local contracting authorities, and provide them with a framework for steering the implementation of SUMP action plans. When master plans exist for urban planning in African cities, they should be included in the terms of reference of the SUMP, even if their application is limited to a limited number of projects. Work done at national level (NUMP) should contribute to providing a legislative and legal framework and sources of funding.

⁴ Reflection group led by CODATU: Patrice Berger and Thibaut Descroux (UrbaLyon), Thierry Goin (CEREMA), Marie Dols (consultant), Philippe Bossuet (SYTRAL), Jean-Jacques Helluin, Mael Martinie, Sofia Martin, Antoine Clémot (CODATU).

Progress on implementation

I. Implementation and improvement of crossroads and terminals in the framework of the Yaoundé Centre Programme

This programme aims at enhancing access conditions to the city centre by improving crossroads and public transport terminals as well as upgrading walking infrastructure. The detailed studies to implement the project started in 2019 and finished in late 2021. Its construction is expected to start in 2022.

II. Construction of a ring road

This project is expected to enhance traffic conditions in the city by the construction of a ring road around Yaoundé. The technical studies were completed for two of the five road segments of the ring, leading to the tender for their construction. Studies for the third ring segment are under preparation, and the project has been declared of public utility. Construction works for the first two segments are expected to start in 2022.

III. Inclusive and Resilient Cities Development Project (PDVIR for its acronym in French)

In 2019, this project kicked off with the objective of providing accessible transport infrastructure for the most underprivileged. The project will improve connectivity of two Districts in Yaoundé through 15 km of structural roads and two pilot projects to promoting walking.

IV. Implementation of TRANSYAOUNDÉ

A BRT system, called TRANSYAOUNDÉ, is under study since late 2020 in the framework of the programme CICLIA (Cities and Climate Change in Sub-Saharan Africa Initiative), cofinanced by AFD, the EU and the Suisse cooperation agency. This study focuses on the design, operational conditions and technical characteristics of the system. Feasibility studies for the first of three BRT lines are under elaboration.

V. Paratransit reform

In order to make of public transport more attractive and rise its modal share, a road map for the paratransit transformation was developed in 2021. This road map intends to enhance service conditions for users of minibuses, collective taxis, and moto-taxis. Parallely, it also seeks to improve the labour conditions for paratransit professionals.

VI. Support to the cities of Douala and Yaoundé in the implementation of their SUMP

This project, financed by the EU, allows capacity development support for Cameroonian authorities in relation to urban mobility by financing decentralised cooperation between Bordeaux Metropole and Yaoundé and Douala. Besides strengthening local capacities, the project goals include structuring a transport authority, creating a mobility observatory, organising participation workshops, and structuring an urban planning agency. The project will be launched in 2022.

VII. Training for city officials

Awareness of city officials in charge of road projects has been raised on the topics of multimodality and public spaces management. Training sessions have been conducted to propose low-cost, soft measures, such as crossroad redesign, bus stops, circulation schemes, etc., to boost implementation.

VIII. Implementation of instruments to reduce air pollution

Together with other Cameroonian authorities, Yaoundé's administration developed a programme to tackle air pollution, following the SUMP adoption. Considering the alarming results of preliminary measurements of air quality, the city requested a grant to the French Ministry of Economy and Finance to implement actions fighting air pollution. The Air Quality Week took place in November 2021.

Dire Dawa, Ethiopia

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 70 km²

Population: 408,000 (2020) | Growth rate: 4,4%

Region capital city

GDP per capita: USD 855.8 (2019)

Modal Share:

Informal public transport: 42%

Walking: 46%

Private cars: 4%

Private motorbikes or 2-wheelers: 1%

Other: 8%

National GHG emissions per capita: 1,60 (tCO₂eq)

Exposure to climate change: HIGH

Context

Located on a large flat plain between Addis Ababa and Djibouti, Dire Dawa is meant to become the main economic hub of eastern Ethiopia. Nowadays, it hosts a high density of commercial activities, including markets that generate important flows of goods and people at different scales, putting pressure on roads and public spaces. In the medium term, national freight transit is expected to increase, along with the development of the national road network and the integration of the new railway into the logistic system.

477,000 trips are made daily in Dire Dawa. Mobility patterns reveal a relatively high propensity to move (1.8 daily trips per inhabitant). Dire Dawa is located on a secondary national/international freight corridor between Addis Ababa and Djibouti, meaning that a significant volume of trucks transit through the city. Dire Dawa currently does not have any transportation master plan.

Two railway lines currently serve Dire Dawa. The century old Ethio-Djiboutian railway is now nearly disused and only operates one or two regional services between Dire Dawa and Dewele at the Djiboutian border. The new Chinese-built railway line between Addis Abeba and Djibouti is operating since 2018 and links both passenger and freight services with a planned dry port near the new station. Railway services do not yet appear as a competitive alternative to road freight, but services are only beginning.

The road network in Dire Dawa can accommodate the different mobility flows going through the city, whether for transit, exchange, or internal purposes, without major disturbance. However, the pressure exerted on the network is extremely unbalanced, with an overwhelming weight on local roads and a limited coverage of structuring ones (primary, secondary, tertiary).

There is no existing mass transit system. Bajaj represents most of the public transport supply, with 6,000 units and a hundred lines. It can be used for both people and goods. Bajaj supply varies quite a lot according to places in the city and the time of the day. Bajaj is a fully private supply that only targets the most solvent market segments and does not properly address the others, leaving some mobility demand unanswered. During peak hours, a few minibuses provide a complementary supply to Bajaj on three routes. The publicly operated city bus service is very limited and consists of 10 urban routes limited to peak hours (four rides a day).

Urban and road transport are managed at both the federal and local levels. Although responsibilities and perimeters are properly defined, some interfaces regarding road or urban transport can be challenging to manage. Both the city and the region of Dire Dawa are under the authority of the mayor. The nine urban *Kebeles* are managed by the city administration with different transport related duties falling under its authority: city bus, road authority and traffic police. The Federal Transport Authority (FTA) is another major player regulating the transport sector through the delivery of licenses. It is the main interlocutor for Bajaj drivers associations. The Ethiopian Road Authority (ERA) manages the interurban road network and national interest road projects in the city (industrial park).

The Dire Dawa Administration, the local counterpart, has the mandate and responsibility to finance mass public transport infrastructure and the running cost of public transport is part of the public authority's budget. The budget for the urban transport sector was set between 480 and 655 million BRR (14 – 19 million USD) in the past few years.

Challenges and main aim of the SUMP

Mobility in Dire Dawa faces several problems simultaneously, including:

- Lack of structured road network
- Lack of integrated management for road axes
- Lack of proper organisation of Bajaj supply
- Lack of infrastructure for non-motorised modes, resulting in inadequate consideration in planning, investments, and policymaking
- Lack of robust organisation of logistic chains
- Lack of an integrated mobility strategy or multimodal approach
- Lack of coordination between economic, urban, and mobility development strategies

The technical assistance will contribute to institutional strengthening by providing training sessions on the following topics:

- Data analysis and updating (including household surveys analysis) – module 3 or 4
- Modelling and demand studies – module 3 or 4 (after the model has been developed)
- SUMP follow-up and evaluation, including the use and analysis of the household surveys – module 4

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: European Commission

Funding amount: EUR 550,000

Implemented by: AFD through Intra-ACP

Local counterpart: Dire Dawa Administration mayor and Cabinet Affairs Office, Finance and Economy Bureau

Supported activities:

- Project implementation support of the city government for the preparation of a SUMP

Status of implementation

Project start: 2019 Q4

Expected project completion: 2022 Q1

Completed outputs:

- Reporting notes following missions 1 & 2
- Minutes of stakeholders meeting
- Surveys results
- Module 1 report (Urban mobility diagnosis)
- Module 2 report (Vision, goal setting and measure planning)
- Training on transport modelling conducted in July 2021
- Module 3 Action plan
- Presentation of the final SUMP and implementation strategy

SUMP key measures and cost estimates

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

Measure	Cost Estimate
Main road projects	EUR 94,635,000
Micro road projects	EUR 15,000,000
Road design guidelines	EUR 312,458
Road maintenance plan	EUR 312,458
Target road and crossroad network	EUR 312,458
Road axis upgrade projects	EUR 6,014,120
Traffic and mobility management	EUR 14,120
Circulation plan	EUR 387,458
Mobility management integrated taskforce	EUR 28,239
Paratransit structuration and development	EUR 6,034,053
Quality of service targets/charter/commitment	EUR 234,136
Target local transit network	EUR 387,458
Paratransit sector capacity reinforcement	EUR 900,000
Bus network development	EUR 27,080,457
BRT development	EUR 157,659,204
Mass transit development plan	EUR 612,458
Mass transit fare integration	EUR 600,000
Main NMT projects	EUR 3,000,000
NMT micro projects	EUR 6,624,450
Bikes for all	EUR 150,000

Measure	Cost Estimate
NMT integration in transport and mobility projects	EUR 24,917
NMT development plan	EUR 609,136
Pedestrian-centred approach	EUR 300,000
Walking in Dire Dawa	EUR 300,000
Freight terminals	-
Urban logistics projects	EUR 9,000,000
Urban logistics development plan	EUR 450,000
Logistic pilot	EUR 24,917
Transport hub reorganisation	EUR 3,593,750
Sustainable mobility planning process	EUR 3,322
Mobility data management	EUR 150,000
SUMP evaluation	EUR 9,967
Multimodality strategy	EUR 600,000
Energy-wise mobility development	EUR 450,000
Demand management	EUR 300,000
Integrated Transport Authority	EUR 28,239
Integrated Mobility financing	EUR 28,239
Sustainable mobility project management	EUR 450,000
Inclusive, green and gender aware mobility	EUR 300,000
Inclusive, green and gender aware mobility	EUR 28,239
TOD ⁵ project opportunities	EUR 6,016,611
TOD handbook	EUR 230,814
TOD development plan	EUR 225,000
TOD funding opportunities	-

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

Urban transport investment measures	CAPEX Estimate
Public transport and NMT	EUR 204,516,269
Street shaping urban roads and traffic management	EUR 117,016,311
Other measures	EUR 21,889,098
Total	EUR 343,421,678

Projected impacts

The impact projections presented in this section should be read considering the prospect of a significant population increase. With an estimated population of 408,000 in 2020 and an urbanisation rate of 4,4% averaged over recent years, the population will reach 627,574 inhabitants in 2030, following the current trend.

⁵ TOD: Transit Oriented Development

Indicator	Impact 2030 (SUMP vs BAU)	Baseline - 2020	Projected 2030 BAU	Projected 2030 SUMP scenario
Total annual GHG emissions (Mt CO₂eq)	-0,011 Mt CO ₂ eq -40% compared to BAU	0,011 Mt CO ₂ eq	0,029 Mt CO ₂ eq	0,018 Mt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	-19 kg CO ₂ eq / capita	27 kg CO ₂ eq / capita	47 kg CO ₂ eq / capita	28 kg CO ₂ eq / capita
Access				86%
Increase of the proportion of the population living 500 meters or less of a public transport stop	+28%	84%	58%	(+196,500 people with access compared to baseline)
Modal share				
Increase of the modal shares of trips by public transport, walking and cycling	Public transport: +1%	Public transport: 42%	Public transport: 43%	Public transport: 44%
	Walking: +4%	Walking: 46%	Walking: 40%	Walking: 44%
	Cycling: NA%	Cycling: 0%	Cycling: NA%	Cycling: NA%
	TOTAL: +5%	TOTAL: 88%	TOTAL: 83%	TOTAL: 88%
Affordability of public transport				
Percentage of disposable household income spent on public transport for the second quintile household income group	- 1%	12%	10%	9%

Highlights

Dire Dawa completes the preparation of its SUMP to keep pace with strong ambitions and rapid urban growth

Dire Dawa, Ethiopia, completed the preparation of its Sustainable Urban Mobility Plan (SUMP) in 2022. This SUMP is a key document that outlines the city's strategy to improve its transportation system, reduce traffic congestion, and promote sustainable mobility.

The process of developing the SUMP involved extensive consultation with stakeholders, including government officials, private sector representatives, civil society organisations, and community members. The plan's objectives include increasing public transportation services, improving road safety, reducing greenhouse gas emissions, and promoting non-motorised transport modes such as walking and cycling.

The SUMP is expected to have a significant impact on the quality of life of Dire Dawa's residents, as it will help to create a more sustainable and efficient urban environment. The plan is also aligned with Ethiopia's national transport policy, which aims to promote sustainable and inclusive transportation systems.

This achievement highlights the commitment of Dire Dawa's authorities to improve the city's transportation system and promote sustainable mobility, and the crucial role played by AFD and the MobiliseYourCity Partnership in supporting cities in their transition towards sustainable mobility.

Linking urban planning and mobility planning will become essential considering the changing city scale

The number of inhabitants in Dire Dawa is expected to triple by 2040 (reaching 800,000 – 900,000 people). The patterns of this growth will significantly influence the mobility behaviour in the city. The SUMP scenarios are thus structured around the different future shapes of the city, taking into account construction of an already planned new industrial city 15km away from the urban core. While the *scattered city scenario* could increase the urban area by 114km², significantly increasing the length of trips, the alternative, desired scenarios of a polycentric city would ensure more efficient and

sustainable transport through densified development. They would also significantly reduce the newly urbanised areas until 2040.

A structural plan for urban development has already been prepared by the municipality. Linking the SUMP to the structural plan and coordinating between urban development and mobility planning will be key to future sustainable mobility in Dire Dawa.

Walking is a shadow mode – data can shed a better light on its importance

The household survey results indicated that most trips in Dire Dawa are made on foot (46%). Collecting this data showed that the importance of walking had been underestimated before by local decision-makers and helped to put active modes of transport on the agenda in the SUMP process. Thus, the SUMP aims to keep the current modal share of active modes while making the city entirely walkable. Non-motorised modes will, for instance, be considered in planning and upgrading roads to ensure that enough space is provided for pedestrians.

Bouaké, Ivory Coast

Partner city

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



Basic Information

Urban area: 120 km²

Population: 800,000 | Growth rate: +3%

Regional capital city

GDP per capita: USD 2,286 (National)

Modal Share:

Motorcycle: 54%

Walking: 20%

Taxi: 11%

Individual car: 10%

Tricycle: 2%

Minibus "Gbaka": 2%

Truck: 2%

Bicycle: 1%

National GHG emissions per capita: 0.98 (tCO₂eq)

Exposure to climate change: HIGH

Context

Bouaké is located at the intersection of two important international road corridors in the centre of the Ivory Coast, connecting Abidjan with Burkina Faso, Mali, Ghana, southern Guinea, and Liberia. The city is also a rail and air travel hub, and home to an important wholesale market of regional food products, which is the heart of its economy.

Transport system

While the main network is well-maintained along the central axes of the National Road Network, the secondary road network is underdeveloped, and the tertiary roads within residential areas are almost undeliverable. This results in the isolation and spatial segregation of some neighbourhoods. In 2014, only 20% of the 582 km road network had been paved (122km) – mainly in the city centre. Another 23% (135km) was considered passable. There are no parking problems due to the currently low rates of individual motorisation, even though parking on the sidewalk is an issue. However, the wide roads are not designed for parking nor to ensure the safety of cyclists and pedestrians. This situation has a direct impact on road safety.

The majority of the mobility demand has been covered by informal transport since the bankruptcy of the previous public transport company (*Société de Transport Urbain de Bouaké* – STUB) in 2011. Due to the frequent use of butane gas as fuel and the related risk of explosions, informal taxis are a particularly challenging part of the rolling vehicle stock. Minibuses ("Gbakas") represent a smaller traffic share but are more structured.

In this context, public transport service by bus was redeployed in 2020 with several lines operated by SOTRA (Société des Transports Abidjanais). To enhance intercity transport, a regional bus terminal is planned on the outskirts of the city to reduce traffic disruption in the centre. Currently, informal modes (e.g. minibuses with 20 to 30 seats, called Massa / Dianra or Badjan) dominate the interregional transport of people and goods.

The most important mode of motorised transport is two-wheelers (including motorcycle taxis). It is economical, fast, better suited to road conditions and less sensitive to traffic congestion. However, motorcycles and moto-taxis have a predominant presence (60% in 2016) in accidents. Although hard to quantify, walking is an important mode of mobility.

The transport of goods in the urban area is mainly provided by small vehicles (tricycles, pickups, or tarpaulin vans), whose traffic and parking contribute to traffic congestion. Heavy truck traffic and parking, especially those that cross the city in lack of an alternative route, have an extremely negative impact on traffic and on the condition of the roads.

Institutional context

The local authorities most involved in issues to improving urban mobility are the town hall of Bouaké, the Regional Directorate of Transport, and the prefecture. Local institutions do not yet have the means to organise and regulate the cross-cutting and multi-sectoral issues related to mobility. However, the Mayor of Bouaké created a working group on urban mobility (*Groupe de Travail sur la Mobilité Urbaine – GTMU*) in 2022, intending to enhance cooperation and improve planning.

At this stage, the Mairie de Bouaké does not have the capacity to finance mass public transport infrastructure, and there is no demand for such a system. It does not have the authority to borrow from international finance sources. No systems and procedures are in place to monitor, evaluate and report on urban mobility. The GTMU will be one tool to improve the monitoring of urban mobility.

Challenges and main aim of the SUMP

Mobility in Bouaké faces several problems simultaneously. These include:

- The overall mono-centric organisation of the city, which attracts a lot of urban travel, and the low density of the urban grid, which extends travel distances.
- The inadequate quality of the road network, its weak functional hierarchy and its radial organisation, which converges towards the city centre
- The improper use of the asphalt-surfaced road (deficient organisation of traffic, management of intersections and parking, serious road safety issues).
- Traffic congestion in the city centre and road safety issues.
- Lack of public mass transport service. Trips to and from certain neighbourhoods are limited to the use of moto-taxis and walking.
- The omnipresence of low-capacity passenger and goods transport service/paratransit sector.
- Lacking local institutional capacities to organise and regulate such transverse and multi-sectoral problems.
- A lack of regulation through the taking of coercive measures and the absence of police power regarding transport.

The challenge for the city of Bouaké today is to be able to adopt a strategy for sustainable urban mobility in line with the Urban Master Plan (SDU). This strategy is expected to consider the current and future challenges linked to climate change and sustainable development and the specific mobility needs of people in vulnerable situations (children, physically disabled, pregnant women, etc.).

The technical assistance contributes to institutional strengthening by collecting data on the current situation, supporting the authorities in identifying the main challenges and best measures to address them, and organising tailor-made workshops on key mobility issues.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: European Commission

Funding amount: EUR 400,000

Implemented by: AFD through the MobiliseYourCity Africa Program

Local counterpart: Municipality of Bouake

Supported activities:

- Implementation of a SUMP

Status of the SUMP process

Project start date: 2021 Q1

SUMP approval date: 2023 Q1

Completed outputs:

- Elaboration of specific Terms of Reference
- Launch of the consulting call
- Evaluation of the proposals
- Selection of the consultant and administrative assignment of the mission (contract signed in January 2021)
- Diagnosis of urban mobility in Bouaké
- Survey on mobility practice in Bouaké
- Mobility scenarios: business as usual, improved, and ambitious
- Modelling of urban mobility
- Choice of a scenario and development of measures
- Creation of a GTMU
- Final report of the SUMP

SUMP key measures and cost estimates

The total cost of the measures, focusing on (1) urban planning, (2) transport organisation and (3) governance, is 18.2 billion CFA francs, or 27.8 million Euros, to be spread over the next 15 years.

The following table lists the measures identified in the SUMP action plan.

Measure	Cost Estimate (EUR)
Urban planning	Sub-total: 21,340,000
M01 - Improve strategic junctions and traffic lights	EUR 2,500,000
M02 - Moderate traffic zones (30 and semi-pedestrian zones)	EUR 500,000
M03 - Develop/safeguard road crossings	EUR 500,000
M04 - Plant and decorate pedestrian walkways and waiting areas for public transport	EUR 30,000
M05 - Secure pedestrian routes in neighbourhoods	EUR 560,000
M06 - Pedestrian crossings in the lowlands	EUR 30,000
M07 - Develop the "grand marché" area through reallocating public space, support for itinerant merchants and traders, and cross-section improvement	EUR 1,500,000
M08 - Organise and rehabilitate interurban stations	EUR 2,250,000
M09 - Cycle and pedestrian routes along the main network <i>Including 10 km of sidewalk and 5 km of cycleway</i>	EUR 250,000
M10 - Organise the lorry parking areas	EUR 8,000,000
M11 - Horizontal signs	EUR 720,000
M12 - Redesign the main network to promote safety and mixed-use uses	<i>Included in road projects</i>
M13 - Bus infrastructure improvements	EUR 3,350,000
M14 - Exchange areas between small-scale transport and buses	EUR 1,000,000
M15 - Motorbike taxis stations	EUR 150,000
Transport organisation	Sub-total: 4,400
M16 - Raise awareness of good transport practices	EUR 50,000
M17 - Institutional transport: study of services pricing and marketing	EUR 300,000
M18 - Strategic study for the sustainability and development of SOTRA in Bouaké	EUR 1,000,000
M19 - Define and implement a traffic plan	EUR 750,000
M20 - Regulate the access of heavy goods vehicles and their circulation in the city	EUR 10,000
M21 - Taxi sector reorganisation	EUR 100,000
M22 - Establish collective taxi lines	EUR 800,000
M23 - Revitalise <i>gbaka</i> minibus routes and improve their governance	EUR 700,000
M24 - City centre parking management	EUR 170,000
M25 - Evaluate and promote electric motorbike taxis and tricycle development	EUR 150,000
M26 - Motorbike taxi sector regulation and professionalisation	EUR 200,000
M27 - Changing the image of the motorbike taxi sector through good practice promotion	EUR 150,000
M28 - Encourage the development of a motorbike taxi booking platform	EUR 20,000
Governance	Sub-total: 2,050
M29 - Empowerment of the town hall as an urban mobility organising authority	<i>Integrated into M30</i>
M30 - Technical assistance for the town hall urban mobility group	EUR 1,000,000

Measure	Cost Estimate (EUR)
M31 - Entrust the City Council with the joint management of rehabilitation projects	No cost expected
M32 - Strengthen the routine maintenance service for rapid interventions	EUR 700,000
M33 - Create a traffic service - Set up a signalling system	EUR 200,000
M34 - Create a transport planning service	EUR 150,000

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

Urban transport investment measures	CapEx Estimate
Public transport and NMT	EUR 12,420,000
Street shaping urban roads and traffic management	EUR 4,650,000
Other measures	EUR 10,720
Total	EUR 27,790,000

Finance leverage

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

Description	Source of financing	Secured?	Amount
Bouaké local financing for SUMP	Commune de Bouaké	Planned	EUR 300,000
National financing under local management for SUMP	Ivory Coast national government	Planned	EUR 5,800,000
National financing for SUMP	Ivory Coast national government	Planned	EUR 12,200,000

Projected impacts

Indicator	Impact 2030 (SUMP vs BAU)	Baseline - 2021	Projected 2038 BAU	Projected 2038 SUMP scenario
Total annual GHG emissions (Mt CO₂eq)	-0,012 Mt CO ₂ eq	0,086 ^a Mt CO ₂ eq	0,198 Mt CO ₂ eq	0,186 Mt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	-6,1%	98 kg CO ₂ eq / capita	226 kg CO ₂ eq / capita	213 kg CO ₂ eq / capita
Modal share Increase of the modal shares of trips by public transport, walking and cycling	Not quantified	Formal public transport: 0% Informal public transport: 42% Walking: 20% Cycling: 1% TOTAL: 63%	Not quantified	Not quantified
Road safety Decrease of traffic fatalities in the urban area, per 100,000 inhabitants	-2.95 fatalities/100,000 hab	5.9 fatalities/100,000 hab	5.9 fatalities/100,000 hab	2.95 fatalities/100,000 hab

Insights from practice: perspectives for implementation

Adopting a financially realistic plan is key to moving into implementation

The total cost of the measures and actions of the SUMP is 27.8 million Euros, to be spread over the next 15 years. While the amounts to be mobilised seem relatively modest for a SUMP, they are realistic and suited to the identified needs. The objective seems quite attainable provided that the SUMP is supported by a strong political will.

The financing of the SUMP will have to be ensured primarily with the support of the State and donors with EUR 18.6 million from the state's own budget or donor programmes, EUR 8.8 million as retrocession from donor loans to the local authority and EUR 0.3 million from the local budget.

Highlights in the past year

The SUMP assists Bouaké and Ivorian authorities in improving and securing urban mobility in Bouaké

In 2022, the team in charge of the SUMP focused on developing a scenario, selecting the right measures, and supporting the local authorities in creating the Urban Mobility Working Group (GTMU), leading to the adoption of the action plan during the first meeting of the GTMU in October 2022. As consultants are finalising the full, final SUMP report, local authorities are identifying priority measures to implement with the expected financial support of AFD.

A research project to address road safety specifically

Road accident data is collected by the police forces and health workers and automatically updated in an app to show in real-time how many accidents have occurred and where they have taken place. This pilot data collection project is being implemented by the *Institut de Recherche pour le Développement* (IRD, French) and the University of Bouaké, with the support of AFD.

⁶ Estimated by the MobiliseYourCity Secretariat based on SUMP deliverables.

Morocco

Partner country

Status of the project: Completed Technical assistance



Basic Information

Population: 35,740,000 | Growth rate: 1,20%

Percentage of urban population: 58% (2010)

GDP per capita: USD 8,612 (2017)

Percentage of population living below the national poverty lines: 4,8% (2013)

Nationally Determined Contribution (NDC): Quantified transport related NDC

National GHG emissions per capita: 1.75 (tCO₂eq)

Context

Over the last decade, the Government of Morocco has developed a national policy with the objectives of improving urban mobility and addressing the current and future challenges that Moroccan cities are facing. The planning process is therefore already at an advanced level of maturity in the country.

The organisation of a National Day for Urban Transport (JNTU) in 2013 was an opportunity to relaunch the public debate over the main urgent challenges of urban mobility policies. The creation of the Fund for Urban and Inter-urban Road Transport Reforms (FART) and the empowerment of local authorities in the context of devolution and decentralisation, contributed to a redefinition of the national strategy. In 2016, the “MobiliseDays” event in Rabat highlighted the need for evolutions of the national framework and the role of SUMP as a leverage to structure sustainable urban mobility policies.

Moreover, as the host country of COP22 in 2016, the government of Morocco committed to reducing its greenhouse gas (GHG) emissions by 13% by 2030 and was one of the first countries to join the MobiliseYourCity Partnership. In 2021, Morocco increased its ambitions. In its updated nationally determined contributions, the country aims to reduce the GHG emissions by 18.5% by 2030 (unconditional target) and could even reach a 45.5% reduction with the support of other parties of the Paris Agreement (conditional target).

Support from the Partnership

Technical assistance: Develop a national vision for urban mobility.

Funded by: FFEM

Implemented by: AFD, Ademe, Cerema and CODATU, through the MobiliseYourCity Morocco Program

Local counterpart: Ministry of Home Affairs, Directorate General of Local Authorities (DGCL)

Supported activities:

The support for Morocco is to develop a coherent framework for the improvement of urban mobility, in relation with city level actions. Specifically, it aims to build capacities at both the national and local levels, and at developing two policy documents:

- National vision for urban mobility in 2030 (NUMP)
- Action plan for implementation of the national urban mobility strategy

Status of implementation

Project start: 2017

Expected project completion: 2019

Completed outputs:

- National Vision for Urban Mobility in 2030 (NUMP)
- Action plan for the implementation of the national urban mobility strategy

NUMP key measures

The Moroccan National Vision for Urban Mobility in 2030 outlines several significant measures to integrate mobility into sustainable development, improve funding and governance, and promote the efficient organisation of public transport, among other initiatives.

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

- Integration of the mobility dimension into the actions of other major related sectors
- Organisation and planning of urban mobility to contribute to sustainable development
- Maintenance and redeployment of government funding
- Increase and rationalisation of funding from the municipalities
- Completion of the legal and institutional framework and implementation of pilot operations for all other possible sources of funding
- Development of a legal and technical framework for new urban mobility solutions in terms of legislation, regulations, and technical choices
- Implementation of high-impact pilot projects
- Promotion of an integrated and efficient organisation of all modes of public transport
- Maintenance of a realistic and easy-to-manage public transport fare policy
- Development of governance tools
- Strengthening institutional and human resource capacity for better governance at central and local levels
- Development of institutional capacity and skills for digital solutions for urban mobility
- Development of a better understanding of the challenges and priorities for action in digital technology applied to urban mobility
- Improvement of the delegated management of public transport

Dakar, Senegal

Partner city

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



Basic Information

Urban area (Dakar Region): 550 km²

Population: 4,042,225 (2022) | Growth rate: +2.8%

Country capital city

GDP per capita: USD 1,636 (2021)

Modal Shares (in 2015):

Walking: 70%

Formal public transport: 11.7%

Informal public transport (minibuses): 6.8%

Informal collective taxis: 3.5%

Private cars: 4.2%

Formal Taxis: 3.0%

Private motorbikes or 2-wheelers: 0.8%

GHG emissions per capita: 0.6 tCO₂eq at national level in 2016 and 2.1 tCO₂eq/capita in Dakar

Exposure to climate change: MEDIUM

Context

The Dakar region is a fast-growing conurbation that includes the cities of Dakar, Guédiawaye, Pikine, and Rufisque. It is home to over 4 million people and accounts for 25% of the country's population and 50% of the urban population. The population is expected to reach 5 million by 2030 with a growth rate twice as high as in the past 30 years.

The high population density of the region (7,350 inhabitants/km²) masks significant disparities between urban areas and territorial imbalances due to the peninsula's geography and uncontrolled urbanisation. The concentration of jobs in Dakar city center leads to pendular mobility, and income inequality between Dakar and suburban cities increases the use of private vehicles.

The limited space in Dakar and road congestion have led the government to pursue ambitious urban projects outside the current agglomeration, such as the Diamniadio urban pole, which is planned to be the future administrative center of Senegal.

Walking is the most common mode of transportation, accounting for 70% of trips, but is imposed rather than chosen due to the absence or poor condition of sidewalks and obstacles from larger roads. Cycling is hindered by a lack of infrastructure and unsafe road conditions, encouraging a shift to private vehicles.

Public transportation options in Dakar include the public operator Dakar Dem Dikk (DDD) with 42 standard bus lines, 14 private operators with 64 minibus lines under the AFTU's, informal minibus operators, Clando taxi operators. Since 2022, the Express Regional Train (TER) is in addition operating on the corridor of the former "Petit Train de Banlieue", between Dakar downtown and the Blaise Diagne International Airport located in Diamniadio at 36 km distance. Additional mass rapid transit projects are underway: a BRT line between Dakar downtown and Guédiawaye suburb (under construction, expected to begin in 2024) and the extension of the TER beyond the airport (under construction).

The total number of trips within the region of Dakar stands at 3.36 trips per person on average on weekdays. Of these trips, 1.0 trips are made using motorised modes.

The Conseil Exécutif des Transports Urbains de Dakar (CETUD) manages mobility in Dakar and is responsible for piloting public transport (while the TER is under the APIX mandate) and implementing a transport master plan. CETUD's mission is to organise and regulate urban transport and promote healthy competition in accordance with state policies. CETUD has revised its transport master plan with the support of the MobiliseYourCity Partnership to create a Sustainable Urban Mobility Plan (SUMP) 2020-2035.

CETUD has the mandate and responsibility to manage public transport, under the direct authority of the Ministry of Infrastructure. Systems and procedures are in place to monitor, evaluate and report on urban mobility.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: FFEM

Funding amount: EUR 400,000

Implemented by: AFD: supported the elaboration of a SUMP for Dakar metropolitan area, contracted and managed by the local mobility authority, Conseil Exécutif des Transports Urbains de Dakar (CETUD)

Local counterpart: Conseil Exécutif des Transports Urbains de Dakar (CETUD)

Supported activities:

Update the existing urban mobility plan into a SUMP which:

- Builds upon existing studies, plans and documents
- Is aligned with the national urban mobility strategy
- Is the result of a participatory process
- Is ready to be adopted by the CETUD and the relevant authorities

Status of the SUMP process

Project start date: 2020 Q2

SUMP completion date: April 2023

Completed outputs:

Update the existing urban mobility plan into a SUMP which:

- Evaluation of the existing transport master plan report
- Inception report
- Diagnostic report
- Scenario and financing report

Next expected outputs:

- Vision, objectives, and action plan of the SUMP
- Monitoring and reporting of the SUMP
- Reports about the participatory process of the SUMP

SUMP key measures and cost estimates

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

Measure	Cost Estimate (million FCFA)
Reserving rights of way for the development of the TCSP network and active modes of transport	Million CFA 147,820
Organisation of events and participative activities on active modes of transport	
Creation of a cycle lane near UCAD	
Updating the technical inspection centre and introducing environmental constraints	
Organisation and management of mobility events in Diamniadio	Million CFA 5,800
Taking gender into account in the provision and management of mobility	
Taking account of PRMs in mobility provision	
Open data for public transport data	
Communication campaigns on the SUMP	
Restructuring of the CAPTRANS system	
Implementation of a programme to extend the number of air quality measurement stations	
Setting up a mobility/urban planning coordination body	
Opportunity study for a TOD on Grande Médine	Million CFA 7,945
Management of motorbike taxis	
Establishment of a consultation framework for possible changes to the SUMP	
Setting up a vehicle pound	
Road safety study for the urban area	Million CFA 220
Organisational support for CETUD's growth	Million CFA 50
Reform of the urban transport financing model	Million CFA 50
Strategic traffic plans	
Accessibility study of the Daga Kholpa area	
Update of the multimodal accessibility study for the Diamniadio area	Million CFA 520
Multimodal accessibility planning study for the airport sector	
Accessibility study for areas undergoing urbanisation	
Strategic plan and works upgrade for multimodal hubs	
Operational study to improve urban bus stations	Million CFA 22,770
Network restructuring study, second round	
Setting up of a working group on intermodal ticketing	
MAAS study and development of services	Million CFA 1,450
Opportunity study for a maritime transport network	
Feasibility study and construction of TCSP lines	Million CFA 773,750
Strategic study and works upgrades on cycling routes	Million CFA 35,000
Public space charter	
Study on the management of on-demand modes using digital platforms	Million CFA 420
Study of active mode crossings on infrastructure with capacity (N1, A1, VDN)	
Pedestrian master plan and works upgrade	Million CFA 46,360
Feasibility studies	Million CFA 675
Operationalisation of the goods flow management study	Million CFA 9,375
Feasibility study on setting up a parking system for the conurbation	
Training in traffic management and initial analysis of the current situation	Million CFA 2,370
TOTAL SUMP	Million CFA 1,054,600 (Billion EUR 1.6)

Projected impacts

Indicator	Baseline – 2015	Projected 2035 SUMP scenario
Total annual GHG emissions (Mt CO₂eq)	0.924 Mt CO ₂ eq	Not available
Annual transport related GHG emissions per capita (kg CO₂eq)	243 kg CO ₂ eq	Not available
Access		
Increase of the proportion of the population living 500 meters or less of a public transport stop	56%	Not available
Air pollution		
Decrease in mean urban air pollution of particulate matter (in µg PM _{2.5}) at road-based monitoring stations	45 µg/m ³ of PM _{2.5}	Not available
Modal share		
Increase of the modal shares of trips by public transport, walking and cycling	Walking: 70% Cycling: 0% Personal cars: 3% Motorized two-wheeler: 1% Taxi: 2% TC hors TCSP: 23% TCSP: 0%	Walking: 55% Cycling: 3% Personal cars: 9% Motorized two-wheeler: 2% Taxi: 2% TC hors TCSP: 17% TCSP: 10%
Road safety		
Decrease in traffic accidents in the urban area, per 100,000 inhabitants	165 accidents / 100,000 inhabitants	95 accidents/100,000 hab
Affordability of public transport		
Percentage of disposable household income spent on public transport for the second quintile household income group	14.3% (2015, EMTASUD)	Not available

Perspectives for implementation

The Sustainable Urban Mobility Plan of Dakar has been finalised in April of 2023. The official governmental approval of the SUMP is still in progress.

Insights from practice: lessons learned from the SUMP process

One specificity of the Dakar SUMP is that the CETUD was the contracting authority for the SUMP study (not AFD). A delegation agreement was signed between AFD and CETUD for this purpose. This had been possible because CETUD is quite a mature mobility authority, with rather skilled staff. The CETUD was very much involved in the monitoring of the SUMP, more than for usual SUMPs. This was possible because CETUD is a mature mobility authority and also because they were the contracting authority of the SUMP study.

Highlights and Lessons Learned

Finalisation of the SUMP in 2023

The main highlight in 2023 was the finalisation of the SUMP. Although the direct impact of the SUMP process is not yet clear, it is worth mentioning that many major mobility projects are ongoing at the moment in Dakar: mainly BRT, TER extension, and bus priority lines projects. In addition, under the bus priority project financing, CETUD is planning to conduct several studies in the follow-up of the SUMP process: a new households survey, road safety action plan, study of public transport tariffs, study on public transport financing, elaboration of public space design guidelines, traffic study for Dakar city centre within others.

Future projections show the need for increased ambition, beyond ongoing project

In 2022, the SUMP process delivered a vision and possible scenarios for 2035. In Dakar, urban mobility is already experiencing significant change with the arrival of the BRT and light train TER, the network's restructuring, and the construction of new infrastructures. However, projections show that despite the current efforts, meeting the increased demand resulting from population growth will be difficult and costly, as peak hour demand cannot be met by the currently projected transport supply. The scenario-building phase highlighted the need for increased ambition to prevent saturation and meet the city's colossal mobility challenge.

The involvement of various stakeholders makes the SUMP a recognised and valuable plan

Throughout the SUMP process, the responsible committees and the SUMP task force put a strong focus on involving diverse stakeholders in the development of the plan. Workshops were conducted with private and institutional actors as well as the population. The topics of the workshops covered a broad variety of SUMP related issues, including the sharing of roads and the importance of gender for transport. The results from the diagnosis were also presented during a public event to collect feedback on the outcomes. The success of these participatory events is visible through the acknowledgement that the SUMP was able to gain. While the urban mobility plan from 2007 was unknown to some stakeholders, their involvement in the process of preparing the SUMP led to an increased awareness of the aims of the plan.

A multi-modal transport system that favours public transport is key for sustainable mobility

The road network in the densely populated districts of Dakar is already under pressure under the current motorisation rates. At the same time, most trips are still taken by foot as large parts of the population cannot access or afford public transport. In this context, the collaboration of CETUD with paratransit operators to support the professionalisation and upgrading of their buses, as well as the planned development of a BRT system, feed into the SUMP process. Approaches for increasing a multi-modal transport system that focuses on public transport also include the development of a fare system adjusted to the household income and the improvement of conditions for walking and cycling.

Urban planning and transport planning go hand in hand as part of the SUMP

Urban development is a crucial driver for the increasing transport demand in Dakar. Differences in the density among urban districts influence mobility and transport systems. To effectively integrate land use and transport planning, the Ministry of Urban Planning is an essential partner in the SUMP development and has been involved from the start. The objectives of the urban master plan (Dakar 2035) directly feed into the SUMP process. Especially in the less densely populated districts in the outskirts of Dakar, the SUMP aims to focus on developing compact city structures according to the principles of the 15-minute city.

Tunisia

Partner country

Status of the project: Completed technical assistance



Basic Information

Population: 11,540,000 | Growth rate: 1.1%

Percentage of urban population: 70%

GDP per capita: USD 3,317

Percentage of the population living below the national poverty lines: 15.5%

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

CO₂ Emissions (total in million tonnes CO₂/ per capita in tonnes): 32.07 / 2.74

CO₂ Transport Emissions (total in million tonnes CO₂/ per capita in tonnes): 7.27 / 0.62

Proportion of transport related GHG emissions: 21%

Context

The development of the transport sector in Tunisia resembles a pathway that is common across most countries in the Global South; Tunisia is experiencing a steady rate of urbanisation that is expected to result in three-fourths of the population living in urban areas by 2030. A growing citizenry exerts increasing pressure on the existing urban transport infrastructure, already characterised by an inefficient public transport service that has been historically underfunded – state budgets for road infrastructure development are as high as those for public transport - and unable to satisfy the mobility demands of the urban population. These factors have resulted in an increasing motorisation rate, particularly private means of transportation, and subsequently high GHG emission levels:

- Individual transport accounts for 63% of all motorised passenger journeys. This percentage stands in opposition to the 1970s modal distribution, when public transport represented 70% of the modal share.
- Nonetheless, active mobility still constitutes an essential means of transportation that is commonly used by more than 50% of inhabitants in medium-sized cities and approximately 36% of citizens in Tunis, Sousse and Sfax.
- Paratransit has experienced tremendous gains since 2011 with the number of permits granted increasing by 89% for private taxis and 260% for collective taxis between 2001 and 2015.
- The vehicle fleet has steadily increased by more than 55% between 2006 and 2015, comprising now more than 1.5 million cars.
- In 2012 the transport sector emitted 6.5 MtCO₂e, or 21% of total net GHG emissions.
- Congestion in urban areas has become a frequent problem, for example reducing average speeds to 7 km/h during rush hours in the capital city, Tunis and inflicting a cost of up to 2% of the country's GDP.
- Air pollution represents a significant health and economic problem, its cost amounting to between 2% and 10% of GDP.

- While the transport sector accounts for 30% of the country's energy consumption, 94% of this share is concentrated in road transportation, which is in turn disaggregated by the following sub-sectors:
 - » Passenger cars: 49%
 - » Commercial vehicles: 19%
 - » Buses: 15%
 - » Freight transport: 18%

Support from the Partnership

Technical assistance: National Urban Mobility Policy and Investment Programme (NUMP)

Type of NUMP: Policy NUMP

Funded by: FFEM and BMU-ICI

Funding amount: EUR 0.3 M (FFEM), 0.1 M (Cerema) and 0.2 M (BMU-ICI)

Implemented by: GIZ, AFD, Codatu and Cerema

Local counterpart: Ministry of Transport

Finance leverage: EUR 850,000

Main purpose of the NUMP: Contribute to the country's NDC and offer cities a general enabling framework for sustainable urban mobility planning

Supported activities:

With support from MobiliseYourCity's implementing partners AFD, GIZ, Cerema, and Codatu, the Tunisian Ministry of Transport began the process of developing a National Urban Mobility Policy (NUMP) after the country submitted its first NDC in 2015 and joined the Partnership in 2016. The Tunisian NUMP has a strong focus on climate change mitigation and aims to contribute to the country's NDC target of reducing carbon intensity (tCO₂e/GDP) in 2030 by 41% compared to the reference year 2010.

The Tunisian NUMP is comprehensive in nature and includes a broad package of measures to decarbonise transport, increase institutional capacities and improve the governance of the sector:

- Development of technical and institutional frameworks to support Tunisian cities in SUMP development
- Identification of sustainable urban mobility measures, including an action plan for paratransit reform
- Establishment of a national fund for urban mobility
- Establishment of the National Urban Mobility Observatory
- Capacity building programme for local and national agencies
- Support to the ongoing decentralisation process in the country through the creation of local administrative entities

The NUMP, which included an emissions inventory, scenario modelling and definition of mitigation actions, was adopted by the national government in May 2020. The implementation of priority measures is currently underway thanks to the support of an AFD grant between 2020 and 2023.

Status of implementation

Project start: 2017 Q1

Project completion: 2020 Q2

Completed outputs:

- Initial diagnostic and priority setting
- Definition of a vision and strategic orientations
- Definition of action plans, responsibilities and resources
- NUMP elaboration
- Official adoption of the NUMP by the national government
- Tunisian MRV approach
- Tunisian SUMP approach
- Sustainable Mobility Forum to kick-start the implementation of the NUMP
- Mobilization of international experts to support the Ministry of Transport in implementing prioritised actions: Preparation of the framework and identification of administrative resources and competencies for the establishment of local transport authorities, to be mandated by law.

Next expected outputs:

- Support SUMP elaboration in the Great Tunis area
- Development Policy Loan funded jointly by AFD and World Bank using the NUMP as the backbone of a public policy matrix

NUMP key measures and cost estimates

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

Strategic area 1: Governance

- Establishment of appropriate structures at the local level for the planning, development and management of sustainable mobility
- Creation of a Central Technical Support Unit for the implementation of the NUMP
- Creation of a National Commission on Urban Mobility
- Implementation of good governance measures for the mobility sector

Strategic area 2: Capacity building

- Development of capacities of managerial and administrative staff
- Integration of urban mobility into the training programs of civil engineers, urban planners and administrative staff
- Establishment of networks for knowledge exchange and dissemination within the sector
- Development of an implementation plan for awareness raising of civil society, elected officials and media
- Development of capacities of technical and operational, and administrative staff involved in urban mobility

Strategic area 3: Financing sustainable urban mobility

- Improvement of the role of the State through establishment of a National Fund for Urban Mobility
- Definition of competencies of local governments to finance urban mobility
- Revision of fare policy and financing of public transportation
- Reduction and redirection of fuel subsidies to the Urban Mobility Fund
- Improvement of the compensation system for school transport

Strategic area 4: Urban public transport

- Development of public transport rationalisation plans
- Establishment of a public transport regulatory unit within metropolitan mobility authorities
- Restructuring of public transport companies
- Set-up of public service delegation contracts between authorities and public transport companies
- Regulation of paratransit services

Strategic area 5: Improved coordination between transport and land-use planning

- Promotion of integration between master development plans, urban travel plans, and urban development plans
- Establishment of legal provisions for greater coherence between land-use and transport planning
- Promotion of densification of major transit routes through Transport Oriented Development (TOD)

Strategic area 6: Management of individual motorised transport development

- Improvement in road sharing between different modes
- Design of a legal and regulatory framework for carpooling
- Establishment of company travel plans for public organisations
- Mainstreaming and supporting the development of traffic management plans at the local level
- Feasibility study for introducing restrictive parking policies
- Implementation of initiatives to improve freight transport efficiency
- Promotion of intermodality and fare integration between collective transport modes
- Expedite implementation of mass transit projects

Strategic area 7: Promotion of active transportation

- Development of an Active Mobility Action Plan at the national level
- Development of Active Mobility Master Plans in main urban areas
- Implementation of a sidewalk rehabilitation campaign
- Improvement of enforcement capacities to fight the illegal use of public space
- Integration of active mobility into major infrastructure projects

Strategic area 8: Promotion of safer, cleaner and more inclusive urban mobility

- Improvement of road safety in urban areas
- Promotion of e-mobility and alternative fuels
- Introduction of vehicle emission standards
- Promotion of accessibility for the most vulnerable populations

Strategic area 9: Development of digital solutions for urban mobility

- Implementation of an action plan for Smart Mobility Tunisia

Finance leverage

Financing resulting from the NUMP	Source	Amount
Grant fund to support NUMP implementation	AFD	EUR 250,000
Grant fund to develop an urban mobility plan for the Greater Metropolitan Area of Tunis	Republic of Tunisia	EUR 600,000
Grant fund to finance actions of the NUMP (studies, capacity building and tender support for NUMP implementation)	AFD	EUR 400,000

Projected impacts

Indicator	Impact 2030 (SUMP vs BAU)	Baseline - 2015	Projected 2030 BAU	Projected 2030 SUMP scenario
Total annual GHG emissions (Mt CO₂eq)	-3,300,000 tCO ₂ eq	9,200,000 tCO ₂ eq	15,300,000 tCO ₂ eq	12,000,000 tCO ₂ eq
Access				
Increase in the proportion of the population living within 500 meters or less of a public transport stop	Unknown	Unknown	Unknown	80%
Modal share				
Increase in the modal share of trips by public transport, walking and cycling	TOTAL: 31.4%	TOTAL: 53.6%	Unknown	TOTAL: 85%
Road safety				
Decrease in traffic fatalities in the urban area, per 100,000 inhabitants	-50%	-55 fatalities/100,000 hab	Unknown	-22 fatalities/100,000 hab

Highlights

New governance framework for urban mobility and a National Mobility Fund

From 2021 to 2022, an AFD-funded consultant assisted the Ministry of Transport in implementing of a new governance framework for urban mobility, and a National Mobility Fund.

At the national level, the national government is planning the creation of a National Urban Mobility Commission (CNMU) to ensure the political support of the NUMP as well as all the structural reforms proposed, and a Central Technical Support Unit (UTAC) providing technical support to the CNMU and responsible for the operational implementation of most of the actions recommended by the NUMP. It should be first hosted in-house by the Ministry of Transport, to later become an independent public institution.

To ensure that state funding is stable and predictable, the NUMP also plans to create a National Urban Mobility Fund (FNMU) in 2022, to which certain national tax resources from transport such as the road tax would be allocated, as well as certain local taxes. The decentralisation process in Tunisia is still a major challenge, and adjustments to the legal framework to solve the governance problems created by the contradictions between the Local Authorities Code and Law 2004-33 of April 19, 2004, on the organisation of land transport still need to be made. An additional challenge is to find the right legal status for the new entities created at the national level in a context of political instability and very limited budgetary space.

