

**The Nature Conservancy's Response to the Paper entitled  
"Design Elements of a Mandatory Market-Based Greenhouse Gas Regulatory System"  
by  
Sen. Pete V. Domenici and Sen. Jeff Bingaman  
March 2006**

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The Nature Conservancy is an international, nonprofit organization dedicated to the conservation of biological diversity. Our mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. Anchored in strong science and supported by our work on the ground in all 50 states and 27 foreign countries, the Conservancy is committed to finding cost-effective, achievable solutions that reduce the impacts of climate change and benefit people and nature.

The Conservancy strongly supports the immediate adoption of a cost-effective, mandatory program to limit greenhouse gas emissions in the U.S. The Conservancy would like to thank Senators Domenici and Bingaman for the opportunity to share our views on the design of a federal climate change program, particularly those on offsets, climate change adaptation spending and linking a U.S. emissions trading program to those in other countries.

The Conservancy strongly supports the unlimited use of real and verifiable offsets in a federal greenhouse gas cap and trade program. Offsets offer real emission reductions and lower the cost of emission reduction programs. Offsets also protect the market against the price volatility and, thus, lessen the need for cost control instruments such as a safety valve. In particular, the Conservancy strongly recommends including offsets from land conservation and restoration projects in a federal climate program. Proven methods for reliably measuring, monitoring and verifying land-based carbon offsets already exist and are in widespread use.

The Conservancy believes that 25% of the allowance pool revenues should be transferred into a Climate Change Adaptation Fund to support research and other activities that will help plants, animals, ecosystems and the most vulnerable Americans adapt to the impacts of climate change. The Conservancy recommends that these funds be used to support programs that offer the most benefit for people and wildlife at the lowest cost, and restore and protect natural resources that guard against damages linked to climate change (e.g., coastal wetlands that protect against storm surge from hurricanes), among others. The Conservancy believes that 70% of these funds should be given to federal programs and 30% should go to state programs.

Any cap and trade program should be designed to leave open the possibility of linkages with carbon trading programs in other countries, particularly those in Canada and the European Union. Linking a U.S. carbon trading program to a foreign scheme will likely improve market liquidity and lower overall emissions reduction costs for a minimal increase in administrative burden. The Nature Conservancy believes that, because of the United States' large historic responsibility for the climate change problem, our nation must act now to abate greenhouse gas emissions through a mandatory domestic carbon trading program without precondition concerning other nations.

## *Who is regulated and where?*

The Conservancy feels that an economy-wide approach to reducing greenhouse gases in the U.S. is preferable to a program limited to just a few sources or sectors. An economy-wide approach would more equitably share the responsibility of reducing emissions across major sources than a more limited program. The more comprehensive nature of an economy-wide approach would also create more opportunities to find the lowest cost options to meet the emission reduction goal than a sector-specific approach.

The Conservancy feels that the most effective place to regulate greenhouse gas emissions is at the point where there would be the fewest number of facilities in the program, and where no facility would be able to exercise market power. In the United States, the Conservancy feels that the ideal place to regulate greenhouse gas emissions from industrial sources and energy consumption is where fossil fuels enter the fuel supply system. This upstream approach is likely to be easier and cheaper to administer than a program regulating emissions further down the energy production and consumption chain because it would reduce the number of regulated sources, and would simplify the process of monitoring emissions trading and compliance.

In addition, an upstream approach would cover more emissions (notably from transportation) than a downstream approach, and thus, would lead to emission reductions from a broader array of sources. By opening up the widest range of low cost opportunities to reduce emissions, an upstream program could achieve greater emissions reductions than a downstream program, for the same cost. Regardless of whether the program is upstream or downstream, the widest possible range of greenhouse gases should be included in the program (e.g., methane, HFCs, PFCs, SF<sub>6</sub>) since these gases can often be reduced at a lower cost than CO<sub>2</sub> emissions from fossil fuels.

### **Clarifying Question 1a:**

- Is the objective of building a fair, simple, and rational greenhouse gas program best served by an economy-wide approach, or by limiting the program to a few sectors of the economy?

The Conservancy feels that an economy-wide approach to reducing greenhouse gases in the U.S. is preferable to a program limited to just a few sources or sectors. An economy-wide approach would more equitably share the responsibility of reducing emissions across major sources than a more limited program. The more comprehensive nature of an economy-wide approach would also create more opportunities to find the lowest cost options to meet the emission reduction goal than a sector-specific approach.

**Clarifying Question 1b:**

- What is the most effective place in the chain of activities to regulate greenhouse gas emissions, both from the perspective of administrative simplicity and program effectiveness?

