

**TESTIMONY OF MR. ROB BRADLEY  
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**HEARING BEFORE THE COMMISSION ON SECURITY AND COOPERATION IN  
EUROPE: “GREEN AND MEAN: CAN THE U.S. ECONOMY BE BOTH CLIMATE-  
FRIENDLY AND COMPETITIVE?”**

**March 10, 2009**

Thank you for the opportunity to contribute to the deliberations of this Commission. My name is Rob Bradley, and I am Director of the International Climate Policy Initiative at the World Resources Institute. The World Resources Institute is a non-profit, non-partisan environmental think tank that goes beyond research to provide practical solutions to the world’s most urgent environment and development challenges. We work in partnership with scientists, businesses, governments, and non-governmental organizations in more than fifty countries to provide information, tools and analysis to address problems like climate change, the degradation of ecosystems and their capacity to provide for human well-being.

I am very pleased to be here to speak to what I consider the most pressing environmental issues faced by the world – and to what I consider a major opportunity for the United States to assume a role of international leadership. In this testimony, I would like to make three points, each of which I will expand on below:

First, that the time is very ripe for the U.S. to reengage internationally on the issue of climate change and take up a leadership role. Further, that the engagement between the U.S. and major developing countries will be a critical factor for success.

Second, that the world has changed dramatically from the days of the Kyoto Protocol. Major developing countries are ready to take significant action on limiting emissions and the Bali Action Plan provides a solid foundation for a new international climate agreement that meets key U.S. interests.

Third, that the role of the green economy and of economic opportunities will play an important role in shaping international engagement.

## **1. There is no time to lose**

Let me begin by commenting on the urgency of the challenge. The science is compelling. Engaging major developing countries is critical to success. Finally, conditions are right for a major reengagement by the US.

### **The science is compelling**

The Earth is warming, primarily due to human activities. The cheap, plentiful fossil fuels that have enabled huge increases in human productivity and great improvements in human well being over the past 200 years together with significant deforestation have been the most important causes of global warming. The buildup of carbon dioxide and other greenhouse gases (GHGs) is accelerating, and unless we act very soon to control emissions during our children's lifetimes warming will rise to very dangerous levels.

In February 2007, the Intergovernmental Panel on Climate Change (IPCC - the official science process sanctioned by the world's governments and participated in by the United States) released its latest report on climate change science. The report states that it is "unequivocal" that Earth's climate is warming, and confirms that the current atmospheric concentration of carbon dioxide and methane, two important greenhouse gases (GHGs), "exceeds by far the natural range over the last 650,000 years." Further, the IPCC concludes that it is now "very likely" (greater than 90% probability) that greenhouse gas emissions from human activities have caused "most of the observed increase in globally averaged temperatures since the mid-20th century."

In the two years since this alarming conclusion, further compelling evidence of the impacts of warming have been seen. Indeed, the impacts of warming have become increasingly evident to non-scientific observers. Sea ice in the Arctic is shrinking, and Greenland's massive ice sheet is melting – far faster than predicted. Glaciers are rapidly shrinking from the Rockies to the Alps. WRI annually reviews the latest in climate science. This review confirms that our climate system is changing. Jonathan Lash, WRI's president, provided several examples in his January 15, 2009 written testimony before the U.S. House of Representatives Committee on Energy and Commerce Committee. These include:

According to the National Snow and Ice Data Center (NSIDC), levels of Arctic sea ice from June through September 2007 were at a record low of 4.13 million km<sup>2</sup>.<sup>1</sup> In 2008, while there was some modest recovery, the world still saw the second lowest recorded ice extent since record-keeping began in 1979. Still more worrisome, the extensive losses during the past two summers have led scientists to speculate that the Arctic Ocean may be ice-free in the summertime much sooner than anticipated. Furthermore, in October 2008, scientists reported that the thickness of winter sea ice plummeted after the 2007 minimum, showing that the ice pack is not only shrinking but is decreasing in overall volume.<sup>2</sup>

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<sup>1</sup> NASA "Record Arctic Sea Ice Loss in 2007"

[http://earthobservatory.nasa.gov/Newsroom/NewImages/Images/arctic\\_ams\\_2007259.jpg](http://earthobservatory.nasa.gov/Newsroom/NewImages/Images/arctic_ams_2007259.jpg)

<sup>2</sup> Geophys. Res. Lett. 35, L22502; 2008

The British Columbia Ministry of Forests and Range, in their 2007 report on the mountain pine beetle outbreak<sup>3</sup>, shows that in 2007, the impacted area had increased to 13 million hectares (from 4.2 million hectares in 2003). Mountain pine beetles prefer mature lodgepole pines and while they typically die off with cold snaps, warmer temperatures in the region have allowed them to persist. They cut off the nutrient and water supply of the trees by burrowing in trees' bark. The Ministry finds that 40% of merchantable pine volume – 12% of total merchantable volume on the timber harvesting land base in British Columbia – has been impacted from 1999 to 2006. They project that if the pine beetle outbreak continues at the same pace, it will kill off 78% of the pine volume – 23% of total merchantable volume on the province's timber harvesting land base – by 2015.