At the local scale, depending on the size of the urban areas, Metropolitan Urban Mobility Authorities (AMMU) will be created, as well as Urban Mobility Departments (DMU) within the municipalities, to ensure the development of local mobility strategies and the management of public transport networks. Additionally, there has been advanced discussion with the AUGT (Urban Planning Agency) for the preparation of a SUMP for the metropolitan area of Tunis.

The European Union supports the development of capacities for the transition to low-carbon mobility and the achievement of the Tunisian NDC

Tunisia has committed to reducing its GHG-emissions by 45% by 2030 compared to 2010, and transport must contribute to 37% of this reduction target. To support the implementation of the new Regional Transport Action Plan, the **EU launched the EuroMed Transport Support Project (ETSP)** for a duration of 7 years (January 2017 to December 2023), including an extension due to the context of the pandemic.

This support includes a specific technical assistance project for the secondary city of Sousse. This technical assistance aims to develop the capacity of local authorities to support the transition to low-carbon mobility. Activities include the use of the MobiliseYourCity greenhouse gas emissions calculator to analyse the potential impact of different mobility planning approaches on emissions trajectories. This technical assistance is directly supported by the MobiliseYourCity Secretariat.

Kumasi, Ghana

Partner city

Status of the project: Ongoing preparation of the Sustainable Urban Mobility Plan



Basic Information

Urban area: 2,603 km²

Population: 3,490,000 | Growth rate: + 4.43%

Region capital city

GDP per capita: USD 4,700 (National)

Motorised Modal Share (Road Space Usage):

Formal public transport (Bus): 15%

Informal public transport (Trotro): 53%

Private cars: 14%

Taxis: 12%

Freight vehicles: 1%

Other (LDV): 4%

National GHG emissions per capita: 1.5 (tCO₂eq)

Exposure to climate change: MEDIUM

Context

Since the 2010s, more than half of the population in Ghana (precisely 57%) lives in urban areas. Despite their rapid expansion in size and population, most cities are facing a lack of infrastructure including transport infrastructure. In the last few years, institutions have been unable to cope with the rapid urban transition and Ghana has started to see the side effects of rapid urbanisation, including congestion, unregulated urban expansion, and limited access to services and affordable quality housing.

Kumasi is the second largest city in Ghana. The greater Kumasi Metropolitan Area (gKMA) is the result of multiple extensions of the city's perimeter, including inner Kumasi (KMA) and twelve additional municipalities and districts. It covers a total land area of 2,603km² with a total population of 3,490,000. Kumasi is set to more than double its population. The population density is expected to substantially increase from 159 people per hectare (in 2010) to 279 per hectare in 2033.

Transport system

Rapid urbanisation in Ghana has implications for urban mobility. Severe traffic congestion and road safety issues are the consequence of over-reliance on low-capacity passenger vehicles, inadequate traffic management, heavy dependence on informal public transport services, inadequate facilities for walking and cycling, occupation of roads by hawkers, and so on.

The predominant mode of transport in Kumasi are *trotros*, minibuses carrying between 14 and 23 passengers, and shared taxis which take four passengers. These vehicles do not provide scheduled services and they operate with the 'fill and go' principle, preventing passengers from planning their trips effectively.

The limited capacity of these vehicles is compensated for by their large number. Distribution of vehicles on routes depends on the preferences of the operators, usually linked with the conditions of the roads, leading to an uneven distribution of transport services.

A study carried out in 2011 found that 68% of users travel by small-scale transport buses known as *trotro*/buses and 12% by taxis. *Trotros* occupy less than 30% of road space usage, while private vehicles carrying only 14% of passengers account for 33%. The congestion level also affects the route choice for drivers.

The city has received 60 buses from the Ministry of Transport for the introduction of a mass transit service (pilot BRT), but only 20/25 are operated as the rest of the fleet waits for full study and implementation. The reason for the difficulty in operating these high-capacity buses is also due to competition from *trotros*.

Institutional context

The different Metropolitan, Municipal, or District Assemblies (MMDAs), which are part of gKMA, are empowered by law with legislative responsibilities to make policies, including the enabling legislative instruments, to provide leadership for local transport policy and planning, pass common bye-laws on passenger transport and facilitate a fair and efficient regulatory environment, by providing priority for operators using traffic management measures.

There is an existing Greater Kumasi Urban Development Master Plan, sponsored by JICA and coordinated by the Spatial Planning Department of KMA in collaboration with the six adjoining Assemblies that formed the gKMA. Unfortunately, there has been neither formal coordination among them nor any higher-level authority to regulate inter-MMDA transport. Although the municipality is responsible for mobility management, regulatory measures for informal transport have been put in place.

At the national level, the Ministry of Roads and Highways and the Ministry of Transport (MoRT) are responsible for road infrastructure, while the Ministry of Railway Development is in charge of the mass-transit railway.

The local governments do not have the possibility to borrow from international finance sources based on the Local Government Act of 2016. Systems and procedures are partially in place to monitor, evaluate and report on urban mobility.

Challenges and main aim of the SUMP

The main urban mobility challenges Kumasi is facing are described below:

- Poor integrated land use planning and control procedures. This is resulting in urban sprawl, traffic congestion on major roads, and poor road safety.
- Poor traffic management and the poor condition of the existing road network, connected with a low traffic capacity, misuse of road space, parking issues, and lack of continuity of pedestrian space.
- Inadequate facilities and general inefficiency of the public transport system, which is unable to meet the demand.
- The institutional framework is not optimised for mobility operators and organisations. This is affecting profitability, the enforcement of policies and preventing fleet renewal.
- An excessive level of air pollution, because of the exhaust gas from a fleet of vehicles that is mainly old and poorly maintained
- Uncontrolled occupation of public space by shops

The main aims of the SUMP are to produce a high-quality document, ready for adoption by the different assemblies of the gKMA that identifies different measures to:

- Regulate public transport (including paratransit) for efficiency, safety, and affordability.

- Improve traffic management and traffic safety measures, particularly reducing traffic congestion in the city center.
- Improve pedestrian/Non-Motorised Transport facilities for walkability and safety.
- Improve the institutional and financial framework in view of greater effectiveness for planning, designing, building, regulating and operating the mobility system in the city.
- Improve the technical capacity of the professionals in the area of transport and GHG reduction.
- Build capacities of local experts and other mobility actors in Kumasi to implement, monitor and revise the Sustainable Urban Mobility Plan, serve as advocates of sustainable urban mobility planning, and transfer gained knowledge and experience with other cities in Ghana or the subregion.

The technical assistance contributes to institutional strengthening by inter-alia and providing training sessions on selected topics.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD

Funding amount: EUR 500,000

Implemented by: AFD and CODATU through the MobiliseYourCity Africa Program

Local counterpart: Kumasi Metropolitan Assembly (KMA)

Supported activities:

- SUMP for Kumasi (including support for inception, diagnosis, vision and strategic objectives, scenario development and action planning, financing requirements and public participation)
- Specific mission: Establishment of an observatory of urban mobility data and GHG emissions

Status of the SUMP process

Project start: 2021 Q1

Expected project completion: 2023 Q4

Completed outputs:

- Signature of a Memorandum of Understanding between a delegate of the Kumasi Metropolitan Assembly (KMA) – representing the different assemblies of the Greater Kumasi Metropolitan Area (GMA) and AFD.
- Support for the tender and selection of consultants
- Inception phase and inception report
- MobiliseDays
- Diagnosis phase

Next expected outputs:

- Vision/scenario phase
- Action plan
- Final SUMP report

Core impact indicators

Indicator	Baseline - 2022
Annual transport related GHG emissions per capita (kg CO ₂ eq)	280 kg CO ₂ eq / capita (country wide average)
Road safety Decrease in traffic fatalities in the urban area, per 100,000 inhabitants	9,61 fatalities / 100,000 hab

Highlights in the past year

The SUMP diagnosis brings new insights in Kumasi's current mobility situation and future trends

After a thorough analysis of Kumasi's urban mobility system, several key takeaways emerged that provide insights into the strengths, weaknesses, opportunities, and threats of the city's transportation network.

- Kumasi is experiencing strong population growth and urban sprawl, which is expected to increase housing demand and urban growth. This growth is likely to lead to more congestion, higher travel times, and saturation in the city centre.
- Car ownership rates are expected to rise in Kumasi, particularly as the gender gap between men and women gradually decreases. This will lead to even more competition for urban space and a decrease in space for public transport stations and terminals.
- The current public transport system in Kumasi is working well and is affordable for passengers, but it faces significant challenges. For example, there are conflicts between different modes of transport, and there is a lack of coordination between transport and urban planning.
- Kumasi's road network is relatively complete and logical, and the roads are of good quality where most urgent maintenance works have been done. However, there is a lack of alternatives to the road network, and the traffic conditions in the city centre around Kejetia market are difficult.
- Kumasi faces both opportunities and threats in terms of its urban mobility. Some opportunities include the existence of DOTs and transport unions, the acceptance of public transport by the population, and interest in Kumasi from investors. Threats include inadequate space and pressure on land use for public transport terminals, the risk to the economic model of trotros and affordability, and fast unplanned growth of the metropolis.
- In terms of context, the World Bank is preparing the Kumasi Urban Mobility and Accessibility Plan (KUMAP) that will implement a BRT system in Kumasi. The World Bank has been involved in the SUMP and participated to the Mobilise Days and in the Action plan presentation in Kumasi.
- The BRT project is captured in the SUMP proposal. The World Bank is considering organising their board in July 2025 FOR THE KUMAP and are conducting an institutional assessment with the local authorities and development partners.

Antananarivo, Madagascar

Partner city

Status of the project: Ongoing technical assistance



Basic Information

Urban area: 85,01 km²

Population: 3,209,933 | Growth rate: +4.84%

Country capital city

GDP per capita: USD 522

National GHG emissions per capita: 0.13 (tCO₂eq)

Context

Antananarivo, commonly known as Tana, is the capital and largest city of Madagascar. Centrally located on the island at 1,280 m above sea level, Tana serves as the primary hub for and concentrates the bulk of the country's industrial and administrative activity.

The city grapples with rapid demographic growth, resulting in challenges such as overcrowding, traffic congestion, inadequate waste management, severe air pollution, security concerns, and shortages of public water and electricity. Despite facing these issues, the local authority's efforts to address them are hindered by limited funds and management challenges associated with the burgeoning population.

Notably, a report by the French Embassy reveals that walking accounts for more than 60% of travel within Antananarivo. Paratransit constitutes the bulk of motorised trips, of which *taxi-bé* minibuses account for nearly 72%. However, the absence of a mass transit system exacerbates the increasing travel demand and road congestion.

The city lacks an updated urban mobility planning document to tackle these challenges, and the existing transport organisations, the urban commune of Antananarivo (CUA) and the suburban transport agency (ATT), face complexity due to overlapping competencies, financial constraints, and outdated regulations. Previous initiatives, such as the 2008 Urban Mobility Improvement Programme (PAMU), failed to yield all the expected outcomes, therefore recent efforts include studies on creating a transport organising authority, an economic analysis of *taxi-bé*, defining specifications for operators, implementing a ticketing system, and operator training. The World Bank is currently conducting a study to develop a master plan for urban transport.

In addition to these plans, the city is engaged in various ambitious projects. These include an electric cable transport initiative, the development of an urban train network, the inauguration of a bypass road in 2021, a pilot Bus Class project to enhance the *taxi-bé* service, and an AFD and EU-supported project initiated in 2011 to enhance pedestrian mobility and traffic on specific urban roads. Furthermore, the Commune Urbaine d'Antananarivo (CUA) has secured 10 million euros in AFD funding for urban mobility improvements, including bike paths, sidewalk repairs, and the establishment of a project management unit (PMUD) with a funding of 500,000 euros.

The technical assistance provided under the Partnership aims to:

- Organise an *urban mobility forum* in Antananarivo, enabling all the involved actors to coordinate around a common roadmap.
- Pilot projects for paratransit improvement and reform in Antananarivo.
- Pilot project line for the new Iarivo bypass, inaugurated in 2021
- Pilot project line for existing bus network based on the bypass line demonstrator

The pilot project aims to modernise and professionalise the collective transport/ paratransit system in Antananarivo. The project seeks to demonstrate that it is possible to significantly improve the service rendered to users, reduce air pollution, greenhouse gas emissions, and road safety, while improving the working conditions for the people in the sector. All of this will be achieved without any public subsidy and while maintaining the principles of collective transport by Taxi-Be on the pilot line.

The project will be implemented in phases, starting with the demonstration of the profitability of the new rolling stock on a new infrastructure operated by a private operator or a consortium, followed by the creation of a group of owners who will agree to acquire the new rolling stock and respect the new operating rules. CODATU will provide technical assistance throughout the process, including advising the steering committee, drafting technical and operating specifications, providing support to operators for the creation of the group, training, evaluation, and generalisation of the project.

Support from the Partnership

Technical assistance: Urban mobility forum and pilot project

Funded by: AFD and National Government of Madagascar

Funding amount: EUR 35,000 for the urban mobility forum and EUR 600,000 for the pilot project

Implemented by: Codatu

Local counterpart: Commune Urbaine d'Antananarivo (CUA), ATT (Agence des Transports Terrestres)

Supported activities:

- Urban mobility forum and development of an urban mobility roadmap
- Roadmap for the governance of urban mobility in Greater Antananarivo
- International technical assistance to the local authority for:
 - » Governance improvements
 - » Ticketing
 - » Securing procedures
 - » Change of rolling stock
 - » Training for transport operators
 - » Digital opportunities and passenger information
 - » Communication
 - » Monitoring and evaluation

Status of implementation

Project start: 2023 Q1

Expected project completion: 2024 Q4

Al-Assima (Rabat-Salé-Temara), Morocco

Partner city

Status of the project: Ongoing Technical assistance



Basic Information

Urban area: 1,910 km²

Population: 2,134,533 (2014) | Growth rate: 1.6%

Country capital city

GDP per capita: USD 3,217

National GHG emissions per capita: 2.62 (tCO₂eq)

Exposure to climate change: HIGH

Context

Rabat is the capital city of Morocco and the second largest region of the country. It is both the administrative and business center of the country. Rabat's agglomeration "Al Assima" includes the cities of Salé and Temara. Salé is the biggest cities among the three cities (982,163 inhabitants in 2014), followed by Rabat (577,827 inhabitants), and Temara (574,543 inhabitants). In 2024, the agglomeration's population is expected to reach 2,549,000 inhabitants, which will result in an increase in mobility.

Al-Assima has an existing mass transit system as well as a transport master plan. The local counterparts, Etablissement de la Coopération Intercommunale Al-Assima (ECIAA) and Rabat Région Mobilité (RRM), have the mandate and responsibility to finance mass public transport infrastructure. They have the authority, with the central government guarantee, to borrow from international finance sources. Currently, there are no systems and procedures in place to monitor, evaluate and report on urban mobility.

Al-Assima plans to develop a Sustainable Urban Mobility Plan (SUMP), by mandating a consultant. The future mobility plan will replace the former mobility plan of Rabat and integrate the whole urban area, including the cities of Salé and Temara.

- Structuring the project (governance, feedback on terms of reference)
- Providing RRM with assistance for developing urban mobility diagnosis and vision-building modules
- Assistance for integrating a participatory approach
- Capacity-building (throughout the process)
- Providing technical expertise for the review of SUMP deliverables
- Delivering an expertise programme for the definition and implementation of a local measuring, reporting and verifying greenhouse gas emissions approach, in link with the national level (Rabat is one of the three pilot cities of this specific programme)

The technical assistance contributes to institutional strengthening through capacity building for implementation and a large stakeholder engagement process.

Support from the Partnership

Technical assistance: Support to pilot a Sustainable Urban Mobility Plan (SUMP)

Funded by: CEREMA

Funding amount: EUR 500,000 (in kind)

Implemented by: CEREMA through MobiliseYourCity Morocco

Local counterpart: Etablissement de la Coopération Intercommunale "Al-Assima" ECIAA Rabat Région Mobilité (RRM)

Supported activities:

Technical assistance to support RRM and the SUMP

- Deliverable reviews
- Support during the SUMP committees

Status of implementation

Project start: 2021 Q4

Expected project completion: 2023 Q4

Completed outputs:

- Elaboration of SUMP ToRs
- Diagnosis report
- SUMP elaboration study

Highlights

SUMP preparation study ongoing after being delayed due to pandemic

After the procurement of the SUMP had been delayed in 2020 due to the COVID-19 pandemic, the study on the elaboration of the SUMP started in September 2021. Completion is scheduled for December 2023. As of October 2023, the SUMP is in the action plan phase.

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Casablanca, Morocco

Partner city

Status of the project: Ongoing preparation of the Sustainable Urban Mobility Plan



Basic Information

Grand Casablanca urban area: 1,117 km²

Population: 4,047,066 | Growth rate: 0.85%

Region capital city

GDP per capita: USD 2,832 (2016)

Modal Share:

Formal public transport: 13%

Informal public transport: 6%

Walking: 60%

Private cars: 13%

Private motorbikes or 2-wheelers: 4%

Taxis: 4%

National GHG emissions per capita: 2.62 (tCO₂e/q)

Exposure to climate change: HIGH

Context

Located in the western part of the country, Casablanca is the largest city in Morocco and operates as the country's economic capital, with the industrial and service sectors contributing a viable share in the country's GDP (World Bank, 2017). Statistics show that the region of Casablanca-Settat alone accounted for 34% of Morocco's economy in 2014, positioning the city as the backbone of the country's economy.

Regardless of serving as an important financial hub, the metropolitan area is facing exponential mobility challenges such as increasing traffic congestion, degrading air quality and a public transport network unable to meet the growing demands and take its fair share of the 7.8 million trips taken daily in the city. In 2005, only 15% of inhabitants used the public transport system to commute. Since then, the Moroccan government and the municipality of Casablanca have committed to significantly increasing access to mass public transport by tackling various underlying issues.

In line with this objective, the municipality formulated a strategic development plan focusing on expanding and improving existing tram and bus networks to integrate different neighbourhoods, and foreseeing the development of approximately 100 km of a new public transport network by 2025, which consists of four tram and two rapid bus lines (Casa Transports SA, 2020). The highlight of this project was the implementation of tramway line 1 (31 km completed in 2012) and line 2 (19 km completed in 2018) to develop efficient and green public transport. Additionally, tramway line 3 (14 km) and line 4 (18km) and the BRT lines 5 and 6 are in the pipeline, expected to operate fully in 2022. Alongside the tram lines, the project features a green corridor and improved pedestrian facilities to ensure the enhanced safety and security of citizens. By strengthening various components of the public transport system, the city is committed to reducing private vehicle ownership and cutting on GHG emissions in line with Morocco's NDCs.

There is an existing transport master plan or similar document. Casa Transports, the local counterpart, has the mandate and responsibility to finance mass public transport infrastructure. It has authority to borrow from international finance sources. Systems and procedures are in place to monitor, evaluate and report on urban mobility.

The technical assistance has contributed to institutional strengthening by supporting Casa Transports in the stakeholder engagement process.

Support from the Partnership

Technical assistance: Project management assistance to the Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD

Funding amount: EUR 90,000 (total cost of the SUMP EUR 1,500,000)

Implemented by: AFD through the MobiliseYourCity Morocco project

Local counterpart: Casa Transports

Finance leverage: EUR 100,500,000

Supported activities:

The objective of the MobiliseYourCity service is to assist Casa Transports in piloting the SUMP study in order to contribute to its technical quality, its implementation, its coherence with the MobiliseYourCity orientations as well as with the different approaches at the national and local level in terms of low-carbon transport planning.

- Mission 1: Evaluation and assessment of the 2004 urban mobility plan
- Mission 2: Data collection, surveys, and counts
- Mission 3: Realisation of the diagnosis
- Mission 4: Definition of scenarios and choice of a scenario
- Mission 5: Formalisation of the SUMP Project
- Mission 6: Design and implementation of a mobility observatory

Status of the SUMP process

Project start date: 2017 Q3

SUMP expected completion date: 2022 Q4

Completed outputs:

- Inventory and diagnosis; goal setting and strategy development
- Scenario elaboration
- Formalisation of the SUMP project

Next expected outputs:

- Full SUMP report

SUMP key measures and cost estimates

The following table gives an overview of the measures and cost estimates identified at a preliminary stage of the SUMP process.

Measure	Cost Estimate
Implementation of a Transport Authority	EUR 1,000,000
Mass Transit line implementation	EUR 4,600,000,000
Bus network and taxi reorganisation and related bus lane	EUR 140,000,000
Circulation plan and parking policy upgrade	EUR 250,000,000
Non-motorised transport policy upgrade	tbd
Upgrade of intermodality facilities	tbd
Freight regulation enhancement	tbd
Transversal: improve road safety and reduce private car disturbance	tbd

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

Urban transport investment measures	CAPEX Estimate
Public transport and NMT	EUR 4,741,000,000
Street shaping urban roads and traffic management	EUR 250,000,000
Other measures	EUR 0
Total	EUR 4,991,000,000

Finance leverage

Financing resulting from the SUMP	Source	Amount
Line 3 and 4 of the tramway networks	AFD Loan	EUR 100,000,000
Technical assistance for Casa Transport	AFD Grant	EUR 500,000

Projected impact

Indicator	Impact 2030 (SUMP vs BAU)	Baseline - 2019	Projected 2030 BAU	Projected 2030 SUMP scenario
Total annual GHG emissions (Mt CO₂eq)	-0.1 Mt CO ₂ eq	1.05 Mt CO ₂ eq	1.50 Mt CO ₂ eq	1.40 Mt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	-17 kg CO ₂ eq / capita	262 kg CO ₂ eq / capita	257 kg CO ₂ eq / capita	240 kg CO ₂ eq / capita

Due to the limited availability of new or aggregated data, this factsheet has only marginally been updated in 2024. As the completed SUMP is not yet available, aggregated figures related to SUMP measures, finance leverage and projected impact may be incomplete.

Khouribga, Morocco

Partner city

Status of the project: Ongoing preparation of the Sustainable Urban Mobility Plan



Basic Information

Urban area: 52 km²

Population: 216,397 | Growth rate: 0.65%

GDP per capita: USD 3,237

National GHG emissions per capita: 2.62 (tCO₂eq)

Exposure to climate change: HIGH

Context

Khouribga is an inland urban area and an industrial hub in central Morocco. Located 120 km from Casablanca and 154 km from Rabat, Khouribga serves as the capital of the Khouribga province in the Béni Mellal-Khénifra region. The city emerged in 1923 by French authorities after the discovery of rich mineral reserves and held a strong position as the biggest exporter of phosphate in the world. Due to various mining sites in the region, the local economy is heavily dependent on the mining sector as it contributes significantly to Morocco's economy, accounting for about 10% of the GDP and 72% of national phosphate exports in 2013.

The city is located at the intersection of two major roads. Khouribga has a small railway station for interurban transport located in the centre of the city. It is used for both passenger and freight transport. The railway station was one of the stops of the journey of the climate train from Casablanca to Safi during COP22 in Morocco, raising awareness for sustainable transport. Apart from a city bus, there is no existing mass transit system in the city.

There is no existing transport master plan or similar document. The Municipality of Khouribga, the local counterpart, does not have the mandate and responsibility to finance mass public transport infrastructure, even though it has the authority to borrow from international finance sources. Systems and procedures are not in place to monitor, evaluate or report on urban mobility.

Support from the Partnership

Technical assistance: Project management assistance for Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD

Funding amount: EUR 100,000

Implemented by: AFD through MobiliseYourCity Morocco

Local counterpart: Commune de Khouribga

Supported activities:

- Support the Khouribga Commune in the preparation, launching and piloting of the SUMP study to contribute to its technical quality, its implementation, its coherence with the MobiliseYourCity orientations as well as with the different approaches at the national and local level in terms of low-carbon transport planning.
- Ensure that the SUMP study is well articulated with opposable planning documents (urban planning, environment).

Status of the SUMP process

Project start: 2019 Q2

Expected project completion: 2023 Q4

Completed outputs:

- Terms of reference for the SUMP
- Procurement process to hire a consultant for the SUMP study finalized
- Launching the SUMP process with local consultant

Next expected outputs:

- SUMP process

SUMP key measures, leveraged financing and projected impact

SUMP deliverables and specific information are not yet available at this stage of the SUMP process.

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Maputo, Mozambique

Partner city

Status of the project: Ongoing preparation of the Sustainable Urban Mobility Plan



Basic Information

Urban area: 2,200 km²

Population: 2,541,000 | Growth rate: +2,5%

National capital city

GDP per capita: USD 1,376

Modal Share:

Formal public transport: 9.2%

Informal public transport: 32.9%

Walking/cycling: 45.9%

Private cars: 10.2%

Private motorbikes or 2-wheelers: 0.2%

Freight vehicles: 0.7%

National GHG emissions per capita: 1.24 (tCO₂eq)

Context

Maputo is the capital of Mozambique and a port city located on the coast of the Indian Ocean in Southern Africa. The Maputo Metropolitan Area is the political and commercial centre, and the most populated area of Mozambique, where approximately 8.8% of the country's population lives. Furthermore, the Metropolitan Area of Maputo includes the densest municipality (Maputo city), the most populated municipality (Matola city), and the largest municipality in the country (Boane city). The districts of Marracuene and Maputo city are the most urbanised areas of the agglomeration. The major economic activities in Maputo are trade, transportation, communication, and manufacturing. The attraction of economic opportunities in the capital has therefore resulted in population growth which is spreading into neighbouring cities and districts. There is continuous growth further away from the central area towards the outskirts of Maputo.

The current demand for public transport is greater than the offer, leading to an increase in the ownership of private vehicles, in traffic congestion and in irregular parking on public roads. The poor state of road infrastructures reduces the quality and durability of public transport and the fluidity of traffic. The city also lacks proper infrastructure for active mobility, a high number of road accidents and lacks security for women in transport. These mobility issues can undermine the economic development of the area, due to the limited access to employment opportunities, poor health, and time-consuming trips. This situation affects low-income populations in particular and leads to a severe impact on air quality and climate.

Transport system

An urban transport master plan for the Great Maputo area has been prepared under JICA funding in 2014. According to this document, the two dominant transport modes were walking (46%) and chapas/minibuses (33%). Chapas are an informal form of public transport, owned by private operators who follow a “fill and go” system, usually waiting at terminal areas until being fully loaded. 4,500 chapas were licensed and operating in the Maputo Metropolitan Area in 2004. However, many additional chapas operate without licenses.

The master plan forecasts significant growth in mobility demand in the forthcoming years. Urban trips are expected to double between 2012 (3.3 million trips/day) and 2035 (expected 6.7 million trips per day). As a result, congestion is expected to increase to unbearable levels if no action is taken to make mobility patterns more efficient in Maputo. The 2014 master plan proposes a prioritised action plan to tackle these mobility challenges that feed into the SUMP. The main proposed actions are the development of a mass rapid transit network combined with road network improvements.

Institutional context

The Metropolitan Transport Agency of Maputo (AMT – Agencia Metropolitana de Transportes de Maputo) was created in 2017 through Decree No. 85/2017, and started operating in August 2018 after the appointment of the Board of Directors (PCA). AMT has the responsibility in the Metropolitan Area of Maputo to plan, implement and manage collective public transport, and to respond to the interests of municipalities, provincial, district governments and private partners in the Maputo metropolitan area, as well as the central government, in matters of public transport.

AMT’s precise role, competence, and financial framework are still to be precisely defined. Refined objectives shall be reflected in a strategic plan for the AMT itself, aiming at the structuration and consolidation of the authority. Under the World Bank funding, a partnership with UITP has started to develop such strategic plan but is currently on hold. The AMT staff is supported by Waza think thank, involved as a partner under the T-SUM project. The AMT currently does not have 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 not in place to monitor, evaluate and report on urban mobility.

In this challenging environment, some of the main issues for public stakeholders to tackle are the lack of a common metropolitan vision, poor coordination between stakeholders, limited technical and institutional capacities, and limited options for tax collection and revenues from the transportation system. The Transport Agency for Maputo Metropolitan Area, together with the municipalities of the Metropolitan Area, wants to develop a Sustainable Urban Mobility Plan (SUMP) to work on the current issues related to urban mobility, and to expand the public transport system to all neighbourhoods. The plan shall also improve access routes, consolidate the overall transport system and help with the relationship with other main stakeholders. In the organisational aspect, the SUMP assignment shall support AMT in the finalisation of the institutional structure - strategic plan that is under formulation.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD

Implemented by: AFD through the MobiliseYourCity AFD Africa Program

Local counterpart: Agência Metropolitana de Transporte de Maputo (AMT)

Supported activities

- SUMP preparation for the Maputo Metropolitan Area, managed by the local transport authority, Agência Metropolitana de Transportes de Maputo (AMT)

Other related activities supported by AFD outside of MobiliseYourCity's scope and financing:

- Technical assistance to the AMT (Financing of one Senior and one Junior position)
- Quick wins actions

Status of the SUMP process

Project start: 2021 Q1

Expected project completion: 2023 Q4

Completed outputs:

- Mobilise Days (2019)
- Elaboration of Terms of Reference
- Selection of the consultant and administrative assignment of the mission (February 2021)
- Inception phase (completed in January 2022)
- Diagnosis phase

Next expected outputs:

- Vision and scenario phase
- Action plan and final SUMP

SUMP key measures, leveraged financing and projected impact

SUMP deliverables or specific information is not available at this stage of the SUMP process.

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Mwanza, Tanzania

Partner city

Status of the project: Ongoing Sustainable Urban Mobility Plan



Basic Information

Urban area: 425 km²

Population: 1,311,000 | Growth rate: 5.3%

Region capital city

GDP per capita: USD 1,089

Modal split:

Walking: 61%

Cycling: 3%

Public transport: 25%

Motorcycle: 7%

Private car: 2%

National GHG emissions per capita: 0.206 (tCO₂eq)

Exposure to climate change: HIGH

Context

Mwanza is one of the fastest growing cities in Tanzania. It has a prime location on the Lake Victoria and it has a great potential to become a leading urban centre in the Lake Region and all of the East African Community. Due to its locational advantage, Mwanza offers great investment opportunities that will increasingly attract investors and visitors from all over the Globe. In view of the rapid population growth and economic advantages that Mwanza poses, the Government of Tanzania decided to prepare a master plan to serve as a tool for guiding the spatial and economic growth of this City. This master plan is anticipated to serve as a tool for coordinating actors and projects, attracting planned economic ventures and providing certainty over investment.

Sustainable transport modes dominate commuting choices in intermediate cities in Tanzania. Analysis of available Master Plans suggests walking is the dominant transport mode, accounting for between 50% and 70% of trips in most cities surveyed. Cycling, an equally sustainable alternative, is used by an additional 3% to 8%. In larger cities such as Mwanza and Arusha, public transportation is the second most-used mode, accounting for 20% and 27% of trips, respectively, while other motorised vehicles account for 8% of trips.

Administratively, the country is organised into Regions which are subdivided into Districts, and Districts are further subdivided into wards. All the administrative divisions are represented by respective Governments, except for wards, which are governed by District Authorities. Regional Government i.e., Regional Secretariat, acts as a coordinator between the National level and Local Governments. Additionally, Regional Government assists in the institutional capacity building of Local Governments. Based on the settlement population and other criteria established by The Urban Planning Act, certain districts are classified into Urban District and Rural District. Urban Districts are ruled by City/ Municipal Councils, whereas as Rural Districts are ruled by District Councils.

Mwanza City is comprised of the Nyamagana and Ilemela Districts. In 2000, the Nyamagana District attained city status and is since then referred to as Mwanza City which is ruled by the City Council. Meanwhile, the Ilemela District is largely rural and is ruled by the Municipal Council. The city has 12 Divisions and 21 wards, of which 12 wards are in the Nyamagana district and nine wards are in the Ilemela district. In addition, the city has a total of 481 subwards (Mitaas), eight villages and 72 sub-villages (vitongoji) as per Mwanza City Master Plan 2008-28. Mwanza City and Ilemela local governments collectively occupy the surface area of 1337 km², out of which only 437 km² is dry land area, including islands, while 900 km² belongs to the Lake.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD under the funding line MobiliseYourCity Africa

Funding amount: EUR 375,000

Implemented by: AFD through the MobiliseYourCity Africa Program

Local counterpart: Mwanza City Council

Status of the SUMP process

Tender publication: 2022 Q4

Project start date: 2023

Completed Outputs: Inception Phase

Expected outputs:

- Component 1: Active inception of the SUMP process
- Component 2: Diagnosis
- Component 3: Definition of a vision and strategic objectives, construction of scenarios, formulation of priority measures proposed by the SUMP
- Component 4: Detailing the selected scenario into an action plan, including monitoring and evaluation indicators, implementation modalities and horizons, budgeting and financing of measures
- Cross-cutting mission: Participatory Process (concertation and consultation)
- Final SUMP report

Insights from practice: lessons learned from the SUMP process

- At this stage only the inception phase is completed. First findings will be available after the diagnosis phase, expected in March 2024.

Highlights in the past year

The Sustainable Urban Mobility Plan has successfully kicked off. During their inception and diagnosis mission, the consultants witnessed a great interest from the stakeholders, including the Local Government Authorities and the public transport operators and users. The main issues identified so far are road safety, pedestrian mobility and lack of urban planning around public transport stations.

Lomé, Togo

Partner city

Status of the project: Ongoing Sustainable Urban Mobility Plan



Basic Information

Urban area: 333 km²

Population: 1,477,660

National capital city

GDP per capita: USD 1,700 (Togo)

National GHG emissions per capita: 1.06 (tCO₂eq)

Context

Lomé is the capital and largest city of Togo and represents nearly 20% of the country's population. Lomé is located on the Gulf of Guinea and serves as an important port city, as well as a commercial and industrial hub. The city is home to various economic activities, including agriculture, manufacturing, and services.

The transport system in Lomé is primarily composed of taxis, both collectives and motorcycles. Minibuses are also present, but are mostly reserved for intercity transport. There is limited evidence on traffic congestion in Lomé so far. Lomé's mobility rate (the average daily number of trips per inhabitant) is 2.3, a rather usual rate for a Sub-Saharan city. The population's low age average (the mean age in Togo is 17 years old) and problems regarding affording services such as moto-taxis, taxis and private cars limit the mobility of Lomé's population. There is no formal transport master plan, but the SUMP elaboration process started in April 2023 under the Covenant of Mayors in Sub-Saharan Africa (CoM SSA – EU funding) and SYSTRA as a consultant. The mission includes a feasibility study for supporting measures for SOTRAL, Lomé's public bus company.

Local institutions, including the Ministry of Transport (*MTRAF - Ministère des Transports Routiers, Aériens et Ferroviaires*) and DAGL (*District Autonome du Grand Lomé*) are responsible for managing the transport system. However, there are no clear mandates or responsibilities for financing mass public transport infrastructure, and most institutions, except MTRAF, lack the authority to borrow from international finance sources. Although some systems and procedures exist to monitor, evaluate, and report on urban mobility, they are only partially in place.

The main current challenge concerning urban mobility in Lomé is transport massification, as motorcycles remain the primary motorised mode. Additionally, there is a significant challenge regarding road safety, particularly for pedestrians, who rely heavily on walking, especially the younger population, and face suboptimal conditions for pedestrian movement. These issues have adverse effects on the environment, public health, and economic development. The primary objective of the Sustainable Urban Mobility Plan (SUMP) is to formulate a comprehensive transport strategy that addresses these challenges, improves mobility for residents, and contributes to sustainable urban development.

The provided technical assistance provided will contribute to institutional strengthening by improving the capacity of local institutions to formulate and implement sustainable urban transport policies and programs. This will involve working with local stakeholders to identify key challenges, devise action plans, and establish mechanisms for monitoring and evaluating progress. By supporting the development of a SUMP, the technical assistance will facilitate the creation of a more efficient, safe, and sustainable urban transport system in Lomé, ultimately benefiting the city's residents and fostering economic growth.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: EU, under the Covenant of Mayors in Sub-Saharan Africa (CoM SSA)

Funding amount: 600,000 EUR

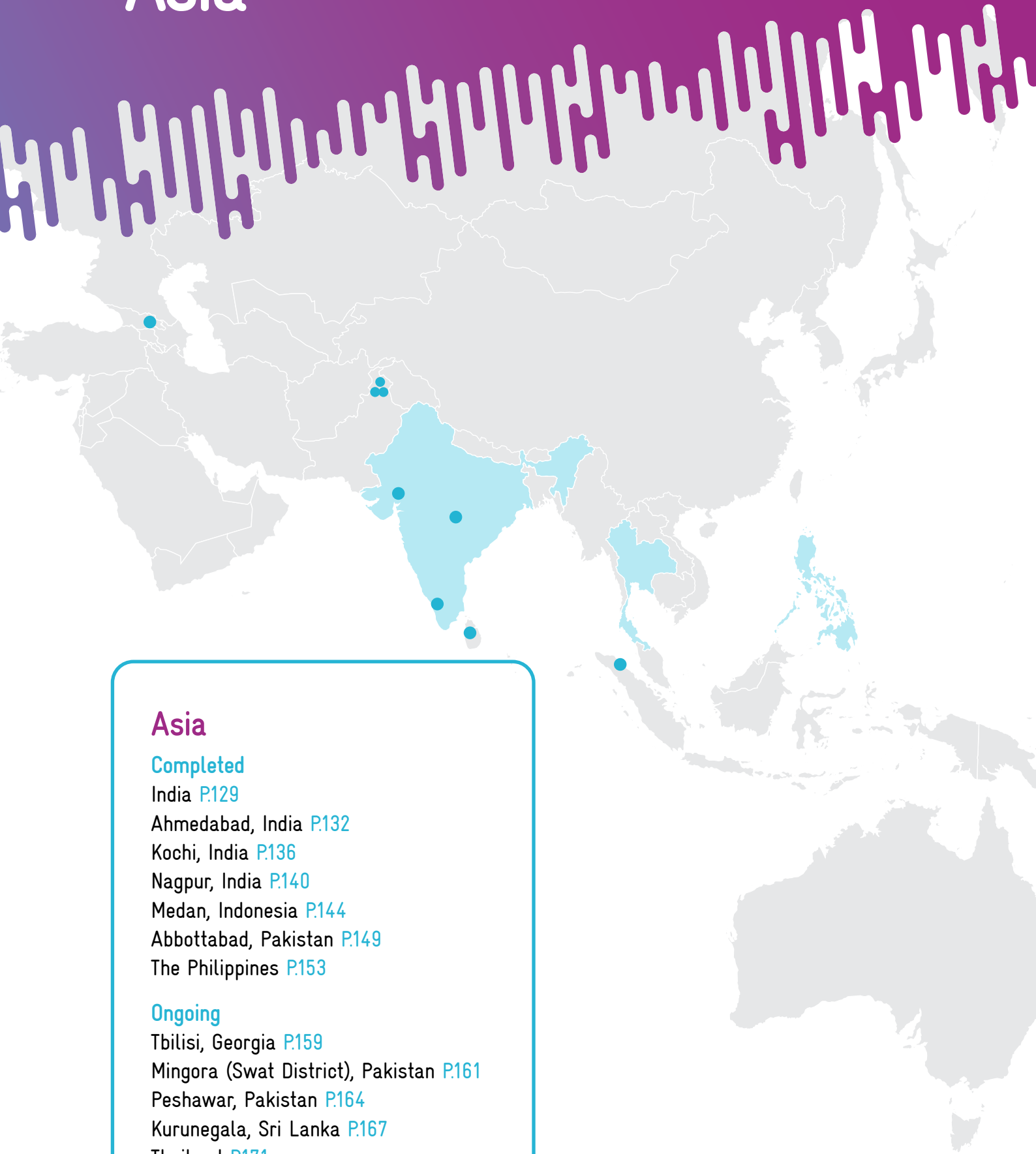
Implemented by: AFD

Status of the SUMP process

Project start date: 2023

SUMP adoption date: Expected mid-2024

Asia



Asia

Completed

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India

Partner country

Status of the project: Completed technical assistance



Basic Information

Population: 1,352,642,280 (2018) | Growth rate: 1.1%

Percentage of urban population: 34% (2018)

Urban population growth rate: 2.3% (2018)

GDP per capita: USD 9,027

Percentage of the population living below the national poverty line: 21.9% (2011)

Nationally Determined Contribution (NDC): Unquantified transport related NDC

National GHG emissions per capita: 1.728 (tCO₂eq)

Context

Home to more than one out of every six inhabitants of the planet, India possesses the size and weight of a continent. Each city has its own transport system, yet their development levels vary. While cities experience steady economic growth, it is juxtaposed with inadequate urban planning, leading to mobility issues. Private modes of transportation are growing rapidly, overshadowing greener public and non-motorised transport options, which suffer from insufficient infrastructure investment. The repercussions include road congestion, a scarcity of parking space, declining air quality in urban areas, and a rising number of traffic accidents.

The MobiliseYourCity programme tailored for India aims to (1) support three pilot cities - Nagpur, Kochi and Ahmedabad - in reducing their greenhouse gas (GHG) emissions associated with urban transport by implementing sustainable urban mobility plans at local level and (2) aid India in improving its sustainable transport policy at the national level. The programme is facilitated with the support of the Ministry of Housing and Urban Affairs and the Government of India at the national level, and with the backing of the pilot cities through their respective municipal corporations.

At the national level, the primary objectives include aligning urban transport policies with GHG emission reduction goals and establishing a Monitoring, Reporting and Verification (MRV) framework to measure and report impacts, thereby facilitating access to climate finance. The envisaged strategy and its operational documentation tools will contribute into achieving the Nationally Determined Contributions (NDCs) outlined by the Government of India under the Paris Agreement, which aims "to reduce the emission intensity of its GDP by 33%-35% by 2030 compared to 2005 level". This strategy, referred to as the "Climate Change Mitigation Strategy for Urban Transport (CCMSUT) in India and the definition and preparation of an MRV system" is being developed with the support of the French Development Agency (AFD) and the Urban Mass Transit Company Ltd. (PIU of the MobiliseYourCity India Programme).

Support from the Partnership

Technical assistance: Elaboration of a climate change mitigation strategy for urban transport

Funded by: EU Asia Investment Facility (AIF)

Funding amount: EUR 490,000

Implemented by: AFD through the MobiliseYourCity India Project

Local counterpart: Ministry of Housing and Urban Affairs (MoHUA)

Main purpose of the technical assistance:

Supporting India at the national level to improve its sustainable transport policy (policy-based strategy), notably by developing a Climate Change Mitigation Strategy (CCMS) that could be submitted to the United Nations Framework Convention on Climate Change (UNFCCC).

The improved sustainable transport policy shall encompass an updated vision for urban transport and the identification of strategic measures for its implementation, including institutional development, financing, capacity building among others.

Supported activities:

- At the national level, MobiliseYourCity is assisting the Government of India (GoI), through the Ministry of Housing and Urban Affairs, in improving their sustainable urban transport policy.
- Connecting urban transport policies to GHG emissions reduction as part of the climate change mitigation agenda.
- At local level, MobiliseYourCity is providing support to three pilot cities - Nagpur, Kochi and Ahmedabad - in their endeavors to reduce GHG emissions in the urban transport sector by developing and implementing SUMPs.

Status of implementation

Project start: 2018 Q3

Expected project completion: 2023 Q4

Completed outputs:

- First Project Steering Committee meeting
- Climate Change Mitigation Strategy
- MRV System Inception
- Nine capacity building sessions conducted at the national level
- Improvement of toolkit to develop Comprehensive Mobility Plans (CMP)
- MRV System Implementation

Highlights in the past year

Improvement of India's toolkit to develop Comprehensive Mobility Plans (CMP)

Comprehensive Mobility Plans serve as India's strategic planning framework for local governments. They bear resemblance characteristics to Sustainable Urban Mobility Plans, aiming to establish a long-term vision and goals for a city's urban mobility system, design a plan integrating urban mobility and land use measures, and determine the necessary steps for implementation.

India's national government has a toolkit in place to guide cities in the development of CMPs. However, the toolkit was outdated. With support from MobiliseYourCity, it is undergoing updates and enhancements along the following lines:

- A self-assessment tool will provide additional support to cities into identifying their current status and preparatory steps required before developing or improving a CMP.
- Climate change will play a more prominent role, such as serving as a principle in prioritising measures and recommendations.
- Comprehensive Mobility Plans will be integrated as statutory documents in Master Plans.

Emphasis on the resilience of the public transport system, and non-motorised alternatives due to the severe impact of the pandemic on profitability

Transportation is a rapidly evolving sector linked with infrastructure development, the adoption of new technologies, and innovative funding mechanisms. However, the Covid-19 pandemic has strongly reduced revenue and introduced new operational and management challenges. Collective transport, in particular, faces major issues related to decreased ridership, volatile demand, additional costs of security and disinfection measures, and staff availability.

Over the past year, knowledge and guidelines have been disseminated through webinars on addressing the financial and operational challenges faced by public transport systems, both for crisis management and anticipation of post-Covid recovery. Electric buses might be part of the response strategy due to their lower operation costs, increased reliability and low emissions of GHGs and air pollutants.

Stakeholders involved in MobiliseYourCity India have made substantial contributions to knowledge development and sharing, organising webinars and publishing guidelines on smart-mobility, non-motorised transport modes, the connection between air quality and urban planning, tactical urbanism, multimodal integration, and various other topics. These contents are available online on the MobiliseYourCity knowledge platform.

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Ahmedabad, India

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 1,866 km²

Population: 7,800,000 | Growth rate: 2.54%

Region capital city

GDP per capita: USD 2,771

Modal Share:

(Source: Metro DPR)

Formal public transport: 11.4%

Informal public transport: 6.1%

Walking: 37.2%

Cycling: 9.1%

Private cars: 3.9%

Private motorbikes or 2-wheelers: 25.9%

Other: 6.3%

National GHG emissions per capita: 2.41 (tCO₂eq)

Exposure to climate change: MEDIUM

Context

Ahmedabad is one of the oldest and most densely populated cities in Gujarat, India. As a hub to industries, including manufacturing, services, textiles, etc., Ahmedabad is experiencing rapid growth. The Greater Ahmedabad (GA) region is expected to grow from 8.1 million in 2011 to about 12.5 million in 2031. Major industrial developments in the city are being planned in areas like Viramgam, Changodar and Bechraji Special Investment Regions (SIRs) in western and southwest parts of the Greater Ahmedabad area. To strengthen the growth in the city, another major employment node, GIFT city, is being planned between Ahmedabad and Gandhinagar as a major financial centre. While some industrial investments are also being envisaged in Kadi, Kalol, and Mehmedabad; Sanand, Dehgam, Kheda and Bavla, which are being developed as residential towns.⁷

All these planned developments will add another 1.75 million trips in the SUMP study area by 2031, a 15% increase from the current levels. Today, about 21% of the population is covered by the public transport system in Ahmedabad, whereby the mode share for public transport is about 11% with about 0.9 million passengers boarding on AMTS (Ahmedabad Municipal Transport Service) buses and 0.15 million on BRTS. Ahmedabad has a compact city structure with poly-centric nodes and mixed land use throughout the city, along major roads. Trip patterns are dispersed, so the average trip lengths (5.5km) are shorter than comparable size cities in India.

⁷ Integrated Mobility Plan for Greater Ahmedabad Region, Vol. 1

Until 2007, urban transport was a state function and had systematically been taken care of in the city of Ahmedabad, especially in the old heritage city. Ahmedabad Municipal Transport Services (AMTS) comprises 201 routes covering 549 km of road. AMTS has a coverage area spread over 88% of the developed AMC area. The AMTS data 2012, it caters to 11% of trips within the city i.e. 0.9 million passengers per day. The first closed system BRT in India was deployed in Ahmedabad in 2009 and is operated by Ahmedabad Janmarg Limited (AJL), a special purpose vehicle (SPV) formulated by Ahmedabad Municipal Corporation, Ahmedabad Urban Development Authority and Government of Gujarat. The BRT system operates on 13 routes with a network length of 82 km and a daily ridership of 130,000 passengers with peak headways of 2.5 to 3 minutes.

Ahmedabad Municipal Corporation, the local counterpart, has the mandate and responsibility to finance bus transport infrastructure, whereby it can possibly borrow from international finance sources too. The performance of bus services is monitored and evaluated periodically by Municipal Corporation.

The local authority is willing to strengthen integrated land-use transport planning, aiming at addressing the lack of land for public spaces, public transport utilities or depots and the absence of walking and cycling infrastructure. Other important challenges are the promotion of fare integration of public transport, the last mile connectivity, the reduction of the travel distance and time and the adoption of on-street design, management, and integration in Local Area Plans.

