Lessons from Urban Transport in Latin America and the Caribbean

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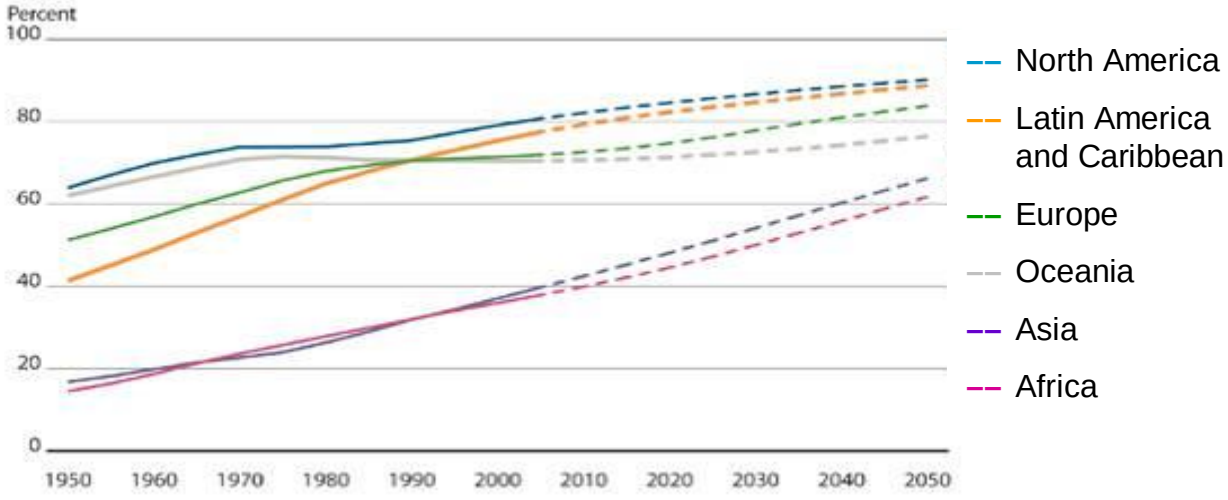
LAC is the most urbanized region in the developing world



Urban Population By World Region

Source: Urban Ages, Cities Programme of London School of Economics and Political Science

- High levels of urbanization: 2010-~80%; 2050-~89%
- LAC urban population in 2010: 470 million
- 133 LAC cities with population over 500.000
- 51 LAC cities with population over 1 Million
- In 2050: 685 mi people will be living in urban areas

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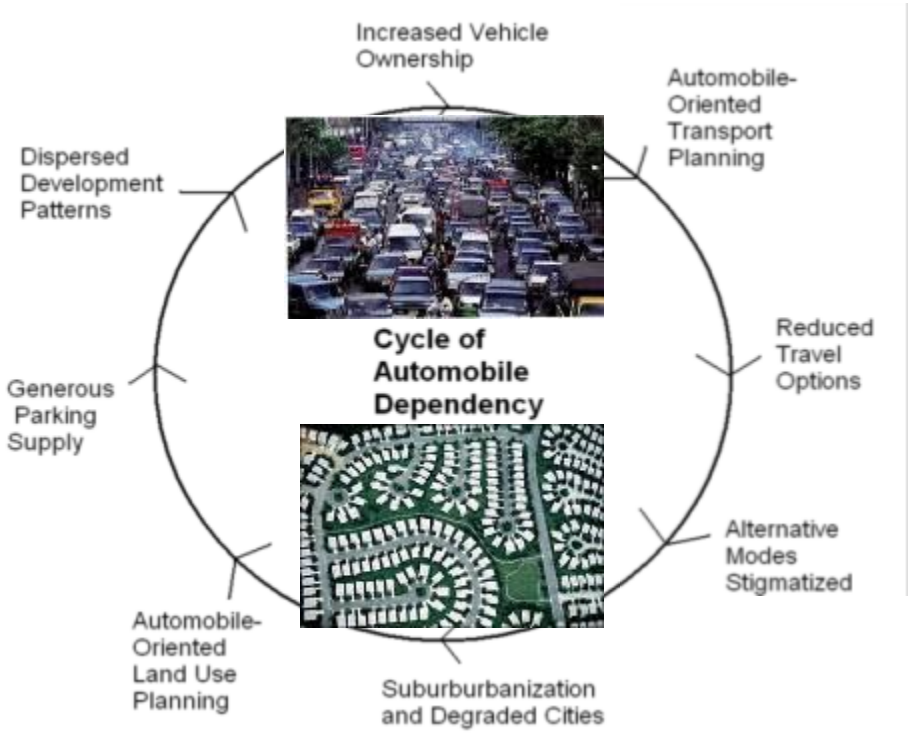
Urbanization is unavoidable

