




Republic of the Philippines
Department of Transportation and Communications



Republic of the Philippines
Department of Environment and Natural Resources
Kagawaran ng Kapaligiran at Kalusugan ng Yamang




National EST Strategy for the Philippines

Shared Growth and the Environment:
The Case of Urban Land Transportation

Shared Growth Seminar Series #12
April 28, 2010
APEC Communications Building, University of Asia and the Pacific

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The formulation of the Philippines' EST Strategy is supported by:



National EST Strategy for the Philippines

Outline

- Context
 - Challenges
 - Co-Benefits in transport
 - AO 254 – Formulation of National EST Strategy
 - Overall goal
- Participatory approach
 - Workshops
 - Consultations
- Strategies, indicators and action plans
- Resources
- Conclusion

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Urban Transport Challenges

- Cities are growing (size and population)
- Motorization rapidly increasing
- Congestion increasing
- Local pollution worsening
- GHG emissions
- Safety worsening
- Oil dependence
- Policies failing to keep up
- Quality of life deteriorating

Impacts of unsustainable transport

Traffic Congestion



Road Safety



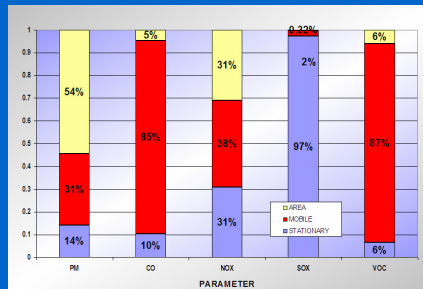
Environment



Impacts of unsustainable transport

2007 NATIONAL EMISSION INVENTORY ACCORDING TO AIR POLLUTANTS (Department of Environment and Natural Resources)

	PM	CO	NOX	SOX	VOC	Total Share
STATIONARY	14.13%	10.26%	30.82%	97.35%	6.48%	20.87%
MOBILE	31.44%	85.03%	38.26%	2.33%	87.42%	65.13%
AREA	54.42%	4.71%	30.92%	0.32%	6.10%	14.01%



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Manifestations of unsustainable transport

Traffic Congestion



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Manifestations of unsustainable transport

Inadequate transport systems



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Manifestations of unsustainable transport

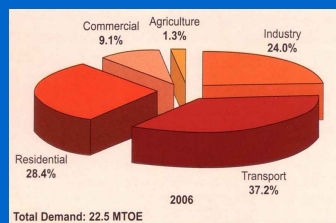
Traffic Accidents



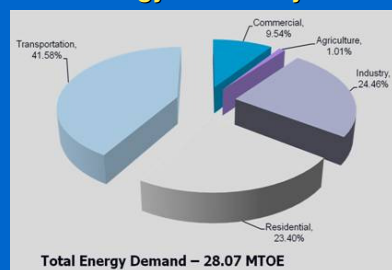
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National EST Strategy for the Philippines