AFD, through the MobiliseYourCity India Program, supported Ahmedabad in developing a Sustainable Urban Mobility Plan and establishing an Urban Mobility Observatory. Technical assistance will contribute to institutional strengthening by building the capacity of local urban bodies on mobility issues and sustainable urban development.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP) and establishment of Urban Mobility Observatory in Nagpur, Kochi, and Ahmedabad

Funded by: European Union

Funding amount: EUR 900,000

Implemented by: AFD through the MobiliseYourCity India Project and supported by UMTC as Project Implementation Unit

Local counterpart: Ahmedabad Municipal Corporation

Supported activities:

9. Preparation of SUMP & creation of mobility observatory
10. Preparation of Handbook for Physical Planning of Transit Interchanges
11. Capacity Building activities for stakeholders in the city

Status of implementation

Project start: 2018 Q4

Expected project completion: 2023 Q1

Completed outputs:

- MobiliseDays (Feb. 2019)
- Inception phase and inception report delivered (Dec. 2021)
- Publication of the *General guidelines and Concept Plan for Transit Interchanges in Ahmedabad*
- Mobility diagnosis report, SUMP Vision and Goal Setting, Construction of Scenarios, Measures prioritisation, SUMP Action Plan and synthesis of SUMP action Plan

- Capacity building: in-person workshops and online webinars
- Meetings of the local steering committee, SUMP task force, and other related instance
- Draft Mobility Observatory (online platform)
- Participatory process
- Finalised Mobility Observatory and MRV systems for Nagpur, Kochi, and Ahmedabad

Core impact indicators baselines and projected impacts

Indicator	Baseline – 2020	Projected 2030 (BAU)	Projected 2030 (SUMP scenario)	Impact 2030 (SUMP vs BAU)
Total annual GHG emissions (Mt CO₂eq)	1569.4	Data not yet available	Data not yet available	Data not yet available
Annual transport related GHG emissions per capita (kg CO₂eq)	180 kg CO ₂ eq / capita	Data not yet available	Data not yet available	Data not yet available
Modal share Increase of the modal shares of trips by public transport and active modes (% of total trips)	Public Transport: 10.3%	Public Transport: 22.6%	Public Transport: 27.9%	Public Transport: +5,3%
Access to public transport Proportion of the population living 500 meters or less of a public transport stop	21% (IMP 2031)	Data not yet available	Data not yet available	Data not yet available
Air pollution Mean urban air pollution of particulate matter (in µg PM _{2.5}) at road-based monitoring stations	33 µg/m ³ of PM _{2.5} ⁸ As on Date 13-02-2021	Data not yet available	Data not yet available	Data not yet available
Road safety Annual traffic fatalities in the urban area, per 100,000 inhabitants	Five fatalities / 100,000 hab (2019)	Data not yet available	Data not yet available	Data not yet available

Key measures and cost estimates

The following table highlights the most significant measures identified in the technical assistance.

⁸ <https://aqicn.org/station/>

Measure

Strategic axis A: Assign clear responsibilities and funding for urban mobility

Strategic axis B: Plan for urban forms and land use that minimise travel distances

Strategic axis C: Mitigate growth of private vehicles use and encourage modal shift from private vehicles to public transport

Strategic axis D: Develop an integrated public transport system

Strategic axis E: Develop complete streets and facilitate access to the integrated transport system

Strategic axis F: Improve efficiency and reduce externalities of the freight system

Strategic axis G: Promote energy efficiency and GHG emissions mitigation

Total cost of measures: Rs. 450.8 billion (EUR 5.02 billion) for investment and Rs. 1.58 billion (EUR 20 million) for operation until 2041

Kochi, India

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 632 km²

Population: 2,100,000 (2011) | Growth rate: 1%

GDP per capita: USD 2,800 (2017)

GHG emissions per capita: 1.7 tons (India, 2014)

Modal share:

Motorcycle: 26%

Cars: 10%

Public bus: 42%

Cycling: 3%

Walking: 12%

Other motorised: 7%

National GHG emissions per capita: 2.41 (tCO₂eq)

Coastal City

Context

Kochi, one of the most important cities in South India is also known as the commercial capital of Kerala. Its influence extends far beyond the municipal corporation area of 95 km² and its 650,000 inhabitants. The demands for mobility in the city is rapidly increasing, with the latest estimates indicating that the metropolitan region accounts for almost two million passenger trips per day (CMP, 2017).

AFD has supported the city of Kochi in constructing a light metro and restructuring its urban mobility - an innovation-driven project that greatly contributes to transforming Kochi into a Smart City.

Kochi has initiated various successful initiatives for the multimodal integration of the first phase of the metro under development. The city has introduced an integrated smart card system, established an agreement with rickshaw associations, and integrated metro stations with walking and cycling infrastructure.

The city has two railway stations, namely Ernakulum North and Ernakulum South, with an estimated daily passenger volume of 65,000. The stations are connected via a 3.8 km corridor that links major activity centers, such as Ambedkar Stadium, Lissie Hospital, and the KSRTC Bus terminal & depot. However, connectivity remains poor, and the primary modes of transport are walking and autorickshaw (intermediate public transport). Despite ongoing efforts, the urban local authority has struggled to improve connectivity between the two stations due to a lack of a suitable design and clarity on optimal movement patterns.

In the recent years, there has been a renewed interest in improving mobility along the corridor. The city aims to develop it as a green corridor, improving connectivity, aesthetics, cleanliness, and security, thus increasing land value throughout. The

objective is also to facilitate multi-modal integration by improving the accessibility to metro stations from identified activity centers. The project's specific goal is to promote mobility focusing on pedestrians and non-motorised modes to create a more walkable, safe, environmentally friendly, and humane city.

However, several challenges persist: lack of stakeholder buy-in for the Comprehensive Mobility Plan (CMP), failure to consider climate impacts in the CMP, disappointing metro ridership and revenues (probably due to inappropriate fares and competition with city buses), and insufficient data availability on urban mobility.

Support from the Partnership

Technical assistance: Improve the existing city mobility plan and support a pre-feasibility study for priority a pilot project

Funded by: EU Asia Investment Facility (AIF)

Funding amount: Approx. EUR 700,000

Implemented by: AFD through the MobiliseYourCity India Project, supported by WRI for project management and coordination

Local counterpart: City of Kochi

Supported activities:

12. Development of a toolkit for the preparation of sustainable and tailored Comprehensive Mobility Plans (CMPs), including the definition of monitoring indicators
13. Capacity-building for Municipal Corporations and Unified Metropolitan Transport Authorities to
 - » i. Implement the toolkit within their cities
 - » ii. Develop strategies for low carbon transport in collaboration with city stakeholders
 - » iii. Ensure the monitoring of strategy implementation through data collection
 - » iv. Facilitate the transfer of data to the national level;
14. Preparation of CMP improvements with city stakeholders, including conducting a bus route rationalisation study in Kochi
15. Conducting a pre- feasibility study for a priority pilot project: the North-South Green Mobility corridor in Kochi
16. Establishment of a dedicated unit within Urban Local Bodies to collect data and oversee the progress of CMP implementation, functioning as a "mobility observatory."

Status of the SUMP process

Project start: 2018 Q4

Expected project completion: 2023 Q4

Completed outputs:

- Mobilise Days
- Establishment of the urban mobility observatory
- North- South rail corridor mobility improvement plan
- Eight capacity building sessions
- Bus Route rationalisation study

Insight from practice

How Kochi aims to transfer the walking experience of more than 10,000 users along the Green Mobility Corridor

Moving along an active railway - an uncomfortable and dangerous route

The corridor selected for mobility improvement serves as the shortest connection (2.5 km in length) between the Ernakulam North and Ernakulam South railway stations. No continuous road exists along this corridor, and the area is characterised by difficult accessibility, uneven paths, and inadequate lighting at night. Despite these conditions, four mobility surveys conducted in February 2020 as part of the diagnosis phase of the study indicated that almost 15,000 people travel along the corridor every day. This includes:

- 10,000 pedestrians who either walk along or on the tracks due to the difficult walking conditions (60%) or cross the tracks (40%)
- 3,000 autorickshaw passengers navigating complex and congested routes parallel to the corridor, transporting 8,000 people
- 400 cyclists utilising parts of the corridor that are accessible to them

The diagnosis of the current situation along the corridor indicated the necessity to improve the connectivity between the railway stations and with the city centre and the surrounding areas as part of the integration of the area into Kochi's urban space. The current unsafe and uninviting conditions further accentuated the need for improved urban management.

Ensuring safe and comfortable movement along the railway - design and planning principles of the Green Mobility corridor

Based on the analysis of the current conditions and surveys results of current corridor users, the plan for the Green Mobility corridor consists of four main components:

- The development of a green corridor adapted to non-motorised transport (mainly focused on pedestrians and cyclists)
- The development of e-rickshaw services on a separate line to provide a fast and environmentally friendly alternative to the current autorickshaws
- Development of hubs and connections to the city centre at core intersections like the KSRTC Bus Terminal to foster intermodal connections and create public spaces
- Development of social and commercial activities to increase the corridor's appeal

The design principles for the proposed project primarily focused on increasing the amenity and accessibility of the area for non-motorised transport modes by levelling the ground and developing pathways of 3 - 4.5 m to ensure safe passage for cyclists and pedestrians within the existing right of way. As part of the aim to increase the security of users, the installation of fences and hedges to separate the railway tracks, was included in the plan. An illumination concept will further ensure safe and appealing use during the night and can also contribute to the beautification of the corridor. Efforts to integrate existing trees into the new design are planned to further enhance the attractiveness and comfort of walking and cycling on the route.

On the pathways towards implementation

In this preliminary stage of the project, implementation costs were estimated at 250 million INR, approximately 3.31 million USD, excluding land acquisition. The estimated user frequency of the corridor and the associated benefits in terms of emission reduction and increase in social and economic activities include:

- A 50% increase in pedestrians and cyclists (including transfer from autorickshaws, motorcycles and car users)
- Emission reduction potential of 84 tons of CO₂/year based on a transfer of 2,400 vehicle-km/day to green modes on the corridor
- Considerable improvements in safety (prevent people from walking on the railway tracks)
- Attractive public space for the 30,000 people who live, work or study around the corridor

The Mobility Improvement study suggests that the project could be implemented in the short term, and initial steps have already been taken by the municipality in this regard. The project was reviewed and updated by the technical department of the Kochi Municipal Corporation, and a preliminary assessment of land ownership was conducted to elaborate on feasibility. Despite delays due to the Covid-19 pandemic and change of municipal government, the project report has been presented and approved by the Municipal Council to commence the Detailed Project Report process for further implementation

Highlights of the past year

Three cities in India have set up an Urban Mobility Observatory

The completion of the Technical Assistance in Kochi was the main highlight of 2023. Additionally, the finalisation of the Urban Mobility Observatories in three cities in India: Ahmedabad, Nagpur and Kochi, was another major highlight. This Observatory showcases the data collected during the technical assistance period, providing an overview of transport-related information for each city. A set of 20 indicators has been defined and is presented through graphs and maps on an interactive website. The Kochi Urban Mobility Observatory can be accessed via the following link: <http://transitec.oslandia.io/sump/mobility-indicators/kochi>.

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Nagpur, India

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 217 km²

Population: 2,893,000 | Growth rate: 1.5%

Region capital city

GDP per capita: USD 3,000

Modal Share:

Formal public transport: 9.8%1

Informal public transport: 26% (autorickshaw, minibus, school bus, chartered bus etc.)

Walking: 9.5%

Cycling: 6%

Private motorbikes or 2-wheelers: 42.6%

Private cars: 5.7%

National GHG emissions per capita: 2.41 (tCO₂eq)

Exposure to climate change: HIGH

Context

Nagpur is known as the Orange city of India, the third largest city in the state of Maharashtra and second capital of the state. Nagpur lies precisely at the centre of the country with the Zero Mile Stone indicating the geographical centre of India. It is a major commercial and political centre of the Vidarbha region of Maharashtra. With nearly 3 million people, Nagpur accounts for 6.5% of the total urban population of the state. The total population including the surrounding towns of Kamptee, Kalmeshwar, and Hingna was 3.6 million in 2021.

Nagpur has been the main centre of commerce in the state and is an important trading location. The city is also home to various food manufacturing units. The city is undertaking the Multi-Model International Passenger and Cargo Hub Airport at Nagpur' (MIHAN) project, which is the biggest economic development project currently underway in India in terms of investments.

Nagpur is one amongst the Indian cities having a Metro Rail System. The majority of commuters currently commute by bus as the metro project is still ongoing. Phase I of Nagpur metro was sanctioned in 2015 and its construction began in December 2020. Nagpur metro started commercial operations at 16 of its stations, and received approval for Phase 2. The Nagpur metro has undertaken initiatives to integrate the metro system with other modes such as station and area design for physical integration and a digital app and card for fare integration.

Apart from the metro, the city bus service is a crucial mode of transport run by Nagpur Municipal Corporation (NMC). The bus service provides connectivity within the city and with suburban areas such as Butibori, Katol, Kalamna etc. NMC recently procured electric buses to run under the "Tejaswini" scheme, a bus service exclusively reserved for women. The Smart City Corporation of Nagpur (Nagpur Smart and Sustainable City Development Corporation Ltd) is also working to improve transport conditions in the city with various proposals such as PBS, Smart Parking, MLCPs etc. and is working with AFD on the preparation of a transition plan to electric buses.

A proposal was also sent to Maharashtra Government for establishing a Unified Metropolitan Transport Authority (UMTA) in Nagpur. The proposal is under consideration.

As other municipal corporations in India, Nagpur Municipal Corporation, has the mandate and responsibility to finance bus transport infrastructure, whereby it can borrow from international finance sources too. The performance of bus services is monitored and evaluated periodically by municipal corporations.

While the ongoing development of a new phase of the metro will provide a new leap in public transport to counterbalance the negative impact of the increase in private vehicle traffic and provide more sustainable mobility solutions for the future, the city still faces significant challenges, such as the financial sustainability of the public transport system and its very low walkability due to the lack of pedestrian infrastructure. Beyond investment and technology, a transformation of mindset and system is required to move beyond the current reliance on individual mobility, for which increased public awareness of the benefits of a more sustainable mobility system will be critical.

Considering that the last comprehensive mobility plan (CMP) was prepared in 2013 and since CMPs are revised every 10 years, a new version may be taken up in the upcoming years. Further mobility needs, patterns and challenges have evolved with the introduction of the metro in the city and warrant an updated planning framework. In addition, the old CMP did not focus on e-mobility aspects which have gained traction in last few years.

AFD is supporting the Nagpur Municipal Corporation in improving existing CMP, developing of an e-bus transition plan and creating of a mobility observatory.

Support from the Partnership

Technical assistance: Mobility plan update, mobility observatory and complementary study

Funded by: European Union through the EU Asia Investment facility

Funding amount: EUR 350,000

Implemented by: AFD through the MobiliseYourCity India Programme

Local counterpart: Nagpur Municipal Corporation via Nagpur Smart and Sustainable City Development Corporation Ltd.

Supported activities:

17. Update of the existing Comprehensive Mobility Plan (CMP)
18. Development of Transition Plan of Municipal buses to Electric Buses
19. Creation of a mobility observatory

Status of implementation

Project start: October 2018

Project completion: December 2023 Q3

Completed outputs:

- MoU signed - August 2018
- Local Steering Committee meetings were held during November 2019, and December 2019, December 2020 and Technical task force committee settled in March 2019
- Eight training and capacity building workshops - July 2019, December 2019 and February 2020
- Online webinars were conducted during the period of June 2020 – Jan 2021
- Elaboration of a Transition Plan for the Municipal Bus Network In Nagpur – Final report "[Pre-feasibility study for electric buses deployment](#)"
- Mobility Observatory

Next expected outputs:

- CMP improvement
- Government approval of the e-buses deployment plan

Core impact indicators baselines

Indicator	Baseline - N/A
Total annual transport related GHG emissions (Mt CO ₂ eq)	507,300 Mt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO ₂ eq)	197 kg CO ₂ eq / capita
Air pollution Mean urban air pollution of particulate matter (in µg PM2.5) at road-based monitoring stations	49.2 µg/m ³ of PM2.5
Road safety Annual traffic fatalities in the urban area, per 100,000 inhabitants	10 fatalities / 100,000 hab
Affordability of public transport Percentage of disposable household income spent on public transport for the second quintile household income group	12%

Highlights in the last years

With the support from AFD, the Nagpur Municipality has developed a transition plan that aims to progressively replace existing internal combustion buses with e-buses

The transition plan to electric buses builds on Nagpur's Comprehensive Mobility plan, which envisaged a progressive increase of the bus fleet size by almost 90% in 2018 and up to 4.5 times its current size by 2041, for a total of 2,418 buses.

The transition plan not only addresses the electrification requirements of a significant share of the bus fleet but also includes recommendations on route rationalisation for better integration with the recently introduced metro and adaptations to the contractual framework to guarantee the operational and financial viability of the new system.

The pre-feasibility study focused on the electrification impacts and operational requirements of the bus fleet that shall be replaced by 2022, as foreseen in the existing contracts. In total, 237 standard diesel buses shall be replaced with 202 newer vehicles. For this purpose, three scenarios were assessed:

- **Reference scenario:** Replacement with new standard diesel buses
- **Scenario 1:** Replacement with new electric buses of 350 kWh battery capacity
- **Scenario 2:** Replacement with new electric buses of 400 kWh battery capacity

The pre-feasibility study showed that all modernisation scenarios required higher OPEX and CAPEX. The e-bus scenarios require significantly higher resources than the reference scenario does. This difference is caused by a substantially higher CAPEX of e-buses relative to diesel buses compared to a lower OPEX for the former.

To close this funding and financing gap, both the study and the transition plan recommend three potential solutions:

1. **Increased cost efficiency through improved contractual frameworks:** Such adaptations could include extending the contract duration from 5 to 10 years, providing additional incentives to increase operational efficiency, and renegotiating existing contracts or launching new competitive tenders for the new electric buses.
2. **Investment subsidies:** Different sources could be leveraged by the Nagpur Municipality to cover the increasing costs, such as advertisement revenue, land-value taxes, as well as international support in the form of soft loans and grants for capital expenditures from diverse sources, such as the Green Climate Fund or the Clean Technology Fund. The study however did not include any of these sources in its financial analysis, hence their potential remains unclear.
3. **Increased fare box revenue:** Currently, Nagpur's tariff levels are relatively low compared to agglomerations sharing similar characteristics, as the city has given priority to service affordability by relying on public subsidies to close the ensuing gap. According to the study, the current conditions provide some flexibility to potential fare increases, assuming that these are progressive and their impact on ridership levels remains limited.

The necessary investments to electrify the bus fleet can be justified by non-quantified positive externalities, such as improved health and air quality and reduced GHG emissions. Even with high emission factors stemming from the electricity grid, battery electric buses have the potential to reduce CO₂ emissions by 30% compared to diesel buses and could save approximately 100 ktCO₂e over a period of 15 years.

Nagpur's transition plan and the pre-feasibility study can be accessed in the MobiliseYourCity Knowledge Platform using this [link](#).

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Medan, Indonesia

Partner city

Status of the project: Completed Sustainable Urban Mobility Plan



Basic Information

Urban area: 3,151 km²

Population: 4,795,186 | Growth rate: +1.1%

Regional capital city

GDP per capita: USD 12,400

Modal Share:

Public transport: 6% of which

Minibus: 94%

Bus: 5%

Train: 1%

On-demand transport services: 7% of which

Tuk-tuk: 40%

Ojek: 50%

Taxi: 10%

Private transport: 72% of which

Car: 23%

Motorcycle: 77%

Non-motorised transport: 15% of which

Walking: 94%

Cycling: 6%

National GHG emissions per capita: 3.45 (tCO₂eq)

Context

Located in the northern part of Sumatra Island, Medan is the capital and largest city of the North Sumatra Province and the fourth largest city in Indonesia. Its population is 2.3 million inhabitants, while its metropolitan area has 4.8 million inhabitants, and is expected to continue to grow. Medan Metropolitan Area (Mebidangro) is composed of four Kota (cities) and two Kabupaten (regencies): Kota Medan, Kota Binjai, Kabupaten Deli Serdang and (part of) Kabupaten Karo.

Belawan, the third biggest container port in Indonesia, and Kualanamu International Airport, the fifth busiest airport of the country, are both located in Medan. The city's economic growth rate of 6.4% is higher than the national average, making the Medan metropolitan area an important industrial and economic hub in Indonesia.

The Medan Metropolitan Area is facing a rapid increase in the use of private motorised vehicles use, predominantly motorcycles. In the meantime, road lengths are increasing by only 0.8% a year, leading to the increased number of vehicles causing congestion issues.

Public transport operates on fixed routes in Medan and consists of public passenger cars and small, medium, and large buses. The area also benefits from a rail network as an alternative transport mode. It is to be noted that there is no Public Transport Authority in the City of Medan and the Metropolitan Area.

The completion of the Sustainable Urban Mobility Plan (SUMP) for Mebidangro in 2022 marked the conclusion of a two-year participatory process of studies and the development of a vision, future scenarios, and an action plan. While focusing mainly on developing public transport, the SUMP, supported by AFD, also provided significant methodological contributions by testing digital solutions for a mobility diagnosis to overcome obstacles such as the COVID-19 pandemic.

A rapidly growing and multi-centric metropolitan area dominated by private motorised mobility

With more than 4.8 million inhabitants, Mebidangro is the largest metropolitan area outside Java, and its urban population keeps growing. The increased dependency on private motorised vehicles leads to congestion along main road axes, time loss, and increased environmental and social externalities, including GHG emissions, traffic fatalities, and air pollution.

The mobility diagnosis evidenced a deficient use of public transport even though a massive bus fleet is available. Only 6% of the trips are collective and are almost exclusively made by Angkot, the local informal minibuses. Private vehicles, particularly motorcycles, prevail in the city, making up 72% of the trips. In total, individual motorised mobility reaches nearly 80%, and only 15% of trips are made by walking or cycling.

The lack of effective urban planning, leads to unmanaged urban sprawl, governance issues regarding procurement, while articulation issues between local and provincial levels constitute other vital issues.

While the COVID-19 pandemic limited data acquisition, the mobility planning process benefited from innovative tools, a mobile application for safe surveys, an online communication platform and live translation for stakeholder engagement activities and workshops.

A vision made possible through an ambitious action plan

As an essential part of the SUMP elaboration, the participative process developed a common vision to provide a sustainable, integrated, and equitable mobility system. The SUMP action plan aims to achieve this vision through six measure packages:

4. The most significant measure package aims at developing **a better public transport system**. It includes six BRT corridors, new rapid rail lines, improvements to the existing bus and rail network, optimisation of the minibus service (called Angkot), fleet renewal, and multimodal hubs. This 3.2 billion USD investment package will help shift 15% of trips from individual motorised modes to public transport. Over 550,000 additional people will have access to the public transport network.
5. **Urban planning**, transit-oriented development, and public space optimisation will reduce urban sprawl and provide better conditions for walking and cycling.
6. **Road infrastructure investments** will focus on enabling public transport and addressing traffic black spots.
7. **Digitalisation** will improve fare intermodality, passenger information and traffic monitoring.
8. Reforms will ensure sustained, comprehensive **governance of mobility**, including the set-up of a metropolitan transit authority, a reform of the informal minibus system, and the separation of tracks management and train operation between distinct entities.
9. **Environment-specific policies** will incentivise the reduction of fuel consumption and foster the use of cleaner and renewable energy. The outcome will be measured through an air quality monitoring and GHG-emissions MRV system.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD

Funding amount: EUR 510,155

Implemented by: AFD through MobiliseYourCity Asia

Local counterpart: North Sumatra Province (and the representatives of the Medan Metropolitan Area authorities from Kota Medan, Kota Binjai, Kabupaten Deli Serdang and Kabupaten Karo)

Supported activities:

- Supporting a SUMP process for the Medan Metropolitan Area
- Conducting capacity development activities (subject to inception phase approval)
- Developing a citizen participation process and a communication plan
- Establishing an observatory on urban mobility data and GHG emissions

Finance leverage: USD 132 million

Status of the SUMP process

Project start: 2020 Q3

Project completion: 2022 Q2

Expected SUMP approval (by provincial and national authorities): shall be approved at the national level in 2024 Q1

Completed outputs:

- Inception Phase
- Diagnosis
- Construction of scenarios and formulation of priority measures
- Action plan which includes indicators, budget, and financing measures
- Final SUMP document

Next expected outputs:

- SUMP adoption by provincial and national authorities
- Establishment of an observatory on urban mobility data and GHG emissions

SUMP key measures and cost estimates

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

Measure packages	Cost Estimate (CapEx) up to 2040	Cost Estimate (OpEx) up to 2040	
Urban planning and non-motorised transport			
<ul style="list-style-type: none"> • Periodical closure of roads • Mixed-use zones • Comfortable and safe sidewalks • Development of safe bicycle lanes • Laws to restrict urban sprawl • Transit- Oriented Development framework 	USD 64,100,000		
Public transport			
<ul style="list-style-type: none"> • Expansion of BRT network • Expansion of urban rail wider network • Increased rail service levels • Bus lines for schools • Optimization and rejuvenation of minibus routes • Waterbus lines • Promotional campaign for public transport 	USD 3,274,000,000		
Road network and private vehicles			
<ul style="list-style-type: none"> • Road link Medan – Berastagi • Circular roads in Medan • Quality road network across Mebidangro • Standardised road signage • Traffic calming measures and blackspots • Limitation on freight vehicles operating hours • Dedicated Park and Ride at transit hubs • Multimodal hubs 	USD 222,300,000	Operating expenses (OpEx) were assessed for all quantifiable and operational actions, including public transport and digital systems, and exclude governance measures that require further specification through additional studies.	
Governance			
<ul style="list-style-type: none"> • Creation of Metropolitan Transport Authority • Corporate taxes on mobility • Capacity building through technical assistance • Separation of train and track operators • Reorganisation and reform of the minibus industry 	USD 8,100,000		
Environment			
<ul style="list-style-type: none"> • Incentives to reduce fuel consumption • Tax on motorised vehicles using urban roads • Cleaner energy sources for all road vehicles • Renewable energy for rail • Air quality stations • Awareness-raising campaign 	USD 2,900,000		
Digitalisation			
<ul style="list-style-type: none"> • Mobility as a service • Fare integration • Passenger information systems • Traffic monitoring systems 	USD 600,000		
Total	USD 3,572,000,000	USD 1,400,000,000	

Finance leverage

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

Description	Source of financing	Secured	Amount
Loan to build the 1st BRT line	World Bank, AFD	Secured	USD 132,000,000

Projected impacts

Indicator	Impact 2035 (SUMP vs BAU)	Baseline - 2020	Projected 2035 BAU	Projected 2035 SUMP scenario
Total annual GHG emissions (Mt CO₂eq)	-0618 t CO ₂ eq or 15% reduction	2225 t CO ₂ eq	3196 t CO ₂ eq	2578 t CO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	-124 kg CO ₂ eq / capita	549 kg CO ₂ eq / capita	641 kg CO ₂ eq / capita	517 kg CO ₂ eq / capita
Access				
Increase in the proportion of the population living within 750 meters or less of a mass transit stop	+7,3%	3,8%	3,8% ¹	11,1%
Air pollution				
Decrease in mean urban air pollution of particulate matter (in µg PM _{2.5}) at road-based monitoring stations	N/A	N/A	N/A	N/A
Modal share				
Increase in the modal shares of trips by public transport, walking and cycling	Public Transport ³ : 13.7% NMT ⁴ : 0% of total trips TOTAL: 13.7%	Public Transport: 9.6% NMT: 15% of total trips TOTAL: 24.6%	Public Transport: 9.6% NMT: 15% of total trips TOTAL: 24.6%	Public Transport: 23.3% NMT: 15% of total trips TOTAL: 38.3%
Road safety				
A decrease of traffic fatalities within the urban area, per 100,000 inhabitants	-9.0 fatalities/100,000 hab	10.4 fatalities/100,000 hab	13.9 fatalities/100,000 hab	4.9 fatalities/100,000 hab (Target)
Affordability of public transport				
Percentage of disposable household income spent on public transport for the second quintile household income group	-15,5%	13,0%	20,5%	5,0% (Target)

Perspectives for implementation

Following official approval by the provincial authorities through a provincial and national decree expected in Q1 2024, the implementation of the SUMP will commence with the creation of a task force that will be in charge of setting up a Metropolitan Transport Authority and establishing an observatory on urban mobility data and GHG emissions.

Additionally, due to the development of the SUMP, with the financial support of the Agence Française de Développement and the World Bank, Medan city will benefit from the Indonesia Mass Transit Project. Under this project, Medan City will develop its first BRT line with a loan of USD 132 million. The study for the BRT line started in 2023, and it will provide 24 km of a BRT corridor, with 12 direct service routes and 45 stations.

Abbottabad, Pakistan

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 1,967 km²

Population: 981,590 (district scale) | Growth rate: 1.82%

GDP per capita: USD 1,284 (Pakistan, 2019)

Modal split:

Walking: 64%

Formal public transport: 5% (including school and staff buses)

Informal public transport: 16% (minibus)

Private cars: 6%

Private motorbikes or 2-wheelers: 5%

Other: 4%

National GHG emissions per capita: 0.9 (tCO₂eq)

Exposure to climate change: HIGH

Context

The city of Abbottabad is located 61 km northeast of Rawalpindi, in the Hazara Division of Khyber Pakhtunkhwa province, in the northwest of Pakistan. It is a gateway to the picturesque Kagan valley. It is connected by road with Indus plain and the Kashmir region, and by rail with Peshawar. The city is a district market and trade center and stands out for being a communication route with China and northern parts of Pakistan. The population of Tehsil Abbottabad is 981,590, distributed over an area of 1,967 km². The administration of the city is under District Administrator Abbottabad.

Currently, the major issues related to urban mobility in Abbottabad are:

- High influx of vehicles due to tourism
- High number of commercial vehicles passing through the city, affecting capacity and safety
- Lack of infrastructure such as alternative routes/bypasses, underpasses/flyover, parking areas, intersection improvement, facilities for non-motorised transport
- Lack of road safety and traffic management
- Air pollution from vehicles
- Lack of master plan framework for urbanisation and transportation
- Lack of formalised institutional setup for addressing mobility issues

The Local Counterpart, the Khyber Pakhtunkhwa Urban Mobility Authority, 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 matters.

The SUMP elaboration aims to provide a comprehensive sustainable mobility plan at the urban scale and propose a conceptual design for priority projects to identify.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD

Funding amount: EUR 1,200,000 global budget for SUMP 3 cities within the Khyber Pakhtunkhwa province

Implemented by: AFD and ADB through MobiliseYourCity Asia

Local counterpart: Transport Department Government of Khyber Pakhtunkhwa province and the Khyber Pakhtunkhwa Urban Mobility Authority (KPUMA)

Supported activities:

- Support the SUMP process for the city of Abbottabad
- Conceptual design for priority projects to identify

Status of the SUMP process

Project start: Q3 2021

Expected project completion: Q4 2023

Completed outputs:

- Inception report
- Urban mobility diagnosis

Next expected outputs:

- Scenario building
- Action plan

SUMP key measures and cost estimates

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

Urban transport investment measures	CAPEX Estimate (€M)
Road Network [including Road projects; Road design guidelines; Road maintenance plan; Traffic and mobility management; etc.]	EUR 52.5 million
Urban transit [including BRT development; paratransit structuration; transport hubs organisation; paratransit quality of service; etc.]	EUR 313 million
Non-Motorised Transport [including NMT guidelines and projects; pedestrian-centred approach; walking and biking equipment; etc.]	EUR 13 million
Urban logistics [including urban logistics roadmap and projects]	EUR 11 million
Integrated mobility policy [including Transport Authority reinforcement; SUMP evaluation; Mobility data management; etc.]	EUR 7.5 Million
Transit Oriented Development [including TOD projects; roadmap and guidelines]	EUR 5 million
TOTAL	EUR 402 million

Finance leverage

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

Description	Source of financing	Planned/Secured	Amount
For 80% of Bus Rapid Transit project and related activities	DFIs (Development Financing Institutions)	Planned	EUR 250,000,000

Projected impacts

Indicator	BAU 2022	Scenario 1 Restructured Paratransit	Scenario 2 Trunk BRT and Bus Feeders	Scenario 3 Integrated BRT
Total annual GHG emissions (Mt CO ₂ eq)	111,510 tCO ₂ eq	111,510 tCO ₂ eq	72,870 tCO ₂ eq	72,990 tCO ₂ eq
Annual transport related GHG emissions per capita (kg CO ₂ eq)	0,123 tCO ₂ eq/ capita	0,129 tCO ₂ eq/ capita	0,084 tCO ₂ eq/ capita	0,084 tCO ₂ eq/ capita
Trips Daily Average				
Total generated trips	1,466,300	2,719,000	2,717,100	2,717,100
Modal share				
Related to the carbon footprint	Motorcycle: 66% Car: 25% Paratransit: 9%	Motorcycle: 41% Car: 30% Paratransit: 29%	Motorcycle: 30% Car: 52% Paratransit: 6% BRT: 12%	Motorcycle: 30% Car: 50% Paratransit: 6% BRT: 14%

Perspectives for implementation

The implementation of the SUMP of Abbottabad will rely on two distinct bodies. Khyber Pakhtunkhwa Urban Mobility Authority (KPUMA) an institutional body, is responsible for transport and mobility topics over the KP Province. The SUMP taskforce is the second technical body, which is responsible for the SUMP implementation, follow-up, and evaluation, under the authority of the integrated mobility authority. The Mobility Committee under KPUMA will bring the different KP Province Departments together to manage and inform about the transport and mobility cases. It will allow local key stakeholders to have open discussions and to review the investment priorities of each Department in a concerted manner. Additionally, the development of the potential Bus Rapid Transit (BRT) line will require the creation of a dedicated operator. Based on TransPeshawar, which is operating BRT in Peshawar, the new BRT operator will be called TransAbbottabad.

Furthermore, the foreseen organisation of the SUMP task force is expected to gather professionals currently in charge of mobility planning, transport operation, urban planning, or land use in current KP Province Departments as well as new external resources hired for the purpose. The resources shall be dedicated to Abbottabad but will be mobilised within a broader team also intervening in the other cities of KP Province. Capacity strengthening will be a continuous process within the SUMP team. Partnership with the Federal government or peer cities from the wider Asian region could also be encouraged to favour capacity building, as well as exchange within the MobiliseYourCity Community of Practice.

Insights from practice: lessons learned from the SUMP process

The SUMP process enables the involvement of local counterparts from the city of Abbottabad under the orientation of the provincial level. The SUMP development requires interaction between public bodies and in this context, it fostered dialogue between local stakeholders on topics that usually are not covered (such as the development of a BRT system or the paratransit reforms). Local authorities often have to deal with problems and solve them in emergency situations rather than having time to plan mobility with an innovative approach.

Highlights in the past year

One SUMP process for three cities

The development of Abbottabad's SUMP is being conducted with the participation of both the provincial and local authorities, under the leadership of the Khyber Pakhtunkhwa Urban Mobility Authority (KPUMA). This public authority was created with support from the Asian Development Bank (ADB) to plan and regulate transportation within the province. This coordination process has been facilitated by establishing three technical SUMP committees for each city of the KP province, namely Abbottabad, Mingora, and Peshawar.

The last phases of the SUMP elaboration allowed the technical committee of Abbottabad to identify priority operational projects to improve mobility and engage the city on the path of sustainable mobility. Three main specific projects have been identified. First, there is a need to improve some road sections. For roads, projects are focused on the central areas of Abbottabad and the existing urbanised area. Road projects care for missing links, network densification, and road upgrades. Micro road projects will be undertaken in different districts (e.g. Bilal Town). Secondly, the main identified infrastructure is the creation of a Bus Rapid Transit line. This priority project should lead to the elaboration of design studies as well as operational exploitation of the future BRT line. Thirdly, in order to improve the public transport service offer, priority is given to reforming paratransit. The paratransit restructuring is linked to the BRT development and will start while BRT phase 1 is being built on Karakorum highway (the main identified corridor).

The Philippines

Partner country

Status of the project: Completed technical assistance



Basic Information

Population: 109,035,343 (May 2020) | Growth rate: 1.63%¹

Percentage of urban population: 51.2%²

GDP per capita 2023: USD 3,499³

Percentage of the population living below the national poverty lines (2021): 18.1%⁴

Annual average infrastructure expenditures as percentage of GDP (2024 General Appropriations Act): 5.3%⁵

Nationally Determined Contribution (NDC): 75% (2.71% unconditional, 72.29%) of a projected 3,340.3 MtCO₂e (2020-2030)⁶

National GHG emissions per capita: 1.39 (tCO₂eq)

Proportion of transport related GHG emissions: 26.1% of energy-related emissions

Exposure to climate change: HIGH

Context

The Philippines is rapidly urbanising, with 51.2% of its over one hundred million population now living in just 145 cities—33 of which account for more than 70% of the national income. The country has a relatively young population (60% under 30 years old) and, until 2019, an average economic growth rate of over 5% per year.

Active and public transport have historically been underfunded at the national and local levels, despite these modes comprising ~80% of trips in Metro Manila and the surrounding provinces. The COVID-19 recovery budget includes increased spending on these modes, which can translate into long-term improvements. In 2018, it was estimated that congestion was costing the economy over PHP 3.5 billion daily in lost productivity, time, and unnecessary vehicle costs—not counting other effects such as GHG emissions and traffic collisions.

⁹ [https://psa.gov.ph/content/2020-census-population-and-housing-2020-cph-population-counts-declared-official-president#:~:text=The%20Philippine%20Statistics%20Authority%20\(PSA,Philippines%2C%20pursuant%20to%20Proclamation%20No.](https://psa.gov.ph/content/2020-census-population-and-housing-2020-cph-population-counts-declared-official-president#:~:text=The%20Philippine%20Statistics%20Authority%20(PSA,Philippines%2C%20pursuant%20to%20Proclamation%20No.)

¹⁰ <https://psa.gov.ph/content/urban-population-philippines-results-2015-census-population>

¹¹ <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=PH>

¹² <https://neda.gov.ph/statement-on-the-2021-first-semester-official-poverty-statistics/#:~:text=As%20reported%20by%20the%20Philippine,more%20Filipinos%20living%20in%20poverty.>

¹³ <https://www.bworldonline.com/infrastructure-gets-budget-boost/>

¹⁴ <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Philippines%20First/Philippines%20-%20NDC.pdf>

The Philippines faces a range of challenges constraining the ability of the country to transition towards sustainable urban mobility. These challenges include:

- Outdated policies and regulations
- Insufficient collaboration among agencies and lacking capacities of public institutions
- Insufficient capacities within government agencies to plan, implement, and monitor initiatives
- Uncertain funding sources for sustainable urban mobility
- Limited data to monitor and properly plan sustainable urban mobility initiatives
- Limited planning and design guidelines for sustainable urban mobility initiatives

The Philippine Urban Mobility Programme (PUMP) provides mechanisms by which the national government is able to support local governments planning and implementing sustainable urban mobility systems, with a focus on public transport, active transport, urban freight, travel demand management, and transit-oriented development. The Programme considered inputs from national- and local-level stakeholders, and was developed closely with the Department of Transportation. It has likewise been approved by the National Economic and Development Authority—the country's oversight planning agency—who recognised that it was in line with the National Transport Policy released in 2017.

The GIZ-run TRANSfer project provides ongoing technical assistance for the programme's implementation through several activities such as the data collection toolkit development, which aims to present government partners with a manual that identifies sustainable urban mobility indicators and how to gather the necessary data points to monitor them.

In 2022, the approved national budget for road-based transport was PHP 13.3 billion, higher than the PHP 12.9 billion from 2021 (counting both the COVID-19-recovery fund and usual budget).¹⁵ Of this PHP 13.3 billion, PHP 7 billion was allotted for public transport service contracting, PHP 1.8 billion for the Public Utility Vehicle (PUV) Modernisation Program including social support, and PHP 2 billion for active transport.

In 2023, the Department of Transportation allocated PhP 106.0 billion to strengthen and modernize the Country's transport systems for more efficient and convenient public transport systems.⁸ Of this, PhP 1.3 billion was allotted for Service Contracting of the Public Utility Vehicle Program; PhP 200 million for the Social Support Component of the Public Utility Vehicle Modernization Program; and PhP 705 million for the Active Transport Bike Share System and Safe Pathways Program in Metropolitan Areas.

Support from the Partnership

Technical assistance: National Urban Mobility Program (NUMP)

Type of NUMP: Mixed NUMP

Funded by: BMU

Funding amount: EUR 1,500,000

Implemented by: GIZ through the TRANSfer III Project

Local counterpart: Department of Transportation

Finance leverage: EUR 3,403,000,000

Main purpose of the NUMP:

- Offer cities a general enabling framework to formulate, adopt, and implement Sustainable Urban Mobility Plans (SUMPs)
- Identification of measures to support improvements in active transport, travel demand management, transit-oriented development and urban freight

¹⁵ https://docs.google.com/spreadsheets/d/1rhd2weqz14d5qdcVVIUjnMBsDECoV_CaDrl7k2zFa-E/edit#gid=2058725729

Vision:

- Social objective: 'A people-first approach that ensures inclusive, comfortable, safe and dignified access to public services'
- Environmental objective: 'An urban transport system which reduces its negative impacts imposed on the environment and on public health towards healthy cities'
- Economic objective: 'Efficient, affordable and economically sustainable transport, which supports economic vitality for the individual and for the city'

Supported activities:

- Status Quo Report
- Visioning Workshops with national government agencies
- Capacity building workshops (including study tours and online trainings) with government, academia, and the private sector
- Technical studies for the government (e.g., improvements in public transport operations, building on the Jeepney+ NAMA, service contracting for public transport, production of base maps)
- Development of a Data Collection Toolkit/Manual

Status of implementation

Project start: 2017 Q1

Project completion: 2019 Q4

Completed outputs:

- EDSA-Bus Case Study: Operations and Business Model (2018 Q4)
- Public Utility Vehicle Modernisation Program Early Evaluation (2019 Q4)
- The Philippines Urban Mobility Programme Concept Document (2019 Q4)
- Sustainable Urban Mobility Data Collection Toolkit (beta version: 2021 Q4)¹⁶

NUMP key measures and cost estimates

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

Measure	Cost Estimate
Develop National walking and cycling policy	EUR 200,000
Collect data to enable planning	EUR 300,000
Increase dedicated staff in Department of Transportation & Local Government Units	EUR 55,000,000
Increase focus on NMT in planning process	EUR 200,000
Address lack of political support	EUR 100,000
Continued ring-fenced funding for walking and cycling projects in HUCs	EUR 500,000,000
Develop NMT guidance	EUR 200,000
Tackle behaviours that discourage walking and cycling	EUR 5,000,000

¹⁶ <https://bit.ly/PHTransportDataCollection> (<https://mobilitydatatoolkit.notion.site/mobilitydatatoolkit/Sustainable-Urban-Mobility-Data-Collection-Toolkit-for-the-Philippines-f10af05a5c9748eeb642ab157619e7de>)

Measure	Cost Estimate
Train existing and future staff on planning for walking and cycling	EUR 1,000,000
Jeepney modernisation program	EUR 5,800,000,000
Develop freight data collection mechanism	EUR 200,000
Develop and implement vehicle standards	EUR 300,000
Establish national freight operator dialogue forum	EUR 300,000
Support consolidation and professionalisation of the freight sector	EUR 300,000
Establish a motor vehicle inspection system	EUR 340,000,000
Promote and assess modern fleet pioneers	EUR 200,000
Explore scrappage and buyback program	EUR 200,000

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 (Active Transport)	EUR 62,000,000.00
Street shaping urban roads and traffic management	Unknown
Other measures (Urban Freight)	EUR 1,500,000.00
Total	Unknown

Finance leverage

Financing resulting from the NUMP	Source	Amount
Public Utility Vehicle Modernisation Program	Private sector investments	EUR 3,160,000
Loans	Local development banks	EUR 36,000,000
Pilot phase of Jeepney+ NAMA (equity subsidy and social support programme)		EUR 56,000,000
Support for local production of public transport manufacturing	National government	EUR 150,000,000
	Development Bank of the Philippines	EUR 8,140,000

Associated financing supporting measures in the NUMP	Source	Amount
Budget for Metro Manila Greenways	National government	EUR 136,000,000
Budget for National Greenways	National government; ADB technical assistance loan	EUR 175,000,000
Budget for Green Green Green Program	National government	EUR 45,300,000
Budget for bikeways	National government (through Bayanihan 2)	EUR 22,900,000
Budget for public transport service contract	National government (through Bayanihan 2)	EUR 97,200,000
Budget for common station connecting LRT 1, MRT 3, MRT 7 and Subway	National government	EUR 48,800,000

Associated financing supporting measures in the NUMP	Source	Amount
Budget for active transport	National government (2022 General Appropriations Act)	PHP 2 billion / EUR 34,250,000
Budget for public transport service contract	National government (2022 General Appropriations Act)	PHP 7 billion / EUR 120,000,000
Budget for PUV Modernisation	National government (2022 General Appropriations Act)	PHP 1.8 billion / EUR 30,800,000

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)	-2.5 Mt CO ₂ eq	20 Mt CO ₂ eq	29.5 Mt CO ₂ eq	27 Mt CO ₂ eq

Highlights

The Philippines' COVID-19 recovery plan's focus on urban mobility counterbalances the impact of the pandemic on PUMP implementation

As part of its pandemic recovery plan, the government released a four-pillar socio-economic strategy covering the following areas and amounting to at least PHP 2.57 trillion: financial aid, improvements to healthcare, monetary actions, and job creation. This includes the *Bayanihan to Recover as One Act*, a law which allocates emergency funding of PHP 5.58 billion for public transport service contracts and PHP 1.32 billion for bike lanes and sidewalks.

COVID-19 has highlighted the need for better active transport infrastructure and policies, more green spaces, and stronger government financial support for public transport. However, the continued spread of the virus and widespread lockdowns have also affected the implementation of the PUV Modernisation Program and any urban freight initiatives.

NUMP: A driving force behind the Philippines' sustainable urban mobility efforts despite the challenges in communication and coordination

The National Urban Mobility Policy (NUMP) is being implemented in coordination with the Department of Transportation and the National Economic and Development Authority, providing guidance on sustainable urban mobility indicators and active and public transport measures. However, it appears that the implementation of the NUMP is running parallel to the government's other measures, and it is unclear if it is being used as a consistent strategy or the driving force.

For the success of the NUMP policy, effective communication is key. This is demonstrated by the better-known Transport Oriented Development plan supported by JICA, which has been cited more widely by the public than the NUMP supported by MobiliseYourCity. Nonetheless, the NUMP has still played a significant role in raising awareness and building the capacities of authorities and civil society.

Despite the challenges, the government's efforts to improve sustainable urban mobility are crucial, particularly in light of the pandemic's impacts on transportation and the environment. Greater consistency in the implementation of NUMP measures and communication efforts could help to further drive progress in urban mobility policies in the Philippines.

Leveraging the required funds for implementation is still a major challenge

Some measures identified in the NUMP are experiencing challenges in securing continuous funding from national and local government. This is both due to more pressing issues, such as COVID and a prioritisation of heavy infrastructure projects, such as rail and roads over other programs and policies, including the reallocation of road lanes for biking and walking. This is reflected in the budget for road-transportation for 2022, of which only 10% has been allocated to active transportation. However, an increase in the transport budget relative to previous years has been made possible by an active civil society movement.

Political commitment needs to be secured across electoral cycles

Political commitment faces difficulties related to national and local elections, potentially leading to the loss of institutional knowledge in partner agencies (e.g., several key staff and offices in the Department of Transport will depart with the existing administration). This potential barrier is currently being addressed through engagement and communication with several transport agencies (e.g., NEDA).

The Sustainable Urban Mobility Data Collection Toolkit supports the monitoring of NUMP Implementation

In 2022, the Sustainable Urban Mobility Data Collection Toolkit, developed in 2021, continued to play a crucial role in informing the planning of urban transport systems and monitoring the implementation of the National Urban Mobility Policy (NUMP). The toolkit provides recommendations on methodologies, tools, and governance aspects for collecting urban transport data, enabling stakeholders at the national and local levels to make informed decisions. The collection of such data is particularly important for policymakers as they work towards sustainable urban mobility amidst the pandemic's impacts on transportation and the environment.

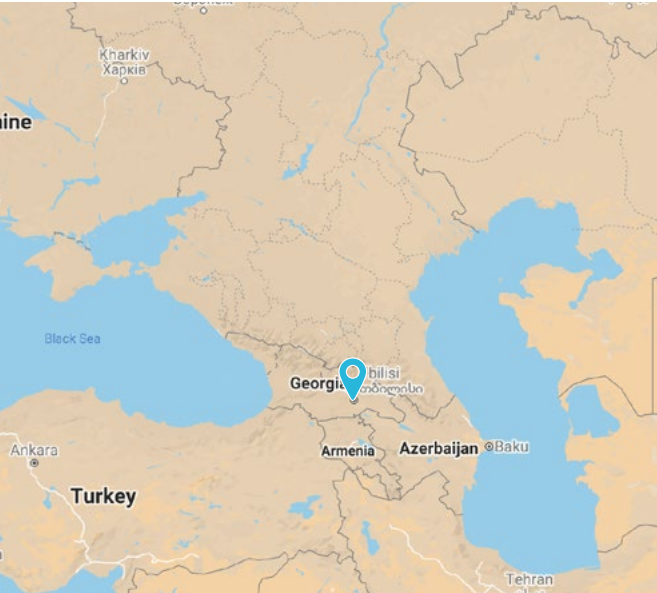
MobiliseYourCity partners continue to support sustainable urban mobility in the Philippines

MobiliseYourCity partners continue to provide support to the Philippines in 2022 through the Urban ACT project. This project builds on the work previously done by Transfer III as part of MobiliseYourCity, focusing on finding solutions to support cities in financing sustainable urban transport measures. Additionally, MobiliseYourCity Asia is hosted in the Philippines, providing a regional centre of knowledge and expertise on sustainable urban mobility.

