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# Environmental Finance

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# Innovative financing and forest conservation

A growing body of opinion is calling for forestry projects to be recognised under the terms of the Kyoto Protocol as a cost-efficient way of generating carbon credits. The Noel Kempff Climate Action Project in Bolivia is the biggest such project yet undertaken and, as **Jeremy Weinstein** explains, there are many ancillary benefits for host countries in addition to the credits and investment dollars

**O**ur goal is to prove that forest conservation is a legitimate, viable and cost-effective climate change mitigation tool," says Dale Heydlauff, senior vice president of environmental affairs at American Electric Power (AEP). The Ohio-based utility is the lead investor, with Oregon-based utility PacifiCorp (now part of the UK's Scottish Power Group) and British Petroleum America (now BP Amoco) in the Noel Kempff Climate Action Project, the world's largest forest conservation project designed to offset carbon emissions.

The Noel Kempff Mercado National Park is 5800 square miles of remote wilderness in north-eastern Bolivia. Its plateau inspired Sir Arthur Conan Doyle's *The Lost World*. The Noel Kempff Climate Action Project covers 2400 square miles that were added to the park in 1996 in a joint initiative by the government of Bolivia, a local non-profit conservation group Fundación Amigos de la Naturaleza (FAN), and The Nature Conservancy (TNC).

"Our prime motivation was to prove a policy point – that we really can preserve tropical forests, capture and store carbon, and avoid emissions from forest destruction," adds Heydlauff.

Before the Climate Action Project began, the forest was under threat from logging and conversion to agriculture. By averting these activities, the project may offset up to 14 million tons of carbon over 30 years. Much of the project funds were used to compensate private logging interests for giving up rights in

the project areas, which the Bolivian government then retired. The rest of the initial funds are for ongoing project implementation, including establishing the long-term financial mechanisms needed to support the project for 30 years.

Total investment in the project is \$9.6 million, with \$2.6 million being raised by TNC and FAN, and \$7 million coming from investors. Industry investors PacifiCorp and BP joined AEP in the project in 1997. PacifiCorp joined the undertaking to add to its portfolio of energy and land use offset projects and to demonstrate the credibility of the technique. BP became involved to learn about the issues surrounding forest carbon sequestration, and to explore the linkages between climate change and biodiversity.

Although Linn Draper, chief executive officer of AEP, believes "it was worth every cent to have been able to protect such a fabulous and ecologically important natural area, even if we never get a single credit certified," the investors are seeking an investment return on capital through the use or sale of carbon offset credits generated. The Bolivian government will receive 49% of any carbon offsets created, the industrial investors will share another 49% and the remaining 2% will go to AEP as a bonus for its pioneering role in developing the project.

Project participants include: TNC, the world's leading private international conservation non-profit, which provides financial management and technical support; FAN, which is dedicated to biodiversity preserva-



Emerging market talent: Martin the monkey won Bexsa's 'employee of the month' award for rescuing the founder's dog from a Rottweiler.

tion and sustainable management of endangered tropical habitats and which manages the park; the government of Bolivia, which has certification and oversight authority; and the three industry investors. Winrock International, another non-profit, provides state-of-the-art monitoring and verification services to ensure the legitimacy of the credits. FAN's sciences department has an advanced plant tissue culture laboratory, researches natural resources for sustainable commercialisation, and contributes to the scientific study of the park.

A unique feature of the project is a local start-up company, Canopy Botanicals SRL, dedicated to sustainable development and biodiversity in Bolivia, intended both to help fund the project over its 30 year life and earn additional returns for the investors. The Park requires about \$500,000 per year, but could use up to \$1 million. After year six, most of the initial investment will have been spent and continued funding will be expected from the government of Bolivia, a TNC-managed endowment, ecotourism, sale of carbon offsets, and profits from Canopy. Original projections called for annual income from Canopy of



Sustainable development and biodiversity are both key aims of the Noel Kempff Project

\$160,000 by year five, increasing to \$300,000 by year 10.

FAN was allocated \$600,000 for its laboratory, which was to provide Canopy with technical support. Another \$600,000 of project funds were available to capitalise Canopy. In mid-1998, when Canopy start-up activities began, the business plan still needed to be developed, and Canopy was subject to an expectation of producing dividends of 30% per year within just a few years. While clearly a high-risk venture, Canopy's success was essential for the project. An alternative would have been to put the Canopy money into the endowment and hope for the best. Although the endowment had earned impressive returns in a runaway bull stock market, returns regress towards a mean and the project has a 30 year funding requirement. However, after reviewing the business plans proposed by Canopy's new general manager, Mark Meador, the investors affirmed the initial judgement that Canopy was needed in order to obtain the necessary rate of return. They determined that Canopy could and should seek to earn returns commensurate with the risks associated with its investments, subject to ordinary emerging market venture capital and risk management principles.