These and countless other observations make it clear that much of what we thought we knew a few years ago about the pace of climate change has been superseded. All of the trends are proceeding more quickly than we anticipated. Rising temperatures and the consequent impacts are all taking place faster than the models predicted. While of course we cannot yet know with complete certainty what will occur 20 (much less 50) years from now, according to our best current work, everything is trending to the high end. And the consequences we are observing today are the product of a mere 0.8 degrees centigrade of warming. Even very aggressive action will only barely forestall two degrees centigrade of warming. The science is telling us we have to act with extraordinary urgency – and that our action must be more than the modest marginal efforts made to date – it must fundamentally change the course of our energy infrastructure, it must address land use and forestry, and it must build a regime that can have global effect, not merely address U.S. emissions.

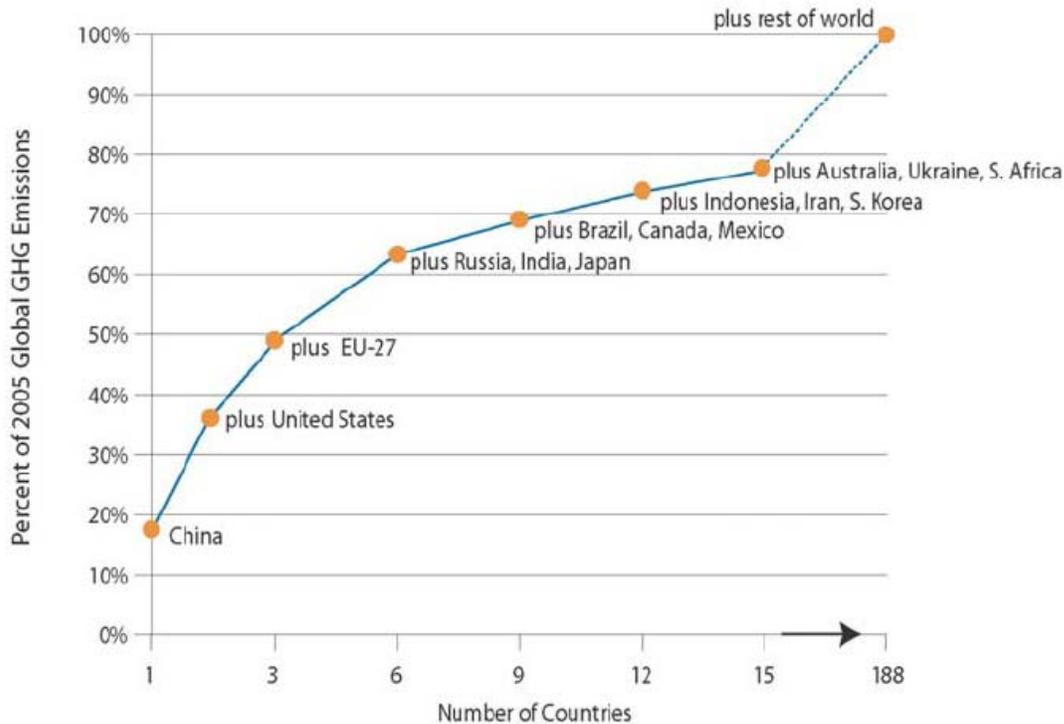
## **The importance of developing countries**

The importance of such a global effort is illustrated by Figure 1. China is of particular importance in terms of emissions, having superseded the United States as the world's largest emitter (though it remains at barely a quarter of US emissions per person). Almost 80% of current global emissions are produced by fifteen countries (counting the European Union as a single country). Of these, nine are developing economies and two (Russia and Ukraine) are post-communist countries still wrestling with economic transition. Without a viable means of engaging these countries in the effort to cut emissions we cannot avoid catastrophic climate change.

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<sup>3</sup> B.C. Ministry of Forests and Range, Forest Analysis and Inventory Branch. 2007. "Timber Supply and the Mountain Pine Beetle Infestation in British Columbia: 2007 Update" [http://www.for.gov.bc.ca/hfp/mountain\\_pine\\_beetle/Pine\\_Beetle\\_Update20070917.pdf](http://www.for.gov.bc.ca/hfp/mountain_pine_beetle/Pine_Beetle_Update20070917.pdf)

**Figure 1: Aggregate GHG emissions by country, 2005**



*Sources and Notes:* WRI, CAIT. Percent contributions are for year 2005 GHG emissions only. Moving from left to right, countries are added in order of their absolute emissions, with the largest being added first. Figures exclude emissions from land-use change and forestry and bunker fuels. Adapted from Figure 2,3 in Baumert et al. (2005).

## The UNFCCC action on climate change to date

The need for global action has been recognized for at least two decades, and was the basis for the 1992 United Nations Framework Convention on Climate Change (UNFCCC), to which the U.S. is a Party. The UNFCCC commits all countries to the fight against climate change on the basis of “common but differentiated responsibilities.” This puts the responsibility on the richest and most polluting countries to lead, and to provide support to the less capable, but for all to participate.

While the UNFCCC commands wide support as an articulation of the climate challenge and a global response, it did not set specific goals for individual countries to deliver emission cuts. For that reason the Kyoto Protocol was agreed in 1997, including binding emissions targets for industrialized and post-communist countries.

