

SANITATION COUNTRY PROFILE

PHILIPPINES

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Decision-Making: In implementing its commitment at the 1992 United Nations Conference on Environment and Development (UNCED), the Philippines has begun the process of integrating Agenda 21 principles into its development plans, programmes, and budgets at the national, regional, and local levels. To assist this progress, the Philippine Council for Sustainable Development (PCSD) has coordinated the integration of a number of priority actions into the country's various Medium-Term Philippine Development Plans (MTPDP).

Plan 21 builds on the solid foundations created by the MTPDP. Plan 21 sets the broad developmental directions of the country and will serve as the basis for the detailed plans of the sector agencies. It ensures the continuation of policies based on self-responsibility, productivity, creation of opportunities through competitive markets and enlightened government regulation. The Philippines has also established a national Agenda 21 called the Philippine Agenda 21, or PA 21. It provides for the creation of an enabling environment which would assist various stakeholders to integrate sustainable development in their decision-making processes. A mechanism to ensure integration of sustainable development in local plans, programmes, and projects is through the localization of PA 21. In this regard, the PCSD has been supporting local initiatives on the creation of local councils through technical assistance and training.

A resolution recognizing and advocating the leading participation of NGOs and POs in the implementation of development programmes and projects has been passed. The other major groups of society, for example women, youth, indigenous peoples, and communities, have been recognized as equal partners in shaping, crafting, and implementing development programmes. They participate in all stages of development. The business sector continues to be involved in a number of programmes to ensure that environmental considerations are integrated in their activities.

The Government of the Philippines passed RA 6969 known as the Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990, which regulates the importation, manufacture, processing, distribution, use, transport, treatment, and disposal of toxic substances and hazardous and nuclear wastes. The law sets standards for the proper management of toxic and hazardous wastes as spelled out in its implementing Rules and Regulations issued in 1992. The Department of Trade and Industry (DTI) through the Board of Investments for example, provides economic incentives that are consistent with the provisions of the Omnibus Investment Code or Executive Order No. 226, to promote the establishment of toxic and hazardous waste merchant facilities, based on the annual Investment Priorities Plan (IPP). Merchant facility refers to an integrated and self-contained facility capable of processing a wide range of toxic and hazardous waste that involve complete treatment, storage and disposal.

A. Basic Sanitation: The National Framework for Physical Planning (NFPP), which contains policy guidelines for settlements planning, espouses policies that would provide access of the population to sanitation, and basic utilities such as water, waste disposal and other services.

B. Solid Wastes: By virtue of the enactment of the Ecological Solid Waste Management Act of 2000 (RA 9003), it has become the policy of the state to adopt a systematic, comprehensive and ecological solid waste management program. Through the Act, the National Solid Waste Management Commission was created to oversee the implementation of solid waste management plans and prescribe policies to achieve the objectives of RA 9003. The use of non-environmentally acceptable packaging shall be prohibited and a phase out period shall be determined after consultation and hearing with stakeholders. New open dump for solid waste shall be prohibited and existing open dumps shall be converted into controlled dumps within 3 years and no controlled dumps shall be allowed within 5 years after the effectivity of the above-mentioned Act.

C. Hazardous Wastes: In compliance with the Philippine obligations to the Montreal Protocol on Substances that Deplete the Ozone Layer, the Philippine Country Program (PCP) for the Phase-Out of

Ozone Depleting Substances (ODS) was prepared in 1993. The PCP, which is reviewed and updated every five years, contains the plans, programs, and activities for the phase out of ODS in the country and the shift to environment friendly practices and technologies.

To implement Republic Act (RA) 6969 known as "Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990" and the Country Program for the phase-out of ODS, the Department of Environment and Natural Resources (DENR) issued various Department Administrative Orders (DAO) such as the Implementing Rules and Regulations of RA 6969 (DAO 92-92), Interim Guidelines for the Importation of Recyclable Materials that Contain Hazardous Waste (DAO 94-28), Priority Chemical List (PCL) (DAO 98-58) and Chemical Control Orders (CCO) for Mercury and Mercury Compounds (DAO 97-38), Cyanide and Cyanide Compounds (DAO 97-39), Asbestos (DAO 2000-02), and ODS (DAO 2000-18). The PCL is a compilation of all chemical substances being used, imported and manufactured in the country while the CCO prohibits or limits the use, manufacture, export, import, transport, processing, storage and possession of chemical substances deemed to pose unreasonable risks or hazard to the public and the environment.

