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Series/Staff Member: Roger Ballentine
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OA/ID Number: 19510
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Folder Title:
Climate Change Other Agriculture/Sinks/Land Uses [1]

Stack:	Row:	Section:	Shelf:	Position:
S	62	1	1	1

Call Tom Grodennell
707-578-9950 (Dec 8, Friday)
Pacific Forest Trust

- Connection b/w sequestration and other enviro goals
 - conservation
 - sprawl
 - etc.
- Role of market to supplement regulation; impact role of logging interests
- Major forest owners will be there. Industry and enviros.
- COP6 - results;



Laurie Wayburn <lwayburn@mail.pacificforest.org>
11/14/2000 01:32:33 PM

Record Type: Record

To: Roger S. Ballentine/WHO/EOP
cc: David Gardiner/WHCCTF/EOP, Jim.Ilyons@usda.gov, Jeff_Burnam@agriculture.senate.gov, Morrisac@state.gov
Subject: follow-up re our discussion on Permanence

Dear Roger:

Tia Nelson(of TNC) mentioned that you all discussed the "permanence" issue last week, and that more clarity as to why I think it critical would help in the discussion. Let me see if this helps at all.

The value of permanence, or durability, is very simple. It is better for the atmosphere and for biodiversity if projects are longer than shorter, i.e. when the net benefit lasts more time, rather than less time. Hence, projects which do last longer, are more durable or are permanent in their duration & benefit, are more desirable, and should be incentivised more than those which do not. All efforts are good, but the longer the better.

Under a system where all efforts count the same, regardless of duration, one loses the incentive to have projects of longer benefit for two main reasons:

- 1) Everyone likes to maintain options to switch to alternatives (other technologies will likely supercede forestry/conservation as a lower cost option; countries could decide to abandon efforts in this area; etc.)
- 2) Timber gets more valuable commercially as it gets older--up to a point--and land becomes more valuable as it gets scarcer. These two factors dominate how forestland is managed and how land decision are made. Thus, the economic incentive in forestry and land carbon projects when all projects count the same is to get carbon credits for a relatively short time (10-20 years) to offset annual costs, wait until the timber or land value far exceeds the carbon "debit" value, and then cut or convert, replacing your carbon credits with cheaper alternatives to the degree you have to, or simply, pay the debit, with the offsetting gain from land or timber sales bringing a far greater net return.

One of the most compelling reasons to work with forests and forest conservation in reducing net atmospheric carbon (beyond their direct emissions reductions) is that these efforts bring great co-benefits, both in this country and abroad. Thus, to ensure that we get the co-benefits of biodiversity, watershed and open-space protection, and increased timber inventories (amongst other benefits), we need a

wants additional incentives for long term sequestration. now, short + long term projects valued the same in a given year, but if there is harvest that is an emission so there will be a disincentive to cut. (all 3.3)

wants a 3.4 rule that would give greater credits for long term commitments.
↳ would get huge resistance; Europe doesn't want any credit so would be against increasing credits
↳ solution maybe in implementing legal framework

durability or permanence standard.

We need to raise this internationally under 3.4 as it would not be a level playing field if European countries, or Russia, for example, had no durability standard and the US did. The benefits for watershed and biodiversity are universal in nature (no pun intended).

Thanks again for your consideration of this.

Laurie Wayburn
President
The Pacific Forest Trust
P.O. Box 879
Boonville, CA 95415
(707) 895-2090, Fax (707) 895-2138

Dear Roger:

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increased timber inventories (amongst other benefits) , we need a durability or permanence standard.

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Laurie Wayburn

President

The Pacific Forest Trust

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David Gardiner <david_gardiner_99@yahoo.com>
11/14/2000 03:59:33 AM

Record Type: Record

To: Janet Anderson/WHCCTF/EOP, Roger S. Ballentine/WHO/EOP
cc:
Subject: Fwd: PFT Press release

Enviro support for sinks.
Note: forwarded message attached.

