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**UNDP Contacts:**

New York and Brasilia  
Ms. Niamh Collier  
Tel: +1 212 906 6111  
Cell: +1 917 609 5133  
niamh.collier@undp.org

Ms. Marisol Sanjines  
Tel: +1 212 906 6763  
Cell: +1 646 201 8036  
marisol.sanjines@undp.org

Geneva and Paris  
Mr. Jean Fabre  
Tel: +41 22 917 8542  
Cell: +41 79 437 07 76  
jean.fabre@undp.org

Brussels  
Mr. Peter Thelin  
Tel: +32 2 505 46 28  
Cell: +32 478312027  
peter.thelin@undp.org

Copenhagen  
Ms. Christine Drud  
Tel: +45 35 46 71 54  
Cell: +45 29 45 23 20  
christine.drud@undp.org

Tokyo  
Mr. Tochiya Nishigori  
Tel: +81 3 5467 4751  
Cell: +81 90 7200 3295  
or +81 80 2016 3078  
tochiya.nishigori@undp.org

Washington  
Ms. Cara Santos Pianesi  
Tel: +1 202 331 9130  
Cell: +1 202 262 3381  
cara.santos@undp.org

Brisbane  
Mr. Zoran Stevanovic  
Tel: +421 2 59337 428  
Cell: +421 908 729 846  
zoran.stevanovic@undp.org

Bangkok  
Ms. Cherie Hart  
Tel: +66 2 268 2133  
Cell: +66 8 1 918 1564  
cherie.hart@undp.org

New Delhi  
Ms. Surekha Subarwal  
Tel: +91 11 46532330  
Cell: +91 9810153924  
surekha.subarwal@undp.org

Mexico City  
Ms. Maria Amparo Lasso  
Tel: +5255 52 63 98 94  
Cell: +5255 29 66 79 72  
maria.lasso@undp.org

Moscow  
Ms. Sizhanna Kolomiets  
Tel: +7 (495) 787 2100 (ext.2235)  
Cell: +7 916 107-9416  
sizhanna.kolomiets@undp.org

London  
Ms. Chandrika Deshpande  
Tel: +44 020 7396 5338  
Cell: +44 (0) 7957 460 246  
chandrika.deshpande@undp.org



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# Climate change threatens unprecedented human development reversals

**Brasilia, 27 November 2007**—With governments preparing to gather in Bali, Indonesia to discuss the future of the Kyoto Protocol, the United Nations Development Programme's Human Development Report has warned that the world should focus on the development impact of climate change that could bring unprecedented reversals in poverty reduction, nutrition, health and education.

The report, *Fighting climate change: Human solidarity in a divided world*, provides a stark account of the threat posed by global warming. It argues that the world is drifting towards a “tipping point” that could lock the world’s poorest countries and their poorest citizens in a downward spiral, leaving hundreds of millions facing malnutrition, water scarcity, ecological threats, and a loss of livelihoods.

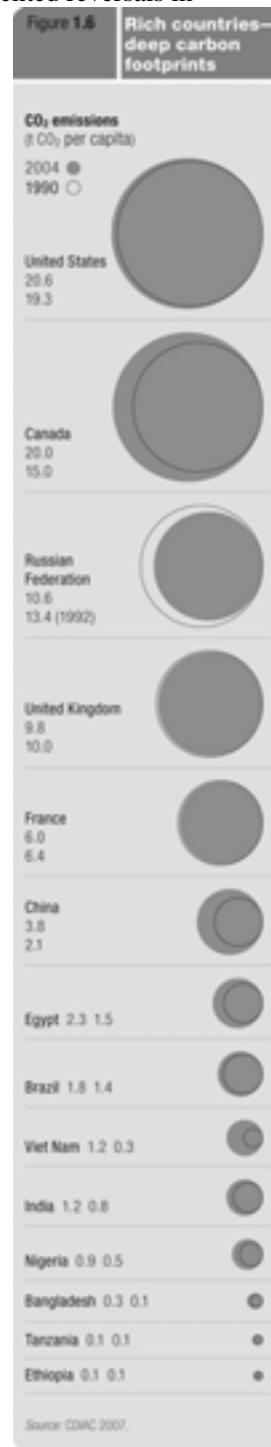
“Ultimately, climate change is a threat to humanity as a whole. But it is the poor, a constituency with no responsibility for the ecological debt we are running up, who face the immediate and most severe human costs,” commented UNDP Administrator Kemal Derviš.

The report comes at a key moment in negotiations to forge a multilateral agreement for the period after 2012—the expiry date for the current commitment period of the Kyoto Protocol. It calls for a “twin track” approach that combines stringent mitigation to limit 21st Century warming to less than 2°C (3.6°F), with strengthened international cooperation on adaptation.

On mitigation, the authors call on developed countries to demonstrate leadership by cutting greenhouse gas emissions by at least 80% of 1990 levels by 2050. The report advocates a mix of carbon taxation, more stringent cap-and-trade programmes, energy regulation, and international cooperation on financing for low-carbon technology transfer.

Turning to adaptation, the report warns that inequalities in ability to cope with climate change are emerging as an increasingly powerful driver of wider inequalities between and within countries. It calls on rich countries to put climate change adaptation at the centre of international partnerships on poverty reduction.

“We are issuing a call to action, not providing a counsel of despair,” commented lead author Kevin Watkins, adding, “Working together with resolve, we can win the battle against climate change. Allowing the window of opportunity to close would represent a moral and political failure without precedent



in human history.” He described the Bali talks as a unique opportunity to put the interests of the world’s poor at the heart of climate change negotiations.

The report provides evidence of the mechanisms through which the ecological impacts of climate change will be transmitted to the poor. Focusing on the 2.6 billion people surviving on less than US\$2 a day, the authors warn forces unleashed by global warming could stall and then reverse progress built up over generations. Among the threats to human development identified by **Fighting climate change**:

- The breakdown of agricultural systems as a result of increased exposure to drought, rising temperatures, and more erratic rainfall, leaving up to 600 million more people facing malnutrition. Semi-arid areas of sub-Saharan Africa with some of the highest concentrations of poverty in the world face the danger of potential productivity losses of 25% by 2060.
- An additional 1.8 billion people facing water stress by 2080, with large areas of South Asia and northern China facing a grave ecological crisis as a result of glacial retreat and changed rainfall patterns.
- Displacement through flooding and tropical storm activity of up to 332 million people in coastal and low-lying areas. Over 70 million Bangladeshis, 22 million Vietnamese, and six million Egyptians could be affected by global warming-related flooding.
- Emerging health risks, with an additional population of up to 400 million people facing the risk of malaria.

Setting out the evidence from a new research exercise, the authors of the Human Development Report argue that the potential human costs of climate change have been understated. They point out that climate shocks such as droughts, floods and storms, which will become more frequent and intense with climate change, are already among the most powerful drivers of poverty and inequality—and global warming will strengthen the impacts.

“For millions of people, these are events that offer a one-way ticket to poverty and long-run cycles of disadvantage,” says the report. Apart from threatening lives and inflicting suffering, they wipe out assets, lead to malnutrition, and result in children being withdrawn from school. In Ethiopia, the report finds that children exposed to a drought in early childhood are 36% more likely to be malnourished—a figure that translates into 2 million additional cases of child malnutrition.

While the report focuses on the immediate threats to the world’s poor, it warns that failure to tackle climate change could leave future generations facing ecological catastrophe. It highlights the possible collapse of the West Antarctic ice sheets, the retreat of glaciers, and the stress on marine ecosystems as systemic threats to humanity.

“Of course there are uncertainties, but faced with risks of this order of magnitude uncertainty is not a case for inaction. Ambitious mitigation is in fact the insurance we have to buy against potentially very large risks. **Fighting climate change** is about our commitment to human development today and about creating a world that will provide ecological security for our children and their grandchildren,” Mr. Derviş said.

### Avoiding dangerous climate change

The authors of the Human Development Report call on governments to set a collective target for avoiding dangerous climate change. They advocate a threshold of 2°C (3.6°F) above pre-industrial levels (the current level is 0.7°C, 1.3°F).

Drawing on a new climate model, the report suggests a ‘21st Century carbon budget’ for staying within this threshold. The budget quantifies the total level of greenhouse gas emissions consistent with this goal. In an exercise that captures the scale of the challenge ahead, the report estimates that business-as-usual could result on current trends in the entire carbon budget for the 21st Century being exhausted by 2032. The authors warn that on current trends the world is more likely to breach a 4°C threshold than stay within 2°C (3.6°F).

The Human Development Report addresses some of the critical issues facing negotiators in Bali. While acknowledging the threat posed by rising emissions from major developing countries, the authors argue that northern

governments have to initiate the deepest and earliest cuts. They point out that rich countries carry overwhelming historic responsibility for the problem, have far deeper carbon footprints, and have the financial and technological capabilities to act.

“If people in the developing world had generated per capita CO<sub>2</sub> emissions at the same level as people in North America, we would need the atmosphere of nine planets to deal with the consequences,” commented Mr. Watkins.

Using an illustrative framework for an emissions pathway consistent with avoiding dangerous climate change, the Human Development Report suggests that:

- Developed countries should cut greenhouse gas emissions by at least 80% to 2050 and 30% by 2020 from 1990 levels.
- Developing countries should cut emissions by 20 percent to 2050 from 1990 levels. However, these cuts would occur from 2020 and they would be supported through international cooperation of finance and low carbon technology transfer.

Measured against this benchmark, the authors find that many of the targets set by developed country governments fall short of what is required. It notes also that most developed countries have failed to achieve even the modest reductions—averaging around 5% from 1990 levels—agreed under the Kyoto Protocol. Even where ambitious targets have been set, the report argues, few developed countries have aligned stated climate security goals with concrete energy policies.

Scenarios for future emissions reinforce the scale of the challenge ahead. On current trends, CO<sub>2</sub> emissions are projected to increase by 50% to 2030—an outcome that would make dangerous climate change inevitable. “The bottom line is that the global energy system is out of alignment with the ecological systems that sustain our planet,” commented Mr. Watkins, adding: “realignment will take a fundamental shift in regulation, market incentives, and international cooperation.”

**Fighting climate change** identifies a range of policies needed to close the gap between climate security statements and energy policies for avoiding dangerous climate change. Among the most important:

- **Pricing carbon.** The report argues that both carbon taxation and cap-and-trade schemes have a role to play. Gradually rising carbon taxes would be a powerful tool to change incentive structures facing investors. It also stresses that carbon taxes need not imply an overall greater tax burden because they could be compensated by tax reductions on labour income.
- **Stronger regulatory standards.** The report calls on governments to adopt and enforce tougher standards on vehicle emissions, buildings and electrical appliances.
- **Supporting the development of low carbon energy provision.** The report highlights the unexploited potential for an increase in the share of renewable energy used, and for breakthrough technologies such as carbon capture and storage (CCS).

Proposals for the European Union Emissions Trading Scheme				
	Emissions cap for 2008–2012 period			
	2005 verified emissions under Phase II of ETS (Mt CO <sub>2</sub> )	Proposed by government (Mt CO <sub>2</sub> )	Allowed by European Commission (Mt CO <sub>2</sub> )	Allowed by European Commission as % of 2005 emissions
Austria	33	33	31	94
Belgium	56	63	59	105
Czech Republic	83	102	87	105
Finland	33	40	38	115
France	131	133	133	102
Hungary	26	31	27	104
Germany	474	482	453	96
Greece	71	76	69	97
Ireland	22	23	21	95
Italy	226	209	196	87
Netherlands	80	90	86	108
Spain	183	153	152	83
Sweden	19	25	23	121
United Kingdom	242 *	246	246	101
<b>Total</b>	<b>1,943 *</b>	<b>2,095</b>	<b>1,897</b>	<b>98</b>

a. Does not include the United Kingdom's installations which were temporarily excluded from the scheme in 2005 but will be covered in 2008 to 2012, estimated to amount to 30 Mt CO<sub>2</sub>.

Source: European Union 2007c.

- **International cooperation on finance and technology transfer.** The authors note that developing countries will not participate in an agreement that provides no incentives for entry, and which threatens to raise the costs of energy. The report argues for the creation of a Climate Change Mitigation Facility (CCMF) to provide \$25-50 billion annually in financing the incremental low-carbon energy investments in developing countries consistent with achieving shared climate change goals.

Drawing on economic modeling work, the Human Development Report argues that the cost of stabilizing greenhouse gases at 450 parts per million (ppm) could be limited to an average to 1.6% of world GDP to 2030. “While these are real costs, the costs of inaction will be far greater, whether measured in economic, social or human terms,” warned Mr. Derviš. The report points out that the cost of avoiding dangerous climate change represents less than two-thirds of current world military spending.

