

DINNER/DISCUSSION SUMMARY

Sustainable development - how should policy and business decisions reflect pressures on natural resources and global climate?

Held at The Royal Society on 18th July, 2006

We are grateful to the Natural Environment Research Council for supporting this meeting

- Chair:** **The Earl of Selborne KBE FRS**
 Chairman, The Foundation for Science and Technology
- Speakers:** **Barry Gardiner MP**
 Minister for Biodiversity, Landscape and Rural Affairs,
 Department for Environment, Food and Rural Affairs
- Professor Alan Thorpe**
 Chief Executive, Natural Environment Research Council
- Mr Dorian Emmett**
 Head of Sustainable Development, Anglo American

MR GARDINER said that he had chosen his own title as Minister for Biodiversity, Landscape and Rural Affairs, putting biodiversity first rather than last, because of his strong feelings on the subject. There were certain essential requirements for life and human welfare. At present, according to the Millennium Ecosystem Assessment, some 60% of ecosystem services were used unsustainably. Irretrievable damage was being done, for example in destroying fisheries. Yet understanding of the issues was poor and incomplete. We were not bad in dealing with problems point by point, but the reality was more diffuse and had to be seen as a whole. Many still thought of economic development and environmental protection as separate, and used different language and systems of measurement. Although it had so far been largely ignored, the Millennium Ecosystem Assessment had well shown the need for a single broad, integrated, approach: for example, future investment must be proof against changes in climate.

There were two particular requirements. First we needed to adopt new ways of assessing true costs and using common methodologies. That meant measuring the impacts of human activity on the environment, whether in development, housing or transport policy, and in assessing ecosystem services at their true value. For example, the Minister would like to see government departments having to bid for their share of consumption of ecosystem services. Secondly we needed to improve public understanding of the importance of ecosystem services. This in turn meant close cooperation between the government, scientific, business and industrial communities. The work of the Research Councils was essential in this process. Of course trade-offs between different economic interests were neces-

sary, and short- and long- term factors had to be balanced. We now needed to set priorities across the whole spectrum.

PROFESSOR THORPE said that good science was essential at all stages. It was never easy to bring all the factors together: the main drivers were human population increase, exploitation of resources, economic growth, energy generation, climate change and fresh water supplies, with their various impacts on society. Since the industrial revolution, atmospheric greenhouse gases had been increasing, and surface temperature had risen by 0.80 °C in the last half century, with big regional variations. It was easier to assess the value of goods produced than of the benefits which accrued from ecosystem services. The Millennium Ecosystem Assessment had been a health check on the condition of the planet, and the results were not encouraging: for example, use of fresh water was expanding at 20% a decade. We remained alarmingly ignorant about the functioning of ecosystems and their value in relationships with each other. The next report of the Intergovernmental Panel on Climate Change (IPCC) would reduce some uncertainties and make others clearer: for example, the implications of the current warming in the Caribbean, and surface ozone and smog over Indonesia.

The Hadley Centre of the Met Office had been working on scenarios for the next 200 years. There was good cooperation with Japan whose simulator computer was producing increasingly detailed results. The trend, particularly evident on land, was towards greater warming. The conditions of the 2003 heatwave in Europe could be regarded as normal by the 2040s, and even cool by

the 2060s. The prospects had to be seen and acted upon together. There should be a strategic alignment of the Research Councils with government (especially DEFRA), the Met Office, the Environment Agency, and business and industry.

MR EMMETT said that as a mining company Anglo American had particular problems. While pursuing wealth creation, it was moving towards sustainable development, and took particular pains to work with local communities and to clear up after mine closures. It went for a five-fold bottom line to include natural, human-manufactured and social considerations. In Sub-Saharan Africa it had taken special account of local health problems, and introduced anti-viral therapies. This had been a good business decision.

Costs were always easier to quantify than ecosystem benefits, but clarity was important, and his company supported the Global Reporting Initiative. There had to be trade-offs, and conditions were of course different in industrial and non-industrial countries. For the particular problems of mining, his company was guided by carefully defined principles; it participated in the International Council on Mining and Metals; and it attached real value to the UN Global Compact. The tools of the trade were to establish the right policies, guidelines and datasets, submit them to peer review, integrate risk management, and assess social and economic impacts. There was a need to invest in new technologies, especially those concerned with energy such as hydrogen generation and carbon capture. For the rest he emphasised the need for innovation, partnership with all concerned, and exploitation of opportunities.

In informal discussion before and after dinner, the following points were raised:

- Better public communication of the issues was essential. The scientific evidence was now pretty obvious. Even the need for new and better methodologies was widely recognised. There was a clear need to get away from rhetoric about sustainability and move towards practical action. There was also a need, not least within government, to reconcile different interests.
- The investing public and the electorate had to be taken into better account. Not everyone knew what 'ecosystem services' meant. A good way of conveying the message was to underline local circumstances. People were concerned about the degradation of their environment, and the prospects for future generations. There were no 'free goods'.
- The quantification of benefits, for example in human health and wellbeing, was particularly tricky. Here case studies should help. But some things were beyond quantification.
- Ways of rewarding people for protecting the environment were desirable. Current reform of the Common Agricultural Policy was moving in this direction.

- There were contradictions in government policy: on one hand it was seeking, not always successfully, to reduce greenhouse gas emissions, and talking about energy efficiency; and on the other it was encouraging the development of the aviation industry and other transport policies inimical to the environment. For the government it was pointed out that it was seeking to include aviation within the European carbon reduction scheme, and had to balance many other considerations. It was not always easy to assess risks and judge likely outcomes.
- Above all those involved should learn to speak the same language and work closely together. There was something to be said for keeping politics out of these issues as much as possible, and to promote cooperation between the main political parties.

In summing up the Earl of Selborne as chairman said that the essential message was that we had to work together in understanding and coping with issues that greatly affected this and future generations.

Sir Crispin Tickell GCMG KCVO

The presentations are on the Foundation website at www.foundation.org.uk.

Useful web links:

Anglo American - Sustainable Development Principles:

www.angloamerican.co.uk/corporateresponsibility/sustainabledevelopment/sd/

Department for Environment, Food and Rural Affairs:

www.defra.gov.uk

The Environment Agency:

www.environment-agency.gov.uk

The Foundation for Science and Technology:

www.foundation.org.uk

The Intergovernmental Panel on Climate Change:

www.ipcc.ch

The Millennium Ecosystem Assessment:

www.millenniumassessment.org

The Natural Environment Research Council:

www.nerc.ac.uk

The Sustainable Development Commission:

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