

Introduction to Natural Resource Accounting

What is natural resource accounting?

Natural resource accounting is the compilation of data on natural resources within an accounting framework. The term also covers the interpretation of data and reporting. Natural resource accounts may involve either physical quantities or stocks valued in monetary terms. Natural resource accounts differ from other data in that they are organised in terms of stocks and flows. The terms '*natural resource accounting*', '*green accounting*' and '*environmental accounting*' are used interchangeably in the literature on the subject and are regarded as synonyms.

The aim of natural resource accounting is to provide information on the state of natural resources and the changes affecting them. As such, it is therefore an important link in the chain of sustainable development.

The term 'sustainable development' is taken to mean a form of development which is capable of meeting the needs of the present generation without jeopardising the ability of future generations to meet their own needs.

What are natural resources?

It is important to explain what is meant by 'natural resources'. Whilst a variety of classifications are used in the literature, they all have in common with each other the fact that they refer not only to those resources which contribute to marketable forms of production, such as subsoil resources, cultivated plants and livestock, as well as non-cultivated natural assets that yield products such as timber, but also to non-commercial or environmental resources such as air, water, land and biological life. The principal aspect in the former case is quantity, whereas quality is the most important factor in relation to the latter type of resource.

The aims of natural resource accounting:

Natural resource accounting is one of the tools which may be used to support environmental policy, alongside instruments such as environmental impact assessments at a project level, integrated environmental and economic analyses for policy work at the sectoral and macro-economic levels, and public investment/expenditure reviews (Kirk and Hamilton, 1996). The provision of information on the income and expenditure associated with the maintenance or restoration of natural resources can also be an aim of natural resource accounting.

Generally speaking, natural resource accounting is seen as a means of demonstrating linkages between the environment and the economy.

Natural resource accounts may contain either physical units or monetary values. Physical quantities are always a first, necessary step. Their inherent value lies in the fact that they provide a means for direct monitoring and for the evaluation of stocks and flows relating to the state of the environment.

Physical quantities need to be expressed in monetary terms when monetary accounts are compiled. The resultant information can form the basis for the computation of environmental performance indicators. At a macro-economic level these indicators can include for example, a 'green' national product or other '*green aggregates*' such as '*green savings*'.

There are various types of natural resource accounts: stock accounts, flow accounts, a combination of these two, emission accounts, waste accounts and environmental expenditure accounts.

Natural resource accounting can be used for:

- the demonstration of accountability for the management and protection of natural resources
- identifying environmental problems such as resource depletion;
- analysing government policy;
- undertaking resource management and decision-making;
- monitoring sustainable development;
- drawing up (macro-economic) indicators for environmental performance or prosperity;
- improving benchmarks for measuring a country's national product.

International organisations:

There are a number of organisations which are active in this field, such as the United Nations Environment Programme (unep) and the United Nations Statistical Division (unsd, formerly known as unstat). These organisations include the Organisation of Economic Cooperation and Development (oecd), the World Bank, the World Resource Institute (wri), the Statistical Office of the European Communities (eurostat) and the Worldwide Fund For Nature (wwf).