Urban sustainability requires affordable, safe and clean transport

Main issues to be addressed

- ❑Low density expansion of the cities
- ❑Rapid increase of vehicle ownership
- ❑No priority for urban public transport (UPT) – 30 to 40% of land use to streets (low investment in PT)
- ❑Inefficient, poor coverage, low quality and insecure UPT
- ❑Increase of congestion: pollution and environmental deterioration and low traffic safety
- ❑Inefficient use of energy: urban carbon footprint grows faster than population.



Urban Transport Trends

↗ Motorization is increasing

- Higher income
- Low fuel prices
- Low vehicle maintenance costs
- High rates of motorization

Brasil: Car sales multiplied by 3 and motorbike sales multiplied by 10 in 15 years (1990-2006)

Sao Paulo: Nº of private vehicle grew 450% in less than 30 years (1970: 640.000 veh.– 1997: 3.5 million veh.)

Buenos Aires: Motorization rate grew from 190 to 250 veh./1000inhab. in 5 years (1991-1996)

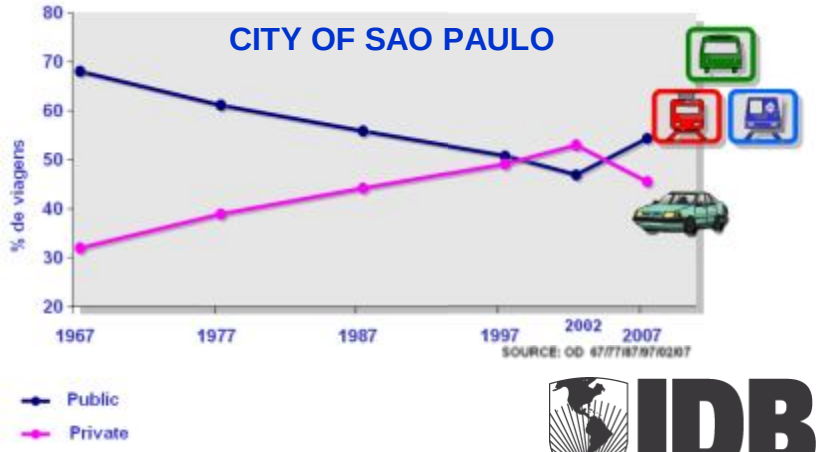
↘ Public transport share is decreasing

City	Public transport as a % of motorized trips			
	Year	%	Year	%
Buenos Aires	1993	49	1999	33
Mexico City	1984	80	1994	72
Sao Paulo MR	1977	46	1997	33

⇨**40%** (2010)

Source: Fulton and Wright

↗ The trend can be reversed…



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Sao Paulo Metropolitan Region, Brazil

Sao Paulo's Mass Transit System – MTS (2008):

- Population: 20 million
- Trains: 261km – 2M passengers/day
- Metro: 61km – 3.3M passengers/day
- Intercity buses: 5500 veh. – 2M passengers/day – 33km BRT
- SP municipal buses: 15.000 veh. – 112km BRT

Reasons for Success:

- Physical and Tariff Integration of Bus and Rail Systems (2000-2006)
- State & City Inter-agency Coordination for Tranportation Planning and Policy
- Investments – >US$10billion
  - Trains:+47km
  - Metro: +19km
  - BRT: +91km
  - SP buses: +160km
- PITU – Integrated Urban Transport Plan

PITU – Integrated Urban Transport Plan

- ❑ NMT – Bike access to Metro and Trains, bike parking at stations, bikeways
- ❑ TDM – Restrictions to private vehicles
- ❑ Integrated Land Use & Transportation Planning
- ❑ Clean bus technologies:
  - ➢ Ethanol- and Hydrogen-powered buses
  - ➢ Fleet renewal
  - ➢ Emissions Control Programs

