

# Philippine Response to the United Nations Decade of Education for Sustainable Development

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The quality of the environment and the quality of life are directly related. Human beings have the power to control the quality of the environment. Too frequently the use of this power has a negative impact on the environment often to the point of irreversibility. Thus, the defense and improvement of the environment for intergenerational use and enjoyment has become an imperative goal for all.

Society prepares its citizens to carry out their responsibilities through its education system. Education helps citizens develop an awareness and sensitivity to the environment and its problems, acquire the knowledge and skills to perform in society effectively, and foster positive attitudes and proper conduct towards the environment. This is the role of environmental education (EE). All sectors of society are expected to contribute towards the attainment of the goals of EE. It relies on partnership and cooperation of all stakeholders at the local, national and international levels.

This paper deals mainly with environmental education (EE) programs and activities for basic education and teacher training

## National & School Policies and Support on Environmental Education for ESD

In the late 60s, popular books such as *Silent Spring* by Rachel Carson, *Closing Circle* by Barry Commoner and *Limits to Growth* by Donella Meadows aroused the environmental consciousness of middle class professionals and college students. Soon after, Eugene Odum's *Ecology* became widely used in college biology and ecology courses. It was during these times that agricultural production for self-sufficiency was the major thrusts of the government but was not sustained due to fertility reduction and soil erosion. Likewise, the effects of increasing deforestation were beginning to be felt as flash floods and sedimentation of dams and reservoirs became more serious (ADB Philippines EE Report, 1992).

The National Pollution Control Commission was established also in the late 60s to monitor vehicular emissions and pollutive industries. Environmental awareness grew further with the creation of the National Environmental Protection Council (NEPC) and the Natural Resources Management Center. In 1977, the Philippine Environmental Code was promulgated directing the Department of Education (formerly DECS now referred to as DepED) to integrate environmental education in the school curricula at all educational levels and for NEPC to conduct continuing educational campaign and training for the improvement of the environment.

With the creation of government agencies, schools also began offering environmental science and management

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courses. Years later, the Environmental Management Bureau (EMB) was created out of the merger of the NPCC and NEPC. Its Environmental Education and Information Division (EEID) fully undertook the planning and implementation of environmental education activities.

The Philippine Strategy for Sustainable Development was formulated in 1989 and EE was one of its 10-pronged strategies.

A review of the state of EE in the country was done in 1991 to determine the existing infrastructure that supports EE, policy formulation process, implementation arrangements, the role of government agencies particularly the DepED and the Department of Environment and Natural Resources (DENR), coordination mechanisms, qualification of key staff, and adequacy of funding. The study also assessed the extent of coverage of environmental issues in the curricula at all levels and in all subjects both in the syllabus and examinations as well as the extent to which these issues are effectively taught. The scope and quality of textbooks and supplementary instructional materials including visual aids were also reviewed. Furthermore, the study evaluated the capacity of DECS and DENR personnel to produce appropriate pupil learning materials and teacher resource materials as well as the readiness of teachers to provide instruction in basic education. Finally, the review identified innovative activities at the basic education and teacher training level.

The results of the study enabled the researchers to identify major issues and concerns and made recommendations concerning policy reforms, institutional capacity building, curriculum, staff qualification and materials development. Thus, the National EE Action Plan (NEEAP 1992-2002) was designed. The Plan laid down a ten-year program for the systematic dissemination of EE concepts and skills through the formal and nonformal education systems. This plan also operationalized the EE strategy in the PSSD as well as the stipulations of EE embodied in the Philippine Environmental Code.

Its major components are: curriculum and materials development, training, information and social advocacy, research, institutional capacity building, and policy development and reforms.

Five years after the release of the NEEAP, pilot projects were implemented. One of the outputs is an EE Curriculum Framework. This document describes the four dimensions of EE: objectives, learning strategies, experiences/activities for students and assessment and evaluation. Based on this framework, exemplar lessons plans, posters and comics with EE orientation were also prepared for different subject areas. In addition, four video materials on different titles were developed for use in formal as well as nonformal EE activities.

A series of training programs on how to use the EE curriculum framework followed. The training was intensive in 1999 to 2001 for basic education and higher education and was expanded to cover technical/vocation education in 2002.

EE promotion became more active in 1995 with the establishment of the network of 380 universities and colleges nationwide called the Philippine Association of Tertiary Level Environmental Planning and Management or PATLEPAM. Programs and activities of the association were based on the Philippine Agenda 21. Their activities also included in-service training of teachers at the basic education level.

