Conservation, carbon and transition to sustainability

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At an international conservation meeting recently discussion in a session break turned to the question of climate change. Nothing unusual in this: climate change may not be the most immediate threat to biodiversity but as a slow-burn crisis it figures large on most conservationists' radar. Moreover, the idea of linking carbon reduction to habitat protection by reducing deforestation and degradation has created startling possibilities for new funding of conservation activity.

However, this particular discussion moved beyond the threat of climate change to the question of responsibility for reducing release of CO_2. Business corporations everywhere are being urged by environmentalists to reduce their carbon footprint: measuring the amount of energy they use, including their travel, and making those data available to shareholders and customers (and environmentalists). Do conservation organizations bear the same responsibility? Do they feel a particular responsibility to publish, limit or offset the carbon costs of their operations? It seems not: some conservation organizations offset the carbon from travel but others see carbon offsetting as a personal issue. So, do conservationists consider the carbon and consumption implications of the policies they suggest, for example global ecotourism as a way to meet the local costs of conservation and development? No, many conservationists do not see it as their place to correct the faulty world economy but rather to use it to protect nature.

There is, of course, a debate to be had about the relative contribution of global air travel to climate change, or the cost effectiveness of tackling carbon profligacy in northern lifestyles versus carbon release from tropical deforestation. There is also an argument that where the work of conservation organizations reduces habitat loss, it offsets their carbon footprint. But nonetheless, there is a paradox here. Anthropogenic climate change is a leading cause of biodiversity loss, moreover one whose future implications are likely to be increasingly serious and potentially catastrophic. The so-called carbon connection is obvious and its challenge has been eloquently presented (Orr, 2007). Yet as conservationists we sometimes seem to think we can be excused from addressing our own carbon footprint. We concentrate on stopping biodiversity loss: the rest is someone else's job, and does not overlap with ours.

This is a strange state of mind. We seem to fear that limiting our international travel may imperil our capacity to do good. If we do not plough the skies ceaselessly, how can we achieve the superhuman feats needed to counter humanity's impacts on nature: we need to be there, making the case for nature, recruiting and training partners, taking responsibility for nature in its last fastnesses. What this implies is that conservation work is too important to risk constraining its effectiveness, even when by our actions we contribute to one of the key drivers of biodiversity loss. Like business executives reluctant to see profits spent on green initiatives, we argue that we must obey a higher imperative, although in our case it is to protect biodiversity, not to maximize shareholder value.

This reflection prompts a question: how integral is biodiversity conservation to the wider sustainability movement? Historically, the links have been clear and close (Adams, 2008). But what about the situation today, when concern about climate change seems to be shared across the globe — is conservation still at the heart of calls for sustainability? This is a key question for conservationists as the Fourth World Conservation Forum and 22nd World Conservation Congress are convened in Barcelona. It has been central to the IUCN Future of Sustainability initiative (Adams, 2006; Jeanrenaud, 2007).

After 2 years, two meetings, an e-forum discussion, and debate at 10 IUCN regional membership and commission meetings, a report *Transition to Sustainability: Towards a Diverse and Humane World* (Adams & Jeanreneaud, 2008) summarizes the challenge ahead. Surviving the Anthropocene (Crutzen, 2002) will be seriously difficult, for humanity and for other species. To make it, we need a rapid and effective transition to sustainability — we need to create a world that sustains abundant, diverse and worthwhile life, human and non-human, and does so humanely. Is this possible? Yes, but it goes without saying that it will not be easy. The world economy must be decarbonized: there have to be dramatic reductions in carbon use through increased technical efficiency, breaking the dependence of fossil carbon for energy generation and delinking energy use and economic growth. This has to be achieved alongside a commitment to justice and global equity.

These are huge challenges but they are not all. A transition to sustainability must be based on the protection of life: biodiversity and biosphere. The conservation of nature is the fulcrum for wider change towards sustainability. Without functioning, diverse ecosystems the services on which both human life and quality of life depend will not endure. A world where techno-science seeks to deliver ecosystem services through synthetic processes is not only science fiction but also a grim environmental dystopia.