The Conservancy feels that the most effective place to regulate greenhouse gas emissions is at the point where there would be the fewest number of facilities in the program, and where no facility would be able to exercise market power. In the United States, the Conservancy feels that the ideal place to regulate greenhouse gas emissions from industrial sources and energy consumption is where fossil fuels enter the fuel supply system. This upstream approach would be easier and cheaper to administer than a program regulating emissions further down the energy production and consumption chain because it would reduce the number of regulated sources, and would simplify the process of monitoring emissions trading and compliance.

In addition, an upstream approach would cover more emissions (notably from transportation) than a downstream approach, and thus, would lead to emission reductions from a broader array of sources. By opening up the widest range of low cost opportunities to reduce emissions, an upstream program could achieve greater emissions reductions than a downstream program, for the same cost. Regardless of whether the program is upstream or downstream, the widest possible range of greenhouse gases should be included in the program (e.g., methane, HFCs, PFCs, SF<sub>6</sub>) since these gases can often be reduced at a lower cost than CO<sub>2</sub> emissions from fossil fuels.

With an upstream regulatory scheme, it will be important to consider imports of fossil fuel, as over 65% of fossil fuel is imported from foreign sources. We recommend that these sources be regulated at the point of entry to the U.S. for fuel arriving via pipeline and at the point it is offloaded from a ship for fuels arriving via tanker or barge.

*Should the costs of regulation be mitigated for any sector of the economy, through the allocation of allowances without cost? Or, should allowances be distributed by means of an auction? If allowances are allocated, what is the criteria for and method of such allocation?*

The Conservancy prefers programs that auction off as many emissions allowances as politically feasible. Auctions generate revenues that can be used to support wider use of energy efficiency technologies and low or no carbon electricity production, and to reduce the deficit or cut taxes. Auctions also treat all sectors of the economy equally and don't provide windfall profits to any particular company or group.

### **Clarifying Questions 2a:**

#### ***Technology R&D and Incentives***

- What portion, if any, of the revenues from permits or the auction of allowances should be reserved for technology development? If some portion is reserved for this purpose, should that set-aside flow to the federal government with funds spent through the traditional appropriation process? Or should the funds be allocated directly to a non-profit research consortium, chartered by the federal government, which would then administer technology development and deployment projects? Or should there be some combination of these two options?
- What criteria should be used to determine how such funds are spent and which projects are chosen?
- What other mechanisms should be used to promote technology deployment? Options include tax credits, cost-sharing for demonstration projects, assistance to state energy programs, etc.

**What portion, if any, of the revenues from permits or the auction of allowances should be reserved for technology development? If some portion is reserved for this purpose, should that set-aside flow to the federal government with funds spent through the traditional appropriation process? Or should the funds be allocated directly to a non-profit research consortium, chartered by the federal government, which would then administer technology development and deployment projects? Or should there be some combination of these two options?**

The Conservancy advocates allocating 75% of auction revenues to support the development and deployment of clean energy technologies as part of a broader strategy to address climate change. The Conservancy also believes that the auction revenues should be used to support research and other activities that will help plants, animals, ecosystems and the most vulnerable Americans

adapt to the impacts of climate change. Lastly, the Conservancy strongly recommends that a federal cap and trade program allow the unlimited use of offsets from improved forest and cropland management, reforestation, and forest and grassland conservation to lower the compliance costs and increase the environmental gains of the program.

The Nature Conservancy believes that 75% of the revenues from allowance auctions or other permit sales should be invested in a Clean Energy Fund to support the development and deployment of emissions reductions technologies. The Conservancy supports earmarking as much of these funds as politically feasible for the development and deployment of energy efficiency technologies, demand-side management measures, renewable energy technologies and fuel efficient vehicles. The Conservancy recommends that no more than \$40 billion be transferred into the Clean Energy Fund. Once the \$40 billion limit is reached, we recommend that 75% of the allowance revenues from that point forward be transferred to the Treasury to help lower taxes. The remaining 25% of the allowance revenues should be transferred into a Climate Change Adaptation Fund to support research and other activities that will help plants, animals, ecosystems and the most vulnerable Americans adapt to the impacts of climate change (see more details below in response to the question on adaptation spending).

The Conservancy believes that a new, independent non-profit research consortium would be best suited to administer the development and deployment of emissions reducing technologies. The independent research group would be better protected from political pressure than the traditional appropriation process and would be more likely to make science-based investments in developing low-cost emissions reduction technologies.

### **What criteria should be used to determine how such funds are spent and which projects are chosen?**

The Conservancy believes the funds should be spent on activities that either:

- Have the greatest potential to achieve a breakthrough or a transformational emission reduction technology (e.g., stationary fuel cells, cellulosic biomass, low-cost solar power) or
- Support the development or deployment of technologies that are likely to achieve the greatest amount of emission reductions at the lowest cost.

