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How Two Per Cent of Global GDP can Trigger Greener, Smarter Growth While Fighting Poverty

New UNEP Report Underlines Sustainable Public Policy and Investment Path on the Road to Rio+20

Nairobi/World, 21 February 2011—Investing two per cent of global GDP into ten key sectors can kick-start a transition towards a low carbon, resource efficient Green Economy a new report launched today says.

The sum, currently amounting to an average of around \$1.3 trillion a year and backed by forward-looking national and international policies, would grow the global economy at around the same rate if not higher than those forecast, under current economic models.

But without rising risks, shocks, scarcities and crises increasingly inherent in the existing, resource-depleting, high carbon 'brown' economy, says the study.

As such, it comprehensively challenges the myth of a trade off between environmental investments and economic growth and instead points to a current "gross misallocation of capital".

The report sees a Green Economy as not only relevant to more developed economies but as a key catalyst for growth and poverty eradication in developing ones too, where in some cases close to 90 per cent of the GDP of the poor is linked to nature or natural capital such as forests and freshwaters.

It cites India, where over 80 per cent of the \$8 billion National Rural Employment Guarantee Act, which underwrites at least 100 days of paid work for rural households, invests in water conservation, irrigation and land development.

- This has generated three billion working days-worth of employment benefiting close to 60 million households.

Two per cent of the combined GDP of Cambodia, Indonesia, the Philippines and Vietnam is currently lost as a result of water-borne diseases due to inadequate sanitation.

- Policies that re-direct over a tenth of a per cent of global GDP per year can assist in not only addressing the sanitation challenge but conserve freshwater by reducing water demand by a fifth by 2050 compared to projected trends.

The report has modeled the outcomes of policies that redirect around \$1.3 trillion a year into green investments and across ten key sectors—roughly equivalent to two per cent of global GDP. To place this amount in perspective, it is less than one-tenth of the total annual investment in physical capital.

Currently, the world spends between one and two per cent of global GDP on a range of subsidies that often perpetuate unsustainable resources use in areas such as fossil fuels, agriculture, including pesticide subsidies, water and fisheries.

Many of these are contributing to environmental damage and inefficiencies in the global economy, and phasing them down or phasing them out would generate multiple benefits while freeing up resources to finance a Green Economy transition.

Incomes and Employment

In addition to higher growth, an overall transition to a Green Economy would realize per capita incomes higher than under current economic models, while reducing the ecological footprint by nearly 50 per cent in 2050, as compared to business as usual.

The Green Economy report acknowledges that in the short-term, job losses in some sectors—fisheries for example—are inevitable if they are to transition towards sustainability.

Investment, in some cases funded from cuts in harmful subsidies, will be required to re-skill and re-train some sections of the global workforce to ensure a fair and socially acceptable transition.

The report makes the case that over time the number of “new and decent jobs created” in sectors - ranging from renewable energies to more sustainable agriculture - will however offset those lost from the former “brown economy”.

For example, investing about one and a quarter per cent of global GDP each year in energy efficiency and renewable energies could cut global primary energy demand by nine per cent in 2020 and close to 40 per cent by 2050, it says.

- Employment levels in the energy sector would be one-fifth higher than under a business as usual scenario as renewable energies take close to 30 per cent of the share of primary global energy demand by mid century.
- Savings on capital and fuel costs in power generation would under a Green Economy scenario, be on average \$760 billion a year between 2010 and 2050.

The report, *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, also highlights enormous opportunities for decoupling waste generation from GDP growth, including in recovery and recycling.

- The Republic of Korea has, through a policy of Extended Producer Responsibility, enforced regulations on products such as batteries and tyres to packaging like glass and paper, triggering a 14 per cent increase in recycling rates and an economic benefit of \$1.6 billion
- Brazil's recycling already generates returns of \$2 billion a year, while avoiding 10 million tonnes of greenhouse gas emissions; a fully recycling economy there would be worth 0.3 per cent of GDP.

The report, compiled by the UN Environment Programme (UNEP), in collaboration with economists and experts worldwide, takes meeting and sustaining the UN's Millennium Development Goals - ranging from halving the proportion of people in hunger to halving the proportion without access to safe drinking water - as one aim.

Bringing down emissions of greenhouse gases to the much safer levels of 450 parts per million by 2050 is another overarching target.

The findings were presented today to environment ministers from over 100 countries at the opening of the UNEP Governing Council/Global Ministerial Environment Forum.

The report, part of a bigger macro-economic study published online, is aimed at accelerating sustainable development and forms part of UNEP's contribution to the preparation of the Rio+20 conference scheduled in Brazil next year.

The full report is available online from today and countries are encouraged to submit further Green Economy examples. Over the coming months UNEP's Green Economy team plans to present the report in capitals around the world.

Here they also want to learn firsthand how best to assist countries and communities commence a transition to a Green Economy within their national circumstances.

Achim Steiner, UN Under-Secretary General and UNEP Executive Director, said: "The world is again on the Road to Rio, but in a world very different to the one of the Rio Earth Summit of 1992."

