



## **"Global Green New Deal" - Environmentally-Focused Investment Historic Opportunity for 21st Century Prosperity and Job Generation**

### ***UNEP Launches Green Economy Initiative to Get the Global Markets Back to Work***

**London/Nairobi, 22 October 2008** - Mobilizing and re-focusing the global economy towards investments in clean technologies and 'natural' infrastructure such as forests and soils is the best bet for real growth, combating climate change and triggering an employment boom in the 21st century.

The call was made today by the United Nations Environment Programme (UNEP) and leading economists as they launched the Green Economy Initiative aimed at seizing an historic opportunity to bring about tomorrow's economy today.

Achim Steiner, UN Under-Secretary General and UNEP Executive Director, said: "The financial, fuel and food crises of 2008 are in part a result of speculation and a failure of governments to intelligently manage and focus markets".

"But they are also part of a wider market failure triggering ever deeper and disturbing losses of natural capital and nature-based assets coupled with an over-reliance of finite, often subsidized fossil fuels," he said.

"The flip side of the coin is the enormous economic, social and environmental benefits likely to arise from combating climate change and re-investing in natural infrastructure - benefits ranging from new green jobs in clean tech and clean energy businesses up to ones in sustainable agriculture and conservation-based enterprises," he added.

Mr Steiner said there was a crucial and urgent need to bring creative, forward-looking and 'transformational thinking' into next month's Financing for Development Review Conference-taking place in Doha, Qatar.

Other critical dates rapidly coming up in the international calendar include a proposed financial crisis summit of the G8+5, called for by French President Nicolas Sarkozy and the next round of UN climate convention negotiations in Poznan, Poland in December.

"Transformative ideas need to be discussed and transformative decisions taken. The alternative is more boom and bust cycles; a climate-stressed world and a collapse of fish stocks and fertile soils up to forest ecosystems - vast, natural 'utilities' that for a fraction of the cost of machines store water and carbon, stabilize soils; sustain indigenous and rural livelihoods and harbor genetic resources to the value of trillions of dollars a year," said Mr Steiner.

Hilary Benn, Secretary of State for the Department for Environment, Food and Rural Affairs, who held the launch, said, "The green technological revolution needs to gather pace, as more and more of the world's jobs will in future be in environmental industries. Britain is committed to building a green economy at home and abroad: it will be good for business good for the environment and good for development. UNEP's initiative will help make this change; in particular by helping us to understand just how much we depend on the environment - soil, air, water and biodiversity - for our very existence."

### ***Current Economic Models: Short-Changing People and the Planet***

Pavan Sukdhev, a senior banker from Deutsche Bank who is seconded to UNEP to lead the research, said: "The economic models of the 20th century are now hitting the limits of what is possible - possible in terms of delivering better livelihoods for the 2.6 billion people still living on less than \$2 a day and possible in terms of our ecological footprint".

"Investments will soon be pouring back into the global economy - the question is whether they go into the old, extractive, short-term economy of yesterday or a new green economy that will deal with multiple challenges while generating multiple economic opportunities for the poor and the well-off alike," he said.

The new report aims to help governments make better choices and send the right market signals to investors, entrepreneurs and consumers world-wide so "we move from mining the planet to managing and re-investing in it," said Mr Steiner.

The Green Economy Initiative, which has close to \$4 million-worth of funding from the European Commission, Germany and Norway, builds in part on a request by the G8+5 group of nations two years ago.



The G8+5 study on the Economics of Ecosystems and Biodiversity (TEEB), also led by Mr Sukhdev and funded by the European Commission and Germany, reported its Phase I findings in May at the UNEP-linked Convention on Biological Diversity meeting in Bonn.

It highlighted the economic magnitude of "business - as-usual" losses, and drew strong links between ecosystem & biodiversity losses and the persistence of poverty.

The Green Economy initiative has three pillars - valuing and mainstreaming nature's services into national and international accounts; employment generation through green jobs and the laying out the policies; instruments and market signals able to accelerate a transition to a Green Economy.