Tbilisi, Georgia

Partner city

Status of the project: Ongoing technical assistance



Basic Information

Urban area: 726 km²

Population: 1,108,717 | Growth rate: 1.33%

GDP per capita: USD 5,422

Modal Share:

Public transport: 49%

Walking: 28%

Private cars: 20%

Taxis: 2%

National GHG emissions per capita: 4.61 (tCO₂eq)

Context

Tbilisi is the largest city and capital of the Republic of Georgia, located in the South Caucasus, in East Georgia along the bank of River Mtkvari. Due to its strategic location between Europe and Asia and its proximity to the Silk Road, the city serves as an important trade route between neighbouring countries thereby significantly experiencing high traffic levels especially through the Tbilisi Metropolitan Area. The population census indicates that around 1,108,717 inhabitants currently reside in the city which accounts for approximately 30% of Georgia's total population (Tbilisi Sustainable Urban Transport Strategy, 2015)

Tbilisi is on the road towards sustainable urban mobility and is working on major areas to promote it. Previously, the city was heavily dependent on private vehicle ownership resulting in major traffic congestions and environmental challenges such as air and noise pollution. However, from 2010s onwards, the city has invested extensively in a green transport network in line with the Tbilisi Sustainable Urban Transport Strategy. Today, Tbilisi has with a 27.6 km long soviet-era metro network – servicing an average of 450,000 passenger trips a day and accounting for approximately 13% of total trips – operating as the backbone of the public transport system. The metro is complemented by an expanding BRT system and extensive municipal and minibus services with a ridership of more than 350,000 daily passengers, and a recently introduced bicycle road network.

The city, however, still faces major mobility-related challenges. Three of the most pressing challenges relate to a lack of infrastructural and fare integration of the diverse public transport services, a persistent predominance of private motorised transport and a very low modal share of active modes, especially cycling. Tbilisi joined the MobiliseYourCity Partnership in 2019 and is now part of a new project aiming at supporting city administrations in the South Caucasus to design, implement and further develop their urban transport systems in the frame of a participatory, sustainable, and integrated urban development.

Georgia's capital is cooperating with various MobiliseYourCity implementing partners to develop, among others, a Sustainable Urban Mobility Plan (SUMP), improve the existing BRT system in the city centre promote active transport, strengthen the capacities of the local government and develop a cable-car service.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD for MobiliseYourCity Asia

Funding amount: EUR 406,000

Implemented by: AFD in collaboration with ADB and GIZ

Local counterpart: Municipality of Tbilisi

Finance leverage: EUR 400,000

Supported activities:

By the Asian Development Bank (ADB)

- Infrastructure development and financing of the SUMP

By Agence Française de Développement (AFD)

- Technical assistance to the transport department of the Tbilisi City Hall to monitor SUMP elaboration
- Follow-up on initiatives related to active mobility with the Tbilisi City Hall
- Complementary study on (i) improvement of the existing BRT-light in the city centre; (ii) improvement of the standard bus network; (iii) potential development of a cable car system; (iv) development of a bike share scheme and a cycling master plan

Status of the SUMP process

Project start: Q1 2019

Expected project completion: Q1 2024

Completed outputs:

- Sustainable Urban Mobility Plan

Next expected outputs:

- Adoption the Sustainable Urban Mobility Plan by Tbilisi City Hall

SUMP key measures, leveraged financing and projected impact

Final SUMP deliverables will be published after official approval by Tbilissi local authority.

Mingora (Swat District), Pakistan

Partner city

Status of the project: Ongoing technical assistance



Basic Information

Urban area: 5,337 km² (district scale)

Population: 2,309,570 (district scale) | Growth rate: 1,5%

Largest city of Swat District: Khyber Pakhtunkhwa province

Modal Share:

Public transport: 25%

Walking: 58%

Private motorised modes: 17%

National GHG emissions per capita: 1.99 (tCO₂eq)

Context

Mingora is the largest city and commercial centre of the Swat district, while Swat's administrative capital is Saidu Sharif. Mingora is located on the Swat River side, north of Saidu Sharif. This district is part of the Malakand division of the Khyber Pakhtunkhwa province of Pakistan. It is renowned for its natural beauty and well known as a tourist centre. Mingora is connected by the N-95 and N-45 highways to Peshawar and Islamabad through Mardan. Locally, the administration is run by the Deputy Commissioner. Tehsil Municipal Administration is responsible urban transport and the Regional Transport Authority regulates private vehicles.

Mingora suffers from inadequate road capacity (including infrastructure facilities such as flyovers and underpasses) in view of the high traffic growth rate and rising private vehicle ownership. Road safety is a major issue due to a lack of proper traffic control devices (such as signs, signals, markings) and a little enforcement of regulations by traffic wardens. There is currently no master plan for transportation and land use available.

The local Counterpart, the Khyber Pakhtunkhwa Urban Mobility Authority has the mandate and responsibility to finance mass public transport infrastructure - however, it does not have the capacity to borrow from international finance sources. Some systems and procedures are partially in place to monitor, evaluate and report on urban issues.

The Sustainable Urban Mobility Plan (SUMP) elaboration aims at providing a comprehensive sustainable mobility plan at the urban scale and at proposing a conceptual design for priority projects that will be identified in the SUMP.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: French Development Agency (AFD)

Funding amount: EUR 1,200,000 (budget includes SUMP for three cities in the Khyber Pakhtunkhwa province)

Implemented by: AFD and the Asian Development Bank (ADB) through MobiliseYourCity Asia

Local counterpart: Transport Department Government of Khyber Pakhtunkhwa province and the Khyber Pakhtunkhwa Urban Mobility Authority

Supported activities:

- Development of a Sustainable Urban Mobility Plan
- Conceptual design for identified priority projects

Status of the SUMP process

Project start: 2021 Q3

Expected project completion: Q1 2023

Completed outputs:

- Inception report
- Urban Mobility diagnosis
- Vision and scenario building
- Action plan

Next expected outputs

- Final SUMP and Concept Design for priority projects

Projected impacts

Indicator	BAU 2022	Scenario 1 Scattered city and restructured paratransit	Scenario 2 Compact city bus network	Scenario 3 Decongested city bus network
Total annual GHG emissions (Mt CO₂eq)	72,080 tCO ₂ eq	72,080 tCO ₂ eq	41,370 tCO ₂ eq	41,680 tCO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	0.0537 tCO ₂ eq/capita	0.115 tCO ₂ eq/capita	0.066 tCO ₂ eq/ capita	0.067 tCO ₂ eq/ capita
Trips Daily Average				
Total generated trips	915,300	1,394,100	1,393,100	1,394,900
Modal share	Motorcycle: 20%	Motorcycle: 20%	Motorcycle: 25%	Motorcycle: 25%
Related to the carbon footprint	Car: 25%	Car: 35%	Car: 50%	Car: 50%
	Paratransit: 55%	Paratransit: 45%	Paratransit: 17%	Paratransit: 17%
			Bus: 7%	Bus: 7%

Highlights in the past year

SUMP vision and scenario building with the development of a concept design for a priority project

As part of the joint SUMP process for the city of Mingora, three scenarios have been developed with the local counterparts and the KPUMA in 2023. One major feature in terms of sustainable mobility would be the introduction of a Bus Rapid Transit line, which would also trigger the improvements along the potential corridor (road intersections, traffic signals, pedestrian crossings, and pavements). As part of this project, and prior to the launch of the BRT project, a paratransit reform will be engaged.

The diagnosis showed that the primary mode of transport in Mingora is paratransit, accounting for around 25% of total trips, – followed by walking. However, the city lacks integration between paratransit regulation, road planning, design, maintenance, and traffic regulation, which can affect decision-making and administration. Additionally, significant ongoing road projects, such as the Kanju Interchange, aimed at reducing congestion, the planned Swat Motorway extension, and the development of Kanju Township Park, to accommodate urban growth were noted.

The SUMP diagnosis also revealed the lack of consideration for the Swat riverbank. Despite its significant potential, there is insufficient infrastructure and facilities to support leisure and related activities that would attract residents and tourists. In the context of the SUMP, a 2 km section on the southern bank of the Swat River has been chosen as a showcase for the development of a walkway and recreational area as a priority project.

The development of the Swat riverbank will facilitate the city's connection to the river while ensuring continuous urbanism. It will provide a sustainable and inviting recreational area for Mingora residents. In summary, developing such a project would: (i) reinforce urban continuity by integrating the Swat River banks as an integral part of the city; (ii) contribute to the development of non-motorized transport mobility potential along the riverbank as a continuous axis through different neighbourhoods; (iii) add value to the city's tourism by developing a green and blue corridor; (iv) provide road network improvements to access the riverbank area.

Peshawar, Pakistan

Partner city

Status of the project: Ongoing preparation of the Sustainable Urban Mobility Plan



Basic Information

Urban area: 1,217 km²

Population: 4,269,079 | Growth rate: +3.29%

GDP per capita: USD 1,406 (Pakistan)

Modal Share:

Formal public transport (excl. BRT): 16%

BRT: 4%

Private cars and motorbikes: 25%

Walking: 55%

National GHG emissions per capita: 1.99 (tCO₂eq)

Exposure to climate change: HIGH

Context

Peshawar is the capital city of Khyber Pakhtunkhwa province, located 160 km west of Pakistan's capital city Islamabad. It is home to 1,970,042 inhabitants, spread over an area of 157 km², with the metropolitan area housing 4,269,079 inhabitants across 1,217 km². The city is governed by the Peshawar Municipal Corporation.

Recently, Peshawar has introduced a Bus Rapid Transit (BRT) system, named "Zu Peshawar". This system, conceived and built with support from the Asian Development Bank (ADB) and the Agence Française de Développement (AFD), commenced operations in August 2020. Operated by TransPeshawar, the BRT system comprises a main corridor stretching over 28 km from Chamkani in the east, to Hayatabad and Karkhano Market in the west. Additionally, it features a 68 km long network of 8 feeder routes, connecting the main corridor to other parts of the city.

A feasibility study conducted ahead of the BRT system's implementation revealed that cars and motorcycles dominated the modal share, representing 62% and 22%, respectively. Public transport, including rickshaws, accounted for only 15% of the modal share. The introduction of the first BRT line has already begun to alter this modal share, as it is attracting users to this public transport service.

Peshawar faces challenges stemming from an inadequate public service offering, leading residents to heavily rely on private cars, resulting in traffic congestion, road safety concerns, and poor air quality.. The city lacks a sufficient road network, infrastructure for non-motorised transport, and effective traffic management. Moreover, the city has also recognised a need for improved control of land use and urban development.

To address these challenges and prepare a comprehensive plan addressing not only transport issues but also improving the quality of life, the Khyber Pakhtunkhwa Urban Mobility Authority (KPUMA) has opted to develop a Sustainable Urban Mobility Plan (SUMP). This plan will encompass not only mobility-related issues but also considerations regarding local economic development and health concern.

Furthermore, the SUMP will facilitate the development of a Transport Management Plan and the establishment of a Road Safety Authority. It will also include initiatives to improve Non-Motorized Transport options and equip the city with better monitoring capabilities for traffic and GHG emissions. Lastly, the SUMP will build KPUMA's capacity for sustainable mobility planning.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD

Funding amount: EUR 1,200,000 (budget includes SUMP for 3 cities in the Khyber Pakhtunkhwa province)

Implemented by: AFD and ADB through MobiliseYourCity Asia

Local counterpart: Transport Department Government of Khyber Pakhtunkhwa province and the Khyber Pakhtunkhwa Urban Mobility Authority

Supported activities:

- SUMP elaboration for the city of Peshawar
- Conceptual design for identified priority projects (i.e., BRT transit corridor and line extensions, cable car)

Status of the SUMP process

Project start: 2021 Q3

Expected project completion: 2024 Q1

Completed outputs:

- Inception Phase
- Diagnosis report
- Vision and scenarios
- Action plan

Next expected outputs:

- Final SUMP and Concept Design for priority projects

Projected impacts

Indicator	BAU 2022	Scenario 1 Compact City	Scenario 2 Scattered City	Scenario 3 Southern Extension
Total annual GHG emissions (Mt CO₂eq)	1,214,600 tCO ₂ eq	927,640 tCO ₂ eq	1,214,600 tCO ₂ eq	960,830 tCO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	0.22686 tCO ₂ eq/capita	0.152 tCO ₂ eq/capita	0.199 tCO ₂ eq/ capita	0.158 tCO ₂ eq/ capita
Trips Daily Average				
Total generated trips	6,368,800	15,212,600	15,229,800	15,226,200
Modal share				
Related to the carbon footprint	Motorcycle:24% Car: 49% Paratransit: 26% BRT: 2%	Motorcycle: 31% Car: 50% Paratransit: 9% BRT: 9%	Motorcycle: 32% Car: 48% Paratransit: 14% BRT: 7%	Motorcycle: 30% Car: 49% Paratransit: 10% BRT: 11%

Highlights in the past year

Zu Peshawar: The First Gold Standard BRT in Pakistan is Changing the Way People Travel

The authorities responsible for urban mobility in Peshawar have an ambitious vision to transition towards more sustainable urban transportation. With the preparation of the SUMP, supported by MobiliseYourCity partners, significant investments are foreseen, including the development of Zu Peshawar BRT, the first Gold-Standard BRT in the Indian sub-continent.

Peshawar's ambition and efforts in sustainable mobility have gained international recognition. In 2022, the city was nominated for, and received an honorable mention from the Transport Development Policy (ITDP) Sustainable Transport Award. This recognition highlights Peshawar's commitment to prioritising the needs of its citizens and to ensuring that their transportation needs are met in a sustainable and inclusive manner. More recently, Zu Peshawar received the "Best Smart Ticketing" Prize from Transport Ticketing Global and was a finalist for the "Prize for Cities" awarded by the World Resource Institute. As the city progresses with its SUMP and planned investments, it is poised to become a leader in sustainable urban transportation in the region and beyond.

As the SUMP nears completion, Peshawar advances with active mobility projects

Over the last year, as the SUMP process approaches completion, several conceptual designs for key and priority projects have been developed. Among them is the concept design for the regeneration of the Kabul canal, which aims to transform it into a non-motorized transport-friendly area. Another conceptual design focuses on upgrading the existing Saddar BRT Station area to create public spaces conducive to non-motorized transport and seamless intermodal connections.

Find out more in a [case study, co-developed by ITDP, TUMI and TransPeshawar](#).

Kurunegala, Sri Lanka

Partner city

Status of the project: Ongoing Sustainable Urban Mobility Plan



Basic Information

Urban area: 11 km²

Population: 122,172 | Growth rate: 1.4%

Region capital city

GDP per capita: USD 3,853

Modal Share:

Formal public transport: 25.3%

Informal private transport: 16.2%

Walking: 11.8%

Cycling: 1%

Private cars: 22.3%

Private motorbikes or 2-wheelers: 18.7%

Taxis: 1.3%

Other: 3.4%

National GHG emissions per capita: 1.67 (tCO₂eq)

Exposure to climate change: LOW

Context

Kurunegala has 120,000 inhabitants, including 30,000 in the urban core. Despite being a relatively small city for Sri Lanka, it is the capital city of both the North-western Province and the Kurunegala District.

According to the National Physical Plan (NPP) updated by the National Physical Planning Department (NPPD) of the Ministry of Megapolis and Western Development (MMWD) in 2018, the Kurunegala urban area could grow to 1,000,000 inhabitants by 2050. The city is also expected to meet an annual growth rate of 2.5%, the highest in Sri Lanka. Kurunegala is expected to become one of the main urban centres – even a “metro region” – of the East-West Development Corridor that guides the spatial and economic development at the national scale. Consequently, Kurunegala will face many challenges regarding urban development, employment, and transportation. The city must plan its internal transport as well as connections with the other cities of the corridor and with Colombo, the national Capital City.

The city has a railway station (located in the Southeast of the urban core) and is located on a rail axis. However, it does not play a major role in daily commuting as people usually commute by private motorised vehicles (car, motorbike and tuk-tuk) or by public bus. Currently, the Municipality of Kurunegala (the SUMP local counterpart) does not have the mandate or responsibility to finance mass public transport infrastructure nor the authority to borrow from international finance sources. The running costs of the collective transport system are, however, part of the public authority’s budget.

The objective of the project is the elaboration of a SUMP for the city of Kurunegala from the ground up since there is neither an existing public mass transit system nor an existing transport master plan for the city.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: AFD

Funding amount: EUR 400,000

Implemented by: AFD through MobiliseYourCity Asia

Local counterpart: Municipality of Kurunegala

Supported Activities:

- MobiliseDays (35 participants)
- Diagnosis workshop (32 participants)
- Public Transport focus group
- Scenario analysis workshop

Status of the SUMP process

Project start: Q1 2019

Project completion: Q4 2021

Completed outputs:

- Inception report (September 2019)
- Diagnosis report (March 2020)
- Scenario elaboration and comparison report (1st Draft, May 2020/ Revised Draft, December 2020)
- Final SUMP report

SUMP key measures and cost estimates

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

Measure	Cost Estimate	Implementation Period
Introduce a road hierarchy for Kurunegala	60,000	2021-2023
Speed regulation and enforcement	80,000	2021-2023
Parking management	60,000	2021-2023
	120,000	2023-2026
Outer ring road		
Develop green corridors/pedestrian and bicycle lanes	60,000	2021-2023
City center calming	120,000	2021-2023
Introduce a linkedin ATM system for the city including PT priority at signals	100,000	2021-2023
	100,000	2023-2026
Develop a transit corridor	To be costed in feasibility study (FS)	TBD in FS

Measure	Cost Estimate	Implementation Period
Provide mini-bus stands at the city centres	To be costed in FS	TBD in FS
Provide park-and-ride at the city centres	To be costed in FS	TBD in FS
Develop a multimodal hub at the central rail station	To be costed in FS	TBD in FS
City bus network (improvement of current services)	80,000	2021-2023
City bus network (Public Service Obligation)	200,000	2023-2026
Develop ITS for Public Transport (ticketing, digital mapping)	60,000	2021-2023
	120,000	2023-2026
Develop fare integration within the KMC area (for PT, rail)	200,000	2023-2026
School bus parking	60,000	2023-2026
Freight transport	120,000	2023-2026
Bike and e-rickshaw promotion	200,000	2021-2023
Preparation & promulgation of auto rickshaw regulations	120,000	2021-2023
Institutional support and progressive development of coordinated urban transport arrangements	440,000	2021-2023
Improve pedestrian and vehicular access to the Kurunegala Teaching Hospital	F.S to be costed	F.S to be costed
Street design toward the inclusion of pedestrians and non-motorised transport	120,000	2021-2023
Muttetugala overpass	F.S to be costed	F.S to be costed

Projected impacts

Indicator	Impact 2030 (SUMP vs BAU)	Baseline - 2018	Projected 2030 BAU	Projected 2030 SUMP scenario
Total annual GHG emissions (Mt CO₂eq)	-0.0002 Mt CO ₂ eq	0.0827 Mt CO ₂ eq	0.0935 Mt CO ₂ eq	0.0933 Mt CO ₂ eq
Veh.km of formal public transport	Formal public transport:	Formal public transport:	Formal public transport:	Formal public transport:
Increase of the availability of public transport	7,698 Veh.km	51,209 Veh.km	66,748 Veh.km	74,446 Veh.km

Highlights in the past year

Kurunegala's SUMP prioritises measures for their implementation

The implementation of the SUMP has been structured by identifying primary and secondary actions. The former refers to main SUMP projects that will be developed and implemented on their own and on a priority basis. The latter will function to enhance the impact of primary projects and are considered as subordinate to these.

In total, 26 measures were identified in the SUMP, and two development scenarios were proposed that could be implemented separately or collectively, depending on their level of ambition. Considering the project objectives, scenario two was finalised for implementation. It focused on medium-term goals (until the year 2025) regarding public transport development and implementation of governance structures overall shaping the mobility framework for the city of Kurunegala.

The Kurunegala Municipal Council (KMC), the Road Development Authority (RDA), and the Sri Lankan Transport Board (SLTB) oversee the implementation of most of these measures. The funding for the different measures is expected to be assumed with support from International Funding Institutions (IFI), and will be complimented by KMC, RDA, and the Urban Development Authority (UDA). The financial mechanism for these measures is rather complex as it involves multiple stakeholders for the different measures, and to date remains unclear.

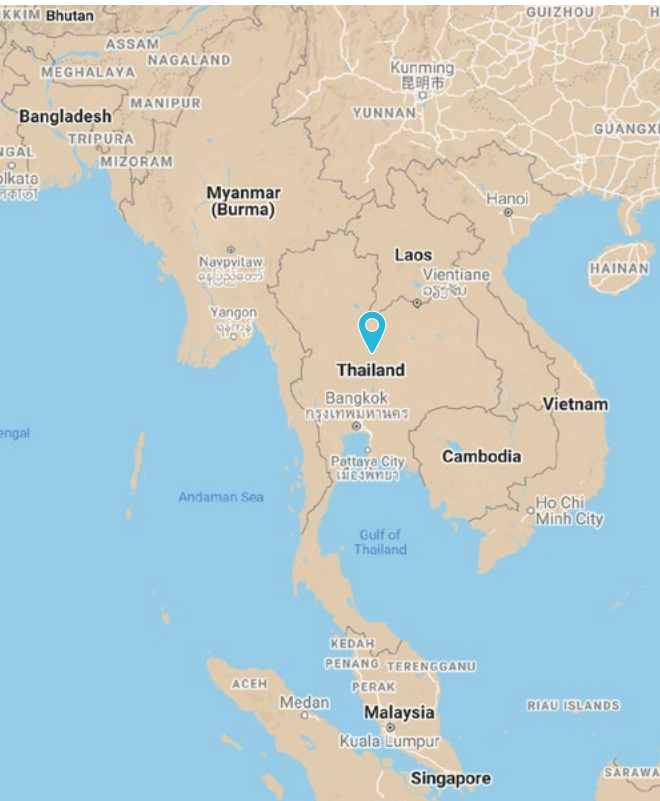
Political unrest puts Kurunegala's mobility plan on hold

Due to the current political climate in Sri Lanka, the approval and implementation of the Sustainable Urban Mobility Plan of Kurunegala has been put on hold. As a result, the city might struggle to address important mobility-related challenges, including traffic congestion, air pollution, and limited access to public transportation. The future of the plan remains uncertain until the political situation stabilises.

Thailand

Partner country

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



Basic Information

Population: 66.17 million (2021) | Growth rate: -0.01%

Percentage of urban population: 34.47%

GDP per capita: USD 6,730.31 (2020)

Percentage of the population living below the national poverty lines: 6.84% (2020)

Nationally Determined Contribution (NDC):

Reducing annual GHG emissions by 20%, or 115.6 MtCO₂, in 2030 compared to BAU. Transport will aim to reduce 41 MtCO₂ or 35.42% of the total NDC target (MoT)

National GHG emissions per capita: 5.37 tCO₂eq (excluding LULUCF), 3.99 tCO₂eq (including LULUCF)

Proportion of transport related GHG emissions: 25.93% (including LULUCF)

Exposure to climate change: HIGH

Context

Thailand is in the heart of Southeast Asia and borders Lao PDR, Myanmar, Cambodia, and Malaysia. Its capital is Bangkok or Krung Thep in Thai. Thailand has the second largest economy in Southeast Asia after Indonesia. The services sector represents 45.75% of jobs in Thailand and contributes to 58.59% of the total GDP, followed by the agriculture sector, which employs 31.62% of the active workforce and contributes to 8% of the GDP. Last is the industry sector, which employs 22.63% of the active workforce and contributes to 33.4% of the GDP (Statista, 2019). Thailand relies heavily on tourism, with nearly 40 million visitors in 2019. This puts Thailand in one of the top 10 most visited countries in 2019. However, many sectors have suffered from the decline in tourism due to the COVID-19 pandemic, which had a major impact on Thailand's economy. Thailand experienced negative GDP growth in 2020 for the first time since 1998.

Private vehicles are the most popular mode of transportation in Thailand. Bangkok has the most diversified transport offer in the country, including BTS (sky train), MRT (subway), metered taxis, motorcycle taxis, and Tuk Tuks. However, the city is still notorious for traffic congestion as people prefer to use private vehicles for convenience and flexibility. To travel across the country or to the suburbs, there is an abundance of minivans and buses that connect most cities and popular destinations. Thailand also has 38 airports, seven of which are international airports. It typically takes around an hour to reach anywhere in Thailand by plane. Thailand also has a rail system spanning 4,925 km (BOI), which serves every part of the country although it is not a high-speed train.

The national government has collaborated with GIZ to develop a National Urban Mobility Programme (NUMP) called the Thai Clean Mobility Program, aiming towards reducing GHG emissions stemming from the transport sector, reducing air pollution and promoting a modal shift away from motorised private vehicles to public transport.

The development of the NUMP is a participatory process which requires several preparatory steps and discussions. These steps include:

- Building on existing sector studies to assess city and national government mechanisms for funding, financing and transport planning and implementation
- Identifying support needs for cities that are to be included in the NUMP (capacity, financial instruments, funding, planning procedures, institutional framework)
- Assessing the main current barriers to low-carbon transport in Thailand
- Providing recommendations for “Vision & Goal setting” to:
 - » Draft a national vision for urban mobility (in line with the NDC action plan);
 - » Define the objectives of the National Urban Mobility Programme; and
 - » Provide strategic direction on using the various levers of action available (governance, financing, funding, capacity building, technological choices, etc.) in Thailand

Support from the Partnership

Technical assistance: National Urban Mobility Programme (NUMP)

Type of NUMP: Programme NUMP

Funded by: BMU

Funding amount: EUR 1,661,634

Implemented by: GIZ through the TRANSfer III Project

Local counterpart: Office of Transport and Traffic Policy and Planning (OTP), Ministry of Transport

Main purpose of the NUMP:

- Provide necessary groundwork that allows policymakers in the Thai government to make an informed decision on the implementation of the NDC action plan
- Develop a funding mechanism that supports the implementation of urban transport measures
- Provide a planning framework for urban transport planning (quality standards, clear guidance on roles and responsibilities, capacity development)

Objectives and supported activities:

The ‘Thai Clean Mobility Program’ consists of three pillars:

- Congestion charging
- Set-up of a Clean Transport Fund
- Public transport electrification

Status of implementation

Project start: 2017 Q1

Expected project completion: 2022 Q4

Completed outputs:

- Study Tour to Berlin and London (February 2020)
- Pre-feasibility study on congestion charging design for Bangkok (November 2020)
- Two congestion charge videos for communication and educational purposes for broad public as well as for the expert and policy maker community (December 2020)
- Study for the development of a Clean Transport fund (December 2020)
- Thailand Clean Mobility vision of the youth (July 2022)
- Study for Thailand's upscaling public and private investment on public transport electrification (October 2022)

NUMP key measures and cost estimates

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

Measure	Cost Estimate
Congestion Charge	EUR 662,279,406
Bus Modernisation	EUR 124,902,630
BTS/MRT Fare Subsidy	EUR 290,633,646

Core impact indicator baselines

Indicator	Baseline - 2016
Total annual GHG emissions (Mt CO₂eq)	68.26 Mt CO ₂ eq from the energy sector
Annual transport related GHG emissions per capita (kg CO₂eq)	1.04 kgCO ₂ eq
Air pollution	
Decrease in mean urban air pollution of particulate matter (in µg PM _{2.5}) at road-based monitoring stations	43 µg/m ³ of PM _{2.5}
Road safety	
Decrease of traffic fatalities in the urban area, per 100,000 inhabitants	11 fatalities / 100,000 habitants (2020)

Insights from practice: lessons learned from the NUMP process

Balance is key, as implementing congestion charging represents a political risk

One key lesson learned from this project is that implementing a congestion charging system can be a complex and politically sensitive process. It involves balancing the objectives and constraints of multiple stakeholders, which can be challenging.

In this project, a steering group and a working group were formed to ensure that all relevant stakeholders were included in the policy design process. However, due to the upcoming national election in Thailand, gaining political buy-in for the actual implementation of the congestion charge in Bangkok has been difficult, as decision-makers may fear that proposing such a system could reduce their popularity with the public.

Supporting sustainable urban mobility in Thailand requires addressing institutional and regulatory barriers

Implementing the Clean Mobility Fund presents an opportunity to address institutional and legal barriers to congestion charging. Although the Ministry of Finance has reservations due to the past performance of similar funds, this presents an opportunity to ensure transparency and good performance in this initiative. The feasibility study has identified key roles and stakeholders involved in implementing the system, and it is recommended that cooperation between these stakeholders is set up to ensure successful implementation. Additionally, legal issues related to vehicle identification, charging, and payment enforcement need to be addressed. Addressing these issues will ensure a strong foundation for the Clean Mobility Fund and pave the way for effective policy recommendations.

Highlights in the past year

A youth vision on clean mobility in Thailand

The Transportation Institute at Chulalongkorn University is working with the GIZ TRANSfer project to help the Office of Transport and Traffic Policy and Planning (OTP) develop a roadmap for implementing congestion charges in Bangkok. As part of this effort, a workshop was held in July to raise awareness of congestion charging among youth and university students, with a focus on the Thailand Clean Mobility Programme (TCMP). The workshop aimed to help students understand the planning and technical factors that have contributed to the success of congestion charge policies in other countries, and to introduce approaches that could be adapted to the Thai context.

During the workshop, students were divided into groups and tasked with developing solutions for implementing congestion charges in specific areas of Bangkok. Some of the suggestions included reducing fees for vulnerable groups who need to use personal cars for medical treatment, optimising public transport with funds generated from the charges, and restricting vehicle types and entry times with variable fees. After presenting their ideas, the students voted on the best solutions, and shared their perspectives with professors and experts.

The goal of the workshop was to encourage young people to get involved in shaping policies that promote clean mobility and sustainable transportation in Bangkok. By fostering a better understanding of congestion charging and its potential benefits, the workshop aimed to contribute to the successful implementation of the TCMP and to help build a more sustainable future for the city.

The Future of Thailand's Sustainable Clean Mobility - TRANSfer Project Closing Event for Thailand

On 26 September 2022 – the Office of Transport and Traffic Policy and Planning (OTP), together with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH celebrated their successful collaboration in Thailand's Sustainable Clean Mobility under the implementation of the Facilitating the development of ambitious transport mitigation actions (TRANSfer) project.

Over the past five years, OTP and the TRANSfer-Thailand project have jointly engaged with many related agencies to explore alternative solutions for solving the most enduring urban transport issues, i.e., emission mitigation, traffic congestion, and public transport service improvement. On this occasion, H.E. Georg Schmidt, the Ambassador of Germany to Thailand, Mr. Daniel Bongardt, TRANSfer Project Director, Dr. Dominika Kalinowska, Director of GIZ Transport Projects Thailand / ASEAN, Ms. Birgit Schwenk, Director-General at the Federal Ministry for Economic Affairs and Climate Action, Germany, and Mr. Punya Chupanit, Director General at the Office of Transport and Traffic Policy and Planning (OTP), reported and took part in the panel discussion under the topic “Move Forward Climate Change Mitigation Actions in the Transport Sector”. Around 100 participants from other related agencies in the public sector, private sector, educational institutions, and international organisations also joined the Closing Seminar.

Although the TRANSfer project has reached its final chapter, the OTP is still determined to work towards GHG emissions reduction and to continue the legacy of the TRANSfer project through, for instance, the study of the possibility and suitability of a congestion charge scheme in Bangkok and the plan for the establishment of the Clean Mobility Fund to improve public transport services.

The findings of the project’s pre-feasibility study showed that if the congestion charge is implemented, it can help to decrease congestion and air pollution and at the same time increase travel speed and the number of commuters on public transport. Moreover, a financial analysis found that the Total Cost of Ownership (TCO) of an electric public bus is 23% lower than that of a fossil fuel public bus, mainly because of the difference between fuel and electricity costs. If 3,200 public buses that use natural gas are replaced with electric vehicles, GHG emissions can be reduced by 184,000 tonnes of carbon dioxide equivalent annually. However, the improvement of the service quality of public buses still needs support from the government to work out long-term solutions.

The support and cooperation that the OTP obtained from the TRANSfer project plays a vital role in helping Thailand reach its GHG emissions reduction target and sustainable transportation.

Eastern Europe

Eastern Europe

Completed

Chernivtsi, Ukraine [P.177](#)

Lviv, Ukraine [P.178](#)

Poltava, Ukraine [P.181](#)

Vinnytsia, Ukraine [P.188](#)

Zhytomyr, Ukraine [P.189](#)



Chernivtsi, Ukraine

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 153 km²

Population: 266,366

Region capital city

GDP per capita: USD 8,668

Context

Chernivtsi is located in the south-west of Ukraine, 40 km from the border with Romania. The relief is characterised by a significant difference in elevation, between 150m and 537m above sea level.

Chernivtsi is viewed as one of Western Ukraine's main cultural centres. The city is also considered one of Ukraine's important educational and architectural sites. It is a major regional rail and road transportation hub, also housing an international airport.

Chernivtsi has a long tradition of public transport, being home of a tramway network during 70 years from 1897 to 1967. Today, Chernivtsi passengers use several types of public transport: trolleybuses, shuttles, minibuses and taxis. The network includes 43 bus lines and nine trolleybus lines. This offer is completed by about 20 radio taxi services providers.

The main means of public transport in the city is the trolleybus. This type of transport appeared in Chernivtsi on 1 February 1939, but was completely rebuilt after its destruction during the Second World War. The existing trolleybus network has been in operation since 1966.

Support from the Partnership

Technical assistance: Technical assistance related to transport modelling

Funded by: The German Federal Ministry for Economic Cooperation and Development (BMZ), Swiss State Secretariat for Economic Affairs (SECO)

Implemented by GIZ through the project **Integrated urban development in Ukraine**

Local counterpart: City Council of Chernivtsi

Supported activities:

- Capacity building related to transport modelling
- Development of transport models for Chernivtsi
- Optimisation of the public transport network through modelling based on existing SUMP

Status of implementation

Project start: 2017 Q4

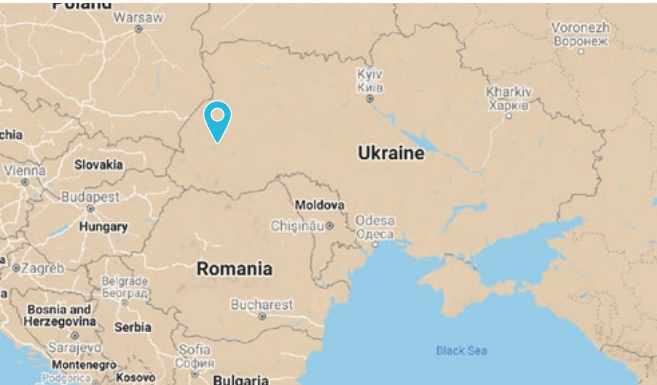
Project completion: 2019 Q4

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Lviv, Ukraine

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 171.71 km²

Population: 734,000 | Growth rate: 0%

Region capital city

GDP per capita: USD 8,668

Context

Car ownership increased a lot in Lviv, which will cause traffic to become denser and denser. In the long term, this situation could become intolerable and jeopardise every effort to capitalise on the attractiveness of the historic city. Parking is also an issue as it takes away valuable space for public and private transport as well as for pedestrians.

Car ownership in the Ukraine increased significantly since the independence in 1991. However, there were still only 220 motor vehicles per 1,000 inhabitants in 2012 (excluding motorcycles and other two wheeled vehicles) compared to 580 in Poland or 588 in Germany. Even though figures for Lviv are far above the Ukrainian average, traffic in the city will become denser in future. Moreover, the UNESCO world heritage area is expected to attract more visitors when tourists will no longer be deterred by the political insecurities.

Public transport and traffic are not only impeded by car in movement, but also by static cars. Indeed, parking in the city centre takes away valuable space for public and private transport as well as for pedestrians. In most of the European cities with a comparable historical center, let alone UNESCO heritage, cars are banned totally from the center. This is in theory true for the inner cordon of world heritage area in Lviv too but not always in practice. Moreover, the historical center of high urban value and exquisite buildings in Lviv is not confined to the UNESCO boundaries.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: The German Federal Ministry for Economic Cooperation and Development (BMZ), Swiss State Secretariat for Economic Affairs (SECO)

Implemented by GIZ through the project Integrated urban development in Ukraine

Local counterpart: City Council Lviv

Supported activities:

- Capacity building for designing, applying, and implementing processes and standards of integrated and sustainable urban development
- Preparation of priority infrastructure projects and implementation of small scale, low budget, and high impact investments (quick wins)
- Establishment of suitable communication, coordination, and cooperation mechanisms

Status of implementation

Project start: 2017 Q4

Project completion: 2019 Q4

Completed outputs:

- Development of **the Integrated Urban Development Concept** for Lviv in close cooperation with the Chief Architect and the City Institute and in accordance with the **Leipzig Charter** on Sustainable European Cities.
- Active involvement of the Representatives of municipal units of Lviv in the process of developing **the Sustainable Urban Mobility Plan**, including City Institute, Spatial Development Institute, municipal transport operator "Lvivavtodor", municipal company "Lvivelectrotrans", Department of Housing and Infrastructure, Transport office, Architecture and Urban Development Department, as well as international experts from Switzerland and Germany. Many meetings were held with residents and stakeholders.
- Organisation of a comprehensive training program called **"Management Competences"**, aimed at improving the capacity of Lviv City Council and enhancing closer cooperation between different structural units, better coordination of projects and optimisation of administrative management at both vertical and horizontal levels.
- Creation of the Green Line, **the Demonstration Infrastructure Project** is a pedestrian-bicycle connection from Sykhiv District to the city center, passing through green territories, an industrial zone and connecting buildings of Ukrainian Catholic University. The concept has been developed and working documentation is being prepared for the first section along the southwestern part of Park Ivan Pavlo II to Shuvar Market at Khutorivka.

Next expected outputs:

- Continue the implementation of the Integrated Urban Development Concept
- Further implementation of objectives set out in the Sustainable Urban Mobility Plan, including transport solutions and urban space renovations in accordance with the principles of sustainable mobility
- Further work on implementing the Green Line as a good example of alternative connections in the city should be continued

SUMP key measures and cost estimates

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

Measure	Cost Estimate
Implementation of e-ticketing	-
Acquisition of 10 low-floor trams	10,000,000
Acquisition of 100 buses	12,000,000
Acquisition of 50 trolleybuses	12,000,000
New bus depot	12,000,000
Reconstruction of 15 km of trolleybus catenary	13,000,000
Implementation of the Ukraine Urban Road Safety Program	37,800,000

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	
Street shaping urban roads and traffic management	
Other measures	
Total	

Finance leverage

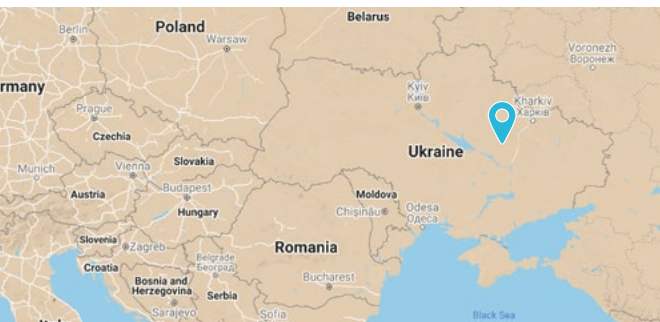
Financing resulting from the SUMP	Source	Amount
Loan leveraged through MobiliseYourCity for the implementation of SUMP infrastructure, fleet and e-ticketing measures	EBRD and EIB	59,000,000
Loan for the financing of the Ukraine Urban Road Safety Program	EBRD and EIB	37,800,000
Loan for the financing of the second phase of the Ukraine Urban Public Transport Program	EBRD and EIB	70,000,000
Loan for the financing of the Lviv E-Bus project.	IFC	50,000,000

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Poltava, Ukraine

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 106.4 km²

Population: 106.4 km² | Growth rate: 0%

GDP per capita: USD 4,621,31

By aligning its economic and touristic objectives, Poltava is implementing a Sustainable Urban Mobility Plan with a focus on enhancing public transport attractiveness and promoting active mobility.

Key facts

City, Country	Poltava, Ukraine
Population ¹	287,000
Land area (Poltava City) ²	106.4 km ²
GDP per capita	USD 4,621,31
Baseline motorisation rate ³	152 cars / 1,000 inhabitants
Local Partner (organisation)	Poltava City Council
Implementing partners	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH through the project Integrated urban development in Ukraine
Donors supporting technical assistance for the SUMP	<ul style="list-style-type: none"> German Ministry for Economic Cooperation and Development (BMZ) Swiss Federation State Secretariat for Economic Affairs (SECO)
Amount in technical assistance	Included in the Integrated Urban Development in Ukraine project which has a budget of 9,100,000 EUR to support multiple cities
SUMP implementation timeline	<ul style="list-style-type: none"> Joined MobiliseYourCity in June 2017 MobiliseDays in September 2018 Start of SUMP elaboration in 2019 SUMP completed and approved in 2020
SUMP Vision	To transform Poltava into a more liveable urban environment and a dynamic regional hub seamlessly connected to the national and global economies. The focal points of the SUMP are strengthening the city's economy and promoting a healthier, more inclusive way of life.

¹ State Statistics Service

² Poltava City Master Plan

³ Regional service center in Poltava region, Ministry of Internal Affairs of Ukraine, 2015

Thanks to the funding from BMZ, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has supported the Poltava City Council in developing a Sustainable Urban Mobility Plan (SUMP). The project encompasses diagnosis the current situation, defining sustainable urban mobility priorities and goals, analysing possible future scenarios, and, finally, identifying priority measures.

Although participatory processes had previously taken place in the city, such as online public consultations and civil society actions, the project went much further, ensuring the broad involvement of residents and specialised professionals in the area.

The implementation and development of the selected SUMP measures are expected to provide transport access to the entire population, particularly low-mobility groups, increase ecological compatibility, and strengthen the city's economy and tourism attractiveness.

Diagnosis: Urban Mobility in Poltava

Poltava is an important regional city characterised mostly by a flat terrain with a maximum elevation of +159.2 meters above sea level. The urban area experiences negative demographic growth, marked by low fertility and high mortality rates. However, motorisation levels are expected to increase by 330 cars per 1,000 inhabitants by 2031, which will have a significant impact on the city's road network and traffic.

The city's spatial organisation is heterogeneous. Although the average population density is high, there is significant variation in population density among micro-districts. Most workplaces and points of attraction are concentrated in the centre, the surroundings of the southern station and in the southern part of the city, while the northern part is less populated.

These factors are crucial for analysing the resident mobility patterns and forming an efficient public transport system. Commuting constitutes a significant share of traffic in the city, heavily influencing morning peak periods from home to work, and vice versa in the evening.

Mobility demand and transport services

According to a mobility survey conducted in May 2018, Poltava's daily travel rate averages 2.1 trips per person. As depicted in **Figure 1**, the modal split highlights the current dominance of motorised travel modes (car and public transport), representing 67.6% of trips, while non-motorised modes (walking and cycling) account for 32.3%.

75% of households do not own a car, resulting in limited car usage compared to cities of the similar size in Ukraine or elsewhere in Europe. Consequently, public transport usage is high (55.2%), making it the most frequently -used mode of transportation in Poltava. Walking ranks second, constituting 30.5% of all trips.

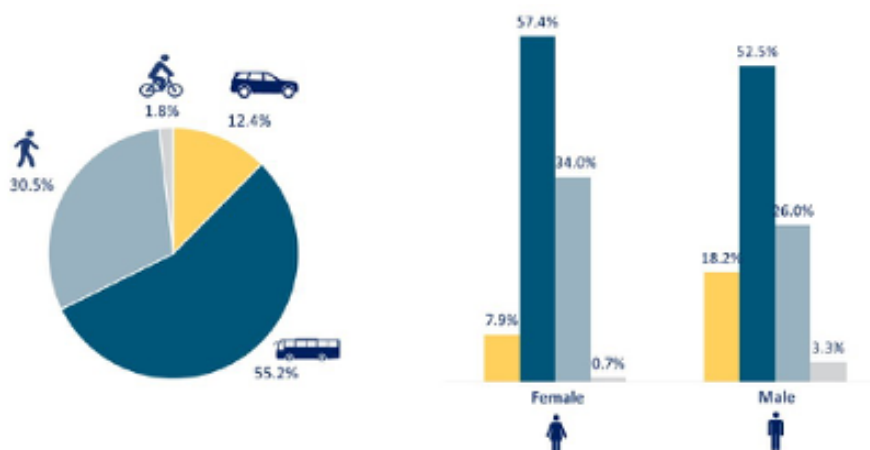


Figure 1 - Modal split

Overview of mobility services

Public transport services (trolleybus and bus)

The city counts 10 trolleybus and 65 bus routes.⁴ 15% of the final stops of these bus routes are located outside the city's territorial borders, enhancing route network accessibility for nearby settlements. A staggering 87.9% of local residents live within 500 m of public transport stops.

The urban electric transport network (trolleybuses) spans 73 km, while the total length reaches 250 km³ (Figure 2). The public transport system encompasses 407 stopping points.

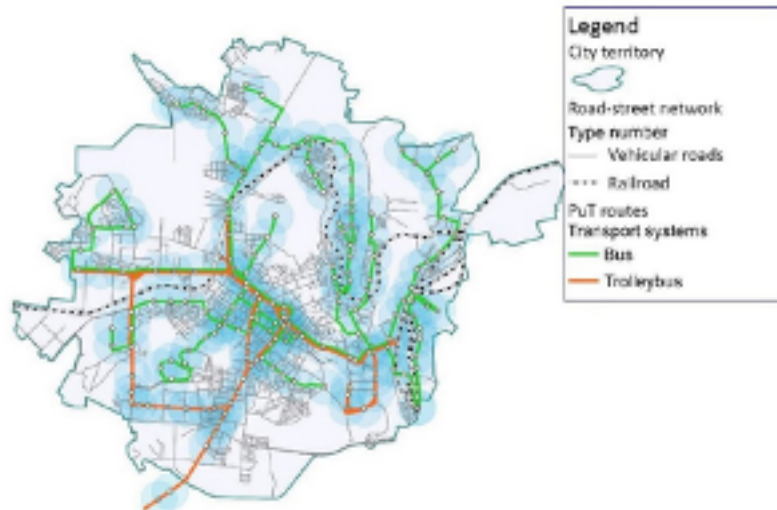


Figure 2 - Public transport network

While the network is relatively well developed, the renewal of both bus fleet and electric trolleybuses is necessary. Today 49% of Poltava's bus fleet consists of low-capacity buses, and over 70% of the rolling stock of the trolleybus fleet is over 15 years⁵.

Walking

Poltava's streets do not systematically consider the needs of pedestrians. Ensuring barrier-free pedestrian spaces for individuals with limited mobility poses a significant challenge, considering that 10% of Poltava's population comprises people with disabilities. Additionally, various obstacles often occupy pedestrian space, which hinders the free movement of pedestrians.

Cycling

The city's cycling infrastructure remains undeveloped, yet its geographical layout and broad streets harbor substantial potential for its emergence.

Private vehicles

Although private cars constitute a minor portion of the modal split, Poltava grapples with significant issues stemming from mass spontaneous street parking. The absence of a unified city parking space management scheme and control system exacerbates this problem.

⁴ Register of urban passenger transport routes as of December 1, 2017, Poltava Transport and Communications Department

⁵ According to the data of KP "Poltavaelektroavtotrans" as of 01.12.2017

Social issues

The diagnosis revealed that existing public transport vehicles inadequately serve vulnerable groups, including the elderly people and individuals with limited mobility.

Furthermore, several surveys highlighted gender disparities, particularly concerning cycling. Merely 9% of active bicycle users in Poltava are women⁶. This gender gap indicates the perception of cycling as a highly dangerous mode. On the other hand, women are more likely to use electric trolleybuses compared to men.

Road safety emerges as a critical concern in Poltava, especially for pedestrians, who constitute the most frequent victims. Analysis of traffic violence heat maps indicates that areas failing to meet minimal standards for pedestrian accessibility and barrier-free spaces, such as underground pedestrian crossings, tend to be the most dangerous for pedestrians in Poltava.

