TESTIMONY OF
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BEFORE THE SENATE COMMITTEE ON FOREIGN RELATIONS,
SUBCOMMITTEE ON INTERNATIONAL DEVELOPMENT AND FOREIGN
ASSISTANCE, ECONOMIC AFFAIRS AND INTERNATIONAL
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Good morning, Mr. Chairman and Members of the Committee. Thank you for inviting me to testify on this important subject. My name is Dirk Forrister, and I am Managing Director of Natsource LLC, an environmental asset management company headquartered in New York City with offices in Washington, DC, South America, Europe, Japan and Canada. My testimony will address the potential for greenhouse gas emissions trading markets to help combat the problem of deforestation.

In my remarks today, I will discuss Natsource's experience with:

- forestry-related carbon offsets,
- the context of today's international carbon markets,
- the minor role that forestry projects currently play in that market,
- the barriers that limit the role of forestry in the effort to address climate change, and
- the potential for improving policy in the future international policy regime to enhance forest protection.

Natsource

Natsource is deeply involved in the international carbon markets on behalf of our clients. We are a leading environmental asset management firm and

currently have approximately $1.2 billion in assets under management. This capital is used to purchase greenhouse gas (GHG) compliance instruments on behalf of industrial emitters that are required to reduce their GHG emissions, and GHG reductions and other environmental commodities on behalf of return investors. Natsource Asset Management LLC is a registered investment advisor with the Securities and Exchange Commission. Our staff is comprised of experts that have helped to develop the policies that created emissions markets and others that have participated in some of the first and largest transactions in the GHG market. New Energy Finance, a leading independent analytical service recently ranked Natsource as the largest purchaser of carbon credits (on a risk adjusted basis) in the world. We attach a press release that communicates this award for the record. We have entered into contracts of over $1 billion for these assets.

International Emissions Trading Association

I am also testifying today as a representative of the International Emissions Trading Association (IETA), a trade association representing 179 industrial, financial and service companies who are active in emissions markets and greenhouse gas emissions trading policy development around the world. IETA is the leading international organization that has participated in the development of GHG markets. Natsource is a longstanding member of IETA, and I currently serve as the Chairman of IETA's Clean Development Mechanism (CDM) Working Group as well as its Market Oversight Committee. Jack Cogen, Natsource CEO currently serves as IETA's Chairman.

Markets are the Most Efficient Policy Tool to Achieve Climate Policy Objectives

Natsource and IETA support the use of emissions trading to address the problem of climate change. We are united in our belief that markets are the most efficient way to address climate change. Free markets will ensure that scarce resources are deployed to achieve the maximum amount of emission reductions at the lowest possible cost. We support policies that authorize allowance trading for covered sources, the creation of project-based reductions (sometimes called "offsets") from uncapped facilities, and the use of offsets by regulated firms to comply with emissions targets. Natsource and IETA members believe that these policies will reduce the cost of climate protection. There should be no quantitative or qualitative limits imposed on the use of these markets for compliance. Such arbitrary limits only increase costs, diverting resources from investment necessary to achieve other societal objectives. Given the magnitude of the challenge posed by climate change, we believe that all policy tools should be used. Ultimately, a portfolio of actions is required to achieve long-term climate protection. We do not believe that greenhouse gas emissions markets are an end unto themselves, but are a key tool to mobilize capital required to assist and facilitate a cost-effective transformation to a lower carbon emitting economy.

We believe that policies can be developed that ensure the environmental integrity of carbon offset projects. Specifically, offsets created by forestry are a key asset in the effort to mitigate climate change. As you know, stabilizing concentrations of GHGs in the atmosphere at levels under discussion will cost trillions of dollars through the 21st century and ultimately requires the transformation of the energy system. Sequestration of carbon dioxide from the atmosphere in the near term is essential while society is attempting to create the advanced energy technologies which are not yet economically competitive but which are essential to achieving the steeper reductions later in the century to achieve long term climate policy objectives. We also believe that policies

can be designed to guard against potential events which would reverse the benefits of forestry offsets. These are events such as fires or floods.

Finally – and of particular importance to today's discussion – as governments find ways to strengthen and improve the international policy regime to address climate change, IETA's members strongly support broadening the carbon offset market to include new asset classes, such those that would award credits for avoided deforestation.

Deforestation

Deforestation in developing countries is currently the second largest source of human greenhouse gases, representing about 20%-25% of global GHG emissions.[1] According to the Food and Agriculture Organization, global deforestation was estimated to be 7.3 Million hectares per year in the period 2000-2005.[2] However, because of concerns about additionality, permanence, and leakage, avoided deforestation was excluded from the CDM.