The phase-out of ODS is on track and within the country's commitments to the Montreal Protocol. The accomplishment for the phase-out of CFCs 11 and 12, which account for 97% of total ODS controlled imports, exceeded the target in 2001, i.e. importation/consumption was reduced by 33% as against the 25% target. The Philippines is close to achieving the 50% target reduction earlier than the 2005 schedule, i.e. 46% reduction had already been achieved in 2002. There is no recorded importation of other CFC substances since 1997. Consumption of halon 1211 and 1301 is also being reduced to essential uses, i.e. 55% reduction from the 1995-1997 base amount of 103.9 MT was recorded in 1998.

D. Radioactive Wastes: The Philippine Nuclear Research Institute (PNRI), formerly the Philippine Atomic Energy Commission was created upon the passage of Republic Act No. 2067 known as the Science Act of 1958. The PNRI is mandated (1) to conduct research and development studies in the utilization of radioactive materials for commercial, industrial, medical, biological or agricultural or other peaceful purposes (2) to regulate and license the acquisition, distribution and use of radioactive material by issuing rules/regulations and establishing such standards to govern the shipments, possession and use of radioactive materials for the purpose of protecting the health and safety of the general public.

PNRI through the Nuclear Regulations, Licensing and Safeguards Division (NRLSD), issued specific regulations known as the Code of PNRI Regulations (CPR) to address the safe management of radioactive waste.

In 1990, the Philippine Congress enacted the Toxic Substances, Hazardous Wastes and Nuclear Waste Control Act of 1990, commonly known as Republic Act 6969. The Act seeks to protect public health and the environment from unreasonable risks posed by these substances. This legislation is under the jurisdiction of the Department of Environment and Natural Resources (DENR) with the PNRI as the authority, specific for the control of nuclear/radioactive wastes in the Philippines.

Programmes and Projects:

A Basic Sanitation: The following programmes and projects are being implemented and done in cooperation with the different groups and sectors of the society:

1. **Belgian Integrated Agrarian Support Programme (BIARSP):** This programme is a bilateral project between the Government of the Philippines (GOP) and the Government of Belgium (GOB). It is focused on supporting the Comprehensive Agrarian Reform Program (CARP) of the Philippine Government. BIARSP aims to assist in developing conditions for self-reliant and sustainable rural development in the agrarian reform communities (ARCs).

GOP has set aside PhP 436.06 M for the project and received a grant from the GOB in the amount of PhP 968.92 M. The total project cost is PhP 1,404.97 M. The activities of the project started on March 1998 with the DAR as the lead implementing agency. Two of the programme's subcomponents are:

a) The Primary Health Care Service (PHC Component)

This component is integrated as an activity to enhance the development of quality care in the ARC populace and the non-ARCs as well. Community organizers have been tapped to encourage and enhance community participation in the management of the health system.

Medical equipment bought, rehabilitation and upgrading of 4 District Hospitals are completed, 78 barangay health stations and 22 rural health units are established and 80 batches of training for health workers are facilitated. About 33 "Botika sa Barangay"/Health Plus outlets in 3 pilot communities were put up to serve the medical needs of the rural people. A functional Provincial Public Health Unit has been established in every target province. About 90% of the expected outcome was accomplished.

b) The Drinking Water Supply and Sanitation Services (WATSAN Component)

Facilities are properly used through the promotion of a basic health and hygiene education programme and an operational water quality control and surveillance programme.

ARCs now have access to safe, sufficient, permanent and nearby potable water supply and access to appropriate household latrine facilities. Cognizant of limited resources, construction of households and semi-public latrines were built where the need is known to be greater.

About 100 percent of the expected results were attained.

2. Implementation of Solid Waste Segregation Program: In line with the Environmental Management Program (EMP) in DAR, the Technical Working Group has formulated the guidelines on waste segregation to properly guide all its personnel in their segregation practices. The Department aims to conserve government resources including converting waste materials into something useful, to advocate a better, friendly and healthy environment and ultimately achieve result to zero waste.

The EMP's goal is to institutionalize zero waste in DAR. Working hand in hand with the management, security guards and janitors, and employees' organizations such as: Department of Agrarian Reform Ladies' Association (DARLA), Department of Agrarian Reform Multi-Purpose Cooperative (DARMPC), Agrarian Reform Middle Managers Association (ARMMA) and Department of Agrarian Reform Employees' Association (DAREA), etc., will help a lot in achieving the program expectations and objectives.

For the smooth implementation of the program, guidelines were issued through a memorandum on 02 December 2003 to all DAR Officials and Employees.

