Climate change, urbanization and sustainable urban transport in developing country cities

Sara Candiracci, Energy & Transport Policies Section
Climate change & urbanization

- Global climate change has become a leading development issue at the same time and rate as the world has become urbanized.
- Half of humanity (3 billion) now lives in urban areas.
- 95% of urban growth is occurring in developing countries.
- Africa is home to over 13% of the world’s total population and is growing at 2.7% per year (the fastest growth in the world).
- By 2030 the share of urban areas of Africa will increase passing from 7.5% (1950-2000) to 22.6% (2000-2030).
- Nairobi is one of the fastest growing cities in the world (5%).
- Most of GHG emissions that cause global warming come from cities, especially from transport sector.

**HOW WE PLAN, MANAGE, OPERATE & CONSUME ENERGY IN OUR CITIES IS THE KEY DRIVER BEHIND GLOBAL WARMING!**
Climate change & Transport

- Transport accounts for one-quarter of global energy use and energy-related CO2 emissions.
- Between 1970 & 2006 global GHG emissions from transport increased by 130%.
- Emissions are expected to increase 57% worldwide by 2030 and more than 80% by 2050.
- Nearly 80% of all the future CO2 growth is expected to come from developing countries.
- Emissions in the transport sector and virtually all the expected growth in emissions come from private cars, light duty vehicles and trucks.
- Car ownership worldwide is set to triple to over two billion by 2050.
- These trends will lead to a doubling of transport energy use, with a higher growth rate in CO2 emissions.

THIS FUTURE IS NOT SUSTAINABLE!
Overall lack of sustainability of transport sector in Developing Countries

- Vehicle ownership rates in developing countries are low (10-20% or urban residents), but cities are facing traffic congestion, worsening air and noise pollution, decreasing road safety, and huge expenses for road infrastructure.

- Motorization is rising rapidly (10%) and transportation energy use in developing countries increased over 4%/year over the past 20 years (exceeding the global 2.7% rate of increase).

- High levels of pollution cause 6,500 deaths/year in Mexico City; 170,000-280,000 in China.

- Air pollution is estimated to cost around 2% of GDP in developed countries and 5-20% of GDP in developing nations.

- We need to pay more attention to the coming environmental implications when residents of developing country cities will demand transport & mobility like any other urban resident.
Transport has a significant role to play!

- IPCC: “To avoid the worst impact from climate change, global CO2 emissions must be cut by at least 50% by 2050”.
- IEA: “If transport does not reduce CO2 emissions well below current levels by 2050, it will be difficult to meet targets”.
- Bellagio Declaration: “Effective Climate Action is incomplete without addressing the overall system performance of the Transport Sector”.

**BOTH DEVELOPED & DEVELOPING COUNTRIES ARE EXPECTED TO REALIZE THESE EMISSION REDUCTIONS!**
Challenges of rapid motorization in developing countries

- Physical and living environments rapidly deteriorating, vehicular congestion, safety problems, increased GHG emissions, large group of low-income travellers.

- Public transport is very costly for the poor (30% of income) and NMT is often neglected in transport infrastructure investments.

- Increase mobility for broad segments of the population at an affordable price without causing environmental problems.

- Substantial financial and institutional resources are required.
Which constrains do city managers have?

Elements that constrain city managers to design and implement sustainable transportation planning & policy:

- Fragile political/environmental agenda
- Limited funds & planning expertise
- Lack of reliable data on motorization and GHG emissions
- Inexperienced local institution
- Lack of political engagement on sustainable transport
- Uncoordinated linkages with relevant international treaties
- Inadequate learning linkages between existing projects
- Absence of capacity for monitoring and evaluation of existing practices
How can we enable mobility in developing country cities without accelerating climate change?

Areas of intervention to be addressed to implement a sustainable pathway for transport:

- Promote adoption of sustainable transport options (BRT/NMT, TDM, LUP).
- Wide information sharing, capacity building and policy advocacy mechanism.
- Improve energy efficiency of urban transportation and mitigation of environmental emissions.
- Establish partnership & collaborations with governments, industry and consumers.
- Encourage a range of policy measures to strengthen investments in public transport & infrastructure; to promote more effective carbon finance mechanisms; to create clear international targets and predictable, long-term economic incentives for new low-GHG technologies.
- Improve transport and climate data collection and analysis.
Conclusion

- A significant reduction in CO2 emissions in transport will only be possible if all world regions contribute.

- Developing countries must be enabled to keep transport emissions low while enjoying economic growth and ensuring social inclusion and more liveable cities.

- Integrate human settlements development aspects with urban mobility.

- Improve levels of mobility for the urban poor through promotion of affordable transport programs and appropriate transport technologies.

- Ensure a public transport system targeted for all classes of users, not just for low income population.

"THE FRIENDLIER TO CAR A CITY IS THE LESS HUMAN IT BECOMES"
Enrique Penalosa, Former Mayor of Bogota, Colombia