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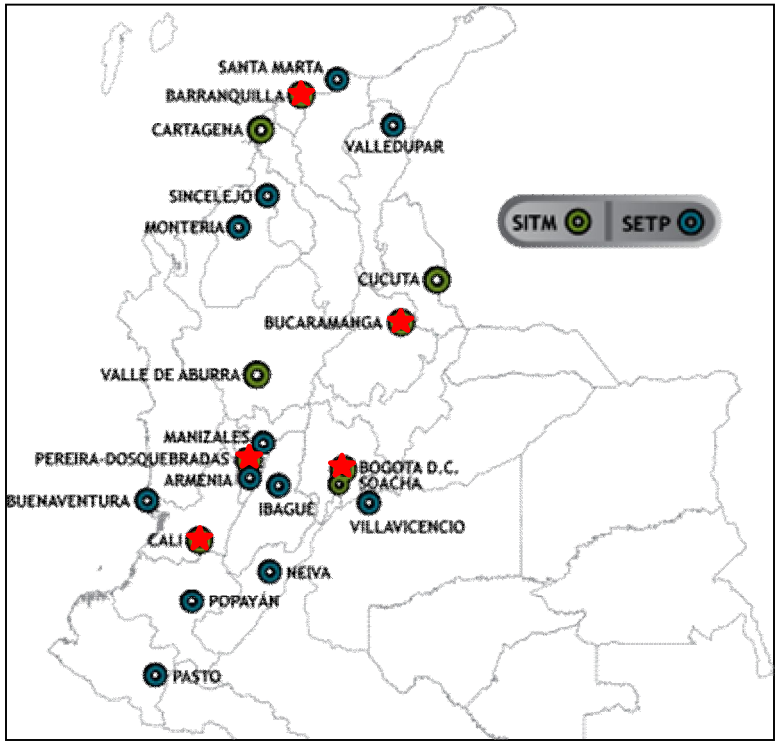
Colombia

National Urban Transport Policy (NUTP) - 2002

- Supports implementation of transport systems in large (>600K hab) and medium-sized (250K-600K hab) cities: provide competitive, efficient, affordable and safe mobility options
- GoC provides financial support (up to 70% of infrastructure investment costs in sunk funds) and institutional capacity building incentives for municipalities
- GoC invested US$1 B since 2000 (aprox. US$1 B more from cities, private sector); US$ 1.7+ B expected from GoC alone through 2016
- Goals: 8 SITMs (Bus Rapid Transit in large cities) and 12 SETPs (medium-sized cities) while maintaining or increasing mode share of public transit



SITMs - Integrated Mass Transport Systems
SETPs - Strategic Public Transit Systems

Colombia

Bogotá - TransMilenio: 10 years of achievements

- 82km of dedicated busway
- 1,500 obsolete buses replaced by newer vehicles (Euro II)
- 1.6M passengers per day
- Travel time reductions (12 min average)
- 88% fatalities reduction
- 240km of bikeways
- Pedestrian streets
- Deteriorated urban sectors recovered
- Land value increase around main corridors and stations
- Creation and consolidation of strategic sectors in the city
- Public space generation
- Real estate developments
- Green house effect reduction. Significant drops in CO2 s, PM10, NOx, SOx, emissions

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Colombia

Medium Cities SETPs

- Cities between 100k and 600k hab. Main purpose is to improve the quality of public transport.
- Tailor-made interventions for each city. Transport solutions feature changes in local regulations, local capacity building, decentralization of government services, land use changes, optimization of bus route systems, consolidation of formal bus operating companies, restoration of historic areas, recovery of public spaces, pedestrianization of downtowns, and investments in dedicated busways, bikeways and traffic light control systems.
- Program will start in 7 of the 12 selected cities

Mexico

Federal Mass Transit Program (PROTAM)

- FONADIN (National Infrastructure Fund) technical and financial support for local Mass Transit Investment Projects with strong social justification, in Cities & Metropolitan Areas with population larger than 500.000

Non recoverable studies	Up to 50% of total cost
Sunk fund investments	Up to 50% of total project investment At least 34% private investment

- Integrate Projects to Sustainable Mobility Plans.
- Strengthen local institutions in urban transport planning, regulation & management.