### Adaptation efforts overlooked

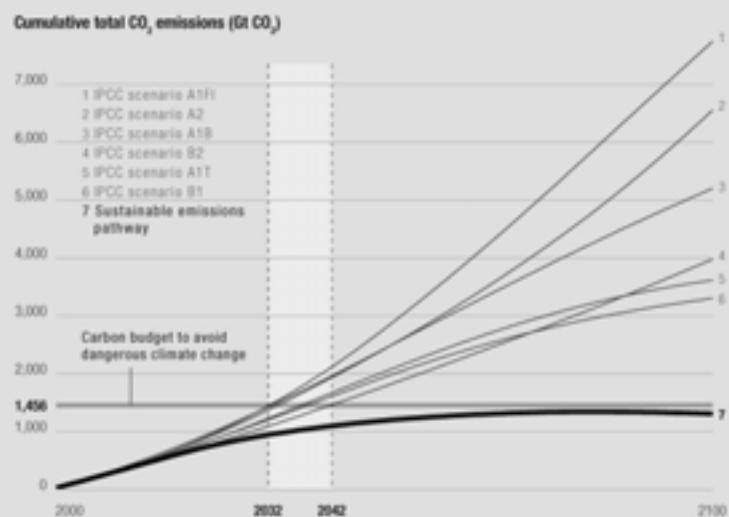
While stressing the central medium-term role of mitigation, **Fighting climate change** warns against neglecting the adaptation challenge. It points out that, even with stringent mitigation, the world is now committed to continued warming for the first half of the 21st Century. The report warns that adaptation is needed to prevent climate change leading to major setbacks in human development—and to guard against the very real danger of insufficient mitigation.

The report draws attention to extreme inequalities in adaptation capacity. Rich countries are investing heavily in climate-change defence systems, with governments playing a leading role. By contrast, in developing countries “people are being left to sink or swim with their own resources,” writes Desmond Tutu, Archbishop Emeritus of Cape Town, in the report, creating a “world of ‘adaptation apartheid’.”

“Nobody wants to underestimate the very real long-term ecological challenges that climate change will bring to rich countries,” Mr. Watkins commented. “But the near term vulnerabilities are not concentrated in lower Manhattan and London, but in flood prone areas of Bangladesh and drought prone parts of sub-Saharan Africa.”

The Human Development Report shows that international cooperation on adaptation has been slow to materialize. According to the report, total current spending through multilateral mechanisms on adaptation has amounted to \$26 million to date—roughly one week’s worth of spending on UK flood defences. Current mechanisms are delivering small amounts of finance with high transaction costs, the authors say.

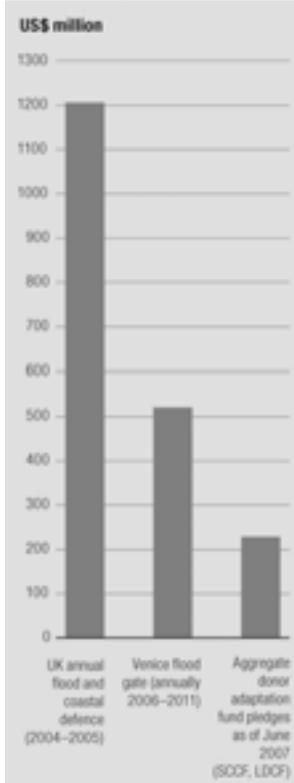
**Figure 1.10 The 21<sup>st</sup> Century carbon budget is set for early expiry**



Note: **IPCC scenarios** describe plausible future patterns of population growth, economic growth, technological change and associated CO<sub>2</sub> emissions. The **A1 scenarios** assume rapid economic and population growth combined with reliance on fossil fuels (A1FI), non-fossil energy (A1T) or a combination (A1B). The **A2 scenario** assumes lower economic growth, less globalization and continued high population growth. The **B1 and B2 scenarios** contain some mitigation of emissions, through increased resource efficiency and technology improvement (B1) and through more localized solutions (B2).

Source: Meinshausen 2007.

**Figure 4.5 Developed country investments dwarf international adaptation funds**



Source: Abbott 2004; DfID 2007 and GEF 2007.

The report argues for reforms including:

- Additional financing for climate proofing infrastructure and building resilience, with northern governments allocating at least \$86 billion annually by 2015 (around 0.2% of their projected GDP).
- Increased international support for the development of sub-Saharan Africa's capacity to monitor climate and improve public access to meteorological information.
- The integration of adaptation planning into wider strategies for reducing poverty and extreme inequalities, including poverty reduction strategy papers (PRSPs).

**Fighting climate change** concludes that “one of the hardest lessons taught by climate change is that the historically carbon intensive growth, and the profligate consumption in rich nations that has accompanied 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: rising prosperity and climate security are not conflicting objectives.”

\* \* \* \*

**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](http://www.undp.org)



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**UNDP Contacts:**

New York and Brasilia  
Ms. Niamh Collier  
Tel: +1 212 906 6111  
Cell: +1 917 609 5133  
[niamh.collier@undp.org](mailto:niamh.collier@undp.org)  
Ms. Marisol Sanjines  
Tel: +1 212 906 6763  
Cell: +1 646 201 8036  
[marisol.sanjines@undp.org](mailto:marisol.sanjines@undp.org)

Geneva and Paris  
Mr. Jean Fabre  
Tel: +41 22 917 8542  
Cell: +41 79 437 07 76  
[jean.fabre@undp.org](mailto:jean.fabre@undp.org)

Brussels  
Mr. Peter Thelin  
Tel: +32 2 505 46 28  
Cell: +32 478 81 2027  
[peter.theslin@undp.org](mailto:peter.theslin@undp.org)

Copenhagen  
Ms. Christine Drud  
Tel: +45 35 46 71 54  
Cell: +45 29 45 23 20  
[christine.drud@undp.org](mailto:christine.drud@undp.org)

Tokyo  
Mr. Toshiya Nishigori  
Tel: +81 3 5467 4751  
Cell: +81 90 7200 3295  
or +81 80 2016 3078  
[toshiya.nishigori@undp.org](mailto:toshiya.nishigori@undp.org)

Washington  
Ms. Cara Santos Pianesi  
Tel: +1 202 331 9130  
Cell: +1 202 262 3381  
[cara.santos@undp.org](mailto:cara.santos@undp.org)

Brazília  
Mr. Zoran Stevanovic  
Tel: +421 2 59337 428  
Cell: +421 908 729 846  
[zoran.stevanovic@undp.org](mailto:zoran.stevanovic@undp.org)

Bangkok  
Ms. Cherie Hart  
Tel: +662 288 2133  
Cell: +66 8 1918 1564  
[cherie.hart@undp.org](mailto:cherie.hart@undp.org)

New Delhi  
Ms. Surekha Subarwal  
Tel: +91 11 46532330  
Cell: +91 9810153924  
[surekha.subarwal@undp.org](mailto:surekha.subarwal@undp.org)

Mexico City  
Ms. María Amparo Lasso  
Tel: +5255 52 63 98 94  
Cell: +5255 29 66 79 72  
[maria.lasso@undp.org](mailto:maria.lasso@undp.org)

Moscow  
Ms. Svetlana Kolomiets  
Tel: +7 (495) 787 2100 (ext.2235)  
Cell: +7 916 107-9416  
[svetlana.kolomiets@undp.org](mailto:svetlana.kolomiets@undp.org)

London  
Ms. Chandrika Deshpande  
Tel: +44 020 7396 5338  
Cell: +44 (0) 7957 460 246  
[chandrika.deshpande@undp.org](mailto:chandrika.deshpande@undp.org)



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# Developed countries must cut emissions, invest in adaptation to prevent human development reversals

## Wealthy countries' carbon footprint threatens to stamp out progress in Africa, but the 2007/2008 Human Development Report proposes a way forward

**Brasilia, 27 November 2007**—The heavy carbon footprint of developed countries threatens to stamp out and then reverse advances in health, education and poverty reduction in sub-Saharan Africa unless critical steps are taken to cut emissions and invest in “climate-proofing” the livelihoods of the poor, according to the 2007/2008 Human Development Report (HDR) on climate change launched here today.

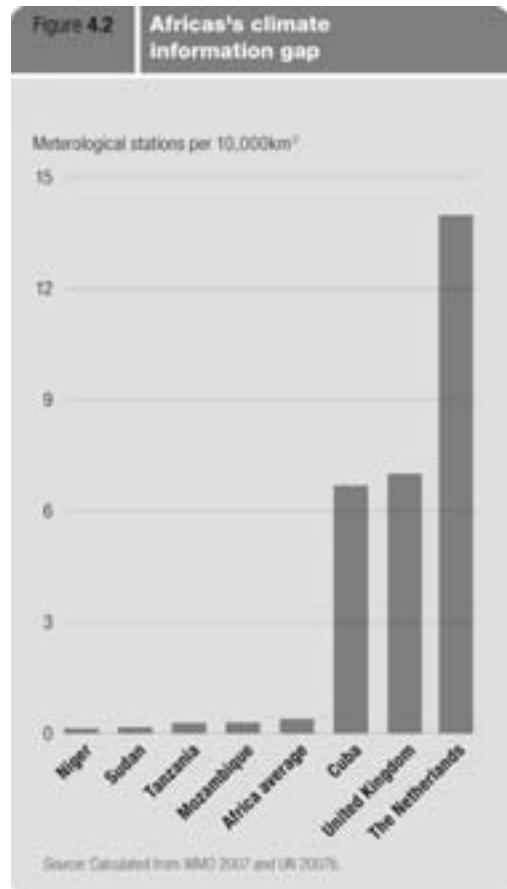
Building on the recently-released Intergovernmental Panel on Climate Change (IPCC) Synthesis Report, the United Nations Development Programme (UNDP) HDR, entitled **Fighting climate change: Human solidarity in a divided world**, sets out a pathway for climate change negotiations in Bali, Indonesia, and stresses that a narrow 10-year window of opportunity remains to put it into practice.

If that window is missed, temperature rises of above two degrees Celsius could see an extra 600 million people in sub-Saharan Africa go hungry, new and more frequent epidemics of mosquito-born diseases like Rift Valley Fever and malaria and agricultural losses of up to US\$26 billion by 2060 in the region, a figure higher than total bilateral aid received by sub-Saharan Africa in 2005.

“The carbon budget of the 21<sup>st</sup> 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 Report and Director of UNDP’s HDR Office, “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”.

### A “nine-planet” lifestyle

Nearly 550 million people in sub-Saharan Africa lack access to energy. Families are left in the dark to cook with vegetation and animal dung over smoky stone fires, while their rich counterparts in developed countries run up the energy bills. Respiratory disease, in part caused by breathing in such smokey fumes, is the biggest killer of children in the world today.



**Fighting climate change** notes that if each poor person on the planet had the same energy-rich lifestyle as an American or Canadian, nine planets would be needed to safely cope with the pollution. In fact, the US state of Texas, with 23 million residents, emits more CO<sub>2</sub> than all of the 720 million residents of sub-Saharan Africa put together, says the Report.

Faced with these stark differences, the authors note that critical global emission cuts should not undermine efforts to get basic energy services to the poor. The world's richest countries have a historic responsibility to take the lead in balancing the carbon budget by cutting emissions by at least 80 percent by 2050, says the Report, in addition to supporting a new \$86 billion annual global investment in substantial international adaptation efforts to protect the world's poor.

"Africa is entering a new century. There is promise. Growth and development are accelerating and peace is being consolidated in many parts of the Continent," said UNDP Administrator Kemal Derviș, "Getting the fight against climate change right would in turn catalyze significant human development advances across the board. But if we don't act on climate change, the hope of Africa—the continent with the lightest carbon footprint—could be stamped out."

### Human development "traps"

Current evidence points to a direct linkage between climate change and increased risk of climate disasters, like floods and droughts, and the overwhelming majority of people affected live in developing countries, says **Fighting climate change**. The authors note that on average between 2000 and 2004, one in 19 people living in the developing world was affected by a climate disaster each year, compared to one person in 1,500 for OECD countries.

In the aftermath of a flood or drought, it is impossible to capture in images the depth of damage inflicted on poor people in Africa. With limited access to insurance, savings or assets, poor households are faced with stark choices in the face of climate shocks that can wipe out crops, reduce job opportunities, push up food prices and destroy property.

In the 1999 drought in Malawi, most poor people coped by eating less, says **Fighting climate change**. They also used up their savings or borrowed money and sold their livestock, poultry or household items. Then in 2002, when drought hit again, nearly five million people were in need of emergency food aid. It did not arrive immediately, says the Report, and households coped by turning to extreme survival measures such as theft and prostitution.

The Report illustrates how climate shocks can lock people into a downward cycle of poverty. The authors found children born during a drought, for example, were much more likely to be malnourished and stunted. In Ethiopia and Kenya, two of the world's most drought-prone countries, children aged five or less born during a drought are respectively 36 and 50 percent more likely to be malnourished than children not born during a drought. For Ethiopia, that meant two million additional malnourished children in 2005. In Niger, children aged two or less born in a drought year were 72 percent more likely to be stunted, according to the Report.

Table 2.2 Drought in Malawi—how the poor cope		
Behaviours adopted to cope with drought, 1999 (% of people)	Bilantyre Town (%)	Rural Zomba (%)
<b>Dietary adjustments</b>		
• Substituted meat for vegetables	73	93
• Ate smaller portions to make meals last longer	47	91
• Reduced number of meals per day	46	91
• Ate different foods, such as cassava instead of maize	41	89
<b>Expenditure reduction</b>		
• Bought less firewood or paraffin	63	83
• Bought less fertilizer	38	33
<b>Cash generation for food</b>		
• Depleted savings	35	0
• Borrowed money	36	7
• Searched for casual labour ( <i>ganya</i> ) for cash and food	19	59
• Sold livestock and poultry	17	15
• Sold household items and clothes	11	6
• Sent children to look for money	10	0

Source: Devendra 1999.