### **What other mechanisms should be used to promote technology deployment? Options include tax credits, cost-sharing for demonstration projects, assistance to state energy programs, etc.**

The Conservancy supports a variety of innovative and cost-effective approaches to shift toward more efficient and clean energy technologies. The following are some approaches that are worth considering.

- **Feebates:** A revenue neutral financial instrument that would shift customer choice in purchasing new vehicles by combining fees on inefficient vehicles with rebates to

efficient vehicles. Consumer freedom of choice could be preserved if the feebates were applied separately within each vehicle-size class.

- **Market-based Energy Efficiency Standards:** All consumer products that use energy (e.g. home appliances, office equipment, furnaces, etc.) should be subject to new energy efficiency standards. The future minimum energy efficiency standards for each product should not be set arbitrarily but at the level of the most energy efficient model currently on the market. In essence, today's best model becomes tomorrow's minimum standard, creating an ongoing mechanism for improvement. Japan has successfully used this approach for several years under the "Top Runner" program.
- **Technology Prizes:** Offer multi-billion dollar prizes for the first company to successfully produce a given technology at a predetermined price. For example, prizes could be given
- for cost-competitive carbon sequestration, solar power, cellulosic ethanol, or a 100 mpg four seat car.
- Loan guarantees for the development of new energy generation or renewable fuel manufacture technology.
- Funding for mass transit.
- Long-term contract guarantees for the purchase of electricity or fuel produced from renewable generation facilities.
- Payments for demand-side management contracts based on a per megawatt reduced basis.
- Deployment of net metering technology to facilitate the deployment of renewable energy.

### **Clarifying Questions 2b:**

#### *Adaptation Assistance*

- What portion of the overall allowance pool should be dedicated to adaptation research or adaptation-related activities?
- How should these allowances or funds be administered?
- What is the appropriate division between federal vs. regional, state, and local initiatives?

**What portion of the overall allowance pool should be dedicated to adaptation research or adaptation-related activities?**

The Nature Conservancy believes that 25% of the allowance pool revenues should be transferred into a Climate Change Adaptation Fund to support research and other activities that will help plants, animals, ecosystems and the most vulnerable Americans adapt to the impacts of climate change. We do not believe that the amount of revenue transferred into the Climate Change Adaptation Fund should be capped.

In light of scientific conclusions on the risks of climate change, the need for funds to support climate change adaptation is great. In 2002, the National Academy of Science concluded that, “recent scientific evidence shows that major and widespread climate changes have occurred with startling speed....The new paradigm of an abruptly changing climate system has been well established by research over the last decade, but this new thinking is little known and scarcely appreciated by the wider community of natural and social scientists and policy makers.”<sup>1</sup>

As temperatures continue to rise, scientists predict increased ice melt, rising sea levels, increased intensity of storms and other extreme weather events. Scientists also anticipate that certain habitats and places may no longer have the right climate for the plants and animals that live there now. Global climate change has already caused the geographic ranges of some plant and animal species to shift northward and upward in elevation, while ranges for others have shrunk considerably.

We must fund scientific studies aimed at developing adaptation strategies to protect or investments in natural assets and nature reserves, in response to climate impacts that are already detectable in natural systems and in many plant and animal populations. Fisheries, timber harvests, grazing and nature parks are all managed based on ecological processes that are being fundamentally altered as a result of climate change. If we are not proactive and do not anticipate the changing world, many sectors of our society will suffer severely.

The Conservancy recommends using the revenues transferred into the Climate Change Adaptation Program to support a range of programs that meet one or more of the following principles:

1. Offer the most benefit for people and wildlife at the lowest cost.
2. Protect against catastrophic damages to people and wildlife.
3. Offer emission reduction or carbon sequestration benefits, in addition to supporting adaptation to climate change (e.g., restoring coastal forests both protects against erosion and storm surge and sequesters carbon).
4. Restore and protect natural resources that directly guard against damages from climate change events (e.g., coastal wetlands that protect the mainland from hurricane surges, forests that protect waterways from erosion during severe rainfall).

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<sup>1</sup> National Research Council (2002) *Abrupt Climate Change: Inevitable Surprises*. National Academy Press, Washington, D.C.

### **How should these allowances or funds be administered?**

The Conservancy believes that allowance revenues set aside for adaptation should be administered by an independent entity equipped to efficiently and effectively support climate change adaptation activities. This entity would be charged with funding projects that avoid the largest damages to wildlife and low-income communities at the least cost.