3. Rural Water Supply and Sanitation Project, Phase V (RWSSP-V). This is an ongoing project by the DILG with the Philippine Center for Water and Sanitation-International Training Network Foundation (PCWS-ITNF). The project assists LGUs in the mobilization of communities and organizing Barangay Water and Sanitation Association (BWSAs). The activities are geared towards strengthening the project beneficiaries in assuming their responsibility for operation and maintenance of level 1 water supply system. The project is designed to benefit 910 barangays in the fifth and sixth class municipalities of the provinces of Ilocos Sur, Nueva Vizcaya, Mindoro Oriental, Mindoro Occidental, and Palawan. The goal of the project is to achieve sustained improvements in community managed water supply and sanitation services.

Wastewater development programmes such as septic tank dislodging, treatment and disposal, gravity-fed sewage collection network and treatment system, and rehabilitation and replacement of pipes will be implemented. In addition, a study on low-cost sanitation/sewerage treatment technology, to be piloted in four cities in Visayas and Mindanao, is proposed by the Department of the Interior and Local Government (DILG) for possible JICA Development Study Program (DSP) financing.

B. Solid Wastes: The initiatives taken include: reducing wasteful packing of products; encouraging the introduction of more environmentally sound products; and encouraging specific consumer-oriented programmes such as recycling and waste management projects of the Department of Environment and Natural Resources (DENR).

The Integrated Environmental Management Programme (IEMP), a joint undertaking of DENR and US AID, aims to encourage sustainable economic growth in the Philippine industrial sector while reducing pollution from industrial activities, and improving human health and the environment. It conducts pollution management appraisals (PMAs) to periodically assess waste minimization opportunities and improve firms' production processes and methods (PPM).

C. Hazardous Wastes: Under the PCP and with funding support from the Multilateral Fund for Montreal Protocol, the Philippines has implemented projects that encourage manufacturing and service firms to use and facilitate the use of non-ODS and non-ODS-using equipment. These include the conduct of feasibility studies on refrigeration and mobile air conditioners recycling, and the use of ODS alternatives for the foam, tobacco and solvent sectors.

The United Nations Industrial Development Organization (UNIDO) has provided technical assistance to reduce mercury emission and pollution in gold mining areas in Mindanao. Phase 1 of the project, which was completed in 2000, assessed mercury contamination and impact on selected mining sites and adjacent areas, improved government capacity on analysis and determination of mercury contamination, and distributed tools to artisanal and small scale miners on alternative process/technology for ore extraction.

Technical assistance was also provided by the Japan International Cooperation Agency for the formulation of a Hazardous Waste Management Framework Plan for the Philippines (Phase 1) and a Study on the Establishment of an Integrated Hazardous Waste Treatment, Storage and Disposal Facility with special focus on the semi-conductor and electronics industry (Phase 2). See also under Solid Wastes.

A study on the Management of Health Care Wastes in Metro Manila was also prepared with funding from the Asian Development Bank Technical Assistance for Solid Waste Management for Metro Manila. The study assessed the current status of and proposed strategies for medical wastes management in Metro Manila.

The Environmental Management Programme on Industry Competitiveness, a component program of the Philippine Government and UNDP Portfolio on Ensuring Environmental Sustainability, is promoting the

concept of industrial ecology, an approach that promotes the integrated and synergistic management and use of materials, industry processes and infrastructure facilities between companies and among industries.

D. Radioactive Wastes: The PNRI with the technical assistance provided by the International Atomic Energy Agency (IAEA) and the Department of Science and Technology (DOST) established a Centralized Low Level Radioactive Waste Management Facility in the country.

In 1995 the Philippines through PNRI hosted the IAEA Regional Training Course on Management of Spent Sealed Radioactive Sources and Other Waste from Small Nuclear Applications for the East Pacific Region. The training course provided principles and criteria for the safe management of spent radiation sources and other waste originating from nuclear applications and facilitated, encouraged bilateral or multilateral cooperation regarding safe management of spent radiation sources. The course was participated by twenty-two (22) foreign participants.

The Philippines hosted two International Demonstration Courses in 1998 and 1999 entitled IAEA Regional Demonstration of Predisposal Waste Management Methods and Procedures for Member States of the East Pacific Region. The course demonstrated predisposal waste management methods and procedures developed by the PNRI Centralized Low Level Radioactive Waste Management Facility which are in agreement with internationally accepted standards and criteria; supplemented theoretical knowledge with hands-on experience with radioactive waste and demonstrated techniques matching regional needs and potentials.