## Fighting “adaptation apartheid”

The authors emphasize that while carbon dioxide emissions know no borders—one tonne of emissions from Texas does the same damage as one tonne emitted by Niamey, Niger—the capacity of the residents in these locations to cope with the effects of climate change varies dramatically.

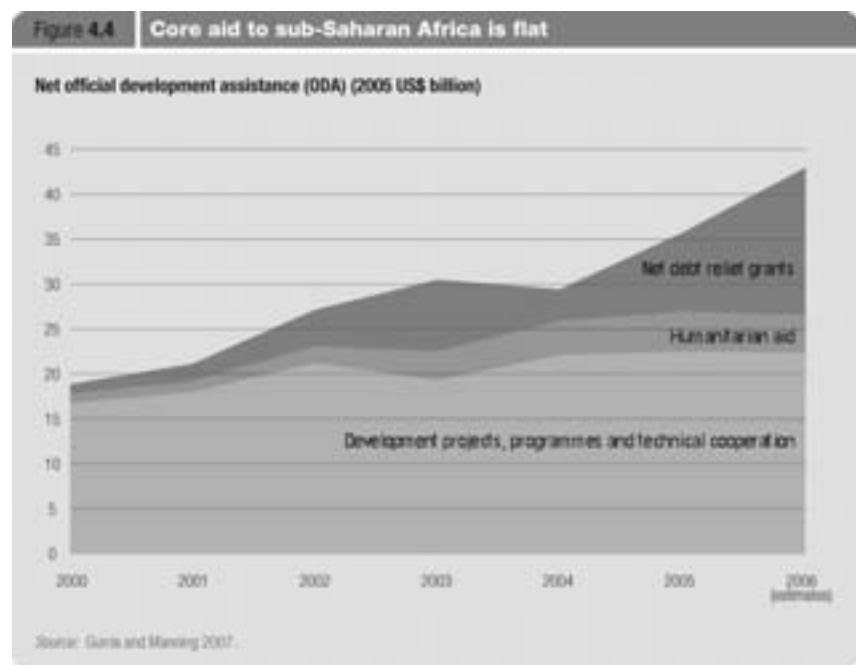
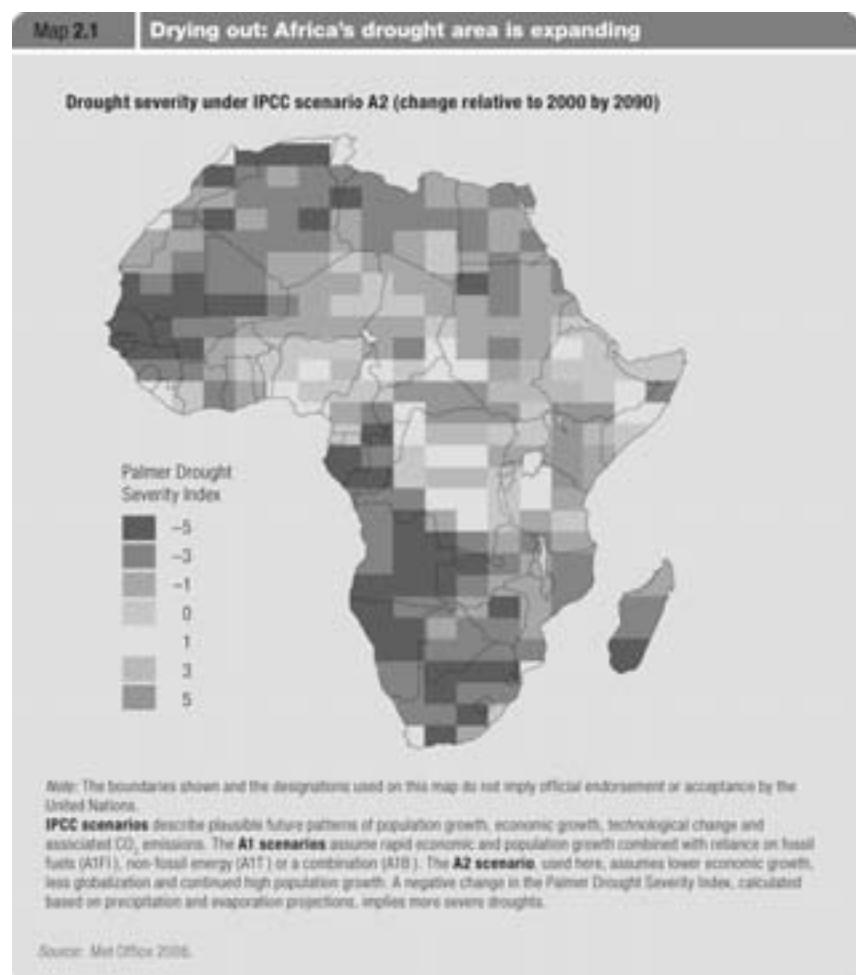
As global warming changes weather patterns in large parts of Africa, crops fail and people go hungry, says **Fighting climate change**. By contrast, “in rich countries, coping with climate change to date has largely been a matter of adjusting thermostats, dealing with longer, hotter summers, and observing seasonal shifts.”

In California, for example, rising winter temperatures are expected to reduce snowfall in the Sierra Nevada mountain range, which acts as a water storage system for the State. As this threatens the availability of water throughout the year, California has developed an extensive system of reservoirs and water channels to maintain flows of water to the dry areas, while also investing heavily in recycling water.

In northern Kenya, by comparison, increased frequency of droughts means that women are walking greater distances to fetch water, often ranging from 10 to 15 kilometres a day, says the Report. This confronts women with personal security risks, keeps young girls out of school and imposes an immense physical burden—a plastic container filled with 20 litres of water weighs around 20 kilograms.

“Leaving the world’s poor to sink or swim with their own meagre resources in the face of the threat posed by climate change is morally wrong,” writes Desmond Tutu, Archbishop Emeritus of Cape Town, South Africa, in the Report, “[but] this is precisely what is happening. We are drifting into a world of ‘adaptation apartheid’.”

Current spending through multilateral mechanisms on adaptation in developing countries has amounted to \$26 million to date—roughly one week’s worth of spending on United Kingdom flood defences. This is nowhere near sufficient, says the Report, and it calls on the developed countries to support a new global investment of at least \$86 billion annually, or 0.2 percent of OECD



countries' combined gross domestic product (GDP), in adaptation efforts to climate-proof infrastructure and build the resilience of the poor to the effects of climate change.

## A pathway for Bali and beyond

**Fighting climate change** stresses that unless dramatic changes happen both at the national and international levels, climate change will stall and then reverse efforts to reach the Millennium Development Goals in Africa. Existing aid investments will be put at risk because of climate-related events and an increasing portion of development money will be diverted to tackling climate disasters rather than long-term development.

With these challenges in mind, the Report lays out two sets of recommendations. The first set relates to the foundations for successful adaptation planning:

- **Expand the continent's meteorological monitoring network**, so that farmers can get better information faster about climate patterns in the region. Currently the continent has one weather station for every 25,460 square kilometres. The Netherlands, by contrast has one site for every 716 square kilometres.
- **Invest in climate proofing infrastructure such as water-storage or “water harvesting” facilities** in countries like Ethiopia, Kenya, and Tanzania with high levels of rainfall concentrated in a few weeks of the year.
- **Improve national social insurance programmes** build resilience while protecting farmers and poor urban residents from the worst effects of climate-related disasters. The Kalomo pilot project in Zambia, providing \$6 a month to families in the bottom 10 percent of the economy, is a promising example of one such programme.
- **Invest in early-warning systems.** Mozambique's creation of early warning and rapid-response mechanisms following devastating floods in the year 2000 is one such example referred to by the Report's authors.

The second set of recommendations lays out a definitive checklist for all political leaders meeting in Bali in December—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 a total of at least 20 percent by 2050 compared to 1990 levels, and for developed countries by 30 percent by 2020 and at least 80 percent by 2050 compared to 1990 levels.
- **Create a Climate Change Mitigation Facility** to finance the incremental low-carbon energy investment in developing countries to give developing countries 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.
- **Put a proper price on carbon** through a combination of carbon taxation and an ambitious global expansion of cap-and-trade schemes.
- **Increase the capacity of developing countries to participate in the carbon market.**
- **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, while supporting growth and promoting access to energy.
- **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).

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**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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<http://hdr.undp.org/>

**UNDP Contacts:**

New York and Brasilia  
Ms. Niamh Collier  
Tel: +1 212 966 6111  
Cell: +1 917 609 5133  
[niamh.collier@undp.org](mailto:niamh.collier@undp.org)  
Ms. Marisol Sanjines  
Tel: +1 212 966 6763  
Cell: +1 646 201 8036  
[marisol.sanjines@undp.org](mailto:marisol.sanjines@undp.org)

Geneva and Paris  
Mr. Jean Fabre  
Tel: +41 22 917 8542  
Cell: +41 79 437 07 76  
[jean.fabre@undp.org](mailto:jean.fabre@undp.org)

Brussels  
Mr. Peter Thelin  
Tel: +32 2 505 46 28  
Cell: +32 478 31 2027  
[peter.theslin@undp.org](mailto:peter.theslin@undp.org)

Copenhagen  
Ms. Christine Drud  
Tel: +45 35 46 71 54  
Cell: +45 29 45 23 20  
[christine.drud@undp.org](mailto:christine.drud@undp.org)

Tokyo  
Mr. Toshiya Nishigori  
Tel: +81 3 5467 4751  
Cell: +81 90 7200 3295  
or +81 80 2016 3078  
[toshiya.nishigori@undp.org](mailto:toshiya.nishigori@undp.org)

Washington  
Ms. Cara Santos Pianesi  
Tel: +1 202 331 9130  
Cell: +1 202 262 3381  
[cara.santos@undp.org](mailto:cara.santos@undp.org)

Brotislava  
Mr. Zoran Stevanovic  
Tel: +421 2 59337 428  
Cell: +421 908 729 846  
[zoran.stevanovic@undp.org](mailto:zoran.stevanovic@undp.org)

Bangkok  
Ms. Cherie Hart  
Tel: +662 288 2133  
Cell: +66 8 1918 1564  
[cherie.hart@undp.org](mailto:cherie.hart@undp.org)

New Delhi  
Ms. Surekha Subarwal  
Tel: +91 11 46532330  
Cell: +91 9810153924  
[surekha.subarwal@undp.org](mailto:surekha.subarwal@undp.org)

Mexico City  
Ms. Maria Amparo Lasso  
Tel: +5255 52 63 98 94  
Cell: +5255 29 66 79 72  
[maria.lasso@undp.org](mailto:maria.lasso@undp.org)

Moscow  
Ms. Svetlana Kolomiets  
Tel: +7 (495) 787 2100 (ext.2235)  
Cell: +7 916 107-9416  
[svetlana.kolomiets@undp.org](mailto:svetlana.kolomiets@undp.org)

London  
Ms. Chandrika Deshpande  
Tel: +44 020 7396 5338  
Cell: +44 (0) 7957 460 246  
[chandrika.deshpande@undp.org](mailto:chandrika.deshpande@undp.org)



United Nations  
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# Developed countries should provide incentives for Asia to go green

**Setting out a pathway for Bali, the Human Development Report says rich nations must cut emissions by at least 80 percent and invest in adaptation and clean technology for poorer countries**

**Brasilia, 27 November 2007**—Wealthier countries must take the lead in cutting carbon emissions to prevent catastrophic reversals in health, education and poverty reduction for the world's poor, while providing incentives for developing countries like China and India to follow suit, according to the 2007/2008 Human Development Report (HDR) on climate change 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 see the disappearance of the Himalayan glaciers that provide water and food for over two billion people, the displacement of 22 million people in Vietnam and the destruction of 45 percent of Mekong Delta farmland as sea levels continue to rise, the collapse of coral reefs in Indonesia on which local fishermen depend, and annual damage costs of up to seven percent of the gross domestic product (GDP) of small island states like Fiji, Samoa and Vanuatu. Some could disappear completely, warns the Report.

“The carbon budget of the 21<sup>st</sup> 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.”

The world’s richest countries have a historic responsibility to take the lead in balancing the carbon budget by cutting emissions by at least 80 percent by 2050, according to the Report. In addition, they should support a new US\$86 billion global annual investment in substantial international adaptation efforts to protect the world’s poor. Developed countries should also adopt a new mechanism to transfer clean energy technology to developing countries. The Report argues that with the support of such measures, developing Asian countries—especially fast growing and industrializing countries like China and India—should also play their part with total emission cuts of at least 20 percent by 2050.

## A “nine-planet” lifestyle

Across the world, 1.6 billion poor people still rely on wood and animal dung for fuel—930 million of them live in East and South Asia. While they are left in the dark, rich countries are running up the energy bills. If each poor person on the planet had the same energy-rich lifestyle as the United States or Canada nine planets would be needed to

safely cope with the pollution, says **Fighting climate change**.