### **What is the appropriate division between federal vs. regional, state, and local initiatives?**

The Conservancy believes that 70% of the funds for adaptation measures should be given to federal programs and 30% should go to state programs. This split between state and federal programs is roughly consistent with the current ratio of spending at the federal and state levels to manage and conserve natural resources in the U.S.

Given approximately 30% of lands in the U.S. are under federal ownership and management, investing in federal adaptation programs is a high-leverage approach to minimizing climate change damages to natural resources. Climate change is already affecting the ability of federal natural resource management agencies to protect the investments that American taxpayers have already made in protecting land and water resources. For example, agencies that manage our federal forestlands are already faced with the challenges of protecting against higher risks of forest fire, pest outbreaks (e.g., the pine beetle infestation threatening forests in the northern U.S. and Canada), and loss of tree species linked to climate change. Providing these agencies with resources to adapt to climate change in the near term will reduce the risk of catastrophic impacts to important land and water resources. In addition, acting now to minimize the impacts of climate change would be far more cost-effective than working to recover these resources after the damages had already occurred.

To protect wildlife and natural resources in the U.S., the Conservancy believes that 70% of the adaptation funding should be dispersed to federal agencies that manage land and water resources, for example the Bureau of Land Management, the Forest Service, the Fish and Wildlife Service, the U.S. Geological Survey, the Army Core of Engineers, Wildlife Refuges, and others.

Given approximately 9% of lands in the U.S. are owned and managed by state governments, investing in state adaptation programs is also a relatively high-leverage approach to addressing climate change impacts to natural resources.

The Conservancy believes that the following types of programs at the federal, state, and regional levels would meet the principles described above. The Conservancy would be pleased to develop a more comprehensive list of program types that would meet these principles if that would be useful.

- a) Federal programs to identify and protect natural communities most vulnerable to climate change, for example (e.g., coral reefs).

- b) Federal programs to identify federal lands at greatest risk of being damaged by climate change, to monitor federal lands to allow for early detection of impacts, and to develop adaptation strategies to minimize the damage.
- c) Federal or state programs to protect water resources, especially in the arid West (e.g., programs that re-establishing natural river flows to create water reserves for commercial, agricultural and urban water users during drought conditions, and to support wildlife).
- d) Programs to support the comprehensive state wildlife conservation plans, recently completed under the State Wildlife Grant Program.
- e) Coastal wetland conservation programs that maximize wildlife conservation benefits and protection against coastal flooding and storm surge.

### **Clarifying Questions 2c:**

#### ***Consumer Protections***

- What portion of the overall allocation pool should be reserved to assist consumers?
- Should funds from the sale of permits or allowances be targeted primarily to low-income consumers, or should they be more widely distributed to benefit all consumers?

### **What portion of the overall allocation pool should be reserved to assist consumers?**

The Conservancy advocates allocating auction revenues to assist low-income consumers as part of the strategy to address climate change. The Conservancy also supports:

1. set-aside programs to support research and other activities that will help plants, animals, ecosystems and the most vulnerable Americans adapt to the impacts of climate change.
2. unlimited use of offsets from improved forest and cropland management, reforestation, and forest and grassland conservation in a federal cap and trade program to lower the compliance costs and increase the environmental gains of the program.
3. set-aside programs to support the development and deployment of clean energy technologies.

### **Should funds from the sale of permits or allowances be targeted primarily to low-income consumers, or should they be more widely distributed to benefit all consumers?**

The Conservancy believes that a federal program regulating greenhouse gas emissions would not lead to significant increases in energy prices, and that any impact would be small relative to the fluctuations in energy prices that consumers currently experience. However, the Conservancy recommends that Congress scale-up the Low Income House Energy Assistance Program as needed, using some portion of the auction or other revenue from allowances sales. This program has worked well to help offset energy costs for low-income and fixed-income households.

Given the minimal impact that a federal emission reduction program would have on energy costs, the Conservancy does not believe that a set-aside program to assist all other energy consumers is warranted.

### **Clarifying Questions 2d:**

#### ***Set-Aside Programs***

- What portion of the allocation pool should be reserved for the early reduction credit program and the offset pilot program?
  
- Are other set-aside programs needed?

### **What portion of the allocation pool should be reserved for the early reduction credit program and the offset pilot program?**

For more than a decade the Conservancy has been working to reduce heat-trapping emissions by implementing offsets project that protect and restore forest and grasslands. Today, through offsets projects covering more than 2 million acres in Belize, Bolivia, Brazil and the U.S., the Conservancy estimates that over 40 years, the protection and restoration of these largely forested areas will provide a climate benefit equal to keeping 8 million cars off the road for one year. We've included at the end of the response to this question two examples of projects in which the Conservancy has used proven scientific methods and technologies to measure the emission reductions and carbon sequestration from land conservation and restoration activities.