SUMP vision and goals

Vision for urban mobility in Poltava

Poltava is a city of healthy lifestyles, particularly welcoming to young people, that values and supports its elderly population. It maintains a tolerant and safe environment, underpinned by a strong sense of social responsibility within the community.

The Strategic Urban Mobility Plan (SUMP) for Poltava identifies six key priorities alongside associated goals aimed at enhancing the city's mobility landscape:

Priority 1: Improving public transport attractiveness

- Improve the quality of public transport services
- Introduce an efficient public transport management system
- Improve accessibility for individuals with limited mobility
- Develop a multimodal and integrated public transport network
- Prioritise public transport within traffic planning

Priority 2: Parking space optimisation

- Relocate parking from roads and sidewalks in the city centre
- Ensure sufficient parking provision in residential areas
- Implement parking management systems near public and commercial institutions
- Decrease the presence of large-sized vehicles in the city centre

Priority 3: Data collection and analysis, and creation of an intelligent transport system

- Establish a unified information system
- Introduce an electronic payment system for transport services
- Disseminate information to road users
- Upgrade infrastructure in accordance with the latest technologies

Priority 4: Cycling infrastructure development

- Encourage cycling among residents and tourists
- Establish a management mechanism for cycling development
- Improve cycling infrastructure to facilitate quick and safe journeys

⁶ According to the cyclists survey results of "CITYLAB", 2015-2016

Priority 5: Pedestrian spaces enhancements and accessibility

- Increase the appeal of walking as a mode of transport
- Develop safe and comfortable facilities for pedestrians
- Implement a municipal management system for pedestrian infrastructure

Priority 6: Road safety enhancement

- Cultivate a safer urban environment
- Foster improved traffic culture among residents

Key SUMP measures

Under the SUMP framework, specific measures have been identified for each priority area. They can be categorised into five points:

- **Infrastructure measures** to promote inclusivity, safe access to transport, and ensure long-term city resilience.
- **Management and organisation measures** relevant for the development of management systems and strategic documents to support high-quality urban mobility.
- **Monitoring and data collection measures**, essential for assessing urban transport conditions and identifying issues.
- **Capacity building measures** aiming toward raising the awareness among key stakeholders, including politicians and planners, about sustainable mobility.
- **Promotion and awareness measures** aiming toward scaling up citizen participation and understanding the sustainable urban mobility transition.

The following table presents the main short-term measures planned.

Measures	Cost estimates in M€	Proposed Financing Source	Implementation by
Physical investments			
(Infrastructure, rolling stock, etc.)			
Short term acquisition of 11 buses	0.8M€	Domestic financing	2019
Acquisition of 40 low floor trolleybuses and modernisation of 3 traction substations	10M€	European Bank for Reconstructions and Development (EBRD) loan	2021
Technical (studies, plans, designs, etc.)			
Setup of a working group for cycling infrastructure and appointment of a cycling envoy			

Projected results and impact

The implementation of the measures listed above will lead Poltava to consolidate its regional importance as an ecologically oriented city, committed to enhancing its citizens' quality of life. The following table presents the expected results and impact.

Impact Area	Expected Impact				
GHG emissions (SDG 11)	Improved but not quantified				
Accessibility (SDG 11)	<table border="1"> <thead> <tr> <th>Accessibility for the entire population</th> <th>Accessibility for people with reduced mobility</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> • Baseline: 87.9%⁷ • Improved but not quantified </td> <td> <ul style="list-style-type: none"> • Baseline: 11%⁸ • Improved but not quantified </td> </tr> </tbody> </table>	Accessibility for the entire population	Accessibility for people with reduced mobility	<ul style="list-style-type: none"> • Baseline: 87.9%⁷ • Improved but not quantified 	<ul style="list-style-type: none"> • Baseline: 11%⁸ • Improved but not quantified
	Accessibility for the entire population	Accessibility for people with reduced mobility			
<ul style="list-style-type: none"> • Baseline: 87.9%⁷ • Improved but not quantified 	<ul style="list-style-type: none"> • Baseline: 11%⁸ • Improved but not quantified 				
Air pollution (SDG 11)	Improved but not quantified				
Modal share	<p>Percentage of total trips by public transport</p> <ul style="list-style-type: none"> • Baseline: 55%⁹ • SUMP scenario: improved but not quantified 				
Road safety (SDG 3)	<ul style="list-style-type: none"> • Baseline: 0.04 accident/ 1000 inhabit.¹⁰ • Improved but not quantified 				
Mobilised finance (SDG 17)	10M€ - Loan leveraged through MobiliseYourCity (EBRD)				
Infrastructure and assets with committed financing (SDG 9)	<p>The primary focus of Poltava's SUMP is to enhance the attractiveness of public transportation. Consequently, the majority of measures outlined in the Poltava SUMP are related to optimising and restructuring the route network. The key actions include:</p> <ul style="list-style-type: none"> • Reduce duplication in urban public transport routes • Transitioning away from low-capacity vehicles to alleviate network congestion • Reduce travel time for passengers • Optimise operational costs of the transport system • Establish a network with the most efficient vehicles • Promote the adoption of electric transport • Introduce additional trolleybus routes • Introduce new forms of public transportation such as car sharing, ride sharing (e.g., Uber), bike sharing or municipal taxis • Upgrade infrastructure in accordance with the latest available technologies; • Introduce bicycle infrastructure across all areas of the city, particularly those with recreational spaces and tourist attractions 				
Expected institutional impact	<p>Poltava's SUMP includes several governance- related actions aimed at establishing effective management systems to guarantee the attainment of its goals and priorities.</p> <p>Expected institutional impact: Poltava's SUMP includes several governance-related actions aimed at establishing effective management systems to guarantee the attainment of its goals and priorities. The expected impact at the institutional level can be deduced from the following list of recommended measures:</p> <ul style="list-style-type: none"> • Creation of a single centralised management system for public transport in the city • Establishment of a municipal management system of pedestrian facilities • Creation and approval at the municipal level of terms of reference for the development of cycling transport • Establishment of a responsible authority for the organisation and management of the unified data system • Creation of municipal service for parking control • Conduct regular training in the field of management, development of public transport and the collection and analysis of traffic data for members of the relevant local authorities • Development and implementation of a Programme for Street Design • Creation and approval at the municipal level of the terms of reference for the development of pedestrian infrastructure • Establishment of a municipal authority responsible for road safety coordination in Poltava • Inclusion of an independent "road safety audit" component into the projects for street repair and reconstruction 				

⁷ Based on data about place of voters registration

⁸ Characteristics of Urban Passenger Transport, 2008

⁹ Estimated based of Mobility Survey, Dornier Consulting International GmbH, 2018

¹⁰ Information of the Police Department of Poltava in 2015

Highlights

Two years after the adoption of the SUMP, significant progress has been made to make public transport and cycling more attractive in Poltava

Since the SUMP was approved by the Poltava City Council in 2020, the most progress have been made in Priority 1: *increasing the attractiveness of public transport*, and Priority 4: the *development of cycling*.

Priority 1: Attractiveness of public transport

- Effective purchase of 11 buses in 2019 and 40 new low-floor trolleybuses in 2020 (financed by the EBRD)
- Implementation of real-time information systems for passengers, including a mobile app and GPS trackers embedded in trolleybuses
- Development of transport model to improve public transport routes
- Repair of 23 public transport stops, with ten equipped with real-time information systems for passengers
- Preparation of a EUR 4.5 million investment project by the European Investment Bank (EIB), to develop trolleybus network lines and infrastructure, including power station
- Initiation of the process to integrate fares

Priority 4: Development of cycling

- Formation of a working group for cycling infrastructure development
- Preparation and approval of a specific action plan for cycling in Poltava
- Ongoing development of bicycle infrastructure with additional support from GIZ, including bike park installations for schools, libraries, and sports facilities, shared bicycles for public administration, and identification of new cycling routes
- Communication and advocacy efforts have been made in local media and schools, in collaboration with police services, to improve attractiveness and safety of cycling in Poltava

The political situation is hindering the domestic financing of SUMP measures

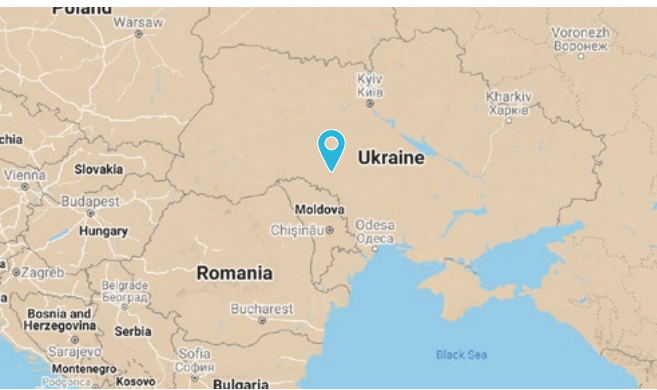
The main obstacle for the SUMP implementation is the access to domestic public financing, exacerbated by the political situation, and the reallocation of budget to national defence. With international tensions escalating into a military conflict with the Russian Federation, there is little prospect of improvement in the short term.

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Vinnytsia, Ukraine

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 113 km²

Population: 369,900 (2018) | Growth rate: 0,27%

Region capital city

GDP per capita: USD 8,668

Context

The city of Vinnytsia has a relatively well-structured transport network that serves most housing and employment districts and connects them with the centre. The size of the system is optimal for trams and buses, but railway and vast industrial areas represent a barrier for soft modes of transport.

Topography, hydrography, and industrial infrastructure have a strong influence on the development of the road network. Only few relations exist over the Southern Bug river. A direct connection between outer districts does not exist, and most of outer districts have low population and employment density.

The recent developments have been strongly oriented toward individual motorised traffic, and there is room for improved traffic management, profiles of the existing streets offer enough space for all different modes of transport, including cycling, and for quality urban space with tree lined avenues.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: The German Federal Ministry for Economic Cooperation and Development (BMZ), Swiss State Secretariat for Economic Affairs (SECO)

Implemented by: GIZ through the project **Integrated urban development in Ukraine.**

Local counterpart: Vinnytsia City Council

Supported activities:

- Capacity building for designing, applying, and implementing processes and standards of integrated and sustainable urban development
- Preparation of priority infrastructure projects and implementation of small scale, low budget, and high impact investments (quick wins)
- Establishment of suitable communication, coordination, and cooperation mechanisms

Status of implementation

Project start: 2017 Q4

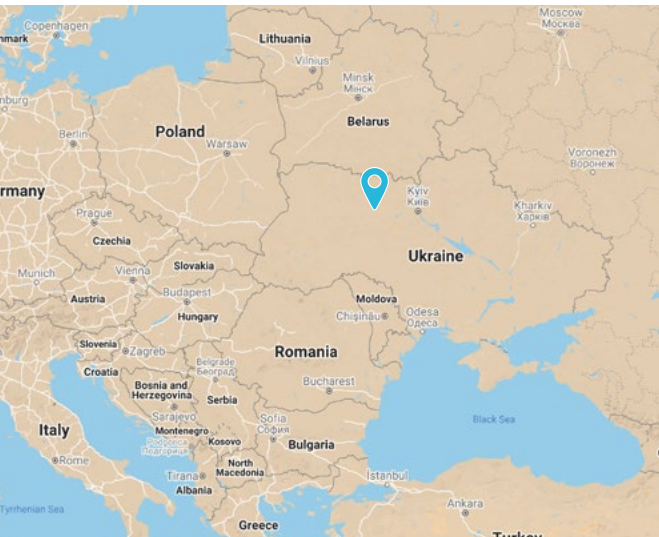
Project completion: 2019 Q4

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Zhytomyr, Ukraine

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 93 km²

Population: 264,300 (2018)

GDP per capita: USD 8,668

Modal share:

Motorised vehicles: 15%

Public transport: 46%

Walking: 37.8%

Cycling: 1.3%

Context

Zhytomyr is a city in the north of Ukraine, and is an important hub of inter-city road transport, due to its position as a crossroads between Kiev and the western cities of the country. It is also an important railway hub linking Kiev, western Ukrainian cities, Minsk, and Russia via Belarus.

The city has a long tradition of electric public transport, with the adoption of the tramway in 1988, and the trolleybus since 1962. The trolleybus network grew steadily until 2008, when it was streamlined from 19 to 11 lines. Every year, the city's trams and trolleybuses carry almost 40 million passengers. The length of the electric transport routes reaches 125 km.

Several transport and mobility related challenges were identified during the SUMP preparation process. The fleet of public transport rolling stock needs to be updated. The average age of the trolleybus is 27.5 years, the tram is 32.5 years old and the standard period of operation is 10 and 15 years, respectively. Road accidents are frequent and road markings are absent on a variety of secondary roads and alleys, where it is particularly important to replenish the markings. In terms of walking infrastructure in the city, Zhytomyr has a problem of narrow pedestrian walkways, which are common in residential areas. Most traffic lights have no sound equipment. The street lighting focuses only on roads, which leads to insufficient lighting on the sidewalks.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: The German Federal Ministry for Economic Cooperation and Development (BMZ), Swiss State Secretariat for Economic Affairs (SECO)

Implemented by GIZ through the project **Integrated urban development in Ukraine**

Local counterpart: City Council Zhytomyr

Finance leverage: EUR 10,000,000

Supported activities:

- Capacity building for designing, applying, and implementing processes and standards of integrated and sustainable urban development
- Preparation of priority infrastructure projects and implementation of small scale, low budget, and high impact investments (quick wins)
- Establishment of suitable communication, coordination, and cooperation mechanisms

Status of implementation

Project start: 2017 Q4

Project completion: 2019 Q4

SUMP key measures and cost estimates

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

Measure	Cost Estimate
Reconstruction of central streets and sidewalks	Not available
Envoy for bicycle transport is needed within the structure of the city administration	Not available
Further work on the concept of changes of Sobornyi and Peremohy squares, elaboration of feasibility studies, looking for funding	Not available

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

Finance leverage

Financing resulting from the SUMP	Source	Amount
Trolley buses	EBRD	EUR 10,000,000

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Latin America and the Caribbean

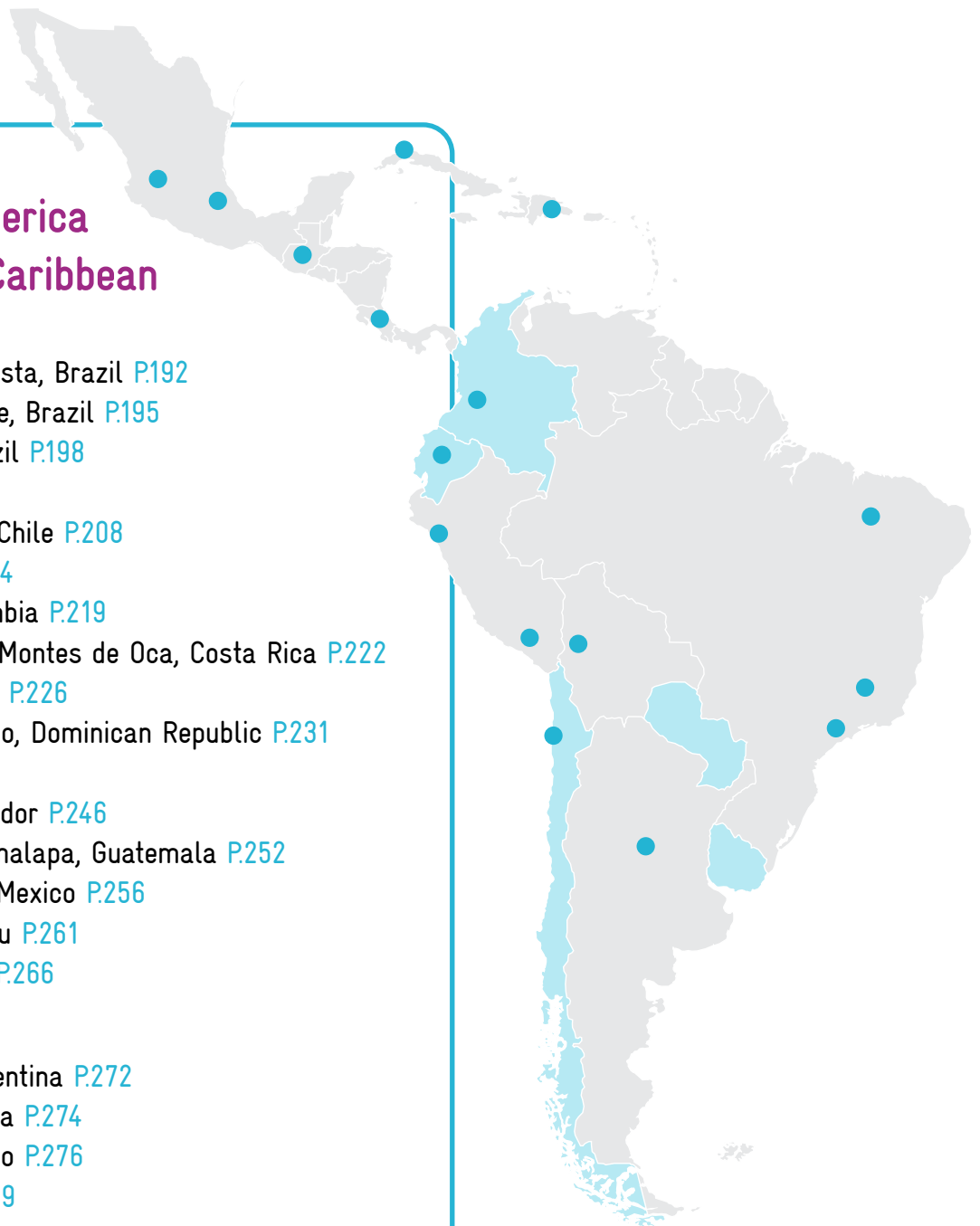
Latin-America and the Caribbean

Completed

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- Teresina, Brazil [P.198](#)
- Chile [P.202](#)
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Baixada Santista, Brazil

Partner city

Status of the project: Completed Sustainable Urban Mobility Plan



Basic Information

Antofagasta urban area: 2,422 km²

Population: 1,892,314 | Growth rate: +1.24%

Region capital city

GDP per capita: USD 16,771

Modal Share:

Public transport: 24%

Walking: 34%

Cycling: 7%

Private cars/motorbikes: 35%

National GHG emissions per capita: 5.12 (tCO₂eq)

Exposure to climate change: MEDIUM

Context

The Metropolitan Region of Baixada Santista (RMBS), established in 1996, was formed by the grouping of nine municipalities: Bertioga, Cubatão, Guarujá, Itanhaém, Mongaguá, Peruíbe, Praia Grande, Santos, and São Vicente. Despite corresponding to less than 1% of the surface of the State of São Paulo, the region accounts for approximately 4% of the population of the state of São Paulo. It also represents the 4% of the state GDP and is recognised as one of the most important metropolitan regions of Brazil due to its important harbor and strong industrial and tourist sectors.

In RMBS 185,247 people travel daily, with 13.38% of them travelling to the Metropolitan Region of São Paulo (RMSP) and 77.95% within RMBS. The current road, sea and rail accesses to the port complex significantly limit the potential for cargo movement expansion, which is projected in an expansion Master Plan. A specificity of the region is the seasonality of tourism activities which highly impacts the transport system.

Today there are approximately 230,000 vehicles registered in RMBS, and the private vehicle fleet is expanding at a faster rate than the population growth. The metropolitan roads serve metropolitan bus transportation, operated by São Paulo's Metropolitan Company of Urban Transport (EMTU), but are often poorly integrated with the Light Rail Transit System (VLT) and the intermunicipal buses. Approximately 11% of regional travel is made by bicycle, but with low integration with other modes. Most of the metropolitan routes that belong to the municipalities are not equipped with bicycle lanes. RMBS currently has about 220 km of bike lanes and cycle paths in place.

There is no transport master plan or similar document for the metropolitan region, although some of the municipalities have their own transport master plans. Baixada Santista Metropolitan Agency (AGEM) does not have the mandate and responsibility to finance mass public transport infrastructure. Instead, the Government of the State of São Paulo acts directly in the region, especially on the issue of mobility, through the Secretariat of Metropolitan Transport (STM), the

Secretariat of Logistics and Transport (SLT), and the Metropolitan Company of Urban Transport (EMTU). The state government has the authority to borrow from international finance sources. Some systems and procedures are partially in place to monitor, evaluate, and report on urban matters.

Baixada Santista is receiving technical assistance to develop a regional urban mobility and logistics plan for the region aiming at guiding actions and investments for the short, medium, and long-term. The new plan should allow the expansion and integration of different modes of passenger transport, with the goal of improving traffic flows and decreasing travel times. The modal share of public transport and bicycles should both rise.

The technical assistance will also contribute to strengthening institutions by providing general guidelines and proposals for integrated transport solutions, containing a complete diagnosis of current mobility conditions and a prognosis of the evolution of these conditions. It will allow proposing actions that streamline the mobility system and present alternatives that maximise the potential for the sustainability of each mode of transport, to achieve adequate standards for the movement of people and loads in the region. Finally, it will help establish a Monitoring and Evaluation System (SIMA) with a set of sustainable mobility and logistics indicators providing constant information for the Thematic Chamber of Mobility to monitor the outcome of the proposed actions, thus contributing to the integrated management cycle of the region.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: European Commission

Funding amount: EUR 500,000

Implemented by: AFD through the EUROCLIMA+ Program

Local counterpart: Baixada Santista Metropolitan Agency (AGEM)

Supported activities:

- Preparation of a Regional Urban Mobility and Logistics Plan for Baixada Santista, which guides actions and investments for the short (2022), medium (2026) and long-term (up to 2030)
- Mobility diagnosis (data collection, inventory and evaluation)
- Definition of vision, objectives and strategies of SUMP
- Action and Financing Plan for SUMP implementation
- Participatory approaches and processes
- Monitoring and formal reception of PRMSL-BS and support for implementation

Status of the SUMP process

Project start date: 2021 Q2

SUMP adoption date: To be defined

Completed outputs:

- Project initiation
- Phase 0: Preliminary inform
- Phase 1: Diagnosis
- Phase 2: Definition of vision, objectives and strategies
- Phase 3: Action and financing plan
- Phase 4: Participatory approaches and processes
- Phase 5: Monitoring and formal reception of PRMSL-BS

Projected impacts

Indicator	Baseline - 2019
Total annual GHG emissions (Mt CO ₂ eq)	38.87 Mt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO ₂ eq)	34.367 kg CO ₂ eq / capita
Air pollution	
Decrease in mean urban air pollution of particulate matter (in µg PM _{2.5}) at road-based monitoring stations	34.367 kg CO ₂ eq / capita

Perspectives for implementation

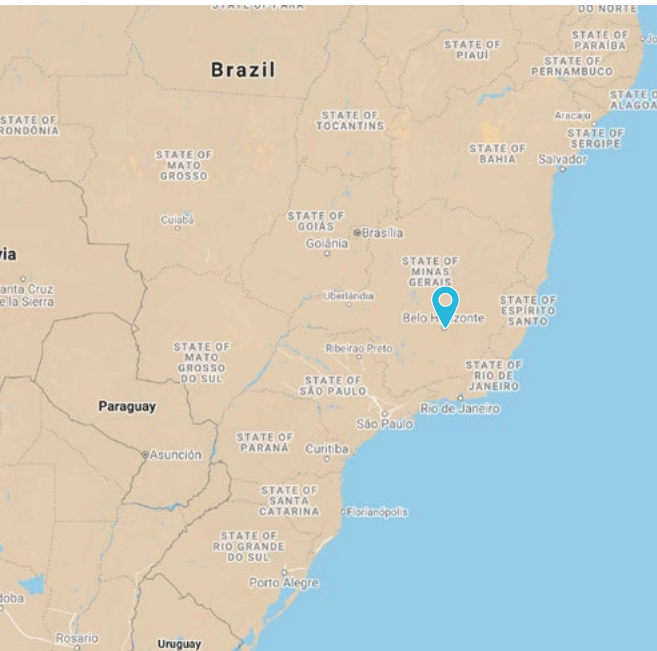
Political buy-in for approval needs to start from the outset involving all key stakeholders

As this is a regional plan, the approval must involve all nine municipalities that are part of the metropolitan region. The SUMP development process has included the participation of all cities from the beginning through the Mobility and Logistics Technical Chamber, with periodic meetings, during which the consultant presented updates and key documents were shared. Financing of prioritised actions will potentially come from the National Government and a new framework on public transportation.

Belo Horizonte, Brazil

Partner city

Status of the project: Completed pilot project



Basic Information

Urban area: 14,420 km²

Population: 5,700,000 | Growth rate: 1.05%

Regional capital city

GDP per capita: USD 17,239

Modal Share:

Formal public transport: 28%

Walking: 35%

Cycling: 0.4%

Private cars: 33%

Motorcycle: 4%

National GHG emissions per capita: 5.12 (tCO₂eq)

Context

Belo Horizonte is the capital of the state of Minas Gerais and is located in the south-eastern region of Brazil. It is the third-largest metropolitan area in the country and has a population of over 2.4 million, with 5.7 million in the official Metropolitan Area (IBGE, 2014). Considering the rather moderate ambition level of Brazil's NDC, local action in cities plays a crucial role for climate change mitigation. Belo Horizonte is one example of an active mid-sized city committed to sustainable development.

In its NDC, Brazil commits to reducing greenhouse gas emissions by 37% below 2005 levels by 2025. The NDC also contains a subsequent indicative contribution to reduce greenhouse gas emissions by 43% below 2005 levels in 2030. Compared to the 1990 level, this translates to 6% respectively 16% reduction. With this target, Brazil is the first major developing country to commit to an absolute GHG reduction below 1990 levels.

Belo Horizonte has a series of plans (Master Plan, PlanMob-BH, Belo Horizonte – a Smart City, etc.) and policies in place that are reviewed and monitored on a regular basis to help guide the urban development of the city. Belo Horizonte has already made important progress towards sustainability and in the medium and long run, envisions becoming an example of smart and sustainable urban development for Brazil and Latin America. However, road transport remains responsible for 53% of greenhouse gas emissions in Belo Horizonte and could reach 6 million tons of CO₂ emissions by 2030. With regard to mobility, Belo Horizonte already has an innovative Sustainable Urban Mobility Plan (2010, reviewed in 2016), called PlanMob-BH, with comprehensive measures related to eight strategic areas: (1) active mobility, (2) collective mobility, (3) motorised individual mobility, (4) traffic calming and circulation, (5) urban logistics, (6) sustainable city, (7) universal accessibility, and (8) management, supervision and operation. Each strategic intervention is complemented by actions and indicators for short (2020), medium (2025) and long-term (2030) planning horizons.

Since 2017, Urban Pathways has been supporting Belo Horizonte in the implementation of active mobility projects. For this, Urban Pathways has invited the city to participate in several international fora, trainings, and peer-to-peer learnings. Moreover, Urban Pathways has provided technical assistance in the development of project proposals to be submitted to donors. As a result, in 2019, Belo Horizonte implemented four "Zones 30", one of which counted on the support of Urban Pathways from conceptualisation to financing, namely "Zone 30 Confisco". The successful implementation of Zones 30 in Belo Horizonte has led to political support and great acceptance from the citizens.

The Zone 30 pilot-project foresees a wide deployment of vertical and horizontal signalling, the reallocation, and repositioning of parking spaces to encourage a reduction in the speed, and the enlargement of sidewalks, including the insertion of urban furniture, hereby creating small areas of coexistence for pedestrians. Beyond the immediate mobility related issues, Belo Horizonte also recognises these measures as an opportunity to revitalise the downtown area and enhance the quality of life by creating pedestrian streets and giving the space used for cars back to the people.

In terms of capacity building, Urban Pathways involved Belo Horizonte in webinars on e-scooters, tactical urbanism, public space interventions, AQ sensors, etc. Urban Pathways also supported the participation of Belo Horizonte in the Transport and Climate Change Week 2018 and 2022 (Berlin), the Sustainable Urban Infrastructure Forum (Quito), the International Conference on Climate Action 2019 - ICCA (Heidelberg), and, among others, a site visit to Santiago de Chile (2020). Thus, Urban Pathways would like to continue supporting Belo Horizonte in the development of active mobility projects, awareness raising, and cross-sectorial integration related to climate change mitigation.

Support from the Partnership

Technical assistance: Pilot Project development

Funded by: BMU through the International Climate Initiative (IKI), WRI Brasil, TUMI

Funding amount: EUR 100,000

Implemented by: Wuppertal Institute and UN-Habitat through the Urban Pathways project

Local counterpart: Belo Horizonte Transport and Traffic Company (BH-TRANS)

Supported activities:

- Pilot project financing and implementation
- Capacity building, training, and participation in international fora
- Assistance in the development of project proposals for donors

Status of implementation

Project start: 2017

Project completion: 2022

Completed outputs:

- Pilot project implementation of Zone 30 in the Confisco neighbourhood
- Pilot project implementation of the EcoZone in the Santa Tereza neighbourhood
- Capacity building and webinars on e-scooters, tactical urbanism, public space interventions, AQ sensors

Insights from practice: key pilot project takeaways

The necessity of a pilot project as a first step for implementing zone 30 in Belo Horizonte

The pilot project, implemented in the Confisco neighbourhood since 2019, aimed to create a low-cost Zone 30, increase safety around the school area, and enhance social cohesion in the neighbourhood. The positive results of the project, including increased public perception and city-wide replication, have led to the institutionalisation of this type of intervention in Belo Horizonte. Despite the success of the pilot project, there is still room for improvement in the intervention strategy and specificity of project results. Possible improvements include addressing measurement errors, increasing assessment days, and incorporating awareness-raising activities related to waste.

Incorporating sustainability and awareness-raising activities in future urban intervention projects: Insights from the Confisco Zone 30 pilot project

The pilot project showed that community participation, before and after assessments, and inter-institutional cooperation, are crucial elements for the success of an urban intervention project like the Confisco Zone 30. The positive results of the project, such as increased safety around the school area and social cohesion in the neighbourhood as well as the public's positive perception, have led to the institutionalisation of this type of intervention in Belo Horizonte. BHTrans is now creating a Zone 30 guide to help replicate this success city-wide.

The pilot project also revealed that there is still room for improvement in the intervention strategy and specificity of project results. For example, the results of the Smart Citizen Kit did not exhibit the desired results during the mobility week, and the relative numbers of pedestrian and cyclist counts hardly exhibited any difference in mobility behaviour in the surroundings of the school. To address these issues, covering a longer period of time before and after the intervention and increasing assessment days could help reduce data biases and measurement errors.

Finally, some elements that could be included in future urban intervention projects were identified, such as the fabrication of urban furniture with local partners using recycled materials and the inclusion of awareness-raising activities related to waste. The Confisco Zone 30 already incorporated some of these elements, but further attention to these topics could improve the success of future projects. Overall, the pilot project provided valuable insights into what works and what could be improved in urban intervention projects, serving as a model for future initiatives.

Results and perspectives for scaling

Belo Horizonte's Model for Safe and Sustainable Mobility: A Blueprint for Cities Worldwide?

While the project's specific implementation may not be directly replicable in other locations, the project's emphasis on community engagement, inter-institutional cooperation, and low-cost interventions can serve as a model for similar projects around the world. The creation of a Zone 30 guide can be a valuable tool for other cities interested in pursuing similar initiatives.

Teresina, Brazil

Partner city

Status of the project: Completed pilot project



Basic Information

Urban area: 1,392 km²

Population: 1,203,922 | Growth rate: 1.21%

Region capital city

GDP per capita: USD 6,729

Modal Share:

Formal public transport: 21.3%

Walking: 32.6%

Cycling: 11.8%

Private cars: 24.8%

Private motorbikes or 2-wheelers: 5.8%

National GHG emissions per capita: 5.12 (tCO₂eq)

Exposure to climate change: MEDIUM

Context

Teresina is a low-density agglomeration of 1.2 million inhabitants, located in north-east of Brazil. The city is located at a crossroads near major cities on the north coast of the country, notably Fortaleza and Sao Luis, which significantly contributes to its economic development. However, the city suffers from urban sprawl, which increases travel time, costs and reduces the efficiency of public transport.

The 2008 Master Plan for Transport and Urban Mobility states that 1.91 million trips are made per day in the greater Teresina. The most common of these is made by foot (32.6%), followed by private car trips (24.8%) and municipal public transport (21.3%). The least common modes of transport are bicycles (11.8%) and motorcycles (5.8%). The relatively low share of public transport illustrates existing issues related to efficiency, accessibility and affordability of public transport. Public transport in Teresina is currently provided by about 100 bus lines, as well as a BRT system- currently under development. This network is operated by four main companies with a total fleet of 550 vehicles. The network is supplemented by eight alternative service routes, operated by 45 vehicles from minor operators organised under the SINTRAPI (Alternative Passenger Transport Operators Union).

During the last year, the current "conventional" bus system has gradually been replaced by the new Integrated BRT System. This evolution has redesigned the bus routes. These were previously classified into (i) radial, (ii) circular, and (iii) *diametrais*, meaning from one side of the city to the other, going through the city center, all converging to the Central Business District, and leading to overlapping itineraries and a saturation of some segments in the system.

The Integrated BRT System introduces a new feeder-trunk system, operating with a set of feeder lines that connect neighborhoods to the zone terminal, and trunk lines (BRT) departing from the terminals to city center or linking terminals. It divides the city into four main zones, namely South, Southeast, East, Center-North - Teresina doesn't have West zone inside the municipal jurisdiction. Each zone has two bus terminals, and the CBD has four unloading terminals. The bus route concession was allocated by zone, and each operator holds the concession for the set of routes of a particular zone.

Teresina Municipality Town Hall, the local counterpart, has the mandate and responsibility to finance mass public transport infrastructure. It has the authority to borrow from international finance sources. Systems and procedures are partially in place to monitor, evaluate and report on urban transport.

The project supported by the MobiliseYourCity Partnership implements an Open Innovation approach which aims at (i) identifying the key issues of the transport system management and (ii) developing relevant digital solutions that can address those issues and scale up strategy.

The specific objectives of the Project are to:

- Provide a rapid assessment of the current public transportation system of Teresina;
- Co-identify and prioritise the main issues faced by the public transportation system;
- Identify solutions and technologies which could address those prioritised issues, including blockchain;
- Provide methodology and resources to prototype pilot projects;
- Lessons learned from the pilots, documentation and definition of the pilot implementation strategy.

The technical assistance contributes to institutional strengthening by tackling trust issues between all the stakeholders of the mobility sector through data and technological solutions.

Support from the Partnership

Technical assistance: Pilot Project development

Funded by: EUROCLIMA+

Funding amount: EUR 500,000

Implemented by: AFD through the project

Local counterpart: Teresina Municipality Town Hall, Secretary of Planning and Coordination (SEMPLAN)

Supported activities:

- Install the blockchain platform and promote its use by the actors involved in the Teresina transport system.
- Implement a public transport governance system based on co-management and the opening of data and processes whereby the municipality, companies, users and the treasury interact in a collaborative way.

Status of implementation

Project start: 2019 Q4

Project completion: 2022 Q1

Completed outputs:

- Signature of a MoU between Teresina and AFD
- Diagnosis
- Setup of The Open Innovation
- Pilot conception
- Proof of concept
- Scale-up strategy

Core impact indicators baselines

Indicator	Baseline - 2020
Total annual transport related GHG emissions (Mt CO ₂ eq)(Brazil)	1,070.08 Mt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO ₂ eq)(Brazil)	5,120 kg CO ₂ eq / capita
Air pollution Mean urban air pollution of particulate matter (in µg PM2.5) at road-based monitoring stations	13 µg/m ³ of PM2.5
Road safety Annual traffic fatalities in the urban area, per 100,000 inhabitants	22.8 fatalities / 100,000 hab

Insights from practice: key pilot project takeaways

Breaking Down Barriers: How Teresina's Pilot Project overcame Data Inefficiencies in Transport Management

The pilot project in Teresina aimed to improve the efficiency of the BRT system by implementing an innovative information and interrelationship system. By reducing information asymmetries between stakeholders, decision-making was improved, making it easier to adjust to the interests of each actor. The project successfully tackled the challenges of inefficient data management and analysis, paving the way for more effective traffic reorganisation policies in the future.

The use of this information system is also intended to reduce the levels of traffic norm infringement by private companies in terms of fines and infractions committed, in addition to providing better traceability of the process.

Open innovation processes are allowed for public interest and the sharing of data. However, political will is lacking to expand solutions

Implementing blockchain technology in the transportation sector is very innovative and became a challenge in the open innovation process, as there were few participants who could integrate it into the solutions. The open innovation process allowed for citizen participation and interest in the management of the transportation system, while internally ensuring that the municipality coordinated to share data and public information. As a result, the information has been shared publicly at the following website: <https://observatorio.stardust.dev.br/>. Regardless, the lack of political interest from the high officers and the remaining basic challenges of the public transport system, did not allow for systemic change.

In parallel and inspired by the success of the #moveteresina participatory challenge, the city implemented two tactical urban planning interventions in two public spaces in the city. These two interventions communicated information about the project, shared the main data on the city's transportation and raised awareness about the challenges of climate change.

On April 1, 2022, the city partnered with the consulting firm SYSTRA-UNIFOR and carried out a closing mission of the pilot "Mobility Observatory: Blockchain Technology to improve data management for citizen participation in Public Transportation in Teresina, Brazil".

Results and perspectives for scaling

Scaling-up strategy developed from the outset connects to potential funding for the city

The scaling up of Teresina's pilot project was included from its inception. Solutions developed in the Open Innovation process were structured into a strategy to be implemented by the city. This strategy is to be included as part of potential funding for the expansion of the Proof of Concept, through the AFD Project "Teresina 2030".

For this project, it is important to highlight that open data tools are necessary for the better planning of urban sustainable mobility strategies. Therefore, the resulting platforms, such as the observatory and the applications, are an appropriate scalability model- in its participatory methodology of construction. On the other hand, international visibility of these solutions is crucial to replicate this pilot project in other contexts and cities. For 2022, the municipality of Teresina continued to be accompanied to support the next steps in the financing of the project.

Chile

Partner country

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



Basic Information

Population: 18,050,000 (2018) | Growth rate: 1.4%

Percentage of urban population: 87.8%

GDP per capita: USD 16,522

Percentage of the population living below the national poverty line: 10.9%

Annual average infrastructure expenditures as a percentage of GDP: 2.2%

Nationally Determined Contribution (NDC):

100% e-taxis by 2050

100% urban public transport e-buses by 2040

58% private e-vehicles by 2050

58% commercial e-vehicles by 2050

National GHG emissions per capita: 5.1 (tCO₂e)

Proportion of transport related GHG emissions: 24.1% (2016)

Exposure to climate change: HIGH

Context

The Republic of Chile, a country in South America, occupies a long, narrow strip of land between the Andes to the east and the Pacific Ocean to the west. Chile covers an area of 756,096 km² and has a population of 18 million as of 2018. The capital and largest city is Santiago.

Chile has an economy characterised by the exploitation and export of raw materials. In 2012, exports - copper, fruit, fishery products, paper and cellulose pulp, chemicals, and wine - reached USD 83.66 billion, while imports - oil and derived products, chemicals, electrical and telecommunications articles, industrial machinery, vehicles and natural gas - reached USD 72,200 billion. The public debt was 10.1% of the GDP, of which the external debt amounted to USD 102.1 billion by late 2012.

By 2030, CO₂e emissions from the transport sector will likely increase 36% compared to 2007, reaching the value of 46.4 megatons CO₂e. This trajectory is currently strongly correlated with GDP growth, and the business-as-usual projections for 2050 go from 44.5 megatons CO₂e for low GDP growth projections to 84.4 megatons CO₂e for high GDP growth projections.

The Ministry of Transport and Telecommunications (MTT) is responsible for developing transport in Chile. It develops transport plans for the country's main cities every ten years, in addition to managing public transport contracts and subventions, among other responsibilities.

Due to a highly centralised system, Chilean cities have few competencies for planning sustainable urban mobility. However, as of 2021, due to a new decentralisation law, municipalities receive new powers in this area. Since October 2019, Chile has been subject to a profound social and political crisis, which has led to a referendum for a constitution renewal.

Despite Chile's efforts to electrify public transport, such as the ongoing fleet electrification in several regions, the country shows high levels of development inequality between the capital and other cities. Indeed, public transportation is still informal in several towns and does not meet the same qualitative and quantitative standards as in the capital city.

The implementation of a National Urban Mobility Policy (NUMP) aims to support cities in the development of sustainable urban mobility, either through the establishment of multisectoral political guidelines (Strategy) or the facilitation of a financing programme, in addition to supporting commitments of the NDC and the country's Long-Term Strategy (LTS).

Technical assistance for the development of the NUMP has strengthened the institutional framework in the country mainly through the facilitation of dialogue and agreements from a multisectoral (discussion between the transport sector, urban planning, environment, and energy) and multilevel (dialogue between the regional and local levels) perspective.

Support from the Partnership

Technical assistance: National Urban Mobility Policy or Programme (NUMP)

Type of NUMP: Mixed Programme and Policy NUMP

Funded by: European Commission

Funding amount: EUR 1,000,000

Implemented by: GIZ through the EUROCLIMA+ Programme

Local counterpart: Ministry of Transportation and Telecommunications

Main purpose of the NUMP:

- Offer cities and regions a general enabling framework for Sustainable Urban Mobility Plans
- Provide technical guidance on a wide range of technical issues relevant to the transport sector in the context of reducing GHG emissions
- Offer cities a general enabling framework for SUMPs
- Regulate a wide range of technical issues
- Provide technical advice on a wide range of technical issues

Supported activities:

- Design a National Programme for Sustainable Mobility
- Elaboration of the National Strategy for Sustainable Urban Mobility (writing, revising, and promoting the participation of other institutions in the process)
- Various NUMP Chile roundtable meetings and strategic planning of the NUMP activities
- Virtual peer-to-peer workshops (with Brazil, Ecuador, and Uruguay) and internal workshops with several MTT departments
- Development of technical studies relevant in the context of the Chilean Long-Term Strategy for Fighting Climate Change (Emissions Inventory, Emissions Projection, Status Quo Analysis, among others)

Status of implementation

Project start date: 2018 Q4

NUMP expected completion date: 2023

Completed outputs:

- NUMP Workshops in Quito, Ecuador and Bogota, Colombia (March 2019 and February 2020)
- Status quo analysis and a series of multisectoral workshops to build a shared understanding of the urban mobility situation, including mobility challenges and current actions implemented by seven sectoral ministries
- Internal round of 3 workshops (Nov-Dec 2020) with the participation of representatives from most departments (regional and national) of the Ministry of Transport and Telecommunication (MTT) to define the objectives and action lines of the National Strategy on Sustainable Urban Mobility (134 participants in total)
- Study in emissions Inventory from the transport sector (2020)
- Study on emissions projections from the transport sector (2021)
- National Strategy for Sustainable Mobility (2021)

Next expected outputs:

- Investment Programme to support the implementation of sustainable mobility measures by subnational governments (currently in process)
- MRV process at the national level

NUMP key measures and cost estimates

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

Measure	Cost Estimate
1. Integrating mobility into the territory	
• Instruments of urban planning oriented to public transit and active mobility	Not quantified ¹¹
• Urban design and management oriented toward public transit and active mobility	
• Intersectionality with a territorial approach	
• Sustainable urban logistics	
2. Reducing the negative effects of urban mobility on the environment by strengthening climate mitigation actions addressing and local negative externalities	
• Climate-oriented social assessment of projects	Not quantified
• Disincentives for polluting vehicles usage	
• Disincentives for polluting vehicles purchase	
• Polluting vehicle control	
• Fleet decarbonisation	
• Promotion of technological shifts for private vehicles	

¹¹ The National Sustainable Mobility Strategy provides a repertoire of 30 types of measures. Regional governments wishing to develop a sustainable urban mobility plan should select from the most suitable measures for their context. Hence, there is not cost estimate for the 30 types of measures. Their costs depend on the specific application that each regional government will do (for example, how many kilometres of bikeways or pedestrian paths).

Measure	Cost Estimate
<p>3. Promoting more efficient use of urban and road space by enabling better travel demand management and enhancing access through prioritising sustainable modes of transport</p> <ul style="list-style-type: none"> • Reduction of the need to travel • Redistribution of road space • Improvement of public transit’s levels of service • Incentives for public transit operation and ridership • Promotion and facilitation of intermodality • Disincentives to inefficient car ownership and use 	Not quantified
<p>4. Active and safe mobility</p> <ul style="list-style-type: none"> • Walking and cycling infrastructure • Road safety initiatives that prioritise pedestrians and cyclists • Promotion of intermodality between cycling and public transit • Incentives for active mobility 	Not quantified
<p>5. Promoting inclusion, universal accessibility, and gender equality in mobility systems</p> <ul style="list-style-type: none"> • Universally accessible infrastructure and public spaces • Universally accessible public transit • Safe public transit 	Not quantified
<p>6. Integrating citizens’ vision into decision-making</p> <ul style="list-style-type: none"> • Appropriate and transparent participatory processes leading to agreements • Decentralised governance for sustainable mobility • Arrangements allowing citizens to raise their concerns and communication about processes 	Not quantified
<p>7. Progressing towards greater integration and transparency of mobility data, enhancing information access for users, and strengthening the technological bases for planners, operators, and decision-makers</p> <ul style="list-style-type: none"> • Improvement of mobility data collection, processing, and analysis arrangements • Digital transformation for an integrated transit management • Strengthening of information services for citizens • Development of integrated transport services 	Not quantified

Projected impacts

In its current status, the NUMP Chile includes a catalogue of measures but no action plan or NUMP scenario with quantified impact.

Indicator	Impact 2030 (NUMP vs BAU)	Baseline - 2020	Projected 2030 BAU	Projected 2030 NUMP scenario
Total annual GHG emissions (Mt CO ₂ eq)	Not possible to quantify	20.01 Mt CO ₂ eq	22.25 Mt CO ₂ eq	Not yet quantified
Annual transport related GHG emissions per capita (kg CO ₂ eq)	Not yet quantified	853 kg CO ₂ eq / capita	1174 kg CO ₂ eq / capita	Not yet quantified

Perspectives for implementation

The national government is promoting the NUMP for cities to take action

The most important output of the NUMP Chile project has been the National Sustainable Mobility Strategy. This Strategy presents a repertoire of 30 types of sustainable mobility measures. Thus, this Strategy offers cities and regions a general enabling framework for developing sustainable urban mobility plans. Regional governments wishing to create a sustainable urban mobility plan should select from these 30 measures the ones most suitable for their context.

The transport planning agency (SECTRA) of the Chilean Transport Ministry is currently conducting workshops with professional teams from different regional governments to demonstrate how the National Sustainable Mobility Strategy works and can assist them in developing SUMP for their cities. Until now, one regional government has prepared a SUMP (Antofagasta) and is tendering a consultancy project to support the development of a SUMP in another city within the region (Calama).

Insights from practice: lessons learned from the NUMP process

Integrated multi-sector and multilevel coordination, communication, and participation have been critical elements in the preparation of Chile's NUMP

Regarding multisectoral and multilevel governance, Chile is a highly centralised country with a low public culture of territorial linkage and involvement in decision- and policy-making. This situation has impacted the development of the NUMP due to the difficulties in incorporating the particularities of the different territories into their development plans, as well as in linking transport with other sectors and ministries, making it challenging to formulate comprehensive measures to reduce emissions.

Moreover, the empowerment of the transport sector around the climate crisis is still challenging. Although the NUMP has facilitated this approach, there is still a significant gap for the transport sector to communicate in a transparent and timely manner the impact it has on the climate and opportunities for change.

In Chile, integrated urban planning still fails to incorporate both the climate crisis and other development issues, such as gender perspectives and inequality. These areas are not yet fully assumed by the different sectors directly influencing urban spaces and their dynamics.

Local governments possess more profound knowledge of urban mobility needs

Regional governments possess better knowledge and understanding for selecting sustainable mobility measures that are more suitable for their contexts. Hence, the National Sustainable Mobility Strategy offers cities and regions a general enabling framework for developing SUMP that local governments will complement by adding context-specific insights and adapting the proposed available measures to create effective SUMP road-maps.

Highlights from the past year

A financing programme will complement the National Urban Mobility Strategy

GIZ is currently supporting the development of a public financing programme to fund two national sustainable mobility strategy measures. These measures are "No. 6: Disincentive to the use of pollutant vehicles" and "No. 12: Road space redistribution." The aim of this programme is to create a financing alternative for regional and local governments interested in controlling the adverse effects of transport, acting simultaneously on both demand (such as Measure 6 on discouraging the use of polluting vehicles) and road supply (such as Measure 12 on the redistribution of road space).

This program is being developed throughout 2023 but has encountered several barriers. In Chile, the development of the implementation strategy, began with the formulation of a sustainable mobility program intended to operate as a competitive fund with resources from the central government allocated to regional governments for the design and implementation of such projects. However, the development of this program has faced significant difficulties due to the fact that the attributions and budgets necessary for the implementation of sustainable mobility policy measures are under the purview of different ministries within the national government, and the management of this program would require an alignment of interests that seems difficult to achieve. In addition, the NUMP serves as a normative but not a binding policy.

