

Indicators for sustainable development

Stimuli for debate and research

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In March 1996 the Department of the Environment published 'Indicators of Sustainable Development for the United Kingdom'. Its origins can be traced back to the Earth Summit in Rio in June 1992, where the Government made a commitment to develop a strategy for sustainable development. This was published in 1994. The indicators, which followed, were an attempt to inform people about the issues involved in considering whether our development is sustainable. There were about 120 covering 21 themes, such as air, water resources, land use, energy and minerals extraction.

As a preliminary set they were always meant to be replaced and in 1997 the Minister, Michael Meacher, initiated their revision. The approach to be taken was outlined in a consultation paper on a revised UK strategy for sustainable development 'Opportunities for Change' issued by the Department of Environment, Transport and the Regions (DETR) in February 1998. In it are the four key objectives which the Government regards as underlying sustainable development. Covered in more detail in Alan Meale's article, these are:

- social progress which recognises the needs of everyone;
- effective protection of the environment;
- prudent use of natural resources;
- maintenance of high and stable levels of economic growth and employment.

Embedded in these is the concept of the mutual dependence of human society

and the natural environment, which is in marked contrast to the more common approach of regarding the natural environment as being under threat from human society.

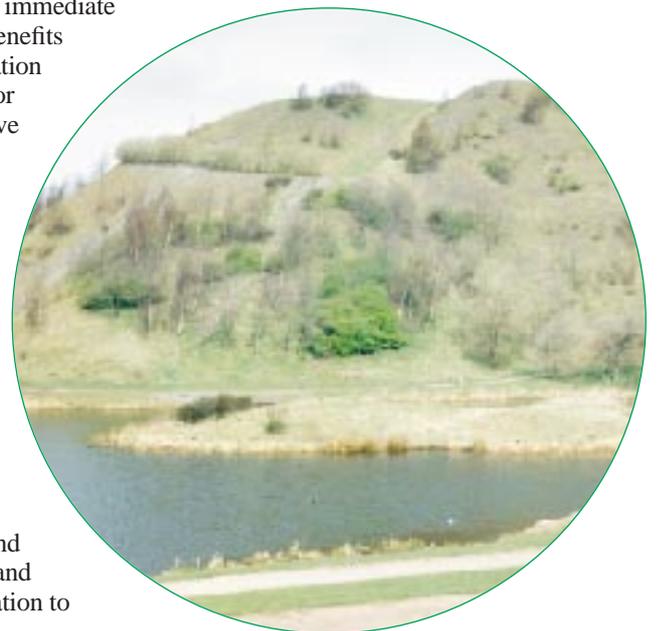
Management of the exploitation of the Earth's mineral resources is central to sustainable development. However, this brings noise, dust, roads congested with lorries carrying tonnes of crushed rock and short-term environmental disruption caused by quarries and open-cast mines. These factors have a greater immediate impact on people than the benefits they enjoy from the exploitation of the resource. Indicators for sustainable development have to take account of the need for the resource to be exploited as well as the short and long-term consequences of doing so and they must not reflect a narrow viewpoint. Restrictions on the mining of an indigenous mineral resource may lead to enhanced exploitation overseas and importation into UK. Thus, the environmental impact is exported and both atmospheric pollution and the energy cost of transportation to end user are increased.

Volumetrically, the largest consumption of any mineral product is of aggregate. This is an abundant resource, but supply may locally be severely constrained. Heathrow Airport, for example, is sited

on one of the biggest gravel deposits in England. Indicators for the sustainability of supply of aggregate, therefore, can not merely reflect its abundance. When such regionally variable matters as

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accessibility, transportation costs, social disruption and impacts on quality of life are taken into account, it becomes clear that long-term local supply of even the most abundant primary resource cannot be assured. The potential for substitution and recycling has to be taken into account in any set of national indicators. The issues are complex and the current theory and methodologies for devising indicators are inadequate, but the fact that indicators do exist will act as a stimulus for debate and more research.



Forest Park tip, Corridge, Hanley, Stoke-on-Trent. This area was originally occupied by the tip from Hanley deep pit. It has been reclaimed, successfully revegetated and is now an amenity.