

# Copenhagen needn't cost the earth

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Over the past two years all roads have been leading to Copenhagen and the crucial UN climate convention meeting. In a matter of days the world will know whether this will prove to be a dead end; a delay or a detour or a gear-changing moment in human affairs.

The outcome should be of the highest importance to the Commonwealth Heads of Government as it should be every man, woman and child alive today be they in a developed or a developing economy.

At stake is perhaps the most important international treaty since World War II – one that can put more than 190 nations onto a low-carbon, resource-efficient Green Economy path so necessary if the world is to thrive, let alone survive over the coming decades and century. The meeting in Copenhagen has brought the world, including members of the Commonwealth, together in a way perhaps not witnessed in half a century – it has also brought the UN together too.

Ban Ki-Moon, the UN Secretary General has worked tirelessly to make a new, scientifically-credible agreement in 2009 a possibility. He has realised from the start that in the 21st century, climate change represents the most extraordinary threat and disruption to security, development and human wellbeing. But also an inordinate opportunity to catalyse a low-carbon, resource-efficient Green Economy able to meet the needs and aspirations of six billion people, rising to nine billion by 2050, if swiftly and comprehensively addressed.

The mobilisation of the UN system, including colleagues at the UN Framework Convention on Climate Change towards this end has been unprecedented and UNEP and its staff have been part of that change and challenge. We have striven with institutions and individuals in the UN and across fields such as science, business, energy and natural resource management to illuminate the wealth of options and choices governments have, to unleash markets and trigger innovation.

The Intergovernmental Panel on Climate Change, co-hosted by UNEP and the World Meteorological Organisation, is the benchmark underpinning the reality of rising greenhouse gas emissions. Its 2007 landmark report put a full stop behind the science, outlined the sobering impacts but also calculated the costs of action – along with Lord Stern on behalf of the UK government, and underlining that it will not cost

the Earth to combat climate change, far from it.

Through the UNEP Finance Initiative and fora such as the UN Global Compact there has been mobilisation of insurers, banks, pension funds and others on fostering investments that move markets in favour of low-carbon companies and ones that are embracing more resource-efficient paths.

Industry-wide collaboration has also accelerated. For example, a new global initiative to accelerate the penetration of energy-saving light bulbs is under way with market leaders Osram and Phillips with funding from the Global Environment Facility. Through partnerships with the construction sector and sectors such as tourism, more opportunities have been spotlighted from energy-efficient building to low footprint leisure.

The mobilisation of public opinion through initiatives such as the Billion Tree Campaign and the Seal the Deal campaign have played their part in giving a voice to millions who felt unable to speak. The Global Green New Deal/Green Economy initiative, launched last year as a way of dealing with multiple crises including climate change, has achieved resonance in capital cities from Seoul to Beijing and from Canberra to London, Paris, Berlin, Brasilia and Washington.

The central but often overlooked role of ecosystems in mitigating and assisting economies to adapt to climate change has also been brought centre stage through assessments such as the Blue Carbon report. Carried out in collaboration with UNESCO, the Food and Agricultural Organisation of the UN and a global team of scientists, it estimates that carbon emissions – equal to half the annual emissions of the global transport sector – are being captured and stored by marine ecosystems such as mangroves, salt marshes and seagrasses.

A combination of reducing deforestation on land, allied to restoring the coverage and health of these marine ecosystems could deliver up to 25 per cent of the emissions reductions needed to avoid 'dangerous' climate change. However, the report also estimates that up to 7 per cent of these 'blue carbon sinks' are being lost annually or seven times the rate of loss of 50 years ago. "If more action is not taken to sustain these vital ecosystems, most may be lost within two decades," says the report *Blue Carbon: the Role of Healthy Oceans in Binding Carbon*.

One idea to tip the balance in favour of conservation and 'marine ecosystem renovation' is a Blue Carbon

fund which the countries of the North could use to pay countries and communities in the South. The idea is not so far fetched. It is likely that nations will agree to pay developing economies to maintain the 'green carbon' in forests under a partnership – Reduced Emissions from Deforestation and forest Degradation (REDD).