The Philippines participated in the IAEA Model Project INT/4/131 "Sustainable Technologies for Managing Radioactive Waste" particularly in the radium conditioning project. A national team performed the radium conditioning with the supervision of an IAEA expert. In other countries a foreign team undertook the radium conditioning with IAEA assistance. The project was extended to include the quality assurance in the management of radioactive waste.

There is a on-going Technical Cooperation Project with IAEA Model Project (RAS/9/27) entitled "Development of Technical Capabilities for Sustainable Radiation and Waste Safety Infrastructure" Milestone 4 - Waste Safety with the main objective to establish public exposure control aimed at radiation protection of the public and environment.

It has been recognized by the international scientific community that indefinite above ground storage of radioactive waste is an unacceptable practice as far as safe management of radioactive waste is concerned. The Philippines in adopting this policy has initiated and currently pursues a countrywide site investigation for a near surface disposal for low to intermediate radioactive waste.

The PNRI has an operational Technical Cooperation Project with IAEA entitled "Site Selection (Phase I) and Conceptual Design (Phase II) of a Near Surface Disposal Facility for Low and Intermediate Level Radioactive Waste in the Philippines. The main objective of the national project is to select and identify potential candidate sites for a near surface disposal site for low to intermediate level radioactive waste in the Philippines within the context of the geologic hazards vulnerability of the country.

Status: Socio-economic aspects: The National Anti-Poverty Summit drew-up poverty reduction targets at the regional level to achieve a national target of 30% by 1998. It also resolved to expand the coverage of the SRA from an initial concentration on 20 priority provinces to an additional 57 provinces and 65 cities. Based on the results of the 2000 census, the country's population growth rate for the 1995-2000 period is 2.36 percent- a rate higher than the 1990-1995 period which is 2.32 percent. Relative to other ASEAN countries, this growth rate is very high given that Thailand and Indonesia have reduced their growth rates to 0.9 percent and 1.5 percent, respectively, since the early 1990s. Given the demographic trend in the

country, the population policy embodied in the Philippine Population Management Program (PPMP DP) was restated to address the need for Reproductive Health (RH) and Family Planning (FP) information and services. Likewise, its companion document- the Population Investment Plan (PIP)- was revised. Despite these efforts in Population Development (POPDEV), several issues have not been addressed. For one, there is still gap between desired and actual family size. In 1998, actual family size was 3.7 children while the desired family size per women was 2.7 children. Contraceptive use is low as indicated by the 28.2 percent contraceptive prevalence rate for modern method. However, this has increased to 32.3 percent in 2000. Unmet need remains high at 20 percent (about three million). Other issues are the increasing incidence of teenage pregnancy and the lack of a sustainable operating mechanism for RH/FP. The infant mortality rate (IMR) decreased from 48.9 per 1,000 live births in 1995 to 41.2 per 1,000 live births in 2000. However, the Philippines still ranks far below our neighboring countries like Singapore and Thailand with IMR of 3.1 and 6.3 per 1,000 live births respectively in 2000.

A. Basic Sanitation: The MDGS include a target to halve both the proportion of people who are unable to reach, or afford, safe drinking water, and the proportion of people without access to basic sanitation by 2015. Based on 1991 data, there are about 25.1 percent of households in the country which have no access to proper sanitation (Table 1). Thus, to meet the MDG target, this should be reduced to 12.5 percent by 2015. However, it should be noted that the proportion of households without access to proper sanitation increased 30.6 percent in 1998. If this is an indication of trends, then it is unlikely that the Philippines will be able to meet the MDG for sanitation. It should be noted, however, that the statistics on sanitation is not as robust as that for water.

Table 1. Sanitation: Actual and Projected Access

% of HH without Access			Average Rate of Progress	Required Rate of Progress	Ratio of Required Rate to Average Rate
1991	1998	2015			
25.1	30.6	12.5	-0.79	1.06	-1.36

Source of basic data: Manasan, Rosario, Philippine Country Study on Meeting the Millennium Development Goals, 2002

The Government recently moved towards the privatization of the Metropolitan Waterworks and Sewerage System (MWSS) as a result of Executive Order No. 311. The privatization aimed to: improve service standards and expand service area coverage; increase the water supply system efficiency; eliminate fiscal burden on the government; and implement waste water management programmes. The privatized MWSS is obligated by the year 2000 to provide water on a 24-hour basis, to maintain water quality within World Health Organization standards and to ensure effluent discharge is within the standards set by the Department of Environment and Natural Resources (DENR). These concessionaires are required to provide clean and safe drinking water to 98% of the population in Metro Manila by the year 2001 and to expand the water supply facilities to include raw water sourcing and treatment. Wastewater development programmes such as septic tank dislodging, treatment and disposal, gravity-fed sewage collection network and treatment system, and rehabilitation and replacement of pipes will also be implemented.

