

# **THE ENVIRONMENT, WELLBEING AND POLICY IN THE UK: SPEECH AT THE PRIME MINISTER'S WELLBEING CONFERENCE**

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The quality of the environment is one of the key drivers of wellbeing. It has long been argued that nature is 'economically invisible' because so little of its value to society appears in the market. In the UK we have done a lot to get a better understanding of the value of environmental assets and their contribution to wellbeing.

I will say something about that, and how we reflect this in policy design.

## **THE ENVIRONMENT AND WELLBEING**

The relationships between wellbeing and the environment are much researched but not always well understood. We can all intuitively understand enjoyment of the environment because we experience it.

But more complex areas like the impact of environmental assets on health are harder to quantify,<sup>1</sup> and people often miss altogether the contribution of the environment to business innovation, technology and the rate and resilience of economic growth.<sup>2</sup> How do we give weight to these in policy design?

Researchers increasingly recognise the natural environment as a form of capital – contributing alongside manufactured, human and social capital to wealth and wellbeing. As such we need to understand how our influence on the condition of natural assets affects the capacity of the environment to continue to provide the things which contribute to our wellbeing.

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<sup>1</sup> Research for Natural England, for example, estimates that access to green space for households in England reduces healthcare costs by around £2.1 billion a year. David Stone (2009): 'An estimate of the value and cost effectiveness of the expanded WHI scheme' (Natural England, London).

<sup>2</sup> For instance, The Economics of the Ecosystems and Biodiversity Report (TEEB) has estimated the global value of markets based on genetic resources at US\$500bn a year. See TEEB (2010): TEEB for Policymakers, Summary: Revealing the value of nature, page 17, [www.teebweb.org](http://www.teebweb.org). Broadly similar estimates can be found in other literature – for example Kerry ten Kate and Sarah A. Laird (1999): *The Commercial Use of Biodiversity: Access to Genetic Resources and Benefit-Sharing*. European Commission and Earthscan, London.

The environment's contributions to wellbeing are incredibly pervasive. The ecosystems services framework summarised in Box 1 shows the structure of benefits that the environment provides to society – from raw materials such as food and materials; to regulating services such as climate and flood regulation and air quality; to cultural services such as relaxation and inspiration.

**Box 1:**  
**Environmental assets provide a flow of benefits known as 'ecosystems services'**

**Provisioning Services** - Material goods and inputs to production - eg food, timber, fibre, genetic resources

**Regulating Services** - eg: climate regulation; water purification, flood risk management, air quality

**Cultural Services** - non-material benefits such as education, recreation, inspiration

**Supporting Services** – these occur within ecosystems and support the provision of other ecosystems services - eg soil formation, pollination, nutrient cycling.

## **REFLECTING THE VALUE OF THE ENVIRONMENT IN POLICY**

We use a range of techniques developed by researchers working with us to assess the value the services the environment provides in terms of improvements in people's welfare, environmental risks avoided, and contributions to the rate and resilience of economic growth. This is a process of constant engagement with the research community, making sure that the values we use reflect our best scientific understanding of the complexity of environmental assets and systems, as well as the underlying uncertainty about the relationships between different parts of environmental systems.

These approaches are well established right across departments in UK government as part of our framework for appraisal of policy options and projects, and not just in the environment departments.<sup>3</sup> This means that any

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<sup>3</sup> HM Treasury (2003): Appraisal and Evaluation in Central Government: Treasury Guidance (HM Treasury, London). [www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk)

significant impact on environmental benefits and wellbeing of any policy can be reflected in policy design and advice to Ministers.

So how does this make a practical difference? Here are some examples.

In climate change – our Department of Energy and Climate Change produces values for carbon values which all government departments are required to use in all policy areas.<sup>4</sup> This helps us to identify the most cost-effective approaches to cutting greenhouse gas emissions wherever they are located in government or the economy – from infrastructure design to public buildings, taxes on waste, and purchasing decisions.

More local impacts on environmental value are taken into account in the design of infrastructure – for example the Department of Transport’s approach to decisions on roads location and design systematically gives weight to environmental amenity, pollution and noise.<sup>5</sup>

In tax policy, the landfill tax, first introduced in 1996, reflects the costs landfill imposes on the environment and is designed to change behaviours.<sup>6</sup>

The recent spending review gave weight to environmental costs and benefits - including for example flood risk management and in funding Kew's Millennium Seed Bank, giving weight to the social, scientific and commercial value of biodiversity.<sup>7</sup>

Accounting for natural value and wellbeing identifies new opportunities from investing in natural capital. For example investing in wetlands can improve flood risk management and reduce its cost; and there is strong evidence on the value of urban green spaces for health, recreation and temperature regulation. The Government’s Natural Environment White Paper to be published next year will set out the next steps on this approach.

