

**Global biodiversity mechanisms:
a thematic review of recent developments and future evidence needs**

Strand Palace Hotel, London 20th May 2009

Ecosystem Approach Working Group Report

May 2009

Visit: <http://www.jncc.gov.uk/MEA-event>



Global biodiversity mechanisms: a thematic review of recent developments and future evidence needs?

London, 20th May 2009

Ecosystem Approach - Working Group Report

Ecosystem Approach [[ppt feedback](#)]

Chair: Nick Davidson (Ramsar Convention Secretariat)

Participants: A.J. McConville (Institute for European Environmental Policy), Amanda Gregory (JNCC, rapporteur), Andy Swash (Defra), Bill Watts, (Environment Agency), Caryn Le Roux (Welsh Assembly Government), Chris Mahon (IUCN UK Committee), David Pritchard (JNCC Joint Committee), Diana Mortimer (JNCC), Eimear Nic Lughadha (Royal Botanic Gardens Kew), Hilary Kirkpatrick (Council for Nature Conservation and the Countryside), Ieuan Joyce (JNCC Joint Committee), James Screen (Government Office for Science), Jane Desbarats (Institute for European Environmental Policy), Janet Barber (Kaleidoscope Research and Policy), Jean Smyth (Defra), Joanna Drewitt (Scottish Government), Joanna Robertson (CCW), Martin Brasher (Defra), Pam Berry (Oxford University), Peter Brotherton (Natural England), Peter Costigan (Defra), Sarah Moon (Defra), Sharon McAuslan (Defra), Suzanne Perry (Natural England), Tina Yates (JNCC), Trevor Salmon (Defra).

1. Key implementation requirements

Three key points about the Ecosystem Approach (EA) and Ecosystems Services (ES) set the context for this working group:

- the CBD Ecosystem Approach is not an additional commitment – it is a tool and checklist to confirm the sustainability of projects;
- business as usual is not an option – altering to sustainable practices through the EA approach will result in trade-offs and there will be conventional “winners and losers”;
- which ecosystem services (and how much of each) do we need now and what and how much will we need in a changing world? And what happens if we can't get them?

After broad discussion the group felt there was not a complete understanding of ecosystem services within the different Government sectors and how the EA could be applied. As a holistic approach the EA should deliver sustainability by providing a framework, with a checklist, of the elements required to deliver and maintain projects over longer time scales than the policy and commodity based context currently provides. For example, it is not just about planting mangroves but checking that they have survived 5-10 years later and then replanting as required. Looking beyond the biodiversity conventions the EA can be an approach to help individual decision makers identify the optimum set of benefits for decision-making (not just to protect ecosystems). A key element is the socio-cultural dimension which, in many societies, is intimately intertwined with functioning ecosystems.

2. Key emerging issues

One of the key issues addressed was that of language. The language, terminology and interchangeability of terms such as environmental services, ecosystem services, benefits, etc are different between the MEAs and even within the biodiversity sector itself. The Ramsar Convention and the study on The Economics of Ecosystems and Biodiversity (TEEB) have recognised the importance of the lack of continuity and understanding of terminology. The group agreed these issues need to be addressed but also considered whether changing the terms to 'life support systems' would allow for better public engagement and understanding; likewise whether using 'sustainability assessment' rather than 'strategic environmental assessment' / 'environmental impact assessment' (SEA/EIA) would be preferable. Language barriers also exist across cultures and in governance. Different cultures respond to language used or ideas suggested in different ways, e.g. the provisioning services debate where farmers provide goods but also environmental services. Using the EA individuals and communities can see how and where the decisions have been made along with the benefits and trade-offs.

Valuing ecosystems, future ecosystem services, functions and traits of species and their future potential use is a challenging area but one that needs to be addressed. Ecosystems represent future genetic resources, provide opportunities for climate change adaptation, flood/storm defence, etc. This potential may be lost if the value of long term ecosystem resilience is largely ignored – especially when it is not perceived to deliver or be exploited immediately. Failing systems also represent lost opportunities. Can we define what level of biodiversity is required to deliver critical ecosystems and how close are we to the limits now? We have little understanding of the effects of changes to ecosystems, the critical thresholds or the non-linear effects of ecosystem change. These issues have implications on the post 2010 targets.