B. Solid Wastes: In the Philippines, there are government policies to encourage increasing the efficiency of resource use and reduction of waste per unit of economic output.

C. Hazardous Wastes: Phase I of the Study on Hazardous Waste Management, which was conducted from July 2000- May 2001, reported that about 278,393 tons/year of hazardous wastes is generated in the

country. The major generator of hazardous wastes comes from the Fabricated Metal Products, Machinery and Equipment manufacturing sector.

As of September 2001, there are:

- Registered Hazardous Waste Generators: 1,852
- Recognized Transporters of Hazardous Waste: 91
- Recognized Treater/Recycler of Hazardous Waste: 42

Regional Distribution of Hazardous Waste Generation is as follows:

Region	Total Amount of Hazardous Waste Generation (tons)
1	3,937
2	1
3	18,939
4	56,613
5	97
6	7,210
7	8,912
8	11,323
9	60
10	14,178
11	7,771
12	17,383
CARAGA	42
ARMM	10
CAR	622
NCR	131,295
Total:	278,393

Type of hazardous wastes and industrial category is as follows:

- Manufacture of Fabricated Metal Products, Machinery and Equipment: 5,600 tons/year (26%);
- Electric Gas and Water Supply: 5,000 tons/year (23.2%);
- Manufacture of Food, Beverage and Tobacco: 3,300 tons/year (15%).

D. Radioactive Wastes: PNRI through the Radiation Protection Services operates and maintains the PNRI Centralized Low Level Radioactive Waste Management and the Interim Storage Facility located within the PNRI compound. The facility has adopted two basic strategies in the management of radioactive waste: (1) decay storage and (2) waste collection, segregation, treatment, conditioning and packaging followed by interim storage. Interim storage is allowed for conditioned wastes only. The interim storage facility is an engineered trench above ground with concrete slabs roofing.

The US Department of Energy is providing the technical and financial assistance to the PNRI in the upgrading of the interim storage of the conditioned waste strengthening the safety and security of the facility.

Authorized Users of Radioactive Materials (as of Dec. 2003)

Region	No. of Authorized Users
I	1

II	-
III	26
IV	44
V	3
VI	9
VII	16
VIII	2
IX	3
X	6
XI	11
XII	2
CARAGA	1
ARMM	-
CAR	4
NCR	179
TOTAL	307

Capacity-Building, Education, Training and Awareness-Raising: Another innovation in integrating sustainable development (SD) in governance is to implement the “Environmental Intelligence Quotient Scheme (EIQS).” The EIQS will integrate environmental and SD aptitude test in the examination administered by the Philippines’ Civil Service Commission (CSC) and Career Executive Service Board (CESB) for career service officers and other government personnel. An Environment and Natural Resources Network (ENR Net) has also been set-up to provide information on SD and environment.

The Philippine Council for Sustainable Development (PCSD) established an internet portal called PSCD Net (<http://pcsd.neda.gov.ph>), which provides information about the functions and initiatives of PCSD. It also provides information resources to the academe, research institutions, business and civil society regarding the Philippine Agenda 21, laws and issuances of government agencies, as well as updates on the country’s commitments to international agreements.

A. Basic Sanitation: As part of the advocacy and capacity building functions of Department of Interior and Local Government (DILG), it has been conducting health and hygiene education and proper sanitation practices through trainings provided to Rural/Barangay Waterworks and Sanitation Associations (RWSAs/BWSAs). Together with the Department of Health (DOH), the DILG is also conducting trainings on water supply and sanitation intended for the Provincial and Municipal Water and Sanitation Teams. Further, DILG, through its Water Supply and Sanitation Program Management Office (WSSPMO), developed a sanitation technology options kit.

The Philippine Center for Water and Sanitation-International Training Network Foundation (PCWS-ITNF), an NGO, which provides a platform for government, non-government and the academe to work together towards the promotion of community-based water supply and sanitation systems implemented the following capacity building activities:

a) Improving LGU Capacities in Potable Water Supply. The purpose of this project is to enhance the Local Government Units’ (LGUs) capability to deliver water and sanitation services to their constituents. It enhanced the capability of the LGUs in the areas of technology selection and planning; community involvement; access to funding and other resource facilities; construction know-how; and operation and maintenance institutionalization. This was implemented from October 2002 to March 2003 to five 5th municipalities each from Misamis Oriental, Misamis Occidental and one from Bukidnon.

b) Replicating Integrated Community-Managed Approach in Water Supply and Sanitation.