Do You Yahoo!?
Yahoo! Calendar - Get organized for the holidays!
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Received: from mail.pacificforest.org (209.204.182.249) by mta229.mail.yahoo.com with SMTP; 13 Nov 2000 16:50:28 -0800 (PST)
Received: from [192.168.0.3] by mail.pacificforest.org (AppleShare IP Mail Server 6.1) id 55558 via TCP with SMTP; Mon, 13 Nov 2000 16:45:33 -0800
Date: Mon, 13 Nov 2000 16:35:51 -0800
From: Jennifer O'Donnell <jodonnell@mail.pacificforest.org>
Subject: PFT Press release
To: david_gardiner_99@yahoo.com
Message-id: <v04210103b63639286d80@[192.168.0.3]>
MIME-version: 1.0
Content-type: multipart/mixed; boundary="Boundary_(ID_PC5IGssphPaJu0FDCL035w)"
Content-length: 41488
X-Apparently-To: david_gardiner_99@yahoo.com via web6202.mail.yahoo.com
X-Track: 1: 40

For Immediate Release:	For Further Information:
November 14	Joe Bridgman 707-578-9950 x 13
	Jennifer O'Donnell 707-578-9950 x 12

The Pacific Forest Trust Commends Inclusion of
Forest Carbon Sinks Credits in the Kyoto Protocol

Santa Rosa - This week, delegates from over 160 countries are gathering at The Hague, Netherlands as part of the sixth Conference of the Parties to the Kyoto Protocol. This meeting is particularly significant as the Parties face the question of whether forests should be considered in the Protocol as a means of reducing carbon dioxide (CO2) emissions, and if so, how they should be included. Loss and unsustainable management of forests is known to be the second

largest source of CO2 emissions.

The US position supports rules for the broad inclusion of forests and other land uses that reduce CO2 emissions. According to the United States, such activities should be eligible for carbon credits under the Kyoto Protocol. PFT President Laurie Wayburn commended the US's position saying, "Done right, this is a tremendous opportunity to reduce carbon emissions, create a new economy, and support forest conservation."

According to Ms. Wayburn "done right" means three things. First of all, credits for carbon sequestration must be additional to carbon stored as a result of business as usual practices. Second, forests included in carbon accounting should be managed for the permanent sequestration of carbon so that emissions reductions are lasting and conservation co-benefits are realized. Finally, credits must be verified by independent third parties.

① add. from 1
② permanent
③ verifiable

PFT's recommendation's are further articulated in a recently released report "Forest Carbon in the United States: Opportunities and Options for Private Lands," co-authored by PFT and several leading scientists.

Inclusion of credit for forest-based activities that reduce CO2 emissions in the Protocol would create a new market for forest stewardship and conservation. It would create a structure under which landowners could be paid for keeping land in forest and for increased stewardship of those forests. Keeping land in forest, not only reduces carbon dioxide emissions from forest loss, it also increases sequestration and provides numerous co-benefits to forest ecosystems such as biodiversity and watershed conservation.

"Managing forest for carbon by growing older forests with greater stocks of carbon also provides more habitat for species, enhances water quality and augments local forest economies," said Professor John Gordon of the Yale School of Forestry and Environmental Studies, "This is a win-win opportunity."

A recent press release from The United Nations Environment Programme (UNEP) supports this position saying "Climate policies can be more economically and environmentally effective if they are integrated into national plans for sustainable development. Win-win policies that simultaneously meet the objectives of more than one environmental convention should be encouraged as much as possible."

###

A collaborative, problem-solving organization, the Pacific Forest Trust works with landowners, forest managers, public agencies, local communities, and others to sustain private forestlands for the wealth of goods they provide.

