

ENV.B.2/SER/2008/0046r

Conference on Wilderness and Large Natural Habitat Areas¹

May 27 – 28, 2009**Prague, Czech Republic**

DOCUMENTARY MATERIAL 09

Re-uniting climate change mitigation efforts with wilderness protection and biodiversity conservation

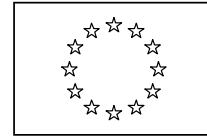
The chapter is based on a script kindly provided by Harvey Locke (with inputs from Brendan Mackey and Cyril Kormos), which was modified based a consultation with the European Commission and the Czech Presidency.

The time has come for a major initiative to re-unite climate change mitigation efforts with wilderness protection and biodiversity conservation. Recent scientific research has shown clearly that the destruction of intact forested ecosystems (whether they be tropical, temperate or boreal) releases carbon to the atmosphere whereas leaving them intact keeps carbon from the atmosphere. This new understanding provides a way to make important advances to mitigate both climate change and the species extinction crisis.

The United Nations Framework Convention on Climate Change and the Convention on Biological Diversity were both negotiated at the Earth Summit in Rio de Janeiro in 1992. They were designed to tackle the same problem- humanity's overuse of the Earth's natural resources and the atmosphere's ability to assimilate the resulting emissions. UNFCCC seeks to limit emissions of CO₂ that cause dangerous levels of climate change. The CBD seeks to halt the loss of biodiversity. Both conventions have also been charged with development goals for poorer countries. Their implementation phases are the Kyoto Protocol and the Programme of Work on Protected Areas respectively (there are also other programs under the CBD).

Sixteen years after they were developed together as complementary strategies to safeguard the future of life on Earth, a strange thing has happened. Many policy experts consider the two conventions to be

¹ Also known as: Conference on Wild/Nearly Wild Areas in the EU



very different. Some programs are being advanced under Kyoto that actually harm the goals of the CBD such as clearing natural forests to plant palm oil for bio fuels. And no credit is given under Kyoto for leaving wild nature intact. Further, many environmentalists working on climate change are fearful that any allowance for the protection of nature in Kyoto will undermine efforts at emissions reductions. Even at the implementation level, governments that are signatory to both conventions often assign responsibilities for the conventions to different departments. Since the US is not a signatory to the CBD many US NGOs simply ignore it. And both climate change and the extinction crisis are getting worse (IUCN Red List).

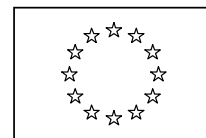
This separation is bad for the goals of both conventions as science has now made clear that the protection of nature will help climate change goals for both mitigation and adaptation. There is widespread myth that old growth forests are not helpful to mitigate climate change. This is false. Recent analysis by Luyssaert et al states bluntly “We find that in forests between 15 and 800 years of age, net ecosystem productivity (the net carbon balance of the forest including soils) is usually positive. Our results demonstrate that old-growth forests can continue to accumulate carbon, contrary to the long-standing view that they are carbon neutral.” And the only way to keep those benefits is to keep those forests intact. “Old-growth forests accumulate carbon for centuries and contain large quantities of it. We expect, however, that much of this carbon, even soil carbon, will move back to the atmosphere if these forests are disturbed.”

It is important to note that in recent climate talks (Bali 2007) there is a fledgling effort to recognize carbon in tropical forests through Reducing Emissions from Deforestation and Degradation (“REDD”) but the large amounts of carbon in temperate and boreal ecosystems are usually ignored (though recently announced Norwegian REDD funding may be more inclusive). This narrow focus on the tropics is partly because the science of the values of carbon in temperate and boreal ecosystems is not taken into account (see Global Carbon Budget), because there are no development goals met by protecting temperate and boreal ecosystems as they occur in wealthy countries, and partly because some of the NGOs pushing REDD do not concern themselves with temperate or boreal ecosystems.

Organic carbon is stored in living and dead biomass and the soil. In the tropics, most of the organic carbon in a forest ecosystem is stored in the living trees. In boreal forests, there is proportionally more found below ground due to slow decomposition rates. Temperate forests store large amounts of carbon in both trees and the soil. Protected areas in all forested zones whether they be tropical, temperate or boreal are the best way to prevent this carbon from being released to the atmosphere. Mackey et al state “Reducing Emissions from Deforestation and Degradation (REDD) is important in all forest biomes-boreal tropical and temperate- and in economically developed as well as developing countries. From a scientific perspective, green carbon accounting and protection natural forests in all nations should become part of a comprehensive approach to solving the climate change problem”. Simply put, all wilderness and biodiversity habitat conservation wherever they occur is good for the climate.

Land use disturbance, whether it be clearing forests, disturbing soils or burning vegetation was responsible for 25% of man made CO₂ emissions since the industrial revolution and the problem continues with estimates that it continues to contribute 20% of CO₂ to the atmosphere (Global Carbon Project), which could be too low an estimate.

The Intergovernmental Panel on Climate Change (Fischlin et al) said: “During the course of this century, the resilience of many ecosystems (their ability to adapt naturally) is likely to be exceeded by an unprecedented combination of change in climate, associated disturbances (e.g. flooding, drought, wildfire, insects, ocean acidification) and other global change drivers (especially land use change, pollution and over-exploitation of resources), if greenhouse gas emissions and other changes continue at or above current rates (high confidence)”.

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Without healthy functioning ecosystems freshwater will become scarce, air quality will diminish, the extinction crisis will accelerate and humanity will have a very difficult time adapting to climate change. Leaving wild areas intact helps ecosystems adapt to climate change (Fischlin et al). Vast systems of interconnected protected areas that span elevations and altitudes are the best mechanism to allow terrestrial species and ecosystems to adapt to climate change (World Conservation Congress). The Programme of Work on Protected Areas under the Convention on Biological Diversity already includes all these tools. Any post-Kyoto or REDD Framework should include protected areas in all biomes as a key climate change mitigation strategy.

Large scale nature conservation is a first order climate change strategy. It is time to take a holistic view of the CBD and UNFCCC by bringing them back together to ensure that actions under the one help the other, rather than cause harm.

The REDD effort initiated at Bali and the recently established Ad Hoc Technical Experts Group on Biodiversity and Climate Change which will explore bringing the two conventions together are useful efforts. But there is a need for senior levels in all countries to give explicit direction to recognize the integrated nature of climate change and nature conservation in order to move climate change mitigation efforts to a more holistic and effective level.

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