

Increased media scrutiny, public participation, and awareness are leading to faster and more-effective political decisions on environmental protection. As a result, laws and ordinances have become more comprehensive over time; yet their implementation is found to be lagging. People are losing confidence in the government's ability and willingness to implement policies and programs to improve the environment. Based on the review presented in previous sections, the following major challenges are identified.

1 *Strengthening long-term national commitment to environmental protection* is crucial to reversing current patterns of resource use, and for implementing pollution-prevention programs on a larger scale. Although national laws should be upheld irrespective of the administration in power, in reality, the priorities change each time a new government is elected. This leads to discontinuities and programmatic breakdown in bureaucratic agendas. In addition, a pervasive culture of political patronage in government agencies is seen as a significant obstacle to the systematic implementation of regulations, and to improving the quality of environmental governance.

2 *Heightened public awareness* will exert pressure on both the private and public sectors to uphold their responsibilities and follow the law. Timely and accurate information on environmental quality indicators and costs can catalyze public participation. Sharing such information encourages environmental stewardship among citizens, improves the willingness to pay for environmental services, and enhances the effectiveness

of economic instruments in achieving compliance. For example, in the case of solid waste management, low willingness to pay for garbage collection is a result of poor services in the past and a lack of information on the true costs and benefits of solid waste management. Similarly the unwillingness to pay for cleaner vehicles or fuel can be related to the absence of easy to understand information on the health effects of air pollution. Strong opposition to the siting of waste treatment facilities is rooted in the not-in-my backyard (NIMBY) syndrome.

3 *Supporting private sector in the provision of environmental services* will help bridge the gap between local government and DENR responsibilities and resources. Budgetary shortfalls significantly limit agencies' ability to implement environmental policies and services. Despite budgetary shortfalls, most local government units have not explored alternatives to large scale public sector infrastructure projects. Partnerships with the private sector are an alternative mechanism for providing much needed environmental services.

For example, more private resources can be harnessed to improve sanitation in Manila, which has one of the lowest access rates for piped sewerage services among Asian cities. The private sector or a quasi-government organization may be allowed to collect, treat, and dispose wastewater for a fee. Since the provision of financing for such facilities is new to commercial banks, there is a need to reduce investment uncertainties and risks by considering preferential credit and guarantees.



4 *Improved coordination and capacity* within local agencies is crucial to harmonize the decentralization process of DENR with that of the Local Government Units. For example, institutions responsible for allocating land and resource use permits rely on uncoordinated maps and data sets. Local government agencies also need to coordinate with other agencies to better provide environmental services.

5 *Modernizing monitoring, enforcement, and public disclosure* will strengthen environmental compliance and enforcement. Current enforcement efforts appear to be constrained by weak and uncoordinated monitoring systems, and by a lack of basic capacity to translate information into environmental priorities. To complement existing command-and-control regulations, successful initiatives to promote community participation, industry self regulation, public-private partnerships, and market-based policy

instruments could be scaled up. Examples include the environmental user fee in Laguna de Bay and EcoWatch, privatizing provision of environmental services, and enterprise level and industry-wide pollution efforts.

6 *Streamlining bureaucratic processes will encourage investment in natural resources.* Tenurial instruments issued by DENR, under programs such as community-based forest and coastal resources management policies, have formally strengthened local rights. Yet, bureaucratic complexities and delays have often resulted in conflicts on the ground, and limited the potential of these instruments to provide incentives for sustainable management and investments. New institutional arrangements such as Protected Area Management Boards and provincial environmental councils could bypass many of the existing institutional and bureaucratic constraints, and encourage local stewardship of natural resources.



Through industrial tree plantations denuded mountains are transformed into thriving production forests.
Source: DENR.



Organization	Web Address	Description & Content
Department of Environment and Natural Resources (DENR)	www.denr.gov.ph	Overview of the programs and projects that help protect, preserve, and enhance the natural resources of the Philippines.
Environmental Management Bureau (EMB)	www.emb.gov.ph	Focuses on environmental laws for various environmental media, standards, and environmental quality status of the country.
Department of Health (DOH)	www.doh.gov.ph	Programs and projects to improve health and sanitation.
National Water Resources Board (NWRB)	www.nwr.gov.ph	Water resource regions and water quantity and availability.
Laguna Lake Development Authority (LLDA)	www.llda.gov.ph	Environmental quality of Laguna de Bay and its watershed, including the Environmental User Fee System.
Asian Development Bank (ADB)	www.adb.org/water/	Information on water policy, water operations, water actions, and basic water sector information.
Partnership in Environmental Management for the Seas of East Asia	www.pemsea.org	Marine pollution and initiatives in the 12 East Asian countries.
Bureau of Fisheries and Aquatic Resources (BFAR)	www.bfar.gov.ph	Information on fishery laws and fishery resources, including production volume.
US-Asia Environmental Partnership (US-AEP)	www.usaep.org	Information on recent development in environment and its own projects in the region.
US Environmental Protection Agency (USEPA)	www.epa.gov	Extensive information available on all technical and legal aspects of environment, including water.
United Nations Development Programme (UNDP)	www.undp.org	UNDP water related programs.
United Nations-Habitat (Water and Sanitation in the World's Cities)	www.unhabitat.org	Information on safe drinking water, and adequate and low-cost sanitation facilities.
Water Supply and Sanitation Performance Enhancement Project (WPEP)	www.wpep.org	Sector studies and ex-post evaluations of water supply and sanitation projects in the Philippines.
World Bank Water and Sanitation Program (WSP)	www.wsp.org	Description and details regarding the World Bank Water and Sanitation Program. Reports on best practices in water supply and sanitation.
World Health Organization (WHO)	www.who.int/water_sanitation_health/en/	Water quality, particularly the 3rd edition of WHO Guidelines for Drinking Water Quality.
Center Science and Environment (CSE)	www.rainwaterharvesting.org	Comprehensive website on water issues in India, including information on water scarcity and legislation.
World Bank	www.worldbank.org/html/fpd/water	Water Supply and Sanitation website.
World Bank Water	lnweb18.worldbank.org/ESSD/ardext.nsf/18ByDocName/StrategyWaterResourcesSectorStrategyAnOverview	World Bank Water Strategy.
National Environment Agency (Singapore)	app.nea.gov.sg	National Environment Agency (Singapore).
Pollution Control Department (Thailand)	www.pcd.go.th/indexEng.cfm	Provides information on water quality in Thailand.
Environmental Protection Department (Hong Kong)	www.epd.gov.hk/epd/index.html	Provides information on water quality and water resources in Hong Kong.
The Ministry of Water Resource (The People's Republic of China)	www.mwr.gov.cn/english	Information about the water resource issues in China.
Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)	www.pemsea.org	Provides information on the regional program on the environmental management of the Seas of East Asia, involving 12 East Asian countries and supported by the Global Environment Facility, UNDP, and IMO
Network of professional institutions in Mediterranean (MEDCOAST), including ICCOPS of Italy, Institute for Remote Sensing of EU, and PAP/RAC of Croatia.	www.medcoast.org.tr	Supports and enhances integrated coastal management practices and beach areas in the Mediterranean and black sea countries.