The Report points out that even though China will overtake the US as the world's largest emitter of carbon dioxide in the next 10 years, a person in the US still emits on average five times more carbon dioxide than a person in China, or over fifteen times more than a person in India. The average air-conditioning unit in Florida emits more CO<sub>2</sub> in a year than a person in Cambodia during his or her lifetime.

“The critical challenge for Asia in the face of climate change is to expand access to affordable energy, while at the same time decarbonizing growth,” says UNDP Administrator Kemal Derviș, “International cooperation is vital to unlock win-win scenarios that enhance both the climate security and the energy security that are vital for growth and poverty reduction.”

The Report recommends establishing a Climate Change Mitigation Facility (CCMF), financed by developed countries and designed to provide incentives, including access to clean energy technology, to guide developing countries to a greener development pathway.

This is essential because developing countries will be responsible for an increasing share of emissions, say the authors. For example, the current level of power generation capacity in China is set to double by 2015—equivalent to current capacity in Germany, Japan and the United Kingdom combined—and will rise another 60 percent by 2030. Coal is likely to account for three-quarters of the total increase. Over the same period in India, power generation capacity will amount to roughly twice current power generation in California, again with coal as the lead source. As such, the authors stress that addressing climate change effectively will require serious investment in the cleanest possible coal technologies coupled with an increase in the use of clean and renewable energy sources and maximum energy efficiency.

“Properly financed technology transfer from rich countries to poor countries has to be the entry price that developed countries pay for their carbon trail,” says Mr. Watkins.

## Deforestation

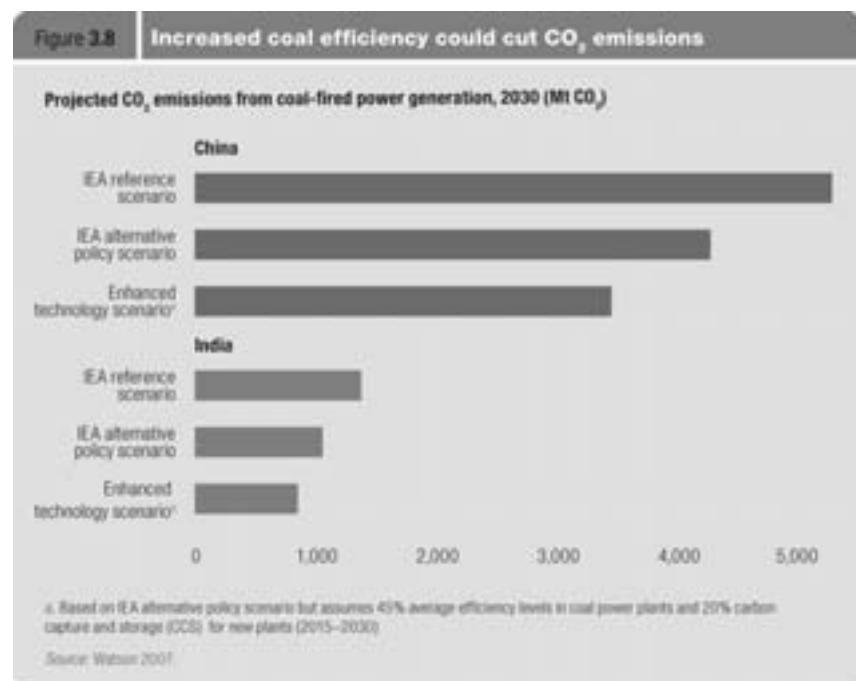
**Fighting climate change** emphasizes that a key driver of growing emissions is deforestation, though the profit made from felling trees across the developing world could be dwarfed by the benefits of conservation.

In Indonesia, for example, oil palm cultivation generates an estimated value of \$14 per hectare, says the Report. “As the trees that stood on that hectare burn and rot, they release CO<sub>2</sub> into the atmosphere—perhaps 500 tonnes a hectare in dense rainforest. At a carbon price of \$20-30 a tonne, a plausible future range on the (European Union) Emissions

Table 3.3 Carbon emissions are linked to coal plant technology			
	Approx. CO <sub>2</sub> emissions (g/kWh)	Reduction from Chinese average (%)	Lifetime CO <sub>2</sub> saving (Mt CO <sub>2</sub> ) <sup>a</sup>
<b>Coal-fired plants:</b>			
Chinese coal-fired fleet average, 2006	1140	—	—
Global standard	892	22	73.3
Advanced cleaner coal	733	36	120.5
Supercritical coal with carbon capture	94	92	310.8

a. Lifetime savings assume a 1GW plant running for 40 years at an average capacity factor of 85 percent in comparison with a similar plant with Chinese average efficiency (currently 29 percent).

Sources: Watson et al. 2007.



Trading Scheme) EU ETS, the carbon market value of that release would amount to \$10,000–15,000 a hectare.” Put differently, farmers in Indonesia are trading a carbon bank asset worth at least \$10,000 in terms of climate change mitigation for around two percent of its value, says the Report.

“Countries are losing assets that could have real value in terms of carbon finance. And people depending on forests for

Appendix table 1.J

**Measuring the global carbon footprint—selected countries and regions**

Top 30 CO <sub>2</sub> emitters	Carbon dioxide emissions <sup>a</sup>									
	Total emissions (Mt CO <sub>2</sub> )		Growth rate (%)		Share of world total (%)		Population share (%)		CO <sub>2</sub> emissions per capita (t CO <sub>2</sub> )	CO <sub>2</sub> emissions or sequestration from forests <sup>b</sup> (Mt CO <sub>2</sub> /year)
	1990	2004	1990–2004	1990	2004	2004	1990	2004	1990–2005	
1 United States	4,818	6,046	25	21.2	20.9	4.6	19.3	20.6	-500	
2 China <sup>c</sup>	2,399	5,007	109	10.6	17.3	20.0	2.1	3.8	-335	
3 Russian Federation	1,984 <sup>d</sup>	1,524	-23 <sup>e</sup>	8.7 <sup>f</sup>	5.3	2.2	13.4 <sup>f</sup>	10.6	72	
4 India	682	1,342	97	3.0	4.6	17.1	0.8	1.2	-41	
5 Japan	1,071	1,257	17	4.7	4.3	2.0	8.7	9.9	-118	
6 Germany	980	808	-18	4.3	2.8	1.3	12.3	9.8	-75	
7 Canada	416	639	54	1.8	2.2	0.5	15.0	20.0	-	
8 United Kingdom	579	587	-1	2.6	2.0	0.9	10.0	9.8	-4	
9 Korea (Republic of)	241	465	93	1.1	1.6	0.7	5.6	9.7	-32	
10 Italy	399	450	15	1.7	1.6	0.9	6.9	7.8	-52	
11 Mexico	413	438	6	1.8	1.5	1.6	5.0	4.2	-	
12 South Africa	332	437	32	1.5	1.5	0.7	9.1	9.8	(1)	
13 Iran (Islamic Republic of)	218	423	99	1.0	1.5	1.1	4.0	6.4	-2	
14 Indonesia	214	378	77	0.9	1.3	3.4	1.2	1.7	2,271	
15 France	364	373	3	1.6	1.3	0.9	6.4	6.0	-44	
16 Brazil	210	332	58	0.9	1.1	2.8	1.4	1.8	1,111	
17 Spain	212	330	56	0.9	1.1	0.7	5.5	7.6	-28	
18 Ukraine	600 <sup>d</sup>	300	-45 <sup>e</sup>	2.8 <sup>f</sup>	1.1	0.7	11.5 <sup>f</sup>	7.0	-60	
19 Australia	278	327	17	1.2	1.1	0.3	16.3	16.2	-	
20 Saudi Arabia	255	308	21	1.1	1.1	0.4	15.9	13.6	(1)	
21 Poland	348	307	-12	1.5	1.1	0.6	9.1	8.0	-44	
22 Thailand	96	268	180	0.4	0.9	1.0	1.7	4.2	-18	
23 Turkey	146	226	55	0.6	0.8	1.1	2.6	3.2	-18	
24 Kazakhstan	259 <sup>d</sup>	209	-23 <sup>e</sup>	1.1 <sup>f</sup>	0.7	0.2	15.7 <sup>f</sup>	13.3	(1)	
25 Algeria	77	194	152	0.3	0.7	0.5	3.0	5.5	-6	
26 Malaysia	55	177	221	0.2	0.6	0.4	3.0	7.5	3	
27 Venezuela (Bolivarian Republic of)	117	173	47	0.5	0.6	0.4	6.0	6.6	-	
28 Egypt	75	158	110	0.3	0.5	1.1	1.5	2.3	-1	
29 United Arab Emirates	55	149	173	0.2	0.5	0.1	27.2	34.1	-1	
30 Netherlands	141	142	1	0.6	0.5	0.2	9.4	8.7	-1	
World aggregates										
OECD <sup>g</sup>	11,205	13,319	19	49	46	18	10.8	11.5	-1,000	
Central & Eastern Europe & CIS	4,182	3,168	-24	18	11	6	10.3	7.9	-166	
Developing countries	6,833	12,303	80	30	42	79	1.7	2.4	5,092	
East Asia and the Pacific	3,414	6,682	96	15	23	30	2.1	3.5	2,294	
South Asia	991	1,955	97	4	7	24	0.8	1.3	-49	
Latin America & the Caribbean	1,068	1,423	31	5	5	8	2.5	2.6	1,667	
Arab States	734	1,348	84	3	5	5	3.3	4.5	44	
Sub-Saharan Africa	456	663	45	2	2	11	1.0	1.0	1,154	
Least developed countries	74	146	97	1	1	11	0.2	0.2	1,098	
High human development	14,495	16,816	15	64	57	25	9.8	10.1	90	
Medium human development	5,946	10,215	72	26	35	64	1.8	2.5	3,027	
Low human development	78	162	108	1	1	8	0.3	0.3	858	
High income	10,572	12,975	23	47	45	15	12.1	13.3	-937	
Middle income	8,971	12,163	36	40	42	47	3.4	4.0	3,693	
Low income	1,325	2,084	57	6	7	37	0.8	0.9	1,275	
World	22,703 <sup>i</sup>	26,983 <sup>i</sup>	28	100 <sup>j</sup>	100 <sup>j</sup>	100 <sup>j</sup>	4.3	4.5	4,038	

**NOTES**

- <sup>a</sup> Data refer to carbon dioxide emissions stemming from the combustion of solid, liquid and gaseous fossil fuels and from gas flaring and production of cement.
- <sup>b</sup> Data refer only to living biomass—above and below ground, carbon in deadwood, soil and litter are not included. Refer to annual average net emissions or sequestration due to changes in carbon stock of forest biomass. A positive number

suggests carbon emissions while a negative number suggests carbon sequestration.

<sup>c</sup> CO<sub>2</sub> emissions for China do not include emissions for Taiwan Province of China, which were 124 Mt CO<sub>2</sub> in 1990 and 241 Mt CO<sub>2</sub> in 2004.

<sup>d</sup> Data refer to 1990 and growth rate values refer to the 1990–2004 period.

<sup>e</sup> OECD as a region includes the following countries that are also included in other subregions listed here: Czech Republic, Hungary, Mexico, Poland,

Republic of Korea and Slovakia. Therefore, in some instances, the sum of individual regions may be greater than the world total.

<sup>f</sup> The world total includes carbon dioxide emissions not included in national totals, such as those from bunker fuels and oxidation of non-fuel hydrocarbon products (e.g., asphalt), and emissions by countries not shown in the main indicator tables. These emissions amount to approximately 5% of the world total.

their livelihoods are losing out to economic activities operating on the basis of a false economy,” stress the authors, who call for carbon sequestration from both forests and land to be recognized as an essential parts of December’s climate change negotiations in Bali.

### Fighting “adaptation apartheid”

As the climate changes, poor people are being forced to cope with increasing climate shocks and long term risks—and the price of doing so is likely to leave their prospects for human development bankrupt, says ***Fighting climate change***. Even if stringent emission cuts are put into place now, the two thirds of the world’s poor that live in Asia will be increasingly vulnerable to rising temperatures. They must be given meaningful assistance now to adapt, stress the authors.

“The poor are not in a position to manage added risks. When there is a drought, they sell their seeds and livestock, they withdraw their children from school, the whole family starts skipping meals,” says Mr. Watkins. This varies dramatically with how rich countries cope, says the Report.

In the low-lying Netherlands, for example, homeowners are preparing for flooding with the assistance of the Government by building homes with foundations like the hull of a ship that can float on water, yet in the densely populated villages of the Mekong Delta in Vietnam, locals have been left to adapt with swimming lessons and lifejackets. While the rich are learning how to float on water, the poor are learning how to float in it, “creating a world of ‘adaptation apartheid’,” writes Desmond Tutu, Archbishop Emeritus of Cape Town, South Africa, in the Report.