Risks in emerging market projects come in a variety of forms. For example, Mark Meador lost an alarming amount of weight after just a few months in Bolivia as a result of an emergency appendectomy, tropical fever, and intestinal parasites. By his third visit with

me back in California, he had fortunately gained the weight back, but sported a nasty head injury, incurred in La Paz after losing consciousness due to high altitude!

The legal status of Canopy was another complication which had to be addressed. The comprehensive agreement governing the Noel Kempff project provided that Canopy should be a Sociedad Anónima (SA). However, the project's Bolivian counsel advised that an SA required that all capital be placed on deposit when the company is formed and, further, that each shareholder put up capital for its shares. But, in the case of Canopy, the investors were putting up \$600,000 over four years for 49% of the company, with FAN taking 51%, so such a structure would not work. The legal operating requirements for an SA are also much more cumbersome than for the alternative form of organisation that was eventually chosen, a Sociedad de Responsabilidad Limitada (SRL) or Bolivian limited liability partnership. An SRL's capitalisation does not need to come in all at once and FAN could own 51% without having to put up any money.

In order to streamline matters further, a Delaware corporation, Canopy Botanicals Inc, was set up to be the 49% owner of Canopy Botanicals SRL. The three corporate backers of the Noel Kempff project invested in this US firm which is purely an investment company. PacifiCorp's shares in it are held through its greenhouse gas mitigation project investment subsidiary, PacifiCorp Future Generations Inc.

The Bolivian SRL, 51% owned by FAN, is the operating company. FAN's dividends from the SRL go to the project. This structure was chosen to avoid Bolivian taxes on investor transfers of participation interests, simplify future investment, and avoid numerous other administrative hoops that arise on direct investment in Bolivia. The project sought and received Bolivian government approval for these changes. Even with the simplified structure, the paperwork process in Bolivia was substantial.

Canopy's immediate task was to develop a business plan. I was concerned about being able to capitalise any business for \$600,000. Pre-project business plans and feasibility studies had been generated for a company with start-up capital of \$1.2 million, which was not our case. Mark Meador quickly came up with a range of opportunities and correctly decided that since Canopy was so thinly capitalised, activities that generated current income with little capital outlay would be an appropriate initial focus, parallel to business plan development. Brokering sustainably harvested botanical products was an opportunity that immediately presented itself, as Bolivia is home to one of the most biologically diverse ecosystems in the world.

**A**n American ethno-pharmaceutical company said it needed a resin of the croton tree, called *sangre del drago* (dragon's blood) as a raw material for a drug intended to treat diarrhoea in AIDS patients. Although this opportunity seemed to be the *deus ex machina* for an underfunded Canopy, it had a rough ride. After realising that their drug was not going to be approved by the US Food and Drug Administration in the near future, the company recast itself as a botanicals company, and its product as a botanical supplement. We were told its need for *sangre* remained large and immediate, and that Canopy was a key link in its supply chain. However, the company changed its order on such a regular basis that it seemed to be expecting 'just-in-time' raw material delivery from the tropical jungles of South America. This created such a poor impression of us with our suppliers that the investment of time and reputation against reliability of future revenue was deemed too heavy and the endeavour terminated.

As the brokering faltered, we decided that investing in local ventures seemed a good way to leverage Canopy's limited capital. The company's first investment was in Rainforest Exquisite Products SA (Repsa), a Bolivian producer of organic, shade-grown, high altitude roasted coffee and green coffee beans, and very tasty chocolate-covered coffee beans and Brazil nuts. Canopy's investment allowed Repsa to expand production capacity, introduce new products and increase its international sales presence. Canopy also provides technical assistance to Repsa management.

BP is considering offering Repsa products for sale in its convenience stores. This would be of obvious benefit to Repsa but would also

give BP experience investing in conservation and sustainable development. BP's Bolivian affiliate, Chaco, is helping develop local markets through its suppliers and members of Camara Boliviana de Hidrocarburos, the local petroleum association.

Dale Heydlauff introduced Repsa products into AEP headquarter's cafeteria, which serves 2000 employees and is managed by Marriott catering services, which itself presents another excellent market opportunity for Repsa. AEP is also actively working to introduce the products into grocery chains in the area around its home town of Columbus, Ohio.