Technological Options:

- Bus Rapid Transit (BRT)
- Light trains & Trolleys
- Metros & Suburban Trains
- Multimodal Transfer Terminals

Monterrey

Tren Suburbano Valley of Mexico

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Curitiba, Brasil

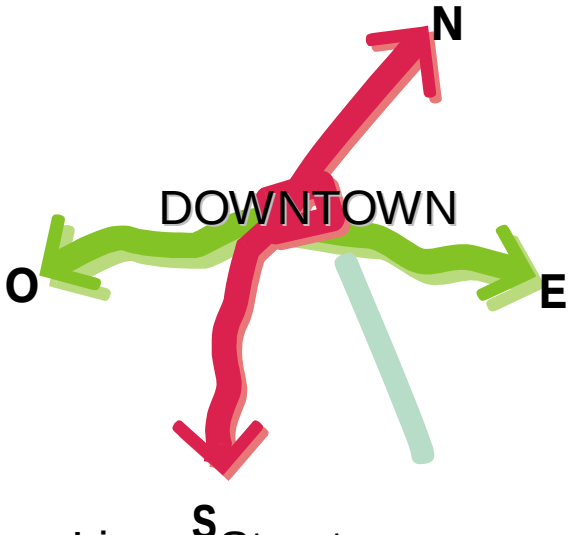
Master Planning for Sustainability

Agache Plan 1943

Radial Structure

Pop. : 150,000 inhab.

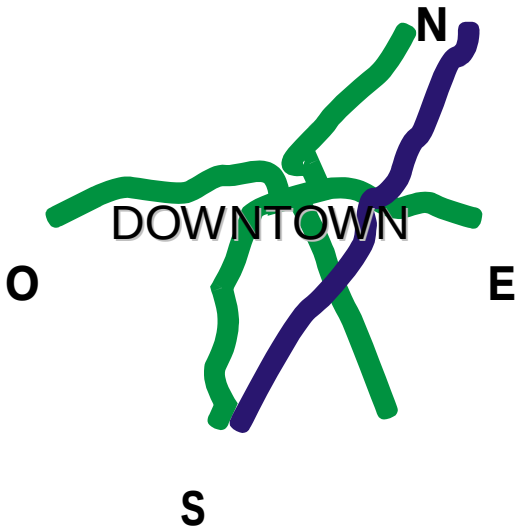
Master Plan 1966



Linear Structure

Pop.: 500,000 inhab.

Master Plan 2004



Revision of the 1966 Master Plan

Pop.: 1.7 million

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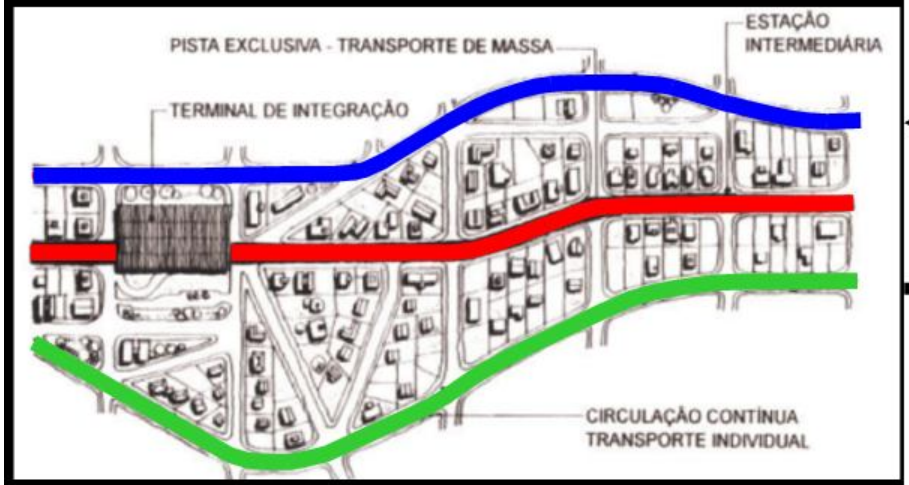
Master Plan1966 Revised in 2004