This project is a capacity building intervention for community managed water supply and sanitation services for selected LGUs in the CARAGA region. The project design is a replication and enhancement of success stories involving men and women in the communities as partners of the local government in the entire project cycle of delivering water supply and sanitation services. It also calls for the involvement and capacity building of local resource partners who would be able to provide a support system to the community water and sanitation associations thereby increasing their chances of sustaining service provision in a more efficient and effective way.

c) UNDP-PHI 93-010 Project on Institution Building for Decentralized Implementation of Community-Managed Water Supply and Sanitation Projects. This was the first major learning project that was designed to establish effective management strategies and organizational processes in support of devolved responsibility for delivering basic water supply and sanitation services. The ultimate vision of the project was to have organized water users capable of managing water and sanitation facilities as key to ensuring sustainability of services. PCWS-ITNF was involved in this project from 1995 to 1997.

d) Doña Flavia Potable Water System and Sanitation Demonstration Project. In 1998, the Philippine-Canada Local Government Support Program (LGSP) funded by the CIDA provided a small capability building grant to augment the LGU's resources for a community water supply system. Funds were provided to the PCWS-ITNF to assist the San Luis LGU in setting up a demonstration project in barangay Dona Flavia, that would showcase a community-based management approach for water supply. The output of the project was the setting up of the Dona Flavia Waterworks and Sanitation Association (DFWSA) and empowering them to take responsibility, authority and control over their water system. This scheme has been replicated in six other barangays, namely, Sta. Inez, Dona Maxima, Koalisyon, Poblacion, Don Alejandro and Nuevo Trabajo. Initiatives to build the core group of leaders in Barangay Santiago have also started. A total of 715 households from these different barangays are directly benefiting from the scheme. The Municipality of San Luis has institutionalized its Municipal Water and Sanitation Team to provide technical support services to these barangays.

e) Capability Building for the Operation and Maintenance of Communal Water Systems: A Collaborative Undertaking for Sustainability. This six-month project, contracted by the SZOPAD Social Fund to the PCWS-ITNF, commenced on November 24, 2000. For this project, PCWS-ITNF worked with ex-Moro National Liberation Front combatants and various indigenous peoples (IPs) and tribal groups including the Maguindanaos, Manobos, B'laans, T'boli, Tirurays, Ilongos, Boholanons and Cebuanos. The project covered 10 communities with level II spring development water supply systems built through the efforts of the MNLF and the IPs and the financial support of the SZOPAD Social Fund.

B. Solid Wastes: The Government provides training of local government policy-makers on sustainable development, particularly organizational seminars on solid waste management, and waste minimization by the Environmental Management Bureau (EMB), among others.

C. Hazardous Wastes: The Government, through the DENR's Environmental Management Bureau with support from the United Nations Environment Programme (UNEP), has implemented a series of seminars and training courses on the control and phase-out of ODS such as the Training Course for Customs Officers and other Key Stakeholders on Monitoring and Control of ODS and Compliance.

With assistance from the UNIDO, artisanal and small-scale miners in Mindanao have been trained on the alternative process/technology for ore extraction to reduce mercury pollution.

As an initial step to the mainstreaming of eco-industrial development (EID) in the Philippines, technical training and outreach programs on EID are being conducted at the economic/industrial zones in the Laguna-Batangas-Cavite provinces of the CALABARZON growth network in Region IV-A.

The Department of Health, and the DENR are conducting stakeholders' workshops on health care wastes to identify the necessary steps to address concerns relating to: (a) the implications of the implementation of RA 8749 or the Philippine Clean Air Act of 1999, which prohibits the use of biomedical incinerators after 17 July 2003, and (b) the limited alternative facilities in place to cater to the remaining medical wastes that cannot be handled by the existing treatment facilities.

Other Capacity-building activities in the area of hazardous wastes management are as follows:

- Information Dissemination of RA 6969 with PEZA, PCAPI and other industry organizations;
- Planned IEC campaign and networking among stakeholders (e.g. treaters/recyclers, transporters, generators);
- Establishment of a National Ecology Center to provide consultancy, information, training and networking services for the implementation of RA 9003.