The strategy builds on the findings of TEEB while also linking with the Green Jobs Initiative of UNEP, the International Labour Organization, the International Trades Union Confederation and the International Organization of Employers.

The Green Economy Initiative will draw on the existing and considerable body of work generated by UNEP, the UN-system and others ranging from the impacts and opportunities of shifting fish, fuel and other subsidies up to innovative market mechanisms and financial products already triggering a transition.

In 18 to 24 months it should deliver for governments - North and South - a comprehensive assessment and tool kit for making the necessary transition.

Erik Solheim, the Norwegian Environment Minister, said:" There are moments in history when an idea's time has come - this is the case for a comprehensive Green Economy Initiative. Norway is delighted to be supporting this UNEP initiative. Innovative approaches and actions are needed in this very complex situation with a fundamental environmental crisis topped by an international financial situation out of control".

"I commend UNEP for responding so fast and timely -in particular how UNEP together with International Labour Organization (ILO) have demonstrated the huge untapped job potential in sustainable management of natural capital and nature based assets," he added.

#### **Five Priority Sectors Underpinning a Global Green New Deal**

The five sectors likely to generate the biggest transition in terms of economic returns; environmental sustainability and job creation are:-

- Clean energy and clean technologies including recycling
- Rural energy, including renewables and sustainable biomass
- Sustainable agriculture, including organic agriculture
- Ecosystem Infrastructure
- Reduced Emissions from Deforestation and Forest Degradation (REDD)
- Sustainable cities including planning, transportation and green building

#### **Notes to Editors**

##### **Economic Mismatch**

Global economic growth over the past 50 years has been accompanied by accelerated environmental decline.

From 1981 to 2005, the global GDP more than doubled, in contrast to the 60% of the world's ecosystems being degraded or used in an unsustainable manner.

Only a fraction of national income is spent on the environment. The global annual spending on the environment is estimated at best at US\$10 billion per year.

This is in contrast to the US\$60-90 billion needed for those environmental investments that contribute directly to poverty reduction alone.

Misaligned incentives work against the environment. Global agricultural subsidies amount to more than US\$300 billion a year, but there is a lack of funds for reforestation.



Global energy subsidies range from US\$240 billion to US\$310 billion per year or around 0.7 per cent of global GDP, but there is inadequate support for renewable energy development.

A recent assessment by UNEP also concluded that a dramatic phasing-out of fossil fuel subsidies could cut greenhouse gas emissions by some six per cent by boosting energy efficiency.

Meanwhile the same assessment concluded that fossil fuel subsidies, often justified as an anti-poverty measure, rarely benefit the urban and especially the rural poor but tend to benefit fossil fuel companies; equipment suppliers and the middle class and well off in an economy.

The global automobile industry generates some \$1.9 trillion in revenues but employs just 4.4 million people.

The global steel industry is a \$500 billion income earner but employs 4.5 million people.

The world's 100,000 National Parks and protected areas generate wealth via nature-based good and services equal to around \$5 trillion but only employ 1.5 million people.

"Here you have some of the choices in a nutshell. If we are to lift 2.6 billion people living on less than \$2 a day out of poverty, do we put them into making more and more motor cars, TV's and PC's, or do we invest in the protected area network and develop its potential for green and decent new jobs ?," said Mr Sukhdev.

"An additional investment of \$ 50 billion a year in around 100,000 conservation areas worldwide could secure the \$5 trillion-worth of services provided by these natural assets while generating millions of new jobs and securing livelihoods for rural and indigenous peoples."

### **Clean Energy and Clean Tech-not starting from ground zero**

Greenhouse gas emissions need to be cut by 80 per cent and finite natural resources from fossil fuels to metals need to be more efficiently used and re-used.

UNEP's Sustainable Energy Finance Initiative renewable energy investments rose to \$160 billion in 2007, up from \$100 billion in 2006.

Norway announced this month that it intends to double its national research fund for renewables to \$3.4 billion.

This year the UK announced a \$100 billion investment to build 4,000 onshore and 3,000 offshore wind turbines by 2020-while creating some 160,000 jobs.

