



OUR PLANET

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GREEN ECONOMY

The New Big Deal

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reflections

by Achim Steiner,
U.N. Under-Secretary-General and
Executive Director, UNEP

Globalisation does not just spread economic ups — and the current deep downs — rapidly across the globe. It can do the same for compelling and transformational ideas. As ministers gather in Nairobi for the Governing Council, two concepts being developed by UNEP are emerging as a powerful antidote to the economic gloom: the 'Global Green New Deal' and a transition to a global Green Economy. Together, they offer a way of overcoming short-term economic woes while setting the stage for sustainable growth in the 21st century, with markets rewarding nations and companies that invest in decent employment, innovation, resource efficiency and creativity.

The President of the Republic of Korea, Lee Myung-Bak, for example, recently announced 36 'Green New Deals' to "ease people's pain and create jobs", featuring such initiatives as creating high-speed railways and big networks of bicycle tracks and providing two million energy-saving 'Green Homes'. Power plants powered by gas from waste and forestry biomass are also planned, as is developing the next generation of hybrid vehicle technologies. The four-year stimulus package will create nearly one million new jobs, contribute to combating climate change and lay the groundwork for further economic growth.

China's \$570 billion stimulus package also includes a Green New Deal. No new factory or project will be permitted if it is highly polluting, or is a heavy consumer of energy or resources. One trillion yuan (\$142 billion) is to be spent over the next three years on such environmental improvements as accelerating forest planting programmes and increasing energy conservation and pollution-control. There will also be preferential pricing aimed at increasing the share of renewables from 8.3 per cent of energy in 2007 to 15 per cent in 2020 and investments to switch commodities and people from road to rail.

Among many other examples, the United Kingdom's stimulus package to create 100,000 jobs includes investments in such climate-friendly projects as solar, wind and wave power, electric cars and improved energy efficiency in homes and offices. Prime Minister Gordon Brown says that: "The environment is not being pushed off the agenda" by the recession, but is "part of the solution".

Importantly, the new President of the United States has made a Green New Deal a key foundation of an economic and employment recovery programme. This aims to promote energy from renewable sources and



energy conservation, including by raising vehicle fuel economy standards and subsidising purchases of plug-in hybrid cars, to 'weatherise' one million homes annually and upgrade the nation's electrical grid. The package will create an estimated five million jobs and deliver much-needed leadership on climate change.

At the Governing Council we look forward to hearing further examples of how countries are embracing a green economic transformation. Collecting and disseminating shining examples of smart market mechanisms and creative financial instruments is one of the central goals of the UNEP's new Green Economy initiative. Next year we plan to publish a guide and tool-kits for both Northern and Southern governments, showcasing the kinds of legal and fiscal changes and reforms that can help accelerate the transition to a more sustainable 21st century global economy. And during this year we also plan to publish policy options on such topics as rural energy and renewables — with others, such as on ecosystem restoration, sustainable transport and urban economies, in the pipeline. These reports draw on a unique partnership we are building with UN organisations and economic and policy think-tanks.

Over the coming months governments will inject hundreds of billions of dollars to stimulate economies. Soon trillions of dollars, now sitting on the sidelines, are likely to be mobilised back into markets by investors. Will this investment go into the old brown economy of the 20th century or the new green 21st century one?

The multiple crises of 2008 and the ones looming — from climate change to natural resource scarcity — require a fundamental re-think and re-focusing of how a globalised world orders its affairs. The Green Economy is an idea whose time has come — and one that seems to be taking root, capturing the imagination of leaders and civil society around the world.

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Cover photo © PETER GINTER / Science Faction / Getty Images. A 'Green Economy' is what we want to see. In this time of global financial turmoil, a warming Earth and inefficient energy generation and use, the best path to take, and the one discussed in this issue of *Our Planet*, leads to more jobs, clean energy and a better world for all. The new 'big deal' as outlined in this magazine, offers hope, opportunity and several solutions.

silver lining

by Juan Somavia

The global picture for jobs is grim. Preliminary International Labour Organization (ILO) estimates for 2009 forecast tens of millions of new unemployed people and working poor due to the global financial crisis — with a particularly worrying rise in youth joblessness. The financial crisis has rapidly evolved into an economic crisis and now a jobs one.

Many elements of a global rescue package are being discussed, ranging from short-term bailouts to medium- and longer-term proposals for boosting public expenditure on programmes with strong employment content, increased lending to help to finance growth-supporting expenditures in developing countries, and greater training and promotion of new skills development. An increasing number of economic stimulus packages include the greening of economies and the creation of 'green jobs'.

UNEP's Executive Director, Achim Steiner, has called 'green jobs' the "silver lining of climate change." In the newly deteriorating economic climate, will they prove to be one of the most important elements of the responses to the economic crisis? There is reason to believe that they can and should be a vital and crucial element of any recovery plan.

Our recently published report, *Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World*, examined green jobs in a global context for the first time. Funded and commissioned by UNEP under a joint Green Jobs Initiative with ILO, the International Trade Union Confederation and the International Organization of Employers, it represents the best available knowledge and forward-looking thinking on how to bolster green job creation in the global economy.