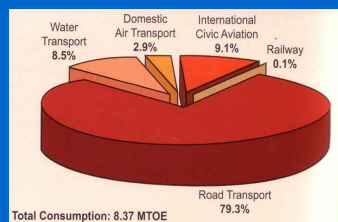
2006 Energy Demand by Sector



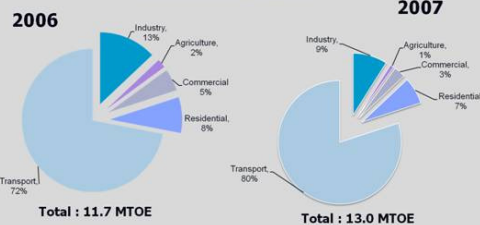
2008 Energy Demand by Sector



2006 Transport Energy Consumption



Sectoral Consumption of Oil

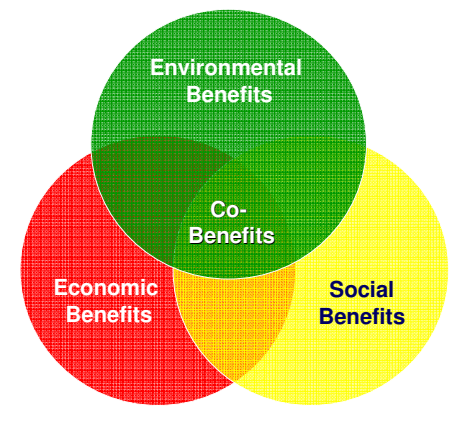
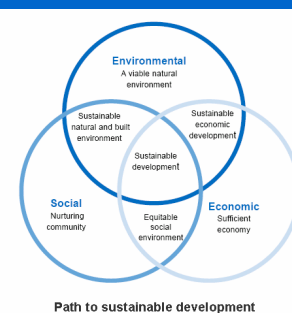


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National EST Strategy for the Philippines

What are co-benefits?

Realisation of multiple objectives within a single strategy



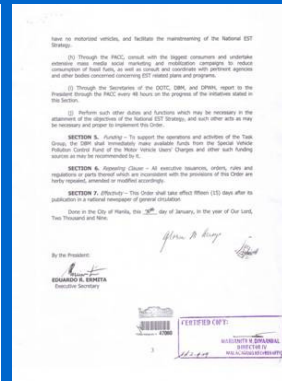
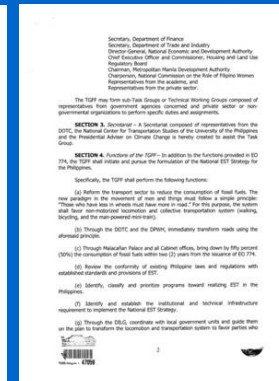
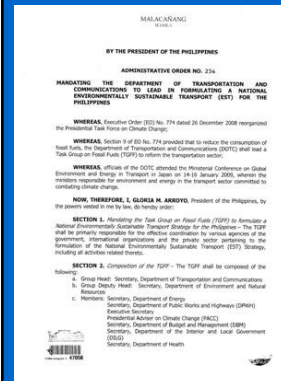
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Overall Goal of the National Strategy:

- ✓ **Reduction of the annual growth rate of energy consumption and associated GHG emissions** from the transport sector in urban areas of the country
- ✓ **Mainstream environmentally sustainable transport (EST),** which involves, among others, the promotion of transportation systems of low carbon intensity and shift towards the use of more sustainable transport modes

Inclusive, equitable and people-centered!

Presidential Administrative Order No. 254 - Formulation of a National Environmentally Sustainable Transport Strategy for the Philippines -



Outcomes of participatory process/ consultations



Inception Meeting – September 12, 2008
Partnership Meetings/Workshops – October 24, 2008 and December 12, 2008
Cebu BRT Conference – May 9, 2009
Action Planning Workshop – August 7, 2009
World Roads Conference – October 27, 2009
Forum on Greening the Transport Sector – November 12, 2009
Focus Group Discussions

Planning Horizons:

Immediate: until 2010	Medium Term: 2016
Short Term: until 2013	Long Term: Beyond 2016

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Regional Consultations

- **Iloilo City** – May 15, 2009 in cooperation with LTO Region VI and the Metro Iloilo – Guimaras Economic Development Council (MIGEDC)
- **Davao City** – May 22, 2009 in cooperation with the LTO Region XI, City Government of Davao, and the Energy and Clean Air Project (ECAP) of USAID
- **Baguio City** – June 11, 2009 in cooperation with the LTO-CAR, City Government of Baguio, and the Energy and Clean Air Project (ECAP) of USAID

Objectives:

- a) To present the draft National EST Strategy;
- b) To present good practices of EST; and
- c) To identify appropriate EST applications as well as hindrances at the local level

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EST Thematic Areas

(Aichi Statement, 2005)

1. Public Health
2. Strengthening Roadside Air Quality Monitoring and Assessment
3. Traffic Noise Management
4. Vehicle Emission Control, Standards, and Inspection and Maintenance
5. Cleaner Fuels
6. Public Transport Planning and Travel Demand Management (TDM)
7. Non-Motorized Transport (NMT)
8. Environment and People Friendly Infrastructure Development
9. Social Equity and Gender Perspectives
10. Road Safety and Maintenance
11. Knowledge Base, Awareness and Public Participation
12. Land-Use Planning