We are following with interest proposals that would authorize the creation of offsets from avoided deforestation, such as Reduced Emissions from Deforestation and Degradation (REDD) championed by Papua New Guinea. We believe that credible, verifiable and environmentally effective rules can be established to govern the creation of emissions offsets from avoided deforestation projects. These projects would provide major benefits to host countries and investors in addition to benefiting the climate system.

[1] Skutsch et. al, "Clearing the way for reducing emissions from tropical deforestation", Environmental Science& Policy 10 2007, p.1
[2] http://www.fao.org/forestry/foris/data/fra2005/kf/common/GlobalForestA4-ENsmall.pdf

Natsource's Experience with International Forestry Offsets

Natsource believes that offsets created by forestry are a key policy tool in the portfolio of actions to address climate change. Natsource Asset Management LLC (NAM) has invested in both domestic U.S. forestry offsets and international offset projects on behalf of its investors as part of its portfolio of GHG assets. NAM is making these investments because we believe that they are good investments but also to provide policymakers with the confidence that such projects will provide permanent and enduring benefits. Ultimately, investment is required to build such confidence. However, forestry-related reductions comprise less than 1% of NAM's portfolio, due to policy restrictions on their use. We have not invested in avoided deforestation projects because they are not currently usable for compliance in any governmentally sanctioned emissions trading system.

In Chile, NAM invested in the Nerquihue afforestation project, where open land will be converted into a forest by planting trees to sequester carbon. The project is comprised of 12 small-scale afforestation projects. The project developer has partnered with the individual land owners at the project sites and will act as the project entity.

This project includes the use of advanced forestry technology. Until the 1990s, the project site land was used for intense agriculture and pasture. It is relatively remote and hilly, which hinders the use of mechanized land tending and planting. In addition, the project area for the plantings is extremely dry and lacks natural seed sources. Forest establishment using traditional planting techniques has a high chance of failure due to these dry conditions, and is expensive due to typical mechanized planting techniques. As a result, the project developer will use advanced North American tree inoculation

technology that will improve the likelihood that the seedlings will prosper. It is expected to generate around 470,000 Temporary CERs (tCERs) from inception until 2012. This type of unit can be produced under the Kyoto Protocol through reforestation or afforestation projects, but is of less compliance value because the credits must be replaced in the following compliance period.

In February 2008, Natsource purchased 60,000 tons of carbon emissions reductions on behalf of its clients from a private forest owner represented by the Pacific Forest Trust. The emissions reductions were created through sustainable forestry on a permanently conserved property in California. This project illustrates the significant role that management of existing forests in the United States can play in addressing climate change. The transaction is the first commercial delivery of certified emissions reductions under the Forest Protocols adopted last fall by the California Air Resources Board (CARB). The Protocols are the first rigorous governmental accounting standards in the U.S. for climate projects embracing forest management and avoided deforestation, while ensuring emissions reductions are real, permanent, additional and verifiable. We have attached the press release announcing this transaction for the record.

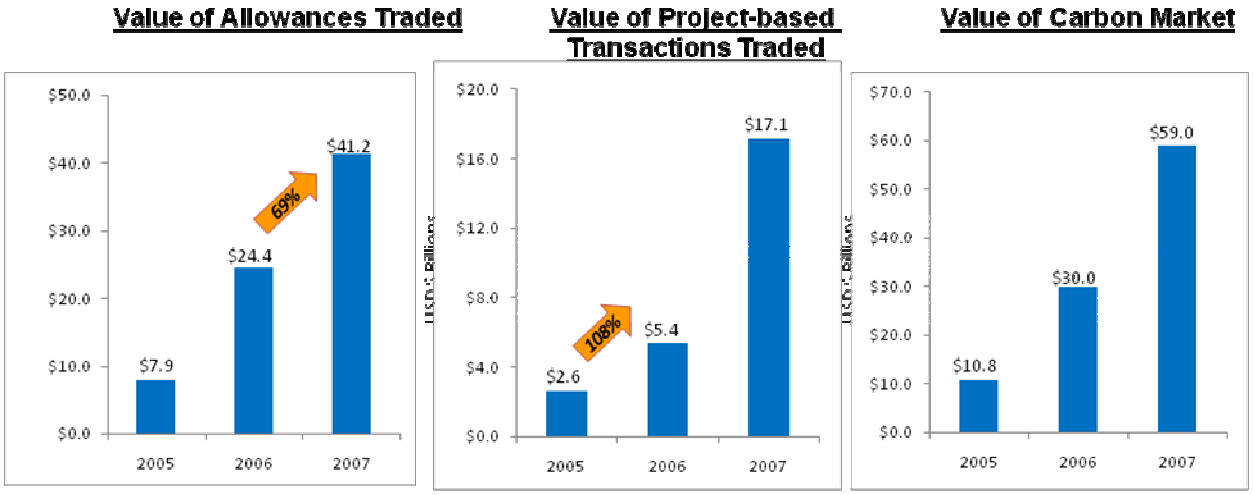
We view these domestic and international transactions as small initial steps in what we hope to be more vibrant involvement in forestry-related offset projects in the future. For that to occur, a more favorable market and regulatory climate is urgently needed.