THE
PACIFIC
FOREST
TRUST

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PRESERVING
PRODUCTIVE
FORESTLANDS

Sinks DeB

September 28, 2000

Mr. Frank Loy
Under Secretary of State for Global Affairs
United States Department of State
2201 C Street, NW
Room 7250
Washington, D.C. 20520

Mr. Roger Ballentine
Deputy Assistant to the President
for Environmental Initiatives
115 Old Executive Office Building
Washington, D.C. 20502

Dear Under Secretary Loy and Mr. Ballentine:

The Pacific Forest Trust (PFT) is writing in response to the United States (US) submission, dated August 1, 2000, regarding its position on land use, land use change and forestry within the Kyoto Protocol. PFT has six years experience working on these issues in the domestic US. PFT has developed and implemented several forest carbon projects and has gained direct experience in project level accounting, performance guarantees, and domestic forest carbon transactions.

Overall, PFT welcomes the United States' broad approach to articles 3.3 and 3.4, which recognizes the vital role of forests in decreasing (or increasing) global atmospheric carbon levels. Likewise, we support the views of Robert Watson, Chair of the Intergovernmental Panel on Climate Change, that both forestry and forest conservation can significantly contribute to efforts to mitigate global warming. The US submission outlines an approach that has the potential to catalyze a significant new economic sector in US forestry, as well as provide an incentive for forest conservation stewardship. Within the framework that the US proposes, PFT has several recommendations that would make forest-based carbon mitigation (whether enhancing, maintaining or conserving existing sinks or promoting new sinks), carbon sequestration, and accounting more meaningful and effective. Our recommendations, listed below, address issues at both the national and project level of accounting:

- **Permanence:**
Recommend a permanent land registration system that also encourages permanent carbon sequestration.
- **Credit /Debit Accounting at the Project Level:**
Establish an accounting system that both encourages permanent carbon sequestration and accurately captures annual carbon credits and debits (sequestration and release) over time.
- **Threshold and Discounting:**
Assign carbon credits only to practices that exceed business as usual activities at both the national and project level; discount short-term project credits or provide a bonus for permanent (i.e. 100 year) projects.
- **Conservation, Biodiversity and Watershed Benefits:**
Ensure express recognition of co-benefits in all conservation and management projects.
- **Carbon in Wood Products:**
Ensure no double counting of product carbon through the accounting system; identify an accurate method to track product decay.
- **Leakage and Minimum Ownership Entry:**
Establish an accounting system that requires at least 60% of holdings within forest region to be entered in order to earn carbon credit and accounts for carbon loss and decay over time.
- **"Forest" Definition:**
Include forest soils as a component of the "forest" definition and require a minimum qualifying area of 100 acres.
- **Accounting Timeframe:**
Ensure that accounting timeframe does not allow "gaming" between 1990 and 2008, the beginning of the first commitment period.

→ avoid perverse incentives:
 Car proposal: no credit if
 parcel stored ~~by~~ ⁱⁿ ~~the~~ ^{the} carbon sink
 beginning of budget period
 than at any point in previous
 - years for 2000 etc

Permanence:

- Recommend a permanent land registration system that also encourages **permanent carbon sequestration**.

There are two types of permanence. One type, as suggested by the US, calls for the permanent registration of land in the accounting system. This approach will help account for all changes in carbon stores so that both credits and debits for carbon emissions and storage are realized. For example, as the US mentions, decay after forest harvest is a continuing source of carbon emission that could escape the debiting process if land is not permanently entered into in the accounting system¹. Such a carbon source should be measured, and it is quite feasible to do so under a permanent land registration system.

The US should also address a second permanence issue, the permanent (or long-term) storage of carbon, which is unique to LULUCF activities at the project level. While a ton of carbon sequestered is equivalent to a ton of emissions prevented, forest carbon stores can be re-released. The LULUCF Special Report recognizes that conservation-based forestry, one which promotes longer rotation periods and the maintenance of old and older growth forests, ultimately sequesters more carbon than harvest and regeneration cycles that follow short rotation cycles (see LULUCF Special Report, section 5.2.1). PFT's projects confirm these assertions.

To address the two issues of permanence, PFT suggests the following:

- 1) In addition to the promotion of the permanent entrance of land into the Kyoto accounting system, the US should advocate forest management activities that result in the **permanent or long-term storage of carbon**. Specifically, the US should recommend management practice standards that store carbon either permanently or for a minimum of 100 years (the recommendation of the Protocol and the LULUCF Report section 3.3.6.3). Such permanency should also be encouraged through the accounting system discussed in the following section.