D. Radioactive Wastes: The capacity building activities in the field of radioactive waste are as follows: (1) International Atomic Energy Agency (IAEA) Human Resource Development Programme which includes training courses, workshops, meetings, conferences, on-the-job training, scientific visits, technical cooperation projects, regional cooperation projects, research contracts (2) Forum for Nuclear Cooperation in Asia (FNCA) on Radioactive Waste Management supported by Atomic Energy Commission in Japan and the Ministry of Education, Culture, Sports, Science and Technology (MEXT) - regional cooperation through workshops and seminars including organization of special task groups (3) In-house standard course offerings and training courses conducted by the Nuclear Training Center of the PNRI.

Information: National Master Plan on Land Resources Management proposes the adoption of computerized Survey Verification System (SVS) and Land Records Management Information System (LMRIS), Geographic Information System (GIS) Technology on a National scale and the acquisition of modern surveying equipment.

A. Basic Sanitation: No information available.

B. Solid Wastes: A National Solid Waste Management Status Report containing an inventory of existing solid waste facilities, waste characterization, waste generation projections, and other pertinent information is regularly updated and published.

Geological studies on the appropriate location of solid waste management sites, including the identification of geohazards and potential waste sources was completed in 1998.

C. Hazardous Wastes: No information available.

D. Radioactive Wastes: The PNRI Centralized Low Level Radioactive Waste Management Facility is maintaining an inventory of all unconditioned and conditioned radioactive waste (solid, liquid, disused sealed sources) which includes waste characterization, activity, reference date, volume and source serial number.

It has been recognized by the international scientific community that indefinite above ground storage of radioactive waste is an unacceptable practice as far as safe management of radioactive waste is concerned. The Philippines in adopting this policy has initiated a countrywide site investigation for a near surface disposal for low to intermediate radioactive waste. This is an ongoing multi-agency project led by the PNRI.

The PNRI has a current Technical Cooperation Project with IAEA entitled "Site Selection (Phase I) and Conceptual Design (Phase II) of a Near Surface Disposal Facility for Low and Intermediate Level Radioactive Waste in the Philippines. The main objective is to select and identify potential candidate sites for a near surface disposal site for low to intermediate level radioactive waste in the Philippines within the context of the geologic hazards vulnerability of the country.

The project has identified 41 candidate sites for near surface disposal all over the country using Geographic Information System (GIS) and is in the process of selecting the top three best suitable sites based on ocular site investigations and site verifications.

Research and Technologies: Management of hazards, disasters and risks is among the areas of concern. The establishment and operation of centralized waste handling is in progress. This is complemented by the development of training modules in the field. Other on-going R&D activities include: the development of efficient and clean technologies to reduce industrial wastes (such as the development of appropriate methods for water pollution control); utilization of renewable energy sources; strengthening of solid waste management; and air pollution quality.

A. Basic Sanitation: There are ongoing research and development activities in the development of appropriate methods for water pollution control to reduce industrial effluents.

The Philippine Center for Water and Sanitation – International Training Network Foundation (PCWS-ITNF) and the Institute of Water and Sanitation Development (IWSD) –which is based in Harare, Zimbabwe - are undertaking a joint study on the participatory monitoring of water and sanitation programs. This study involves reviewing current monitoring practices and establishing plans for monitoring programs in the two countries; developing monitoring framework based on experiences of other agencies; building capacities for participatory monitoring; field implementation of the entire monitoring protocol in six localities in Zimbabwe and in the Philippines; and, advocacy work for monitoring.

B. Solid Wastes: The Integrated Environmental Management Programme (IEMP), a joint undertaking of DENR and US AID, aims to encourage sustainable economic growth in the Philippine industrial sector while reducing pollution from industrial activities, and improving human health and the environment. It conducts pollution management appraisals (PMAs) to periodically assess waste minimization opportunities and improve firms' production processes and methods (PPM). There are also initiatives being coordinated by the PBE, a non-stock, non-profit organization formed to assist business firms in making their operations supportive of environmental thrusts. The PBE developed and promotes the PBCSD, an instrument which encourages business firms to adopt environmentally correct practices or cleaner production strategies. Some of the initiatives include implementation of a pollution control programme by Hi-Cement (cement plant) which includes the installation of a device that controls the release of dust and other particulate matter into the atmosphere.

The establishment and operation of centralized waste handling is in progress. This is complemented by the development of training modules in the field. Other on-going R&D activities include the strengthening of solid waste management, among others.