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1. Public Health

Strategies	Indicators	Action Plan
1] Formulation and promulgation of Department (DOH) Administrative Orders on public health	<ul style="list-style-type: none"> Action and communications plan; Guidelines and policies developed and circulated; Implementing rules and regulation; and Road map 	<ul style="list-style-type: none"> Creation/ formulation of action and communication plan; Prepare and formulate guidelines Prepare and formulate IRR Prepare/ formulate and mainstream road map and time line
2] Establishment of partnerships among concerned agencies or groups including information and communication dissemination on public health hazards	<ul style="list-style-type: none"> Inter-agency links; Working group(s); MOAs among concerned agencies or groups; Incentives scheme; and Media support 	<ul style="list-style-type: none"> Creation/ establishment of steering committee and TWG Create working groups/committee Issue/sign MOA Establish/set incentives scheme Enter into MOA with media fit
3] Full implementation of EST program on public health	<ul style="list-style-type: none"> Community based organizations/ NGO's involved; LGU's capacitated and involved; and Medical package in the National Health Program 	<ul style="list-style-type: none"> Establish tie ups with NGO's and community based org Capacity assessment and training of identified LGU's. Conceptualize and incorporate medical package in the national health program Strengthen and capacities community based health facilities

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2. Social Equity and Gender Perspective

Strategies	Indicators	Action Plan
1] Monitoring and reinforcement of existing laws, rules, and regulations on gender, age, and PWD concerns	<ul style="list-style-type: none"> • Level of compliance of concerned agencies, LGUs, and • transport infrastructure and service providers 	<ul style="list-style-type: none"> • Convene concerned agencies to evaluate compliance
2] Installation of traffic and transport assistive devices including manpower components	<ul style="list-style-type: none"> • No. of traffic and transport assistive devices installed, and • Manpower component assigned in key areas 	<ul style="list-style-type: none"> • Determine areas for installation and manpower requirements • Installation of needed devices and assignment of personnel in these areas

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3. Strengthening Road Side Air Quality Monitoring and Assessment

Strategies	Indicators	Action Plan
1] Monitor reduction of concentration of TSP and other criteria pollutants	<ul style="list-style-type: none"> • Reduction in concentration of criteria pollutants 	<ul style="list-style-type: none"> • Establish baseline data for other criteria pollutants; determine contribution of transport to emissions (inventory)-- emission factor development and AAQ modeling; source apportionment/ speciation
2] Purchase/Installation of PM10, PM2.5, HC, CO, NO2, SO2 (road side) equipment	<ul style="list-style-type: none"> • No. of operational roadside air quality monitoring stations 	<ul style="list-style-type: none"> • Identify potential hotspots and prioritize establishment of stations
3] Capacitate local government units and other sectors on monitoring and assessment	<ul style="list-style-type: none"> • No. of trained LGU personnel in basic air quality management • No. of LGU AQM plans developed and implemented 	<ul style="list-style-type: none"> • Identify potential staff to be trained in the HUCs; • Conduct trainings (e.g. use DENR mobile AQ monitoring van); conduct of action planning workshops on AQM

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4. Traffic Noise Management

Strategies	Indicators	Action Plan
1] Amendment/updating of noise standards and compliance	• Revised noise standards	<ul style="list-style-type: none"> • Update of baseline roadside noise level data by 2010; • Set up Inter Agency TWG
2] Strict enforcement of motor vehicle noise regulations	• Roadside noise level	<ul style="list-style-type: none"> • Purchase of noise level meters; • Training on use of equipment and procedure of LTO and LGU personnel; • Issuance of Memo/Admin Order on noise regulations for inspection of in-use MVs; • Roadside apprehension procedures for LGUs
3] Enhancement of LGU capability/ enact local ordinances on noise [including ambient and source]	• Enacted ordinances on noise	• Dissemination of template of ordinance (samples, ex. QC)