UNEP is hosting the secretariat for UN REDD which includes UNDP and FAO and whose work – funded by Norway and others – is preparing nine pilot countries in Africa, Asia and Latin America for this unfolding opportunity. By some estimates a country such as Indonesia could stand to earn a US\$1 billion a year if it halves its rate of forest loss. Paying developing economies to maintain the carbon stock of ecosystems is leading to new and transformative avenues with similar multiple, Green Economy benefits.

UNEP, in partnership with the World Agroforestry Centre and with funding from the Global Environment Facility, has launched a Carbon Benefits Project with farmers and landowners in Western Kenya; China, Niger and Nigeria. It aims to rapidly develop the land use standard or calculator that will allow investors in London, Toronto, Mumbai or the Caymans to know how much carbon is being sequestered under different land management regimes. This opens the door to pay developing countries to farm crops and carbon and get paid for both.

On World Environment Day 2009, we also launched The Natural Fix. Again looking at the carbon capture and storage potential of other terrestrial ecosystems, including peatlands. Some developed economies are preparing to put billions of dollars into carbon capture and storage (CCS) at power stations – why not invest some of this in nature-based CCS? The natural one is tried and tested over millennia and could prove to be far more cost-effective if rapidly enhanced.

UNEP has also been working with leading scientists on other opportunities to bring countries into a climate partnership. While the international community's over-arching aim in terms of cutting emissions must be CO<sub>2</sub>, there are other non-CO<sub>2</sub> gases and pollutants of growing concern. Many of these need also to be curbed because of their wider environmental impacts, such as those on public health, agriculture and the planet's multi-trillion dollar ecosystems, including forests.

Black carbon, a component of the soot emissions from diesel engines and the inefficient burning of biomass cooking stoves is a case in point. It is a key component of air pollution linked to 1.6 million to 1.8 million premature deaths annually as a result of indoor exposure and 800,000 as a result of outdoor exposure.

Black carbon, which absorbs heat from the sun, is also contributing to global warming – with its contribution ranging from 10 per cent to over 45 per cent of the current contribution. It is also linked to accelerated losses of glaciers in Asia – the soot deposits darken ice making

it more vulnerable to melting. One study estimates that 26 per cent of black carbon emissions are from stoves for heating and cooking with over 40 per cent of this from wood burning; over 20 per cent from coal; 19 per cent from crop residues and 10 per cent from dung. Some companies have developed stoves that cut black carbon emissions by around 70 per cent using passive air flows and better insulation while using 60 per cent less wood – perhaps a mass introduction of such stoves could deliver multiple, Green Economy benefits.

Scientists estimate that some 50 per cent of current global warming may now be due to substances such as black carbon, nitrogen compounds, methane and low level ozone – it may be more, it may be less. While carbon dioxide can remain in the atmosphere for centuries, some of these other pollutants such as black carbon and ozone have relatively short lives in terms of days, weeks, months or years offering almost immediate climate benefits: the message here is that everyone has an opportunity to do something.

Climate change is not going to simply go away like a bad nightmare in the morning if governments walk away from Copenhagen without a serious deal. You can stop the clocks, but you cannot stop the climate clock ticking without transformative and committed action. And the longer the world waits, the more difficult, costly and damaging climate change will become.

Copenhagen represents the best opportunity to plan the future in a managed and considered way; otherwise the future will plan itself. And this may well overwhelm the coping capacities of our national and global institutions, forcing societies to react and to scramble to deal with events that are already unfolding and challenging the very foundations upon which modern civilisation, as it has evolved today, depends. **F**

An ill wind: black carbon is a key contributor to premature deaths and glacier loss



**Reducing deforestation on land, allied to restoring the coverage and health of marine ecosystems could deliver up to 25 per cent of the emissions reductions needed**