Integration of Land Use, Public Transportation and Street Network

Linear Growth

One-way road

Dedicated lanes for buses

One-way road

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Express Line 100 passengers

1974

North-South Axis -54.000 passengers/year

1991

Direct Line

2008

Direct Line – Articulated bus

Evolution of the Integrated Transit Network

1979

Inter District Lines

Express Bus - Articulated bus – 160 passengers

1992

Biarticulated bus – 260 passengers

2008 - 2009

Green Line

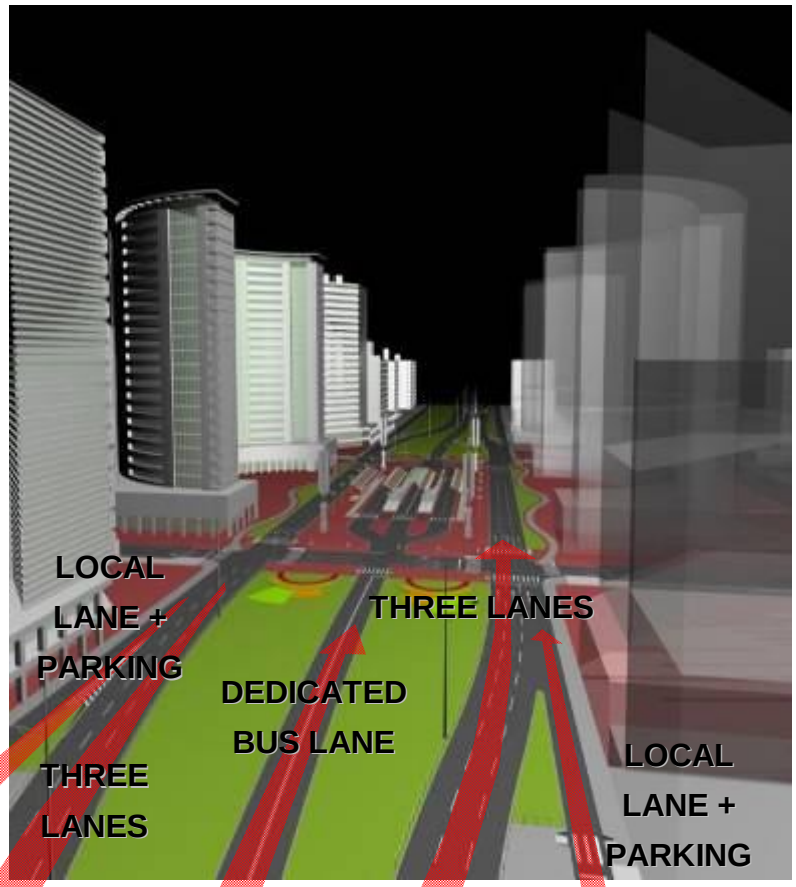
The Green Line

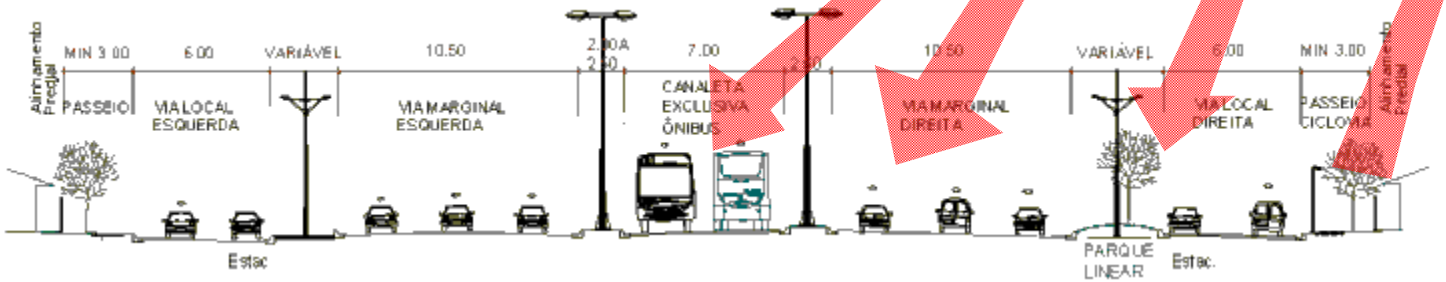
A new development axis (under construction) in the city, transforming a former Federal road into an urban avenue, integrating land use to public transit and street network, promoting the integration of several areas in the city and directly reaching 23 districts.

