

green breakthroughs



by Pavan Sukhdev

The years 2008 and 2009 will no doubt be written into history as special ones: when the world community was forced to face multiple global challenges ranging from financial meltdown and deep economic recession, to interconnected crises in energy, food and the environment — years which also saw deep-seated political re-awakening and change.

But will today's 'tipping point' take us to a new, better and sustainable world? Or will we merely stimulate the old economy to recover just enough to let us stumble along our unsustainable development paths for a little longer, awaiting a ruder and perhaps final awakening?

There appears to be a dawning realization that the old economic order is seriously stressed, perhaps even breaking down. The war cry 'greed is good' is no longer heard in the markets, and 'nationalization' is no longer an evil to be avoided at all costs. People even speak of 'limits to growth' without being dismissed as antiquated Malthusians. There is a sense that the messages that environmental science and environmental economics have been publishing for decades are finally being picked up and read, not just by the public, but by political leaders.

The scale of the challenge has evidently not been lost on the world's leadership, if the economic stimulus packages being strung together to prevent the financial crisis from turning into an all-out global economic rout are anything to go by. Almost two trillion dollars have already been committed to shoring up the creaking global financial system. Another two trillion dollars of fiscal stimulus is being lined up — by over a dozen developed and developing country governments across the globe — to help their economies to stave off what threatens to be the worst economic recession since the early thirties. Australia has just seen its worst plunge in Job Ads, an employment indicator, in thirty years. The U.S. has just seen its worst weekly payroll statistics in over a quarter century.

What is not so well known is that around 20 per cent of the \$2 trillion of stimulus packages is investment to 'green' our economies. It takes the form of investments in, and incentives for, renewable energy, energy efficiency, materials efficiency, clean technology, waste mitigation and an increasing focus on sustainable use and restoration of nature-ecosystems and biodiversity. The questions are: will all this work, is it enough, and is it the best use of public money? And what can 'greening' do for the world economy, for employment and for poverty?

Put simply, greening could save the world's economy from another prolonged period of serious recession, massive job losses and worsening poverty, and create an economy in which growth is truly sustainable. This is what UNEP's Green Economy Initiative sets out to prove.

Take clean energy, for example. Globally, 2.3 million workers are already employed in renewable energy technologies. By 2030, it is estimated that investments in them could create more than 20 million jobs globally, including 2.1 million in wind energy, 6.3 million in solar photovoltaics and 12 million jobs in biofuels-related agriculture and industry. By comparison, total employment in oil and gas and the oil refining industries is just over 2 million jobs. The numbers speak for themselves.

Are businesses already 'greening' their products and looking towards a new world? The smartest are already doing so. As part of General Electric's 'ecomagination' campaign, their engineers worked out how to transform one of the oldest and most powerful forms of transport into an energy-efficient marvel: the hybrid rail locomotive. Take a 4,400 horsepower locomotive, add lead-free rechargeable batteries (a 1,000 pound molten-salt cell) and a fuel-efficient diesel locomotive, and you end up with quite a package.



Every time the engine brakes, energy is transferred into the batteries (rather like the hybrid Toyota Prius) providing an extra 2,000 horsepower to use when needed. The result? Fuel consumption down 15 per cent, emissions down a remarkable 50 per cent compared to locomotives operating today. And the best part? The first of the locomotives goes into operation next year.

But how about poverty? Can 'greening' or renewable energy help solve the problems that the Millennium Development Goals have targeted, and which we are still struggling to achieve? Here is an answer wrapped in an example: Grameen Shakti, a company launched by Nobel Peace Prize laureate Professor Muhammad Yunus' pioneering microfinance Grameen Bank organization in Bangladesh. It has been working a quiet renewable revolution in the country since 1996, selling and financing solar photovoltaic panels and greening the energy supply of over 8,000 homes in Bangladesh every month. Women who buy these panels become village electricity distributors, selling their solar electricity to neighbouring homes at no more than the monthly cost of kerosene, their normal fuel. Grameen Shakti's CEO, Dipal Barua, has a vision of greening energy use, bringing the women of Bangladesh out of poverty and ill-health, and converting a million homes from health-damaging kerosene stoves to solar electricity by next year.

But are 'green' investments in stimulus packages enough? And are the enabling conditions in place for a new era of green growth? These questions are central to the Green Economy Initiative. To address them, it has organized itself around the key sectors of green investment — renewable energy and rural energy, clean technology, materials and waste management, sustainable cities, biodiversity-based business and ecological infrastructure. Its first paper, on a global Green New Deal will be out in a few months. It will guide policy makers on the opportunity that investment in greening represents: a deployment of public funds that can not only restore economic and employment growth, but do so in a way that is sustainable into the distant future, representing perhaps the best available return on investment for public funds.

But will the world have to wait for political will to emerge, and for coordinated policy action to take place for sustainable growth to begin? Perhaps not. "There is already a green economy breaking through what's breaking down," as Lawrence Bloom, chair of the Green Economy Initiative's sustainable cities' sector group puts it. Our hope is that the successful models we already seen will be given the opportunity to scale up and succeed the world over. Our vision is no less than a world society in harmony with nature, thriving on a truly global green economy. 