A global recovery strategy

Dealing in green

The Global Green New Deal aims to stimulate economic recovery and reduce environmental degradation and poverty. But it will only succeed if the Group of Twenty commit to global governance and mobilize international support.

n 2-3 December 2008, the United Nations Environment Programme (UNEP) convened a meeting in Geneva to instigate its Global Green New Deal initiative. The need for such a comprehensive global strategy seemed self-evident. In 2008, the world was confronted with multiple crises – fuel, food and financial – and by the end of that year the world was contending with the worst economic recession since the Great Depression of the 1930s.

Overcoming these crises required a package of policy measures similar to President Roosevelt's New Deal, but at a global scale. A Global Green New Deal encapsulates such a timely mix of polices, which aim to stimulate economic recovery and create jobs while enhancing the livelihoods of the world's poor and lessening carbon dependency and environmental degradation.

A Global Green New Deal

The package of policy, investment and incentive measures comprising a Global Green New Deal must have three principal objectives:

- Revive the world economy, create employment opportunities and protect vulnerable groups.
- Reduce carbon dependency, ecosystem degradation and water scarcity.
- Further the Millennium Development Goal of ending extreme world poverty by 2025.

But achieving these goals requires a commitment to global governance, especially by the world's largest and richest economies – the Group of Twenty (G-20). Thus, the Global Green New Deal recommended an expenditure of 1% of

By **Edward B. Barbier**, John S. Bugas professor of economics at the University of Wyoming, US. He is the author of A *Global Green New Deal: Rethinking the Economic Recovery* (Cambridge University Press, 2010), an expanded version of the consultancy report on the Global Green New Deal he was commissioned to write for the United Nations Environment Programme.

summary

- The Global Green New Deal aims to stimulate economic recovery and create jobs, and simultaneously reduce carbon dependency, ecosystem degradation and water scarcity.
- Achieving these goals requires a commitment to global governance, especially by the world's richest countries, the Group of Twenty (G-20).
- The G-20's failure to coordinate a green stimulus package, however, limits their effectiveness in 'greening' the global economy.
- The G-20 should follow the lead of China and South Korea, whose policies reflect the belief that investments in clean technologies can have a major impact on growth, expand exports and create employment.

global gross domestic product (GDP) on green initiatives over the next several years.

G-20 countries should prioritize energy efficiency and clean energy investments, and developing countries should aim to improve agricultural productivity, freshwater management and sanitation. Such investments should be accompanied by a swath of domestic and international policies – from removing perverse agricultural, fishing and energy subsidies to taxing or trading carbon emissions, instigating tax credits for low-pollution cars and other clean-energy innovations, financing the transfer of green technologies to developing countries and creating a global carbon market through climate change negotiations.

Recent developments

Initially, the world community's response to the Global Green New Deal seemed positive. By the end of 2009, several G-20 economies had incorporated a sizable 'green fiscal' component in their recovery spending. Such measures included support for renewable energy, carbon capture and sequestration, energy efficiency, public transport and rail, improved electrical grid transmission and environmental protection. However, the G-20 has failed to instigate a worldwide 'green recovery'.



Governments – almost exclusively members of the G-20 – did spend over US\$520 billion on green stimulus during the recession, comprising 16% of all fiscal spending and 0.7% of the G-20 GDP. Although this sounds like quite a lot, the green spending fell short of the 1% of GDP recommended in the Global Green New Deal. More importantly, only a handful of economies devoted much of their total fiscal spending to green stimulus plans.

South Korea launched a 'Green New Deal' as its fiscal response to the global recession which, when supplemented by additional green stimulus spending, comprised 5% of its GDP. China apportioned around a third of its total fiscal spending to green measures, or 3% of its GDP. Although low-carbon investments accounted for the majority of fiscal spending by the European Union (EU), total EU fiscal spending in general was small (US\$22.8 billion), only 0.2% of GDP. Green stimulus amounted to just 12% of the total fiscal stimulus of the United States and 0.9% of GDP.

Overall, most G-20 governments were cautious in making low-carbon and other environmental investments during the 2008-09 recession, and some did not implement any green stimulus measures. Important emerging market and developed economies that did not enact any green stimulus plans include Argentina, Brazil, Greece, the Netherlands, Portugal, Russia and Switzerland. The reasons for this caution in implementing green stimulus packages are still difficult to discern. They ranged from scepticism about the effectiveness of the measures in delivering both jobs and environmental improvement, a lack of political will, concerns

about increasing government budget deficits and simple short-sightedness.