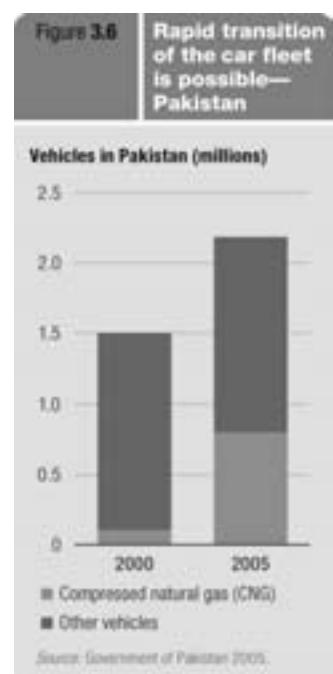
There are examples of how adaptation efforts can make a difference. The ‘char’ islands of Bangladesh are home to 2.5 million people, 80 percent of whom live in extreme poverty and all of whom live in constant risk of flooding. Recent efforts to construct homes on earthen platforms and provide hand pumps and latrines to secure clean water and sanitation mean that 56,000 of the char dwellers are less vulnerable to flooding than before. According to the Report, every \$1 invested in this adaptation initiative protects \$2-3 of assets that would otherwise be lost during flooding, without mention of the highly damaging implications of flooding for nutrition, health and education that may be avoided.

Yet the finance needed to support such practical initiatives to protect the poor is not available, stress the authors. In fact, says the Report, total current spending through multilateral mechanisms on adaptation in developing countries has amounted to only \$26 million to date—roughly one week’s worth of spending on United Kingdom flood defences. This is nowhere near sufficient, says the Report, and it calls on the developed countries to support a new global investment of \$86 billion annually, or 0.2 percent of northern countries’ combined GDP, in adaptation efforts to climate-proof infrastructure and build the resilience of the poor to the effects of climate change.

### Pathway for Bali

***Fighting climate change*** lays out a definitive checklist for all political leaders meeting in Bali in December—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 and from developed countries by 30 percent by 2020 and at least 80 percent by 2050, compared to 1990 levels.
- **Create a Climate Change Mitigation Facility** 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 of \$25-50 billion annually.
- **Put a proper price on carbon** through a combination of carbon taxation and an



ambitious global expansion of cap-and-trade schemes.

- **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).
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- **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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#### UNDP Contacts:

New York and Brasilia

Ms. Niamh Collier  
Tel: +1 212 966 6111  
Cell: +1 917 609 5133  
[niamh.collier@undp.org](mailto:niamh.collier@undp.org)  
Ms. Marisol Sanjines  
Tel: +1 212 966 6763  
Cell: +1 646 201 8036  
[marisol.sanjines@undp.org](mailto:marisol.sanjines@undp.org)

Geneva and Paris

Mr. Jean Fabre  
Tel: +41 22 917 8542  
Cell: +41 79 437 07 76  
[jean.fabre@undp.org](mailto:jean.fabre@undp.org)

Brussels

Mr. Peter Thesen  
Tel: +32 2 505 46 28  
Cell: +32 478 31 2027  
[peter.thesen@undp.org](mailto:peter.thesen@undp.org)

Copenhagen

Ms. Christine Drud  
Tel: +45 35 46 71 54  
Cell: +45 29 45 23 20  
[christine.drud@undp.org](mailto:christine.drud@undp.org)

Tokyo

Mr. Toshiya Nishigori  
Tel: +81 3 5467 4751  
Cell: +81 90 7200 3295  
or +81 80 2016 3078  
[toshiya.nishigori@undp.org](mailto:toshiya.nishigori@undp.org)

Washington

Ms. Cara Santos Pianesi  
Tel: +1 202 331 9130  
Cell: +1 202 262 3381  
[cara.santos@undp.org](mailto:cara.santos@undp.org)

Brazília

Mr. Zoran Stevanovic  
Tel: +421 2 59337 428  
Cell: +421 908 729 846  
[zoran.stevanovic@undp.org](mailto:zoran.stevanovic@undp.org)

Bangkok

Ms. Cherie Hart  
Tel: +662 288 2133  
Cell: +66 8 1918 1564  
[cherie.hart@undp.org](mailto:cherie.hart@undp.org)

New Delhi

Ms. Surekha Subarwal  
Tel: +91 11 46532330  
Cell: +91 9810153924  
[surekha.subarwal@undp.org](mailto:surekha.subarwal@undp.org)

Mexico City

Ms. María Amparo Lasso  
Tel: +5255 52 63 98 94  
Cell: +5255 29 66 79 72  
[maria.lasso@undp.org](mailto:maria.lasso@undp.org)

Moscow

Ms. Svetlana Kolomiets  
Tel: +7 (495) 787 2100 (ext.2235)  
Cell: +7 916 107-9416  
[svetlana.kolomiets@undp.org](mailto:svetlana.kolomiets@undp.org)

London

Ms. Chandrika Deshpande  
Tel: +44 020 7396 5338  
Cell: +44 (0) 7957 460 246  
[chandrika.deshpande@undp.org](mailto:chandrika.deshpande@undp.org)



United Nations  
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# Climate change widens the inequality gap in Latin America and the Caribbean

## 2007/2008 Human Development Report sets out climate change pathway for Bali

**Brasilia, 27 November 2007**—Climate change is deepening the divide between the rich and poor across Latin America and the Caribbean, threatening to halt and then reverse advances in health and education for the most vulnerable, according to the United Nations Development Programme (UNDP) Human Development Report (HDR) on climate change launched here today.

Building on the recently-released Intergovernmental Panel on Climate Change (IPCC) Synthesis Report, the 2007/2008 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.

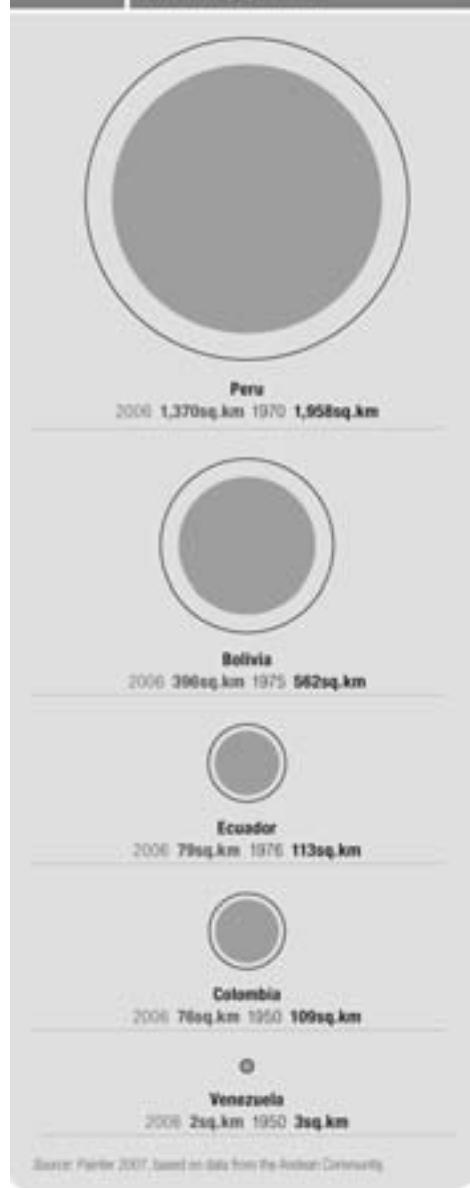
If that window is missed, temperature rises of above two degrees Celsius could see over 10 percent of land in the Bahamas submerged under water, losses of up to 60 percent of rain-fed maize production in Mexico on which two million poor farmers depend, the disappearance of glaciers that provide 80 percent of fresh water to Peruvian cities, and increased cases of dengue fever in previously dengue-free areas of Latin America, says the Report.

“The carbon budget of the 21<sup>st</sup> 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 and Director of the Human Development Report Office, “and the poor—those with the lightest carbon footprint but the least means to protect themselves—are the first victims of developed countries’ energy-rich lifestyle.”

The world’s richest countries have a historic responsibility to take the lead in balancing the carbon budget through a range of measures, says the Report, including: cutting emissions by at least 80 percent by 2050; investing at least an additional US\$86 billion annually in adaptation

Figure 2.7

Latin America's retreating glaciers



Source: Pinter 2007, based on data from the Andean Community

efforts to protect the world's poor; supporting the production of biofuels without eroding the rights of small farmers or indigenous people; and backing efforts to reduce deforestation in countries like Brazil. The Report argues that with the support of such measures and through international cooperation of finance and low carbon technology, developing countries should also play their part with total emission cuts of at least 20 percent by 2050.

### **“Human development traps and trade-offs”**

“Without the fallback of savings, insurance or access to loans, climate change will increasingly force poorer households into human development traps, pushing them to make trade-offs between sending their children to work or to school or cutting down on meals to save money,” says UNDP Administrator Kemal Derviş launching the Report in Brasilia. “Those tradeoffs will reinforce and perpetuate income, gender and other inequalities in Latin America and the Caribbean.”

In Honduras, for example, Hurricane Mitch wiped out over 30 percent of the assets of the poorest quarter of the population, compared with only seven percent of the assets of the richest quarter, says the Report. In Nicaragua, the proportion of children working rather than attending school increased from 7.5 to 15.6 percent in households affected by the same hurricane. The Report also cites household research in Mexico covering the period 1998-2000 that showed an increase in child labour in response to drought.

As the examples illustrate, many of the climate-induced human development traps in Latin America and the Caribbean are natural disaster-related. The authors stress that every \$1 invested in improving natural disaster prevention activities in developing countries could prevent \$7 in losses.

Despite the clear economic rationale, the amount currently invested multilaterally in adaptation in developing countries has amounted to \$26 million to date—roughly one week’s worth of spending on United Kingdom flood defences, says the Report. With this in mind, **Fighting climate change** calls for developed countries to support a new global investment of at least \$86 billion annually, or 0.2 percent of northern countries’ combined gross domestic product (GDP), in adaptation efforts to climate-proof infrastructure and build the resilience of the poor to the effects of climate change.

The authors also call for governments in the Region to strengthen social investment programmes like cash transfer programmes so that people are less vulnerable when climate shocks hit. The Report cites Brazil’s “Bolsa Familia” initiative and Nicaragua’s “Red de Protección Social” as positive examples.

### **A “nine-planet” lifestyle**

Nearly 45 million people in Latin America and the Caribbean live without access to electricity, half of them in Bolivia, Haiti, Honduras, Nicaragua and Peru. While they are left in the dark, richer countries are running up the energy bills. **Fighting climate change** notes that if each poor person on the planet had the same energy-rich lifestyle as an average person in Germany or the United Kingdom, four planets would be needed to safely cope with the pollution. That figure rises to nine planets when compared with the average of the United States or Canada.

Faced with such stark inequality—both within and between countries—the authors note that essential emission cuts should not undermine efforts to get basic energy services to the poor. With this in mind, the authors recommend that developed countries set up a Climate Change Mitigation Facility (CCMF) to finance incremental, low-carbon energy investment in developing countries, giving them the means to switch to low emission pathways without blocking access to energy for their poorest people, along with the incentive to commit to binding international emission cuts.

### **Biofuels and deforestation**

As personal transportation accounts for greater oil consumption than any other activity and is the fastest growing source of CO<sub>2</sub> emissions, developed and developing countries alike should change the mix of fuels in the transport sector to align energy policies with carbon budgets, notes the Report. Brazil offers one of the most successful



examples, with one-third of the country's transport sector now running on sugar-based ethanol, the cleanest and cheapest biofuel developed in recent decades.

Yet both the European Union and the United States are employing protectionist tariffs against Brazilian ethanol, effectively blocking the expansion of markets for this fuel and thereby perpetuating the market advantage enjoyed by more carbon-intensive fuels, says the Report.

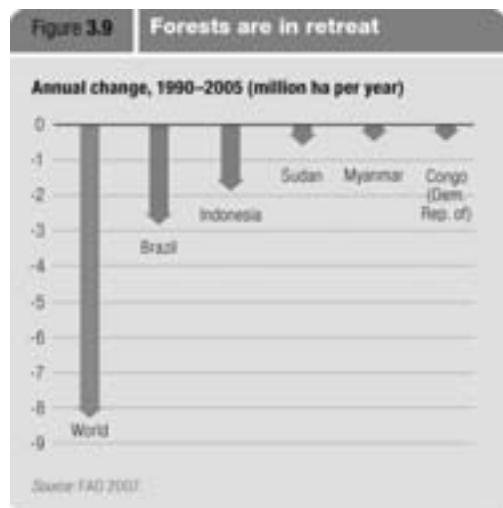
"Claiming to promote clean fuel technology while obstructing its development is an example of what *Fighting climate change* argues is a lack of alignment between what governments say and what they actually do," says Mr. Watkins, as the Report calls for the abolition of ethanol tariffs.

Less than one percent of the sugar production that sustains Brazil's ethanol industry originates from the Amazonia and, as a result, it has not contributed to rainforest destruction. Reducing deforestation is cited by the authors as a priority to ensure CO<sub>2</sub> emissions can be sufficiently mitigated. Yet between 2000 and 2005, net forest loss worldwide averaged 73 thousand square kilometres a year—an area the size of Chile. Every hectare lost adds to greenhouse gas emissions, stress the authors, who recommend international backing for financial transfers to developing countries that voluntarily reduce their greenhouse gas emissions by maintaining their forests.