*The Conservancy supports the unlimited use of credible, verifiable offsets in a federal greenhouse gas cap and trade program.*

The Conservancy strongly supports the creation of credible, market-driven offsets program to offer regulated entities the option to purchase allowance credits from sources not covered by the program's emission cap. The Conservancy supports the inclusion of real and verifiable offsets in a federal greenhouse gas emission reduction program for the following reasons:

1. Offsets offer real emission reductions.
2. Offsets both increase the flexibility and lower the cost of emission reduction programs. By expanding the allowance market to include low cost emission reductions from sources outside of the cap, offsets would allow covered entities to take on tighter emissions limits without increasing compliance costs and, thus, increase the overall environmental benefit of the program.
3. Offsets help to protect the market against price volatility and, thus, lessen the need for a safety valve. The Conservancy would prefer that a federal cap and trade program not

include a safety valve. Once triggered, the safety valve would allow regulated companies to purchase additional permits issued by the government at a pre-determined price. Once in effect, a safety valve would allow emissions from regulated entities to go above the emissions limit and, therefore, would undermine the environmental goals of the program.

4. If a safety valve must be included to assuage concerns about potential price spikes, offsets would lower the overall compliance costs of the program and thereby delay a triggering of the safety valves and, thus, increase the environmental gains compared to not including offsets.
5. Including offsets in the program would reduce the transaction costs of the emissions trading market by increasing market liquidity, since a safety valve (if part of the program) would be less likely to be triggered.

*The Conservancy supports allowing regulated entities in the U.S. to purchase offsets credits issued by foreign governments.*

The Nature Conservancy believes that the benefits of leaving open the possibility of linkages with carbon trading programs in other countries, particularly those in Canada, the European Union and Japan, far outweighs the potential difficulties involved. Linking a U.S. carbon trading program to a foreign trading scheme will likely improve market liquidity and lower overall emissions reduction costs for a minimal increase in administrative burden. Overall, The Nature Conservancy believes that the challenges presented from differences in program design or implementation could be addressed and overcome in the administration of the program.

For full two-way trading, the Nature Conservancy believes an independent entity would be required to coordinate emissions credit trading between U.S. and foreign carbon markets. Such an institution would be responsible for ensuring that all trades across jurisdictions complied with the relevant discount factor (if any) and were not double counted as emissions reductions in both the United States and abroad.

Alternatively, the United States could unilaterally allow one-way carbon trading between a foreign emissions trading program and the U.S. carbon market. In such a system, the U.S. Congress would allow regulated entities to present credits from pre-approved foreign emissions trading programs to meet the requirements domestic climate change regulations. The United States would want to establish a process to ensure that all credits traded were real and verified emissions reductions that were not double counted. The major benefit of this program would be that it requires no international negotiations, only modifications to U.S. law.

*The Conservancy supports including offsets from land conservation and restoration projects in a federal greenhouse gas cap and trade program.*

The scientific findings on observed and anticipated climate change strongly suggest that all major sources of greenhouse gas emissions, including emissions from deforestation and land-use, will need to be addressed to minimize climate change impacts to people, plants and animals. Deforestation and other land use changes account for 20-25% of global greenhouse gas

emissions,<sup>2</sup> an amount greater than the total fossil fuel emissions in the United States. Without substantial emission reductions from deforestation and other land-uses, climate change can not be adequately addressed.

Forests, grasslands and other natural systems store carbon in their leaves, wood, roots and soil. As plants grow, they remove carbon dioxide from the atmosphere. But when they are destroyed, that carbon is released back into the atmosphere, contributing to the accumulation of emissions.

Carbon storage rates in forests and other landscapes in the United States are declining. Without additional economic incentives, such as carbon offset payments to land owners, carbon storage rates in these landscapes are expected to continue to decline.<sup>3</sup> Carbon project financing from a federal offsets programs would create important incentives to increase carbon storage and reduce emissions from terrestrial sources.

The Conservancy strongly recommends that offsets from improved forest and cropland management, reforestation, and forest and grassland conservation be included in a federal program to limit greenhouse gas emissions. In addition to offering real emission reduction or carbon sequestration benefits, these activities contribute to biodiversity and watershed protection. In addition to the benefits of offsets trading mentioned above, allowing land conservation offsets in a federal emissions trading program would also help to win program support from farmers, foresters and the conservation community.