¹ Harvest is the primary disturbance that causes the release of carbon, which continues for decades.

Credit /Debit Accounting at the Project Level:

- Establish an accounting system that both encourages permanent carbon sequestration and accurately captures annual carbon credits and debits (sequestration and release) over time.

Increasingly, forests are being managed for fiber products rather than saw timber products. Forests are economically valued on shorter cycles (i.e. 12-35 years) when compared to previous decades (40 – 80+ years). The assignment of full carbon credit for short-term forestry projects, which have the probability or certainty of re-release of carbon stores, provides no financial incentive to implement longer and more sustainable rotation periods. This is simple net present value economics. A dollar for a credit in a present year (incentive) is worth more than a dollar debit (disincentive) in a future year. Hence, simply having annual credit and debit accounting does not promote or reward long-term carbon sequestration. Consequently, a debit for carbon loss incurred in the future is not as meaningful to an individual landowner when an immediate full carbon credit can be gained in the short-term. In order to overcome the financial incentives to conduct shorter rotation cycles and encourage the permanent storage of carbon (as well as accurately account for annual carbon gains and losses), PFT recommends that the US do the following:

- 1) Advocate a debit/credit system that provides a financial incentive for long-term/permanent carbon sequestration through either a discount system for short-term projects or the award of bonuses for long-term projects. Pursuant to this framework, the carbon credits or bonuses would be awarded on an annual basis, proportional to the length/duration of the project. Under a discounting system, practices involving permanent sequestration (i.e. 100 + years) would receive full carbon credits, and shorter projects would receive proportionally discounted credits. Under a bonus system, long-term (or permanent) projects would receive full annual credit but no bonus. Projects of a shorter duration would receive credits, but a smaller proportionate bonus. Both credit systems should account for carbon loss due to decay that may result from shorter-term projects.

Threshold and Discounting:

- Provide credits only for practices that exceed business as usual activities at both the national and project level.

The US decision to support a narrow construction of article 3.3 and a broad construction of 3.4 eliminates confusion and lays a foundation for

comprehensive carbon accounting. By restricting the definitions of afforestation and reforestation under 3.3 so that they exclude harvest and regeneration, it is clear that regular forest management activities are not included within the authority of 3.3. Rather, the proposed broad interpretation of 3.4 to include forest, cropland and grazing management activities will account for these activities.

While the US should be commended for its approach to articles 3.3 and 3.4, there are inherent drawbacks associated with such a comprehensive approach to 3.4 that must be addressed. First, as the US recognizes, the inclusion of all management activities under 3.4, would provide the US with windfall credit toward its allotted emission reduction target in the first commitment period, as it will be crediting business as usual (BAU) activities. Acknowledging that this distortion contradicts the purpose of the Protocol and the Framework Convention, the US proposes two methods to mitigate this result: the use of a threshold approach or a universal discount.

To minimize the windfall carbon credits received for BAU practices in the first commitment period and "level the playing field," PFT suggests that the threshold approach is best, as follows:

- 1) Establish a national threshold, above which the United States could earn carbon credits. For the United States, such a threshold should be current applicable land use, forestry, agriculture or range management sector laws and regulations and prevailing industrial management practice. Pursuant to this threshold, any carbon units that are sequestered **in addition** to those already acquired through law would earn credit.

In its submission, the US estimates that BAU forestry practices sequester approximately 310 MMTCE per year (see US Submission, p.15). Consequently, PFT recommends that the US implement 310 MMTCE as its annual threshold during the first commitment period. Any emissions reductions that exceed this threshold would be credited toward US emission reduction targets in the first commitment period.

- 2) A parallel approach should be applied at the project level whereby credits are only awarded for practices that exceed BAU. Similar to the national level, current applicable land use, forestry, agriculture or range management sector laws and regulations and prevailing industrial management practice should serve as indicators for BAU. Only carbon units that are sequestered **in addition** to those sequestered through law would earn credit.