Canopy also invested in Bolivian Ecological Exports SA (Bexsa), which has pioneered an innovative cultivation system that allows edible and medicinal mushrooms to be rapidly spawned in central Bolivia's hot, humid climate. Bexsa sells its products locally, and plans to export fresh mushrooms to neighbouring countries and dried mushrooms worldwide. It also prepares packaged foods from the trimmings of its edible mushrooms and is researching other fungi with applications in clothing dye, decomposition of industrial waste and medicine. The Canopy investment will allow Bexsa to expand its capacity, enter the international market, and strengthen its management systems. The founding genius behind Bexsa is Niels Prahm and Canopy structured the transaction to incentivise him to institutionalise his technical and management expertise within Bexsa.

Canopy continues to explore other opportunities. With help from FAN Sciences, it is developing Bolivian medicinal plants and herbs to introduce into nutritional supplement markets in the US and Europe. Canopy is also formulating a joint venture with a US manufacturer of botanical supplements that would include building a botanical extraction facility in Bolivia. Canopy will likely have some involvement with plant tissue services and ornamental plants, principally orchids, in conjunction with FAN Sciences. FAN is also designing a line of gold and silver jewellery based on rare Bolivian orchids to be marketed by Canopy. The company intends remaining flexible and persistent in pursuing endeavors compatible with biodiversity conservation and the overall objectives of the Noel Kempff project.

Canopy is just one example of how host countries receive ancillary benefits from forest conservation projects. In addition, project funds have been used to strengthen the Bolivian National Climate Change Program to facilitate offset certification and development of other climate change mitigation projects. The project also includes economic development activities to assist local communities, such as revolving loan funds for micro-enterprises like agroforestry projects, animal husbandry and small bakeries. It has funded health care programmes, an ambulance and radio system, pharmacies, potable water supplies,

school improvements, road and bridge repair, and legal assistance for indigenous people seeking title to the land on which they live.

More such projects will occur if the United Nations Framework Convention on Climate Change permits a broad range of forest projects under the Clean Development Mechanism. Despite controversy about crediting forest conservation projects, in addition to the genuine global ecological benefits, Latin American countries are well served if the rules permit it. These projects promote the flow of resources to build capacity in countries which have the need but not the means to develop climate change policies and projects. Developing countries will suffer an opportunity cost if investments that could have supported their sustainable development are not made because industry is prohibited from including forest conservation projects in their portfolio of GHG mitigation actions.

Smart investors will not rely solely on forestry to meet their emissions reduction commitments, but will develop portfolios including a broad array of domestic and international GHG mitigation projects, keeping a close eye on individual project costs, risks and



## Recommended reading

Eyre Mundy, *Risk Mitigation in Forestry Under Kyoto* (1999).  
 Forest Trends and World Resources Institute, *Getting It Right: Emerging Markets for Storing Carbon in Forests* (1999).  
 Merrill Lynch Australia, *Building Materials, Kyoto & Carbon Sinks* (1999).  
 PriceWaterhouseCoopers, *Climate Change: Consequences for the Public and Private Sectors of the United Nations Negotiations and Agreements* (1999).  
 Union of Concerned Scientists, *Linking Solutions to Climate Change and Biodiversity Loss Through the Kyoto Protocol's Clean Development Mechanism* (1998).

### Websites:

Project: <http://www.noelkempff.com>

FAN: <http://www.fan-bo.org/>

More relevant hyperlinks can be found at:

<http://ourworld.compuserve.com/homepages/JWeinstein/rainfore.htm>

timing of offsets. Forestry projects which protect the ecosystem resonate with the 'man on the street' in the US, so US legislation to ratify agreements such as the Kyoto Protocol would be more likely to pass if it accommodated such projects.

Climate change mitigation legislation will happen, even as the scientific community debates the timing and magnitude of climate change. The driving force will not be the politics, but the finance. Powerful financial market participants are swinging into place behind it, whatever their politics. Insurance companies, paying out more as weather-related disasters increase with changing climate, are helping by developing sophisticated risk management infrastructure. Accounting firms, investment banks and other Wall Street players who recognise an emerging opportunity are seeking to be at the cutting edge of the inevitable. An over-the-counter carbon market is developing, with the active participation of top-flight brokers such as Cantor Fitzgerald and NatSource, and a futures contract is planned by the Sydney Futures Exchange. BP, working with Environmental Defense, has pioneered an internal trading system and linked management bonuses to unit GHG mitigation targets. Shell has introduced a similar trading programme.

Tropical forest conservation projects not only generate real offsets, but also bring ancillary benefits, as well as investment dollars, to host countries. Canopy Botanicals, for example, leverages its capital with strategic local alliances to obtain investment returns, promote adding value locally, and fulfill ecological and social aspects of the project mandate. Canopy has been a tremendous, and I hope successful, learning experience for all involved.

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