### A pathway for Bali and beyond

The combined recommendations of *Fighting climate change* lay out a definitive checklist for all political leaders meeting in Bali in December—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 and from developed countries by 30 percent by 2020 and at least 80 percent by 2050, compared to 1990 levels;
- **Create a Climate Change Mitigation Facility (CCMF)** to mobilize the \$25-50 billion needed annually to finance low-carbon energy investment in developing countries;
- **Allocate \$86 billion annually to adaptation**, or 0.2 percent of northern countries' combined GDP;
- **Put a proper price on carbon** through a combination of carbon taxation and an ambitious global expansion of cap-and-trade schemes;
- **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);
- **Make adaptation part of all plans to reduce poverty and extreme inequality**, including poverty reduction strategy papers;
- **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.



The Report 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.”

\* \* \* \*

**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.

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<http://hdr.undp.org/>

**UNDP Contacts:**

New York and Brasilia  
Ms. Niamh Collier  
Tel: +1 212 906 6111  
Cell: +1 917 609 5133  
[niamh.collier@undp.org](mailto:niamh.collier@undp.org)

Ms. Marisol Sanjines  
Tel: +1 212 906 6763  
Cell: +1 646 201 8036  
[marisol.sanjines@undp.org](mailto:marisol.sanjines@undp.org)

Geneva and Paris  
Mr. Jean Fabre  
Tel: +41 22 917 8542  
Cell: +41 79 437 07 76  
[jean.fabre@undp.org](mailto:jean.fabre@undp.org)

Brussels  
Mr. Peter Thelin  
Tel: +32 2 505 46 28  
Cell: +32 478 31 2027  
[peter.thelin@undp.org](mailto:peter.thelin@undp.org)

Copenhagen  
Ms. Christine Drud  
Tel: +45 35 46 71 54  
Cell: +45 29 45 23 20  
[christine.drud@undp.org](mailto:christine.drud@undp.org)

Tokyo  
Mr. Toshiya Nishigori  
Tel: +81 3 5467 4751  
Cell: +81 90 7200 3295  
or +81 80 2016 3078  
[toshiya.nishigori@undp.org](mailto:toshiya.nishigori@undp.org)

Washington  
Ms. Cara Santos Pianesi  
Tel: +1 202 331 9130  
Cell: +1 202 262 3381  
[cara.santos@undp.org](mailto:cara.santos@undp.org)

Broatislava  
Mr. Zoran Stevanovic  
Tel: +421 2 59337 428  
Cell: +421 908 729 846  
[zoran.stevanovic@undp.org](mailto:zoran.stevanovic@undp.org)

Bangkok  
Ms. Cherie Hart  
Tel: +662 288 2133  
Cell: +66 8 1918 1564  
[cherie.hart@undp.org](mailto:cherie.hart@undp.org)

New Delhi  
Ms. Surekha Subarwal  
Tel: +91 11 46532330  
Cell: +91 9810153924  
[surekha.subarwal@undp.org](mailto:surekha.subarwal@undp.org)

Mexico City  
Ms. María Amparo Lasso  
Tel: +5255 52 63 98 94  
Cell: +5255 29 66 79 72  
[maria.lasso@undp.org](mailto:maria.lasso@undp.org)

Moscow  
Ms. Svetlana Kolomiets  
Tel: +7 (495) 787 2100 (ext.2235)  
Cell: +7 916 107-9416  
[svetlana.kolomiets@undp.org](mailto:svetlana.kolomiets@undp.org)

London  
Ms. Chandrika Deshpande  
Tel: +44 020 7396 5338  
Cell: +44 (0) 7957 460 246  
[chandrika.deshpande@undp.org](mailto:chandrika.deshpande@undp.org)



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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 21<sup>st</sup> 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 Derviš, “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 <sub>2</sub> emissions (Mt CO <sub>2</sub> )		CO <sub>2</sub> emissions per capita (t CO <sub>2</sub> )		Energy intensity (Energy used per unit of GDP PPP US\$)		Carbon intensity (CO <sub>2</sub> per unit of GDP PPP US\$)		
	1990	2000	2004	1990	2004	1990	2004	1990	2004
Russian Federation *	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 *	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 *	138	119	117	13.4	11.4	0.32	0.26	1.03	0.66
Slovakia *	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.

Sources: 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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<http://hdr.undp.org/>

**UNDP Contacts:**

New York and Brasilia  
Ms. Niamh Collier  
Tel: +1 212 966 6111  
Cell: +1 917 609 5133  
[niamh.collier@undp.org](mailto:niamh.collier@undp.org)  
Ms. Marisol Sanjines  
Tel: +1 212 966 6763  
Cell: +1 646 201 8036  
[marisol.sanjines@undp.org](mailto:marisol.sanjines@undp.org)

Geneva and Paris  
Mr. Jean Fabre  
Tel: +41 22 917 8542  
Cell: +41 79 437 07 76  
[jean.fabre@undp.org](mailto:jean.fabre@undp.org)

Brussels  
Mr. Peter Thoeni  
Tel: +32 2 505 46 28  
Cell: +32 478 81 2027  
[peter.thoeni@undp.org](mailto:peter.thoeni@undp.org)

Copenhagen  
Ms. Christine Drud  
Tel: +45 35 46 71 54  
Cell: +45 29 45 23 20  
[christine.drud@undp.org](mailto:christine.drud@undp.org)

Tokyo  
Mr. Toshiya Nishigori  
Tel: +81 3 5467 4751  
Cell: +81 90 7200 3295  
or +81 80 2016 3078  
[toshiya.nishigori@undp.org](mailto:toshiya.nishigori@undp.org)

Washington  
Ms. Cara Santos Pianesi  
Tel: +1 202 331 9130  
Cell: +1 202 262 3381  
[cara.santos@undp.org](mailto:cara.santos@undp.org)

Broatislava  
Mr. Zoran Stevanovic  
Tel: +421 2 59337 428  
Cell: +421 908 729 846  
[zoran.stevanovic@undp.org](mailto:zoran.stevanovic@undp.org)

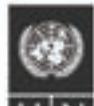
Bangkok  
Ms. Cherie Hart  
Tel: +662 288 2133  
Cell: +66 8 1 918 1564  
[cherie.hart@undp.org](mailto:cherie.hart@undp.org)

New Delhi  
Ms. Surekha Subarwal  
Tel: +91 11 46532330  
Cell: +91 9810153924  
[surekha.subarwal@undp.org](mailto:surekha.subarwal@undp.org)

Mexico City  
Ms. Maria Amparo Lasso  
Tel: +5255 52 63 98 94  
Cell: +5255 29 66 79 72  
[maria.lasso@undp.org](mailto:maria.lasso@undp.org)

Moscow  
Ms. Svetlana Kolomietz  
Tel: +7 (495) 787 2100 (ext.2235)  
Cell: +7 916 107-9416  
[svetlana.kolomietz@undp.org](mailto:svetlana.kolomietz@undp.org)

London  
Ms. Chandrika Deshpande  
Tel: +44 020 7396 5338  
Cell: +44 (0) 7957 460 246  
[chandrika.deshpande@undp.org](mailto:chandrika.deshpande@undp.org)



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# US must climate-proof growth to prevent human development reversals

## The 2007 Human Development Report calls for 80 percent emission cuts by 2050

**San Francisco, 27 November 2007**—The United States has a unique responsibility to “climate-proof” its growth not only to protect Americans but also to prevent catastrophic reversals in health, education and poverty reduction for the world’s poor, according to the Human Development Report (HDR) on climate change launched here today.

As the US prepares to join global leaders in Bali in December to negotiate future action against climate change, the United Nations Development Programme’s (UNDP’s) HDR, entitled **Fighting climate change: Human solidarity in a divided world**, stresses that a narrow ten-year window of opportunity remains to act.

If that window is missed, temperature rises of above four degrees Fahrenheit could see an extra 600 million people in sub-Saharan Africa go hungry, over 200 million more poor people flooded out of their homes and an additional 400 million exposed to diseases like malaria and dengue fever.

“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 four degrees—is being overspent and threatens to run out entirely by 2032,” says Kevin Watkins, lead author and Director of the Human Development Report Office, “and the poor—those with the lightest carbon footprint but the least means to protect themselves—are the first victims of the developed countries’ energy rich lifestyle.”

As the world’s largest economy and one of the biggest CO<sub>2</sub> emitter, the US has a responsibility to take the lead in balancing the carbon budget by cutting emission by 80 percent by 2050, according to the Report, in addition to contributing to a new US\$86 billion annual global investment in substantial international adaptation efforts to protect the world’s poor.

### A “nine-planet” lifestyle

Across the world, 1.6 billion poor people still rely on fuelwood and animal dung for fuel. While they are left in the dark, rich countries are running up the energy bills. If each poor person on the planet had the same energy-rich lifestyle as the average American, nine planets like ours would be needed to safely cope with the pollution, says **Fighting climate change**.

The 19 million people living in New York State have a higher carbon footprint than the 766 million people living in the world’s 50 least developed countries, states the Report, while an average air-conditioning unit in Florida emits more CO<sub>2</sub> in a year than a person in Afghanistan or Cambodia during their lifetime.

## Balancing the carbon budget

While a handful of private and public sector initiatives in the US have successfully reduced emissions in some industries, “voluntary” emission cut policies are not enough, says the Report. Greenhouse gas intensity—the amount of greenhouse gas emissions released per dollar of gross domestic product (GDP) generated—has fallen by one quarter since 1990 in the US but total carbon emissions have risen by one quarter. This means that while economic growth is not as greenhouse gas intensive as it was, emissions continue to climb.

Although the Report stresses that the US approach of focusing on cutting greenhouse gas intensity rather than overall emissions is not enough, the changes required do not imply an overtly pessimistic future: “While the transition to cleaner energy and lifestyles will have short-term costs, there may be economic benefits beyond what is achieved by stabilizing temperatures,” stresses UNDP Administrator Kemal Derviš in the Report. “This could bring new incentives for massive investment, stimulating overall demand and leading to innovation and productivity jumps in a wide array of sectors,” he says.

	CO <sub>2</sub> emissions per capita (t CO <sub>2</sub> ) 2004	Equivalent global CO <sub>2</sub> emissions (Gt CO <sub>2</sub> ) 2004 <sup>b</sup>	Equivalent number of sustainable carbon budgets <sup>c</sup>
			<sup>d</sup>
World <sup>e</sup>	4.5	29	2
Australia	16.2	104	7
Canada	20.0	129	9
France	6.0	39	3
Germany	9.8	63	4
Italy	7.8	50	3
Japan	9.9	63	4
Netherlands	8.7	56	4
Spain	7.6	49	3
United Kingdom	9.8	63	4
United States	20.6	132	9

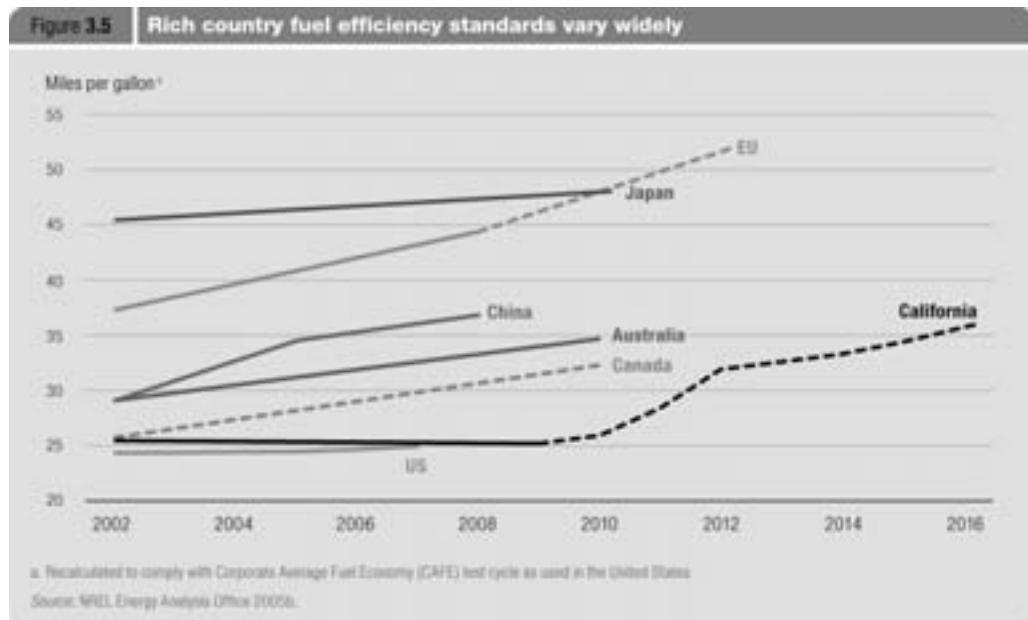
a. As measured in sustainable carbon budgets.

b. Refers to global emissions if every country in the world emitted at the same per capita level as the specified country.

c. Based on a sustainable emissions pathway of 14.5 Gt CO<sub>2</sub> per year.

d. Current global carbon footprint.

Source: HCRD calculations based on Indicator Table 24.