The global market for environmental products and services currently runs at around \$1,370 billion or \$1,000 billion Euro according to German consultants Roland Berger.

The market in 2020 could double to \$2,740 billion or Euro 2,200 billion.

Some 50 countries including a dozen developing countries, have set renewable energy targets including Mexico; Argentina, Brazil, Dominican Republic, China, India, the Philippines, Iran, Morocco, Syria, Tunisia, Senegal, South Africa and Uganda.

Globally some 300,000 people are employed in wind power and maybe 170,000 in solar. Over 600,000 are employed in solar thermal-most of these in China.

Nearly 1.2 million are employed in biomass energy in four countries-Brazil, USA, Germany and China.

Overall 2.3 million are employed in renewable energy sector-a conservative figure.

Kleiner Perkins, the venture capital firm that supported the establishment of Google, Netscape and Amazon.com, recently directed \$100 million to new companies working on lowering CO2 emissions.

Clean Tech investment in China will total an estimated \$580 million in 2007 and is likely to total more than \$720 million in 2008.

### **A shift towards renewable energy and clean technologies is already underway.**

This is as a result of the existing UN climate change agreements and in the anticipation of a deep and decisive new deal in Copenhagen in late 2009 that will better price carbon.



Numerous shining examples exist on how to accelerate a transition to a low or even zero carbon economy including feed-in tariffs such as those that were introduced a few years ago in Germany.

The German renewable sector, for example, now already generates \$240 billion in annual revenue, employs 250,000 people, and is expected to provide more jobs than the country's auto industry by 2020.

### **Rural Energy-not starting from ground zero**

Two billion people globally do not yet have electricity, oil or gas to cook food and for daily living.

This perpetuates the poverty trap and undermines attempts to achieve the UN Millennium Development Goals while putting pressure on economically-important ecosystems such as forests for fuel-wood and charcoal.

It is a crisis but also an opportunity including a business one given the potential size of the market for alternative energy systems

The Clean Development Mechanism of the UN's Kyoto Protocol is starting to reach some of the smaller developing economies.

This is in part as a result of initiatives including the UN's Nairobi Framework of 2006 that is building the capacity of countries in, for example sub-Saharan Africa, to access the mechanism.

Other measures have included awareness-raising among banks and industry players on the Continent to new green finance opportunities.

The main countries benefiting to date have been the rapidly developing economies such as China, Brazil, India and South Africa.

### **CDM starting to take-off in smaller developing countries**

The new figures for Africa, compiled by UNEP Risoe Centre in Denmark, indicate that this is changing with the first CDM projects emerging over the past 18 months in six countries - the Democratic Republic of the Congo (DRC); Madagascar, Mauritius, Mozambique, Mali and Senegal.

These include an oil well, gas flare reduction project in the DRC and a run-of river hydroelectric project in Madagascar.

In Kenya new projects include a 35MW extension of geothermal, hot rocks, generation and a sugar cane waste into-energy project with Mumias Sugar Company.

The total of CDM projects in Africa still remains low compared to a global tally of close to 3,500 CDM projects, but does mark a departure from the very low levels of the past.

Assuming governments agree on a deep and decisive new climate agreement in 2009, Africa overall could see roughly 230 projects by 2012.

These could cumulatively generate over 65 million certified emission reductions, worth close to one billion US dollars at a conservative carbon credit price of \$15.

Other measures might include different risk assessment by developed countries; the us weather derivatives and other insurance-linked products are being piloted and bundling numerous smaller projects including cross border ones together, to make them more attractive to investors.

For example the UNEP Solar and Wind Energy Resources assessment has mapped more than 2,000 MW of wind energy potential in Ghana, mainly along the border with Togo.

CDM projects that reflect the transport, heating and cooling and industrial emissions from developing country urban areas could also be a way forward and contribute to greening cities.

Feed-in tariffs and tax changes, such as VAT on clean energy and energy saving products, may assist rural electrification.

### **Other smart instruments include micro-credit schemes and buying down the interest on loans.**

UNEP has worked with two banks in India to reduce the cost of solar loans in rural areas from 12 per cent to five and then two per cent. 100,000 people were able to afford solar power. The project is now self-financing.