Nevertheless, the option of embedding this program within a binding legal framework is being considered and developed. Specifically, within the Regional Land Use Plans (PROT) and Regional Action Plans on Climate Change (PARCC). In this way, pressure is exerted on the authorities and decentralization is strengthened.

Antofagasta, Chile

Partner city

Status of the project: Completed Sustainable Urban Mobility Plan



Basic Information

Antofagasta urban area: 30,718 km²

Population: 388,545 | Growth rate: 2%

Region capital city

GDP per capita: USD 47,000

Modal Share:

Formal public transport: 25.08%

Walking: 28.31%

Cycling: 0.33%

Private cars: 35.13%

Taxis: 9.13%

Freight vehicles: 1.28%

Other: 0.74%

National GHG emissions per capita: 5.92 (tCO₂eq)

Exposure to climate change: MEDIUM

Context

Antofagasta spans 30 km length and on averages 2 km in width, where approximately 380,000 citizens residing there according to the 2017 census. The city, primarily reliant on the copper mining industry for economic development attracts tens of thousands of migrants seeking employment opportunities. The intercensal variation (2002-2017) indicated a notable population increase of 22.99%, surpassing the national growth rate of 16.26%. Antofagasta experienced a significant population surge, adding 72,396 new inhabitants during the intercensal period. A considerable portion of these newcomers are immigrants drawn to the region by its climate and employment prospects.

Around 100,000 vehicles traverse the city daily, covering average distances ranging from 5.9 and 7.4 km. Geographic constraints and demographic pressures have pushed the city's expansion to the north and the south, with more than 60% of the population residing in the northern sector. Nonetheless, the central area remains the focal point for services, employment, and economic activities leading to congestion and straining the already inadequate transport network. The transport network has, in turn, only exacerbated urban development and land use challenges. The two branches of the private train that transports materials from the mines to the port pass through the heart of the municipal territory, dividing the city in two, interrupting traffic flows and consuming a large part of the urban territory with its right of way.

Faced with this, the Regional Government, in conjunction with the Local Government and other institutions, has promoted a series of mobility initiatives that complement the current public transport system and the urban transport master plan. However, these are not necessarily linked to each other, and their impact in terms of emissions is unknown.

The regional Government of Antofagasta has the mandate and responsibility to finance mass public transport infrastructure, not its operation. It has the authority to borrow from international finance sources. Systems and procedures are not yet in place to monitor, evaluate and report on urban transport development.

The SUMP process has already achieved important milestones. A Technical Board that institutionally and politically validates the development of the SUMP has been established, as well as a Social Board responsible for including the

demands and perspectives of citizens and other stakeholders in the SUMP. The authorities also set up a website (www.movilidadantofagasta.cl) that is the primary communication tool with citizens, hosting surveys and news.

Phases 1, 2 and 3 of the SUMP development process have ended. There is already a consolidated vision, objectives, indicators, and goals for the SUMP and a selection of measures. SUMP's official launch happened in November 2022.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan

Funded by: European Union

Funding amount: EUR 500,000

Implemented by: GIZ through the EUROCLIMA+ Programme

Local counterpart: Regional Government of Antofagasta

Supported activities:

- Develop an Integrated Sustainable Urban Mobility Plan, incorporating environmental goals and implementing monitoring, reporting and verification (MRV) mechanisms to existing measures and isolated individual modal plans
- Support the integration of various modes of transport and enhance existing bike lanes, sidewalks and public transport infrastructure
- Formalise the Technical Board for Sustainable Mobility within the city
- Provide training for regional and municipal government officials
- Foster citizen empowerment and ensure their access to decision-making process, with a focus on investment initiatives

Finance leverage: USD 2.313.292.800

Status of the SUMP process

Project start date: May 2018

SUMP adoption date: 2022 Q4

Completed outputs:

- Status quo analysis, including emissions inventory
- Implementation of the communications and participatory process strategy, including the website and social media accounts
- Implementation and results of online surveys
- Implementation of the Technical Board
- Implementation of the Social Board
- MRV plan
- Phase I to IV completed
- Draft SUMP policy document
- Establishment of an [Observatory for Sustainable Urban Mobility](#) in the city of Antofagasta
- Communications products (graphic summary of the policy text, short video, poster)
- Launch of SUMP implementation

SUMP key measures and cost estimates

The following table highlights the most significant measures identified in the SUMP. The measures presented here are part of the prioritised set of measures¹².

Measure	Cost Estimate
Total prioritised measures	USD 1,222,680,555
Physical (infrastructure, rolling stock, etc.)	USD 1,202,049,946
Renewal of buses and collective taxis fleet	USD 417,000
Mass transit system	USD 576,666,667
Shelters and public transport transfer zones	USD 2,027,778
Network of high-standard pedestrian axes	USD 299,042
Extending the network of cycle lanes and cycle parking areas	USD 7,381,944
Urban renovation zones and incentives for residential use	USD 1,291,667
Traffic calming measures	USD 4,861,111
Enabling and consolidating urban transects	USD 78,889
Continuity of north-south road axes	USD 214,930
Integrated intermodal stations and terminals	USD 16,541,667
Technical (studies, plans, design)	USD 76,000
Restructuring of the taxi-bus service network	USD 76,000
Policy & regulation	USD 20,569,444
Parking management policy	USD 55,555
Incentives for the generation of centralities	USD 3,166,667
Incentivos para la generación de centralidades	USD 69,444
Integration of logistics in land-use planning	USD 576,389
Establishment of a regional metropolitan transport corporation	USD 76,389
Development of the Public Space Infrastructure and Mobility Plan	USD 16,625,000

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

Urban transport investment measures	CapEx Estimate
Public transport	USD 579,284,722
Active transport	USD 314,965,277
Disincentive car use	USD 17,888,888
Land use and public space	USD 430,152,777
Freight and logistic transport	USD 716,027,777
Intermodality	USD 310,513,888
Governance	USD 16,701,388
Total	USD 2,385,534,722

¹² Measures that due to their technical, financial feasibility and GHG emissions reduction potential are indispensable to kick-off the implementation of Antofagasta's SUMP.

Finance leverage

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

Description	Source of financing	Status	Amount
State funding sources	Regional Government of Antofagasta	Planned	USD 497,011,200
State funding sources	Ministry of Housing and Urban Planning	Planned	USD 414,019,200
State funding sources	Ministry of Public Works	Planned	USD 406,896,000
Electrification of the freight train	Private company investment FCAB	Planned	USD 576,800,000
Concession mechanisms through public-private partnerships		Planned	USD 418,566,400

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

Package of measures	Measure	Investment	Concessional investment
Public Transport	Redesign of the service network of taxi buses	USD 62,755	
	Renewal of the vehicle fleet of taxi buses and collective cabs	USD 342,300	USD 342,300
	Mass transit system	USD 473,743,200	USD 399,350,000
Active Transport	Shelters and transfer areas for public transportation	USD 1,665,860	
	High-standard pedestrian axis network	USD 245,668,710	
Car disincentive	Expansion of the bicycle lanes and bicycle parking network	USD 6,064,415	
	Traffic calming measures	USD 3,993,500	
Land Use and Public Areas	Parking management policy	USD 45,640	
	Incentives for the generation of new urban centers	USD 2,601,480	
Logistic transport	Urban renewal zones and incentives for residential use	USD 1,061,130	
	Integration of logistics in land use planning	USD 473,515	
Intermodality	Integration of rates and payment methods	USD 57,050	
	Continuity of north-south road axes	USD 176,569,750	
	Enabling and consolidation of urban transects	USD 64,808,800	
Governance	Integrated intermodal stations and terminals	USD 13,589,310	USD 12,151,650
	Creation of a regional corporation of metropolitan transportation	USD 62,755	
	Development of the Infrastructure and Mobility Plan in the Public Space (PIMEP)	USD 13,657,770	
TOTAL		USD 1,004,456,530	USD 412,984,950

Projected impacts

Indicator	Impact 2030 (SUMP vs BAU)	Baseline – 2017	Projected 2035 BAU	Projected 2035 SUMP scenario
Total annual GHG emissions (Mt CO₂eq)	-0.36 Mt CO ₂ eq	0.343 Mt CO ₂ eq	0.400 Mt CO ₂ eq	0.364 Mt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	Not quantified	815 kg CO ₂ eq / capita	Not quantified	600 kg CO ₂ eq / capita
Access				
Increase in the proportion of the population living within 500 meters or less of a public transport stop	Not quantified	80.4% (2018)	Steady	90%
Modal share				
Increase in the modal shares of trips by public transport, walking and cycling	Not quantified	63.3% (2018)	Gradually decreasing	70%
Road safety				
Decrease in traffic fatalities in the urban area, per 100,000 inhabitants	Not quantified	5.56 fatalities / 100,000 hab (2018)	Gradually increasing	3.50 fatalities/100,000 hab

Perspectives for implementation

Public authorities are working together to allocate funding for SUMP implementation

The regional Government worked during December 2022 with other central and local government public agencies to develop a programming agreement for financing the projects of the SUMP. A programming agreement is a financing agreement between two or more financial institutions, such as Ministries, Municipalities and Regional Governments, aimed at pooling resources for the achievement of an objective of high regional interest.

Insights from practice: lessons learned from the SUMP process

Global methodologies need to be adapted to the local context

Transport planning methods and tools used for SUMP development must meet the requisites of the Chilean national investment system; otherwise, projects cannot obtain financial resources from the central Government. Learning from Antofagasta's SUMP, the regional Government has overcome this problem in a new project when developing terms of reference for Calama's SUMP. The central Government accepts the planning methods and tools used so that projects can qualify for public resources.

Participation is a crucial component of the SUMP formulation, yet related strategies must be the most cost-efficient alternatives considering the available resources. It is important to consider public participation from the beginning of the SUMP process. This trade-off worked very well for the Antofagasta SUMP case, becoming one of the strengths of this experience. Public participation was particularly relevant for understanding the current problems and needs of Antofagasta's population.

Although the generation of two participatory roundtables (the Technical Roundtable and the Social Roundtable) was a successful process in Antofagasta, it required more resources and the need to cross-reference the work carried out in both spaces. Generating a single broad participatory roundtable (multi-sectoral, multi-level and multi-stakeholder) from the beginning of the SUMP can reduce costs and increase efficiency for process management.

It is vital to be able to communicate progress while the SUMP is under development so that people can become involved in it to generate a «collective awareness» about the urgency of acting in the transport sector to mitigate the climate crisis. Implementing the website and other digital tools proved to be of great help in this regard.

Even if it is not a binding policy instrument, ensuring budget allocation at different levels of government and governance bodies can uphold the SUMP

The Antofagasta SUMP is a non-binding public policy instrument, so its approval rests in the hands of the principal, which corresponds to the Regional Government of Antofagasta. However, to secure part of the public funding required for the plan, the Regional Government has committed to sign a «Programming Agreement», which is the general instrument through which Regional Governments engage shared funding with Ministries to finance local initiatives.

The Regional Secretariat of the Ministry of Housing and Urban Development has decided to give continuity to work carried out by the SUMP participatory roundtables, merging them and taking over their leadership. This leadership will make it possible to exercise control over the SUMP's implementation and continue empowering the stakeholders involved.

Sustainable urban mobility should be planned in interaction with other urban planning instruments and adapted to the local context

Antofagasta conceived its SUMP as compatible with other urban public policies, such as regeneration, housing or development plans, since authorities should not understand mobility from a single sectoral perspective. Several urban components influence urban mobility and vice-versa.

For the SUMP development in Antofagasta, the SUMP team harmonised the SUMP methodology proposed by MobiliseYourCity with existing transport or mobility planning processes and experiences in the local territory. Existing transport plans already addressed aspects such as modelling, indicators or measures' scope.

Antofagasta launches Chile's first SUMP mobility observatory

As part of the SUMP process, Antofagasta presented its Mobility Observatory, a platform that allows the visualisation of the indicators of the SUMP, the first of its kind in a Chilean city. The observatory consists of a web platform that monitors the implementation of the Antofagasta SUMP and its strategic objectives. [Read more on EUROCLIMA+ website.](#)

Development of a Diffusion Report of Antofagasta's SUMP

An Antofagasta SUMP diffusion report was developed in November 2022. The purpose of this report is to provide information on the SUMP formulation process, its objective, key definitions, vision, measures, costs, roadmap, among other details.

Colombia

Partner country

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



Basic Information

Population: 50,662,678 (2020) | Growth rate: 0.8%

Percentage of urban population: 77.1%

GDP per capita: USD 5,334

Percentage of the population living below the national poverty line: 27%

Annual average infrastructure expenditures as a percentage of GDP: 1.8%

Nationally Determined Contribution (NDC): Committed reduction of 51% of overall GHG emissions compared to BAU by 2030, unquantified mobility target

National GHG emissions per capita: 3.75 (tCO₂eq)

Proportion of transport related GHG emissions: 12%

Exposure to climate change: HIGH

Context

Colombia is Latin America's third most populated country after Brazil and Mexico. Bogotá is its capital and most populated city, the country's economic, political and financial centre. 77.1% of Colombian citizens live in cities. In rural areas, access to education, public health and other essential services is still limited in many regions. Poverty and inequality are significant challenges for Colombia, with a multidimensional poverty index of 20.2% and a GINI index of 0.522, placing it as the second-most unequal country in Latin America, only after Honduras. According to the National Ministry of Finance and Public Credit reports, Colombia's Gross Domestic Product (GDP) has been growing for the last two decades, with an average annual growth rate of 3.8%. This economic growth is remarkable, given the country's long-standing internal conflict. Colombia is an upper-middle-income country. Historically, oil and other energy products have played an important role in Colombia's economy. The country's priority exports and industrial growth areas are oil, electronics, agriculture, information technology, and shipbuilding.

Since road transportation in Colombia was responsible for 12% of the overall country-wide GHG emissions (37.8 MtCO₂e) in 2018, tackling the transport sector is crucial for complying with climate change mitigation goals. Electric mobility can be a powerful tool for achieving such goals. Additionally, public concern about the negative impacts of air pollution on public health has increased over the past years. The transport sector (mainly, diesel freight and public transport) is responsible for 25% of PM_{2.5} emissions in large cities, the most relevant air pollutant in the Colombian context.

Buses play an important role in Colombia's transport landscape, from small feeder buses to bi-articulated high-frequency buses. They contribute to 23% of Bogotá's local air pollution. However, given the increasing urban population densities and the deteriorating air quality, the bus systems' various configurations present an untapped potential for providing access to clean urban mobility. Electrification of public transport is an intersectoral priority of at least four national policy agendas (Energy Efficiency, Climate Change, Air Pollution and Urban Mobility) and three international policy commitments: the Paris Agreement, the New Urban Agenda and the Sustainable Development Goals.

Since the electrification of transport is vital for complying with climate commitments, promoting green growth, and protecting human health, the National Government has started developing a National E-Mobility Strategy in 2019. As electric buses have considerably higher upfront investment costs than traditional technologies and the technology is relatively new in Colombia, the technical assistance aimed to overcome these barriers with a program that supports the electrification of Colombia's public passenger transportation systems.

The technical assistance had four workstreams aiming at creating a suitable environment for electromobility deployment in cities without significant zero-emission fleets:

- **Technical and regulatory design:** Identify the technical and regulatory needs that should be located at the transport policy level in the country to enable the transition to electric public transport systems.
- **Financial design:** Analyse the context, barriers, costs, and economic conditions of public passenger transportation in Colombia to construct, in conjunction with our counterparts, an instrument to facilitate investments in electric fleets and infrastructure.
- **Design of a coordination and governance scheme:** Through a systemic process with the national government counterparts, define the decision-making frameworks and methods to approve and follow up on the policies and plans that enable technological advancement.
- **Design of an MRV system:** Build methodologies and capacities to monitor the development of policies and their impacts, especially regarding the mitigation of Greenhouse Gases.

Support from the Partnership

Technical assistance: National Urban Mobility Policy or Programme (NUMP)

Type of NUMP: Programme NUMP

Funded by: German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

Funded amount: EUR 800,000

Implemented by: GIZ through the TRANSfer III project

Local counterpart: Ministry of Transportation

Main purpose of the NUMP:

The TRANSfer project helped develop a National E-Bus Promotion Programme. This programme is comprised of a national investment fund to finance the upgrade of public transportation fleets, and is intended to set the institutional arrangements and capacities for large-scale monitoring, reporting and verification methodology for e-bus deployment.

Supported activities:

- Financial and economic analysis for e-bus deployment at a large scale
- Pre-feasibility of a public investment fund
- Support to legally structure a national fund for e-buses
- Supporting implementation of a national framework on e-mobility and its governance
- Diagnosis of technical gaps and barriers for policymakers
- Ex-ante and ex-post MRV system preparation

Finance leverage: USD/EUR 870,000

Status of implementation

Project start date: 2019 Q1

NUMP adoption date: 2022 Q1

Completed outputs:

- Zero emissions vehicles' investment fund for buses and freight legally established
- Fleet replacement and investment scenarios for every transport system in the country
- Pre-feasibility, structure proposal and stakeholder awareness for the instrument
- National-scale institutional arrangement for e-mobility
- Operation and maintenance of an e-bus training program in place with an employability and gender perspective
- Course for e-buses system planning and electricity procurement for operators
- Mitigation potential and MRV methodologies for e-buses in line with the National Registry of Emissions Reductions (RENARE)
- Assessment of regulatory and capacity building needs, technical and policy barriers for e-bus deployment
- International course on transport systems based on e-buses (with Moving Chile)
- Employability strategy and technical curriculum with a gender perspective
- Electricity procurement guidelines
- E-bus workshop in Cali, Colombia (24-25 February 2020, 70 participants from cities, Ministry of Transportation, and academia)
- Fund included in the current Government (2022-2026) plan, extended to fund instruments for taxis

Next expected outputs:

- The fund design and setting has not been finished by the end of 2023. It is expected to be running next year.

NUMP key measures and cost estimates

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

Measure	Cost Estimate
Public fund to finance bus fleet renewal (estimated from medium investment scenarios)	USD 460 million

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

Urban transport investment measures	CAPEX Estimate (€M)
Nationwide bus fleet renewal - (estimated from medium investment scenarios)	USD 850 million
Street shaping urban roads and traffic management	0
Other measures	0
Total	USD 850 million

Finance leverage

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

Financing resulting from the NUMP	Source	Amount
E-motion project funding proposal for Latin America to the Green Climate Fund	AFD	EUR 570,000
Public fund investment manuals and implementation	ADB	EUR 300,000

Projected impacts

Indicator	Impact 2030 (NUMP vs BAU)	Baseline - 2019	Projected 2030 BAU	Projected 2030 NUMP scenario
Total annual GHG emissions (Mt CO ₂ eq)	-5.7 Mt CO ₂ eq	34 Mt CO ₂ eq	43.4 Mt CO ₂ eq	37.7 Mt CO ₂ eq
Annual transport-related GHG emissions per capita (kg CO ₂ eq)	- 113 kg CO ₂ eq / capita	675 kg CO ₂ eq / capita	862 kg CO ₂ eq / capita	749 kg CO ₂ eq / capita

Perspectives for implementation

The Colombian congress approved a 2021 law creating the national fund for e-bus renewal

In 2021, a national law for climate action (Ley 2169 – 2021) was enacted, aiming to establish goals and actions to achieve carbon neutrality, climate resilience and low-carbon development in Colombia in the short, medium, and medium- long-term. The law creates a national fund for the technological upgrading of public transport systems and freight fleets. This fund will promote purchasing low or zero-emission vehicles and the support infrastructure required for the energy supply. The potential financial sources for the fund include local authorities, non-reimbursable technical cooperation, grants, and financial revenues, among others. Together with the government, the implementing partner (GIZ) is committed to keeping the support to find feasible funding alternatives to feed the created fund.

Despite the change in National Government, GIZ positioned the project in the political agenda for implementation

The technological upgrade fund for public transportation fleets and light freight was a process approved by Law 2169 on December 2021. Its implementation has been a dynamic process taking most of 2022. This is significant since the country changed national government, and the new administration needed to reprise implementation.

Given that the fund is written in the law, its implementation was practically assured. Nonetheless, GIZ carried out the following activities for the project to be kept in the hands of decision makers:

- Ensuring investment manual resources with other cooperating institutions
- Including the mandate for implementation and potential funding sources as part of new administration's government plan
- Considering adding additional transport modes (taxis and heavy freight) to the fund's scope

1 Calculations made by the MobiliseYourCity Secretariat based on Colombia first NDC (<https://unfccc.int/NDCREG>) and Colombia MRV method (<https://changing-transport.org/wp-content/uploads/Infografia-traCS-EN-1.pdf>)

Insights from practice: lessons learned from the NUMP process

The decision-makers' ownership of the project contributes to keeping it alive

The experience with Colombia's technology upgrade fund showed that the key to achieving the project's adoption and implementation is to generate ownership among decision-makers and their advising teams. Also, it is necessary to shield the process from political conditions by achieving their legal approval as part of more significant initiatives.

The electrification of public transport in Colombia still needs public investment to cover capital costs

Studies indicated that the difference between the total cost of ownership of an internal combustion engine bus and an electric unit was considerably high. As a result, transport authorities and public transport operators in intermediate and small-sized cities cannot cover electrification's capital costs through soft loans. Instead, a considerable package of subsidies from the national government is required to make the e-bus technology competitive regarding its capital investment costs.

Nationwide emission reduction programmes in the transport sector can be comprehensive but flexible

The technical assistance delivered in Colombia did not follow the traditional NUMP formulation approach. It tried to meet the needs of four pre-identified barriers for deploying electric mobility at the national scale and achieving effective mitigation outcomes. Thus, project's four workstreams (finance, governance, capacities and MRV) interacted harmoniously to deliver concrete results related to the political and financial commitment to the renewal of the public transport fleet in the country. However, the project did not follow the guidelines for formulating a NUMP.

Electrification's sustainability goes beyond ensuring funds and includes support infrastructure, capacity development, and systemic change

Building capacities in electric mobility within the transport sector is critical to ensuring the sustainability of a solid fleet-renewal policy. Transport authorities must interact with the energy sector to enable fertile conditions for electromobility deployment. Moreover, operators and technicians need to be trained in the maintenance and mechanics of electric vehicle systems so that operation management is not at risk. The inclusion of a gender focus in this component intended to close the gender gap and enable women access to jobs in the transport sector.

Highlights from the past year

The technology upgrade fund is included in the newly elected national government's (2022-2026) strategic sustainable mobility and decarbonisation tools

The newly elected government validated the implementation of the fund, including the possible funding alternative that could be used for the investment (General Budget, Demand Management Tools, and green taxes) and broadening the scope to taxis and heavy-duty freight.

Ibagué, Colombia

Partner city

Status of the project: Completed Pilot Project



Basic Information

Urban area: 56.8 km²

Population: 529,635 | Growth rate: 0.69%

Region capital city

GDP per capita: USD 5,024

Modal Share:

Formal public transport: 34.37%

Informal public transport: 0.3%

Walking: 26.89%

Cycling: 0.9%

Private cars: 11.1%

Private motorbikes or 2-wheelers: 15.08%

Taxis: 7.26%

Other: 4.7%

National GHG emissions per capita: 3.58 (tCO₂,eq)

Exposure to climate change: MEDIUM

Context

Ibagué has 541,101 inhabitants (DANE, 2018), of which 501,991 (92.77%) are located in the municipal capital, and 39,110 (7.23%) in populated and dispersed rural centres. The urban area is positioned in the Andean region with great ecological riches. Its strategic position in the country enables strong economic, social, and cultural interactions with cities such as Bogotá and Cali, located 205 km and 279 km away, respectively. According to the Ibagué Sostenible report (2018), the city has great opportunities to consolidate its vocation and play a more relevant role at the national level. Regarding its territorial articulation, Ibagué is an obligatory point of passage between the Pacific Ocean and the centre of the country. This location has positioned the city as a critical node facilitating the mobilisation of passengers and cargo. Additionally, Ibagué's economy revolves around commerce, services, agriculture, mining, and generating products and services of high added value.

In recent years, Ibagué's urban growth, especially on its outskirts, has generated accessibility problems to the city's downtown area and caused travel times to increase substantially. Hence, it is important to integrate new mobility models that connect the historic centre where much of the urban equipment is located. The Mobility and Public Space Master Plan estimated that 905,000 trips are made every day in Ibagué, of which 36% are made to commute, 25% to study, 11% for personal errands and the remaining 28% for shopping, accessing health, recreation, and other activities. Mobility accounts for 32% of Ibagué's total CO₂ emissions, making it the second most polluting sector in the city. The city has 35.4 kilometres of cycle infrastructure. The municipality of Ibagué does not yet have exclusive roads for public transportation since the Strategic Public Transportation System (SEPT – Mass Transit System) was approved in August 2020 and is now under implementation. According to the city's Mobility and Public Space Master Plan, the public transportation service has 32 routes with a vehicle fleet of 1,018 vehicles, of which 73% are buses, 16% are coaches, and the remaining 11% are minibuses. The Mayor's Office of Ibagué, headed by Mayor Andrés Fabián Hurtado Barrera (2020-2024), has 15 sectoral secretariats: General, Planning, Finance, Administrative, Government, Health, Education, Economic Development, Culture,

Environment and Risk Management, Community Social Development, Agriculture and Rural Development, Infrastructure, Mobility and Information and Communication Technologies – TIC. The local Counterpart - INFIBAGUÉ, Ibagué Municipality, has the mandate and responsibility to finance mass public transport infrastructure. However, 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 mobility.

The project implemented by GIZ through the EUROCLIMA+ Program consists of a pilot plan for the implementation of a sharing system for assisted pedalling bicycles for the city of Ibagué. This system will have eight stations, 69 mechanical bicycles and 16 electric-assisted bicycles across the city centre. The strategic objective of the project is to increase the number of residents and circulating populations in downtown using shared bicycles while promoting cycling as a main mode of transportation. Additionally, the pilot project aims to build public authorities' capacity in sustainable mobility. The pilot seeks to reduce the levels of environmental pollution from mobile sources and promote healthy lifestyles by increasing the modal share of bicycles from individual motorised transport.

For the implementation of the public bicycle system pilot, EUROCLIMA+ acts as a strategic ally with INFIBAGUÉ, an entity that seeks to encourage, promote, and contribute to sustainable development and foster a social sense of the city by bringing together government agencies, economic associations and citizens. INFIBAGUÉ will be responsible for the implementation of the pilot project. To this end, licenses have been arranged with the Planning Secretariat for the installation of the stations in public spaces, and the mechanisms for the future sustainability of the pilot have been coordinated with the Municipal Council.

The technical assistance contributes to institutional strengthening by improving the capacities of the mayor's staff involved in the project. It does so by linking them to the private sector and other experiences through the Community of Practice on sustainable urban mobility.

Support from the Partnership

Technical assistance: Pilot Project Development

Funded by: European Commission

Funding amount: EUR 500,000

Implemented by: GIZ through the EUROCLIMA+ Program

Local counterpart: Ibagué Municipality - INFIBAGUÉ

Finance leverage: 195,000 EUR approx. (ordinary budget from local government up to 2024)

Supported activities:

- Formulation of a bike sharing pilot project
- Development of a strategic planning document that ensures the sustainability of the project
- Proposal of a business model combining both public and private resources for the bike sharing system
- Building public authority capacity for sustainable mobility planning

Status of implementation

Project start: 2019

Project completion: 2023 Q1

Completed outputs:

- Technical, legal and financial structuring in the feasibility stage and support in the tender process for system implementation
- Successfully completed the tender process, in which the implementation and start-up of the pilot was awarded in Q3 of 2021
- INFIBAGUÉ managed permits for the installation of stations in public spaces with the Planning Secretariat
- Manufactured bicycles and stations
- Completed software development
- The bicycles arrived in the country at the end of March 2022
- Installation and station deployment Q3, 2022
- Tender process to select an operator in November 2022
- Pilot project private operator selection and contract signing in January 2023
- Inauguration of the system in February 2023
- Deliverables of consultant additional support (operational scheme options) in March 2023

Insights from Practice: Key Pilot Project Takeaways

Considering that the transport sector in Ibagué is the second most responsible for CO₂ emissions, it is paramount to promote strategies to decarbonise transport. The implementation of a public bicycle pilot is in line with this objective, as well as promoting healthy lifestyle habits and offering alternatives for people with low incomes.

Lessons Learned from Ibagué

The implementation of public bicycle systems requires a clear and defined steering structure within the city. This should ideally be implemented from the project structuring stage so that it reaches maturity and can be operated smoothly.

In the same way, it is essential that the city selects a business model according to its specific conditions. It is advisable to incorporate various funding sources to reach financial closure more easily.

Results and perspectives for scaling

The findings and lessons learned from the structuring process of the Ibagué public bicycle system are part of the [Guide for the implementation of Public Bicycle Systems](#) issued by the Colombian national government on August 2, 2022, with the support of EUROCLIMA+ and the C40 Cities Finance Facility as part of the actions included in the [National Active Mobility Strategy](#) with a gender and differential approach - ENMA, also supported by EUROCLIMA+. This guide includes a step-by-step guide and recommendations for replicating and scaling up the implementation of public bicycle systems in Colombia.

Highlights in the past year

The system was put into service in February 2023 through an indirect public operation scheme (private operator paid by the local government). To date, it has more than 700 active users who together have made more than 3,000 trips with a journey time of 25 minutes each.

From 2024, the system will start to be operated directly by Infibagué, who, during these first months of operation, have acquired the needed experience so that they can have better control at a lower cost.

Curridabat & Montes de Oca, Costa Rica

Partner city

Status of the project: Completed pilot project



Basic Information

Urban area: Curridabat 15.92 km²

Montes de Oca 15.16 km²

Population: 79,577 (Curridabat) and 62,533 (Montes de Oca) | **Growth rate:** 0.78% (Curridabat) and 0.36% (Montes de Oca)

Cantons of the Metropolitan Area of San José

GDP per capita: USD 11,215

Modal Share (Metropolitan San Jose Area, 2016):

Formal public transport: 26%

Informal public transport: 2%

Walking: 36%

Cycling: 1%

Private cars: 27%

Private motorbikes or 2-wheelers: 5%

Taxis: 2%

Train: 1%

Exposure to climate change: MEDIUM

Context

Montes de Oca and Curridabat are two of the 21 municipalities of the Metropolitan area of San José; an urban agglomeration with more than 1.5 million inhabitants (one-fourth of the total national population). They are conurbations in the east zone of the metropolitan sprawl. Both cantons are highly developed, with a service-based economy. Moreover, Montes de Oca hosts many well-known universities in the country. Most of the residential and commercial activities for both municipalities are located in connection to the border with the canton of San Jose, Costa Rica's capital.

As of 2016, more than 2.6 million trips were generated within the metropolitan area of San Jose in a working day. Although sustainable transport alternatives dominate the modal split (36% walking and 26% public transport), private modes (cars and motorbikes) have gained relevance, sharing 32% of the total trips. The motorisation rate is 0.5 cars per household and is expected to grow 4% annually. In contrast, cycling has very low penetration as a transport mode.

Half of the trips in Curridabat and Montes de Oca are either internal or "inter-cantoniales", falling within their own territorial boundaries. The rest have the canton of San Jose as their destination. Historically, and due to their geographic and social circumstances, cycling has held a more significant role in urban mobility in Curridabat and Montes de Oca compared to

neighbouring districts. This preference for the bicycle is influenced by the presence of students in the area and the working class in medium- and low-income settlements (mostly men).

There is no mass transit system in the municipalities, as in the rest of the metropolitan area. However, in 2017 an Integral Sustainable Urban Mobility Plan (PIMUS for its acronym in Spanish) was formulated for the metropolitan area of San Jose, aiming at integrating all modes of transport with urban planning. The PIMUS proposes the promotion of active modes of transport and the deployment of cycling infrastructure.

Since 2002, Curridabat's administration has promoted and encouraged a progressive and environmental vision of the city. Under the slogan "Ciudad Dulce" (Sweet City) the local government has undertaken interventions favouring biodiversity and the balance between constructed and natural environments. The canton has set a long-term commitment for active mobility. Decision-makers and city officials in both municipalities consider themselves active urban cyclists. In turn, Montes de Oca implemented one of the first dedicated cycling lanes in the metropolitan area, enhancing its connection with the canton of San Jose.

The local counterparts do not have the mandate and responsibility to finance mass public transport as it is a national jurisdiction. As for the transport or cycling infrastructure, responsibilities are shared between national and local authorities, depending on the type of roads on which cycling lanes are located. Systems and procedures are partially in place to monitor, evaluate and report on urban mobility.

Considerable efforts were needed to consolidate the existing cycling infrastructure and to enlarge it beyond isolated initiatives. Additionally, governance schemes that could enable the construction and maintenance of cycling infrastructure were missing, leading to limited coordination between national ministers and local governments. In this context, the lack and atomisation of cycling infrastructure, and the ambiguous responsibilities of public authorities for active mobility planning threatened the long-term scalability of such initiatives.

The objective of the pilot project was to improve the conditions for the mobility and accessibility of urban cyclists in the cantons of Curridabat and Montes de Oca by developing cycling demand data, a plan for cycling infrastructure for both cantons, and the design and adequacy of a prioritised network of cycling lanes. Participatory and educational processes for data collection and systematisation were implemented with cycling communities in the study area, although the pandemic limited in-person activities.

Support from the Partnership

Technical assistance: Pilot Project development

Funded by: European Union through EUROCLIMA+

Funding amount: EUR 400,000

Implemented by: GIZ through the EUROCLIMA+ Program

Local counterpart: Municipality of Montes de Oca, Municipality of Curridabat, Ministry of Public Infrastructure and Transport, Ministry of Planning, Ministry of the Environment (through the Dirección de Cambio Climático) and Ministry of Foreign Affairs

Supported activities:

- Information gathering: Collect information on cycling infrastructure needs in a participatory manner in the cantons of Montes de Oca and Curridabat
- Diagnostic: Identify the infrastructure needs of people who use bicycles as a means of transport, prioritised based on data collected, technical criteria, and participation
- Implementation: Design and build the infrastructure in the cantons of Montes de Oca and Curridabat while strengthening the urban cycling planning capacities
- Evaluation: Systematise and disseminate experiences and lessons learned during the project implementation

Status of implementation

Project start: 2019 Q4

Project completion: 2021 Q4

Completed outputs:

- Participatory data collection: participatory workshops with medium- and low-income cyclists to collect information on urban cycling in the canton identified participants' infrastructure and capacity needs for urban cycling. During the lockdowns related to the COVID-19 pandemic, some workshops were held virtually, and information was gathered through interviews and secondary sources.
- Prioritised planned infrastructure: identified priority infrastructure for urban cycling based on collected data, technical and participatory criteria. This proposal included 54km of cycling lanes in Montes de Oca and 60km in Curridabat. 20 km were to be implemented with EUROCLIMA+ funds.
- Adequation of cycling lanes: permanent implementation of an initial 4-km cycling lane in Montes de Oca in March 2021 followed by the implementation of another 16 km in a second phase finished in late 2021.
- Scaling-up experience: experience and lessons learned documented and disseminated, to promote the development of similar and complementary projects in other cantons of the San Jose Metropolitan Area.
- Strengthening capacities: Population of the cantons of Curridabat and Montes de Oca sensitised about better urban cycling.

Insights from practice: key pilot project takeaways

Tactical cycling interventions favour the efficient use of resources

The selection of tactical alternatives for bicycle lane implementation was a wise move that enhanced efficiency regarding the use of the limited available resources. Thus, the bike lanes were implemented with the minimal required elements for their operation, though ensuring adequate conditions of road safety and considering the national technical guidelines. The bicycle lanes implemented in this project became permanent as the experience tested and provided feedback to the national technical guidelines for cycling infrastructure adopted during the project execution. Other actions aimed at fostering intermodality were made part of other activities linked to the pilot project, such as cycle-friendly adequations in train stops to allow cyclists to access public transport facilities.

Both political commitment and interinstitutional coordination enable project success

The driver for success in this project was the joint political commitment regarding active mobility and the coordinated work among technical officials and decision-makers. This group of collaborators was flexible and acted promptly to tackle emergent challenges. They also leveraged opportunities, especially those coming from the sanitary situation in the pandemic context. This group sought to enable synergies with other stakeholders in the public and private sectors and civil society. A governance structure for active mobility was created: "Red Intercantonal de Movilidad Activa - RIMA" (Intercantonal network of active mobility) to consolidate the cycling and walking network among different levels of government.

Results and perspectives for scaling

Replicability in the near future is ensured due to the assignment of both national and local resources to continue the cycling network expansion

Replicability in the future is expected to occur through a snowball effect. Efforts aimed at planning cycling infrastructure at the metropolitan level produced the Intermunicipal Territorial Plan for Active Mobility.

As the municipalities gained experience in how to implement adequate cycling infrastructure and better coordinate with the national government, implementation of the rest of the cycling lanes is likely to take place. Curridabat's municipality is already financing the expansion of its cycling network. This situation enables the incremental improvement of the existing network in both the short and long term. The Council of Road Safety (COSEVI for its name in Spanish) will also contribute to installing bollards in zones where cars reach high speeds.

Curridabat and Montes de Oca push cycling forward on the metropolitan policy agenda

With the launch of the RIMA, both Curridabat and Montes de Oca took the lead to continue the implementation of the Intermunicipal Plan for Active Mobility, encouraging neighbouring municipalities to undertake actions to deploy walking and cycling infrastructure.

Stakeholders and project participants achieved coordination with the Costa Rican Railway Institute (INCOFER for its acronym in Spanish) to allow cyclists access to the train infrastructure. The model is replicable.

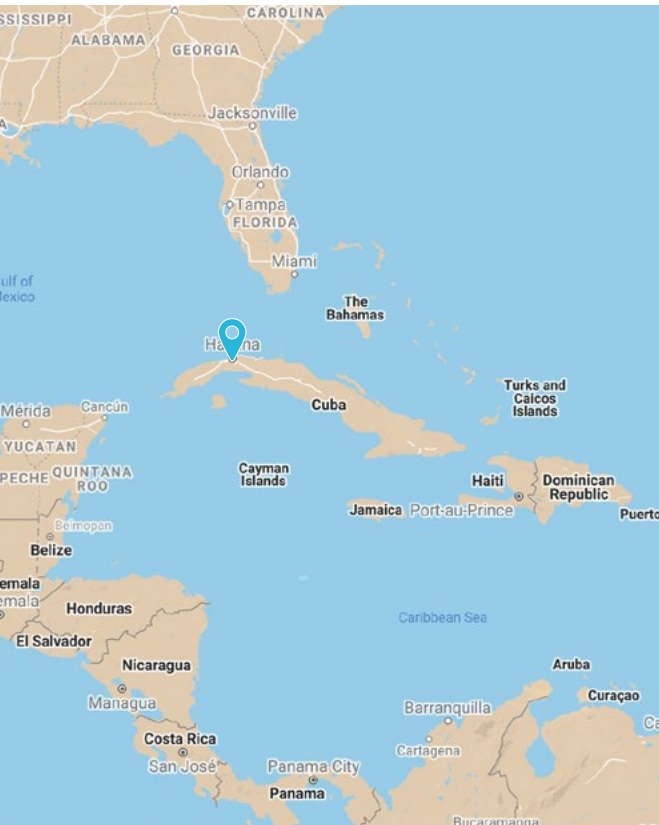
The municipalities approved budgets to expand cycling infrastructure. The Pilot Project also leveraged additional financial resources from the EU-funded MUEVE project to build part of the priority cycling corridors.

As the project was completed in December 2021, the factsheet has only marginally been updated in 2024.

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%

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 (tCO₂eq)

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 notably with a gross population density of around 41,000 inhabitants/km² while the net density in the city's residential areas is only around 18,000 inhabitants/km².

Havana has a polycentric structure, and its growth has preserved the oldest fabrics of some neighbourhoods. The axes that linked the oldest nucleus 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 the communication routes.

The bay, the fundamental reason for the location of the city, 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 zone, an intermediate zone and a peripheral zone. Despite the development beyond the central area, the main concentrations of jobs, cultural and recreational infrastructure and tourism are in a narrow strip close to the sea, which conditions current mobility patterns. Even today, the tunnel seems insufficient in terms of mobility.

Despite being a polycentric city, the leading metropolitan functions and the most significant number of jobs are located 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 conditions of the existing urban mass transport imply that citizens consume excessive time for transportation.

The city has a public transit system and already has 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 secondaries 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, improvement of 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 guarantee 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 the improvement of 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 700,000

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):

- Definition and preparation of a Pilot Project which aims 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 implementation (SUMP)

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 USD¹**

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	Cost Estimate
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 fare	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 USD²
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 measures 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 CO₂eq)	Not quantified	1,72 Mt CO ₂ eq ⁴	Not quantified	Not quantified
Annual transport related GHG emissions per capita (kg CO₂eq)	Not quantified	805 kg CO ₂ eq / capita	Not quantified	Not quantified
Modal share	TOTAL: +0.86%	Formal public transport: 43.6%	Formal public transport: 43.8%	Formal public transport: 44.5%
Increase of the modal shares of trips by public transport, walking and cycling		Walking: 46.2%	Walking: 46.2%	Walking: 46.2%
		Cycling: 1.1%	Cycling: 1.1%	Cycling: 1.1%
		TOTAL: 90.9%	TOTAL: 91.1%	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 was 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.

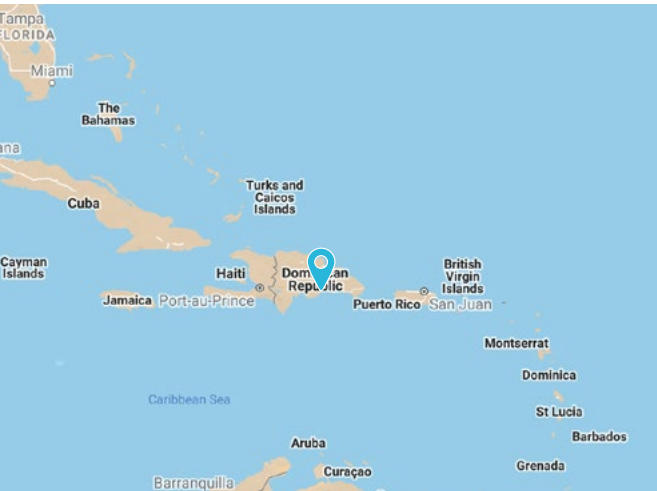
Implementing the SUMP requires a significant investment that exceeds the previous 20 years' level, with a more robust national contribution in foreign and national currency. Achieving this effort involves a structural change in financing in the transport sector, and a well-defined national contribution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

⁴ Estimation by the MobiliseYourCity Secretariat based on SUMP deliverables.

Santo Domingo, Dominican Republic

Partner city

Status of the project: Completed pilot project



Basic Information

Population: 3.66 Million

Urban area: 1,300 km²

Motorisation rate: 155.5 vehicles per 1,000 inhabitants

Transport emissions per capita: 128 g CO₂eq

GDP per capita: USD 9,700

Critical mobility challenges

The SUMP in a nutshell

Selected SUMP Measures

Total plan \$ 2.6 billion for urban mobility, from which \$1.25 billion already financed

Projected SUMP impact in 2030

<p>Only 10% of the population has access to formal public transport</p>	<p>\$ 1.8 billion to build a public transport offer with over:</p>	
<p>Predominance of private cars and informal transport services</p>	<p>From which:</p> <ul style="list-style-type: none"> • \$ 1 billion to extend and improve the metro network • \$ 763 million for BRT, tramway and buses • Improvement of attractiveness, inclusivity and communication of public transport 	<ul style="list-style-type: none"> • Annual greenhouse gas emissions reduced by 20% in 2030 • Increase access to formal public transport from 10% to 43% of the population of Gran Santo Domingo • Increased modal share of all public transports combined from 36% to 44% • 110 km of mass rapid transit lines
<p>Transport inequality: very poor conditions of transport for users without a private car</p>	<ul style="list-style-type: none"> • \$ 656 million for improved roads and streets • Modernisation policies for private and public transport vehicles • \$ 47 million for non-motorised transport infrastructure and a green corridor along the river • € 15 million for a bike-sharing system • Social tariff policy 	<ul style="list-style-type: none"> • 150 km of new or improved cycle lanes • 150 km of new or improved sidewalk • Improved affordability of public transport
<p>Wide variety of non-integrated transport services</p>	<ul style="list-style-type: none"> • Integrated tariff policy 	<ul style="list-style-type: none"> • Leading role of the new transport authority INTRANT

Key facts

City, Country	Santo Domingo, Dominican Republic
Population	3.4 million
Land area	1,300 km ²
GDP per capita	USD 9,700
Baseline motorisation rate ¹	155.5 vehicles per 1000 inhabitants
Annual transport emissions per capita ²	128 g CO ₂ eq
Local Partner (organisation)	Instituto Nacional de Transporte Terrestre (INTRANT)
Implementing partners	Agence Française de Développement (AFD)
Donors supporting technical assistance for SUMP	Agence Française de Développement (AFD), European Union (EU), Inter-American Development Bank
Amount in technical assistance	~ 550,000 USD
SUMP Implementation timeline	<ul style="list-style-type: none"> • Joined MobiliseYourCity in June 2017 • MobiliseDays in October 2017 • Start of SUMP in March 2018 • SUMP completed and approved in September 2019
SUMP Vision	An integrated approach to improve access to sustainable mobility services and socioeconomic opportunities for all citizens by integrating urban and transport planning, enhancing sustainable transport modes, and strengthening institutional, technical, and financial capacities of local transport authorities.
Key expected results (GHG, modal share and access)	<p>Compared to 2018, in a SUMP scenario by 2030 Santo Domingo can expect to</p> <ul style="list-style-type: none"> • Increase access to public transportation to 43% of Santo Domingo citizens from 10% • Increase total trips taken by public transport to 44% from 36% • Reduce GHG emissions by 30% compared to a business as usual (no SUMP)
Total SUMP Investment Requirement	<p>USD 2.6 billion</p> <p>Mass transit (CAPEX + OPEX - annual)</p> <ul style="list-style-type: none"> • 2018 (Baseline): 60 • 2023 (SUMP): 64 • 2025 (SUMP): 160 • 2030 (SUMP): 200

¹ For comparison with motorisation rates in European capital cities, Berlin has a motorisation rate of 330 car per 1000 inhabitants, and other capital cities in Austria, Belgium, Denmark, France, Hungary, Ireland and the Netherlands have a motorisation rate under 450 cars per 1000 inhabitants. Source: Eurostat Regional Yearbook 2020.

² For comparison, the annual transport (except air travel) emissions per capita in Germany are 1.61 tCO₂eq. Source: Die Umweltwirtschaft in Deutschland: Entwicklung, Struktur und internationale Wettbewerbsfähigkeit. www.umweltbundesamt.de

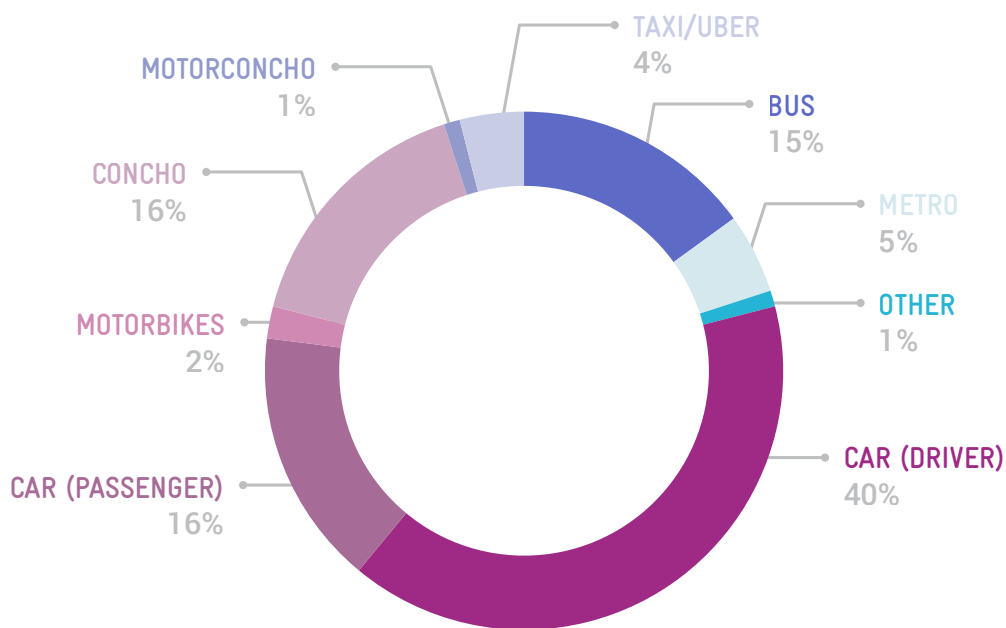
Diagnosis of urban mobility in Santo Domingo

Existing Mobility and transport services

Located in the Caribbean region, Santo Domingo is the administrative, economic, and political capital of the Dominican Republic. With a population estimated at more than 3.5 million inhabitants, representing one-third of the total country population, and with a projection of 4 million in 2030, Santo Domingo is a dynamic fast-growing city.