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5. Vehicle Emission Control, Standards, and Inspection and Maintenance

Strategies	Indicators	Action Plan
1] Establish motor vehicle standards on fuel economy and roadworthiness (in-use)	<ul style="list-style-type: none"> • % compliance of MVs to emission standards • Developed fuel efficiency standards for public transport • Developed vehicle roadworthiness standards for all vehicles 	<ul style="list-style-type: none"> • Develop fuel efficiency standards for PT vehicles/fuel efficiency ratings for private modes (for PT, to aid in LTRFB fare setting); • Develop vehicle scrap page program
2] Strengthen road side apprehension on polluting and non-roadworthy vehicles {Intensify organization of Anti Smoke Belching Units under CENRO office}	<ul style="list-style-type: none"> • % compliance of MVs • No. of operational LGU Anti Smoke Belching Units; 	<ul style="list-style-type: none"> • Encourage enactment of local ordinances to impose fees and set aside collection as a local clean air fund; • Encourage creation of LGU ASBUs with training; • Facilitate deputation of LGU personnel by LTO
3] Mandatory twice per year inspection of PUV	• % compliance	• Issuance of policy directive requiring of mandatory twice a year inspection of PUVs

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6. Cleaner Fuels

Strategies	Indicators	Action Plan
1] Increase use of cleaner fuels for all vehicles (reduction of use of conventional fuels)	<ul style="list-style-type: none"> % of vehicles using alternative fuels No. of distribution stations for alternative fuels 	<ul style="list-style-type: none"> Provision of fiscal and non-fiscal incentives for producers and users of cleaner fuels; Incentives for assemblers of cleaner fuel vehicles; incentives for clean fuel conversion/retrofit companies); Negotiate for sources of natural gas supply (e.g. Malampaya or imported); Develop standards for LPG conversion of tricycles
2] Adoption of harmonized fuel quality standards (Euro regulations)	<ul style="list-style-type: none"> Euro 4 adoption 	<ul style="list-style-type: none"> Harmonization of biofuel blends with Euro 4 standards; Study on appropriate fuels for motorcycles/tricycles (e.g. conversion of 2-stroke to LPG); Suitability of E10 to carbureted vehicles;
3] Improve distribution system for CNG	<ul style="list-style-type: none"> Number of daughter stations 	<ul style="list-style-type: none"> Conduct of FS for additional CNG refueling stations; Encourage investors for LNG terminals and pipeline distribution system

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7. Public Transport Planning and Travel Demand Management

Strategies	Indicators	Action Plan
1] Public transport network integration	<ul style="list-style-type: none"> Inclusion in national plan No. of LGUs having PT planning integrated in local plans No. of LGUs with intermodal stations Presence of integrated ticketing system for Metro Manila's rail system 	<ul style="list-style-type: none"> Integrate EST in NTPP2, DOTC to endorse NTPP2 to NEDA Development of HLURB policy guidelines to integrate PT plan to LGU plan - mandatory to HUCs Develop policy guidelines
2] Develop and enhance appropriate freight transport policies	<ul style="list-style-type: none"> No. of development studies e.g., logistics improvement plan 	<ul style="list-style-type: none"> Push studies for rationalized truck routes
3] Develop and implement appropriate TSM/TDM measures	<ul style="list-style-type: none"> Travel time reduction for public and private transport users No. of rationalized truck routes 	<ul style="list-style-type: none"> Conduct studies to assess travel speeds along critical corridors/sections Assessment of truck routes in Mega Manila

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7. Public Transport Planning and Travel Demand Management (Cont.)

