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PREFACE

Air quality is the focus of the Philippines Environment Monitor 2002. Initiated in 2000, the Philippines Environment Monitor series presents a snapshot of key environmental trends in the country. Its purpose is to inform stakeholders of key environmental changes as they occur, in an easy-to-understand format. Using charts, graphs, and texts, the 2000 Monitor benchmarked trends in various environmental indicators associated with water and air quality, and natural resources conservation. The 2001 Monitor addressed solid waste management. The Monitor is not a strategy document of either the Philippine Government or The World Bank. Since environmental changes occur over the medium- to long-term, the series is designed to track general trends every five years.

Growing human and vehicle populations and increasing industrial activities are the main causes of worsening air quality in the urban centers of the Philippines. Industrial activities, transport sources, and waste burning, cause pollution that may take the form of particulate matter, nitrogen dioxide, sulfur dioxide, carbon monoxide, and global greenhouse gases. These pollutants have many economic costs, including increased health costs. Although data are scarce, one study estimates that health costs of exposure to PM_{10} in four urban centers are over US\$400 million.

In the last few years, efforts by the Government have helped to reduce and even eliminate some of the pollutants. The most comprehensive government action has been the passage of the Clean Air Act (CAA) in 1999. Among the key policy shifts incorporated in CAA are the use of market-based instruments and the increased role of the private sector. On the programmatic side, the phase-out of lead in gasoline by January 2001 has mostly eliminated the lead problem. Sulfur dioxide emissions in Metro Manila have fallen because of the closure of a few power plants around the metropolis. Selected private sector enterprises have taken steps to help reduce vehicular emissions by allowing only pollution-free vehicles to enter their premises. Similarly, civil society organizations have been very active in promoting awareness and catalyzing public opinion for improvements in air quality. Despite these positive steps, air quality in the country remains poor. The major impediments to alleviating the problem include poorly enforced laws, weak institutional capacity, and inadequate investment. By acting now, the country and its people can enhance their quality of life while advancing the goals of economic development.

The Philippines Environment Monitor 2002 includes: 1) an introduction to air pollution; 2) a description of the pollution sources for eight key pollutants and the resulting trends in ambient air; 3) impacts of these pollutants, particularly particulates, on public health and public perception; 4) responses of the Government, civil society, and the private sector; and 5) a description of the institutional arrangements, legal framework, and budget. The Monitor concludes by identifying challenges to implementing an integrated air quality management program including low cost measures that could yield significant benefits.

The Philippines Environment Monitor 2002 is the result of a joint exercise involving national agencies, academics, civil society, and researchers. A draft of the Monitor was discussed at a consultation workshop in May 2002. Information contained in this Monitor has been obtained from published and unpublished data and reports of government agencies, universities, non-governmental organizations, individuals, The World Bank, and its international partners.

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank	NEDA	National Economic and Development Authority
CAA	Philippine Clean Air Act of 1999	NGO	Non-governmental organization
CAR	Cordillera Autonomous Region	NO _x	Oxides of nitrogen
CO	Carbon monoxide	NO ₂	Nitrogen dioxide
CO ₂	Carbon dioxide	O ₃	Ozone
COCAP	Concerned Citizens Against Pollution	ODS	Ozone depleting substance
DA	Department of Agriculture	PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
DOE	Department of Energy	PCA	Partnership for Clean Air
DENR	Department of Environment and Natural Resources	PGH	Philippine General Hospital
DILG	Department of Interior and Local Government	PIA	Philippine Information Agency
DOH	Department of Health	PhP/P	Philippines Peso
DOTC	Department of Transportation and Communications	PM	Particulate matter
DTI	Department of Trade and Industry	PM ₁₀	Particulate matter less than 10 microns in diameter
EDSA	Epifanio de los Santos Avenue	PM _{2.5}	Particulate matter less than 2.5 microns in diameter
EMB	Environmental Management Bureau	PNRI	Philippine Nuclear Research Institute
ENRAP	Environmental and Natural Resources Accounting Project	PUV	Public Utility Vehicles
Gg	Gigagram (10 ⁹ gram)	SIDA	Swedish International Development Cooperation Agency
GHG	Greenhouse gas	SMC	San Miguel Corporation
HC	Hydrocarbon	SO ₂	Sulfur dioxide
LGU	Local Government Unit	SPPI	Science Park of the Philippines, Inc.
LTO	Land Transportation Office	SWS	Social Weather Station
mg/m ³	Milligrams per cubic meter	TSP	Total suspended particulates
MMAQISDP	Metropolitan Manila Air Quality Improvement Sector Development Project	µg/dl	Micrograms per deciliter
MMDA	Metropolitan Manila Development Authority	µg/m ³	Micrograms per cubic meter
MP	Montreal Protocol	UNFCCC	United Nations Framework Convention on Climate Change
MVIS	Motor Vehicle Inspection System	UP	University of the Philippines
MW	Megawatt	VOC	Volatile organic compound
NCR	National Capital Region	WHO	World Health Organization
NSCB	National Statistical Coordination Board		

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