Millions of green jobs already exist. Millions more are in the making. They contribute to preserving or restoring the quality of the environment; help cut consumption of energy, raw materials and water; de-carbonize the economy and reduce greenhouse gas emissions; minimize waste and water pollution; and protect and restore ecosystems and biodiversity.

Energy supply — in particular renewable energy — buildings and construction, transportation, agriculture and forestry will all be particularly important in terms of their environmental, economic and employment impact. Clean technologies are already attracting increasing amounts of venture capital: in some countries this has more than doubled in recent years.

Millions of new jobs have been created in the renewable energy sector worldwide, and the potential for growth is huge in alternative energies, wind, solar and biomass. Already, renewables generate more jobs than oil production and refining, and projected investment could create at least another 20 million more by 2030. And 12 million new agricultural jobs could be created in producing biomass for energy and related industries.

A worldwide transition to energy-efficient buildings would create millions more jobs still, and 'green' existing employment for further millions of workers in construction. Investing in improved energy efficiency in buildings could generate an additional 2 to 3.5 million green jobs in Europe and the United States alone, with the potential for much higher jobs growth in developing countries. Recycling and waste management employ millions worldwide and are expected to grow rapidly in countries facing escalating commodity prices.

Of course, many jobs that are green in principle may not be green in practice. Some because they may cause environmental damage by inappropriate practices, and some because they are inherently dangerous, dirty and difficult. Sectors of concern — especially, but not exclusively, in developing

countries — include agriculture and recycling where work involves low pay, insecure employment contracts and exposure to hazardous materials. These jobs would not constitute what the ILO calls "decent work". And though millions of green jobs already exist, too few are being created for the world's most vulnerable workers living on less than \$2 per day, and especially for the women and millions of unemployed youth who need them the most.


Moving towards a more sustainable development path will involve major changes in all countries' production and consumption patterns. It's a global challenge that will affect enterprises and work places all over the world. The transition has already started. Half of today's 2.3 million jobs in renewables are in the developing world. Moving towards a sustainable low carbon economy can work for the poorest of the poor. The solar panels being installed in rural villages are just one example of this, and there are many more.

But we need to make sure that green jobs are decent jobs, and acknowledge that good green jobs do not come naturally. Millions of workers throughout the world, for example, are involved in recycling discarded computers and mobile phones. Though their jobs may seem green, they are often bad quality ones where the first things to go in the recycle bin are health and safety rules.

New jobs will be created, others adapted, and some will fade out. Mitigating and adapting to climate change will entail a transition to new patterns of production, consumption and employment. Policies have to focus in the beginning on those at the receiving end of this transition so as to keep political will and public support. That means helping to diversify economies, assisting enterprises and workers to adapt, ensuring social protection is in place, and that there are training programmes to fill skills gaps. The best way to make a just transition is by ensuring that those who are most directly involved — employers and workers — have a say in it. We need effective social dialogue to help us grow into a greener economy.

So, are green jobs a viable hope for the world's environmental and economic future in times of sharply lower growth and recession? The answer is decidedly: Yes. Huge opportunities exist to create them through energy and industrialization policies that reduce environmental footprints. They can provide decent work and incomes that will contribute to sustainable economic growth and help lift people out of poverty. They are central to the positive link that needs to be established between climate change and development. Indeed, the major investments to adapt to climate change could provide many new and better jobs for the most vulnerable people.

Green jobs not only have long-term potential for sustainable economic growth, but can help jump-start stalled economies and put people back to work quickly in both developing and developed countries. This is particularly true in retrofitting buildings to make them more energy efficient, in accelerating the extension of public transport, in constructing the infrastructure needed to adapt vulnerable countries to climate change, in shifting to renewable energy and in works undertaken to rehabilitate ecosystems and reforestation.

Some nations have already adopted economic packages that promote green job growth as a short-term way of rebuilding, rewiring and renewing existing infrastructure and facilities to make them more energy-efficient, and as a long-term solution to unemployment and environmental issues. If invested wisely, the resources to overcome the economic crisis could leave a legacy of energy-efficient infrastructure, rehabilitated ecosystems, renewable energy sources, and countries more resilient to climate change. And they could lay the foundation for a greener economic future which is environmentally sound, economically productive and socially sustainable. If ever there was a time for the Green Jobs Initiative to take hold, this is it. 

solar solution

by Zhengrong Shi



Much has been said in recent years about China's supposed reluctance to contribute to the global effort to reduce greenhouse gases and mitigate the impacts of climate change. But, even though it was not a signatory to the Kyoto Protocol, the country has quietly undertaken a wide range of initiatives to become more energy-efficient and to increase its reliance on renewable energy. In many cases these have far exceeded efforts in the developed world. In the process, it has also turned clean technology into a significant driver for new economic development.