International Market Context

Greenhouse gas markets or the "carbon market" as it is known to some are evolving and will continue to mature over the next several years. We believe that capital is available to finance activities that reduce deforestation if clear

rules are put in place that govern the creation and use of offsets from such activities.

Driven by companies seeking to comply with greenhouse gas emissions targets in Europe and Japan, the international carbon market grew to $59 billion in size last year. (The graphic below illustrates market growth since 2005 and provides data sources.) This market includes trading in several types of compliance instruments, which can be categorized generally as either allowances or project-based reductions. The latter category includes Certified Emission Reductions (CERs) created by the Kyoto Protocol's Clean Development Mechanism (CDM) projects as well as Emissions Reduction Units (ERUs) created by its Joint Implementation (JI) provisions. Within the CDM, two other types of offset can be created for afforestation and reforestation projects (sometimes referenced as "Land Use and Land Use Change and Forestry – or LULUCF). However, these mechanisms do not award CERs for avoided deforestation. Allowance transactions comprised $41 billion of this traded value and offsets accounted for the remaining $18 billion.



Data for 2005 and 2006 is derived from both of the World Bank's 2006 and 2007 "State of the Carbon Market" reports. Data for 2007 is derived from Point Carbon and cited in Bloomberg "Emissions Trades Rose 80% in Value Last Year" Point Carbon Says" 2008-01-15. New York.
Note: 2007 "Value of Project-based Transactions Traded" does not include ERUs.

Although the CDM has been criticized by some from the environmental and investor community, it has stimulated billions of dollars in investments that reduce GHG emissions in developing countries and reduced regulated firms' costs to comply with emissions targets. CERs and ERUs are generally available at much lower prices than EU allowances, given the lower cost abatement opportunities in developing countries and economies in transition. In 2006, the average price of an EU allowance was approximately $22.10 per tonne, while the average price of a CER was $10.90 per tonne. Given this price differential, many European companies have used CERs and ERUs as important components of their strategy to comply with emissions targets. In addition, Japan has been a large buyer of these assets given that they are cheaper than the cost of reductions that can be achieved in Japan. Many of the U.S. members of IETA with installations regulated in Europe have purchased these assets in recognition of the important role that offsets play in controlling the costs to comply with emissions targets in Europe's trading system. IETA supports the inclusion of provisions in U.S. climate legislation that would authorize the use of international offsets to comply with emissions targets. Compliance costs will be far higher without the use of such assets.

Recent analysis by EPA of the Lieberman-Warner legislative proposal concludes that "the use or limitation of offsets and international credits has a larger impact on allowance prices than the modelled availability or constraint of key technologies."[3] The analysis assumes that international offsets (rather than international allowances) will be allowed up to a 15% cap. It finds that eliminating the use of international credits, while still allowing domestic offsets up to the 15% cap, would increase allowance prices increase by 34%. If domestic offsets and international credits are not allowed, then allowance prices would increase by 93%. This translates into additional costs to GDP of $314 billion in

[3] U.S. Environmental Protection Agency, *EPA Analysis of the Lieberman-Warner Climate Security Act, S. 2191 in 110th Congress*, March 14, 2008, http://www.epa.gov/climatechange/downloads/s2191_EPA_Analysis.pdf

2020. Analysis by New Carbon Finance -- which assumes that the bill will only allow use of international allowances, and not international credits -- obtained similar results. It estimates that if the Lieberman Warner legislation was modified to allow international offsets up to 15% of the allocated amounts, prices would decrease by 60% in the period up to 2015 and by 44% by 2020.[4]

As mentioned previously, the global carbon market includes trade in both allowances and project based offsets. In 2007, the $17.1 billion in traded offset value consisted of CERs, created by CDM projects. (It does not include additional, but much smaller, trade in ERUs created from JI projects in countries with economies in transition – Russia, Ukraine, and countries in Eastern and Central Europe.) Given policy restrictions on the use of forestry-related offsets, the World Bank identified that only 1% of the traded volumes of offsets in 2006 occurred in agriculture and forestry projects.[5] As of March 5, 2008, there were 3,082 projects in the CDM pipeline, with a headline volume of over 2.5 billion tonnes through 2012.[6] In the Afforestation and Reforestation catagories, there are 17 projects identified, which in turn are expected to produce under 7 million tonnes through 2012.[7]

The reason for the lower degree of market interest in forestry-related offset projects is the restrictive policy environment that exists for such projects.