Proven methods for reliably measuring, monitoring and verifying land-based offsets already exist and are in widespread use. Methods for measuring and monitoring terrestrial carbon pools, based on commonly accepted principles of forest inventory, are well established and tested. For decades, landholders and government agencies have been accurately measuring and monitoring forest status and growth using a combination of techniques including, direct field measurements, satellite and aerial photography and computer modeling. Many protocols for measuring and monitoring carbon project benefits already exist, including those established by the IPCC, the Department of Energy 1605(b) program, and the California Climate Action Registry.

In addition, well-developed third-party verification approaches are being used for ensuring the veracity of offsets credits. To further enhance credibility, if there are scientific uncertainties regarding offset measurements, discount rates can be set according to the measured percentage of uncertainty.

Carbon storage data for the nation's various forest types are readily available. Drawing from periodically collected Forest Inventory and Analysis data, the United States Forest Service has developed estimates for average carbon storage per acre, growth rates, and potential maximum carbon storage in spruce-fir, white pine, maple-beech birch, oak hickory and other major forest types.

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<sup>2</sup> Watson, et al (Eds.) (2000) – Intergovernmental Panel on Climate Change (IPCC): *Special Report on Land Use, Land use Change and Forestry* – Cambridge, U.K.

<sup>3</sup> According to the Environmental Protection Agency's Inventory of U.S. GHG Emissions and Sinks, U.S. forests sequestered 18% less carbon in 2000 than they did in 1990.

Based on our on-the-ground experience, the Conservancy believes that the technical challenges in implementing sound offsets projects are manageable and that a well-designed offsets program would achieve real emission reductions and permanent (or insured) sequestration.

*Baselines* to measure emission reductions and carbon sequestration from offsets projects can be established using existing credible and cost-effective methods. For example, a credible baseline for grassland and forest restoration projects and conservation tillage projects can be established using the base year approach, that is, by evaluating land use and measuring carbon stocks in the year immediately preceding the start of project. Credible baselines for forest and grassland conservation projects could be developed using regional or county averages of deforestation rates or grassland destruction rates. These rates could either be developed by the organization administering the offsets program, or by another qualified public entity.

The *Permanence* of the carbon offset benefits can be ensured by requiring projects to clearly establish in offset purchase agreements who is liable for fully replacing the carbon offset credits, in the event that the associated carbon benefits are lost. Offering temporary credits or requiring permanent conservation easements are also options for ensuring the permanence of carbon offset benefits.

*Leakage*, or potential shifts of activity from the project area to somewhere outside of the project boundary, can be addressed by requiring project developers to: 1) design the project to avoid leakage, if possible; 2) estimate potential leakage if it can't be mitigated and apply a leakage discount factor to the measured carbon benefits; and 3) monitor for leakage over the project lifetime and subtract any detected leakage from the carbon benefits claimed. Third party verifiers should be required to certify the accuracy of this information.

Well designed carbon projects offer multiple environmental and socioeconomic co-benefits such as wildlife conservation and improved water quality. The Conservancy believes that land-use carbon projects should promote the conservation of native ecosystems. To ensure that these projects avoid environmentally detrimental activities, they should not be permitted to destroy or negatively impact native ecosystems, or introduce invasive or non-native species.

As a leader in developing land conservation and restoration offsets projects, the Conservancy has worked with partners to apply proven scientific methods and technologies to measure the emission reductions and carbon sequestration from land conservation and restoration activities. The following are two examples of offsets project developed and implemented by the Conservancy that deliver real carbon and biodiversity benefits:

*Noel Kempff Mercado National Park, Bolivia.* The Nature Conservancy's Noel Kempff Climate Action Project (NKCAP) in Bolivia is an example of a large-scale forest conservation project where the emission reductions, baseline and leakage assessment has been validated and verified by a third party. In November 2005, an internationally accredited certifier, Société Générale de Surveillance (SGS), verified the emissions reductions from the NKCAP achieved from 1997 to 2005 using rigorous certification standards. The Noel Kempff project provides an excellent working example of how carbon sequestered in living forest biomass and emission reductions achieved through forest conservation can be scientifically quantified, monitored and certified.

The Noel Kempff Mercado National Park is one of the most biologically diverse areas in the world. When over 2 million acres adjacent to the park was threatened with timber harvesting and deforestation, the Conservancy stepped in. This project is expected to reduce up to 17.8 million tons of carbon dioxide in the atmosphere over 30 years. By facilitating a unique partnership between the Bolivian government, Fundacion Amigos de la Naturaleza and three energy companies, we helped to terminate the logging rights, and the land was incorporated into the national park. To ensure the long-term conservation of the forest its resources – and the continuation of these climate benefits – the Conservancy and local partners have established a park endowment fund and are developing sustainable economies that rely on a healthy forest. We are also monitoring changes in the park’s tropical forests and savannas to plan for the continued protection of the park.

