



EST CASEBOOK

Leading Practices of Philippine Cities on Environmentally Sustainable Transport (EST)



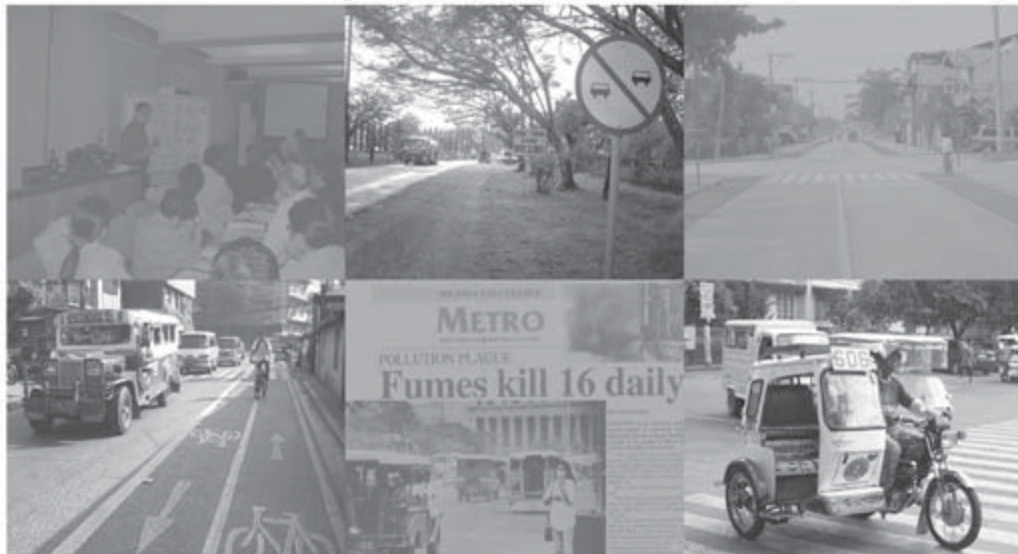
University of the Philippines
National Center for Transportation Studies
November 2009





EST CASEBOOK

Leading Practices of Philippine Cities on Environmentally Sustainable Transport (EST)



University of the Philippines
National Center for Transportation Studies
November 2009



EST CASEBOOK

LEADING PRACTICES OF PHILIPPINE CITIES ON
ENVIRONMENTALLY SUSTAINABLE TRANSPORTATION (EST)

PROJECT TEAM MEMBERS

Noriel Christopher C. Tiglao, Dr. Eng. – *Project Leader*

Karl N. Vergel, Dr. Eng. – *Case Writer*

Ma. Sheilah G. Napalang, Dr. Eng. – *Case Writer*

Alorna A. Abao – *Project Coordinator*

Michael Cocjin – *Research Assistant*

Anna Milissa Pacuña – *Research Assistant*

Published by the

National Center for Transportation Studies

University of the Philippines Diliman, 1101 Quezon City, 2008

This document has been reproduced with financial assistance
from the DENR-UNDP Environment and Natural Resources
Capacity and Operations Enhancement (ENR-CORE).

The contents of this document are the sole responsibility of the authors.

Acknowledgments

To the local chief executives and their personnel who actively supported the capacity-building and social marketing of Environmentally Sustainable Transport (EST) in 2007 –

To the LGU of Cebu City headed by Mayor Tomas R. Osmeña with Engr. Paul Villarete (Coordinator, CPDO) and Mr. Arnel Tancinco (Executive Director, CITOM);

To the LGU of Marikina City headed by Mayor Ma. Lourdes C. Fernando with Mrs. Carlota V. Contreras (Past OIC, Marikina City Bikeways Office);

To the LGU of San Fernando City, La Union headed by Mayor Pablo C. Ortega with Engr. Rudy P. Ducusin (Coordinator, CPDO) and Mr. Valmar Valdez (CENRO Officer);

To the LGU of Cagayan de Oro City headed by Mayor Constantino G. Jaraula with Ms. Estrella F. Sagaral (Coordinator, CPDO) and Ret. Gen. Filipino Amoguis (Past Head, Roads and Traffic Administration); and

To the LGU of Iligan City headed by Lawrance LI. Cruz with Arch. Gil R. Balondo (Coordinator, CPDO);

To our partners from academic institutions and NGOs who willingly shared their most valuable time and resources during the seminar-workshops –

To UP College Cebu represented by Prof. Enrique Avila (Dean) and Dr. Jonnifer R. Sinogaya (Coordinator, Program for Environmental Studies);

To Mindanao State University-Iligan Institute of Technology (MSU-IIT) represented by Prof. Metodía M. Trinidad (Professor, Department of Civil Engineering);

To Clean Air Initiative for Asian Cities (CAI-Asia) represented by Mr. Bert Fabian; and

To USAID-Energy and Clean Air Project (ECAP) represented by Mrs. Arlene Donaire and Ms. Evan Dispo;

To our partners from DOTC and other concerned national government agencies who share in our collective vision for sustainable transport systems in support of local and national development;

To DENR-UNDP ENR-CORE Programme for providing catalytic support in promoting EST in the country.

