



N S C B

National Statistical Coordination Board  
(Pambansang Lupon sa Ugnayang Pang-Estadistika)

***THE ECONOMY,***  
***THE ENVIRONMENT***  
***AND***  
***SUSTAINABLE***  
***DEVELOPMENT***



Deforestation, soil erosion, and pollution are some of the serious problems that threaten the existence of the human race. These problems on the deteriorating quality of the environment and rapid loss of natural resources prompted worldwide attention to the development trend that the world is experiencing today. For this reason, international organizations like the United Nations organized conferences that seek to address worsening environmental problems and foster integrated environmentally sound development.

In 1972, the United Nations convened a **Conference on the Human Environment** that aims to identify possible links between the environment and development as part of the effort to address environmental problems. From this, different alternative development strategies cropped up. But despite these moves, problems still mushroomed because of traditional economic development policies that are not attuned with environmental concerns. In 1987, the United Nations formed the **World Commission on Environment and Development** (WCED) or the **Brundtland Commission** to study possible solutions to environment and development problems. The commission concluded that development should meet the needs of the present generation without compromising the needs of the future

generations or what it termed as **Sustainable Development**.

In 1992, more than 100 heads of state met in Rio de Janeiro, Brazil for the first international Conference on Environment and Development, or the **Earth Summit**, to address urgent problems of environmental protection and socio-economic development. The assembled leaders adopted Agenda 21, a 300-page plan for achieving sustainable development in the 21<sup>st</sup> century.



One of the objectives of Agenda 21 is to integrate environmental issues to development policies. Considerations were also given to the effects of economic activities on the environment and the effects of environmental degradation and depletion to economic activities. In short, Agenda 21 stresses that economic policies should be held accountable for whatever effects it brings to the environment. The new concept emphasizes the importance of integrating natural resources constraints and environmental effects in measures of economic development. Thus, there is a need for **environmental accounting**.

What is environmental accounting and why is there a need for it? This pamphlet will answer questions on environmental accounting and explain its importance to users of information. For illustration, this material contains some information on environmental accounting exercises done in the Philippines.

## **W**hat is ENVIRONMENTAL ACCOUNTING

Environmental Accounting is short for environmental and natural resource accounting (ENRA). It is likewise termed as “**green accounting**,” “**resource accounting**,” and “**integrated economic and environmental accounting**.”

Environmental accounting is a relatively new concept which aims to include in the traditional measurement of economic development the cost of using the environment as inputs to production and as a sink for wastes. The traditional way of measuring the economic development of a country is through the Gross National Product (GNP) and Gross Domestic Product (GDP). Data from the **System of National Accounts** (SNA) are used to calculate these indicators. SNA is the set of accounts which national governments compile periodically to track the performance of their economies.

Gross National Product is an estimate of the total value of goods and services produced during a given period of time by the nation's residents, regardless of where these are produced. Gross Domestic Product, on the other hand, is the total market value of all final goods and services produced within a country in a given year. These are the most commonly used measures of the economic growth of a country.

However, these macro-economic indicators do not reflect the costs of using the environment, depletion and/or degradation of the natural asset, etc.

The production of goods and services is made possible through the use of assets or capital such as land, equipment, etc. From the point of view of environmental accounting, land, water, and air are treated as assets that are used in the production of

goods and services of a country. Environmental accounting therefore estimates the costs for the use of natural resources and its environmental functions and shows separately actual expenditures for protecting and preventing the decline in the quality of the environment. ENRA seeks to track changes in the quantity as well as in the quality of natural resources and the environment over a specified period of time. These changes are estimated both in physical and monetary terms. Environmental accounting also allows the estimation of environmentally adjusted and sustainable income and product.

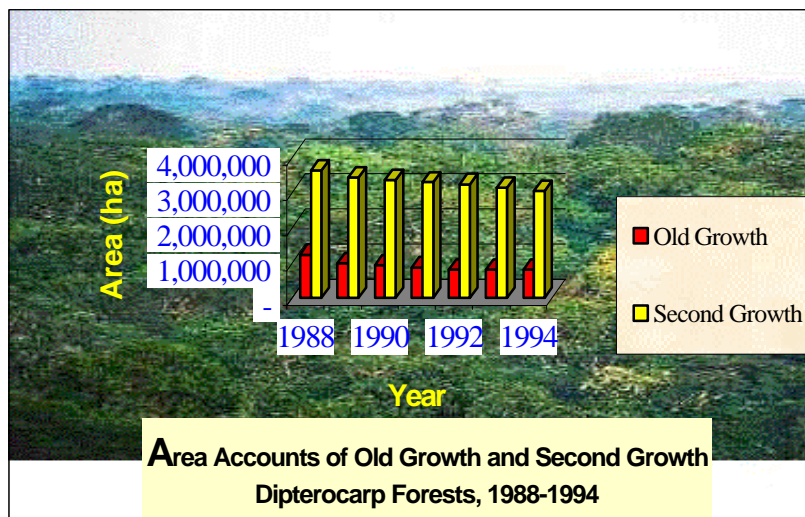
Environmental accounting, to some extent, is designed to reveal economic distortions in the production and consumption activities resulting from subsidies granted to economic activities that are heavily dependent on the environment for waste absorption and natural resources for raw materials.

## **R**ationale for Environmental Accounting

The unabated exploitation of our natural resources and the resulting degradation of the environment created a heightened level of awareness and concern for the environment among many nations. At the center of this concern for the environment is the development of parameters that would measure and provide indicators on the inherent inter-relationship of the economy and the environment particularly on how economic activities by man influence the quality of the environment. With current national policies and programs giving more emphasis on sustainable development, the environment and natural resource accounting is expected to provide a clearer picture of the environment alongside economic performance. As such, the SNA was enhanced to provide for the development of satellite accounts, one of which would measure the depletion of natural assets and the degradation of the environment.