Strategies	Indicators	Action Plan
4] Develop mass transit systems especially BRT	<ul style="list-style-type: none"> No. of cities with appropriate mass transport No. of mass transport lines 	<ul style="list-style-type: none"> Assessment of existing public transport system Push studies for mass transport including BRT and rail
5] Rationalize public transport according to transport and road network hierarchies	<ul style="list-style-type: none"> Public transport mode and supply suitable to major corridor based on network demand estimates (to replace current Route Measured Capacity method) 	<ul style="list-style-type: none"> Assessment of existing public transport system in Philippine cities Push studies for mass transport including BRT and rail for highly urbanized cities

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8. Non-Motorized Transport

Strategies	Indicators	Action Plan
1] Develop policies and guidelines for pedestrian- and cycling-inclusive land use planning	<ul style="list-style-type: none"> No. of NMT-friendly cities Number/length of bike lanes constructed Number/length of pedestrian walkways constructed % or amount of budget provision or incentives on the use of NMTs (national and local government) 	<ul style="list-style-type: none"> Develop local indices Push for plan implementation by 2012
2] Provision of NMT facilities	<ul style="list-style-type: none"> No. of NMT-friendly cities Number/length of bike lanes constructed Number/length of pedestrian walkways constructed % or amount of budget provision or incentives on the use of NMTs (national and local government) 	<ul style="list-style-type: none"> Develop local indices Push for plan implementation by 2012

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9. Environment and People Friendly Infrastructure Development

Strategies	Indicators	Action Plan
1] Incorporate green architecture principles in the design of transportation infrastructure	<ul style="list-style-type: none"> No. of cities adopting or implementing environmentally sustainable transport infrastructure including green designs Increase in number/length of pedestrian walkways and other people friendly facilities 	<ul style="list-style-type: none"> Develop local indices by 2010 Prepare plans by 2011, implementation by 2013
2] Incorporate "inclusive transport" principles in transportation infrastructure and vehicle design	<ul style="list-style-type: none"> % Reduction in accidents involving elderly, children, women and persons with disabilities % Increase in the number of public transport vehicles incorporating "inclusive" design Number of cities adopting or implementing environmentally sustainable transport infrastructure including green designs Increase in number/length of pedestrian walkways and other people friendly facilities 	<ul style="list-style-type: none"> Strict implementation of provisions for PWD, senior citizens, pregnant women, etc.
3] Provide seamless and secure transport systems	<ul style="list-style-type: none"> Number of intermodal terminals; Reduced number of incidents 	<ul style="list-style-type: none"> Develop indices Conduct diagnostic assessment Prepare intermodal terminal plans

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10. Land Use Planning

Strategies	Indicators	Action Plan
1] Promote mixed use development (compact, shorter trip distances)	<ul style="list-style-type: none"> Urban density (no. of persons/area); Diversity of land uses in a given space; Trip lengths (unit distance) 	<ul style="list-style-type: none"> Conduct of transport surveys; Advocacy activities of responsible agencies; Recognition of local best practices in compact, mixed use development
2] Capability building on integration of land use and transport policies	<ul style="list-style-type: none"> Case studies on EST and develop toolkits Number of trainings/ seminars on land use and transport integration conducted Number of CLUPs/CDPs integrating EST Recognition of good practices of LGUs on EST 	<ul style="list-style-type: none"> Detailed case study on the Marikina Bikeways in 2009 and search for EST leading practices of HUCs Development of EST training program and modules Develop and conduct advocacy activities for LGUs Develop and implement recognition mechanics

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11. Road Safety and Maintenance

Strategies	Indicators	Action Plan
1] Road safety audit	<ul style="list-style-type: none"> Number of road projects audited for road safety Percent of road-kms audited Number of certified Road Safety auditors 	<ul style="list-style-type: none"> Road safety audit training Development or RSA training module IRAP: International Road Assessment Programme
2] Valuation of accident costs	<ul style="list-style-type: none"> Itemized accident cost components 	<ul style="list-style-type: none"> Research on accident costs
3] Establish road traffic safety zones	<ul style="list-style-type: none"> Number of road traffic safety zones 	<ul style="list-style-type: none"> Identification of criteria for selecting candidate areas/corridors TSZ Traffic management studies Legal support like issuance of LGU ordinances, or aids of legislation

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12. Knowledge Base, Awareness and Public Participation