"Rio 2012 comes against a backdrop of rapidly diminishing natural resources and accelerating environmental change—from the loss of coral reefs and forests to the rising scarcity of productive land; from the urgent need to feed and fuel economies and the likely impacts of unchecked climate change," he added.

"The Green Economy as documented and illustrated in UNEP's report offers a focused and pragmatic assessment of how countries, communities and corporations have begun to

make a transition towards a more sustainable pattern of consumption and production. It is rooted in the sustainability principles agreed at Rio in 1992, while recognizing that the fundamental signals driving our economies must evolve in terms of public policy and market responses,” he said.

“We must move beyond the polarities of the past, such as development versus environment, state versus market, and North versus South,” said Mr. Steiner.

“With 2.5 billion people living on less than \$2 a day and with more than two billion people being added to the global population by 2050, it is clear that we must continue to develop and grow our economies. But this development cannot come at the expense of the very life support systems on land, in the oceans or in our atmosphere that sustain our economies, and thus, the lives of each and everyone of us,” he added.

“The Green Economy provides a vital part of the answer of how to keep humanity’s ecological footprint within planetary boundaries. It aims to link the environmental imperatives for changing course to economic and social outcomes—in particular economic development, jobs and equity,” said Mr. Steiner.

Pavan Sukhdev, on secondment from Deutsche Bank and head of UNEP’s Green Economy Initiative, said: “Governments have a central role in changing laws and policies, and in investing public money in public wealth to make the transition possible. By doing so, they can also unleash the trillions of dollars of private capital in favour of a Green Economy.”

“Misallocation of capital is at the centre of the world’s current dilemmas and there are fast actions that can be taken starting literally today—from phasing down and phasing out the over \$600 billion in global fossil fuel subsidies to re-directing the more than \$20 billion subsidies perversely rewarding those involved in unsustainable fisheries,” he said.

“A Green Economy is not about stifling growth and prosperity, it is about reconnecting with what is real wealth; re-investing in rather than just mining natural capital; and, favouring the many over the few. It is also about a global economy that recognizes the intergenerational responsibility of nations to hand over a healthy, functioning and productive planet to the young people of today and those yet to be born,” added Mr. Sukhdev.

Notes to Editors:

Key Findings and Some Key Sectors

UNEP defines a Green Economy as “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”.

A big part of that transition involves policies and investments that decouple growth from the current intensive consumption of materials and energy use.

While there has been some decoupling over the past 30 years, the gains have been far too modest to put the planet on a sustainable path and conserve finite resources.

Pivotal Policy Role of Governments

Innovative and imaginative public policies will be vital to generate enabling conditions that, in turn, can unleash markets and direct private sector investments into a Green Economic transition.

These include:

- Sound regulatory frameworks, a prioritizing of government spending and procurement in areas that stimulate green economic sectors and limits on spending that deplete natural capital.
- Taxation and smart market mechanisms that shift consumer spending and promote green innovation.
- Public investments in capacity building and training, alongside a strengthening of international governance.

Public policy can also ensure that the benefits of greening one sector can trigger wider sustainability benefits across others.

- Overall, the report suggests that the lion's share of the proposed two per cent of global GDP will need to come from private capital, primed by more modest amounts from the public purse.

From Fisheries to Buildings—Ten Key Sectors Underpin a Green Economy

The ten sectors identified in the report as key to greening the global economy are: agriculture, buildings, energy supply, fisheries, forestry, industry including energy efficiency, tourism, transport, waste management and water.

Of the two per cent of GDP proposed in the report, the sums invested by sector at current levels of GDP would be:

- \$108 billion for greening agriculture, including on small-holder farms.
- \$134 billion in greening the building sector by improving energy efficiency.
- Over \$360 billion in greening energy supply.
- Close to \$110 billion for greening fisheries, including reducing the capacity of the world's fleets.
- \$15 billion in greening forestry with important knock-on benefits for combating climate change.

- Over \$75 billion in greening industry, including manufacturing.
- Close to \$135 billion on greening the tourism sector.
- Over \$190 billion on greening transport.
- Nearly \$110 billion on waste, including recycling.
- A similar amount on the water sector, including addressing sanitation.

Some Sectoral Highlights

Agriculture

A Green Economy would invest \$100 billion, up to \$300 billion a year until 2050, in agriculture in order to feed nine billion people, while promoting better soil fertility management and sustainable water use to improve biological plant management.

- Scenarios indicate an increase in global yields for major crops by 10 per cent over current investment strategies.
- Equal to raising and sustaining nutrition levels to 2,800-3,000 kilocalories available per person by 2030.
- Food waste globally is translating into 2,600 kilocalories per person per day; therefore, a transition to a Green Economy needs to address these challenges, which link to several of the sectors concerned.

Buildings

The building sector is the single largest contributor to global greenhouse gas emissions, with one-third of global end-energy use taking place in offices and homes.

The construction sector is responsible for more than a third of global material resource consumption, including 12 per cent of all freshwater use.

Based on an IPCC scenario, the climate footprint of the building sector is projected to nearly double to 15.6 billion tones of carbon dioxide equivalent by 2030, or 30 per cent of total energy related CO².