Let us take, for example, our forest resources. The Philippines is gifted with a wide area of dense forests, home to a wide variety of fauna and flora, providing for clean water and fresh air. Through the years, rapid economic development, industrialization, creeping urbanization and rising population gave rise to the demand for forest products. Areas classified as forest areas were quickly exploited and others were converted to other uses to support the demands of the economy and the population. What used to be clean and ambient environment quickly became polluted.

With environmental accounting, the state of the environment is



determined – how many of these resources are available to us, how much we are consuming, the quality of the remaining resources, their economic importance/value and how much is spent for the protection of the environment.

The environmental accounts can be used to develop sound

and sustainable national policies. Economic policies, for example, would be developed according to the capacity of the environment to supply the demand for raw materials; pollutive industries could be regulated while those that are not pollutive could be prioritized and given trade incentives. Environmental accounting would also provide indicators on how much the government is earning (taxes) through the use of our natural resources and how much of it goes directly to the private sector (as profit).

Environmental accounting is deemed as a necessary tool to attain a balance between economic performance and use of the environment. This balance, on the other hand, would signal the continuous development of economic policies and programs aimed towards the country's sustainable development aspirations.

## **E** nvironmental Accounting in the P hilippines

Realizing the need to relate and integrate the environment to economic development, countries such as Norway, Canada, Australia, The Netherlands, Indonesia, etc., began conducting experiments on environmental accounting during the last twenty years.

In the Philippines, environmental accounting started in 1991 when the Department of Environment and Natural Resources (DENR) commissioned a non-government organization to undertake an environment and natural resource accounting project (ENRAP).

In 1995, another ENRA project was piloted under the United Nations Development Programme's (UNDP) Country Programme on Integrated Environmental Management for Sustainable Development (IEMSD). The Environmental and Natural Resources Accounting Sub-programme adopted the UN System of Integrated Environmental

and Economic Accounting (SEEA) framework, a satellite account of the System of National Accounts. Initial work of the National Statistical Coordination Board (NSCB), which spearheaded the ENRA project in 1995 was built on some of the earlier works of ENRAP and resulted in the successful compilation of five asset accounts – fishery, forest, minerals, land and soil, and, water resources. Results of the asset accounts were published and disseminated to various line agencies of the government that have been part of the ENRA effort in the Philippines. The current effort on asset accounts compilation now focuses on the revision and updating of the methodologies used in the pilot activities as suggested by sectoral experts on natural resources and consultants on environmental accounting.

The NSCB likewise, has compiled several accounts on environmental degradation brought about by several economic activities like agriculture, fishery and forestry; manufacturing; mining; electricity generation; and, transport services. Environmental protection services of both the government and private sectors were similarly covered in the Philippine ENRA. The publication of the results of the compilation of economic activities and environmental protection services will be due at the end of the year.

Several other activities have been undertaken by the NSCB in the course of developing environmental accounting in the Philippines. One of the most significant milestones is the signing on March 21, 1997 of the Executive Order no. 406, institutionalizing the Philippine Economic–Environmental and Natural Resources Accounting (PEENRA) System in the country and creating environmental accounting units in the National Economic Development Authority (NEDA), the DENR and the NSCB. The signing of EO 406 is part of the Government's commitment to the principles set forth in the Agenda 21 that emphasizes the need to attain economic growth and equity through sustainable utilization of the country's resources.

Preparations are now underway for yet another milestone in environmental accounting – the organization of the Manila Group which is an organization of Asia-Pacific countries conducting environmental accounting. The Manila Group is a proposed counterpart of the London Group.

The Manila Group will provide a venue for interaction in developing and implementing environmental satellite accounts among the Asia-Pacific countries on one hand and the international community on the other. It will include not only the countries with prior experiences in environmental accounting, but also those countries planning to compile their environmental accounts that would normally not be able to attend the London Group sessions.

## **P**hilippine Publications on Environmental and Natural Resource Accounting

As a means to disseminate the interim outputs of the NSCB on environmental accounts, several documents were published and are available at the **National Statistical Information Center** (NSIC). The Philippine Asset Accounts: Forest, Land/Soil, Fishery, Mineral, and Water Resources documents the sources and methods in deriving the results, as well as the statistical analysis and limitations of the results. The special studies on freshwater fishery and gold mining were also published along with the paper (Green Accounting for a Sustainable Economy) prepared by Dr. Peter Bartelmus. The publication of another book, Environmental Degradation due to Selected Economic Activities is in the offing.

Different country papers presented in international and local fora since 1996 and the draft Sources and Methods of the Philippine SEEA are also available at the NSIC. Other documents which are being used as reference materials by NSCB are properly filed within NSCB.

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ENRA documents are also available in the net. The PEENRA Homepage in the NSCB website, [www.nscb.gov.ph/peenra](http://www.nscb.gov.ph/peenra), contains information that can help the public understand better the complex and dynamic interaction of environment and economic activities. The Homepage gives a quick access to the entire collection of documents, publications and interim results produced by the ENRA efforts of the NSCB. It provides information on SEDA/PEENRA such as the framework, Executive Order 406, organizational structure and glossary of terms. It has a facility for feedback/comments and renders links to related web pages and hyperlinks with the NSCB Homepage.

## Philippine Economic-Environmental and Natural Resources Accounting



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