Similar initiatives have kick-started the solar water heating market in Tunisia. In Mexico, UNEP is working with UNDP on a Global Environment Facility project with similar aims.

The programme will cooperate with Mexico's National Solar Water Heater Program (known as PROCALSOL) to develop a supportive regulatory environment and to assist in building the market demand and the supply chain for solar water heaters.

The aim is to reach the total capacity of 2,500,000 cubic metres of installed systems in Mexico by the end of 2011.

It also aims to support continuing sustainable growth of the market beyond the project's life in order to reach the target to 23.5 million cubic metres of installed capacity by 2020.

This has been estimated to correspond to an estimated cumulative greenhouse gas reduction potential of over 27 million tons of CO<sub>2</sub> by 2020.

By 2020, Mexico might have the potential to generate jobs for some 150,000 people in this sector as a result of the new project.

### **Sustainable Agriculture-not starting from ground zero**

Agriculture remains a major employer in the world, providing jobs to about 40% of the total world labour force.

The Global Green New Deal should include a major international program. This should be led by the Food and Agriculture Organization, to provide long-term support for investing in land restoration, soil and water conservation, integrated pest management, organic production, infrastructure development, extension services, and market support in the developing world.

Organic agriculture triggers very polarized views, seen by some as the saviour and others as a niche, even luxury product unable to meet the needs of billions of people.

Studies indicate that organic agriculture in both the North and the South employ more people. But what of the wider benefits?

A new survey by the UN Conference on Trade and the Environment and UNEP in East Africa found that over 90 per cent of studies show that organic or near organic agriculture had benefits for soil fertility; water control; improved water tables, carbon sequestration and biodiversity.

This allows farmers to extend the growing season in marginal areas. The research in East Africa was among 1.6 million organic or near organic farmers from seven countries working on 1.4 million hectares.

Other findings include an increase in crop yields of 128 per cent since switching.

Higher incomes too as a result of not having to buy fertilizers and pesticides; more food availability; higher prices paid through certification schemes for both export and domestic markets-addresses poverty in environmentally friendly way.

Close to 90 per cent of cases showed increase in farm and household incomes and because organic agriculture is more knowledge intensive it has led to improvements in education; community bonds and cooperation on market access.

The report concludes: "Organic and near-organic agricultural methods and technologies are ideally suited for many poor, marginalized smallholder farmers in Africa, as they require minimal or no external inputs, use locally and naturally available materials to produce high-quality products, and encourage a whole systemic approach to farming that is more diverse and resistant to stress".

### **R+D: A perennial challenge**

Governments also need to consider stepping up research into perennial crops. Experts suggest that 'moving back to the future' to these kinds of multi-year crops with deep roots can also boost soil fertility and stability 50-fold while assisting in adapting to climate change.

Perennial crops are also 50 per cent better at carbon capture and storage than their annual cousins, according to some estimates.

Because they do not need to be planted every year, they use less farm machinery and require fewer inputs - reducing greenhouse gas emissions further.



### **Environment Infrastructure Investments and REDD - not starting from ground zero**

Over the past 300 years, the global forest area has shrunk by around 40 per cent; half the globe's wetlands have been lost since 1900 and human - led species extinction rates are now 1,000 higher than the 'natural' rate of extinction.

Some 60 per cent of the Earth's ecosystems and the goods and services they provide are now degraded.

Losses of natural areas between 2000 and 2050 are projected to be 7.5 million square km, roughly the size of Australia, if existing economic models continue unfocused and undirected.

The economic losses have recently been emerging. For example in the Caribbean, tourism losses linked with an 80 per cent decline in coral reefs are set to rise to \$300 million a year.

### **Some Estimates of Returns on Natural Infrastructure Investments**

An annual investment of \$45 billion could conserve services from protected area ecosystems which deliver an estimated \$5 trillion a year-a good cost benefit ration of 100:1.

Coral reefs, whose fishery, tourism and flood protection services are estimated at between \$100,000 and \$600,000 per square km, could be conserved for an investment of close to \$780 per square km or 0.2 per cent of the value of the ecosystem protected.

