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Wealthier nations should lead emission cuts and provide incentive for developing CEE and CIS countries to go green.

As the 2007/2008 Human Development Report sets out a pathway for Bali, authors stress that the effective use of carbon markets could provide “win-win” solutions for the Region.

Brasilia, 27 November 2007—Major carbon emitting countries have a historical responsibility to lead the way in balancing the global carbon budget, while providing incentives to developing countries as well as to transitional Central and Eastern European (CEE) and Commonwealth of Independent States (CIS) nations to develop cleanly, according to the 2007/2008 Human Development Report (HDR) launched here today.

Building on the recently-released Intergovernmental Panel on Climate Change (IPCC) Synthesis Report, the United Nations Development Programme (UNDP) HDR, entitled *Fighting climate change: Human solidarity in a divided world*, sets out a pathway for climate change negotiations in Bali, Indonesia, and stresses that a narrow ten-year window of opportunity remains to put it into practice. If that window is missed, temperature rises of above two degrees Celsius could halt and then reverse progress in health, education and poverty reduction for the world’s most vulnerable people.

In Siberia, temperature increases of 3.6 degrees Celsius—more than twice the global average—are already severely affecting the way of life of indigenous people. The thawing of permafrost, which covers 60 percent of the Russian Federation, will increase vulnerability to flooding while the melting of permanent snowfields and glaciers in the mountains of Central Asia threatens the livelihoods of millions.

“The carbon budget of the 21st Century—the amount of carbon that can be absorbed creating an even probability that temperatures will not rise above two degrees—is being overspent and threatens to run out entirely by 2032,” says Kevin Watkins, lead author of the Human Development Report, “and the poor—those with the lightest carbon footprint and the least means to protect themselves—are the first victims of developed countries’ energy-rich lifestyle.”

Fighting climate change says developed countries have a historic responsibility to take the lead in balancing the carbon budget by cutting emission by at least 80 percent by 2050. In addition, they should support a new US\$86 billion global annual investment in adaptation efforts to protect the world’s poor and adopt an effective way of transferring clean energy know-how across borders, giving an incentive for poorer countries to move to greener development pathways.

Tapping into carbon markets could also help the Region to cut emissions: “Putting a proper price on carbon with a mixture of taxation and more stringent cap-and-trade measures will be key in the fight against climate change,” says UNDP Administrator Kemal Derviş, “and emissions trading through carbon markets could play a ‘win-win’ role in supporting low-carbon investment in the CEE and CIS Region.”

Rising emissions, rising costs

While developing countries account for a growing share of global emissions, rich countries still lead in running up the carbon debt. If each poor person on the planet generated the same emissions as an average person from the United Kingdom or Germany, four planets would be needed to safely cope with the pollution, says *Fighting climate change*. That figure rises to nine if the benchmark is set at the emissions of an average American or Canadian. The Russian Federation's carbon footprint is only slightly behind the OECD average.

Fighting climate change notes that there has been little success to date in cutting overall greenhouse gas emissions. In 2004, emissions for Annex I countries were three percent below 1990 levels, with much of the overall decline attributable to deep emissions in the Russian Federation and other transition economies—in some cases in excess of 30 percent. This outcome owes less to energy policy reform than to the effects of economic recession in 1990s, says the Report. Emissions are now rising with economic recovery, stress the authors.

Heavy investment in infrastructure will be required in the Russian Federation, for example, to adapt roads, electricity lines and the Baikal Amur railway to the melting permafrost, while plans are already being drawn up to protect the planned East Siberia-Pacific export oil pipeline from coastal erosion linked to the thaw. In Central Asia, losses of glacial melt into the Amu Darya and Syr Darya rivers could restrict the flow of water for irrigation into Uzbekistan and Kazakhstan, while compromising Kyrgyzstan's plans to develop by using hydroelectric power.

Rising temperatures will unleash a vicious cycle on the Region, says the Report: the Russian Federation's melting permafrost could release vast amounts of methane—a potent greenhouse gas—into the atmosphere, which would in turn increase warming and the rate at which the permafrost melts.

Carbon markets may offer way forward

Energy reform policies in the Region present a mixed picture. In the Czech Republic, Hungary and Poland, advances in energy intensity—the amount of energy consumed per unit of GDP—have been driven by economic reform and privatization. Ten years ago, Poland used 2.5 times more energy per unit of cement produced than the European Union (EU) average, for example, but that gap is now gone.

Ukraine, by comparison, has achieved far lower reductions in energy and carbon intensity, says the Report. Over the past 15 years, coal has steadily been replaced by cheaper and less polluting imported natural gas, but with the interruption of supplies from the Russian Federation in early 2006 and the doubling of import prices, the Ukrainian government is considering a shift back to coal. This demonstrates the way in which national energy security may conflict with global climate change goals, says the Report.

The Russian Federation's energy sector remains twice as energy intensive as Poland. The natural gas sector, where it is estimated that the state energy company Gazprom lost nearly 10 percent of its total production in 2004 through leaks and inefficient compressors, illustrates the need for further energy reform. Enhanced energy efficiency could play a key role in reducing the nation's emissions, stress the authors.