## **Current EE Programs and Its Contribution to National Development**

Current EE related programs are based on NEEAP 1992 to 2002. Some of these programs have been sustained.

### **Curriculum and Materials Development**

EE is integrated into the formal curriculum of classroom learning and the organizational and operating procedures of the school through its environmental management (or its informal curriculum). Science, Social Studies, Mathematics, Communication Arts and Technology and Livelihood Education are taught with an environmental orientation. Textbooks and supplementary materials have been developed and used in schools using environmental situations as context for concept understanding or as applications of concepts in real life.

DENR provides updated information about the environment to different agencies, schools, and universities through its publication of the State of the Philippine Environment as well easy to read materials on different environmental concerns which could be used in schools. Video materials for specific environmental concerns like solid wastes, safe water, forest conservation, and coastal zone management are also available.

The Commission of Higher Education (CHED) has revised its general education curriculum especially for teacher education to include an EE-oriented subject. The National Institute for Science and Mathematics Education Development of the University of the Philippines (UP NISMED), the national center for science and mathematics education, develops curriculum materials for students and resource materials for teachers. From the private sector, Miriam College Foundation develops modules for use by member schools of the Catholic Education Association of the Philippines. There are many other institutions doing similar activities.

### **Training**

Inservice training programs of teachers include updating of their knowledge about environmental related issues and ways of integrating these issues into the curriculum. Environmental integration is done not just to help teachers make classroom interaction more relevant and interesting but give them opportunities to develop higher order thinking so that they can pass on the skills to their students.

Recently concluded training conducted by UP NISMED, in cooperation with EMB DENR, focused on how to use the Breath Clean Air module series in secondary schools.

Other programs focus on technical training such as monitoring pollutants in bodies of water, air pollutant emissions of vehicles, level of acid rain, and many others.

Training programs for teachers are organized not just by government institutions but also by professional teachers organizations, business groups, and NGOs.

## **Information and Social Advocacy**

The EMB-DENR takes the lead in producing advocacy materials. TV and radio plugs about air pollution, water pollution, solid waste management, toxic and hazardous chemical waste management, unleaded gasoline, and the environmental crisis in general are regularly broadcasted. Posters about global warming, climate change, air pollution, water pollution, endangered species, garbage, trees, and waste segregation are distributed as calendars. Popular competitions aimed at increasing awareness and education of the public on general environmental related matters have been conducted. These include photography contest on citizen participation in environmental protection, painting contest on global warming, cross-stitch design contests on humankind in harmony with nature, television spot contest and poster making on environmentally-sound development and the role of youth in the care of the environment in the new millenium. In addition, T-shirt designing, Green Schools competition, environmental quiz, recycled products contest, and making scale models on sustainable development have also been organized.

The local government units all over the country, organize yearly the Search for Cleanest Barangay (the smallest political unit in the Philippines), to highlight the need for proper waste management and implement the Ecological Waste Management program of the government as well as the Philippine Clean Air Act.

## **Challenges Faced in Implementing Current EE Programs at School and Other Levels of Education**

Interest in EE across the country is growing but good practice is not widespread. There are many activities going on but these are not cohesive and unidirectional. Most initiatives still tend to favor nature conservation rather than the multidisciplinary concept of sustainable development and the holistic imperatives of a sustainable future. EE activities are initiated by the DENR not by the DepED. The focus is on information and awareness-raising campaigns directed at individual behavioral change rather than broader educational or sustainability goals. The lack of interest of DepED explains why EE is often not a priority, especially as the curriculum is overcrowded. Moreover, EE concepts are usually not included as examination subjects. The interactive and experiential teaching strategies of EE are in conflict with the traditional classroom practices that emphasize recall of content and examination performance rather than development of problem solving and other higher-order thinking skills.

Instructional materials on different environmental problems/issues are available but in limited circulation. Oftentimes, critics question the accuracy and bias of the information received by young people about environmental issues. Given the scarcity of EE-related textbooks and support materials, children and the community get information (often sensationalized) from inaccurate sources.

Many teachers attempt to integrate EE objectives and topics into their subject areas. However, the information overload, coupled with the complex and continuously developing state of environmental knowledge makes it difficult for teachers to present a coherent and balanced picture of the nature of an environmental problem, especially if they are not adequately trained. Teachers need training in carrying out discussions on issue-based topics.

Local studies also reveal that the problems stated are intensified by the lack of support for EE by policy makers, school administrators and teacher educators. Professional teacher organizations and nongovernmental organizations (NGOs) have not been maximized in conducting in-service training on EE strategies. Media support as well as school and community linkage are limited. Researches related to EE methodologies are lacking. EE programs are not sustained especially when funds are not made available

Moreover, the holistic and sometimes philosophical nature of EE, the variety of environmental problems/issues to be debated on, and the different educational background of environmental educators make EE promotion sometimes difficult and challenging.

