

## POST-BES Ecosystem Services Seminar 9 May 2007

### Notes from discussion

The discussion picked up on the speakers' themes of uncertainty and lack of knowledge, how best to develop appropriate policy instruments given these uncertainties and the urgent need for action in many cases.

Participants' comments and questions are recorded below. Responses to questions are in italics. The views expressed are those of the individual participants.

### UNCERTAINTIES

#### Discount rate

Emily McKenzie presented research from the Millennium Ecosystem Assessment that showed that the net present value of an ecosystem and its services could be higher under conservation or sustainable use than when it was converted to unsustainable use for short-term financial gain (see slide 8 of her presentation).

- The discount rate assumed in economic analysis when considering the economic value of alternative land use options is crucial to the resulting recommendations. The rate varies between individuals and under different circumstances.
- Many of the criticisms of the Stern review of climate change economics and of fisheries policies centres on the discount rates used.
- Policy makers are able to take a longer view based on the perspective of society as a whole, and therefore use a lower discount rate than that used from a private individual's perspective.
- Values do change with discount rates. As long as this is transparent, it can actually help inform the debate.

#### Valuation studies

There are too few valuation studies to be able to generalise results, as they are expensive. Coverage of different ecosystems is patchy, but people would be more confident about an ecosystem approach if there were more data. There is a focus on prioritising value transfer initiatives to keep costs down. However, it can be difficult to transfer values from one system to another as the value of ecosystem services can differ from place to place, depending on a range of local circumstances.

#### Role of biodiversity in providing ecosystem services

Participants agreed that very little is known about the relationship between biodiversity and the provision of services.

- To what extent can managed ecosystems substitute for intact ones? For instance can the catchments protection given by intact forests be provided by managed forests instead? *One function, such as water flow management, may be substitutable, but the full range of services is likely to be maximised by the intact ecosystem. In general, more biologically diverse systems provide a greater range of benefits.*
- Will we be able to answer these questions in the foreseeable future? *It is an emerging field: we will understand more but we won't get to the bottom line on all ecosystem functions.*

## **POLICY OPTIONS**

### **Balance between economic instruments and regulation**

- Market-based instruments can be more efficient than regulation alone, but do need to be underpinned by it.
- One participant asked about global initiatives for conserving habitat, saying that land use regulation has been less effective than fiscal measures. They said that the EU Emissions Trading Scheme had shown international trading can work, now a global land use trading scheme was needed. There were already precedents for rewarding successful management without measuring ecosystem services exactly: what is the most likely global initiative for conserving land? *The USA is experimenting with market instruments, e.g. wetland banks, biodiversity offsetting and carbon and water saving – by trading off local habitat loss with conservation elsewhere. They have had some success because the scheme is within one country with strong regulation and institutions. It will be harder internationally. Carbon offsetting within the UN Framework for the Convention on Climate Change is relatively advanced in exploring potential global measures, but it is struggling with the various challenges involved.*

### **Limits**

- Need for a shared language among biophysical scientists, social scientists and economists, e.g. they may each have a different understanding of ‘limits’.
- A discussion of environmental limits raises the issue of integrating the three pillars of sustainable development: societies could choose to let the environment degrade.
- Understanding environmental limits can help set policy targets and international institutions already have some experience e.g. with sulphur, nitrogen and carbon dioxide.

### **Population growth**

- Pressure on ecosystem services is a function of population size as well as per capita resource use, but population growth is never discussed.

### **Public loss and private gain**

- Do economic models take enough account of individuals’ need to maintain a certain rate of yield or return now? How do they account for the fact that benefits and costs accrue to different groups? *Some people will lose out. Policy makers need to be clear about this and compensate for it. Gains and losses can be shown spatially which helps prioritise incentives.*

### **Defra’s position**

Provided by Stephen Bass, Head of Ecosystems Approach Project team, Defra.

- Defra are working to produce an action plan for embedding an ecosystems approach to policy making and deliver in England, by the end of 2007. This will set out how Defra and others will work in a more holistic and integrated way to better deliver environmental objectives across the natural environment, to maintain and enhance the supply of ecosystem services. To do this we will need to better reflect to true value of ecosystem services in policy and decision making, and the action plan will set out how we intend to do this.

- We recognise there are some important uncertainties in the science and economics that underpin an ecosystems approach, but we are working from the premise that we already have enough information in many areas so make a start. The approach must recognise that we will never have 'perfect answers', but this is about making better informed decisions with the information available.
- If we are to mainstream an ecosystems approach across government and beyond, we need to address limitations around the language that we use. Terms such as 'ecosystem services' will not help us engage policy makers in other government departments and certainly not the public. We need to develop language and messaging appropriate for a wide range of audiences if this is to appeal more widely.