The Kyoto Protocol has had a significant impact, in particular in moving the European Union to adopt climate policies, including a cap-and-trade system. It has generated an international market for carbon offsets, and has given a major signal to business in many countries that a world of constrained emissions is coming.

However, Congress raised several concerns with the Kyoto Protocol structure, and the treaty was not ratified by the United States. The concerns included:

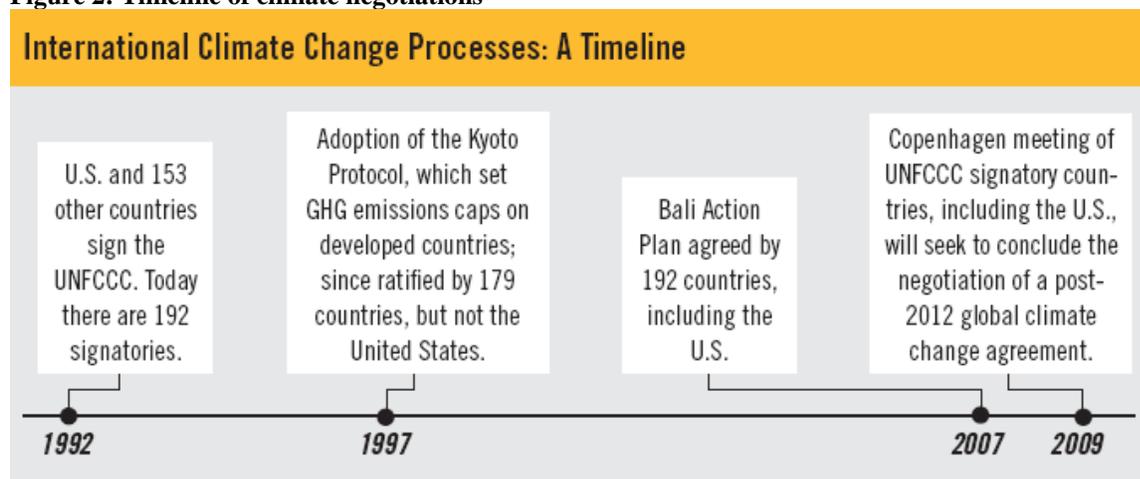
- Concerns about economic impacts. At the time targets were set, few countries had a clear understanding of what meeting those targets would mean in economic terms. Congress feared that Kyoto would cause undue damage to the U.S. economy.
- Lack of developing country commitments. Congress similarly insisted that major developing countries such as China and India should have commitments to limit emissions.

These objections were most famously expressed in the Byrd-Hagel resolution of 1997. Although this Resolution was adopted before the Kyoto Protocol was agreed, there has been a wide perception that the Protocol did not meet Byrd-Hagel’s provisions. The Protocol was never submitted to the Senate for ratification. In fact, diplomatic leadership by the Clinton Administration may have overreached Congressional support for legislative action domestically.

### A new opportunity

The Kyoto Protocol sets targets until 2012. The United Nations, including the U.S., have agreed to a timetable (the so-called “Bali Action Plan”) for negotiating the post-2012 climate arrangements, with the deadline of a meeting to be held in Copenhagen, Denmark, in December 2009. This Fifteenth Conference of the Parties to the UNFCCC (COP15) aims to bring together the countries within and outside the Kyoto Protocol in a more inclusive agreement, although it is not yet clear exactly what form that agreement will take.