Deforestation contributes close to 20 per cent of global greenhouse gas emissions-\$17 billion to over \$30 billion annually could halve this while securing livelihoods and boosting conservation-related employment in tropical countries.

A global marine protected area network, involving the closure of 20 per cent of total fishing grounds could result in profit losses of an estimated \$270 million annually.

But could sustain fisheries worth \$80-100 billion a year; assist in conserving an estimated 27 million jobs while generating one million new ones and protect food supplies for over one billion people, especially in developing countries whose main or sole source of animal protein comes from fish.

### **Emerging Public and Private Natural Infrastructure Instruments**

Under the UN climate convention for Reduced Emissions from Deforestation and Forest Degradation (REDD) to be included in a post-2012 deal up to payments for ecosystem services.

Norway for example has pledged close to \$3 billion for REDD; Costa Rica has invested around \$200 million in protection of forests for ecosystem services and Mexico is paying 1.5 million rural people to manage forests and watersheds.

The United States spends more than \$1.7 billion a year in direct payments to farmers for environmental protection.

The European Union promotes environmentally-friendly agriculture and forestry under its Euro 4.5 billion Rural Development programmes.

New instruments are emerging such as habitat and 'bio-banking'. In the United States, companies and individuals can buy wetland mitigation banks. Trade in wetland bank credits reached around \$350 million in 2006.

'Endangered species credits' are being generated by a biodiversity cap-and-trade system, also in the United States. The market volume has been around \$40 million with over 44,000 hectares of endangered species habitat protected.

A similar scheme, created through the BioBanking Bill of 2006, has been piloted in New South Wales, Australia.

Certification schemes involving consumers and companies are also becoming more creative. In South Africa's Cape Floral Kingdom, a biodiversity hot spot, wine producers who commit 10 per cent of their vineyard to conservation can use a special label.

The market for sustainably produced commodities could reach \$60 billion by 2010.

There is an urgent need for governments to promote a sharp increase in financial flows via creative market mechanisms and smart instruments that reward those investing in rather than degrading nature-based assets.



### **Sustainable cities-not starting from ground zero**

Huge opportunities exist for cutting greenhouse gas emissions and generating employment. In some countries the built environment is responsible for up to 40% of total energy use.

A worldwide transition to energy-efficient buildings would create millions of jobs, as well as "greening" existing employment for many of the estimated 111 million people already working in the construction sector.

Investments in improved energy efficiency in buildings could generate an additional 2-3.5 million green jobs in Europe and the United States alone, with the potential much higher in developing countries.

Several cities are now developing sustainable transport projects including Bus Rapid Transport schemes.

In Mexico City BRT schemes alongside cycle-ways and new traffic measures, envisage a 10 per cent cut in transport-related smog and fine air particles and average annual benefits of over \$750 million.

The Marikina bikeway project, which is focusing on safe cycle ways in Manila, Philippines, plans to double the share of journeys by pedal power by 2015. It is estimated that for every dollar of the around \$2 million invested there will be a two dollar return in health and wider environmental benefits.

Such projects are also helping to boost the incomes of local, often poor, people according to the new analysis by the World Bank which is one of the implementing agencies of Global Environment Facility-funded initiatives.

In Lima, Peru use of bicycles twice a day results in per capita savings of up to \$7.60 per month. The amount of money saved is equivalent to just under 10 per cent of a Lima resident's monthly energy bill.

Better use of information technology, demand management and planning and market instruments are also forming part of such schemes.

For example, housing and employment should be focused along transit hubs so as to shorten journeys to buses and cycle ways. Congestion charging, parking fees and tax credit for more efficient forms of transport may also be a boon.

Finally, simple measures like ensuring buses and vehicles are properly maintained and serviced can deliver significant benefits in terms of greenhouse gas emissions and local air quality.

"In Rio de Janeiro, improved operation of diesel buses has shown to result in annual savings of 40 million liters of fuel - a 12.5 per cent reduction - averting 107,800 tonnes of carbon dioxide emissions per year."

### **For More Information Please Contact**

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