Links to climate change negotiations need better communication through the UN Framework Convention on Climate Change (UNFCCC), Reducing Emissions from Deforestation and Forest Degradation (REDD), or the Millennium Development Goals (MDGs). Forests have been the primary focus for carbon sequestration under REDD but other ecosystems may present greater opportunities, e.g. sustainable use of wetlands. Wetlands have historically been used for mitigation processes; flood protection and storm defence, but they can provide real additional value with their carbon storage capacity. It was acknowledged that the science is generally weaker and the wetland systems are more complex than forests.

3. Evidence and Research needs

Better evidence of the added value of the EA on the ground is required. The group asked: what is the additional value provided by following the EA; what does it deliver on the ground; have assessments been done on projects following the EA; and what was delivered?

It was recognised there are lots of tools which assist with ensuring that sustainability issues are addressed in projects. In many cases these tools help to apply the EA without making reference to it. These successful approaches should be identified and communicated, e.g. water companies are now taking account of ecosystem services although they are not using these terms. The Marine Stewardship Council for fisheries and Forest Stewardship Council for timber are demonstrating an ecosystem approach for commercial reasons – the accreditation ought to promote the EA as they are using and making money from the approach.

While many case studies are available, there are few showing good examples of projects which fully demonstrate the benefits of following the EA in different ecosystems. Extracting and feeding back the lessons from each case study is still a weakness. Examples of projects which follow sustainability principles that have resulted in an ecosystem approach are required. The group noted that an IUCN publication and the CBD website showcase some examples. All the case studies need to be reviewed to identify what drivers and incentives cause a project to be managed in a particular way.

What are the benefits of the schemes? Can these benefits be used to enable benefit transfer (where valuations/benefits in one project can be used to guide other projects) and the winners and losers associated with land use change projects identified? The group asked whether payments for ecosystems services were appropriate; is there a need for compensation; how, when and why do you pay compensation; and when it is not feasible? This is a complex issue - often it is difficult to identify beneficiaries (who may not know they are benefiting and who may be miles from where the project has taken place), whereas the losers definitely know they are losing.

Discussion also focused on understanding what ecosystem services we are going to need in the future, and in a changing world. We need to retain biodiversity for a multitude of reasons but there was an impression that there is not enough information on capacity in natural systems, e.g. pollinators, etc. Ecosystems also provide genetic resources and loss of biodiversity results in the loss of genetic resources – how do you value something that you no longer have or place a value on genetic resources for potential future use? This is a huge challenge. The benefits of ecosystem services at a general level, and the benefits humans derive directly from ecosystems, need to be made clearer, but without deconstructing what ecosystems provide into sectoral commodities.

4. The interface between science and policy

What are the risks of the EA being ignored and do we have a good enough vision of what will happen if we do not practice the EA? The EA confirms sustainability and, as such, should be used and communicated at the international level through the Department for International Development to deliver the Millennium Development Goals (MDGs) – not just MDG-7 on environmental sustainability but also other MDGs (eg, MDG-1 on hunger). Increasing global populations and wealth will have implications on demands for water and food and these areas need further debate. The socio-cultural aspects of the MA must not be ignored. The structure and functioning of many communities and societies as a whole is intimately intertwined with the functioning of ecosystems. This is often under-appreciated in policy making. The loss of a service, perhaps as a consequence of a decision or policy, can cause the loss of traditional land-use and knowledge, fractured cultural practices, breakdown of social structures and modularisation of economics in particular sectors.

The MA follow-up is undertaking a lot of research on the points discussed. The group felt that tools which can be directly applied were more important than another global assessment. This would help policy makers to understand who gains from the benefits of the EA, document what decision makers need to help them make informed decisions and, from both a science and policy perspective establish what constitutes a failing ecosystem service. A science/policy interface group at the national level should look at resilience in ecosystems and the post 2010 targets.

5. Priorities from global, European and UK perspectives

The group felt the main priority was to ensure that the climate change debate fully addresses ecosystem sustainability issues, works with the biodiversity sector to recognise the extent of nature-based adaptation and the role of all ecosystems in carbon sequestration. The benefits of the ecosystem approach need to be highlighted to other sectors – particularly the international development sector.

The issues surrounding the application of the MA were broadly similar between metropolitan UK and the Crown Dependencies / Overseas Territories but the impacts may be more intense in small island states. It was noted that conflicts and issues are generally more concentrated - with loss of biodiversity more acutely experienced, genetic resources less explored, and trade-offs more extreme. It was acknowledged that there appeared to be good communications between the islands with great support and action between them. It would be helpful to have case studies of project work in small island states employing the ecosystem approach.

Looking forward, the UK National Ecosystem Assessment presents a major opportunity to increase awareness and communicate the ecosystem approach.