Therefore, **Fighting climate change** sets out a checklist for US officials as they prepare for the Bali climate change negotiations in December. They are as follows:

- Cut emissions 30 percent by 2020 and at least 80 percent by 2050 against a 1990 baseline.
- Invest and promote the deployment of Carbon Capture and Storage (CCS) technology and Integrated Gasification Combined Cycle (IGCC) power plants, emerging technologies that while costly, massively reduce the emissions of coal-fired power stations. Currently only 11 CCS plants worldwide are slated to be brought online by 2015, which is too few, too late. The US should aim at 30 CCS demonstration plants by 2015, and the European Union should have a comparable level of ambition.
- Commit to an increased usage of renewable energy sources, in particular wind and solar.
- Improve regulatory standards for emissions from building and electrical appliances.

- **Raise fuel standards by 20 miles per gallon for cars and light trucks.** This would save 3.5 million barrels of oil per day. The US has the lowest fuel efficiency standards in the developed world—lower, in fact, than in China, stress the authors.
- **Recognize carbon sequestration** on forests and land as essential parts of a future global agreement.
- **Put a proper price on carbon** through a combination of carbon taxation and cap-and-trade schemes. A carbon tax in advanced economies, could generate over \$250 billion per year that can be used for investments in international adaptation and mitigation programmes.
- **Introduce national legislation designed to expand regional initiatives such as the Regional Greenhouse Gas Initiative and Western Regional Climate Action Initiative** around emissions-trading.

Some progress is being made, stress the authors. As the House and Senate negotiate a new energy bill in the US Congress, issues including efficiency targets, renewable electricity generation and how cancelled tax breaks on big oil companies can be invested in renewable energy are already on the table. In states like California, New York and Texas, many of these proposals are already being actively considered or implemented, while several hundred US cities, with populations totaling 65 million people, have signed on to meet their local Kyoto Protocol obligations.

California, the world's sixth largest economy, is setting the global standard for action on climate change mitigation, according to the Report. The State's 2006 Global Warming Solutions Act requires California to cap greenhouse gas emissions by 2020 at 1990 levels, with a long-term reduction goal of 80 percent by 2050. This legislation represents the first enforceable state-wide programme to cap emissions from all major industries, with built-in penalties for non-compliance.

The State is also pioneering higher standards for vehicle emissions, requiring a 30 percent reduction in greenhouse gas emissions from new vehicles by 2016, stringent emission standards for electricity designed to drive low-carbon electricity generation, and by 2020, California aims to generate 20 percent of its power from renewable sources.

### **“Climate-proofing” the US**

However, mitigation alone is not enough, warns *Fighting climate change*. Even the most stringent cuts will not start to have a major impact until the mid-2030s and temperatures will continue to rise through to 2050, cautions the Report.

In the meantime, as Hurricane Katrina and the destruction of much of New Orleans demonstrated all too vividly, the Gulf Coast states and the oil facilities in the Gulf of Mexico stand at risk of being more frequently battered by evermore devastating hurricanes due to warming oceans. Lower Manhattan in New York risks submersion with rising sea levels driven by the accelerated melting of the Greenland and west Antarctic ice caps, say the authors.

Increasing reliance on coal-fired power plants to meet surging energy needs in the US means that the country faces a hefty and mounting bill to climate-proof its own country. With each year's delay in starting to reduce CO<sub>2</sub> emissions, that bill increases. Authorities in the US are considering proposals for building over 150 coal-fired power plants, with planned investment of \$145 billion to 2030, highlights the Report.

### **Fighting “adaptation apartheid”**

Poor people in developing countries are being landed with similarly increasing climate-proofing bills they cannot afford to pay. Their ways of coping vary dramatically to those of rich countries.

In the low-lying Netherlands, for example, homeowners are preparing for flooding with the assistance of the government by building homes with foundations like the hull of a ship that can float on water, yet in the densely populated villages of the Mekong Delta in Viet Nam, locals are left to adapt with swimming lessons and lifejackets. While the rich are learning how to float on water, the poor at best are learning how to float in it, “creating a world of ‘adaptation apartheid’,” writes Desmond Tutu, Archbishop Emeritus of Cape Town, South Africa, in the Report.

Total current spending through multilateral mechanisms on adaptation in developing countries has amounted to only \$26 million to date—roughly one week’s worth of spending on United Kingdom flood defences. This is nowhere near sufficient, says the Report, and it calls on the United States to support a new global annual investment of \$86 billion, or 0.2 percent of northern countries’ combined GDP, in adaptation efforts to climate-proof infrastructure and build the resilience of the poor to the effects of climate change.

**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.”

\* \* \* \*

**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.

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<http://hdr.undp.org/>

**UNDP Contacts:**

New York and Brasilia  
Ms. Niamh Collier  
Tel: +1 212 966 6111  
Cell: +1 917 609 5133  
[niamh.collier@undp.org](mailto:niamh.collier@undp.org)  
Ms. Marisol Sanjines  
Tel: +1 212 966 6763  
Cell: +1 646 201 8036  
[marisol.sanjines@undp.org](mailto:marisol.sanjines@undp.org)

Geneva and Paris  
Mr. Jean Fabre  
Tel: +41 22 917 8542  
Cell: +41 79 437 07 76  
[jean.fabre@undp.org](mailto:jean.fabre@undp.org)

Brussels  
Mr. Peter Thelin  
Tel: +32 2 505 46 28  
Cell: +32 478 81 2027  
[peter.theslin@undp.org](mailto:peter.theslin@undp.org)

Copenhagen  
Ms. Christine Drud  
Tel: +45 35 46 71 54  
Cell: +45 29 45 23 20  
[christine.drud@undp.org](mailto:christine.drud@undp.org)

Tokyo  
Mr. Toshiya Nishigori  
Tel: +81 3 5467 4751  
Cell: +81 90 7200 3295  
or +81 80 2016 3078  
[toshiya.nishigori@undp.org](mailto:toshiya.nishigori@undp.org)

Washington  
Ms. Cara Santos Pianesi  
Tel: +1 202 331 9130  
Cell: +1 202 262 3381  
[cara.santos@undp.org](mailto:cara.santos@undp.org)

Broatislava  
Mr. Zoran Stevanovic  
Tel: +421 2 59337 428  
Cell: +421 908 729 846  
[zoran.stevanovic@undp.org](mailto:zoran.stevanovic@undp.org)

Bangkok  
Ms. Cherie Hart  
Tel: +662 288 2133  
Cell: +66 8 1918 1564  
[cherie.hart@undp.org](mailto:cherie.hart@undp.org)

New Delhi  
Ms. Surekha Subarwal  
Tel: +91 11 46532330  
Cell: +91 9810153924  
[surekha.subarwal@undp.org](mailto:surekha.subarwal@undp.org)

Mexico City  
Ms. Maria Amparo Lasso  
Tel: +5255 52 63 98 94  
Cell: +5255 29 66 79 72  
[maria.lasso@undp.org](mailto:maria.lasso@undp.org)

Moscow  
Ms. Svetlana Kolomietz  
Tel: +7 (495) 787 2100 (ext.2235)  
Cell: +7 916 107-9416  
[svetlana.kolomietz@undp.org](mailto:svetlana.kolomietz@undp.org)

London  
Ms. Chandrika Deshpande  
Tel: +44 020 7396 5338  
Cell: +44 (0) 7957 460 246  
[chandrika.deshpande@undp.org](mailto:chandrika.deshpande@undp.org)



United Nations  
Development  
Programme

Strictly embargoed until 12:00 GMT (10 am in Brasilia) 27 November 2007

# Photo finish between Iceland and Norway to top human development ranking

## The 2007 Human Development Report says Iceland now leads annual United Nations Index

**Brasilia, 27 November 2007**—Iceland has narrowly passed Norway to take the top spot on the Human Development Index (HDI), according to the 2007/2008 Human Development Report (HDR) released by the United Nations Development Programme (UNDP) today. Norway had held the number one ranking for the previous six years. This change in ranking is a result of new estimates of life expectancy and updated GDP per capita figures, stress the Report authors.

Introduced with the first HDR in 1990, the HDI assesses the state of human development through life expectancy, adult literacy and school enrolment at the primary, secondary and tertiary level, along with income, based on the most recent reliable data from UN partners and other official sources. Due to shifts in how countries report the statistics from which the rankings are calculated, the Index is subject to regular adjustment.

The Index analyses 2005 statistics from 175 UN member countries along with Hong Kong (Special Administrative Region of China) and the occupied Palestinian territories. The HDI rankings this year do not include 17 UN member nations, among them Afghanistan, Iraq and Somalia, due to insufficient reliable data.

Twenty-two countries—all in sub-Saharan Africa—fall into the category of “low human development.” In ten of these countries, two children in five will not reach the age of 40; in the case of Zambia that figure rises to one child in two. By contrast, amongst the top 20 countries, only in Denmark and the United States will fewer than 9 children in ten reach the age of 60.

In most countries, including Brazil, China and India, human development has risen over the last 30 years, but some countries have shifted into reverse gear. In all, 16 countries have a lower HDI today than in 1990. Three of these countries—the Democratic Republic of the Congo, Zambia and Zimbabwe—have lower rates of human development than they did in 1975.

### Higher development, higher emissions

This year’s HDR, entitled **Fighting climate change: Human solidarity in a divided world**, which focuses on the impact of climate change on the world’s poor and vulnerable, highlights that the role of energy in human development is reflected in the record of emissions of CO<sub>2</sub>.

According to the Report, the top 20 countries in the HDI emitted more CO<sub>2</sub> in 2004 than all the medium and low human development countries combined, while China and India are the largest emitters of CO<sub>2</sub> amongst developing countries, together they emitted less in 2004 than the top 32 countries in the HDI excluding the United States. By itself, the United States emitted almost as much as China and India combined in 2004.

\* \* \* \*

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# HUMAN DEVELOPMENT REPORT 2007/2008

<http://hdr.undp.org>

## HUMAN DEVELOPMENT INDEX

The HDI measures achievements in terms of life expectancy, educational attainment and adjusted real income

HDI rank	HDI rank	HDI rank
High human development	Medium human development	Low human development
1 Iceland	71 Dominica	137 Mauritania
2 Norway	72 Saint Lucia	138 Lesotho
3 Australia	73 Kazakhstan	139 Congo
4 Canada	74 Venezuela	140 Bangladesh
5 Ireland	(Bolivarian Republic of)	141 Swaziland
6 Sweden	75 Colombia	142 Nepal
7 Switzerland	76 Ukraine	143 Madagascar
8 Japan	77 Samoa	144 Cameroon
9 Netherlands	78 Thailand	145 Papua New Guinea
10 France	79 Dominican Republic	146 Haiti
11 Finland	80 Belize	147 Sudan
12 United States	81 China	148 Kenya
13 Spain	82 Grenada	149 Djibouti
14 Denmark	83 Armenia	150 Timor-Leste
15 Austria	84 Turkey	151 Zimbabwe
16 United Kingdom	85 Suriname	152 Togo
17 Belgium	86 Jordan	153 Yemen
18 Luxembourg	87 Peru	154 Uganda
19 New Zealand	88 Lebanon	155 Gambia
20 Italy	89 Ecuador	
21 Hong Kong, China (SAR)	90 Philippines	
22 Germany	91 Tunisia	
23 Israel	92 Fiji	
24 Greece	93 Saint Vincent and the Grenadines	
25 Singapore	94 Iran (Islamic Republic of)	
26 Korea (Republic of)	95 Paraguay	
27 Slovenia	96 Georgia	
28 Cyprus	97 Guyana	
29 Portugal	98 Azerbaijan	
30 Brunei Darussalam	99 Sri Lanka	
31 Barbados	100 Maldives	
32 Czech Republic	101 Jamaica	
33 Kuwait	102 Cape Verde	
34 Malta	103 El Salvador	
35 Qatar	104 Algeria	
36 Hungary	105 Viet Nam	
37 Poland	106 Occupied Palestinian Territories	
38 Argentina	107 Indonesia	
39 United Arab Emirates	108 Syrian Arab Republic	
40 Chile	109 Turkmenistan	
41 Bahrain	110 Nicaragua	
42 Slovakia	111 Moldova	
43 Lithuania	112 Egypt	
44 Estonia	113 Uzbekistan	
45 Latvia	114 Mongolia	
46 Uruguay	115 Honduras	
47 Croatia	116 Kyrgyzstan	
48 Costa Rica	117 Bolivia	
49 Bahamas	118 Guatemala	
50 Seychelles	119 Gabon	
51 Cuba	120 Vanuatu	
52 Mexico	121 South Africa	
53 Bulgaria	122 Tajikistan	
54 Saint Kitts and Nevis	123 Sao Tome and Principe	
55 Tonga	124 Botswana	
56 Libyan Arab Jamahiriya	125 Namibia	
57 Antigua and Barbuda	126 Morocco	
58 Oman	127 Equatorial Guinea	
59 Trinidad and Tobago	128 India	
60 Romania	129 Solomon Islands	
61 Saudi Arabia	130 Lao People's Democratic Republic	
62 Panama	131 Cambodia	
63 Malaysia	132 Myanmar	
64 Belarus	133 Bhutan	
65 Mauritius	134 Comoros	
66 Bosnia and Herzegovina	135 Ghana	
67 Russian Federation	136 Pakistan	
68 Albania		
69 Macedonia (TFYR)		
70 Brazil		