Figure 2: Timeline of climate negotiations

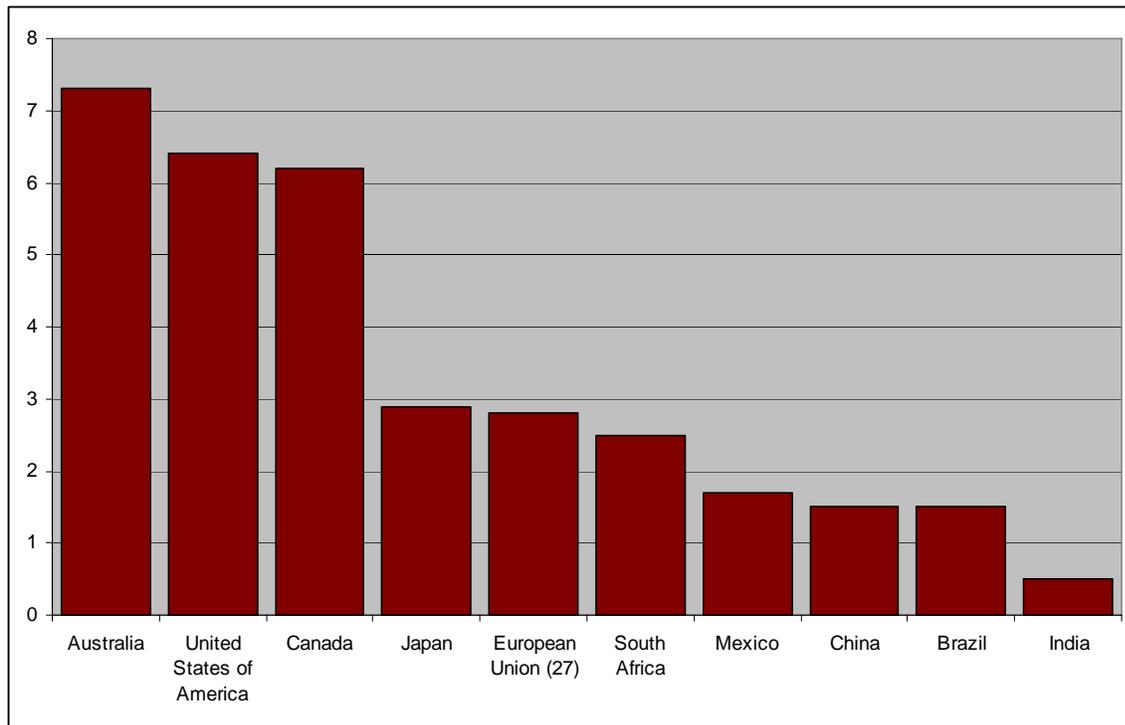


What is clear, however, is that the negotiating mandate provided by the Bali Action Plan provides for a radically different agreement from the Kyoto Protocol. In particular, it provides for mitigation actions from both developed and developing countries. This is a major departure from earlier models of climate action internationally, and it reflects real changes in the world outside the negotiations. In the next section I will discuss those changes and what they mean for an international climate agreement.

## 2. The transformation in developing country action

For many years, developing countries have been clear in their view that they expect a lead from rich countries before they take action on emissions. There are sound reasons for this stance. They are far poorer than developed countries; they have played a far smaller role in creating the climate problem; and their emissions per person remain in the main much lower than those of developed countries (see Figure 3). 1.4 billion people in the development world live on less than \$1.25 a day. Some 2.5 billion people rely on fuelwood, charcoal and animal dung to cook. This is over 80 percent of the population of Sub-Saharan Africa and over half of the populations of India and China.

Figure 3: Emissions in tons carbon per person in selected countries (2005, excludes land use)



Source: Climate Analysis Indicators Tool (CAIT) Version 6.0. (Washington, DC: World Resources Institute, 2009). See <http://cait.wri.org>

However, in the last 2-3 years there has been a flood of developing country plans for addressing climate change. Most major developing countries have now brought forward climate plans. I want to highlight some interesting examples:

**Brazil** announced it would reduce its deforestation rate over 50 percent from recent levels by 2017, avoiding an estimated 4.8 billion tons of CO<sub>2</sub> emissions. Deforestation accounts for about two thirds of Brazilian GHG emissions.

**China** set a target of reducing national energy intensity (energy use per unit GDP) by 20% in the five years to 2010. It has already reduced in each of the past three years: by 1.6% in 2006, 3.7% in 2007, and 4.3% in 2008. Thus China looks likely to be approximately on target to meet its goal. Together, the industrial and building efficiency programs supporting this goal are expected

to yield 550 million metric tons CO<sub>2</sub> in GHG savings. Additional savings are expected from measures in the transport sector. China also has ambitious non-fossil plans, including wind, hydro, nuclear and biomass, all of which are expected to save 640 million metric tons CO<sub>2</sub> by 2010.

**Mexico** pledged to halve its greenhouse gas emissions by 2050, employing a "cap-and-trade" policy like the one recently considered by the U.S. Congress.

**South Africa** has presented a detailed plan to peak its national emissions by 2020.

## **Motivations**

Why are developing countries taking these actions? As in the United States, there are a number of drivers that interact.

First, they are increasingly aware of the risks that climate change presents to their development. China's National Climate Change Programme goes into considerable detail on the risks to its coasts, fresh water supply, agricultural output and other critical concerns. There can be little doubt that even in the midst of pressing development concerns climate change is viewed as an important challenge. However, it is important to recognize the limits of this thinking. Although, to differing degrees, these countries are taking action, they all still look to the United States to lead, given its wealth and historical emissions.

Second, climate concerns align in many instances with broader worries about energy. With the greater energy intensity of their economies, high energy prices have been even more onerous of developing economies than on the U.S. energy security, costs, and pollution are top-level political concerns. Just as here, policy makers are looking for ways to intelligently tackle all these issues.

Third, many countries see opportunity in the new energy technology landscape that is emerging. Countries such as China and India do not see their future in old technologies and businesses. They are keen to position themselves as leaders in the clean energy revolution. Indian wind energy companies, Chinese solar manufacturers, and Brazilian biofuels companies are all among the world's leaders.

It is important to keep these motivations in mind. Any international agreement depends on the signatories choosing to carry out the provisions of the agreement. An alignment of national and international interests provides at least some prospect of genuine participation, and the Bali Action Plan provides a new way to take advantage of this growing alignment. There is a broad interest in seeing the climate agreement succeed, suggesting that countries will take their international commitments seriously.

However, significant questions do remain. Many of these countries have a very mixed record of implementing the goals in their national plans. Reliable data are hard to obtain even on such broad indicators as energy use or economic growth. There are important initiatives in all these countries to implement GHG monitoring, but today very large uncertainties remain in a lot of the

emissions data. Furthermore, standards of enforcement, governance and transparency are very variable. It will certainly not be enough for countries to take each others' plans at face value.