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GEOGRAPHY	ECONOMY / SOCIETY
<p>Area: Total 300,000 sq. km Land 298,170 sq. km Water 1,830,830 sq. km</p> <p>Boundaries: <i>North:</i> Balintang Channel <i>South:</i> Sulu and Celebes Seas <i>East:</i> Philippine Sea/Pacific Ocean <i>West:</i> South China Sea</p> <p>Coastline:..... 17,460 km</p> <p>Maritime claims: <i>Total territorial water area incl.</i> <i>Exclusive Economic Zone</i> 2,200,000 sq. km <i>Coastal</i> 266,000 sq. km <i>Oceanic</i>..... 1,934,000 sq. km <i>Continental shelf area</i> 184,600 sq. km</p> <p>Climate: Tropical: northeast monsoon (Nov. to April); southwest monsoon (May to October)</p> <p>Terrain: Mostly mountains, with narrow to extensive coastal lowlands</p> <p>Elevation extremes: <i>Lowest point:</i> Philippine Sea 0 m <i>Highest point:</i> Mt. Apo 2,954 m</p> <p>Natural resources: timber, nickel, cobalt, silver, gold, salt, copper, petroleum</p> <p>Land use: <i>Arable land:</i>..... 19% <i>Permanent pastures:</i>..... 4% <i>Permanent crops:</i>..... 12% <i>Forest & wetlands:</i>..... 46% <i>Others:</i>..... 19%</p> <p>Environment – International agreements: <i>party to:</i> Climate Change, Endangered Species, Hazardous Wastes, Marine Dumping, Nuclear Test Ban, Ozone Layer Protection, Biodiversity, Wetlands, Whaling, POPs</p>	<p>GDP (2004) 1,148,003 T GDP growth rate (2004)..... 6.1%</p> <p>GDP – composition by sector: <i>Agriculture</i> 18.19% <i>Industry</i> 30.75% <i>Services</i> 43.67%</p> <p>Unemployment rate (2003): 11.4%</p> <p>Gross Domestic Investment/GDP: 20.6%</p> <p>Exports of goods and services/GDP:..... 46.2%</p> <p>Gross domestic savings/GDP:..... 19.5%</p> <p>Gross national savings/GDP:..... 26.8%</p> <p>Industrial production growth rate: 5.3%</p> <p>Agricultural production growth rate: 4.9%</p> <p>Agriculture-products: rice, coconut, corn, sugarcane, banana, hog, broiler chicken, layer chicken, carabao, beef cattle, dairy cattle, duck, goat, chicken eggs, duck sardines, milkfish, oyster, mussels, tilapia, catfish</p> <p>Exports (2004): PhP 530,394 B Imports (2004):..... PhP 622,853 B Exchange Rate:..... 56.04 PhP</p> <hr/> <p>Population (2000):..... 76.5 million Population growth rate: 2.36% Urban population (% of total population):..... 56.9 Birth rate (2004): 24.63/1,000 population Death rate (2004):..... 5.66/1,000 population Infant mortality rate (2003):..... 29/1,000 live birth Access to safe water (% of population): 81.7%** Access to sanitation (% of population):..... 81%** Life expectancy at birth: 70.15 years (average) Literacy (total population):..... 92.3% Elementary participation rate (2003): 90.1%</p> <p>National capital: Manila Administrative divisions (July 2004): 17 regions, 79 provinces Independence: June 12, 1898</p>

Source: National Statistics Office. National Economic and Development Authority, *Medium Term Philippine Development Plan 2001-2004 and Medium Term Development Plan 2004-2010.*, National Economic and Development Authority, *Recent Economic Performance and Prospects for 2004.* Presentation, March 4, 2004. 2001 Philippine Fisheries Profile, Bureau of Agricultural Statistics, 2000 Philippines Statistical Yearbook-National Statistical Coordination Board. World Health Organization, 2004. World Development Indicator 2000.