To address this concern, the use of core messages as unifying themes when doing EE in schools and communities is encouraged. The core messages help learners recognize the connection between environmental quality and quality of life.. The core messages help develop environmental values applicable to any environmental problem or ecosystem - anytime, anywhere. The interrelated unifying themes and the core messages (in italics) are summarized as follows:

- Interconnectedness - Everything on Earth is connected to everything else.

*What one does affects others, directly or indirectly.*

- Biodiversity and Stability - The more diverse the ecosystem is, the more resilient is that ecosystem to change.

*All life forms are important.*

- Change - Changes continuously occur. There are changes that improve the quality of the environment; other changes degrade it.

*We have to avoid or prevent those changes that degrade the environment.*

- Balance of Nature - Nature has its own laws to maintain and/or cleanse itself.

*Nature is beautiful.*

- Finiteness of Resources - Most natural resources are finite. Even those that are renewable are difficult to obtain or they take hundreds of years to grow or develop.

*Resources have to be used prudently and wisely so that future generations can also enjoy them.*

- Population Growth and Carrying Capacity - A given ecosystem can only support a specific number of individuals at a given time.

*Population growth has to be controlled*

- Materials Cycle - Materials are neither created nor destroyed. They are only converted from one form to another. Pollution occurs if the volume of the materials in one place is too much that the ecosystem's quality and usefulness are reduced.

*Recycling is following nature's conservation law.*

- Stewardship and Cooperation - Humans are part of nature. They are not masters but caretakers of God's gift to humankind.

*Each person should practice responsible environmental behavior.*

When the principles and core messages are internalized, these will lead to sustainable development.

## **Country Plans: Contribution of EE for the UN DESD**

Late in 2003, the EMB-DENR organized a consultative workshop on the updating of the NEEAP in the light of relevant national and international challenges, particularly the declaration by the United Nations, of 2005 to 2014 as the Decade of Education for Sustainable Development. The new Plan "envision[s] an environmentally literate and proactive citizenry, imbued with a sense of responsibility to care, protect and enhance environmental quality that is conducive to their well being and supportive of the national economic development and unified in its pursuit of peace, social justices and equity in the use of natural resources".

For its mission, the new Plan aims to

- improve the institutional systems, making them more relevant towards delivery of EE to all segments of society;
- mobilize resources and encourage more private and public investments and partnerships in supporting programs for EE;
- establish a critical mass of committed environmental educators and practitioners who will spearhead the EE movement; and
- promote environmental ethics which will instill the right values and attitudes as a way of life among Filipinos.

For basic education and teacher training, priority targets for action, based on key issues in EE were identified:

- To recommend the designation of a focal point in DepED and DENR and their regional counterparts to coordinate the implementation, monitoring and evaluation of EE.
- To conduct an inventory of existing curriculum materials and related resources for basic education
- To provide teachers with community-based lesson guides, tools and learning materials geared towards SD.
- To establish linkages with relevant institutions that could help in the acquisition of appropriate technologies and facilities that will enhance EE.

- To develop a monitoring and evaluation system for the implementation of the new NEEAP.

For tertiary education, the aims are

- To improve the institutional systems, making them more efficient and effective in the delivery of EE at all levels
- To mobilize resources and encourage public and private investments in supporting the programs for environmental education
- To train a critical mass of competent policy makers, teachers, environment specialists and field workers who will spearhead the EE movement
- To promote an environmental ethic which will inculcate the right values and attitudes among the citizenry with respect to environment

On policy, higher education institutions (HEIs) plan to push for relevant policies in the institutionalization and smooth implementation of key themes in education for sustainable development. On research and development, HEIs plan to identify EE and SD methodologies and strategies in the curriculum as well as evaluate the effectiveness of EE programs.

The proposed NEEAP (2004-2013) is a work in progress. As part of the consultation, the following questions are being discussed:

1. What do you need to help you expand education for sustainable development?
2. From among the items mentioned in 1, what will you or your sector commit to do?
2. What else will you or your sector commit to do?

The new NEEAP will make sustainable consumption and production issues central themes of environmental education. "Education is humanity's best hope and most effective means in the quest to achieve sustainable development" (UNESCO, 1997).

**For more information on the Philippines NEEAP 2004 to 2013, visit <http://www.emb.gov.ph/eeid/neeapoutput>**