## **How the Bali Action Plan includes developing country action**

This is where the international negotiations are important. Creating robust reporting and verification structures can help build trust among countries that bold commitments are really being turned into action. The opportunity provided by the Bali Action Plan (BAP) structure is to align international commitments with national development goals and to create reporting programs that also align with the countries' own abilities to collect and disseminate information. The BAP calls for

*“enhanced national/international action on mitigation of climate change, including consideration of:*

- (i) “Measurable, reportable and verifiable nationally appropriate mitigation commitments or actions, including quantified emission limitation and reduction objectives, by all developed country Parties, while ensuring the comparability of efforts among them, taking into account differences in their national circumstances;*
- (ii) “Nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner.”*

The phrase “measurable, reportable, and verifiable” (MRV) was critical to the agreement of the BAP, and how MRV is reflected in the post-2012 agreement will have significant implications for the effectiveness of that agreement for stakeholders in both developing as well as developed countries.

## **OCSE members – a particular challenge**

The former communist members of the OCSE have received considerably less attention in the formation of international climate policy than major emerging economies such as China and India. Some have joined the European Union, and are part of the coordinated approach that the E.U. is taking to climate policy. Others, most notably Russia, have taken their own negotiating stances.

Engaging Russia in particular has been a challenging undertaking in the international negotiations. The Kyoto Protocol set a target for Russia that allocated far more emission rights than it was expected to need, and allowing the sale of these rights to industrialized countries through international emission trading. This amounted therefore to a financial inducement to Russia to join the Protocol, with the idea that once inside it would accept more binding emission limits in future. In practice, neither the finance nor the willingness to take more binding targets has emerged. At a time of tensions over Georgia, gas supplies and other issues, European countries have little appetite for financial transfers to Russia under the Protocol. And Russian policy makers have shown no interest in more substantive action on cutting emissions.

Unlike countries such as China and India, Russia has both a cold climate and a vast fossil fuel export industry. It is not clear that climate change is widely seen as an important challenge for Russia. Accordingly, Russia will be a tough negotiating partner in shaping a future climate agreement.

This is a particularly stark example of a general point: that the economic as well as the environmental case for climate action will need to be made.

### **3. The case for a positive trade agenda**

To date, debates about climate and trade have tended to focus on potential conflicts, particularly on policy responses to leakage concerns.<sup>4</sup> However, there are significant opportunities to harness complementarities between the climate and trade. A successful approach to the climate challenge will mean deploying new technologies at a global scale at an unprecedented rate, and it is unlikely that this can be achieved without harnessing global trade and capital flows.

However, harnessing this positive link will demand solutions that work for all countries. Future deals to limit greenhouse gas emissions, through the UNFCCC negotiations, and to open markets, under the Doha Round, will depend upon complex reciprocal bargains, the outcomes of which will have to be widely perceived as both fair and effective. This raises important questions. Could the removal of trade barriers affecting the flow of environmental goods and services significantly reduce the economic cost of emissions abatement, not just in the United States, but world-wide? Could prospects of growing “green collar” jobs resulting from climate, energy and fiscal policy ease the acceptance of stricter targets? What broader benefits accrue by more rapid uptake and dissemination of clean energy technology? Finally, where do these benefits from mitigation activity occur? Given that these will often be on different actors than those paying the cost of mitigation, how should distributional effects be handled? Carefully considered responses to these questions will maximize the potential synergies between the climate and trade arenas.

### **Stimulus – Demonstrating leadership through green growth**

The U.S. response to the recent financial crisis exemplifies America’s opportunity to demonstrate economic growth through environmental investment. In the U.S., both Congressional leaders and President Obama have directed government spending in a way that not only generates near term economic activity and employment but also addresses long-term policy goals. Energy and environmental objectives like reducing carbon-dioxide emissions and dependence on foreign oil are chief among these, lending considerable traction to the notion of a “green” stimulus package. As a result, more than 10 percent (over \$100 billion) of the total cost of the “American Recovery and Reinvestment Act” passed in February was directed towards climate-friendly and environmental objectives.