*Louisiana Bayou Pierre Floodplain, U.S.* In northwest Louisiana, the Conservancy is working to bring a critical area of floodplain forest back to health after extensive clearing for agriculture. With the support of a consortium of power companies, 500 acres of farmland will be planted with bottomland hardwood seedlings such as nuttall oak and sweet gum and protected over the long term, linking two existing natural refuges in the Bayou Pierre Floodplain. Because the trees will absorb carbon dioxide as they mature, this reforestation project also provides important carbon sequestration benefits in addition to protecting wildlife. Surrounding communities will benefit from additional natural areas for recreation and improved flood control.

### **Are other set-aside programs needed?**

The Conservancy advocates set-aside programs to support a range of activities to address climate change. In particular, the Conservancy supports:

1. set-aside programs to support research and other activities that will help plants, animals, ecosystems and the most vulnerable Americans adapt to the impacts of climate change.
2. unlimited use of offsets from improved forest and cropland management, reforestation, and forest and grassland conservation in a federal cap and trade program to lower the compliance costs and increase the environmental gains of the program.
3. set-aside programs to support the development and deployment of clean energy technologies.

*Should a U.S. system be designed to eventually allow for trading with other greenhouse gas cap-and-trade systems being put in place around the world, such as the Canadian Large Final Emitter system or the European Union emissions trading system?*

The Nature Conservancy believes that any cap and trade program should be designed to leave open the possibility of linkages with carbon trading programs in other countries, particularly those in Canada, the European Union and Japan, should such a system emerge there. Linking a U.S. carbon trading program to a foreign trading scheme will likely improve market liquidity and lower overall emissions reduction costs for a minimal increase in administrative burden.

**Clarifying Question 3a:**

- Do the potential benefits of leaving the door open to linkage outweigh the potential difficulties?

The Nature Conservancy believes that the benefits of leaving open the possibility of linkages with carbon trading programs in other countries, particularly those in Canada, the European Union and Japan, far outweighs the potential difficulties involved. Linking a U.S. carbon trading program to a foreign trading scheme will likely improve market liquidity and lower overall emissions reduction costs for a minimal increase in administrative burden.

Overall, The Nature Conservancy believes that the challenges presented from differences in program design or implementation could be addressed and overcome in the administration of the program.

**Clarifying Question 3b:**

- If linkage is desirable, what would be the process for deciding whether and how to link to systems in other countries?

The Nature Conservancy believes that the Congress should authorize the President to recognize foreign emissions credits from programs that meet standards adopted by the Congress. Before declaring that foreign emissions credits (such as E.U. emissions credits) are recognized for compliance with U.S. laws, the Congress should require that:

1. The foreign system has an adequate, rigorous system of verification and enforcement.
2. The linkage does not reduce the level of emissions reductions required under U.S. law.
3. The economic or environmental benefits of linking emissions trading programs clearly outweigh any increase in administrative burden or cost.

The Congress should also instruct the President to negotiate agreements with foreign governments where U.S. emissions reduction credits are recognized by foreign entities and vice-versa, provided that they meet Congressional standards adopted under U.S. climate regulations. These bilateral emissions trading agreements should take effect without further Congressional review.

### **Clarifying Question 3c:**

- What sort of institutions or coordination would be required between linked systems?

For full two-way trading, the Nature Conservancy believes an independent entity would be required to coordinate emissions credit trading between U.S. and foreign carbon markets. Such an institution would be responsible for ensuring that all trades across jurisdictions complied with the relevant discount factor (if any) and were not double counted as emissions reductions in both the United States and abroad.

Alternatively, the United States could unilaterally allow one-way carbon trading between a foreign emissions trading program and the U.S. carbon market. In such a system, the U.S. Congress would allow regulated entities to present credits from pre-approved foreign emissions trading programs (such as the European's Union's Emissions Trading Program) to meet the requirements domestic climate change regulations. The United States would want to establish a process to ensure that all credits traded were real and verified emissions reductions that were not double counted. The major benefit of this program would be that it requires no international negotiations, only modifications to U.S. law.

The first step in the process would be for the Congress authorize the President to immediately recognize foreign emissions trading allowances (such as E.U. emissions credits) for compliance with U.S. law provided that:

4. The foreign system has an adequate, rigorous system of verification and enforcement.
5. The linkage does not reduce the level of emissions reductions required under U.S. law.
6. The economic or environmental benefits of linking emissions trading programs clearly outweigh any increase in administrative burden or cost.