Policy Drivers for International Carbon Markets

The international carbon market was created by a set of policies that formed the essential elements of supply and demand, which are discussed below. The market demand is driven primarily by compliance requirements of the group of

[4] New Carbon Finance, "North America White Paper – February 2008"
[5] World Bank, "State and Trends of the Carbon Market 2007," May 2007.
[6] UNEP RISO Center, http://www.uneprisoe.org
[7] Ibid.

developed countries that ratified the Kyoto Protocol and the programs they put in place to implement compliance with their obligations. The supply of and demand for forestry-related credits is driven by rules as to whether they can be used for compliance and others governing their creation.

The Kyoto Protocol authorized the creation of two main types of project-based offsets, CERs and ERUs. It incorporated these mechanisms to enhance sustainable development, to transfer technology, capital and services from developed to developing countries and transition economies, and to reduce compliance costs for developed country governments and private firms required to meet GHG emission reduction targets. Under the CDM, developed countries and firms invest in project-based activities in developing countries and use the carbon offsets created by these investments to comply with their GHG emissions targets. With limited exceptions, CERs of 2000-2012 vintage can be used for compliance with emissions targets in countries that are parties to the Kyoto Protocol. This gave companies the ability to generate and transact early reductions in advance of the Kyoto Compliance period and provided an incentive for developing countries to participate in the global effort to address climate change. Natsource Advisory and Research estimates that there are 2.9 billion tonnes of demand from Japan, the European Union and New Zealand.

The European Union adopted the Emissions Trading Scheme (EU ETS) in 2004 as a key element of its strategy to comply with its Kyoto obligations. It requires emissions cuts from over 10,000 large emitting installations across Europe – including heat and power plants, steel mills, oil refineries, chemical plants, paper mills and other heavy industries. Reductions are required in two phases and cover approximately 45% of the continent's CO2 emissions. Regulated installations can meet their targets by tendering allowances or project-based offsets with limited exceptions to Member States. Companies in the ETS face stiff

penalties if they fail to comply. In order to provide a disincentive for non-compliance, installations will be fined EUR 100 per tonne for emissions in excess of their targets, in addition to having to pay back each tonne of overage.

The European Union adopted the "Linking Directive" in 2005. It allows installations in the ETS to use CERs and ERUs for compliance up to quantitative limits set by Member States (so called "Supplementarity Limits"). It prohibits use of forestry-related offsets and restricts use of credits from large hydropower projects.

Despite the restrictions on use of forestry-related credits in the ETS, there is some market potential for these instruments in Europe from national purchasing programs. In order to meet the Kyoto targets, a number of EU Member State governments have adopted purchasing programs for CERs and ERUs that may include forestry-related instruments. To give a sense of the potential scale of purchasing by these sovereigns, Natsource Advisory and Research estimates that EU Member State governments will need to reduce emissions by about 0.55-0.95 billion tonnes over the Kyoto Period based on current emissions trends and measures that are already in place. These reductions must be achieved through national purchases or other policies and measures for non-covered sectors (transportation, commercial and residential emissions).

The other primary source of demand for CERs and ERUs is Japan. Natsource Advisory and Research estimates that Japan is approximately 740 million tonnes short of its Kyoto targets over the five year Kyoto period based on current emissions trends and measures in place. At present, 40 key emitting economic sectors in Japan have entered into a set of voluntary agreements with the Government to cut emissions, and they are allowed to use CERs and ERUs to meet those commitments. Japanese industry is allowed to import forestry-

related CERs, which has stimulated some Japanese private sector interest in this asset class.