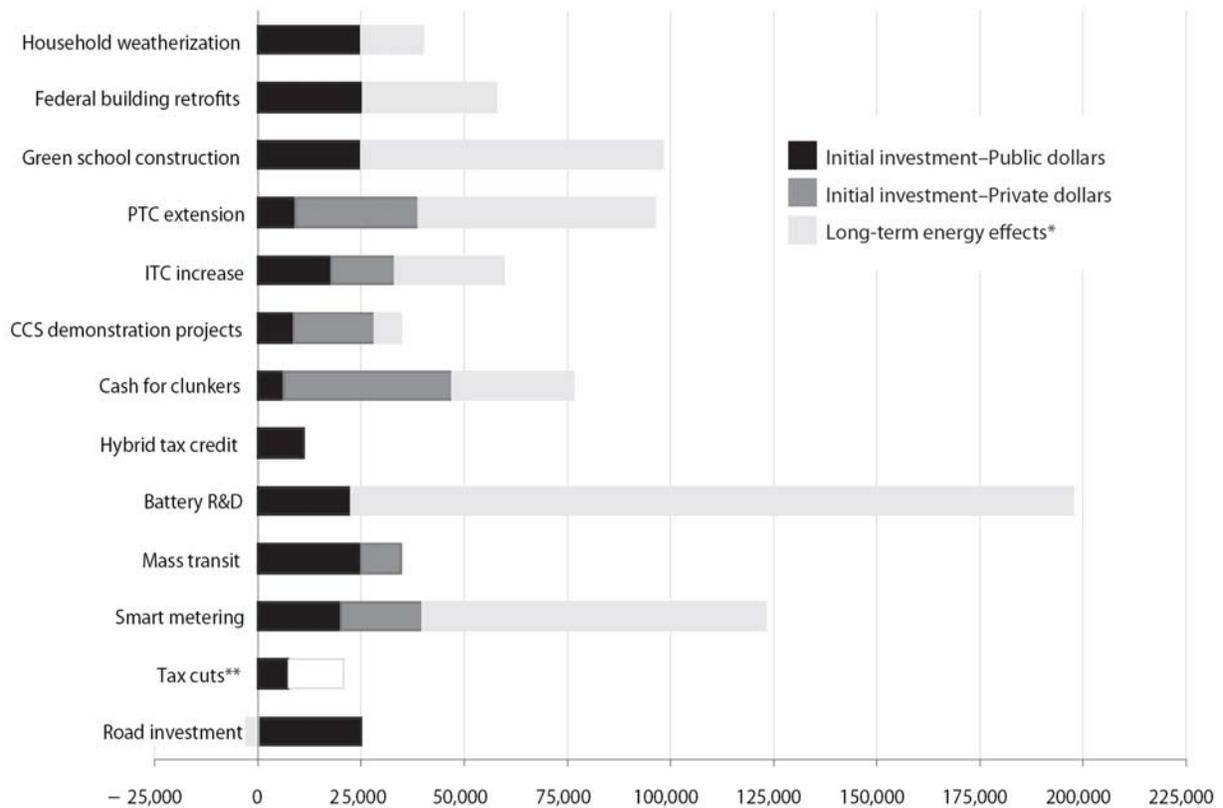
While environmental objectives were a significant driver for these investments, their final passage was the result of widespread recognition of their unique economic benefits. Well-

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<sup>4</sup> Trevor Houser, Rob Bradley, Jacob Werksman, Britt Childs and Robert Heilmayr, *Leveling the Carbon Playing Field: International Competition and US Climate Policy Design*. Peterson Institute for International Economics and World Resources Institute, May 2008.

tailored green components of a recovery effort can create jobs and stimulate the economy while achieving significant energy cost savings for businesses, consumers, and the government. Recovery policies similar to those passed in the U.S. will reduce demand for fossil fuels. The resulting drop in cost and consumption of energy has the potential to save Americans an average of \$450 million per year for every \$1 billion invested. In addition, by returning money to households through lower energy bills, green components of a recovery package combine the employment benefits of tax cuts with the construction and manufacturing jobs created through infrastructure investment. On average, green recovery programs create 30,000 jobs for every \$1 billion in government spending (Figure 4).<sup>5</sup>

**Figure 4 – Total employment effects of green stimulus policies – job years created through \$1 billion in government investment**



\* Long-term energy effects measures the net change in employment (measured in job-years) resulting from energy savings and the change in energy mix for the decade following the initial investment.

\*\* For tax cuts, the lighter field indicates the employment effects of the share of the initial tax cut or rebate saved until future years.

Source: Trevor Houser, Shashank Mohan and Robert Heilmayr, *A Green Global Recovery? Assessing US Economic Stimulus and the Prospects for International Coordination*. Peterson Institute for International Economics and World Resources Institute: February 2009.

<sup>5</sup> Trevor Houser, Shashank Mohan and Robert Heilmayr, *A Green Global Recovery? Assessing US Economic Stimulus and the Prospects for International Coordination*. Peterson Institute for International Economics and World Resources Institute: February 2009.

Internationally, more and more policymakers are hoping to direct government spending in a way that not only generates short-term economic growth and employment, but also addresses long-term policy goals that have been sidelined by the current crisis. Energy and environmental objectives are chief among these and the notion of "green" stimulus has gained considerable traction in capitals around the world. South Korea has shown considerable leadership by dedicating over 80 percent of their stimulus spending measures to energy conservation, low-carbon transit and green jobs initiatives. Although final spending levels are still uncertain, China has also indicated a desire to direct hundreds of billions of dollars of its \$586 billion stimulus effort towards projects that would reduce GHG emissions.<sup>6</sup> As more and more nations attempt to incorporate energy and environmental objectives into their responses to the financial crisis, there may also emerge an opportunity for global cooperation to maximize the environmental and economic impact of spending.

At the G-20 meeting last November, the world's leading economies agreed to combat global recession with coordinated fiscal stimulus. Growing attention to the economic potential of environmental investments has led to widespread calls for the G20's April meeting to endorse a global "Green New Deal." Given the scale of the challenges ahead—a green recovery provides an opportunity for the U.S. to demonstrate the economic case for immediate action to address climate change.

