Future Investing in Living Carbon

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"It's not what we eat but what we digest that makes us strong;
not what we gain but what we save that makes us rich."

This quote by seventeenth century philosopher Francis Bacon seems a good starting point to consider how the climate debate and Copenhagen Accord are altering concepts of wealth creation and the twenty-first century economy.

While the 15th Conference of the Parties (COP 15) failed on most counts, one thing there was wide consensus about was that to keep below the climate change cap of no more than a 2°C temperature rise, decreasing deforestation offers one of the quickest, cheapest, and scalable means of curbing greenhouse gas (GHG) emissions this side of 2030. And the price tag is doable—around $25 billion annually (United Kingdom Government 2008), only slightly more than one New York bank's estimated 2009 bonus pool.

At around 18% of the global total, emissions from burning tropical trees and soils exceed those from the entire transport sector (Nabuurs *et al.* 2007). Moreover, standing tropical forests provide a gigantic carbon capture and storage (CCS) system, removing 4.4 billion tonnes of carbon dioxide (CO_2) from the sky each year (Denman *et al.* 2007)—for *free*. The rainfall this 'living carbon' generates underpins not only global climate security, but food and energy security as well. For instance, 70% of Brazil's electricity comes from hydropower fed by rainfall regulated by Amazonian forests.

Tropical forests are an irreplaceable 'eco-utility' being destroyed at some 13 million hectares (m ha) per year (Food and Agriculture Organization of the United Nations, 2006), of which approximately 5.5 m ha are in rainforests (Hansen *et al.* 2008)—an area nearly twice the size of Belgium. Over 32% of this destruction is caused by expanding inefficient low-intensity agribusiness, which produces billions of dollars in short-term profits. A further 42% is caused by subsistence families degrading forests for food and fuel. Collectively, deforestation results in losses of ecosystem services such as climate and rainfall regulation, reduced biodiversity, and increased disease. Today, these are regarded as externalities, but if assigned a dollar value they would be in the range $3–5 trillion per year (ten Brink *et al.* 2008). McKinsey and Company's (2009) greenhouse gas abatement cost curve clearly shows that to spend the next 20 years developing as-yet-untested industrial scale CCS systems at $150–500 per tonne of CO_2 equivalent (tCO_2e) abated, without saving forests at a potential fraction of the cost and with immediate impact, is economically irrational. It need not be either/or, but both. As this

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analysis makes clear, tropical forests are natural capital we simply cannot afford to do without.

If Bacon is right, will the value of such natural capital rise? The climate debate is pushing to center stage recognition of how nature underpins sustainable wealth creation; tropical forests are the vanguard of this change. It is crucial that the Copenhagen Accord for the first time commits the countries responsible for 80% of global emissions to fixing the problem and curbing deforestation. Currently, $3.5 billion of interim financing for forests is on the table and awaiting the definition of an appropriate delivery system. The Accord commits signatories to contribute $10 billion annually to 2012. After that, US and international carbon markets are likely to invest strongly in REDD+ credits (Reducing Emissions from Deforestation and Forest Degradation) *if* a compliance market develops in which such credits are included. The Copenhagen Accord makes that more, not less, likely.

Unfortunately, in global markets today, tropical forests are still worth more dead than alive. However, if over the longer term, a Kyoto II agreement can regulate even a modest carbon price, opportunity costs of conservation should be able to be met through REDD+. For example, in net-present-value terms converted to US dollars in 2005, the opportunity costs of conserving forests would require a REDD+ credit price of $3-7/$tCO_2e$ to equal revenues from palm oil in Indonesia, $2/$tCO_2e$ for Brazilian cattle ranching, and up to $3.5/$tCO_2e$ for Brazilian soybean farming (Olson and Bishop 2009). Such prices are reachable now in the voluntary carbon market. In 2007, it generated more than 2 million tCO_2e from avoided deforestation projects at an average price of $4.80/$tCO_2e$.

This may not yet convince most farmers to stop deforesting or to restore degraded land, but should REDD+ be tradable in a future compliance market, prices could be much higher—making forests much more valuable. For comparison, the price of emission allowances in the EU Emission Trading Scheme in October 2008 ranged between €18–25 ($23–33)/$tCO_2e$. Coupled with tightening government regulations on access to cheap land, such a scenario could create a significant alternative land use arbitrage opportunity. Today there is effectively only a market in carbon, but tomorrow the hugely valuable ecosystem services these forests provide may acquire a value too. If so, for the first time in history, natural forests might become worth more standing.