The current system of transportation in the City of Santo Domingo has been mostly the result of historically unregulated, uneven, and rapid urbanisation. The results are vastly different levels of service, socio-economic activities, and quality of life across the city's municipalities. The starkest differences can be observed between the city centre – the 'National District' – and its periphery, the latter being particularly affected by the lack of public services, including formal public transport.

This development pathway has fostered a transport system that is mainly based on motorised individual transport, with little consideration of public spaces and pedestrians and a nearly complete disregard for cyclists. Currently, motorisation rates range from 40 to 60 per cent depending on the municipality. Additionally, the high urban density in the National District and the very narrow main roads in the peripheral municipalities heavily constrain the ability to expand public spaces and to repurpose current roads for mass rapid transit services.

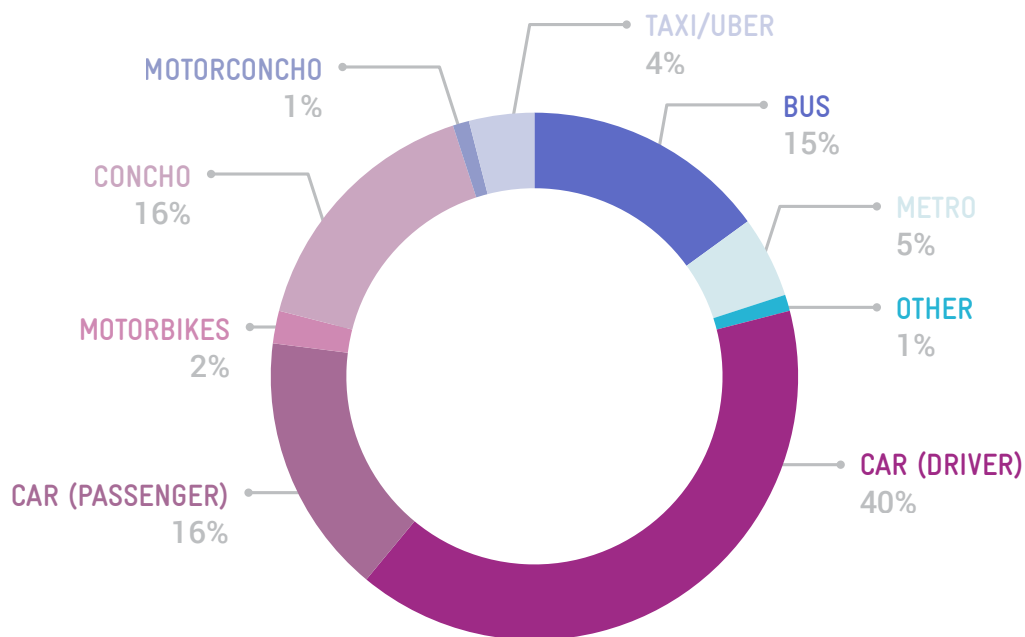


Graph 1: Modal share in Santo Domingo

Public Transport in the city comprises a wide variety of formal and informal services. The formal system comprises 2 metro lines, 1 aerial tramway line and 11 bus lines, the latter being serviced by a relatively small fleet of 160 buses operated by a state-owned bus company. The informal services are constituted by 3,000 mini- and microbuses and 16,000 informal taxis (so-called 'conchos') that operate along 84 and 114 fixed lines, respectively. These numbers reveal the predominance of informal over formal transport: 14% of total trips are made with conchos, 13% with buses and 9% with the metro.

Social, environmental, and economic aspects

The prevalence of informal transport, together with high motorisation rates, means that mobility is highly fragmented and atomized. This not only results in high congestion and long commuting times (>1 hour/day). Informal transport services are also characterized for being uncomfortable and insecure. The inferior quality of service is partly compensated by cheaper fares. However, because fare policy lies at the hands of informal transport associations, they may abuse this power to set fares at unreasonably high levels. Self-regulation has also resulted in low-quality standards in terms of a deteriorating vehicle fleet (75% of the vehicles are more than 15 years old) and under-qualified drivers. These factors contribute to both high levels of traffic accidents, air pollution and GHG emissions. Consequently, informal taxis and private cars account for the highest share of the sector's GHG emissions, accounting for 16% and 56% of total emissions, respectively.



Graph 2: GHG emissions by transport mode

Mobility is heavily influenced by gender. On average, men make 0.5 more trips than women a day. This is explained partly by the fact that 40% of men are employed, whereas only 26% of women have a full-time job and the other 25% stay at home.

Institutional and financial situation

Until the passing of Law 63-17 in 2017 the institutional landscape was equally characterized by a high degree of fragmentation and low regulatory and enforcement capacities of public authorities which allowed for the mostly unregulated development of public transport in Santo Domingo.

Since 2017, INTRANT has been established as the national road transport authority with the purpose of centralising all regulatory and decision-making competencies regarding public transport. Among its central tasks, INTRANT is responsible for regulating and formalising public transport by establishing minimum service and quality standards as a precondition for licences, centralising fare policy and promoting the corporatisation of informal operators in order to facilitate their participation in the integrated public transport system that is currently under development.

Despite the creation of INTRANT, the financial landscape is still fragmented at the national level across various ministries and very limited at the municipal level, which makes the latter dependent on the former. It is expected that INTRANT will help channel, manage, and leverage financial resources and improve coordination among central stakeholders.

The SUMP preparation process and stakeholder involvement

Several participatory formats were selected for stakeholder involvement:

- Steering committee to communicate the progress of the SUMP, discuss and decide on political decisions.
- Bilateral meetings to present and discuss technical and political decisions with municipalities and ministries.
- Focal groups to work on topics selected by INTRANT (public space with neighbourhood committees; school transport with educational institutions and parents).
- Face-to-face interviews and working tables to enhance knowledge of specific sectors (logistics) or geographic areas (municipalities).

Vision and goals

Strategic Vision: An integrated approach to improve access to sustainable mobility services and socioeconomic opportunities for all citizens by integrating urban and transport planning, enhancing sustainable transport modes, and strengthening institutional, technical, and financial capacities of local transport authorities

SUMP Goals and targets:

- Develop a comprehensive and integrated transport network that responds to the different realities of the constituting municipalities and the increasing demand for mobility
- Guarantee equal access to the population as a whole and (re-)establish connectivity in areas affected by natural and infrastructural barriers
- Promote the use of sustainable modes of transport (collective and active) and enhance the public transport network, improve, and expand walking and cycling infrastructure and integrate urban and transport planning
- Align and strengthen institutional, technical, and financial conditions for the implementation of a sustainable mobility system

Test scenarios and selected scenario

Three specific scenarios were defined in order to assess the impact of the SUMP, each one developed with a different level of ambition.

- **Baseline scenario:** no SUMP implementation takes place, but existing laws and regulations are implemented. These include organising and regulating the public transport network, enhancing the metro and aerial tramway systems, developing a vehicle modernisation program for buses and informal services, among others.
- **Central scenario:** this scenario builds on the baseline but assumes additional measures are implemented, such as enhancing road infrastructure, integrating transport modes, increasing accessibility, creating an investment fund for public transport, and achieving 100% modernisation of the current fleet.
- **Ambitious scenario:** this scenario includes additional milestones by factoring in the establishment of a robust financial system with a wide variety of financing sources and instruments (incl. congestion charging and property tax), the inclusion of transport demand management measures, promotion of active and collective transport modes, and the creation of additional incentives to companies and individuals to shift to sustainable transport modes.

The ambitious scenario was selected by INTRANT as the basis for the subsequent definition and selection of measures. The measures selected and the expected impacts of the ambitious scenario are presented in the following sections.

The city of Santo Domingo has opted for the ambitious scenario.

Key SUMP measures

Measures	Cost estimates (million USD)	Proposed Financing Source	Implementation schedule (year)
Physical (Infrastructure, rolling stock, etc.)			
Metro Lines 1 & 2: Increase passenger capacity	480	OPRET ³ , donors (AFD)	2019-2024
Metro Line 2: Line extension	564	MOPC ⁴ , donors	2025-2030
Construction of 5 BRT or LRT corridors	603	MOPC, donors	2021-2025
Construction of 4 aerial tramway lines	159	MOPC, donors	2021-2030
Creation of 5 express busway lines	1.51	MOPC, donors	2019-2030
Infrastructural improvement of intermunicipal networks	606	MOPC	Until 2025
Infrastructural improvement of internal municipal networks	50	MOPC	Until 2023
Improvement and expansion of sidewalks and cycling lanes	42	MOPC, municipalities	Until 2023
Integration of public transport modes	0.3	INTRANT	Until 2020
Implement a public bike-sharing system	15	MOPC, municipalities	Until 2030
Develop a 'green' corridor along the river basin	5	Municipalities, MOPC	Until 2025
Provide parking areas in port zones	0.3	AUPORDOM	Until 2023
Technical (studies, plans, designs, etc.)			
Design of secondary (complementary) bus network	0.3	INTRANT	2029-2030
Study on school transport services	0.3	INTRANT	2021-2023
Studies on improvement of transport demand management	1	INTRANT	2021-2023
Improve access to persons with disabilities	0.6	INTRANT, MOPC, municipalities, operators	Until 2023
Improve image and attractiveness of bus system	20	Municipalities, MOPC, operators	Until 2023
Improve communications of public transport services for users	0.6	INTRANT, donors	Until 2023
Integrate city-port interface management in national and local planning	0.3	AUPORDOM ⁵	Until 2025
Implement merchandise delivery and pick-up plan in port areas	0.3	AUPORDOM	Until 2023
Studies to support urban and transport planning integration	0.6	INTRANT, municipalities	Until 2025
Policy & regulation			
Integrated tariff policy	0.6	INTRANT, operators, government	Until 2025
Social tariff policy	0.6	INTRANT, operators, government	Until 2025
Transport demand management policy	0.6	INTRANT	Until 2023
Private vehicle fleet modernisation policy	0.3	INTRANT, Ministry of finance	Until 2023
Bus fleet modernisation policy		operators	Until 2023
Parking policy	0.6	INTRANT, municipalities, MOPC	Until 2030
Regulation of HDV transit	0.3	INTRANT	Until 2023
Total cost	2,556.11		

³ National transport planning authority (Oficina para el Reordenamiento del Transporte)

⁴ Ministry of public works and communications

⁵ National port authority

Expected results and impact

Impact Area	Expected Impact
GHG emission (SDG 11)	<p>Yearly reduction of GHG emissions relative to 2018 (baseline year)</p> <ul style="list-style-type: none"> • 2023: -4% • 2025: -7% • 2030: - 20%
Accessibility (SDG 11)	<p>Percentage of the total population with access to public transport</p> <ul style="list-style-type: none"> • 2018 (baseline): 10% • 2023: 25% • 2025: 36% • 2030: 43%
Air pollution (SDG 11)	Not quantified
Modal share	<p>Percentage of total trips being realized with Public Transport</p> <ul style="list-style-type: none"> • 2018 (baseline): 36% • 2023: 39% • 2025: 41% • 2030: 44%
Road safety (SDG 3)	Not quantified
Mobilised finance (SDG 17)	<p>Leveraged international finance</p> <ul style="list-style-type: none"> • EU-CIF: 10 M€ (secured, until 2023) <p>Associated international and domestic investments</p> <ul style="list-style-type: none"> • AFD: 436 M€ (planned, until 2030) • Domestic finance and AFD: 245 M€ (secured loan) • Domestic finance and AFD: 590 M€ (planned loan)
Infrastructure and assets with committed financing (SDG 9)	<p>New roads to be built by 2030</p> <ul style="list-style-type: none"> • KM of sidewalks: 150 km • KM of cycle lanes: 150 km • KM of mass rapid transit lines: 109.3 km
Expected institutional impact	<p>The recently created road transport authority, INTRANT, will reduce institutional fragmentation by centralising regulatory and planning functions. This will contribute to improved cooperation between the sector’s strategic, tactical, and operational levels.</p> <p>The leading role of INTRANT in the development and implementation of the SUMP will help channel and leverage additional financial resources from private, public and international stakeholders for the implementation phase.</p> <p>Not only is the new institutional arrangement in the sector a necessary step for building capacity and rationalising authority. Moreover, the SUMP process offers itself as a great learning opportunity.</p>

Lessons learned

The importance of a leading transport authority

The creation of a state-level transport authority opens a new perspective for urban mobility governance and management. The recently created road transport authority, INTRANT, will reduce institutional fragmentation by centralising regulatory and planning functions. This will contribute to improved cooperation between the sector's strategic, tactical, and operational levels.

The leading role of INTRANT in the development and implementation of the SUMP will help channel and leverage additional financial resources from private, public, and international stakeholders for the implementation phase. Not only is the new institutional arrangement in the sector a necessary step for building capacity and rationalising authority. Moreover, the SUMP process offers itself as a great learning opportunity.

A radical change in priorities

Santo Domingo's SUMP may serve as a reminder of an indisputable fact: a sustainable, attractive, accessible, and safe transport system can only be realized by an enabling physical infrastructure that prioritises public and active transport. The city's SUMP is an example of transport planning done right. As the saying goes, "if you plan for cars and traffic, you get cars and traffic. If you plan for people and places, you get people and places".

Progress on implementation

Following the formulation of Santo Domingo SUMP, the implementation was started. The European Union supports the SUMP implementation through the Caribbean Investment Facility and technical assistance implemented by the AFD for 10 million euros. The project is known as Assistance for the Implementation of the Sustainable Urban Mobility Plan (AISUMP). It consists of two main components:

1. the reinforcement of service capacity related to the National Urban Mobility Plan in the Dominican Republic focused on non-motorised transport, public transit, smart mobility and institutional strengthening; and
2. the implementation of the SUMP from Gran Santo Domingo with pre- or feasibility studies and pilot projects.

This technical assistance is provided to INTRANT for four years. It aims at supporting the implementation of the SUMP actions, tender processes, overseeing contract execution and at reinforcing technical capacities. These efforts aid the city in transitioning between the SUMP planning process and the implementation phase.

Prioritisation of SUMP projects

While the SUMP provides a general overview of the vision of urban mobility in the city, the AISUMP defines concrete actions in the short term to advance implementation. This mainly involves transitioning from SUMP measures to project preparation. In Santo Domingo's case, early SUMP projects include the transformation of the public transport system, electromobility deployment, active mobility promotion, and traffic management and urban logistics. In total, 18 projects have been identified as high-priority in the first year of the technical assistance. The prioritisation was done based on a dialogue among different public authorities.

Integrated public transport system and paratransit sector

Besides the extension of the metro lines, feasibility studies of two new BRT corridors are under preparation. Moreover, some '*conchos*' unions have started the formalisation process by creating bus companies. 400 of these *conchos* have been replaced by 30 buses in the first intervened corridor in Santo Domingo. The transformation of the paratransit sector in the city includes actions to train drivers, increase operational and organisational capacities of former *concho* unions, and defining the role of INTRANT to manage institutional relationships with the recently formed bus operators. The technical assistance has contributed to depict alternatives to reach fare integration and subsidies. Lastly, a new transport model is under development to support decision-making, assess scenarios and quantify the impacts of transport interventions.

Electromobility

As the Dominican Republic has experienced a growth in electric vehicle use, momentum to engage private companies in the further deployment of electromobility is in place in Gran Santo Domingo. In 2020, city officials visited Bogota to see first-hand its experience in the sector, especially regarding public transport. The first BRT corridor is expected to be operated with electric buses.

Active mobility

Especially in the 'National District' where most of the economic activities and the historical centre are located, there is an intention from the local government to strengthen the use of active modes. 10 km of cycling lanes have been built which inspired the production of nationwide cycling-lanes implementation guidelines. Supported by European funds, additional 40 km are expected to be built as a pilot project in Santo Domingo. Initiatives such as the bike-sharing system, under formulation, leverage the interaction between mobility and economic development.

Traffic management and urban logistics

Traffic officers are trained in good practices regarding traffic management and law enforcement aligned with the new law on urban mobility. A Regional Road Plan is under development aiming at defining a regional logistical network of major road infrastructure projects.

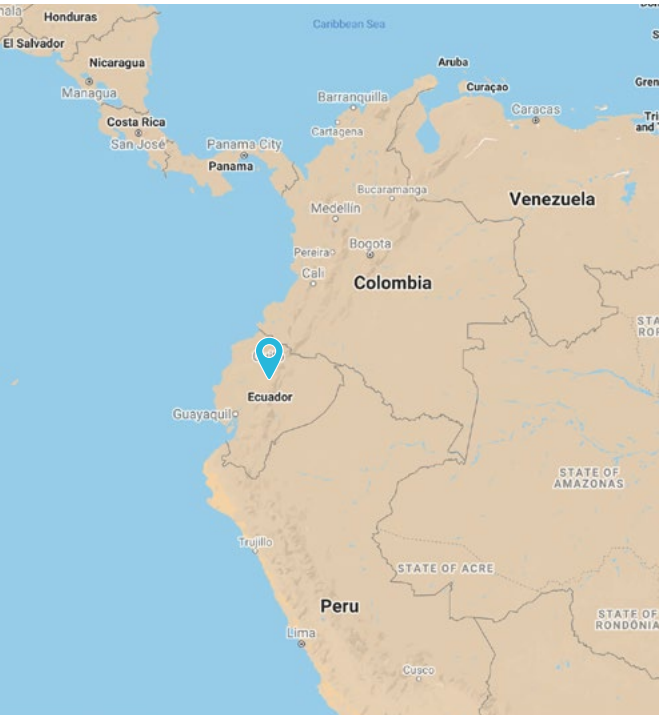
Main SUMP implementation challenges

- The institutional capacity of the recently created INTRANT is limited considering the long list of urban mobility projects proposed in the SUMP. Although highly knowledgeable, the staff is still small for the needs of the city. Moreover, experts on urban mobility trained in the Dominican Republic are rare. Local universities do not thoroughly offer formations on urban transport planning, so qualified young professionals are not trained locally. Since most of the INTRANT staff acquired experience abroad. They face challenges in dealing with context-sensitive issues related to the 18 prioritised projects.
- Financial resource assignation is not guaranteed since budgets are defined at the national level. Urban mobility projects compete for funding against other sectors. The upside is that urban transport is one of the few sectors that have the potential to generate revenue (coming from e.g. fares, on-road parking, fines), and these earnings could be directed to SUMP initiatives.
- Political commitment is needed to maintain the momentum to develop sustainable urban mobility projects in Santo Domingo. Many interventions are not popular as they intend to break the status quo and spatial distribution of streets. For instance, community opposition for cycling lanes implementation on car-road space is usual, as the number of urban cyclists is low. Decision-makers need to be trained in and informed about the sustainable mobility paradigm. Both support of civil society organisations and availability of international funding help to position the topic in the political agenda.
- Multi-level coordination requires a constant flow of information and exchange between national and local authorities. This articulation helps to clearly define responsibilities for the implementation of SUMP projects, as many of them require national approval but local regulation.

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 which 64% reside in urban areas, notably Quito, Guayaquil and Cuenca. The Andes range divides the country in 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 (MTO - its acronym in Spanish), the governing entity of the National Multimodal Transport System, encompasses road, air, sea, and non-motorised transport. Its vision is to formulate, implement and evaluate policies, regulations, plans, programs 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) will focus 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 (MTOPE)

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 wide range of technical issues
- Provide technical guidance on a specific set of technical issues
- Provide technical guidance on an on 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 Plan 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: 2021 Q1

Expected project completion: 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 professionalisation 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 CO₂eq)	- 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 CO₂eq)	- 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%	Formal public transport: 54%	Formal public transport: 50%	Formal public transport: 60%
	Informal public transport: -3%	Informal public transport: 5%	Informal public transport: 5%	Informal public transport: 2%
	Walking: +2%	Walking: 18%	Walking: 18%	Walking: 20%
	Cycling: +2%	Cycling: 0%	Cycling: 1%	Cycling: 3%
	TOTAL: +11%	TOTAL: 77%	TOTAL: 74%	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%

Perspectives for implementation

The project concluded on June 21, 2023, culminating in the launch event of the National Sustainable Urban Mobility Policy (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 documents 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.

Insights from practice: Lessons learned from the NUMP process

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.

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 endeavours. 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.

Highlights of the past year

Final stages of Ecuador's Urban Mobility Policy Project Underway

Ecuador's National Urban Mobility Policy, supported by the MobiliseYourCity Partnership and EUROCLIMAPLUS, aimed to improve urban mobility in Ecuador. Phases III and IV of the project, which, included the tactical development of the policy, such as developing an action plan, a participatory strategy, measurement and reporting plans, and communication plans, were adjusted and completed by December 2022. The project was completed by the end of June 2023.

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 (tCO₂eq)

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 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 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. 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. 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 would 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 the citizen's quality of life. The project involved greater participation of the citizens, especially from vulnerable groups. Additionally, the project 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	USD 7.77M to 9M
b. Special urban plan for the previous <i>Terminal Terrestre</i> (city centre)	
c. Special urban plan for the downtown market area	
Public space and landscape plan	
a. Renovation of Cevallos Park and its area of influence	USD 12.9M to 15M
b. Public space planning - Peri-urban influence centrality, Wholesale Food Market	
c. Special urban plan for <i>Terminal Terrestre Sur</i>	
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	
Demand management plan	
a. Legal, technological, administrative, and economic plan for congestion reduction and optimisation of car and motorcycle use	USD 3.9M to 4.5M
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	
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)	USD 25.9M to 30M
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	
Sustainable-mobility infrastructure plan	
a. Network of bikeways	USD 28.5M to 33M
b. Pedestrian road network	
c. Pacification of the motorised sub-system in cross-roads	
Programme for reducing GHG emissions from transport	
a. GHG monitoring plan	USD 6.5M to 7.5M
b. E-vehicles promotion plan (cars, motorcycles)	
c. Urban-logistics e-vehicles promotion plan	

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 <ul style="list-style-type: none"> • Inclusion of the gender approach in communication strategies • Promotion of active mobility with a gender perspective 	USD 7.8M to 9M
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	
Programme to improve the accessibility of rural and specific population	
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	USD 13M to 15M
c. Plan to improve accessibility to the rural areas	
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	USD 13M to 15M
c. Road safety campaigns	
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	USD 10.4M to 12M
c. Implementation of the Capacity Building Plan	
d. SUMP Financing Plan	

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 CO₂eq)	No available data	0.611 Mt CO ₂ eq	0.756 Mt CO ₂ eq	No available data
Annual transport related GHG emissions per capita (kg CO₂eq)	No available data	3,43 kg CO ₂ eq / capita	4,25 kg CO ₂ eq / capita	No available data
Access				
Increase of the proportion of the population living within 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/m ³ 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%	Formal public transport: 47%	Formal public transport: 48%	Formal public transport: 51%
	Informal public transport: -1%	Informal public transport: 1%	Informal public transport: 1%	Informal public transport: 0%
	Walking: 1%	Walking: 13%	Walking: 13%	Walking: 14%
	Cycling: 1%	Cycling: 1%	Cycling: 1%	Cycling: 2%
	TOTAL: 7%	TOTAL: 62%	TOTAL: 63%	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 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 will be adopted as public policy. This will serve for the development of 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.

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 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 better serve citizens. 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.

Highlights from 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 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 use of public transport and private cars. However, the sustainable-mobility discussion promoted during the 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.

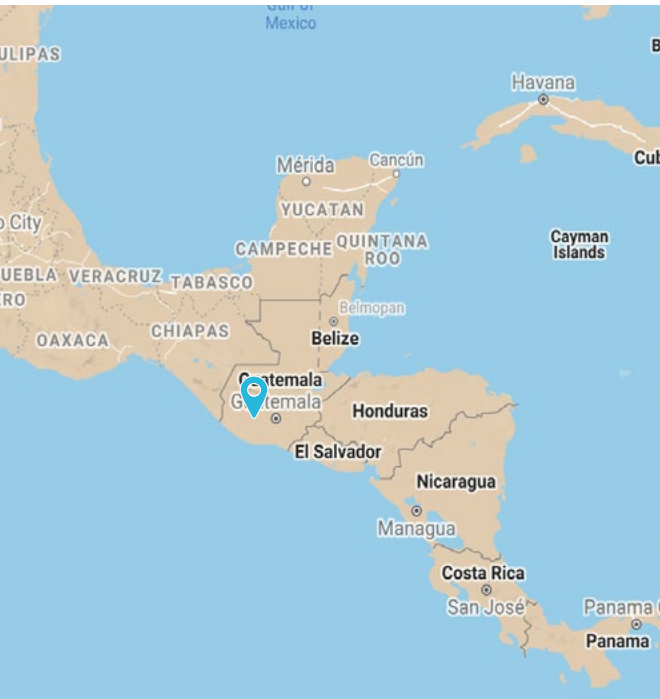
Though monitoring systems are needed, the SUMP has increased access to finance for implementation

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 in strengthening institutions to be able 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.

San Juan Comalapa, Guatemala

Partner city

Status of the project: Completed pilot project / technical assistance



Basic Information

Urban area: 76 km²

Population: 48,597 | Growth rate: 2.4%

GDP per capita: USD 1,158

Modal Share:

Formal public transport: 10%

Tuk Tuks: 14%

Walking: 42%

Cycling: 12%

Private cars: 7%

Private motorbikes or 2-wheelers: 9%

Other: 6%

National GHG emissions per capita: 2.40 (tCO₂eq)

Exposure to climate change: MEDIUM

Context

San Juan Comalapa is an administrative department of Chimaltenango, Guatemala, with 48,597 inhabitants. Most (94%) of the population belongs to the indigenous group of Kaqchikel Maya, with Kaqchikel being the official language. San Juan Comalapa is a rural and low-income area of Guatemala. The municipality includes the city of San Juan Comalapa and 20 surrounding villages. On average, 639 people per km² inhabit the region. It is a compact municipality with many slopes; therefore, transport modes are frequently difficult to access, and tuk-tuks have emerged as a feasible transport solution for the community.

Traditionally, family roles are highly genderised; therefore, women mainly fulfil household and care activities. Gender role division implies different mobility solutions for women and men, as women take daily trips to complete various caretaking and housekeeping activities. For example, women travel significantly more often by tuk-tuk (25%) than men (6%). In contrast, men use bicycles for 20% of their trips. Notably, 11% of the population has difficulties accessing urban mobility services.

The contracting agreement between tuk-tuk providers and the local authorities allows transport services in the municipality for a fare of GTQ 3.00 (~USD 0.39). Currently, 200 tuk-tuks are registered with each half of the tuk-tuk fleet operating every other day. Most of the fleet is in poor condition and has already exceeded its life cycle. Public transport works informally through tuk-tuks providing services similar to taxis and no formal stops. Buses only exist in the outskirts of the municipality, and there is no existing transport authority or mobility secretariat in San Juan Comalapa.

The Electric Tricycle Pilot project, which is part of the EUROCLIMA+ programme, sought to introduce electric transport to boost the renewal of old petrol-powered tuk-tuks and increase the accessibility of public transportation.

In Guatemala, there are several incentives to reduce the cost of electric vehicles in place. However, most of these incentives apply in only three regions in Guatemala. There are regulations regarding importing electric vehicles. Two regulations, in progress, the Law on Incentives for the Import of Non-Conventional Energy Automobiles, presented in 2018, and the Law on Electromobility, introduced in 2019, have not been approved yet.

In the municipal pilot project's first implementation phase, nine electric tricycles and their charging stations were introduced. Of these, two units were dedicated for public transport, four for waste collection, and three for social transport i.e. transport of people with mobility limitations or disabilities.

Support from the Partnership

Technical assistance: Pilot Project development

Funded by: European Union

Funding amount: EUR 250,000

Implemented by: GIZ through the Program EUROCLIMA+ Programme

Local counterpart: Municipality of San Juan Comalapa, Commission for Urbanity, Security and Infrastructure

Supported activities:

- Implement two electric tuk-tuks to increase sustainable public transport options for the municipality
- Increase accessibility by implementing three tuk-tuks for people with mobility difficulties
- Provide rubbish collection in areas that are difficult to access by implementing four electric tricycles
- Empower women through their participation in tuk-tuk owners' meetings
- Provide technical training on the maintenance, operation and management of tuk-tuks

Status of implementation

Project start: 2018 Q3

Project completion: 2022 Q3

Completed outputs:

- Base studies: Analysis of the current mobility situation, state-of-the-art and market survey
- Training strategy
- Communication and dissemination strategy
- Definition of technical specifications
- Management, business and operation model
- Implementation Roadmap
- Implementation of the communication strategy and impact stories
- Procurement of units: launch of tender and procurement of nine electric tuk-tuks
- Implementation of the pilot project: nine electric tuk-tuks and the start of the project test phase

Core impact indicators baselines

The pilot project does not include a projection of future impact, and only baseline data are presented in the following table.

Indicator	Baseline - 2016
Total annual transport related GHG emissions (Mt CO₂eq)	9,234.15 Kt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	0.01191 kg CO ₂ eq / capita
Air pollution	36-43 µg/m ³ of PM2.5
Mean urban air pollution of particulate matter (in µg PM2.5) at road-based monitoring stations	
Road safety	19 fatalities / 100,000 habs (data of 2013)
Annual traffic fatalities in the urban area, per 100,000 inhabitants	

Insights from practice: key pilot project takeaways

The introduction of new technologies in the transport system requires a deep review of the institutional political context

Introducing electric tuk-tuks in San Juan Comalapa's transport system required a detailed review of the market's institutional political context. Local authorities faced operational barriers that were difficult to solve despite their good intentions, such as:

- The widespread rejection of unknown technologies, even in a pilot phase
- The incorrect selection of the implementation strategy based on "giving away" units without solid award criteria, which was discouraged from the beginning by GIZ
- The non-adherence of drivers in a local association reflected the political differences between the various stakeholders that make up the local transport system
- Differences in criteria and objectives between federal and local authorities added complexity to the project

While these barriers could have been identified in early design stages, GIZ adopted various strategies to address them:

- Development of a communication and awareness strategy
- Development of a training strategy aimed at local administration personnel, drivers and mechanics
- Definition of the units' technical specifications to be incorporated with local actors to not repeat mistakes from the previous experience
- Development of alternative management and operation models aiming at empowering local authorities and traditional tuk-tuk drivers (creation of a municipal management company, public-private participation models, introduction of promotion models based on result Based Financing, among others)

Electric mobility is a feasible solution for local transport systems

The project aimed to promote sustainable urban mobility in San Juan Comalapa by introducing electric tuk-tuks into the local transport system. The project's managers considered using this technology to provide social services such as the daily transfer of the elderly and children with special needs to rehabilitation therapies and waste collection in difficult access areas.

The project integrated a gender perspective to empower women and ensure their participation

The project intended to address the greenhouse gas and local emissions in San Juan Comalapa coming from the operation of tuk-tuks powered by fossil fuels while also empowering women and strengthening their participation in transport services. The inclusion of the gender component in the project sought to improve the perception of security and safety among women when using the new electric units. The project also aimed at increasing women's influence in the city's decision-making processes and highlighted the need to consider gender balance in any policy, programme or project, objectives and activities.

Early interinstitutional coordination and capacity development is crucial for project completion

Interinstitutional coordination needs to be enhanced when implementing this type of project, as many stakeholders are involved and do not necessarily have knowledge of mobility projects. Other dependencies of the municipality and the national government had to be involved in earlier stages of the project to obtain the required endorsements or approvals. Education, waste collection, and other sectors are linked to the project execution, which adds complexity to its management. Capacities in the management and execution of mobility projects enable the full involvement of local authorities that might not have sufficient staff or experience.

Legal limitations were an opportunity to support national industry

The project only considered the purchase of vehicles manufactured in Guatemala to overcome regulatory limitations related to the importation of the tuk-tuks units, thus supporting the national industry and showcasing the multiple benefits of the project.

Results and perspectives for scaling

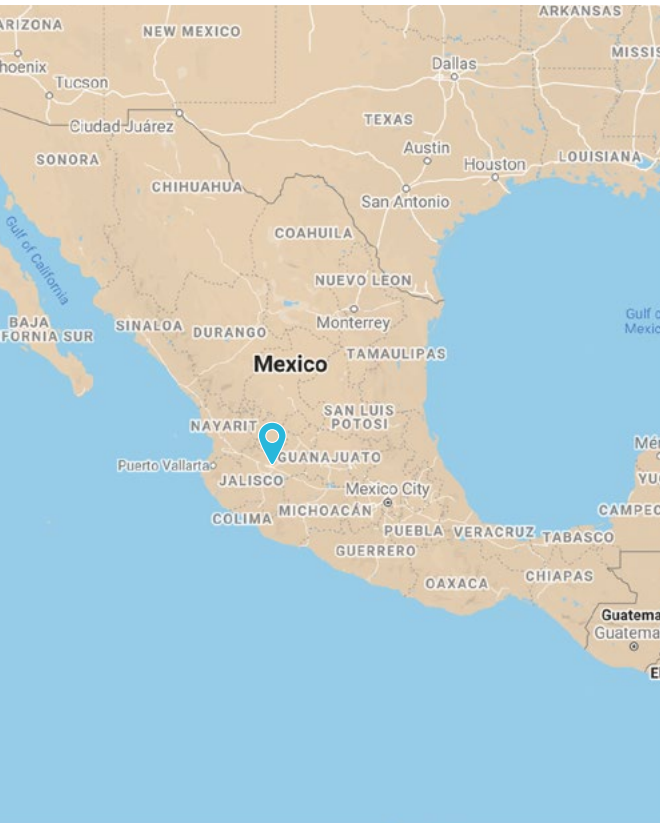
Other cities and manufacturers have expressed interest in replicating the experience

Although the project participants did not solve the definition of adequate operational management models for San Juan Comalapa, it was possible to generate interest from both federal and local authorities in other cities about the benefits of electromobility. Excellent results were also obtained, working hand in hand with local suppliers going through a market development phase, for which this experience provided visibility and concrete results. It was also possible to strengthen local consultants who accompanied this project and became true promoters of sustainable mobility.

Guadalajara, Mexico

Partner city

Status of the project: **Completed technical assistance**



Basic Information

Urban area: 151 km²

Population: 5,243,392 | Growth rate: 1.2%

Region capital city

GDP per capita: USD 7,991

Modal Share:

Formal public transport: 44.24%

Walking: 26.9%

Cycling: 2.73%

Private cars: 15.7%

Private motorbikes or 2-wheelers: 4.07%

Taxis: 2.76%

Moto taxis: 0.89%

Other: 2.73%

National GHG emissions per capita: 5.39 (tCO₂eq)

Exposure to climate change: MEDIUM

Context

The Guadalajara Metropolitan Area (GMA) is the third most populated zone in Mexico and it is located in the centre of Jalisco's State with 5.2 million inhabitants. GMA is comprised of nine municipalities. It is an important centre for industries focused on electronics and cybernetics which attracts many young professionals. The main activities in GMA are the manufacturing industry, trading, personal services and maintenance. The Metropolitan Area hosts 75% of the total industry of Jalisco's State.

Currently, the transport system of the Guadalajara Metropolitan Area is comprised of 233 routes of collective buses, two BRT corridors, three LTR lines, four lines of trolley buses and the public bicycle system. In 2021, the most recent BRT line comprising 41.5 km launched operations to connect all the peripheric areas of the metropolis, provide service to four municipalities, and connect with the rest of the mass transport network.

The Metropolitan Coordination established a management scheme among the municipalities comprising the metropolitan area. This scheme includes the Metropolitan Coordination Board, the nine mayors and the state governor, the Metropolitan Institute of Planning, the Metropolitan Citizen Council and the Metropolitan Planning Advisory Council.

The Metropolitan Planning Institute for Guadalajara's Metropolitan Area (IMEPLAN), the local counterpart, does not have the mandate and responsibility to finance mass public transport infrastructure. Further, it does not have the authority to borrow from international finance sources for infrastructure projects. However, it does have such authority for other more general types of projects, e.g. technical assistance. Systems and procedures are not in place to monitor, evaluate or report on urban mobility.

IMEPLAN aims to develop and propose metropolitan planning instruments, studies and project proposals, as well as mechanisms to improve the joint efforts of the Metropolitan Coordination Instances. IMEPLAN receives technical assistance to develop a Sustainable Urban Mobility Plan and a pilot project. The objective of this technical assistance is to coordinate and establish a plan for urban mobility for the nine municipalities of the metropolitan area, including various modes of accessible, economical, efficient and safe transport.

The technical assistance contributes to institutional strengthening by capacity development of the local team, facilitating exchanges with cities in Latin America and Europe, and having objective and technical resources for facing the issues on mobility.

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: GIZ through the EUROCLIMA+ Program

Local counterpart: Metropolitan Planning Institute for the Guadalajara's Metropolitan Area (IMEPLAN)

Supported activities:

- Formulation of an Integral Sustainable Urban Mobility Plan for the metropolitan region integrating the nine municipalities, all modes of transport and aligned with the metropolitan land use plan.
- A pilot project to implement an innovative methodology for data collection and analysis on urban mobility through digital technology. Data gathered is an input for the SUMP formulation and evaluation.
- Capacity building for public institutions to achieve adequate planning processes in urban mobility.

Status of implementation

Project start: 2018 Q2

Project completion: 2022

Completed outputs:

- Status quo analysis (November 2019 – January 2020)
- Urban cargo logistics (January 2020)
- MobiliseDays (February 2019)
- SUMP Workshop (February 2020)
- SUMP Self-Assessment Workshop (August 2020)
- Development of SUMP strategy – co-creating vision and objectives (April – May 2020)
- Establishment and application of monitoring, reporting and verification (MRV) tools (MobiliseYourCity and Ecologistics) (March-August 2021)
- Update of urban mobility data, integrating non-motorised mobility, freight transport, and public transport (2021)
- Metropolitan Strategy for Emergent Mobility
- Integrated SUMP for the nine municipalities of Guadalajara's Metropolitan Area

Next expected outputs:

- Pilot Project: Mobile application for obtaining new information on citizen mobility patterns

SUMP key measures and cost estimates

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

Measure	Cost Estimate
<p>Objective 1. Improve urban infrastructure and equipment to achieve sustainable mobility</p> <ul style="list-style-type: none"> • Update urban development planning and land-use planning instruments in the state's cities • Improve urban equipment on public roads to facilitate the movement and coexistence of citizens • Adapt the use of roads to different modes of transportation • Increase urban center density. • Improve comprehensive accessibility 	Cost estimates not provided
<p>Objective 2. Increase the coverage and quality of public transportation services</p> <ul style="list-style-type: none"> • Redesign routes based on origin-destination (work, education, social, recreational, commercial) purposes • Improve the quality of public transportation services • Increase the coverage of public transportation services 	Cost estimates not provided
<p>Objective 3. Increase the use of alternative means of transportation by discouraging the use of cars</p> <ul style="list-style-type: none"> • Increase infrastructure that prioritises the use of alternative transportation • Coordinate the public transportation network to allow multimodality • Establish permanent education campaigns for citizen training in road safety and mobility 	Cost estimates not provided

Core impact indicators baselines

The SUMP does not provide impact projections.

Indicator	Baseline - 2016
Total annual transport-related GHG emissions (Mt CO₂eq)	6.2 Mt CO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	2,994 kg CO ₂ eq / capita
<p>Road safety</p> <p>Annual traffic fatalities in the urban area, per 100,000 inhabitants</p>	3.45 fatalities / 100,000 hab
<p>Modal share</p> <p>Increase of the modal share of trips by public transport, walking and cycling</p>	Formal public transport : 47% Informal public transport: 0,89% Walking : 26,9% Cycling : 2,73% TOTAL : 77,52%*

*Datos 2021 (Encuesta Origen – Destino COVID Área Metropolitana Guadalajara)

Perspectives for Implementation

SUMP as an instrument of metropolitan integration

The Guadalajara Metropolitan Area developed its Sustainable Urban Mobility Plan – SUMP. Supported by Euroclima, packages of measures were identified and included for the implementation of the plan along with the development of the Emerging Metropolitan Mobility Strategy (EMME) in 2021, as an articulation tool for the nine municipalities of the metropolis to include urban mobility measures, aligned with the strategic axes contained in the SUMP. This process favours the normative integration between urban mobility, land use planning and climate change actions, in order to have aligned strategies and actions whose implementation allows offering better living conditions to the population of the metropolis in the long term.

Insights from Practice: Lessons Learned from the SUMP Process

Developing mechanisms for citizen participation at the metropolitan level

It was important to resume the application of participation and governance processes on a metropolitan scale, so mechanisms were developed and implemented to integrate a collective vision where the reality of the nine municipalities was included and their needs were addressed as far as possible, based on their particularities, but with a metropolitan vision.

Highlights

Preparing a SUMP for a metropolitan region creates challenges and complexity – but it also enables providing the citizens with sustainable mobility services that transcend administrative boundaries

Facing metropolitan coordination, the SUMP development required participatory processes and decisions making with many stakeholders, mainly the nine municipalities of the metropolis. Therefore, the SUMP has had to consider nine different realities for mobility planning and an important alignment with other local instruments at different levels, namely: Climate Action Plan, Metropolitan Territorial Plans and, Municipal Development Plans.

The sustainability and implementation of the SUMP might depend on the commitment from many authorities in the metropolis. Therefore, the participatory process and involvement level of the set of institutions has been crucial, as well as the alignment with the municipal development plans to enable the implementation beyond the administrative periods and political will.

The Metropolitan Strategy of Emergent Mobility for the metropolitan area was launched and upcoming work aims at its integration with local development plans

The Metropolitan Area of Guadalajara capitalised on the pandemic crisis and the atypical mobility patterns for envisioning a wider vision of the metropolis, developing the Metropolitan Strategy of Emergent Mobility. This policy document provides nine strategic axes on sustainable urban mobility for the nine municipalities and enables an urban mobility common vision for the future. As a further step, and leveraging the administrative transition, the respective development plans of each municipality is expected to be aligned with the strategy.

Periplo represents the first step for a more dynamic, flexible and low-cost urban mobility planning, but its development requires resources from public institutions

Periplo is the app prepared in the framework of this technical assistance to be used as a practical participatory tool capable of engaging citizens in consolidating better mobility conditions. It is also a powerful instrument to monitor and evaluate sustainable urban mobility public policies in shorter periods by enabling adjustments and strengthening planning processes through dialogue between the government and inhabitants.

Developing this kind of pilot project requires awareness of the risks and opportunities of implementing a digital solution for urban mobility planning. It implies not only innovation but also technical skills (data, transport, software, etc.), infrastructure (hosting), budget (operation and maintenance), and more importantly, human capital to translate raw data into useful information for decision making. Periplo has been made available in 2022 to be used in the Metropolitan Area of Guadalajara. Its main challenge is to reach the minimum number of users to have significant or representative data. The commitment of the authorities and citizens should be aligned to make the digitalisation of urban mobility planning processes possible.

Digitalising sustainable urban mobility planning is an innovative solution used for the first time in the Latin American context with the potential to be replicated

Periplo is possibly the first case study on digitalisation for urban mobility planning in Latin America, as a first effort to replace traditional origin-destination surveys or complement them. Digital tools such as Periplo might gather daily data and enable monitoring and evaluation of the measures and actions implemented in the short term. Periplo has many opportunities to be improved but it represents an important step towards digitalisation in urban mobility planning.

Due to the limited availability of new or aggregated data, the factsheet has not been updated in 2024.

Arequipa, Peru

Partner city

Status of the project: Completed Sustainable Urban Mobility Plan



Basic Information

Urban area: 3,700,00 km²

Population: 910,000 | Growth rate: 1.09%

Region capital city

GDP per capita: USD 10,277

Modal Share:

Formal public transport: 46%

Private cars: 18%

Taxis: 13%

Walking: 17%

Cycling: 1%

Private motorbikes or 2-wheelers: 1%

Other: 4%

National GHG emissions per capita: 2.82 (tCO₂eq)

Exposure to climate change: HIGH

Context

Urban mobility in Arequipa presents challenges according to transport data from 2016, which reports 52,877 infractions, 5,410 accidents, 128 fatalities and 5,282 non-fatal victims. In 2008, public buses' modal accounted for 63% of the modal share, while walking represented 16.6%. By 2017, on the main north-south and south-north axis of the city, which traverse the historic centre, 47% of journeys were made by public transport, 30% by private vehicle and 23% by taxi.

Several factors explain the modal choice, including:

- Growth of the vehicle fleet without consideration of service and demand; as of 2016, there are 261,600 vehicles present (25% taxis and 46% private cars).
- Low quality public transport service. Users perceive public transport as unsafe due to its low capacity, poorly maintenance units operating 240 routes with an average age of over 20 years.
- Disjointed urban infrastructure between the activity centres, road discontinuity and the variation of sections within continuous corridors. The overlay of the urban centrality and the historic centre exacerbates urban mobility challenges.

Transport and mobility challenges in Arequipa were key elements that prompted the development of the SUMP. The lack of an integrated and agreed-upon vision for mobility in the city has compromised the system's quality and coverage, leading to isolated actions and significant investments in infrastructure without significant returns for residents' quality of life.

Developing Arequipa's SUMP constituted an essential step toward improving mobility in the metropolitan region. This process included fundraising activities to achieve implementation and cooperation efforts between the municipality with various institutions to develop and implement sustainable urban mobility measures with a comprehensive vision.

In this context, the National Government and the Provincial Municipality of Arequipa have entered into technical cooperation agreements to enhance mass public transport and sustainable urban mobility in an integral and consensual manner. Agreements exist between the Ministry of Transport and Communications (MTC), the Agence Française de Développement (AFD) and CODATU, with the Provincial Municipality of Arequipa (MPA, its acronym in Spanish) as a primary beneficiary of the project. Another agreement is between the MTC and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) to implement the project 'Sustainable Urban Transport in selected cities in the north and south of Peru' (DKTI). The third agreement is between the MPA and the MTC to finance Arequipa's Integral Transport System (SIT) project.

AFD has been working with the MPA since 2016 on urban mobility within the framework of the AFD-MTC-MPA Cooperation Agreement. In recent years, AFD worked with the MPA on direct cooperation and joint work projects, including the development of Arequipa's Sustainable Urban Mobility Plan - SUMP (2020-2022). Arequipa did not have a SUMP or a comprehensive policy strategy on urban mobility for the metropolitan area, making it challenging to implement actions with a shared vision.

Arequipa lacks a mass rapid transit system, but the city has planned a first light rail on the central 15 km NW-SE corridor. Currently, its public transport system relies on non-integrated bus lines. There is an existing transport master plan or similar document (Route Regulatory Plan 2016).

The Municipality of Arequipa, the local counterpart, has the mandate and responsibility to finance mass public transport infrastructure. However, it lacks the authority to borrow from international finance sources. Systems and procedures are partially in place to monitor, evaluate and report on urban transport.

This SUMP project aims to develop a city model that promotes more sustainable travel modes (walking, cycling, and mass public transport). The main expected results are:

- Improving the urban mobility system and incorporating new technologies to reduce travel times and road accidents and implementing the Integrated Transportation System
- Reducing the effects of transport on climate change and non-renewable energy consumption
- Improving urban social equity by ensuring universal accessibility, promoting alternative use of the road system and encouraging healthier modes of transportation
- Developing institutional capacities for the various stakeholders involved in urban mobility issues

The technical assistance provided to Arequipa contributes to institutional strengthening by regulating sustainable urban mobility management, promoting projects to be executed by the municipality, and establishing financing mechanisms for infrastructure, equipment and monitoring systems.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: European Union

Funding amount: EUR 500,000

Implemented by: AFD through the EUROCLIMA+ Programme

Local counterpart: Municipality of Arequipa, Municipal Planning Institute (IMPLA)

Supported activities:

- Development of the integrated public transport network
- Strategic programmes and projects to optimise the operation of freight transport and urban logistics
- Implementation plan
- Monitoring system

Status of the SUMP process

Project start date: 2020 November

SUMP adoption projected date: 2024 Q1

Completed outputs:

- Forum on challenges and opportunities for Sustainable Urban Mobility
- Participation plan
- Communication plan
- Expectations survey
- Diagnostic workshop
- Mobility assessment
- Definition of the vision strategic objectives, and scenario construction
- Action plan, budget, and financing
- Follow-up, reporting and implementation support
- Publication

Next expected outputs:

- SUMP adoption

SUMP key measures and cost estimates

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

Measure	Cost Estimate
01. Promote greater participation in Pedestrian and Bicycle Mobility	USD 170,088,068.32
02. Promote a transformation of public transport towards a massive, integrated, and multimodal system	USD 885,787,428.01
03. Promote more rational and efficient use of private transport	USD 427,779,033.66
04. Promote more sustainable management of freight transport and urban logistics	USD 8,703,246.07
05. Promote intelligent traffic management for regulation, monitoring, and control	USD 39,248,638.74
06. Promote a reduction in the environmental impacts of mobility and traffic crashes	USD 37,150,133.09
07. Promote an improvement in universal accessibility, inclusion, equity, and gender	USD 145,920,411.78
08. Promote institutional strengthening, governance, and civic culture	USD 6,188,481.68
09. Promote a financial sustainability scheme for sustainable mobility	USD 1,842,931.94
010. Promote a mobility model that supports sustainable urban development in the metropolitan area	USD 0.00

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 727,661,666.5
Street shaping urban roads and traffic management	USD 472,892,695.9
Other measures	USD 3,956,919
Total	USD 1,204,511,281.44

Core impact indicator baselines

Indicator	Baseline – 2017-2021	Projected 2042 SUMP scenario
Total annual GHG emissions (t CO₂eq)	360,200t CO ₂ eq	252,140 t CO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)	1923.6 kg CO ₂ eq / capita	Not available
Access		
Increase of the proportion of the population living within 500 meters or less from a public transport stop	61%	70%
Air pollution		
Decrease in the mean urban air pollution of particulate matter (in µg PM _{2.5}) at road-based monitoring stations	9 µg/m ³ of PM _{2.5}	Not available
Modal share		
Increase of the modal shares of trips by public transport, walking, and cycling	Formal public transport: 46%	Not available
	Informal public transport: No data	
	Walking: 17%	
	Cycling: 1%	
TOTAL : 62%		
Road safety		
Decrease of traffic fatalities in the urban area, per 100,000 inhabitants	0.91 fatalities / 100,000 hab	≤5 fatalities / 100,000 hab
Affordability of public transport		
Percentage of disposable household income spent on public transport for the second quintile household income group	12%	Not available

Perspectives for implementation

Although not adopted yet, the SUMP moves forward by securing funding for its implementation

The SUMP undergoes consideration by plenary councillors, culminating into its approval by the Municipal Council through a Municipal Ordinance. Transitioning towards sustainable urban mobility systems necessitates both initial financing for capital investments and ongoing revenue streams over time to ensure the system's long-term sustainability.