### **Relating stimulus action to international finance**

Although both developed and developing countries are called on to take mitigation action under the Bali Action Plan, the Plan promises developing countries support for their actions. Furthermore, that support also needs to be "measurable, reportable and verifiable."

Financial support is the most obviously measurable of these, and contributions from the U.S. and other developed countries will be essential to a successful deal. Perhaps the most important priority in this regard is adaptation. With climate impacts already being felt, and with the poorest countries and communities likely to be hit hardest, there is a real need for such support. But support will also be needed in developing countries to mitigate emissions, and to implement the measuring, reporting and verification systems needed to enshrine these actions in an agreement.

In this context the international economic crisis is a major challenge to the negotiations. Appetite in developed country capitals for providing international finance is drying up. On the other hand, it is hard to see how a climate deal can be reached without significant resources on the table. Creative thinking will be needed to leverage the sources of finance that still work in a recession, and stimulus spending is perhaps the most important of these.

There is a wide range of assessments about the scale of resources required for mitigation and adaptation globally. Within the context of the UNFCCC negotiations, there are high expectations on the part of the developing countries for support and finance for mitigation and adaptation from Annex I countries. This expectation is based on the principle of "common but differentiated responsibilities" from the 1992 Framework Convention. Non-Annex I countries feel that Annex I

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<sup>6</sup> Deborah Seligsohn, "A 'Green Lining' in China's Economic Stimulus Plan", World Resources Institute, November 2008.

parties should be responsible for a greater portion of the solution to climate change, given that their historical contribution to the problem outweighs the contribution by Non-Annex I countries. Responsibility for the solution would take the form of financial support for developing country mitigation and adaptation.

Figure 5 shows the needs and expectations for global mitigation, based on the UNFCCC's 2007 assessment of the level of funding required for global mitigation, and on the G77 and China's proposal on finance submitted to the UNFCCC, which calls for Annex I countries to commit to funding equal to 0.5-1% of their GDP to cover mitigation and adaptation. The figure compares some of the existing and proposed sources of mitigation funding, including existing clean technology funds, the UNFCCC's Clean Development Mechanism (CDM), Official Development Assistance (ODA), and global investment figures, against these expectations and needs. Clearly, the existing financial flows for climate change mitigation are inadequate relative to the scale of the challenge. However, ODA and foreign direct investment (FDI) are both adequate in terms of scale, which indicates that the necessary finance for mitigation is available but must be steered toward climate-friendly investments.

The figure also shows an indication of possible U.S. contribution to developing country mitigation, based on provisions in recent legislative proposals. The figure includes the 2030 values for allowances allocated to international mitigation and adaptation efforts from the 2008 Boxer-Lieberman-Warner Climate Security Act (S.3036) and from Representative Markey's 2008 bill, Investing in Climate Action and Protection Act (H.R.6186). These bills reserved a portion of allowances to fund international forestry, international technology deployment, and international adaptation.<sup>7</sup> This illustrates the size of the gap between the needs and expectations of the developing world for finance from Annex I countries versus what the U.S. has offered to date.

However, it is not clear at this stage what level of finance will be needed in the near term to ensure a successful climate deal.

Although finance is likely to be important, some countries, notably China, put as much or more emphasis on technology cooperation. In many cases this is not a question of funding, but of combined efforts in R&D (with a sharing of the resulting intellectual property) or joint support of demonstration projects. These efforts need not all be pursued within a multilateral agreement, but their presence will help create a more constructive deal.

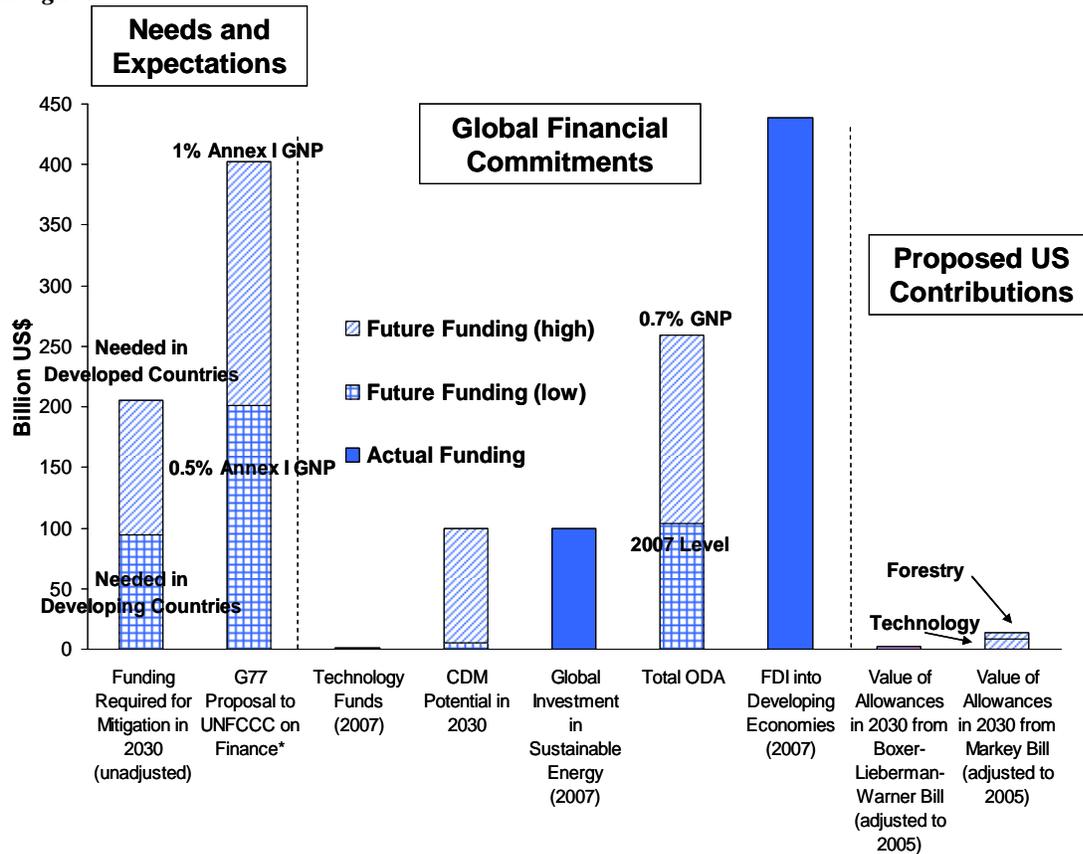
While stimulus policies are aimed first and foremost at domestic economic activity, as noted earlier there are significant areas of common ground. Given the importance of finance in securing a deal, and the difficulty of finding resources in the present climate, the U.S. should actively explore options for coordinating technology development and deployment actions with developing countries through stimulus actions.