*If a key element of the proposed U.S. system is to “encourage comparable action by other nations that are major trading partners and key contributors to global emissions,” should the design concepts in the NCEP plan (i.e., to take some action and then make further steps contingent on a review of what these other nations do) be part of a mandatory market-based program? If so, how?*

The Nature Conservancy believes that, because of the United States’ large historic responsibility for the climate change problem, our nation must act now to abate greenhouse gas emissions through a mandatory domestic carbon trading program without precondition concerning other nations. The Nature Conservancy believes that the best approach to encourage developing country emissions reductions is for the United States to play a leadership role by creating a mandatory greenhouse gas reduction program that would serve as a model for other countries to reduce their emissions.

After the U.S. has demonstrated strong leadership in implementing an effective mandatory program to reduce emissions causing climate change, future U.S. actions to reduce emissions even further could be considered in light of the efforts to address climate change by major developed and developing countries and major U.S. trading partners. However, the Congress should avoid setting a rigid, one-size-fits-all quantitative standard under U.S. law. Instead, the Congress should legislate that qualitative standards of equity requiring “comparable” action by developed countries and “equitable” action by developing countries occur before the U.S. level of effort is increased. To keep the Congress well informed of foreign efforts, the President should be required to report at regular intervals (perhaps every two years) on whether foreign efforts to reduce greenhouse gas emissions are “comparable” or “equitable” to U.S. action.

#### **Clarifying Question 4a:**

- What metrics are most valuable for comparison of developed and developing country mitigation efforts to U.S. efforts?

Developed and developing country efforts to reduce emissions should be evaluated using different metrics since they differ significantly in: the level of historic responsibility for climate change, the capacity to address climate change and overall wealth. The Congress should avoid setting a rigid, quantitative standard for future increases in U.S. efforts since no single quantitative metric is likely to prove sufficiently accurate or equitable for countries with markedly different economic conditions and resource endowments. The Congress could legislate that qualitative standards of equity requiring “comparable” action by developed countries and “equitable” action by developing countries occur before the U.S. level of effort is increased. The President should be required to report at regular intervals (perhaps every two years) on whether foreign efforts to reduce greenhouse gas emissions are “comparable” or “equitable” to U.S.

action. In determining whether or not developed and developing countries have met the required level of effort the President consider the following factors in the analysis of each country's efforts:

- the historic share of global greenhouse gas emissions
- trends in greenhouse gas emissions
- trends in per capita emissions
- trends in the carbon intensity of the economy
- existing policies and measures to improve energy efficiency and reduce emissions
- per capita GDP

#### **Clarifying Question 4b:**

- What process should be used to evaluate the efforts of other nations and how frequently should such an evaluation take place?

The Congress should avoid setting a rigid, quantitative standard for future increases in U.S. efforts since no single quantitative metric is likely to prove sufficiently accurate or equitable for countries with markedly different economic conditions and resource endowments. The Congress could legislate that qualitative standards of equity requiring "comparable" action by developed countries and "equitable" action by developing countries occur before the U.S. level of effort is increased. The President should be required to report at regular intervals (perhaps every two years) on whether foreign efforts to reduce greenhouse gas emissions are "comparable" or "equitable" to U.S. action. In determining whether or not developed and developing countries have met the required level of effort the President consider the following factors in the analysis of each country's efforts:

- the historic share of global greenhouse gas emissions
- trends in greenhouse gas emissions
- trends in per capita emissions
- trends in the carbon intensity of the economy
- existing policies and measures to improve energy efficiency and reduce emissions
- per capita GDP

Based on the President's biennial report, future Congresses will decide whether or not to increase the U.S. level of effort to address climate change.

#### **Clarifying Question 4c:**

- Are there additional incentives that can be adopted to encourage developing country emission reductions?

The Nature Conservancy believes that the best approach to encourage developing country emissions reductions is for the United States to play a leadership role by creating a mandatory greenhouse gas reduction program that would serve as a model for other countries to reduce their emissions.

In addition to reducing greenhouse gases domestically, one area where the United States could encourage developing country emissions reductions is by providing financial and technical assistance to reduce tropical deforestation. Emissions from tropical deforestation are not covered under the United Nations Framework Convention on Climate Change or under the Kyoto Protocol despite being the source of 20-25% of global carbon dioxide emissions – roughly the same level as the United States – and accounting for the majority of emissions in major developing countries such as Brazil and Indonesia. Further, it is likely that emissions from deforestation can be reduced at a lower cost than emissions from energy use and industry within the United States. By allowing the storage of carbon dioxide in plants and soils in developing countries to be included in the offsets program, U.S. climate regulations would help abate emissions in developing countries while lowering the costs to U.S. industries.