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Opinion

New Development and Ecosystem Service Roadkill

by John Reid, Leonardo Fleck, and Marcos Amend

Rainforest nations could earn billions in carbon payments by reducing greenhouse gas emissions from deforestation and forest degradation (REDD), but many are pursuing short-term growth strategies that will ultimately cost them – and the world – dearly. A new study says that road development in the Amazon will damage both the global environment and the Brazilian economy.

25 June 2009 | "However unpalatable road-building is, it may be needed if the people who live in the Amazon are to lead a better life."

That's the June 13 *Economist* referencing a controversial proposal to pave Brazilian federal highway BR-319, a muddy stretch of road between the Amazon cities of Manaus and Porto Velho. The statement reflects the kind of common-sense thinking normally presented as hard-nosed economic reasoning, but it misses a hard-nosed economic fact: namely, that the project's direct costs are greater than its benefits and could squander chances for even greater long-term income in the form of carbon payments generated by reducing emissions from deforestation and degradation (REDD).

That's the conclusion of research recently completed by Conservation Strategy Fund (CSF, see related links, right), which found that for every dollar invested in BR-319, around 33 cents in benefits would be generated. Further, the US$265-million project would directly lead to a better life for only a few hundred people already living near the proposed blacktop. It comes to roughly half a million dollars per person – hardly an efficient way to pull rural people out of poverty.

Indeed, the study found that the road's overall economic loss to Brazil's economy would be around US$150 million in present value terms, and that's not including the lost REDD income.

Killing the Goose

Losing money now is one thing. Losing it forever is quite another, but that's just what roads like this one could mean.

That's because 80% of Amazon deforestation takes place within 30 miles of roads, and many of the carbon-storing trees along the BR-319 will be felled once the road opens. A team led by Britaldo Soares Filho from the Federal University of Minas Gerais estimated that around four million hectares (10 million acres) of forest would be cleared over the next 20 years if the road is built. That would send around two billion tons of CO_2 spiraling into the skies.

Seen another way, the inefficient investment in the road creates a distortion in land-use markets by subsidizing products with high transportation costs. These are low value-to-volume goods such as timber, cattle and soybeans. Carbon storage, on the other hand, has transport costs of, well… zero. Indeed, despite the current debate over carbon stored in harvested wood products, REDD credits derive their value from the fact that the trees are not to be transported.

The Coming Carbon Bonanza

The atmospheric environmental service forests could offer might actually compete favorably with forest clearing, but not yet. Tropical forest protection is now squarely on the agenda for the climate protection agreement that will kick in when the Kyoto Protocol expires in 2012. That means that tropical forest countries stand a chance of getting cash – either out of a centralized fund or in market transactions – for bringing deforestation below an agreed upon reference level.

But an agreement is still some ways off, as negotiators hash out the details and hope that enough money will

materialize from rich countries to pay for this potentially massive reduction in deforestation. Tropical countries have plenty of work before they're ready: they must estimate how much carbon their forests now store, set targets, get conservation policies in place, and build up monitoring and enforcement capacity.

Irreconcilable Differences?

In the meantime, some officials suggest that BR-319 and other forest roads can be deforestation-free, or close to it. Protected areas are the key, they say, and indeed, state and federal agencies have declared or proposed a total of 28 protected areas all along BR-319's route. Success in blending transportation and conservation on this scale would be a monumental accomplishment.

But that will take money. CSF-Brasil joined an official government-NGO working group to help cost out the protection of those 28 areas. The price: US$233 million in present value terms. The transport ministry has offered up a paltry US$19 million.

Carbon funds could someday help close that gap, paying for protection that benefits biodiversity and – if done right – preserving traditional uses practiced by forest peoples. Indeed, some Amazon states are forging ahead with projects aimed at the voluntary carbon market to do just that. But a comprehensive, national approach will be needed to attract enough money and avoid simply pushing deforestation from the BR-319 corridor to someplace else in the Amazon.

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