While the discount approach suggested by the US addresses the issue of windfall credits, such a uniform discount would debit both BAU practices as well as practices that are not BAU. At the project level, this treatment would likely discourage innovative non-BAU approaches to land management practices and carbon sequestration. Consequently, PFT does not support this approach.

Conservation, Biodiversity and Watershed Benefits:

- Ensure express recognition of co-benefits in all conservation and management projects.

As the US identifies, "conservation of soil, water, vegetation, wildlife, carbon and nutrient resources is an integral part of [forest management]" (see US Submission, p. 15). When compared to younger forests, older forests store more carbon (and have more timber inventory). In native forest types, these older forests have greater habitat values for threatened biodiversity. In addition, they have more stable watershed conditions, thus yielding cleaner water supplies. Also, forests managed for older conditions have increased carbon stocks and long-term timber supplies. Furthermore, the prevention of forest loss is an integral tool to control urban sprawl. Accordingly, the US should affirmatively recognize that forest conservation and conservation-based forest management would provide these co-benefits. Consequently, PFT recommends that the US do the following:

- 1) Advocate forest conservation principles and emphasize the co-benefits of conservation and conservation-based forestry in its negotiations. These benefits and standards should be reflected in the rules that are established. A bonus system that reflects co-benefits is one example.

Leakage and Minimum Ownership Entry:

- Require at least 60% of holdings within forest region to be entered into the accounting system in order to earn carbon credits as well as annual credits and debits.

The US proposes a land-based carbon accounting system as opposed to activity-based accounting. This approach should be very effective since it would capture more discreet sources of carbon sequestration and emissions, such as degradation, aggradation and decay (see US Submission, pp. 9, 32).

At the project level, leakage would still be a significant concern, however, unless the majority of the land ownership is registered. Participants could offset their less intensively managed registered lands with more intensive management of unregistered parcels. Under such a scenario,

the participant could gain credits for the registered parcel, while implementing more unsustainable practices (i.e. short rotation cycles coupled with failure to regenerate) on unregistered lands. Such an outcome is contrary to the suggestions of the LULUCF report, which recognizes that more carbon can be lost with intensive management practices. Consequently, the US should advocate standards to both monitor and prevent leakage at the project level that could result from the partitioning and selective registration of managed lands.

To prevent such leakage, PFT suggests that the US advocate the following:

- 1) Require participants to register their land on a regional basis (with regions as defined by the US Forest Service) with a minimum size entry of 60% of their regional ownership. Such an approach should discourage project leakage, as it will ensure accounting for the majority of a participant's emissions/debits as well as its storage/credits.

Carbon in Wood Products:

- Ensure no double counting of product carbon through the accounting system; identify an accurate method to track product decay.

The US properly acknowledges the significance of carbon stored in wood products (and also acknowledges that such product carbon decays over time). This is carbon that is first accounted for in forest growth. Such carbon in products should be viewed as a transfer from the forest carbon pool to the products pool. Therefore, it is not a "new" stock of carbon.

Products carbon is transferred among many consumers. It moves from mills to whole sale to retailers and to owners (often multiple) ultimately. As a result, carbon in products is extremely difficult to track.

As a first step, the US proposes to quantify the amount of carbon harvested for wood products and account for carbon loss by estimating and assigning appropriate decay rates to this carbon pool. In furtherance of this objective, the PFT suggests that the US:

- 1) At the national and project level, develop an accounting method that accurately tracks the transfer of forest carbon into wood product pools and record its slow decay (estimated at 2%/year aggregate) therefrom.

- 2) Ensure that the accounting system accurately ascribes product "credits" and "debits" to the party that owns and controls the product carbon and does not double count forest product carbon.

"Forest" Definition:

- Include forest soils as a qualifying component and require a minimum qualifying area of 100 acres.