Curitiba, Brasil - The Green Line

Preserving the environment:

- Stations provided with equipments to collect, store and reuse rain water
- Use of energy efficient system for public lighting
- Plan to warrant the correct final disposal of the construction works waste
- Buses running on Bio Fuel
- Boulevard along the corridor with native plants
- Recovery of 3 existing urban parks - 21,000 sq meters
- 5,200 trees, of 22 native species
- 18 Km of bikeways (6 km in phase 1)
- TOD - Transformation a former service zone into a mixed-use area increasing density and providing services





Conclusions

1. **A comprehensive policy and strategy for sustainable transport should:**
   - Be stable, flexible and show long-term continuity
   - Be based on a comprehensive Avoid-Shift-Improve approach to enhance and expand the benefits of sustainable low carbon transport projects (CO2 reduction, health, safety, social equity, gender, economic development)
   - Consider different modes and measures (BRTs, NMTs, TDMs, Freight and logistics, TODs, etc)
   - Include all relevant institutional areas (environment, transport, land use planning, housing, economic development, finance, etc)
   - Build awareness through communication and outreach
   - Engage the participation of services providers, key stakeholders and communities down to the grass root level in the discussions

Conclusions

❷ **The local policy and strategy for sustainable transport become more effective when technical, institutional and financial support flows from the national government**

❸ **Increased and flexible financial support should enable cities to accelerate and expand sustainable urban transport systems**

- National support programs
- MDBs
- Climate change funds
- Private investments
- Local financial resources

❹ **Key stakeholders (ie, MDBs, private sector, NGOs) have an important role supporting capacity building and knowledge development**

IDB - Diversification of Activities

GUATEMALA
* TransMetro System expansion

COLOMBIA
* Cali SITM (Mio)
* Bogotá SITP & Metro
* SETP ciudades intermedias

PERU
* Metropolitan Lima
* Arequipa

CHILE
* Transantiago
* Public transport sector reform

URUGUAY
* Montevideo Metropolitan Transport System (SMT)

PANAMÁ
* Panama Mass Transit System

DOMINICAN REPUBLIC
* Metro-Bus System Line 1 portal integration


Curitiba

MEXICO
* Mérida, Yucatán
* Sinaloa Red Plus & Zapata-Obregón BRT

BRASIL
* Brasilia BRT system
* Sao Paulo CPTM & METRO expansions
* Rio de Janeiro *Metropolitan Express* BRT & Rio Bike program
* *Portais da Cidade* of Porto Alegre
* Curitiba RIT expansion
* Fortaleza & San Bernardo do Campo

ARGENTINA
* Buenos Aires Metro expansion & bikeways
* Modernization of public trasport in San Miguel de Tucumán

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IDB - Diversification of Activities

- Mou ADB – IDB**:** joint studies related to sustainable low carbon transport – NAMAs; transport data; side events

- EST FORUM in LAC.

- Sustainable Transport Initiative Action Plan – safety; freight logistic and low carbon transport

- Technical and financial support (grants) to develop sustainable mobility plans at a city level in coordination with the national level - 7 cities (5 world soccer cup host cities in Brazil; 1 in Argentina and 1 in Honduras (medium size city pilot**)**

- Technical and financial support (grants) to develop sustainable freight transport and logistics strategies – 1 at national level in Colombia – intercity freight transport; 1 city pilot for urban freight and logistic in Curitiba Brazil

IDB - Diversification of Activities

- Expanding the scope of BRT projects to include related pedestrian and bike projects; land use proposals along corridors; improvement of the urban landscape and public areas around main corridors; full accessibility for people with disabilities; quantification of CO2 emission

- Development of knowledge studies linked to our operations – regional data observatory for sustainable transport; guidelines for improving the sustainability of road rehabilitation and maintenance projects (gender; health, environmentally sound civil works best practices; adaptation of transport infrastructure and service etc

- Training on sustainable transport to transport division and clients

- Capacity building at local level

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