C. Hazardous Wastes: No information available.

D. Radioactive Wastes: The PNRI Centralized Low Level Radioactive Wastes Management Facility is guided by the research and technology publications of the IAEA such as the IAEA Technical Documents and conducts studies to validate the methodologies taking into consideration local conditions.

Financing: The major obstacles in increasing access to proper sanitation is the high cost involved, especially in establishing a piped sewerage system and waste water treatment plant for urban areas, and the attendant lack of appreciation for these sanitation facilities.

Metro-Manila was able to access Official Development Assistance (ODA) to finance the Manila Sanitation and Sewerage Project (MSSP) which should substantially increase the coverage of these services for the metropolis. However, only few other cities outside the capital were willing to tap financing to establish a similar sanitation system. There's a general reluctance from local authorities to bear the cost of these facilities or to pass on the prospective costs to their constituents. Note that the cost of treating wastewater is three times the cost of generating potable water. Thus, for less crowded cities and for the rural areas, septic tanks for individual households were found to be more cost-efficient and politically acceptable.

In response to these challenges, the NG, through the Department of Health (DOH) and the Department of Interior and Local Government (DILG), will continue to assist the Local Government Units (LGUs) in providing basic sanitation services and in advocating for investments in such services. It will continue to its efforts in: a) strengthening public health programs; b) institutionalizing water quality management systems for LGUs; c) developing the capacity at the national, regional and local levels in providing health testing laboratories; and d) developing the skills and the qualification of personnel within the DOH and at the local levels on environmental health.

The integration of SD principles into budgetary guidelines is being pursued. The Department of Budget and Management (DBM), the lead agency in the integration process, is currently developing a general framework for integrating SD principles and parameters in the budgetary process in coordination with the PCSD Committee on Socio-Economic Dimensions. With the institutionalization of the system, public sector spending may be made more in line with the goals of SD.

A. Basic Sanitation: No information available.

B. Solid Wastes: Chapter V of the Ecological Solid Waste Management Act of 2000 (RA 9003) specified the creation of a Solid Waste Management Fund as a special account in the National Treasury to be administered by the National Solid Waste Management Commission. The fund shall be sourced from a) fines and penalties imposed, proceeds of permits and licenses issued by the Department of Environment and Natural Resources (DENR) under this Act, donations, endowments, grants and contributions from domestic and foreign sources; and b) amounts specifically appropriated for the Solid Waste Management Fund under the annual General Appropriations Act.

C. Hazardous Wastes: No information available.

D. Radioactive Wastes: National budget through the general appropriation (finance the operational cost of the facility including materials needed for the treatment and conditioning); finance the implementation of the activities as counterpart funds for the Technical Cooperation Project with IAEA entitled " Site Selection and Conceptual Design of a Near Surface Disposal Facility for Low and Intermediate Level Radioactive Waste in the Philippines) and publication of FNCA Official Newsletter).

Cooperation: The Philippines hosted a series of Asia-Pacific Economic Cooperation Council (APEC) meetings on sustainable development. These meetings were aimed at advocating wide-ranging concerns and forging APEC-wide consensus on the need for increased economic and technical cooperation on sustainable development. The PCSD, being the country's focal point in sustainable development efforts, was instrumental in forging position papers for international gatherings and dialogues. Among its

commitments is the preparation and coordination of country papers for the annual sessions of the United Nations Commission on Sustainable Development (UNCSD) in New York.

A. Basic Sanitation: No information available.

B. Solid Wastes: No information available.

C. Hazardous Wastes: The Government of the Philippines is a party to the Basel Convention on trans-boundary movement of hazardous wastes and their disposal. While the Convention prohibits the trans-boundary movements of toxic and hazardous wastes, the Philippines signed an agreement with the United States concerning the movement of hazardous wastes from the Philippines to the United States. The Agreement allows the Philippines to ship hazardous wastes generated by local industries for processing in appropriate treatment facilities in the United States.

D. Radioactive Wastes: In 1995 the Philippines through PNRI hosted the IAEA Regional Training Course on Management of Spent Sealed Radioactive Sources and Other Waste from Small Nuclear Applications for the East Pacific Region.

The Philippines hosted two International Demonstration Course in 1998 and 1999 entitled IAEA Regional Demonstration of Predisposal Waste Management Methods and Procedures for Member States of the East Pacific Region. It also hosted the FNCA Workshop on Radioactive Waste Management in 1999. It is worth noting that there exists a bilateral agreement on Radioactive Wastes with Canada and Korea.

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