Meeting the high infrastructure endowment requirements entails financial contributions, not only from the State but also from other sources. The allocation of funds from each source will ultimately hinge on technical feasibility, project inclusion in the Multiannual Investment Programming (subject to meeting their requirements), and alignment of SUMP objectives with the Development Plan, including Metropolitan and Master Plans, and other technical instruments. The ultimate goal is for the SUMP to evolve into a comprehensive mobility planning tool with a sustainability approach. Primary financing sources, categorized into central and complementary sources, are developed by program, implementation horizon, and potential funding sources.

Insights from practice: lessons learned from the SUMP process

SUMPs offer an opportunity to prioritise limited resources based on a collectively agreed upon long-term perspective

Addressing urban mobility from a sustainable approach amid significant challenges in the transport sector and resource constraints necessitates a strategic roadmap with a forward-looking vision. Arequipa's SUMP proposes an ordering and prioritisation framework with robust opportunities for adoption. While the project exhibits scalability potential, local political dynamics may complicate the adoption process.

Highlights of the past year

As of July 2023, the project is in the final stage. However, due to the municipal's processes and political shifts, the schedule, for finalising, presenting, and approving the SUMP by the Municipal Council has been delayed. Additionally, the timing of the closing event and the printing and distribution of the SUMP have been affected. Given the change in municipal administration, the consultant will facilitate engagement and communication with the new administration to ensure the continuation and completion of the approval and closure process, including presenting the project's formulation and results.

Trujillo, Peru

Partner city

Status of the project: Completed technical assistance



Basic Information

Urban area: 1,769 km²

Population: 962,369 (Census 2017) | Growth rate: 1.65%

Region capital city

GDP per capita: USD 6,942

Modal Share:

Public transport: 31.2%

Walking: 18.4%

Cycling: 1.1%

Private cars: 15.5%

Taxis: 25.4%

Other: Collective cabs: 8.4%

National GHG emissions per capita: 3.05 (tCO₂eq)

Exposure to climate change: HIGH

Context

Trujillo, a coastal city in northern Peru, is the capital of the province with the same name. Its geographic location and connectivity with the major cities on the coast and in the highlands of northern Peru make it an important economic centre. The aforementioned factors and the existence of the CHAVIMOCHIC irrigation project, which was started in the 1960s by the National Development Institute (INADE) and extends throughout much of the coast of the La Libertad Region, have contributed to the growth of sectors such as export agribusiness, mining, fishing, and commerce. These sectors contribute the highest percentage to the regional GDP.

The metropolitan area of Trujillo generates 2,298,000 trips per day, with an average rate of 2.4 trips per person/day. Of these trips, 80% represent motorised transport, of which urban passenger transport services represent 65% (provided through the services of minibuses, combis, collective taxis, and cabs). Trujillo does not have an integrated transport system, but in the next few years, the first road corridor for buses is expected to be implemented. This corridor will link the northern and southern parts of the city with a Bus Rapid Transit (BRT) system, for which the tendering process for its technical project is soon to start. This measure represents one of the priorities for the city in its Sustainable Urban Mobility Plan (SUMP), as well as non-motorised transport measures (i.e. implementation of 25km of temporary bicycle lines). This SUMP is key to the effort of the local government to transform its mobility by implementing sustainable and safe transport and mobility solutions. To develop this SUMP, the local government, represented by the Provincial Municipality, received technical assistance from the German Cooperation for Development, implemented by GIZ.

Currently, the Provincial Municipality of Trujillo is advancing in the implementation stage of the SUMP based on the priority of strategic objective 6: promoting accessibility and social equity, with the technical assistance of the GIZ on issues such as solutions for pedestrian spaces and conditions for greater road safety in school areas.

The Ministry of Transport and Communications (MTC), through the National Program for Sustainable Urban Mobility (Promovilidad) seeks to develop integrated transport systems in cities other than the Peruvian capital. To achieve this, Promovilidad offers technical assistance to local governments. Systems and procedures are partially in place to monitor, evaluate, and report on urban transport.

Trujillo Provincial Municipality (MPT for its Spanish initials), the local counterpart, possesses entities that are specialised in urban transport and urban mobility within its institutional structure, such as Transportes Metropolitanos de Trujillo (TMT), the planning organism of urban transport in the metropolitan area of the city, and the Transport, Transit and Road Safety General Office (GTTSV for its Spanish initials), the cargo and passenger transport regulatory and supervisory area. To be precise, TMT, as part of its role with the technical support of GIZ, has been promoting the Programme for the Integral Care of Trujillo's Pedestrians and Cyclists (PROCIPECT) through the promotion of the Dialogue Table for Sustainable Urban Mobility in Trujillo.

Due to its administrative competencies, the MPT manages the implementation of investment projects and all measures that contribute to improving public transport services, ensuring sustainable urban mobility for the population. Although they do not have significant funding, they are implementing a network of temporary bicycle lanes through an agreement with MTC for 500,000 EUR. For example, the signing of the CFF Memorandum of Understanding for the project "Cycle-Infrastructure on Avenida America North, South, and West Pablo Casals and Tupac Amaru" has contributed to the implementation of bicycle lanes in the city. In addition, the MPT authorises and supervises the current transport service with its resources. Through cooperation agreements between MTC and international institutions, it has been possible to finance important studies, such as the one carried out for the proposal of the north-south road corridor, financed by funds from the German Cooperation through KfW. Recently, KfW has managed and completed the study on conditions for the implementation of cycleway projects.

Optimising traffic flow, as well as implementing an integrated and efficient public transportation system, are key elements in mitigating greenhouse gas (GHG) emissions. It also reduces transport costs and improves the quality of life in urban areas. Based on this context, the Peruvian government has developed the NAMA TRANSPerú, which consists of a series of measures to transform the urban transport sector. One of the areas prioritised as part of this matrix highlights the need to support local governments to improve the transport sector.

The goal of Trujillo's SUMP 2020 - 2030 is to improve urban mobility conditions in the city, prioritising the use of public transport and non-motorised modes, while improving the quality of life of its inhabitants. Therefore, Trujillo's SUMP is perfectly aligned with MTC's urban transport sector strategy, represented by the National Urban Transport Policy and the National Program for Sustainable Urban Mobility. Likewise, this local planning instrument promotes modes of travel with less environmental impact, accessibility, social equity, and an integrated, multimodal, low-carbon, and efficient public transportation system. These are the new challenges that the MPT is taking on and has already implemented in the city.

Technical assistance contributes to institutional development by:

- Strengthening the skills of the MPT's technical teams for mobility and urban transport measures management. This has allowed the installation of new institutional capacities, which will contribute to improving the management processes of public transport services.
- Redesigning the institutional structure, establishing areas, functions, and responsibilities for promoting and managing the city's urban mobility with a focus on sustainability and gender equality.
- Establishing coordination models between national and local public agencies within the transport sector, and local coordination spaces between relevant stakeholders in the city, such as the aforementioned COMUS.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP)

Funded by: German Federal Ministry for Economic Cooperation and Development (BMZ)

Funding amount: EUR 1,215,000¹

Implemented by: GIZ through the Sustainable Urban Mobility in Secondary Cities in Peru (DKTI)

Local counterpart: Ministry of Transport and Communications (MTC), through the National Program for Sustainable Urban Mobility (Promovilidad), and selected local governments

Supported activities:

- Establishment and strengthening of the National Program for Sustainable Urban Mobility (locally known as Promovilidad) through support for the MTC
- Establishment of coordination mechanisms at the city level (e.g., stakeholder dialogue) and with local governments and ministries
- Strengthening urban planning and implementation capacity of local governments
- Promotion of exchanges on innovative technologies, methods, and financing mechanisms

Status of implementation

Project start: 2017

Project completion: 2022 Q2

Completed outputs:

- Coordination between actors at the national and sub-national levels in the planning and implementation of investment measures and projects has improved
- Improved coordination mechanisms within cities as well as between local governments and ministries
- Increased capacity of cities for the implementation of measures: Municipalities apply technical and institutional capacities in the planning and implementation of sustainable urban mobility measures
- Innovative technology, methods, and financial mechanisms: Transport managers and planners are aware of proven innovative technologies, methods, and financing concepts for sustainable mobility

Lessons learned

- From project management, be flexible and adapt to changes and different contexts, and prioritise communication for joint work to contribute to effectiveness and efficiency.
- From the strengthening of the PNTU, have quick responses to the identification of priorities in public institutions to take advantage of windows of opportunity, involvement of actors, and commitments of authorities.
- From the creation of PROMOVILIDAD, finding the favourable context to act, the importance of knowledge management and transmission, capacity building according to institutional needs and context, risk management, and organisational development first.

¹ The total funding amount of the technical assistance is EUR 7,300,000. However, the DKTI programme supports six cities in Peru. This number assumes an even allocation of funds among Trujillo, Arequipa, Piura, Cusco, Huamanga and Chiclayo.

- From Organisational development in cities, consider adult learning needs, the importance of generating information for decision-making, determine the scope of agreements, identify key people and/or actors, promote a systemic vision in institutions, and take into account the particularities of cities.
- From sustainable urban mobility planning, recognise the importance of stakeholder management within municipalities and the commitment of decision-makers, leadership of local governments, a participatory approach, and strategic communication.

SUMP key measures and cost estimates

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

Measure	Cost Estimate ²
Sub-programme for universal accessibility and elimination of architectural barriers at intersections in Trujillo's historical city centre	EUR 509,499.14
Programme for the maintenance, improvement, and enlargement of the walking surface of Trujillo's metropolitan area	EUR 1,267,787.80
Sub-programme for the implementation of a core network of bicycle paths	EUR 2,157,703.36
Final phase structuring of the North-South Core Corridor project in the framework of the Integrated Public Transport System	EUR 7,037,296.13
Implementation and operation of the Integrated Public Transport System with a final route regulation plan	EUR 86,178,645.76
Network of Integrated Public Transport System bus stops on feeder corridors	EUR 14,109,206.86
Integral sub-programme for the optimisation and extension of the traffic light network in the metropolitan area	EUR 6,270,758.60

Finance leverage

Financing resulting from the SUMP	Source	Amount
Implementation of sustainable non-motorised transport systems (pop-up cycle lanes)	Ministry of Transport and Communications (MTC)	EUR 404,532.27
Investment project: construction of the north-south corridor and complementary roads	KFW	EUR 60,000,000

Associated financing supporting measures in the SUMP	Source	Amount
Pilot project «Promotion of the recovery of public space and the use of non-motorised transport - Muévete Trujillo, Trujillo, Peru»	TUMI	EUR 73,660.88

Projected impacts

² Trujillo's SUMP was originally budgeted in PEN. For this factsheet the costs were converted into EUR using [InforEuro](#) currency exchange rate. At the time of the conversion, 1 EUR = 4.516 PEN. This applies to all EUR amounts in the document.

Indicator	Impact 2030 (SUMP vs BAU)	Baseline - 2017	Projected 2030 BAU	Projected 2030 SUMP scenario
Total annual transport related GHG emissions (Mt CO₂eq)	-423,36 t CO ₂ eq	376,677 t CO ₂ eq	767, 487 Tn de CO ₂ t CO ₂ eq	355,132 t CO ₂ eq
Annual transport related GHG emissions per capita (kg CO₂eq)³	-387 kg CO ₂ eq / capita -54%	354 kg CO ₂ eq / capita	721 kg CO ₂ eq / capita	334 kg CO ₂ eq / capita
Air pollution				
Decrease in mean urban air pollution of particulate matter (in µg PM10) at road-based monitoring stations	Impact not quantified	59.67 µg/m ³ of PM10	Impact not quantified	Impact not quantified
Modal share				
Increase of the modal shares of trips by public transport, walking and cycling, in SUMP scenario compared to BAU scenario	Public transport: +17.4% Walking: +11% Cycling: +3.2% Private cars: -3.7% Taxis: -14.3% Collective cabs: -9.6% TOTAL: +22%	Public transport: 31.2% Walking: 18.4% Cycling: 1.1% Private cars: 15.5% Taxis: 25.4% Collective cabs: 8.4% TOTAL: 58%	Public transport: 27.6% Walking: 14% Cycling: 0.8% Private cars: 18.7% Taxis: 29.3% Collective cabs: 9.6% TOTAL: 52%	Public transport: 45% Walking: 25% Cycling: 4% Private cars: 11% Taxis: 15% Collective cabs: 00% TOTAL: 74%
Road safety				
Decrease of traffic fatalities in the urban area, per 100,000 inhabitants	-4.4 fatalities/100,000 hab	7.3 fatalities/100,000 hab	9.9 fatalities/100,000 hab	5 fatalities/100,000 hab

Highlights

Implementation of the recently adopted SUMP has begun through interinstitutional coordination bodies

Trujillo's SUMP focuses on the metropolitan area of the city and has a time frame until 2030 for its implementation. After it was approved by the City Council in April 2021, Trujillo became the first Peruvian city to develop and institutionalise a SUMP.

Transportes Metropolitanos de Trujillo (TMT) is currently responsible for the COMUS' Technical Management Unit, in which three other municipality areas participate. This Unit is responsible for organising and overseeing the progressive implementation of the SUMP. Therefore, it oversees seeking funding through national government entities such as the Ministry of Economy and Finance (MEF), the Ministry of Transport and Communications (MTC), the Ministry of Housing, Construction and Sanitation (MVCS), the Ministry of Environment (MINAM); and at the local level through the Regional Government of La Libertad as well as public, private and cooperation organisations. The implementation process started by establishing a roadmap, mapping critical actions and measures, and clarifying responsibilities to monitor progress within the technical team to ensure orderly and prioritised progress in the SUMP.

There is still a long road ahead in terms of implementation, but both Trujillo's Municipality and TMT are committed to facing the challenges to come in the journey to transform their mobility, such as those related to raising the required amounts (both from public and private funds) to fully achieve the SUMP's goal.

Communication products helped to make the SUMP more approachable for citizens and raise awareness of sustainable mobility

During the first quarter of the year, communication strategies were implemented to improve the understanding of the plan among the largest number of civil society stakeholders. Given the context of the pandemic, digital media and social networks were used to make the SUMP more understandable. Digital documents were produced with key messages and short videos explaining the importance of having a clear vision for the city with a focus on sustainable mobility and urban transport, the need for this type of planning instrument and its benefits for the creation of a city with a human scale and with environmental commitment.

These communication actions were followed by a series of awareness-raising workshops to clear up doubts about the SUMP and clarify its content and proposals. Local representatives and several citizens participated in each workshop held by local authorities. The last workshop of the series gathered representatives from central government institutions, such as the Ministry of Transport and Communications (MTC), the Ministry of Housing, Construction and Sanitation (MVCS), as well as regional and local authorities.

Urban mobility planning with a participatory approach allows for ownership and engagement

Given that the SUMP planning cycle contains different actions and steps to be undertaken during the SUMP formulation, there is a need to conceive a strategy for participation and communication, so the interests of the diverse stakeholders are considered in the early stages of the project. Participation and effective communication enable the adequate convergence of objectives regarding urban mobility when formulating the SUMP. The trust built and the constant dialogue between public authorities and citizens contribute to consolidating further phases, such as implementation.

Specifically, based on Trujillo's experience, a guideline for strategic communication and citizen participation during the design and implementation of SUMP in Peru was formulated. This guideline proposes orienting principles to facilitate the SUMP planning and implementation processes beyond mere diffusion and dissemination campaigns or regular one-direction presentations. The viability and success of the SUMP depend on how much its development is related to citizens' demands and perspectives.

Córdoba, Argentina

Partner city

Status of the project: Ongoing Sustainable Urban Mobility Plan



Basic Information

Urban area: 576 km²

Population: 1,600,000 | Growth rate: +0.4%

Region capital city

GDP per capita: USD 12,000

Modal Share:

Formal public transport: 32.2%

Walking: 27.2%

Cycling: 2.6%

Private cars: 26.1%

Private motorbikes or 2-wheelers: 5.8%

Taxis: 5%

Other: 0.3%

National GHG emissions per capita: 8.35 (tCO₂eq)

Exposure to climate change: HIGH

Context

The City of Córdoba is the capital of the Province of Córdoba and is located in the centre of the territory. The singular topography, characterised by terraces, makes it particularly challenging to implement and develop good infrastructure and a mobility system.

Córdoba has an urban area of 576 km² and an estimated population of 1,600,000 inhabitants, making it the second largest city in the country after Buenos Aires. 83% of the population of the Metropolitan Area of Córdoba lives in the city of Córdoba. The economy of the Province of Córdoba is based on services and technological activities (64% of the gross geographic product - GGP), the automotive industry (26.5% of GGP) and the primary sector (9.5% of GGP).

The city is organised by a radio centric system which generates challenges for urban and mobility planning. Its population density is low (63 inhabitants/km²). However, there are high density areas that do not receive basic transport services. This imbalance has existed for the last 50 years.

In the metropolitan area of Córdoba, there are 2,556,906 motorised and non-motorised trips made every day. 85.4% of these trips originate and/or end in the capital city, which reveals the importance of the city within the metropolitan area. Trips are made by 74.7% of the population, which shows a relatively high mobility rate (2.47 trips per working day) when considering the group of people who make at least one trip per day. If the entire population is taken into account, this average drops to 1.84 trips per person per working day. Motorised modes are the predominant mode (69.9%). In recent years, a series of actions have been encouraging the growth of individual mobility to the detriment of mass transport.

A mass transit system is in place with buses and trolleybuses operated by three private firms and a public one. 70 lines compose the system, with 8 central corridors, 2 circle lines, 3 trolleybus lines, 6 district lines and 1 airport line.

There is an existing transport master plan which was approved in 2014 and financed by CAF (Development Bank of Latin America). Its main objectives include the promotion of mass transit, the development of non-motorised transport, the promotion of the rational use of private motorised transport, the generation of new travel patterns that allow for more efficient use of the network infrastructure, greater road safety and the preservation of the environment. This master plan needs to be updated and consolidated to be validated by institutional actors as well as the community.

The *Municipalidad de Córdoba*, the local counterpart, has the mandate and responsibility to finance mass public transport infrastructure. It has the authority to borrow from international finance sources. Systems and procedures are partially in place to monitor, evaluate and report on urban matters. The technical assistance contributes to institutional strengthening by facilitating spaces for exchange between the different areas of the municipality and discussions to have a common vision of mobility for the city.

Support from the Partnership

Technical assistance: Sustainable Urban Mobility Plan (SUMP) and Pilot project

Funded by: European Union

Funding amount: EUR 600,000

Implemented by: AFD through the EUROCLIMA+ Program

Local counterpart: Municipalidad de Córdoba

Supported activities (SUMP):

- SUMP for Córdoba.
- Study of the city's central area to propose structuring actions for the transformation into a low-emissions area.
- Updated origin / destination survey and prediction model of current and future mobility scenarios, including short, medium, and long-term strategies.
- Technical document on the projected GHG mitigation impact of the SUMP implementation.

Status of implementation (SUMP)

Project start: 2021 Q2

Expected project completion: 2023 Q4

Completed outputs:

- Preliminary report
- Diagnosis and evaluation report

Next expected outputs:

- Definition of a vision, strategic objectives and scenario building
- Action plan, budget and funding
- Monitoring, reporting and accompanying implementation

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024..

La Paz, Bolivia

Partner city

Status of the project: Ongoing pilot project



Basic Information

Urban area: 3,152 km²

Population: 951,800 (2019) | Growth rate: 0.7%

Country capital city

GDP per capita: USD 3,143 (2020)

Modal Share:

Public transport (formal and informal): 79,18%

Walking: 11,92%

Cycling: 0,04%

Private vehicles (cars, motorbikes): 6,75%

Other (freight vehicles, taxis): 2,11%

National GHG emissions per capita: 1,77 (tCO₂eq) (2020)

Exposure to climate change: HIGH

Context

La Paz is the economic and administrative capital of Bolivia. With an elevation of roughly 3,650m, it is the highest capital city in the world. Its metropolitan area includes the even higher city of El Alto, with an average elevation of 4,000m. Both cities are connected via one of the biggest cable car networks in the world but are not integrated from an administrative standpoint. The metropolitan area of La Paz-El Alto has a population of about 2 million inhabitants, of which approximately 950,000 live in La Paz.

The Municipality of La Paz (the counterpart for this project) has the mandate and responsibility to finance mass public transport infrastructure. International finance sources can lend money to the counterpart by agreeing on a sovereign loan with the national government, who then retrocedes it to the municipal government. Systems and procedures are partially in place to monitor, evaluate and report on urban mobility.

In 2014, the city inaugurated the country's first formal public transport system: a structural network of buses named Puma Katari that travel along main urban transport arteries designated fixed stops. This is a remarkable innovation compared to the pre-existing "micro" buses stopping on demand and operating at a low commercial speed. The cable car network, called Mi Teleferico, also functioning since 2014, is composed of 11 lines that transport about 250,000 to 300,000 passengers daily (2019). According to the network's expansion plan, four new lines will be operating by 2025.

Compared to other modes, cycling is nearly absent (0.04%) in the modal split, with less than a thousand trips made daily by bicycle. The city of La Paz is topographically challenging for cyclists, with steep slopes and an altitude variation of 600m from the lowest to the highest point of the city. The development strategy of the cycling infrastructure focuses on the implementation of micro-networks connected through the collective transport systems – Cable Car and Puma Katari. These micro-networks will be located in neighbourhoods whose slopes allow connections in order to cover trips for shopping, work or entertainment.

The objective of the pilot project is to design and construct a pilot micro-network in the Southern Macro District of the municipality of La Paz proposing an intermodal connection, promoting the use of bicycles in urban mobility.

Support from the Partnership

Technical assistance: Pilot Project development

Funded by: European Union through the EUROCLIMA+ programme

Funding amount: EUR 500,000

Implemented by: AFD through EUROCLIMA+

Local counterpart: Autonomous Government of the Municipality of La Paz (GAMLP)

Supported activities:

- Initiation: Report on the design and budget for the cycle path proposed by GAMLP
- Preparation: Preparation of bid tender documents for the works, support in the design of the communication campaign for the launch of the bicycle infrastructure
- Training: 20-hour course and study tour on cycling infrastructure for GAMLP staff
- Diagnostic: Report on the site supervision strategy for cycling infrastructure projects, business model for a public bicycle system
- Implementation: Construction of Phase I of the cycling path, technical support during its implementation

Status of implementation

Project start: 2023 Q1

Project completion: 2024 Q1

Completed outputs:

- Bid tender documents for the technical assistance contract.
- Support the design of the communications campaign to launch the project, in addition to covering the costs of dissemination.

Next expected outputs:

- Analyse the design and budget of the cycling-infrastructure proposed by the SMM-GAMLP technical team and make recommendations for improvements and additions to optimise its operation and cost based on best international practices.
- Advise the technical team of SMM-GAMLP in the integrated planning of the Cycle-infrastructure Network for the Southern Macro District of the municipality of La Paz, Phase I (Calacoto and San Miguel areas) and during its construction.

Highlights in the past year

Capacity building and infrastructure implementation interact to encourage cycling

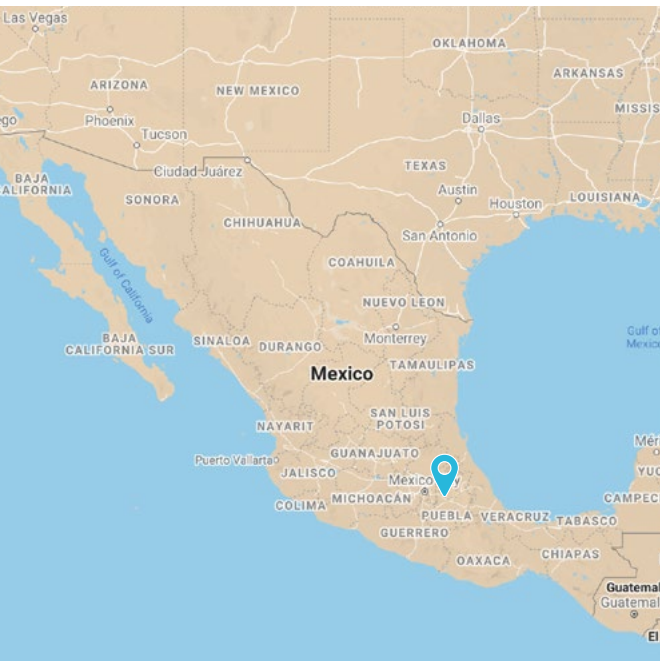
This pilot project aims to test the development model of micro-networks of cycling infrastructure in certain neighbourhoods proposed by the Municipality. It will train technical teams, produce ground-knowledge for future projects, and provide the necessary tools for the completion of the integrated cycling strategy in La Paz.

In February 2023, the consulting contract began and to date (November 2023) two visits have been made to La Paz. Reports 1 and 2 have been delivered, including deliverables related to the programs and results of the training spaces for officials, the communications plan, the Monitoring, Reporting and Verification Plan and recommendations for the design and management of the cycle-infrastructure for La Paz. In October, the La Paz team carried out the study trip to CDMX. Next steps include the report for the design of the public bicycle system which will be delivered to the municipality, and the bidding for the construction of Phase I of the cycle infrastructure.

Puebla, Mexico

Partner city

Status of the project: Ongoing pilot project / technical assistance



Basic Information

Urban area: 563.4 km²

Population: 3,250,000 | Growth rate: 1.59%

Type of city: Regional capital city

GDP per capita: USD 12,184

Modal Share:

Formal public transport: 0.7%

Private cars: 75.5%

Private motorbikes or 2-wheelers: 5.2%

Taxis: 1.1%

Freight vehicles: 18.2%

National GHG emissions per capita: 5.39 (tCO₂eq)

Context

Located in the Valley of Puebla also known as the Valley of Cuertlaxcoapan, Puebla has a current population of 3,250,000 people, making it the fourth largest city and also the fourth largest metropolitan area in Mexico. The territory of Puebla consists of 563.4 km², with an urbanised area corresponding to 43.1%. In the last four decades, the urban area of the municipality of Puebla has grown by more than 500%, while the urban population barely doubled in the same period. Since 1960, the city of Puebla has become a national reference for important public investments and the attraction of external capital and foreign direct investment. As a consequence, a mono-centric and compact urbanisation process was transformed into an extensive and low-density city, initiating developments further and further away from the city centre near its municipal boundaries.

In 2015, Puebla registered a vehicle fleet of 578,784 motorised vehicles in circulation, composed of 75.5% cars, 1.1% public or private passenger transport, 18.2% freight transport and 5.2% motorbikes. In this sense, for 2015 the motorisation rate of the municipality was 277 vehicles per 1,000 inhabitants. According to the statistics, the number of private cars in the municipality of Puebla grew five times more than the municipal population in a period of twenty years (1995-2015), this situation represents a disproportionate increase in private motorised transport that reproduces unsustainable patterns of mobility and urban development.

The city's BRT public transport does not guarantee an intermodal scheme, as there is no integrated system facilitating the transfer from one mode of transport to another.

The local counterpart has the mandate and responsibility to finance public transport infrastructure. It does not have authority to borrow from international finance sources. Systems are partially in place to monitor, evaluate and report on urban mobility.

A large percentage of cyclists come from neighbourhoods located in the south of the city, where the Margaritas terminal from Line 2 is located. The pilot project's goal is to connect this population with the BRT system through the installation of safe and accessible bicycle parking spaces at the terminal. It seeks to facilitate conditions for BRT users to use bicycles as a complementary alternative in their travel chain, as well as to encourage active modes of transport over motorised private vehicles. This pilot project is part of the national sustainable urban mobility strategy and the sustainable mobility program of the municipality of Puebla, approved in 2017.

Support from the Partnership

Technical assistance: Pilot Project development

Funded by: European Commission

Funding amount: EUR 500,000

Implemented by: AFD through the EUROCLIMA+ Program

Local counterpart: Secretary of Mobility Puebla

Supported activities:

Implementation of the pilot project of the BRT's Margaritas terminal: implementing bicycle parking infrastructure and equipment, new bike lanes, and a potential fee system. The project has three components:

- Technical, financial, environmental, and social studies
- Construction monitoring
- Communication and visibility of the project

Status of implementation

Project start: 2021 Q1

Expected project completion: 2024 Q2

Completed outputs:

- Plan of participatory processes
- Report on the results of participatory processes
- Communication and awareness-raising plan
- Diagnostic document
- Comparison of solutions
- Preliminary proposal of solutions
- Implementation plan
- Monitoring, reporting and verification (MRV) plan of the project's impacts

Next expected outputs:

- Construction of the Project
- Foundation system
- Steel structure
- Floor system
- Roof system
- Structural system of the façade
- Electrical installations
- Hydraulic-Sanitary-Pluvial System

Insights from practice: key pilot project takeaways

The Municipality of Puebla, especially the southern area, has been marked by urban sprawl caused by prioritising the use of motor vehicles. The consequences of this urban expansion had caused problems of congestion, inequality and high polluting emissions. To counteract these consequences, it is necessary to implement sustainable urban mobility systems that allow people to access the activities, services and destinations of the City in conditions of equity, security, sustainability and efficiency. Hereby, in line with the Municipal Development Plan, the Sustainable Intramodality Project was developed. The project is expected to reverse the current system focused on the use of motorised vehicles and start building cities that improve the quality of life of its inhabitants, prioritising and promoting sustainable-intermodal mobility.

One of the lessons learned by the process of the intramodality project, was the important role that regulations and normativity play at establishing the guidelines for the development of a Sustainable Mobility System in the Municipality of Puebla. Currently, the legal framework is mostly lacking and vague, which sometimes poses a challenge to Mobility Systems in the application and generation of new and better transportation pathways. However, for this reason, it is expected that the municipality and its partners will work and review these rules and regulations that allow for the generation and protection of the plans, programs and works that exist and promote Sustainable Mobility.

Results and perspectives for scaling

The execution of the Massive Bicycle Parking Project will be carried out in two stages. The first one consists of the installation of 200 anchorage ports (bicycle parking) located in a 2-story building. The structure will be planned for future expansion at two higher levels, the foregoing has allowed the progress and feasibility of the Project, according to the allocated and available resources, but does not limit its operation and, above all, its potential development. In this way, it becomes a feasible and replicable project to use as a model inside and outside the state and country.

Highlights in the past year

Active modes can provide better connectivity with mass transit systems through replicable models

Due to the high volume of cyclists in the Margaritas area terminal, it is important that users have intermodal systems that allow them to travel comfortably and safely throughout Puebla. Therefore, the pilot project is expected to encourage the use of bicycles, increase the use of the BRT and reduce GHG emissions.

The pilot project can be replicated in other Latin American cities that have a BRT system, as it is a project that allows for the connectivity of public transport with other modes of transport, in this case, bicycles, a mode of transport that is growing in the region and that reduces GHG emissions.

As of November 2023, the project works are still in progress. The main advances to date are as follows:

- The foundation work for the main building was completed.
- The placement of the structural steel for the columns was carried out.
- The IPR beams of main girders began to be placed.
- The 10m³ cister was built to store drinking water.

Paraguay

Partner country

Status of the project: Ongoing National Urban Mobility Policy



Basic Information

Population: 6,960,000 | Growth rate: 3.7% (projection 2022)

Percentage of urban population: 62.9%

GDP per capita: USD \$ 4,949 (2020)

Percentage of the population living below the national poverty lines: 23.5%

Annual average infrastructure expenditures as percentage of GDP: 2.25%

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

National GHG emissions per capita: 1,21 (tCO₂eq)(2018)

Exposure to climate change: HIGH

Context

Paraguay, a landlocked country in South America, shares borders with Brazil to the east, Argentina to the south and west, and Bolivia to the north. According to data from 2023, the Paraguayan population is 6.1 million inhabitants. Asunción, with around 550,000 inhabitants, remains the capital and largest city in the country. The official languages are Guaraní and Spanish. The Paraguayan economy is characterised by an extensive informal sector. Since the beginning of the new millennium, Paraguay has experienced a notable reduction in poverty and an increase in shared prosperity. In particular, the country stands out as the fifth largest soybean producer worldwide. As of 2014, the Paraguayan economy has maintained an average annual growth of 4%, driven by solid production and high prices in international markets, in contrast to the economic contraction experienced by other countries in the region in the same period. Despite these achievements, Paraguay faces significant challenges to ensure the sustainability and expansion of its social successes. The majority of the population in rural areas continues to depend on family farming, which puts them at greater risk of falling into poverty. A continuous process of migration has been observed from rural areas to the urban centres of the country in search of better educational and job opportunities. These population movements pose challenges and opportunities for the equitable and sustainable development of Paraguay in the future.

Paraguay, as a landlocked country, relies heavily on its transportation and logistics infrastructure to connect with regional markets and international seaports. River transport remains crucial for the Paraguayan economy, with the Paraguay River serving as the main route through which approximately 60% of the country's foreign trade transits. However, since 2006, the railway system has been largely inactive, with only weekly tourist steam trains and short cross-border freight trains with Argentina operational. Public passenger transportation primarily relies on the bus network, while the urban transportation network exhibits extensive coverage, reaching a significant portion of the population. Cargo transportation predominantly utilises trucks, trailers, and other diesel-fueled means, with diesel accounting for approximately 70% of the total fuel used in the transportation sector. While these elements remain essential for the country's economic development, challenges persist in modernising and diversifying transportation options to ensure long-term efficiency and sustainability.

Updated data from the National Vehicle Registry Directorate reveals a significant increase in the number of vehicles over the last six years, reaching 2,450,789 in 2023. This notable growth in the vehicle fleet is attributed to the increase in GDP per capita, urbanisation, and demographic growth. Despite this growth, Paraguay's vehicle fleet remains one of the smallest in Latin America, with a motorisation rate of approximately 3.2 vehicles per 10 inhabitants. A distinctive characteristic of the Paraguayan automotive sector continues to be the significant presence of used and old vehicles in the vehicle fleet.

The transportation sector remains the primary consumer of petroleum products, with a twofold increase in the period between 2007 and 2023, with diesel accounting for approximately 73% of consumption. Gasoline blending with ethanol and diesel with biofuels is necessary to comply with environmental regulations. It is relevant to note that, despite the growth of the vehicle fleet, gasoline prices in Paraguay continue to be among the highest in Latin America, sparking ongoing economic and political debates.

Paraguay continues to stand out as the largest generator of hydroelectric energy per capita globally in 2023. However, only 20% of electricity generation is used domestically, with electricity rates among the lowest in the region. Given the high costs associated with importing almost 100% of petroleum products, the country shows significant potential for electric mobility. In this context, public transportation, particularly the introduction of electric buses, emerges as a strategic sector to lead electric mobility. One of the implemented projects has aimed to prioritise electric mobility in multimodal urban public transport within the Paraguayan political agenda.

The Electric Mobility Master Plan for Public and Logistics Transportation aims to consolidate efforts toward electromobility, encompassing actions for both public passenger and cargo transportation. The development of the plan will be reinforced through training activities, the active participation of non-state actors, regional exchanges and the identification and management of appropriate financial resources for its implementation. With this approach, Paraguay aims not only to leverage its clean energy generation capacity, but also to promote the adoption of electric vehicles in public transportation as a key strategy towards a more sustainable and energy-efficient future.

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)

Main purpose of the NUMP:

- Promote of electric mobility in multimodal urban public transport in Paraguay, to reduce GHG emissions and to achieve Nationally Determined Contributions (NDCs)
- Prioritise electric mobility in multimodal urban public transport within the Paraguayan political agenda.

Supported activities:

- Develop a Master Plan for Urban, Electric and Multimodal Public Transport and a Monitoring, Reporting along with a Monitoring, Reporting, and Verification (MRV) scheme
- Strengthen public sector capacities for implementing electric transport systems and foster 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 expected completion date: June 2023

Completed outputs:

- Development and validation of the EUROCLIMA+ project concept
- Pre-study in preparation for the NUMP
- Recruitment of a 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 the electrification of transport, including the implementation of a website platform
- Roadmap for the implementation of strategic pilot projects

Insights from practice

The importance of fleet renewal in an intensive-carbon economy

The project aimed at introducing electric mobility in logistics transport in Paraguay has significant impacts on climate and energy levels. By incorporating electric vehicles, it anticipates a substantial reduction in greenhouse gas (GHG) emissions and a decrease in the consumption of diesel and gasoline, the main fuels used by trucks in the country. Furthermore, given Paraguay's dependence on imported gasoline, the adoption of electromobility also foresees a reduction in gasoline consumption by delivery vans and motorcycles, potentially resulting in significant cost savings. This decrease in domestic demand for diesel and gasoline would imply a reduction in the fiscal pressure for the import of hydrocarbon imports, thereby freeing up government resources that could be allocated to priority projects other than fuel imports. In this context, the project seeks not only to mitigate the environmental impact, but also to generate economic and financial benefits for the country.

Perspectives for implementation

In 2023, established an Electric Mobility Strategic Council, led by the Ministry of Industry and Commerce (MIC). This council, formed by presidential decree, aims to position Paraguay as a regional leader in electric mobility, promoting energy security, industrial development and environmental sustainability. The National Electric Mobility Strategy, coordinated by the Ministry of Public Works and Communications (MOPC) and the Secretariat of Technical Planning (STP), will guide the transition towards a sustainable energy matrix, in line with international commitments on climate change and the Paraguay 2030 National Development Plan. There is ongoing communication with to foster project initiatives in the sector.

Due to the limited availability of new or aggregated data, the factsheet has only marginally been updated in 2024.

Uruguay

Partner country

Status of the project: Ongoing National Urban Mobility Policy



Basic Information

Population: 3,387,605 | Growth rate: 0,35%

Percentage of urban population: 96.1%

GDP per capita: USD 17,277

Percentage of population living below the national poverty line: 8.1%

Annual average infrastructure expenditures as percentage of GDP: 5,9%

Nationally Determined Contribution (NDC): Unquantified transport-related NDC

National GHG emissions per capita: 1.90 (tCO₂eq)

Proportion of transport-related GHG emissions: 41%

Exposure to climate change: HIGH

Context

Uruguay has a very high urbanisation index, with 95% of its population living in cities and a sustained migration trend from the countryside to urban centres. Urban population growth occurs through the expansion of urban areas towards lower densities. About half of the population lives in the metropolitan area of Montevideo, Uruguay's capital. The rest of the cities are considerably smaller, with few counting more than 100,000 inhabitants.

Uruguay has achieved very high access rates to public services such as water and electricity. However, in many cases, urban growth did not occur in a planned manner. This situation has caused a surge of settlements with little transport infrastructure and collective transport. Hence, transport systems often present different degrees of inefficiency, provoking lower quality and higher costs. Many users have turned towards alternatives such as motorcycles or private vehicles, even in low-income social sectors. Hand in hand with the most prolonged period of economic growth in the country, which has now lasted for 15 years, a significant increase in the private vehicle fleet has taken place. Public transport demand has decreased, and congestion and air and noise pollution in many cities, especially in Montevideo's metropolitan area, have worsened.

On the other hand, as most Uruguayan cities are small, public transport is often not a viable economic option due to scale issues. In such cases, the population must resort to their vehicles to get around since public transport systems do not exist. This situation constitutes a barrier to the mobility of those who cannot afford a motorcycle or a car.

The public transport sector is highly regulated, with Departmental Governments (GGDD) responsible for granting public transport services and establishing the requirements for corridors and units, e.g. buses and taxis. Electric mobility has been promoted jointly through the Working Group on Energy Efficiency in Transport, led by the Ministry of Industry, Energy and Mining (MIEM) with the participation of the Ministry of Transport and Public Construction (MTOPE), the Ministry of Economy

and Finance (MEF), the Ministry of Housing and Territorial Planning (MVOT) and the Ministry of the Environment (MA), the national public electricity company (UTE), and the Departmental Government of Montevideo (IM).

There also exist private and social groups working on urban mobility, some from business spheres and others from civil society, such as groups of bicycle users. From the private sector, public passenger transport companies and taxi drivers actively dialogue with departmental governments and ministries in charge of urban mobility. In recent years, business groups have been a fundamental part of implementing the first actions to promote electric mobility in Uruguay. Several stakeholders have participated in the communication of promotion instruments, training, knowledge of new regulations and standards, and spaces for dialogue on advantages and possible barriers to electric mobility implementation.

Transport activities generate close to half of total energy-related GHG emissions in Uruguay. Urban electric mobility has the potential to maximise the benefits of the country's low-carbon electricity matrix. A structural transformation of the transport sector might reduce its carbon footprint and contribute to further co-benefits, such as reducing air and noise pollution. Considering that the GGDD are the leading authority for urban transport, enjoying full autonomy from the national level, policy processes have strong participation through the vertical and horizontal governance structure.

Following the structure proposed by MobiliseYourCity for National Urban Mobility Policies (NUMP), this technical assistance intends to build a holistic perspective of the overall NUMP formulation. The NUMP objective in Uruguay seeks to increase access to opportunities located at urban centres through sustainable transport alternatives. From the "ready to implement" approach, the technical assistance supported policy design, implementation instruments (guides), financing mechanisms for specific measures, and a capacity-building roadmap. It has also considered strategic planning, exchanging concept designs, and facilitating workshops and meetings. Detailed knowledge has been provided on Transport Oriented City-Planning, e-mobility solutions, and financing mechanism design.

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 1,000,000

Implemented by: GIZ through the EUROCLIMA+ Program

Local counterpart: Ministry of Industry, Energy and Mining (MIEM); National Energy Directorate; Climate Change Division of the Ministry of Housing, Territorial Planning and Environment

Main purpose of the NUMP:

The project aims to strengthen capacities in planning sustainable urban mobility and to lay the foundations for a national program to promote electric urban mobility that includes the development of technical, regulatory, and financial mechanisms.

Supported activities:

- Incorporation of e-mobility into territorial planning instruments
- Development of standards and regulations for new technologies
- Development of financial tools to promote and accelerate public and private investment for vehicle fleet electrification
- Capacity building and institutional strengthening for public and private actors to facilitate vehicle electrification

Status of implementation

Project start: 2018 Q2

Expected project completion: Not defined

Completed outputs:

- [National sustainable urban mobility planning guide](#)
- [National e-mobility guide](#)
- Draft of the National Sustainable Mobility Policy
- A participatory process with national and subnational stakeholders
- 5 Cities have been supported to move towards sustainable mobility
- Capacity building diagnosis and recommendations for a cross-cutting educational system. A capacity development program on how to design Mobility Plans at the city level was agreed upon with the University of Buenos Aires (UBA), and, 12 practitioners from 6 cities. The program consists of an 8 week self-learning program to be monitored by the UBA online.
- Roadmap for the dissemination of policy and its implementation instruments. The GTP (Project Working Group, for its acronym in Spanish) decided to strengthen institutional capacity by creating a Multisectoral Sustainable Mobility Commission (CIMS). This commission will be piloted with support from Country-Dialogue (a new methodological cooperation format financed by the EUROCLIMA+ Programme).

Next expected outputs:

- National Policy document
- E-mobility solutions guide
- Cost estimation of the policy implementation. The cost will be estimated after the implementation of pilots in six cities with support from the Country-Dialogue of EUROCLIMA+s new phase

Perspectives for implementation

The GTP is responsible for advocating for successful NUMP implementation in Uruguay

The GTP has the technical responsibility to develop the NUMP so it can be adopted at the political level. Its way of working is a replica of the Working Group on Energy Efficiency in Transport, an essential promoter of electric mobility in Uruguay that the Ministry of Industry, Energy and Mining (MIEM) chaired. The GTP has representatives from the environmental, transport, economy, territorial planning ministries, the national public company for electric mobility (UTE) and the Departmental Municipality of Montevideo (IM).

Inspired by these years of joint work building the NUMP, they proposed the creation of the Inter-institutional Commission for Sustainable Mobility (CIMS). This commission will lead the implementation of the NUMP and fill the gap between the national and city levels

Insights from practice: lessons learned from the NUMP process

Although costly and time-consuming, participation enhances NUMP development

While the need to consider the perspectives of each stakeholder group slowed down the policy development process, the inclusion of diverse vantage points improved the setting of objectives and allocating of responsibilities.

In this context, communication is critical. We would advise implementing a dialogue process that engages stakeholders to the greatest extent possible. The input provided by stakeholders should be integrated with an iterative process. In this way, one can harness the cooperation of stakeholders who are committed to the spirit of the policy – this, to be sure, is one of the most valuable outcomes of the policy process.

Vertical coordination is crucial to effectively meet local institutions' needs for sustainable urban mobility

Vertical coordination is crucial for involving stakeholders and ensuring the real-world viability and implementation of the policy. It is essential to carry out this process in several steps to recognise challenges and identify solutions. For example, if the national government promotes sustainable mobility but does not necessarily provide resources to meet stated goals, municipal representatives must tailor their ambitions accordingly.

NUMP implementation foresees additional support documents and an adequate governance framework

The institutional complexity of Uruguay has required an additional effort in coordination. The NUMP implementation transcends the policy document and entails the creation of a National Commission for Sustainable Mobility (CIMS as its acronym in Spanish), the [Sustainable Mobility Planning Guide](#), the [E-mobility Guide](#) and a Financing Mechanism, and other actions. A national law will frame Uruguay's NUMP, and the CIMS will lead the process of enacting the law. After its adoption, the CIMS is expected to lead and coordinate the process for cities to formulate their Sustainable Urban Mobility Plans. Among other responsibilities, the CIMS will regulate access to funds and coordinate local capacity-building.

Available tools for sustainable urban mobility planning need to be adapted to the local context

Introducing the "ready-to-implement" aspect of the policy required work time alongside the counterpart to agree on a format tailored to the national regulatory framework. This "ready-to-implement" methodology came late, and its inclusion into the ongoing process created some friction. However, the counterpart keeping a holistic perspective was crucial to refining the aspects covered. The early engagement of cities was essential to know their specific challenges and needs for future implementation. This consultation process strengthened momentum and commitment from the whole ecosystem of stakeholders. The methodology used is vital for success, as it provides enough flexibility to cover all crucial aspects of sustainable urban mobility planning at the national level while giving room for specific country needs and identity.

2022 was a year for consolidation of a vivid and complex process to reach the NUMP adoption

The adopted strategy for promoting municipal engagement with the national vision was to provide cities with a solid knowledge base for change. Two guidebooks for municipal authorities now accompany the National Urban Mobility Policy. Specifically, the [mobility planning guide](#) supports strategy development at the city level and includes measures and recommendations to consider when planning a sustainable multimodal mobility system. Cities also received a [e-mobility guide](#) that offers solutions and highlights aspects to consider when building an e-mobility system at the city level.

There is a lack of commitment and coordination among the ministries involved to approve the policy

The approval and subsequent publication of the policy requires an interministerial resolution. This must be an agreement between ministries such as the Ministry of Industry, Energy and Mining (MIEM), the Ministry of Transport and Public Construction (MTOPE), the Ministry of Economy and Finance (MEF), the Ministry of Housing and Territorial Planning (MVOT), among others. Not all ministries have the interest and willingness to be part of this agreement. A needed strategy to coordinate and bring together the interests of all these ministries to reach an agreement is currently being developed.

This is the reason why the policy has not been approved yet, despite being drafted and revised since 2022. So far, there is no date set for its approval. It all depends on the authorities in charge at a certain point in time and their interest and willingness to advance sustainable urban mobility.



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