The progress of the last few years has mirrored my own personal passion for changing the way we produce energy. I have always been concerned about the detrimental effect of human reliance on fossil fuels. I believe that global warming is our greatest threat, requiring the commitment of governments, companies and individuals to solve it. After spending time in Australia earning my PhD and completing research in solar 'thin film' technology, I came back to Wuxi, China, in response to government incentives to encourage new technology and renewable energy companies to locate there. I have built a world-leading R&D department that focuses on pioneering the most innovative, cutting-edge technology to capture the sun's energy to generate electricity. Through my research, and with my colleagues at Suntech around the world, we are committed — and working very hard — to reduce the cost of solar systems, reach grid parity and make clean solar energy affordable to as many people as possible. Moreover, we have strong internal environmental policies and practices, and our own new factory and headquarters will be 85 per cent reliant on renewable energy.

China is facing enormous energy challenges. Everyone seems to know that we need to increase our energy supply by the equivalent of one power plant per week to support China's economic growth, which is allowing millions of people to enjoy better standards of living. Much less is known of the extent to which China has taken steps to mitigate the impact of that growing energy demand through incentives for greater efficiency and renewable energy. Policies include:

- Cutting energy intensity 20 per cent between 2005 and 2010, saving five times as much CO₂ as the EU's goals.
- Cutting major pollutants by 10 per cent by 2010.
- Setting one of the world's most aggressive renewable energy standards: 15 per cent of national energy from renewables by 2020.
- Setting targets of 300 megawatts of installed solar by 2010, and 1.8 gigawatts by 2020, in the 2007 National Development and Reform Commission Renewable Energy Development Plan.
- Dedicating \$180 billion for renewable energy by 2020.
- Imposing energy efficiency targets for the top 1,000 companies, a measure with greater carbon savings potential than most Western initiatives.
- Establishing building energy codes in all regions and extensive efficiency standards for appliances, which will be particularly important as China continues to grow.
- Targeting new buildings in major cities like Beijing, Shanghai and Chongqing, to achieve 65 per cent greater energy efficiency than local codes require.
- Closing thousands of older, smaller, dirtier power plants by 2010.


China understands the economic development potential in clean energy technologies. Even the noted journalist Thomas Friedman has remarked that "China is going green in a big way," using domestic demand for cleaner energy to build low-cost, scalable green technologies. Suntech Power Holdings —

now the world's largest solar photovoltaic (PV) module manufacturer, with operations around the globe — was just one of dozens of solar companies that realised the opportunity provided by China's energy challenges and the government's strong commitment to provide alternatives. Through favourable tax policies, aggressive government procurement and national targets, China is building a world-class export industry in all parts of the solar value chain, as well as encouraging increased use of the sun's energy at home. It is now the third-largest national producer of solar PV for the global market and may soon become the leader. In short, it realises that green energy is the key to both sustainable economic growth and a more pleasant environment.

Yet China can still do more, and I'm working closely with the Government to set even more aggressive standards to help drive the development of the country's renewable energy resources. The Government is developing a solar building code with Suntech's participation, and is considering a review of the solar targets in the national renewable energy law — the 1.8 gigawatt goal by 2020 is just a fraction of the country's true potential within that timeframe.

The price of electricity is a key concern both in China and around the world. Like many countries, we understand the power of low-cost electricity to drive economic development: indeed, the United States and the rest of the developed world were able to grow as quickly as they did because of inexpensive energy. But the days of cheap electricity are over — or at least they should be. Any country with highly subsidised electricity tariffs, including China, needs to bring them more in line with the real costs of power, including the costs of the necessary efforts of mitigating carbon emissions and their impacts on the environment. Fairly priced electricity sends a signal to consumers to conserve power and become more efficient in their use of it. As we drive down the cost of solar electricity, we will easily be able to compete against correctly priced electricity from carbon-based sources, unleashing a surge in its adoption both in China and elsewhere.

What is happening in China could happen all over the world. I hope to see other countries, particularly developed ones, match its policies. It is these robust, long-term policy commitments that allow manufacturers like Suntech to grow and to build the economies of scale needed to reduce prices. And visionary leaders like Germany's Hans-Josef Fell, Hermann Scheer and Juergen Trittin, or California's Governor Arnold Schwarzenegger, know they can win clean-tech jobs when they set far-reaching renewable energy goals.

As we embark on the ambitious agenda set for 2009 — and the climate negotiations in Copenhagen at the end of the year — it is critical to understand, particularly in the somewhat reluctant global business community, that pushing ahead with green initiatives, including CO₂ reductions in every country, is the key to long-term sustainable economic world growth. Whether through feed-in tariffs in Europe, direct investments in renewable energy in China or renewable energy standards in United States, each country can contribute towards the common goal of simultaneously turning back the tide of climate change while laying the foundation for healthy economic growth. Personally, I feel a deep responsibility for raising awareness of climate change issues and helping others understand the role that solar energy can play in reducing carbon dioxide emissions and global warming. Working together we can empower people to take up the noble yet pragmatic cause of building a green future for their families and society around the world. 

green collar jobs

by Van Jones



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