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natural

development

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The world's twin economic and ecological crises share striking parallels. Both are driven by a short-term-profit mentality and a value system that encourages us to live beyond our means. Both result in mismanagement of valuable assets. And both are characterised by misaligned economic and financial incentives.

Sub-prime mortgages were the initial culprit in the financial crisis. In the ecological parallel, it could be called 'sub-prime development' — development that undermines nature's capacity to provide people with essential goods and services.

We depend on natural ecosystems every day — for fresh water and food, shelter, building materials and medicines. Yet no less than two-thirds of all ecosystem goods and services have been degraded worldwide by humanity's increasingly heavy footprint. Dams, built to increase power supply to cities and irrigation to croplands, undermine rivers' capacity to support fisheries or sustain the wetlands that provide water filtration and flood protection. Expanding food and biofuel production drives tropical deforestation, releasing carbon stored in trees to contribute to climate change.

The Brazilian Amazon, for example, was once 'blue chip stock', providing generous returns to its citizen 'shareholders' by continuously recycling carbon dioxide into oxygen, cleaning air and regulating regional and global climate. But now this irreplaceable asset is devalued, with one fifth of its area lost to loggers, farmers and ranchers.

The rural poor are especially vulnerable to nature's decline. Three-quarters of the two billion people subsisting on less than \$2 a day live in rural communities that depend on natural ecosystems for sustenance and livelihoods. Climate change will hit them hardest: The Intergovernmental Panel on Climate Change (IPCC) predicts, for example, that by 2020 up to 250 million more Africans will face water shortages. If sub-prime development persists, the poorest will pay — first with their livelihoods, and then with their lives.

This need not happen. Just as robust financial sector reform is possible, alternative development models can reduce or even reverse ecological degradation while addressing rural poverty.

The *World Resources Report 2008*, the World Resources Institute's flagship biennial publication presents such a development model. *Roots of Resilience: Growing the Wealth of the Poor* argues that, in many developing countries, scaling up community-driven nature-based enterprise can provide a firm foundation for combating poverty and increasing resilience to climate change. It draws on many case studies where this has improved ecosystem health while increasing household income.

The Bangladesh government, for example, granted poor villagers ten-year leases over wetlands and the rights to manage the polluted, over-fished waterways on which they depend. Elected community organisations introduced harvesting restrictions, and fishing families, assisted by NGOs and donors, used micro-credit loans to start new livelihoods. Within six years many wetlands had recovered and 180,000 people were enjoying an average one-third rise in household income and a 140 per cent increase in fish catches. The government now plans to extend this model to all inland fisheries and is piloting the approach in the forestry sector.

Over the border in India, community-based efforts to restore degraded watersheds have led to similar success. Villages across 600 watersheds in three states — mentored by the Watershed Organisation Trust, a national NGO — have planted trees and employed simple soil and water conservation techniques to protect water supplies and increase crop cover. In Darewadi, Maharashtra, the village that pioneered the model, agricultural employment has grown from between three and four months a year to nine to 10 months, six new crops have been introduced and farm wages have doubled.

And in drought-plagued Niger, where livelihoods and food security are closely intertwined, a simple, cost-effective practice of farmer-managed tree regeneration has produced a 're-greening' revolution. First piloted by international NGOs and donors, the practice of regenerating trees from stumps and then harvesting their fruits, leaves and wood has spread spontaneously over the past decade. By 2007, up to half the country's farmers were involved, about 200 million trees had been regenerated and over 4.5 million people were reaping the benefits.

The World Resources Report 2008 identified three common elements required for such ecosystem-based enterprises to succeed: community ownership of local resources (which fosters self-interest in the success of the enterprise); community support networks; and technical assistance from intermediary organisations, including government agencies and NGOs. With them, poor communities can unlock the wealth potential of ecosystems and support broader rural economic growth.

How do we make such development initiatives — investing in nature while reducing poverty — more commonplace? Donor governments and international institutions should:

Build capacity in national governments, multilateral development banks and bilateral development agencies to make the connection between ecosystems and poverty. The joint UNEP/UNDP Poverty-Environment Initiative, for example, could provide material on mainstreaming the links between poverty reduction and the environment into national policy making, budgeting and implementation. An Intergovernmental Panel on Biodiversity and Ecosystem Services, as recently proposed by UNEP, could increase the scientific knowledge base linking ecosystems and human well-being.

Incorporate investments in ecosystem service restoration and maintenance into existing development strategies. Viewing ecosystems as a development asset rather than something to be protected from development, could enable developing countries and donors to pursue more robust climate change and development strategies. Governments' climate adaptation plans, for example, could explore the cost-effectiveness of investing in such ecosystem services as water regulation, flood protection and erosion control as an alternative to man-made structures. Donor-led agriculture development plans for sub-Saharan Africa could incorporate an ecosystem service approach and help avoid a repeat of the high environmental and social trade-offs that accompanied the 1960s Green Revolution in Asia.

Strengthen the role of local communities in managing ecosystems. Communities have a vested interest in restoring ecosystems services on which they depend, yet poor citizens often lack legal rights to access them. Development agencies can empower rural communities to participate in decisions concerning ecosystems through policy loans that promote decentralising natural resource management to representative institutions. Governments pursuing decentralisation policies should ensure that authority is transferred to institutions that have the capacity to manage resources sustainably and are representative of and accountable to local people.

Much of the knowledge and many of the tools needed to relieve poverty while protecting ecosystems are already at the disposal of the development community, including the World Bank, UNEP and UNDP. A concerted effort is now needed to put them to use and overcome vested interests in maintaining the current sub-prime development model that benefits a few at the expense of many. As on Wall Street and in other global financial centres, changing such interests is likely to be the most challenging part of the needed reforms. It will require a sea change in attitudes, policies, institutions and behaviour.

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