

There is a wide range of definitions and interpretations of the meaning of 'sustainable development'. The term first came to prominence in the World Conservation Strategy, presented in 1980 by the International Union for the Conservation of Nature and Natural Resources. It was popularised by the World Commission on the Environment and Development's study 'Our Common Future' (1987) which is also known as the Brundtland Report, named in honour of its chairperson, the Norwegian Prime Minister. These and other studies have defined sustainable development in different ways. The most frequently quoted definition comes from the latter study: 'Sustainable development seeks to meet the needs and aspirations of the present without compromising the ability of future generations to meet their own needs'.

In a classic definition, a development path is sustainable 'if and only if the stock of overall capital assets remains constant or rises over time'. Overall capital assets are meant to include not only manufactured capital (machines, factories, roads) but also human capital (knowledge, experience, skill) and natural capital (forests, soil quality, rangeland). The natural resource base of a country and the quality of its air, water and land represent a common heritage for all generations. But, natural resources and other form of capital are substitutes only at a limited scale and to a limited degree. Rather, after the environment has been degraded to some extent, natural resources and other forms of capital likely act as complements. Manufactured capital is generally unproductive without a minimum

available environmental services. To destroy that natural endowment indiscriminately in the pursuit of short term economic goals penalizes both present and especially future generations.

Sustainable development is then a situation in which the development vector D does not decrease over time. However, such a simple definition is not problem-free. For example, non-inclusion of a finite time horizon with an aim to achieve everlasting development makes practical decision making more difficult.

If the rate of change of D with respect to time t must be positive for each and every time period, it is called strong sustainability. Where as only the trend of dD/dt to be positive is referred as weak sustainability. One variant of the weak sustainability measure is that the present value of development benefits should be positive. A present value is a way of expressing a stream of benefits (or costs) that occur over time as a value perceived from the standpoint of the present. To do this future benefits and costs are discounted, i.e., given a lower weight relative to a similar benefit or costs in the present.

Therefore, the development policy makers should incorporate some form of environmental accounting into their decisions. Alternatively, policy makers may set a goal of no net loss of environmental assets. In other words, if an environment resource is damaged or depleted in one area, a resource of

* Environmental accounting (Todaro 3)
Cost-Benefit Analysis (555 - 556)

equal or greater value should be regenerated elsewhere.* Thus, if needs are to be met on a sustainable basis the Earth's natural resource base must be conserved and enhanced' (World Commission on Environment and Development, 1987). It is somewhat more vaguely embraced in the World conservation strategy in terms of maintaining 'essential ecological processes and life support systems', 'preserving genetic diversity' and ensuring 'sustainable utilization of species and ecosystems' (IUCN, 1980, I). A similar definition by economist Robert Repetto: 'Sustainable development [is] a development strategy that manages all assets, natural resources and human resources, as well as financial and physical assets, for increasing long-term wealth and well being. Sustainable development, as a goal rejects policies and practices that support current living standards by depleting the productive base, including natural resources, and that leaves future generations with poorer prospects and greater risks than our own.

The concept of sustainable development has gained very wide acceptance and has become a standard model for thinking about the environment, development and the economy. Most countries attending the Rio Earth Summit in 1992 accepted the general idea of sustainable development, for example as enshrined in the Agenda 21 process agreed at this summit (United Nations, 1993)

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