But as emphasized in the Global Green New Deal, relying on green stimulus alone is not enough to instigate a 'green' recovery. Fossil fuel subsidies and other market distortions, as well as the lack of effective environmental pricing policies and regulations, will diminish the impacts of G-20 green stimulus investments on long-term investment and job creation in green sectors. Without correcting existing market and policy distortions that underprice the use of natural resources, contribute to environmental degradation and worsen carbon dependency, public investments to stimulate clean energy and other green sectors in the economy will be short-lived. The failure to implement and coordinate green stimulus measures across all G-20 economies also limits their effectiveness in 'greening' the global economy.

Finally, the G-20 has devoted less effort to assisting developing economies that have faced worsening poverty and environmental degradation as a result of the global recession. Nor has the G-20 taken a leadership role in facilitating negotiations towards a new global climate change agreement to replace the Kyoto Treaty that will expire in 2012. Therefore, more than ever, the world needs a Global Green New Deal, and it needs the G-20 to implement and coordinate this strategy.

The time is now

There are several reasons why such a worldwide policy initiative is urgent. First, the global recession will not

diminish the costs of climate change and energy insecurity. The 2008-09 recession was preceded by a surge in global energy prices, with the price of oil reaching US\$150 a barrel in July 2008. Due to rising energy costs, prices for food traded internationally increased almost 60% during the first half of 2008, with basic staples such as grains and oilseeds showing the largest increases.

The International Energy Agency estimates that once growth resumes fossil fuel demand will rise by 45%, and the oil price could reach US\$180 per barrel. The remaining oil reserves will be concentrated in fewer countries, the risk of oil supply disruptions will rise and oil supply capacity will fall short of demand growth. Greenhouse gas (GHG) emissions are likely to increase by 45% to 41 gigatonnes in 2030. If atmospheric concentrations of GHG lead to a warming of 5-6°C, GDP could fall by 5-10% globally, and by more than 10% in developing economies.

Second, the right mix of investments and policies today could not only reduce carbon dependency and improve the environment, but also create jobs and stimulate innovation and growth in key economic sectors.

Every US\$1 billion invested in energy efficiency and clean energy in the United States could eventually generate energy savings of US\$450 million per year, reduce annual GHG emissions by 592,600 tonnes by 2020 and lead to approximately 30,000 job-years – a 20% increase in job creation over more traditional fiscal stimulus measures such as income tax cuts or road building.

The recovery policies adopted by China and South Korea reflect the belief that investments in clean energy technologies can have a major impact on growth, expand exports and create employment.

For example, one reason that China has adopted green fiscal measures is that its renewable energy sector already has a value of nearly US\$17 billion and employs close to one million workers. Other green initiatives include promoting fuel-efficient vehicles, rail transport, electricity grid improvements and pollution control. China has also raised taxes on gasoline and diesel, and reduced the sales tax on more fuel-efficient vehicles.

China is also the world's largest recipient of carbon emission reduction credits under the Clean Development

Potential impact of an EU energy conservation programme

A programme to expand energy conservation and renewable energy supply in the European Union could create one to two million new, full-time jobs. Investments in mass transit systems also have significant direct employment effects and reduce transport costs for poor households. More than 3.8 million jobs could be created globally through the production of vehicles with high fuel efficiency, hybrid and alternative fuel use and low-emission technologies. At least 1.2 million jobs worldwide are involved in biofuel production, but global expansion of next-generation feedstocks could easily generate 10 million jobs or more.

Mechanism (CDM), currently earning US\$2 billion from these credits. Overall, China views the promotion of green sectors as a sound industrial policy. It aims to be the world's market leader in solar panels, wind turbines, fuel-efficient cars and other clean energy industries.

South Korea also sees its industrial strategy tied to green growth. In addition to the Green New Deal, the South Korean government plans to establish a US\$72.2 million renewable energy fund to attract private investment in solar, wind and hydroelectric power projects. In July 2009, South Korea launched a five-year green-growth investment plan, spending an additional US\$60 billion on reducing carbon dependency and environmental improvements, with the aim of creating 1.5-1.8 million jobs and boosting economic growth through 2020.

In developing economies, every dollar invested in improving the energy efficiency of electricity generation saves more than three dollars in operating costs. Small hydropower, biomass and solar photovoltaics already provide electricity, heat, water pumping and other power for tens of millions of people in many rural areas. Developing economies currently account for 40% of existing global renewable resource capacity, 70% of solar water-heating capacity and 45% of biofuel production. Expanding these sectors may also be critical for increasing the availability of affordable and sustainable energy services for the poorest households in these economies.