Fighting climate change notes that while varied responses will be required to set the Region on a greener development pathway, tapping into carbon markets could provide “win-win” solutions. Emissions trading through carbon markets such as the EU Emissions Trading Scheme (EU ETS) could

Carbon and energy intensity is reducing in transition economies									
	Total CO ₂ emissions (Mt CO ₂)			CO ₂ emissions per capita (t CO ₂)		Energy intensity (Energy use per unit of GDP PPP US\$)		Carbon intensity (CO ₂ per unit of GDP PPP US\$)	
	1990	2000	2004	1990	2004	1990	2004	1990	2004
Russian Federation ^a	1,984	1,470	1,524	13.4	10.6	0.63	0.49	1.61	1.17
Poland	348	301	307	9.1	8.0	0.36	0.20	1.24	0.68
Ukraine ^a	600	307	330	11.5	7.0	0.56	0.50	1.59	1.18
Hungary	60	55	57	5.8	5.6	0.24	0.17	0.50	0.37
Czech Republic ^a	138	119	117	13.4	11.4	0.32	0.26	1.03	0.66
Slovakia ^a	44	35	36	8.4	6.7	0.37	0.26	0.96	0.51
CEE and the CIS	4,182	2,981	3,168	10.3	7.9	0.61	0.47	1.49	0.97
OECD	11,205	12,886	13,319	10.8	11.5	0.23	0.20	0.53	0.45

a. 1990 data refer to 1992.

Source: HDRO calculations based on Indicator Tables 22 and 24.

support low-carbon investment in the region if certain reforms are put in place. As such, higher energy prices, the scaling down of subsidies, the introduction of a more competitive energy sector with strengthened independent regulation, and wider governance reforms should be among the priorities for the Region, according to the Report.

A pathway for Bali and beyond

Fighting climate change draws together recommendations for mitigation, technology transfer, adaptation and mobilizing finance to lay out a definitive checklist for all political leaders meeting in Bali in December. The result is a pathway for a binding and enforceable post 2012 multilateral agreement that the authors stress will be essential to buttress our planet and its poorest people against the worst impacts of climate change:

- **Cut emissions** from developing countries by 20 percent by 2050 compared to 1990 levels and from developed countries by 30 percent by 2020 and at least 80 percent by 2050 compared to 1990 levels.
- **Put a proper price on carbon** through a combination of carbon taxation and an ambitious global expansion of cap-and-trade schemes.
- **Create a Climate Change Mitigation Facility (CCMF)** to finance the incremental low-carbon energy investment in developing countries to give them both the means to switch to low emission pathways and the incentive to commit to binding international emission cuts. This would need an investment \$25-50 billion annually.
- **Strengthen regulatory standards** by adopting and enforcing tougher efficiency standards on vehicle, building and electrical appliance emissions.
- **Support the development of low carbon energy provision**, recognizing unexploited potential for an increase in the share of renewable energy used and the need for urgent investment in breakthrough technologies such as carbon capture and storage (CCS).
- **Allocate \$86 billion annually, or 0.2 percent of northern countries' combined GDP to adaptation** to climate proof infrastructure and build the resilience of the poor to the effects of climate change.
- **Make adaptation part of all plans to reduce poverty and extreme inequality**, including poverty reduction strategy papers (PRSPs).
- **Recognize carbon sequestration** on forests and land as essential parts of a future global agreement and **back international finance transfer plans on deforestation** as advocated by Brazil among others.

Fighting climate change concludes that “one of the hardest lessons taught by climate change is that the economic model which drives growth and the profligate consumption in rich nations that goes with it, is ecologically unsustainable.” But the authors argue, “with the right reforms, it is not too late to cut greenhouse gas emissions to sustainable levels without sacrificing economic growth: that rising prosperity and climate security are not conflicting objectives.”

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ABOUT THIS REPORT: The Human Development Report continues to frame debates on some of the most pressing challenges facing humanity. It is an independent report commissioned by the United Nations Development Programme (UNDP). Kevin Watkins is the Lead Author of the 2007/2008 report, which includes special contributions from UN Secretary-General Ban Ki-moon, President Luiz Inácio Lula da Silva of Brazil, Mayor of the City of New York Michael R. Bloomberg, Advocate for Arctic climate change Sheila Watt-Cloutier, Chair of the World Commission on Sustainable Development and former Prime Minister of Norway Gro Harlem Brundtland, Archbishop Emeritus of Cape Town Desmond Tutu, and the Director of the Centre for Science and Environment Sunita Narain. The Report is translated into more than a dozen languages and launched in more than 100 countries annually. Further information can be found at <http://hdr.undp.org/en/reports/global/hdr2007-2008/>. The 2007/2008 Human Development Report is published in English by Palgrave Macmillan.

ABOUT UNDP: UNDP is the UN's global network to help people meet their development needs and build a better life. We are on the ground in 166 countries, working as a trusted partner with governments, civil society and the private sector to help them build their own solutions to global and national development challenges. Further information can be found at www.undp.org