Table of Contents

FOREWORD	<i>vi</i>
LIST OF ACRONYMS	<i>viii</i>
PART 1 METRO CEBU	
Background	1
Profile of the City	1
Development Challenges	2
Key Transport and Environment Issues	4
Poor Road Network	4
Increasing Motorization	4
Traffic Congestion	5
Low Service Levels of Public Transport	6
Decrease in Public Transport Patronage	6
Air Pollution	6
Road Traffic Accidents	8
Transport Management Context	8
Specific Programs and Initiatives	9
Metropolitan Planning and Development	9
Traffic Management Institutions	10
Public transport Improvement and Promotion	11
Mass Transit Initiatives	12
Environmental Protection	12
Successes Achieved	13
Lessons Learned	14
Future Directions	15
References	15
PART 2 SAN FERNANDO, LA UNION	
Background	17
Population	18
Motorization	19
Road-Based Public Transport	20
Road network	20
Air Quality	20
Traffic and Transportation Problems and Issues	20
Transport and Environment Management Context	21
Specific Programs and Initiatives	21
Tricycle Conversion Program (2000-present)	21
Supporting Programs and Initiatives for Local Transportation Management	23
Successes Achieved	23
Lessons Learned	25
Future Directions	25
References	27

Part 3	MARIKINA CITY	
	Background	28
	Development Challenges	29
	Key Transport and Environment Issues	31
	Motor Vehicle Registration	31
	Motorized vs. Non-Motorized Traffic	33
	Road Accidents Involving Bicycles	34
	Air Quality Indicators	34
	Transport and Environment Management Context	35
	Specific Programs and Initiatives	36
	Promotion of Non-Motorized Transport (NMT) and Through the Marikina Bikeways Project	36
	Marikina City Bikeways Office	37
	Successes Achieved	38
	Sidewalk Clearing	38
	Marikina Bikeways	38
	Lessons Learned	40
	Future Directions	41
	References	41
Part 4	CAGAYAN DE ORO CITY	
	Background	42
	Development Challenges	43
	Key Transport and Environment Issues	44
	Transport and Environment Management Context	46
	Specific Programs and Initiatives	46
	Successes Achieved	48
	Lessons Learned	48
	Future Directions	48
	References	48

Foreword

Since the signing of the Philippines to the United Nations Framework Convention on Climate Change (UNFCCC) Agreement in Rio de Janeiro in 1992, it has undertaken programs and activities towards achieving sustainable development and addressing climate change. These include the enactment of enabling legislations and the establishment of appropriate institutional arrangements to effectively coordinate and implement the country's commitment in the Rio Summit. The passage of the Clean Air Act (CAA) or Republic Act No. 8749, enacted by the Eleventh Congress in 1999, is one of the major documents that made operational the principles of sustainable development in the country. This law provides for the Department of the Environment and Natural Resources (DENR), together with concerned agencies and local government units, to prepare and fully implement a national plan consistent with the UNFCCC, and other international agreements, conventions and protocols on the reduction of greenhouse gas (GHG) emissions in the country.

With respect to the transport sector, the Philippines is signatory to the Nagoya Statement agreed at the International Conference on Environmentally Sustainable Transport (EST) in the Asian Region in 2003. Furthermore, the Manila Policy Dialogue on Environment and Transportation was held in 2004. In this dialogue, the need for strategic planning on EST was recognized with both the long-term vision and short to long-term actions at the regional, national and local levels. As a result of these meetings, the First Regional EST Forum was conducted in Aichi, Japan in August 2005 that resulted in the Aichi Statement. Then, the Second Regional EST Forum was convened in December 2006 in Yogyakarta, Indonesia. Subsequently, the Asia Mayors' Policy Dialogue for the Promotion of EST in cities was held in Kyoto, Japan in April 2007 and resulted in the Kyoto Declaration.

With regard to the transport sector, the Philippines is signatory to the Nagoya Statement agreed at the International Conference on Environmentally Sustainable Transport (EST) in the Asian Region in 2003. Furthermore, the Manila Policy Dialogue on Environment and Transportation in 2004 identified need for strategic planning on EST with both the long-term vision and short to long-term actions at the regional, national and local levels. However, to date, the integrated national framework in achieving EST in the country is still being developed. Moreover, the capacities of concerned agencies and stakeholders are hampered by the lack of information on the transport sector resulting to skewed perceptions and uninformed decisions.

