

CALL FOR EVIDENCE

Background

Mindful of the continuing loss of biodiversity worldwide and the associated decline of ecosystem services, inspired by the significant impact made on climate change policy by the recent Stern Review on the Economics of Climate Change¹, and with a view to the forthcoming Ninth Conference of the Parties (COP9) of the Convention on Biological Diversity (CBD) to be held in Germany in May 2008, the German Government proposed at the meeting of the G8+5 Environment Ministers in Potsdam 15-17 March 2007 a study on 'The economic significance of the global loss of biological diversity.'

The following was agreed by the Potsdam meeting:

'In a global study we will initiate the process of analysing the global economic benefit of biological diversity, the costs of the loss of biodiversity and the failure to take protective measures versus the costs of effective conservation.'

This was acknowledged by G8+5 Heads of State and Government at the summit in Heiligendamm in June 2007.

The European Commission is supporting Germany with the preparatory work for the study, under the title, 'A Review on the Economics of Biodiversity Loss.' The Review will be conducted in two phases, with the first phase running up to the COP9. Working terms of reference for the Review are annexed; they may later be refined in the light of the findings of the first Phase.

The Review will be carried out by an independent economist who will be appointed as study leader².

Biodiversity is defined as '*the variability among living organisms from all sources including, inter alia terrestrial, marine or other aquatic ecosystems and the ecological complexes of which they are part. This includes biodiversity within species, between species and of ecosystems.*' (Art. 2 of the CBD)

Biodiversity is vital to the healthy functioning of ecosystems. Healthy ecosystems provide a flow of valuable services including the provision of food, fuel and medicines, the regulation of water and air quality, nutrient cycling and many other services from which we benefit directly or indirectly. Whilst human-made changes to ecosystems have often generated large economic gains, biodiversity loss damages the functioning of ecosystems and leads to a decline in essential services, which may have severe economic consequences, particularly in the longer term. The Review aims to improve our understanding of the economic costs which may result from present and future trends of biodiversity loss and related declines in ecosystem services, and of the economic challenges associated with halting these trends.

¹ Stern, N. (2006) *Stern Review on the Economics of Climate Change*

² Discussions are on-going with potential candidates. The evidence collected from this call for evidence is intended to provide a basis for the study leader to develop the work.

It is recognised that not all values of biodiversity can be addressed through an economic approach. The intrinsic value of biodiversity – recognised in the opening clause of the Convention on Biological Diversity – cannot be monetised, but should also be taken into account in decision-making.

As with the Stern Review, the current Review must start with the science. The Review will benefit in this respect from the work of the Millennium Ecosystem Assessment, which made significant progress in assessing current knowledge on biodiversity and ecosystem services. However, it is recognised that biodiversity science is more complex, and arguably less mature, than the science of climate change. Moreover, the current Review does not have the benefit of such a high level of scientific consensus as that underpinning the Stern Review.

While the Review has a global scope, it will also address the specific case of the European Union, much as the Stern Review addressed the specific case of the UK. The Review will provide evidence and analysis that will feed the EU's continuing development and implementation of biodiversity policy, as it relates to both within the EU and to external relations.

The findings of the Review will help to heighten awareness of the value of biodiversity and the relative costs of inaction and effective action, and so help in the development of cost-effective policy responses. Such responses can make a significant contribution to meeting global and EU commitments to reduce and halt the loss of biodiversity, as well as to meeting the Millennium Development Goals. A better understanding of the economics of biodiversity loss is also important in the context of climate change. Diverse, healthy ecosystems provide greater resilience to climate change and may offer more options for adaptation.

The expected outputs of the first phase include: a review of relevant scientific and economic knowledge, highlighting key issues; case studies providing indications of the range of costs and benefits associated with the loss of biodiversity and the decline of ecosystem services; elements for development of a methodological approach.

The results of the call for evidence will contribute to a preparatory report to the Review to be presented at the Ninth Conference of the Parties to the Convention on Biological Diversity in Bonn, Germany, in May 2008.

Call for evidence

The European Commission is today asking interested stakeholders in Europe and worldwide, including government, academic, private sector, scientific, NGO and other experts, to submit evidence to the Review. Evidence on all areas related to the annexed terms of reference will be welcomed.

A comprehensive review of the evidence will be made. This will include a careful study of analytical issues which are critical to the Review, including:

- **science:** comprehensiveness and robustness of scientific knowledge on changes in biodiversity, the relationship between biodiversity loss and diminishing flow or quality of ecosystem services, changes in the flow of ecosystem services (including ecosystem accounting, rates of decline, trade-offs), critical gaps in the science;

- ***economics***: existing techniques for valuation of biodiversity and for forecasting the economic impacts of biodiversity loss; the evaluation of the marginal costs of activities leading to biodiversity loss, including externalities and distributional issues; the use of both aggregate and disaggregate approaches and how to compare and generalise results; the treatment of uncertainty and risk including non-linear and threshold effects in ecosystem dynamics; the treatment of inter-temporal valuations; the assessment of the costs and efficiency of actions to reduce biodiversity loss;
- ***policy***: the role of different incentive structures, institutional arrangements and distributions of responsibilities.

Submissions

Submissions should be sent to:

<mailto:env-call-evidence-bio-loss@ec.europa.eu>

Submissions may take various forms including review papers, case studies, best practice, guidelines, and methodological papers.

In order to facilitate the treatment of the submissions, the Commission would be grateful if the respondents could complete the on-line form, including a concise summary (maximum 1 page) in English to highlight the issues within the submission considered to be of greatest relevance to the Review.

The deadline for evidence to be submitted is 31 December 2007.

Submissions may be published unless a specific request is made for them to remain private.

ANNEX: WORKING TERMS OF REFERENCE FOR THE REVIEW

The working terms of reference for the Review are:

- Examine the evidence on:
 - the implications of current economic activity and the prospects for economic growth over the coming decades (including the composition, location and intensity of growth in developed and developing countries) for the principal pressures (*inter alia*, habitat loss, fragmentation and degradation, over-exploitation, pollution including greenhouse gas emissions³, and invasive alien species) on biodiversity and the associated flow of ecosystem services (this should build on the Millennium Ecosystem Assessment);
 - the economic, social and environmental consequences of biodiversity loss and the associated decline of ecosystem services in both developed and developing countries, taking into account the risks related to ecosystem thresholds and major irreversible impacts, and the interaction of biodiversity loss with climate change, as well as possible actions to adapt to biodiversity loss and the related decline of ecosystem services and the costs associated with them;
 - the costs and benefits of actions to reduce the principle pressures on biodiversity and the related flow of ecosystem services, taking into account the potential impact of technological advances on future costs as well as risks related to ecosystem thresholds and major irreversible impacts; and
 - the impact and effectiveness of national and international policies and arrangements in reducing net pressures on biodiversity in a cost-effective way and promoting a dynamic, equitable and ecologically sustainable global economy, including distributional effects and impacts on incentives for investment in technologies and practices which reduce pressures on biodiversity.
- Consult with key stakeholders, internationally and within the EU, to understand views and inform analysis.
- Based on this evidence, provide an assessment of the costs of the loss of biodiversity and the associated decline in ecosystem services worldwide, and the failure to take protective measures, versus the costs of effective conservation and sustainable use, focusing on the medium to long-term perspective.
- Assess how this analysis applies for the specific case of the EU.

³ Special attention will be given to the direct relevance of findings of the Stern Review, which assumed that land use, agriculture and waste accounted for 18%, 14% and 3% of greenhouse gas emissions in 2000, respectively.