- A combination of applying existing technologies and growth in renewable energy supply under the Green Economy scenarios could dramatically reduce emissions at a saving equal to \$35 per tonne of CO².
- With the right government policies, energy savings of around one-third could be achieved worldwide in the building sector by 2050 for an annual investment of \$300 billion to one trillion dollars.

Fisheries

Subsidies estimated at around \$27 billion a year have generated excess fishing capacity by a factor of two relative to the ability of fish to reproduce.

The report suggests that investing in strengthened fisheries management, including the establishment of Marine Protected Areas and the decommissioning and reduction of fleet capacity, as well as retraining, can rebuild the planet's fish resources.

- Such an investment backed by policy measures will result in an increase in catches from the current 80 million tonnes to 90 million tonnes in 2050, although between now and 2020 there would initially be a fall.

“The present value of benefits from greening the fishing sector is estimated to be three to five times the necessary investment,” says the report.

- Jobs losses in the short to medium term can be minimized by focusing cuts in capacity on a small number of large-scale fishers over small-scale artisanal fleets.
- Jobs in fisheries are expected to grow again by 2050 as depleted stocks recover.

Forestry

Forests generate goods and services, which support the economic livelihoods of over one billion people, recycle nutrients vital for agriculture and harbour 80 per cent of land-based species.

Deforestation also currently accounts for close to 20 per cent of the world's greenhouse gas emissions.

“Reducing deforestation can therefore be a good investment: the climate regulation benefits of halving global deforestation alone have been estimated to exceed costs by a factor of three,” says the study.

The report analyzes the contribution that \$15 billion a year—or 0.03 per cent of global GDP—can make to greening this sector, including triggering greater investments in Reducing Emissions from Deforestation and Forest Degradation (REDD).

Such investments can also assist in scaling-up tried and tested market mechanisms, including certified timber and the certification of rainforest products to payment for ecosystems and community-based partnerships.

- Over the period 2011 to 2050, investment of \$15 billion annually, or 0.03 per cent of GDP, would raise the value added in the forestry industry by more than 20 per cent, relative to business as usual.

- The report suggests that a transition to a Green Economy could increase forested land—currently close to 4 billion hectares—by over three per cent in 2020, eight per cent by 2030 and over 20 per cent by 2050, relative to business as usual.

Fast tracking such recommendations could make a key contribution to 2011—designated as the UN’s International Year of Forests.

Transport

The environmental and social costs of transport in terms of air pollution, traffic accidents and congestion can currently cost around 10 per cent of a region or country’s GDP.

Policies for greening transport range from those that shift journeys to public and non-motorized transport to ones which boost fuel efficiency and cleaner vehicles.

In Europe, the analysis indicates that public transport investments yield regional economic benefits more than twice their cost.

Reducing the sulphur content of transportation fuels in Sub Saharan Africa could save up to nearly \$1 billion a year in health and related costs.

- Investing 0.34 per cent of global GDP per year up to 2050 in the transport sector can reduce oil usage by as much as 80 per cent below business as usual—increasing employment by six per cent above business as usual, primarily in expanding public transport.

Waste

By 2050, the world is likely to be generating over 13 billion tonnes of municipal and other wastes: currently only 25 per cent of all waste is recovered or recycled.

- An investment of \$108 billion a year in greening the waste sector could lead to near full recycling of electronic wastes, up from the current level of 15 per cent.
- Such an investment could also boost the overall waste recycling threefold by 2050 and cut the amounts going to landfill by over 85 per cent versus a business as usual scenario.

Between 20 per cent and 30 per cent of methane-related greenhouse gas emissions could be reduced by 2030 with associated financial savings.

Waste prevention and management also remains a key challenge for manufacturing, where approaches such as remanufacturing and redesign of products and processes can play a part in reducing waste and resource use.

- If the life of all manufactured products was extended by 10 per cent, for example, the volume of resources extracted could be cut by a similar amount.

- The recycling of heat waste through combined heat and power (CHP) installations presents high potential for more efficient energy use. The pulp and paper industry has CHP installations that allow savings of over 30 per cent of primary energy use.

Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication - A Synthesis for Policy Makers, and the full draft chapters, including the modeling and scenarios, will be available after 1pm Nairobi time (or 1000 GMT) on 21 February 2011 at: www.unep.org and www.unep.org/greeneconomy.

The site will also showcase the current compilation of Green Economy case studies from countries and regions around the world.

The 26th session of UNEP's Governing Council/Global Ministerial Environment Forum can be found at: <http://www.unep.org/gc/gc26>

The UN Conference on Sustainable Development 2012 or Rio+20 website is at: <http://www.uncsd2012.org/>

The International Year of Forests 2011 is at: www.un.org/en/events/iyof2011/

For more information, please contact:

Nick Nuttall, UNEP Spokesperson/Head of Media
Tel: +254 733 632755; Email: nick.nuttall@unep.org

Moira O'Brien-Malone, Head of Communications,
UNEP Division of Technology, Industry and Economics
Tel: +33 1 44 37 76 12 ; mobile: +33 6 82 26 93 73
Email: moira.obrien-malone@unep.org