Strategies	Indicators	Action Plan
1] Establish Center for Research in EST (CREST)	<ul style="list-style-type: none"> Established research center at University of the Philippines 	<ul style="list-style-type: none"> Establish research center and allocate resources for multi-disciplinary studies
2] Information build up on public health relative to transport	<ul style="list-style-type: none"> Number of IEC materials produced and disseminated; Number/name of tri-media tapped for information campaign 	<ul style="list-style-type: none"> Conduct research on alcohol, and drug related accidents; Enter into MOA with media
3] Reporting of air quality indices to the public (website)	<ul style="list-style-type: none"> Air Quality Indices - TSP, HC, CO, NO2, SO2, PM10, PM2.5 	<ul style="list-style-type: none"> Development of web portal for reporting of air quality indices
4] Public awareness on hazards of noise	<ul style="list-style-type: none"> No. of advocacy materials used in quad-media 	<ul style="list-style-type: none"> Develop IEC materials

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12. Knowledge Base, Awareness and Public Participation (cont.)

Strategies	Indicators	Action Plan
5] Intensify promotion of alternative fuels and vehicles	• Number of advocacy materials used in quad-media	• Develop IEC materials
6] Development of an integrated road accident database system	• Number of computerized database systems interconnected	• Develop RADSys, • Establish about 30 computerized accident database system for tertiary hospitals • Enhance existing TARAS to include accident data on local roads
7] Establish road safety research center	• Established research center • Number of researches conducted / disseminated	• Proposal for a road safety research center • Conduct road safety research • Dissemination activities like annual conferences, annual reports, and publications
8] Capability building on road safety at the local level	• Number of training programs conducted • Number of Local Government Unit personnel trained	• Development of Road Safety training modules • Trainors' training in Mega Manila • Regional Road Safety training program/seminar

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Resources

Challenge:

How do we support the plans and programs?

Use the Special Vehicle Pollution Control Fund (SVPCF)

- Derived from the Motor Vehicle User's Charge (MVUC)
- One of 4 trust funds. Others are:
 - ✓ Special Road Support Fund
 - ✓ Special Local Road Fund
 - ✓ Special Road Safety Fund ← can be used for RS
- The 3 other funds are under the DPWH while SVPCF is under DOTC

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Resources

Example of SVPCF Projects:

- Planning Support Capacity Building for DOTC and LTO on the Implementation of a Phil Nationwide Motor Vehicle Inspection and Maintenance Program (NMVIMP) – \$ 320K
- Public Transport Network Development Plan for Mega Manila and Other Key Cities
 - Development of Mega Manila Public Transportation Planning Support System (MMPTPSS) : \$ 575K [ongoing]
 - Development of Public Transportation Strategic Plan for Metro Cebu : \$ 745K [ongoing]
- Capacity Building of Personnel Including Institutional Strengthening for EST (CBIS) : \$ 65K [ongoing]
- Center for Research in EST (CREST) : \$ 320K [proposed]
- Development of CLRV Standards : \$ 65K [proposed]

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Paradigm shift in transport?

- Advanced city: How to reduce car use?
- Developing country city: “How to facilitate car use”

“Widening roads to address congestion is like buying larger clothes to address obesity.”

Unsustainable!

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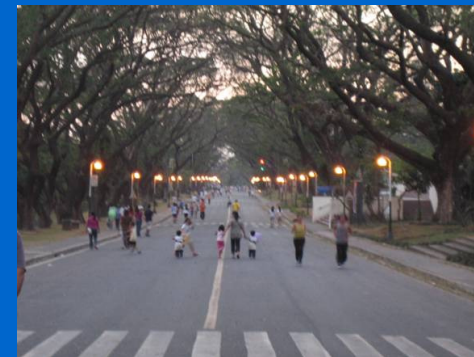
Paradigm shift in transport?

- **Dilemma:** How will this affect development? How will this affect growth?
- **Required:** How to change mindsets? How to change behavior? How to change lifestyles?

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End of presentation

Thank you for your attention.



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