Correcting global imbalances

Another very important contribution of a green recovery to the world economy, especially in the light of the current crisis, is that it may help alleviate global imbalances. According to the International Monetary Fund, 'the phrase "global imbalances" refers to the pattern of current account deficits and surpluses that built up in the global economy starting in the late 1990s, with the United States and some other countries developing large deficits (United Kingdom; Southern Europe, including Greece, Italy, Portugal and Spain; Central and Eastern Europe), and other large surpluses (notably, China, Japan, other East Asian economies, Germany and oil exporters).'

The global structural imbalance means that economies with chronic trade deficits received large and sustained capital flows from surplus economies seeking safer assets as investments. The massive credit flows arising from this imbalance may have precipitated the credit bubble and the subsequent undoing of financial markets, which led to the 2008-09 recession. Thus a major concern is that if the economic recovery does not address the problem of global structural imbalances, these will continue to pose a threat to the future stability of the world economy.

For example, a global green recovery strategy of reducing carbon dependency and improving energy security may help to control both the large current-account deficits incurred by major oil-importing economies, such as the United States, and reduce the trade surpluses of fossil fuel exporting economies.



The height of arrogance, G20 Toronto, June 2010

The role of any global green recovery strategy in reducing the chronic trade surpluses in Asian and other emerging market economies is more complex. A necessary step will be to rebalance the pattern of economic growth in these economies to absorb more of their savings domestically. Most policy prescriptions advocate moderating the excessive reliance on exports and export-promoting investments, and instead expand imports of capital goods for key sectors with future growth potential and shifting the industrial output structure away from labour-intensive goods to skill-, capital- and technology-intensive production. Such an approach may actually be helped by key elements in a global green recovery strategy.

For example, an Asian Development Bank study has estimated that for all Asian economies to reach a target of 20% of total supply from clean energy sources by 2020, it would require capital financing of almost US\$1 trillion by 2030, of which nearly US\$50 billion a year would be required until 2020. The high savings rates in these economies means sufficient capital is available from the private sector, both for funding clean energy investments and attracting further financing from global and regional capital markets, but only if there are stable regulatory frameworks, favourable market conditions and incentives, and reduced uncertainty regarding the long-term price signal for carbon.

If these conditions are met, then a substantial amount of the private sector savings in Asian and emerging market countries could be tapped for raising the investment and growth potential of their economies. The fostering of clean energy investments from domestic sources and overseas financing would also be consistent with shifting the output structure of emerging market economies from labour-intensive goods to skill-, capital- and technology-intensive production.

A global green recovery strategy also advocates the need for emerging economies to invest urgently in comprehensive, well-targeted safety-net programmes and maintain, if not expand, educational and health services for the poor. Such investments might also help to absorb domestic savings and reduce trade surpluses.

What can the G-20 do?

First, all G-20 economies should follow the lead of South Korea and China and turn their green stimulus investments into a long-term commitment over the coming years to reduce carbon dependency and develop clean energy. If the G-20 economies coordinated the timing and implementation of these investments and policies globally, the cumulative impact would be significant. Together these economies account for almost 80% of the world's population, 90% of global GDP and at least three-quarters of global GHG emissions.

Second, the G-20 should also instigate pricing and regulatory reforms for reducing carbon dependency, including removing perverse subsidies and other distortions in energy, transport and similar markets. For example, globally around US\$300 billion annually, or 0.7% of world GDP, is spent on fossil fuel subsidies. Over two-thirds of these subsidies occur in G-20 economies, which could coordinate their phased removal. Cancelling these subsidies could reduce GHG emissions globally by 6% and add 0.1% to world GDP. The financial savings could be redirected to investments in the research and development of clean and renewable energy and energy conservation, further boosting economies and employment opportunities.

Third, the G-20 should adopt environmental pricing policies, whether through cap and trade or taxes, thereby ensuring that carbon and other pollutants, as well as water and scarce ecological resources, are no longer 'free' to use by their economies. Evidence from the United States suggests that such 'direct emission' policies are critical for spurring private investment and inducing technological change in clean energy sectors. In addition, both cap-and-trade and carbon tax policies will generate sizable revenues, which could finance increases in green sector investments and public infrastructure.

Finally, as the dominant sources of international aid and funding of multilateral institutions, the G-20 could mobilize international policy in support of the Global Green New Deal. For example, the G-20 could help secure a post-Kyoto global climate change framework. Both uncertainty over future global climate policy and the delay caused by inaction sharply increase the costs of an agreement to reduce global GHG emissions. The expiration of the Kyoto agreement in 2012 also increases the risks to global financing of carbon-reducing projects and clean energy investments in developing economies. In addition, the G-20 should foster a global aid strategy that provides social safety nets, vulnerability funds, sustainable agriculture assistance and payments for ecosystem services targeted to the poorest of the poor in developing economies.