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<sup>4</sup> Department for Energy and Climate Change (2009): Carbon Valuation in UK Policy Appraisal: A Revised Approach (DECC, London) [www.decc.gov.uk](http://www.decc.gov.uk)

<sup>5</sup> Department for Transport (2004): Transport Analysis Guidance – The environment objective: TAG Unit 3.3.1 (Department for Transport, London) [www.dft.gov.uk/webtag](http://www.dft.gov.uk/webtag)

<sup>6</sup> HM Revenue and Customs (2010): Landfill Tax (HMRC, London); [www.hmrc.gov.uk](http://www.hmrc.gov.uk)

<sup>7</sup> See [www.kew.org/science-conservation/conservation-climate-change/millennium-seed-bank](http://www.kew.org/science-conservation/conservation-climate-change/millennium-seed-bank)

And finally there is new evidence from ESRC-funded research demonstrates that environmental volunteering enhances well-being, increasing active citizenship and community spirit.<sup>8</sup>

## **NEXT DEVELOPMENTS**

Experts have very kindly told us that the UK's approach, developed over decades, is world-leading. But we know that there is more to do as our understanding of environmental systems and their impacts on wellbeing improves. The pressures of climate change make that all the more important.

In the next few weeks, we will publish the first results of the UK's path-breaking National Ecosystems Assessment – the first comprehensive assessment of the state of the UK's environmental assets and the services they provide.<sup>8</sup>

The NEA assesses the value of goods and services in monetary terms but also recognises the non-monetary value of health and well-being benefits. It, gives us a more robust approach to understanding the condition and impacts of the UK's environmental asset base, and its relationship with wellbeing.

In conjunction with our work on the economics of environmental assets and sustainability,<sup>9</sup> we are now developing a framework which will help identify where critical environmental assets are in jeopardy, and make sure this is reflected in the design of policies.

A really interesting and innovative example demonstrating how wellbeing is linked to the natural environment has been developed by researchers at the LSE.<sup>10</sup> This uses a new I-phone app called Mappiness developed by LSE economists. 30,000 people across the UK have already signed up since August 2010. There are of course many issues such as selection bias which must be disentangled. But new analysis using this data is already providing compelling evidence on how actual wellbeing as recorded by people from day to day is enhanced through interaction with the natural environment.

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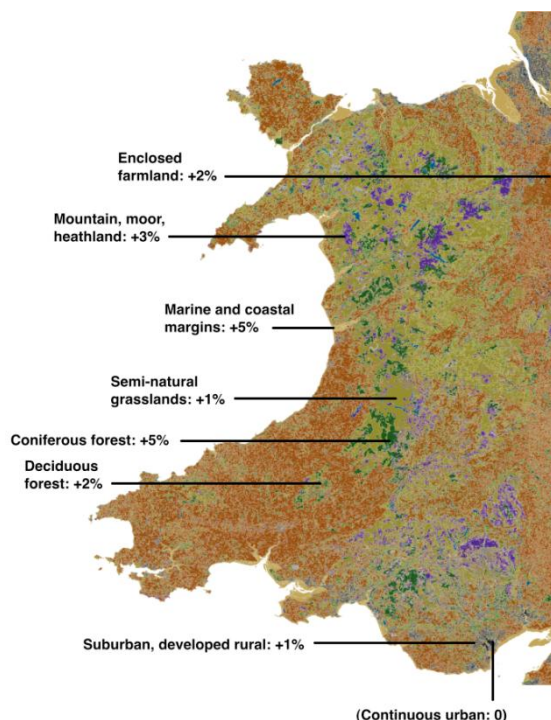
<sup>8</sup> For latest findings from the UK National Ecosystems Assessment see [uknea.unep-wcmc.org](http://uknea.unep-wcmc.org)

<sup>9</sup> Richard Price and Chris Durham (2010): GES Review of the Economics of Sustainable Development; Department for Environment, Food and Rural Affairs/Government Economic Service, London. [www.defra.gov.uk/evidence/economics/susdev](http://www.defra.gov.uk/evidence/economics/susdev)

<sup>10</sup> See [www.mappiness.org.uk](http://www.mappiness.org.uk) The researchers behind Mappiness are George MacKerron and Dr Susana Mourato, environmental economists in the Department of Geography & Environment at the London School of Economics and Political Science (LSE).

## Box 2: LSE's Mappiness Project: Preliminary Findings

- Ecosystem types deduced from location using Land Cover Map 2000
- Econometric model links ecosystem types to wellbeing, controlling for:
  - Type of activity + with whom
  - Weather conditions
  - Time of day, day of week, daylight
  - Plus baseline wellbeing for each individual respondent
- **Wellbeing found to be 1% – 5% higher in all natural environments than in urban, when outdoors**



## CONCLUSION

To sum up, the UK's approach to factoring wellbeing into policy design through our approach to costs and benefits means we are able to take a consistent approach across all areas of government in assessing how best to safeguard and improve environmental wellbeing.

More generally – and I speak for my colleagues from other departments too – environmental and social impacts on wellbeing are at the heart of UK policy design.

The UK's approach is evidence-based and encourages innovation.

And, as we have shown, policies are different as a result.