The Department of Transportation and Communications (DOTC) in collaboration with other concerned departments including the Department of Environment and Natural Resources (DENR) and Department of Energy (DOE), has promoted EST objectives through policies and programs in line with the provisions of the Philippine Clean Air Act. Existing programs include the development and enforcement of emission standards for motor vehicles, modernization of public transport units, promotion of clean fuels and engine technologies, and the development of mass transit systems. However, existing measures are generally of the 'end-of-pipe' type and there is a growing recognition for DOTC to develop more pro-active policies and strategies to deal with transport and environment challenges.

The University of the Philippines National Center for Transportation Studies (UP-NCTS), together with other concerned agencies, has strongly advocated for the mainstreaming of EST in national and local development in the country since 2006. A consultation workshop for all the 17 cities and municipalities was held in September 2006. Then an executive conference was held in October 2006 where local executives were informed about the need to promote EST in their respective cities. This was followed by a course for middle managers in November 2006. Finally, a capacity building program on mainstreaming EST was conducted for five (5) weeks in the months of February and March 2007. The program consisted of institutional visits, visioning sessions and action planning workshops that culminated in the Metro Manila Declaration on EST.

A Memorandum of Understanding (MOU) between DOTC and University of the Philippines Diliman (UPD) was formalized in March 2007 for the conduct of interdisciplinary, basic and applied research on sustainable transport policy, among others. The MOU will take effect for three years. Subsequently, a Joint Memorandum Agreement (JMA) was issued in November 2007 for the creation of a Joint Committee and a Technical Working Group (TWG) between DOTC and UPD.

The University of the Philippines National Center for Transportation Studies (UP-NCTS) has been appointed by the Department of Environment and Natural Resources (DENR) as the responsible party in one of the expected outputs of the UNDP-funded Environment and Natural Resources Capacity and Operations Enhancement (ENR-CORE), namely, "Enhanced capacities of a broad constituency of government, civil society, the private sector (SMEs including micro-enterprises), academic institutions and other key stakeholders for advocacy and implementation of ENR and sustainable energy management."

In 2007, UP-NCTS has conducted "Capacity Building and Social Marketing for Environmentally Sustainable Transport". The action included the conduct of case studies and consultation seminar-workshops for five (5) cities all over the country, namely, Cebu, Marikina, San Fernando in La Union, Cagayan de Oro and Iligan and the conduct of a National EST Conference.

The social marketing activity involved the conduct of four (4) regional seminar-workshops in key cities nationwide as part of mainstreaming EST. The seminar-workshops adopted a social marketing approach whereby representatives from the LGUs were requested to elaborate on their experiences and challenges and other LGU participants provided constructive suggestions under "mentoring" atmosphere. Moreover, allowing the LGUs to host a seminar-workshop allowed the other LGU participants to experience first-hand the EST initiatives, as well as, issues and challenges of the host LGU. The seminars were held in 2007 in the cities of Cebu (August 30-31), Iligan (September 19), Cagayan de Oro (September 20) and San Fernando, La Union (November 22). Close to 200 stakeholders attended the seminars consisting of local chief executives, planning officers, traffic unit heads, and environmental unit managers. The seminar-workshops included technical inputs from experts, sharing of experiences by local government executives and managers, consultation of local stakeholders and forging of partnerships between the local government units and the respective local academic institution.

A national conference was held in December 11, 2007 in Makati City. Case studies on the successful approaches and good practices of selected local government units in promoting EST were presented. The conference was attended by representatives from DOTC, LGUs and academic institutions.

All materials and knowledge resources generated by the project have been made available online through the project's website (<http://ncts.upd.edu.ph/estnow>).

Case studies on the experiences of selected local government units outside Metro Manila were conducted to identify lessons and good practices in achieving EST objectives at the local level. The practical experiences of the selected LGUs provide exemplars of EST project identification, implementation, monitoring and evaluation. The case study cities were selected based on their unique features and innovative approaches in jointly dealing with transport and environment issues in their respective localities. Consequently, four case study cities were identified, namely, Marikina City and the City of San Fernando, La Union in Luzon, Cebu City in the Visayas, and the city of Cagayan de Oro in Mindanao.

Noriel Christopher C. Tiglao, Dr. Eng.
Project Leader

List of Acronyms

BRT	Bus Rapid Transit
CPDO	City Planning and Development Office
CENRO	City Environment and Natural Resources Office
DENR	Department of Environment and Natural Resources
DOTC	Department of Transportation and Communications
ECAP	Energy and Clean Air Project
EST	Environmentally Sustainable Transport
GEF	Global Environment Facility
ENR-CORE	Environment and Natural Resources Capacity and Operations Enhancement
LGU	Local Government Unit
NMT	Non-Motorized Transport
RTA	Roads and Traffic Administration
TSP	Total Suspended Particulates
UNDP	United Nations Development Programme