Asset managers recognize the game is changing. Investments in companies that drive deforestation may be at risk of regulation, tarnished reputations, and lowered future earnings. Investors representing $3.5 trillion of assets have demonstrated their support of a new call for transparency initiated by the Forest Footprint Disclosure (FFD) project in the UK, which published its first Annual Review of corporate performance indicators in relation to five 'forest risk commodities' in January 2010 (Campbell *et al.* 2010b*)*.

A snapshot of this changing economic landscape can be seen in the Brazilian cattle industry: following civil action led by Greenpeace in 2009 that highlighted links between the cattle industry and deforestation, one of Brazil's largest beef exporters lost a $60 million loan from the World Bank's International Finance Corporation. At the same time, Carrefour, JBS Friboi, Walmart, Nike, and other global brands stated they will no longer use products such as beef

and leather sourced from the Amazon, unless a 12-month sustainable chain of custody can be demonstrated. Currently, a federal public prosecutor for the state of Pará is pursuing legal action worth $1 billion against 22 ranchers and 13 meat-packing plants for sourcing beef from farms in non-compliance with Brazilian deforestation laws.

As the January FFD briefing states:

> "The implications of these policies on the private sector will be unavoidable; as developing countries move towards low-carbon development plans, which intrinsically value the natural capital stored in tropical forests, agricultural policies will need to shift towards more sustainable practices that don't rely on the conversion of tropical forests. Private sector participants that are behind the curve in their environmental policies will find ever-decreasing opportunities to grow, in a world where land availability is likely to be constrained" (Campbell *et al.* 2010a).

Of course, conservation will never out-compete commerce, especially with the global population rising to 9 billion by 2050. But what if the true cost of what we consume became factored into the products we buy? Markets today do not price tropical forest infrastructure, but tomorrow's markets might—and change in that direction is happening faster now than at any time in the past. The carbon market is the first faltering step in a wholesale re-calibration of the world economy in which doing business with natural capital in mind will be as commonplace as utilizing social and financial capital. Feeding and fuelling our growing world is one of the greatest challenges of the twenty-first century, but squandering ecosystems that support the process will erode the economics eventually. Businesses that understand this and move toward preserving and leveraging the globe's natural resources will be the rising stars of the future. Investors will want to spot them.

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Biography

Founder and Executive Director of the Global Canopy Programme, a UK NGO established in 2001, Andrew Mitchell has worked in the following areas by:

Ecosystem Services and Innovative Finance Mechanisms: • Building capacity for understanding forest canopy/atmosphere ecosystem services in government and academia in Latin America, India, SE Asia and China. • Instigating and developing of the 'Emergency Package for Tropical Forests' a $25 billion innovative financing mechanism for forests with Prince's Rainforests Project. • Co-Founding Canopy Capital Ltd an investment company set up to pioneer rainforest bonds and tradable 'Ecosystem Service Certificates' to fund forest conservation.

Development and Management of International Science and Conservation Projects: • Establishing the GCP, a network of experts around the world involved in developing the science, policy and finance needed to maintain the world's tropical forests. The GCP catalyses, gathers and applies 'tropical forest intelligence' from its networks to create information and tools used by decision-makers. • Developing, with international Boards Earthwatch Institute from a US based science organisation to a global research, conservation, education institute directly engaging 4000 members of the public each year in the field, funding 260 scientists on conservation and research projects annually.

Climate Policy and Communications: Leading roles in development of policy related to REDD+ (UNFCCC), Green Development Mechanism (CBD), The Economics of Ecosystems and Biodiversity (TEEB). • Publishing of the Little REDD+ Book and Little Climate Finance

Book in five languages. • Instigating of Inter Academy Panel Statement on 'Climate Change and Tropical Forests' (2009) and the 'Forests Now Declaration' (2007) presented at UNFCCC COP in Bali.

Corporate Engagement: • Founding and current Chairing of the 'Forest Footprint Disclosure' project (2009) backed by $3.5 trillion of investor assets to reduce global corporate drivers of deforestation. • Advising companies on environmental policy and PR, and related marketing strategies with McDonalds, Barclays, British Airways and ELF. Co-Founder of the UK Corporate Environment Responsibility Group (CERG) involving over 30 blue chip companies.