<http://hdr.undp.org/>

**UNDP Contacts:**

New York and Brasilia  
Ms. Niamh Collier  
Tel: +1 212 906 6111  
Cell: +1 917 609 5133  
[niamh.collier@undp.org](mailto:niamh.collier@undp.org)  
Ms. Marisol Sanjines  
Tel: +1 212 906 6763  
Cell: +1 646 201 8036  
[marisol.sanjines@undp.org](mailto:marisol.sanjines@undp.org)

Geneva and Paris  
Mr. Jean Fabre  
Tel: +41 22 917 8542  
Cell: +41 79 437 07 76  
[jean.fabre@undp.org](mailto:jean.fabre@undp.org)

Brussels  
Mr. Peter Thesin  
Tel: +32 2 505 46 28  
Cell: +32 478 31 2027  
[peter.thesin@undp.org](mailto:peter.thesin@undp.org)

Copenhagen  
Ms. Christine Drud  
Tel: +45 35 46 71 54  
Cell: +45 29 45 23 20  
[christine.drud@undp.org](mailto:christine.drud@undp.org)

Tokyo  
Mr. Toshiya Nishigori  
Tel: +81 3 5467 4751  
Cell: +81 70 7200 3295  
or +81 80 2016 3078  
[toshiya.nishigori@undp.org](mailto:toshiya.nishigori@undp.org)

Washington  
Ms. Cara Santos Pianesi  
Tel: +1 202 331 9130  
Cell: +1 202 262 3381  
[cara.santos@undp.org](mailto:cara.santos@undp.org)

Brazílava  
Mr. Zoran Stevanovic  
Tel: +421 2 59337 428  
Cell: +421 908 729 846  
[zoran.stevanovic@undp.org](mailto:zoran.stevanovic@undp.org)

Bangkok  
Ms. Cherie Hart  
Tel: +66 2 288 2133  
Cell: +66 8 1 918 1564  
[cherie.hart@undp.org](mailto:cherie.hart@undp.org)

New Delhi  
Ms. Surekha Subarwal  
Tel: +91 11 46532330  
Cell: +91 9810153924  
[surekha.subarwal@undp.org](mailto:surekha.subarwal@undp.org)

Mexico City  
Ms. María Amparo Lasso  
Tel: +5255 52 63 98 94  
Cell: +5255 29 66 79 72  
[maria.lasso@undp.org](mailto:maria.lasso@undp.org)

Moscow  
Ms. Svetlana Kolomiets  
Tel: +7 (495) 787 2100 (ext.2235)  
Cell: +7 916 107-9416  
[svetlana.kolomiets@undp.org](mailto:svetlana.kolomiets@undp.org)

London  
Ms. Chandrika Deshpande  
Tel: +44 020 7396 5338  
Cell: +44 (0) 7957 460 246  
[chandrika.deshpande@undp.org](mailto:chandrika.deshpande@undp.org)



Strictly embargoed until 12:00 GMT (10 am in Brasilia) 27 November 2007

# UNDP TV stories planned for production for the HDR Launch

The UNDP Office Communication has produced eight television stories that will be available to broadcasters under embargo one week prior to the Human Development Report (HDR) launch. Please see list of stories available below.

The stories are each approximately three minutes long and deal with issues in the Report.

Additionally, the Office of Communication will also make available broadcast quality audio files for download and graphics from the Report.

The launch of the HDR in Brasilia, Brazil will also be made available to broadcasters on the day of the launch, 27 Nov 2007.

## **PLEASE NOTE THAT ALL STORIES ARE EMBARGOED UNTIL 12:00 GMT 27 NOVEMBER 2007.**

The stories will be available for preview and broadcast quality download (MPEG 2) on the following FTP download site:

<http://hdr.undp.org/hdr4broadcast/>

You will then need to register to gain immediate access to the site.

The stories will also be distributed by Reuters TV and APTN prior to the launch and will be available for preview and download on [www.tvz.tv](http://www.tvz.tv) (login access can also be obtained from TVZ at [news@tvz.tv](mailto:news@tvz.tv))

### **Stories available prior to the HDR launch: (subject to change)**

#### **1. Climate Change—HDR**

The United Nations Development Programme warns that the world's poorest people will suffer first and worst from the affects of climate change and may cause a reversal of human development across the globe. UNDP / Bangladesh / UN/ Recent /3.00 approx. /Natural with English

#### **2. Climate Change—Adaptation**

UNDP's Human Development Report says that the rich countries need to take up the challenge and help poor countries adapt to the changing climate. UNDP / Bangladesh / Netherlands/ Ethiopia / Recent /3.00 approx. /Natural with English

#### **3. Climate Change— Mitigation**

UNDP's Human Development Report calls for an eighty percent reduction in carbon emission by rich countries by 2050. The Report recommends the best ways to achieve this goal. UNDP/ Bangladesh / US / China / Recent /3.00 approx. /Natural with English

#### **4. Climate Change—Water shortage**

As the effects of climate change grow, various countries in across the globe will suffer water shortages as a result of receding glaciers. UNDP / Peru / Recent/ 3.00 approx. /Natural with Spanish

**5. Climate Change—Climate shocks**

Although specific climate shocks can not be attributed to climate change, UNDP's Human Development Report warns that catastrophic climate events will increase dramatically in the future. UNDP/ Haiti / Bangladesh / Recent/ 3.00 approx. /Natural with English

**6. Climate Change—Science**

Malte Meinshausen of the Potsdam Institute for Climate Change Impact explains the science behind the Human Development Report. UNDP / Germany // Recent/ 3.00 approx. /Natural with English

**7. Climate Change—Ecosystem collapse**

One effect of climate change may be the warming of sea temperatures, which will in turn bleach and destroy coral reefs across the globe. Fishing communities in Indonesia are already suffering the consequences as their coral reefs die out. UNDP / Indonesia // Recent/ 3.00 approx. /Natural with English

**8. Climate Change—Graphics**

Main graphics from the report in Video file format. UNDP/ Recent

**9. Climate Change—HDR launch**

President Luiz Inácio Lula da Silva of Brazil and the UNDP Administrator Kemal Derviş launched the 2007 Human Development Report that deals with climate change and how it impacts the world's poor. UNDP / Brasilia, Brazil /27/11 / 3.00 approx. /Natural with English and Portuguese

# FAST FACTS

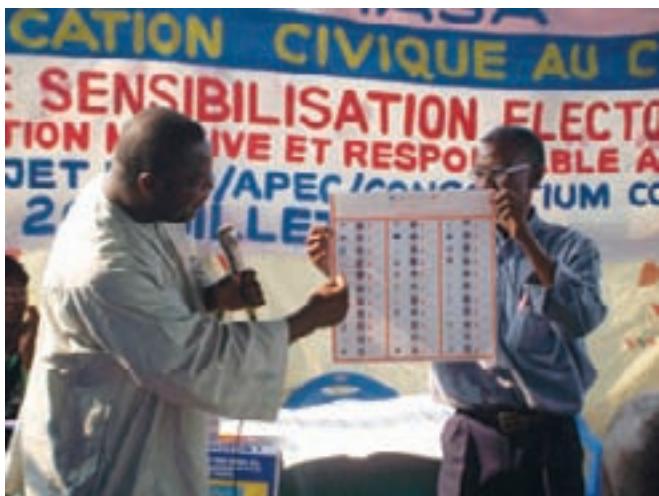
United Nations  
Development Programme



## About UNDP

The United Nations Development Programme (UNDP) is the UN's global development network, advocating for change and connecting countries to knowledge, experience and resources to help people build a better life. We are on the ground in 166 countries, working with governments and people on their own solutions to global and national development challenges. As they develop local capacity, they draw on the people of UNDP and our wide range of partners that can bring about results.

World leaders have pledged to achieve the Millennium Development Goals (MDGs) by 2015, including the overarching goal of cutting extreme poverty in half. UNDP, using its worldwide network, is coordinating global and national efforts to reach these Goals.



During the run-up to the Democratic Republic of Congo's 2006 election, a training session honed the skills of people managing polling stations.

## Developing Capacity on the Ground

Capacity development—the “how” of development—is the overarching contribution of UNDP. Within the framework of national ownership, UNDP efforts support programme countries in developing national and local capacities for human development and achievement of the MDGs, characterized by **effective aid management** and **South-South solutions**. Capacity development cuts across all of our focus areas.

## MATTERS OF FACT

- **135** UNDP country offices worldwide
- **166** countries where UNDP works
- **US\$5.11 billion** total income for 2006
- **5,391** UNV volunteers serving worldwide
- **587** National Human Development Reports published in 135 countries
- **45** of the world's poorest countries were helped by UNDP to compete and benefit from international trade
- **35** countries received election support from UNDP in 2006
- **127** programme countries have energy and environment projects

### • Poverty Reduction and achievement of the MDGs:

While economic growth is essential to human progress, it is not sufficient for achieving the MDGs. UNDP supports countries in formulating, implementing and monitoring MDG-based national development strategies centred on inclusive growth and gender equality to ensure equitable, broad-based human development. UNDP works closely with the United Nations Conference on Trade and Development and other organizations to ensure that the globalization process—international trade, investment regime and development finance—is inclusive and supportive of MDG achievement. Reaching the MDG target of halting and reversing the spread of HIV/AIDS by 2015 is also critical to achieving the other MDGs, particularly targets related to poverty, education, gender equality, and child and maternal mortality. As a founding co-sponsor of the Joint UN Programme on HIV/AIDS, UNDP is responding to the multisectoral challenges of the HIV/AIDS epidemic and contributing to comprehensive UN system action, addressing dimensions of HIV/AIDS relating to development, governance, mainstreaming, legislation, human rights and gender.

• **Democratic Governance:** More countries than ever before are working to build democratic governance. Their challenge is to develop institutions and processes that are more responsive to the needs of ordinary citizens, including the poor, and that promote development. UNDP

helps countries strengthen electoral and legislative systems, improve access to justice and public administration, and develop a greater capacity to deliver basic services to those most in need. Through its programmes, UNDP brings people together within nations and around the world, fostering partnerships and sharing ways to promote participation, accountability and effectiveness at all levels.

**• Crisis Prevention and Recovery:** Many countries are increasingly vulnerable to violent conflicts or natural disasters that can erase decades of development and further entrench poverty and inequality. Through its global network, UNDP seeks out and shares innovative approaches to crisis prevention, early warning and conflict resolution. And because UNDP is on the ground in almost every developing country, wherever the next crisis occurs, we will be there to help bridge the gap between emergency relief and long-term development.

**• Environment and sustainable development:** The poor are disproportionately affected by environmental degradation and lack of access to clean, affordable energy services. UNDP's goal in this area is to strengthen national capacity to manage the environment in a sustainable manner while ensuring adequate protection of the poor. Energy and environmental issues are also global, as climate change, loss of biodiversity and ozone layer depletion cannot be addressed by countries acting alone. UNDP, through programmes such as the Equator Initiative, and the Global Environment Facility—a partnership with the UN Environment Programme and the World Bank—helps countries strengthen their capacity to address these challenges at the global, national and community levels, seeking out and sharing best practices, providing innovative policy advice and linking partners through pilot projects.

In each of these areas, UNDP advocates for the protection of **human rights** and especially the **empowerment of women**. Through our global network, we seek out and share ways to promote gender equality as an essential dimension of ensuring political participation and accountability; economic empowerment and effective development planning; crisis prevention and conflict resolution; access to clean water, sanitation and energy services; and society-wide mobilization against HIV/AIDS.

## Within the UN System

One of UNDP's most important roles is to support and emphasize the need for participatory and accountable

management of the resident coordinator system through enhanced UN system coordination, efficiency and effectiveness, and the strategic integration of development efforts within the context of national development priorities. In a world of limited resources and capacities, UNDP, together with its UN and other development partners, helps to support the most effective use of UN and international aid resources.

## Around the World

UNDP has a unique voice in international development. The annual *Human Development Report*, commissioned by UNDP, focuses the global debate on key development issues, providing new measurement tools, innovative analysis and often controversial policy proposals. It is guided by the belief that development is ultimately a process of enlarging people's choices, not just raising national incomes. The independent team of experts who write the Report draw on a worldwide network of leaders from academia, government and civil society who contribute data, ideas, and best practices. Developing countries and their international partners use the Report to gauge results and shape new policies.

The global Report's analytical framework and inclusive approach carry over into regional, national and local human development reports. The *Arab Human Development Report*, prepared by Arab scholars and intellectuals, has provided an honest, balanced—and at times—harsh view of the obstacles to development in the Arab world. And UNDP has also sponsored reports on the limitations of democracy in Latin America, the plight of the Roma in Europe and the importance of promoting entrepreneurship in developing countries. At the country level, more than 500 *National Human Development Reports* have been published in 135 countries. These Reports are created by national experts and intellectuals and in many cases, their research and advocacy has spurred policy debates that have inspired leaders in countries to build their own development solutions.

For more information, visit: [www.undp.org](http://www.undp.org)

United Nations Development Programme

One United Nations Plaza

New York, NY 10017 USA

