A study planned by the G8 nations could focus much-needed attention on the environmental degradation at the core of so many of the world's problems, or it could sink like a stone, writes Camilla Toulmin, director of the International Institute for Environment and Development.

Open letter to the G8 on its planned 'Stern Review' for biodiversity

The leaders of the G8 group of most industrialised nations are set to back a study of the economic value of biological diversity at this week's summit in Germany. This could be a major milestone that changes public and political opinion about the often-ignored links between natural resources and human well-being.

Or it could sink like a stone, wasting a precious opportunity to focus attention on the degradation of our environment that lies at the core of so many of the world's problems. To mirror the success of the recent Stern Review on the economics of climate change, there are a few things the G8 study must do — and some that it must avoid.

Climate change is complex but biodiversity is more so, not least because it is harder to define, harder to measure and harder to put a price-tag on. The study's authors will not find it easy to explain trade-offs between losing species and retaining ecological integrity in a way that policymakers, businesses and the public can understand.

Learn from Stern

Biodiversity, most simply put, is the variety of life – everything from genes, to species, to entire ecosystems. It provides humanity with many important goods and services, from climate-regulation to crop pollination, from food and fuel to medicines. Poor people are most directly dependent on biodiversity and most affected by its loss. But the value of biodiversity is rarely included in policymaking.

The G8 must therefore ensure that its study is not just a technical report that is divorced from decision-making processes. A key part of the Stern Review's success was its backing by a comprehensive communications strategy. Stern was given a platform to present his findings to the media and in many public and private meetings in key countries.

And he made the political implications clear because he focused his message to challenge the status quo. It will be hard to find an economist of such intellectual stature as Sir Nicholas Stern who also has his exceptional skills in communicating complex issues in a clear and simple manner.

Scientific limitations

The central message of the Stern Review was that addressing climate change now would cost less than paying to fix its future impacts. It concluded that climate change could shrink the global economy by up to 20 per cent but that acting now to face the threat would cost just one per cent of global GDP. To make these projections it drew on a substantial body of knowledge on the links between greenhouse gas emissions, climate change and impacts on economic activities.

This clarity may not be possible for biodiversity as the scientific base to make such linkages is less well developed. Economic valuation of biodiversity relies heavily on the notion of 'existence values' – that people value biodiversity for its own sake rather than for any use

they may derive from it. The UN Millennium Ecosystem Assessment made an important step in unpacking the indirect use values of biodiversity by highlighting the ecosystem services that it provides to society.

But we still know far too little about how different ecological conditions add to or detract from human well-being. Or about the social and economic benefits and costs that arise from keeping natural areas pristine or from using them for a range of different human activities. In the absence of scientific data on how changes in land use alter what people gain from nature, the G8 should not expect too much from economics alone.

This points to the need for a broader approach, especially in the developing countries that are home to most of the world's biodiversity. The G8 would do well to enhance the scientific capacity of such nations to gather the information they need to make their development sustainable and to base policies on sound evidence. The G8 should also explore how institutional and market incentives can encourage a shift in production patterns to reduce adverse impacts on biodiversity.

Beyond dollarisation

The planned study is global in scope. But it must look beyond global 'public good' values of biodiversity – such as the way forests mitigate climate change by removing carbon dioxide from the atmosphere — and focus also on the many local values of biodiversity.

These include contributions to local soil fertility and water supplies; the resilience that crop diversity and wild species bring to people in areas prone to droughts or pest outbreaks; and the cultural importance of species and wild places.

At the same time, the study must also look beyond the mere 'dollarisation' of biodiversity. Who can put a price tag on the cultural value of the Amazon rainforest to the people who live within it, or the importance of 'keystone' species whose loss could lead to the collapse of ecosystems? Or of the future contributions to human well-being of species that await discovery – if they do not first go extinct?

Rights and equity

The G8 study must frame its analysis in terms of real development for the world's poorest people, who often are the unofficial and unacknowledged custodians of natural resources and have traditional knowledge about wild species that could benefit people worldwide.

In developing countries, biological resources such as timber, fisheries, and productive land make up a large proportion of the national 'wealth' on which economic development can be built. Such resources and local knowledge are at risk from expropriation by powerful elites, who return few benefits, as can happen when 'bio-prospectors' seek new drugs from among rainforest plants.

The G8's analysis must explore how the benefits from biological wealth can be shared fairly with the country of origin and with local people. Central to this will be recommendations that promote local rights to control access to biodiversity and its use.

Beyond biodiversity

Two years ago, the UN Millennium Ecosystem Assessment (MEA) warned that 15 out of 24 key services provided by ecosystems to humanity were being used unsustainably. The G8 study must build on this work rather than repeat it. It should go further and examine the costs and benefits of different land uses and how these affect the services that ecosystems provide to humanity. In particular, it should include an extensive analysis of the costs and benefits of conservation versus various alternative land uses.

The MEA identified only a few valuation studies that rigorously compared ecosystem services in an unaltered state with different land-use resource management regimes. These highlighted the economic consequences of biodiversity loss. But to a make a compelling economic case for biodiversity conservation at the global level, many more rigorous valuation studies will be needed.

A real challenge will be to identify ways to integrate payments for environmental protection that bring benefits to local people, help tackle other issues such as climate change, and preserve services that ecosystems provide. It is clear that climate change will affect biodiversity, probably in damaging ways. Maintaining a broad range of diversity will be central to our hopes for effective adaptation to the challenges climate change will bring. Thus, it is ever more important that we maintain and improve the health of our ecosystems.

The study's official remit is to analyse the global economic benefit of biological diversity, and compare the costs of effective conservation with the costs of biodiversity loss. If the study equates effective conservation with protected areas that exclude local people, or preservation of a selected range of, often endangered, species and habitats it will give misleading results. Its greatest potential is to show how the sustainable use of natural resources can contribute to a range of pressing challenges from tackling climate change to ensuring food security, from fighting poverty to fostering democracy.

But to do this, it must ensure that it is pro-poor, not blinded by Western interests, and that its findings are communicated appropriately and widely, as everyone on the planet has a stake in them. It must also be prepared to ask some hard questions, such as how much biodiversity can we afford to lose and how much do we need to keep?

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