In addition to these demand considerations, the Kyoto Protocol and the CDM Executive Board have influenced the development of supply of forestry-related carbon offsets. The parties to the Kyoto Protocol struggled for several years to develop guidelines for LULUCF projects under the CDM, ultimately reaching agreement in Milan at the 9th Conference of the Parties to the UN Framework Convention on Climate Change in 2003. The COP 9 Decision created two types of temporary credits that address concerns about impermanence of the reductions. However, the rules governing the creation and use of these offsets are difficult to understand, and they create units that must be replaced in the next compliance regime. The complexity of these systems and the limited compliance value of the offsets have created limited market interest in them.

Even apart from its treatment of forestry-related projects, the CDM can be characterized as a complex system. IETA is developing a proposal for improving the overall regulatory approach to the CDM for the post 2012 period. We believe that the CDM's current approach to ensuring environmental integrity imposes significant costs and uncertainty on investors, which in turn has adversely limited the mechanism's potential to mobilize the volumes of capital that will be ultimately required to address climate change. IETA members recognize that the CDM has made a significant contribution to learning and has created major benefits. However, we do believe the mechanism can be reformed to influence an even greater level of investment in the future. We believe that improvements are needed to influence trillions of dollars of large-scale investments in the future that are needed to meet global energy demand, and that will determine in large part whether long-term atmospheric GHG concentration targets can be achieved. We are also interested in providing our

views on how the U.S. can learn from CDM in the development of domestic legislation.

Policy Improvements to Tap Carbon Markets to Avoid Deforestation

Forest sequestration – particularly avoided deforestation -- is potentially an important contributor to GHG reductions and to controlling costs of achieving atmospheric concentration targets. Carbon markets could assist in achieving forest-related reductions, if policies in the U.S., Europe, Japan, Canada and others were crafted to permit use of this asset class in compliance with emissions limits.

Avoided deforestation projects could provide a substantial share of supply for the international market, if policies were more favorable. Of the two models cited in the IPCC report that consider forest sinks as a category, one model (IMAGE) estimates that they will make the second-largest contribution to cumulative emission reductions in the short-term, from 2000-2030, with approximately 15 GtCO2e. Another study focusing on forest sequestration concludes that forest sequestration can account for an even larger share of global abatement – one that is in proportion to tropical deforestation's large (25%) share of global anthropogenic GHG emissions. The study estimates that forests can sequester as much as 75 GtC (i.e. 275 GtCO2e) cumulative to 2050, or approximately one-third of total abatement.[8] This would result in an estimated reduction in the price of carbon of 40% by 2050.[9]

[8] "Forestry and the carbon market response to stabilize climate," M. Tavoni et al., Fondazione Eni Enrico Mattei, Working Paper 2007.15, 2007, http://ideas.repec.org/p/fem/femwpa/2007.15.html. As a source for the 25% figure, the report cites Houghton, R.A., 2005. "Tropical deforestation as a source of greenhouse gas emissions", in: Mountinho, P., Schwartzman, S. (Eds.), Tropical Deforestation and Climate Change. IPAM: Belem, Brazil and Environmental Defense: Washington, DC, pp. 13-21.
[9] Ibid.

In light of the importance of forest sequestration for achieving environmental and economic objectives, we would make the following recommendations for your consideration:

1. In the international arena, a major goal of the design of the post 2012 project-based mechanisms should be to significantly increase investment in forestry-related activities and avoided deforestation in particular. In addition to its environmental importance, forest sequestration could be a particularly important category for countries and regions that currently are attracting less CDM investment, such as sub-Saharan Africa. Designing the mechanisms to increase the level of forest sequestration projects is one way to improve the regional distribution of investment.
2. U.S. federal policy should authorize the use of international carbon markets, and forestry-related offsets in particular, as a key tool to control costs of complying with emissions targets. Proposals that impose quantitative and qualitative limits on the use of markets for compliance will increase costs and create market distortions.
3. U.S. policy should support reforms to the project-based mechanisms in the international negotiations to develop a successor agreement to the Kyoto Protocol designed to ensure environmental integrity while attempting to mobilize larger volumes of capital. This system should provide a more reliable, predictable approach to asset creation that will help stimulate greater amounts of investment in emissions mitigation projects around the world.

In the future, we expect that international carbon markets will continue to grow as the international community negotiates a successor agreement to Kyoto and as nations implement policies to achieve their climate goals. IETA members believe that international emissions markets must play a key role to assist

governments in meeting their emissions targets in a cost effective manner. In order for the market to truly realize this ambition, it is important to include the widest range of emission reduction and sequestration strategies in the set of eligible activities for offset creation.

In conclusion, Mr. Chairman, we appreciate the opportunity to testify about the potential for emissions markets to be tapped for protecting the world's forests. As you consider policy alternatives for advancing this objective, we stand ready to assist you.