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<sup>7</sup> Note: The Boxer-Lieberman-Warner Climate Security Act (S.3036) included allocations for international forestry and adaptation, but did not include allocations for technology deployment. Markey's Investing in Climate Action and Protection Act (H.R.6186) was probably the most aggressive bill in terms of funding for international technology deployment, and these numbers are likely an understatement.

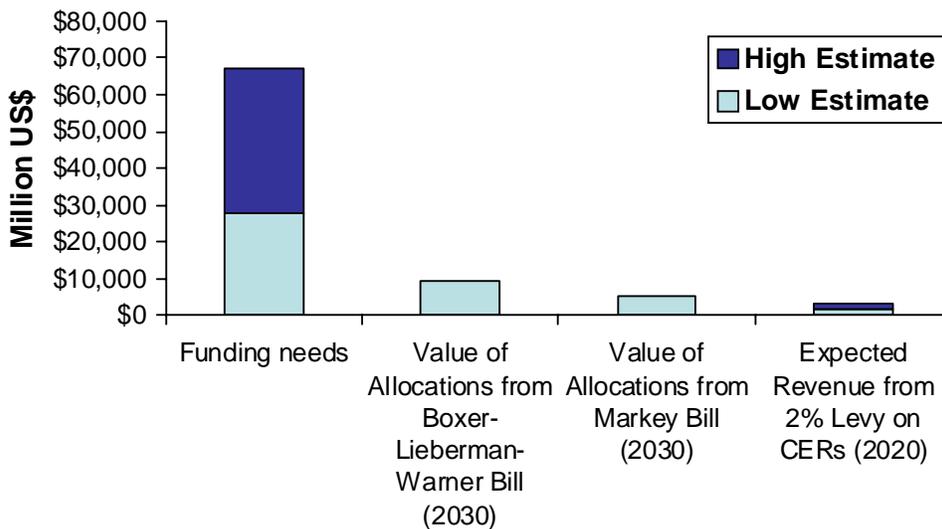
**Figure 5 . International Funding for Climate Change: How do U.S. proposals stack up against the need and expectations and against other global financial flows?**

*Mitigation:*



\*Note: G77's proposal references a percentage of Annex I GDP. GNP is used here for consistency. Figure includes funding for both mitigation and adaptation. Sources: EIA, New Energy Finance, OECD, UNCTAD Statistics, UNFCCC, The World Bank, and WRI analysis.

*Adaptation:*



Sources: EIA, OECD, UNFCCC, and WRI analysis

## **Conclusions**

The U.S. is seeking a new leadership role on climate change, both through adopting national climate policy and by engaging internationally. These two aims are linked: domestic policy will give the U.S. credibility abroad, and participation by other major emitters will help the U.S. undertake ambitious action itself.

The moment is ripe for international engagement. Other major emitters, including all the largest developing economies, have presented national climate change plans, targets or policies. Some have gone much further than others in implementing these, but all have made a major leap from the era of Kyoto.

The international agreement to be negotiated under the Bali Action Plan offers scope to include actions by developing and developed countries that are measurable, reportable and verifiable. This, combined with the national plans being brought forward by developing countries, should answer Congress' major criticism of Kyoto.

In response to the economic crisis both developed and developing countries are bringing forward significant stimulus spending, and in many cases this has a major climate and energy dimension. All these countries hope to create new industries and jobs in clean energy. By engaging internationally on a positive trade agenda the U.S. can help ensure the participation of major developing countries in climate action while creating jobs for American workers, as well as in other countries.