The burning question for conservation in this debate is whether we can deliver biodiversity protection within the context of a world locked on an unsustainable development path. *Transition to Sustainability* argues that we cannot. The need to integrate biodiversity and sustainability cuts both ways. If biodiversity underpins sustainability, so conservation cannot be separated from a wider sustainability agenda. For most of the 20th century the modern conservation movement tried to protect nature away from people and development, in protected areas. In effect, conservationists accepted that

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damage to nature from the expanding world economy would continue while they fought to ensure that the most precious areas were protected. In this limited aim there has been some success: 12% of the terrestrial globe lies in a protected area of some kind. But this was a Faustian bargain: expanding human demands on the biosphere left wider impacts on biodiversity and climate change unchecked, with disastrous effects. It is no longer acceptable to treat biodiversity conservation as if it were independent of wider debates about sustainability.

So, what does a commitment to sustainability involve for biodiversity conservation? Most importantly, we must support the wider changes involved in the transition to sustainability. We need to be able to explain how to build economies that sustain biodiversity and deliver high levels of welfare and happiness to the earth's citizens. Conservation strategies must be crafted that create a biodiverse world that includes people, not a world of biodiverse enclaves in lifeless human landscapes. It is widely recognized that protected areas cannot achieve conservation's aims as small high biodiversity islands. Nor will calls for exclusive reserves necessarily achieve political support from surrounding communities or national taxpayers. The 2003 Durban Accord argued that protected areas should provide benefits 'beyond their boundaries on a map, beyond the boundaries of nation states, across societies, genders and generations' (IUCN, 2005). This demands close integration of protection and sustainable use (http://www.iucn.org/themes/ssc/susg/).

The conservation movement must demonstrate that biodiversity is for rich and poor alike. The complex links between poverty and conservation are increasingly being teased out (Redford et al., 2008; Roe, 2008; Walpole & Wilder, 2008) but conservation must also become more strongly integrated with concerns about wider ecosystem health and human well-being. We need to base our work in what people see nature doing for them, for example providing food, products, a safe and clean environment, beauty and wonder, and of course livelihoods and jobs. If conservation can address such issues, it will be meeting human needs and not (as its critics so often complain) thwarting them.

We need to contribute to debates about the transition to sustainability, working out what successful economies look like if they are not built on vast energy and material demands, polluting factories, airports, jammed freeways, and the export of unsustainable consumptive demand overseas. We need to define what sustainability means in developing economies, and how to achieve it, helping devise strategies that give people the chance to lead lives of aspiration and hope that also sustain living nature.

So, just as biodiversity is critical to sustainability, sustainability is a vital issue for conservation. Can we deliver biodiversity protection in an unsustainable world? Absolutely not, or we will end with biodiversity 'saved' by being shut into boxes like butterflies pinned in a lepidopterist's drawer, our protected areas just impoverished enclaves in a ravaged world (versions of what Ben Elton satirizes as 'claustropheres', artificially maintained ecosystems accessible only to virtual travellers or the super-rich; Elton, 2000).

Conservationists cannot be exempted from the challenge of sustainability: our organizations, our private lives, our shopping patterns, our holidays, and the solutions we offer to impoverished communities in poor countries all have to meet the challenge of sustainable one-planet living (http://www.panda.org/about_wwf/what_we_do/policy/one_planet_living/index.cfm). The idea that we can operate in a bubble while the rest of the environmental movement addresses issues of consumption and the world economy is a cruel illusion, just another version of the standard corporate and consumer fantasy that all will be well. It may well be that the carbon stored in the forests we help our partners protect far outweighs the carbon we burn doing it. But like any corporation or government (or university of course) we need to prove it is so. We need to audit our work, and make the results available to our stakeholders, including our critics.

The natural world, the economy and society are connected: we know this. Therefore as conservationists it seems to me that we have no option. We have to make the issue of a transition to sustainability central to our fight for nature, just as we make nature the centre of the push for sustainability. Anything else is wilfully tunnel-visioned and ultimately self-defeating. Anything else is, surely, simply immoral.

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