BOX 4

Accounting for the environment

Strategies for sustainable development rely on information about the interaction between the economy and the environment. This information is needed to monitor progress towards meeting environmental goals, to assess alternative development strategies and to design environmental policy instruments.

In response to these needs, the System of Integrated Environmental and Economic Accounting (commonly referred to as the SEEA) was developed. Based on the revised UN System of National Accounts (UN 1993), the SEEA brings together economic and environmental information in a common framework to measure the contribution of the environment to the economy and the impact of the economy on the environment. In the early 1990s several developing and developed countries began experimenting with the compilation of the SEEA, and in 1994 the London Group on Environmental Accounting was created to provide practitioners a forum for sharing their experience in developing and implementing environmental accounts.

The SEEA provides policy-makers with indicators and descriptive statistics to monitor the interactions between the environment and the economy as well as a database for strategic planning and policy analysis to identify more sustainable paths of development. The SEEA thus enables governments to formulate and monitor economic policies more effectively, enact more effective environmental regulations and resource management strategies and use taxes and subsidies more efficiently. It also offers a way to improve policy dialogue among different stakeholders by providing a transparent system of information about the relationship between human activities and the environment.

The SEEA, which aims to systematically measure the interaction between the economy and the environment, represents a major step towards standardizing and harmonizing concepts, definitions and methods. The system has four components:

- *Natural resource asset accounts.* These accounts record stocks and changes in stocks of natural resources such as land, fish, forest, water and minerals, allowing more effective monitoring of a nation's wealth. They also allow the calculation of such indicators as the total value of natural capital and the economic costs of natural resource depletion.
- *Flow accounts for pollution, energy and materials.* These accounts provide information at the industry level about the use of energy and materials as inputs to production and the generation of pollutants and solid waste. They produce eco-efficiency and pollution and material intensity indicators that can be used to assess the pressure on the environment and to evaluate alternative options for reducing this pressure.
- *Environmental protection and resource management expenditure accounts.* These accounts identify expenditures incurred by industry, government and households to protect the environment or to manage natural resources. They can be used to assess the economic impact of environmental regulation and taxes and their effect in reducing pollution.
- *Valuation of non-market flow and environmentally adjusted aggregates.* This component presents non-market valuation techniques and their applicability in answering specific policy questions. It discusses the calculation of several macroeconomic aggregates adjusted for depletion and degradation costs and their advantages and disadvantages.

An increasing number of OECD and developing countries have introduced environmental accounts, compiling different components according to their environmental concerns and priorities. Resource-rich countries have usually developed asset accounts in order to design policies for better natural resource management. Countries in which pollution is a main concern have implemented physical flow accounts, often linked to environmental protection accounts so as to analyse the impact of consumption and production patterns on the environment and the impact of environmental expenditure in reducing emissions.

Pilot projects have shown that some of the components of the SEEA can be compiled using existing information from various data sources. These exercises have identified data gaps and inconsistencies, helping to improve both environmental and economic data. The results have already been used by government planning agencies in designing policies and by non-governmental organizations and academia in advocacy efforts.

Source: Prepared by the United Nations Statistics Division based on London Group on Environmental Accounting (2002) and UNSD and UNEP (2000).