



the greatest crime

by Kevin Conrad

Deforestation and forest degradation may be humanity's greatest crime against our planet. They give rise to around 20 per cent of the world's emissions of greenhouse gases and are its major cause of biodiversity, species and habitat loss. They change weather patterns, cloud formations and precipitation, and increase flooding and water run-off, reducing drinking water supplies. They decrease human well-being where soils are thin and poor, and cause soil erosion and desertification. They increase disease, and thus public health costs, and decrease natural pollination rates and agricultural productivity. And the list goes on.

All this has been happening for centuries, but there is now cause for hope. New markets for ecosystem services may offer a paradigm shift. But lasting success will require more hard-headed economics and less soft-headed tree-hugging!

First, we must stop the finger-pointing. Our ever-expanding human enterprise has demolished around 50 per cent of the world's forests — nearly four billion hectares — over the past millennium, mainly in the United States, Europe, North Africa, and the Middle East. In the US for example, almost 90 per cent of virgin forests have been cleared. More recently, deforestation — at the alarming rate of around 13 million hectares a year — has largely shifted to developing countries. History also shows that it can be defeated, but it must be overcome earlier in the development of tropical economies than in that of today's rich countries.

Deforestation is complex, but, put simply, it is driven by the fact that the world values forests more dead than alive. Tropical rainforests are being cut

down because we do not pay for their many valuable and diverse ecosystem services — such as climate stabilization, rainfall generation, crop pollination, soil fertility, food security, waste disposal, water purification, flood control, pest control and recreational services. Traditional economic theory, which considers ecosystem services a ‘common good’ and thus free to all, is primarily responsible.

So, with these services valued at zero, rural communities that depend on and care for forests must make a living in other ways. As they struggle to eke out an existence, keeping the land forested means sacrificing the opportunities gained by converting it to other uses. Many deforest their land so as to trade low-value commodities like timber, beef, palm oil, soy, coffee, and cocoa. And international commodity markets have hardly changed from colonial times.

These economic relics are increasingly perverse and nonsensical. The environment is devastated, rural communities stay poor, and the rich shift the blame. They cite lack of governance and corruption. But these (in both industrial and developing countries) are not drivers of deforestation, but symptoms of obsolete market constructs. Markets begin and end with demand, and this is where we need to find the levers for change. We must shift focus from symptoms to drivers, from blame to solutions.

We must empower rural communities, for the first time, to develop without deforesting. Global leaders must reinvent markets for a sustainable future. But these will not simply spring up overnight, particularly when society has been accustomed to receiving ecosystem services free. Stringent regulatory systems will be needed to underpin them to create ‘demand’ and all stakeholders will have to undergo a comprehensive step-by-step process of market development.

Many lessons can be taken from the Kyoto Protocol process. Efforts must be voluntary, inclusive, led by developing countries (and their rural communities), and must operate transparently within varied national circumstances. A ‘basket of tools’ will be required for tropical countries at differing stages of development:

- **High Forest Cover:** Very early in the development cycle; low rates of deforestation; usually low population densities; comparatively low opportunity cost (e.g. Congo, Guyana, West Papua, etc.).
- **High Deforestation:** Low to moderate development cycle; increasing population densities; low to moderate GDP per capita; increasing opportunity costs (e.g. Bolivia, Brazil, Cameroon, Papua New Guinea, etc.).
- **Forest Regeneration:** Intermediate development cycle; higher population density; moderate GDP per capita; higher opportunity costs (e.g. China, Costa Rica, India, etc.).

Such different stages carry differing analytical, capacity, legal, institutional and policy capabilities. Tropical countries, each at their own pace, will transition through specific stages of implementation:

- **Readiness and Capacity Building (Stage 1):** Analysis, institutional evaluation, legal review, and policy development along with demonstration activities in preparation for wider implementation.

- **Expanded Non-Compliance Implementation (Stage 2):** Expanded range of national, sub-national, local and/or project-level activities, designed as a step toward national carbon accounting systems and leading to measurable, reportable and verifiable emissions reductions.

- **Market-Based Emissions Reductions (Stage 3):** Measurable, reportable and verifiable emissions reductions implemented within compliance markets for ‘offsets’ and applied under a national carbon accounting system at a scale appropriate (national, sub-national, and/or project) for each policy approach and/or incentive framework.

Substantial resources must be mobilized and delivered transparently, predictably, sustainably and sufficiently. Effective implementation will be unlikely unless there is confidence that the opportunity costs associated with the forgone land-use activities will be replaced. So funding must be ramped up with each stage: beginning with ODA, then combining market-linked sources (allowance auctions, transactional fees, etc.), and finally, allowing full access to global compliance markets.

The latest estimate is that around \$20 billion a year will be needed to halve carbon emissions from deforestation. But it would be a wise investment, even for this one ecosystem service alone. Forests sequester some 3.3 billion tons of CO₂ annually. So, with today’s carbon prices around \$33/tCO₂, the rural communities owning most of them are effectively subsidizing the carbon emissions of the rich by \$100 billion per year.

If we are to slow, stop and reverse global deforestation, we must thoughtfully design, implement and regulate new markets that fairly value tropical ecosystem services and so empower rural communities to earn a fair living by protecting their forests and surrounding environment.

The Wagu community along the Sepik River, in my country, Papua New Guinea, voted to cancel their logging concession, telling me that the forests and rivers had provided all they needed for thousands of years. But, in some ways, they now feel trapped. The old ways allowed them to survive, but did not prepare their children for an increasingly complex future. They now struggle with a school that cannot afford a teacher, a health centre with no medicine, and no outboard motors to take fish and produce to market. Yet they still remember how to live sustainably, which many others have forgotten in the rush to get ahead.

Some companies are now valued in billions simply for advertising trinkets while we surf the internet. Some countries make billions selling fossil fuels that pollute our atmosphere, others for producing low-cost consumer products that humanity does not require. Google is worth \$150 billion while the world’s last great tropical forests, left standing, are worth nothing. How can this be right?

Together, we must reconstruct our value frameworks. New environmental markets must support tropical countries striving toward sustainable development by generating ‘billions’ from rainforest ecosystem services that humanity has so far been exploiting for free.

Bold leadership is required on both sides of the economic divide to end this crime against our planet. But there is hope. By saving the forests, maybe we can relearn how to save ourselves. 