The US proposes to define forest according to percentage of tree-cover and land use type with a minimum area of 1 acre. Overall, this approach provides great flexibility for entering forests into the Kyoto system. However, the US should include additional qualifications and safeguards to achieve its intended results. For example, the definition's minimum qualification of 1 acre is unrealistic, as it would be extremely difficult, if not impossible, to track such parcels in an accounting system. It would be much more feasible to track areas the size of 100 acres and larger, and parcels this size are more likely to be managed and under threat of conversion and breakup.

Additionally, forest soils, should be included as a qualifying factor for an area to be a "forest." Without this qualification, there is a risk that "forests" will be generated (or attempted to be generated) in non-forest systems, such as wetlands or native grasslands, thus damaging other fragile ecosystems. Consequently, in order to avoid this perverse incentive, the inclusion of forest soils as defined by the US Forest Service, the US Department of Agriculture and the Natural Resource Conservation Service, should be a qualifying component within the forest definition.

In light of the above, PFT suggests the following adjustments to the US forest definition:

- 1) Include forest soils, as defined by the US Forest Service, the US Department of Agriculture and the Natural Resource Conservation Service, as a qualifying factor within the definition of "forest."
- 2) Establish 100 acres as the minimum size requirement to qualify as a "forest."

Accounting Timeframe:

- Ensure that accounting timeframe does not allow "gaming" between 1990 and 2008, the start of the first commitment period.

The US suggestion regarding timeframes within which carbon stocks should be assessed is inconsistent and therefore, problematic. On the one hand, the US support for continuous commitment periods minimizes the likelihood of opportunistic behavior. For example, with gaps of time between commitment periods, a party could potentially clear-cut a forest outside the commitment period without being debited for the resulting carbon emissions. Subsequently, the same party could then regenerate that harvested forest during the commitment period to gain carbon credits. The US recommendation for continuous time periods omits this possibility by enabling ongoing assessment of carbon stock losses and gains.

On the other hand, the US creates a loophole for opportunistic behavior in its following statement, "[f]or each commitment period, the changes in carbon stocks . . . should be assessed from the time the activity first occurred since 1990 or the beginning of that commitment period, whichever is later, to the end of that commitment period" (see US Submission, p. 22)(emphasis added). Pursuant to this language, a party could strategically harvest and regenerate a forest between 1990 and the first commitment period (2008-2012) in such a way that would maximize the receipt of credits during the first commitment period and minimize the debit. Ironically, this US position is encouraging the perverse it is also discouraging when it promotes continuous commitment periods.

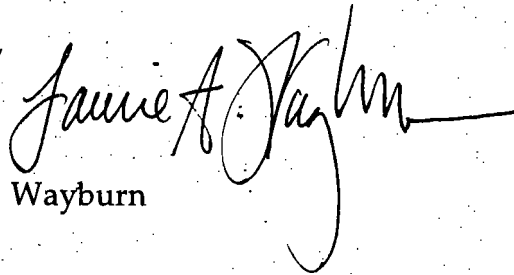
In light of the perverse incentive created by the conditional language cited above, the PFT recommends that the US:

- 1) Change the conditional statement "whichever is later" to "whichever occurs first" so that parties who choose to harvest between 1990 and the first commitment period will be both debited and credited for their actions. Such language would be more consistent with the US rationale for continuous commitment periods.
- 2) Ensure that the accounting system includes long-term decay in debiting.

In summary, PFT supports the US proposal to define article 3.3 narrowly and article 3.4 broadly so that forest management activities may be included within the Kyoto Protocol as creditable. The US position articulates many of the elements that will lead to an effective carbon accounting system at both the national and project level. Also, the proposal provides a great opportunity to foster conservation and conservation-based forest management domestically and worldwide. Such practices will ultimately provide greater benefits to the atmosphere as a mitigation measure for climate change.

Furthermore, the US approach supports other national policies, specifically those that seek to develop sustainable resource economies, contain sprawl, prevent forest conversion, protect native biodiversity and protect and restore watersheds. However, in order to realize these benefits and avoid outcomes that are inconsistent with the Protocol, the US should adopt the principles and standards identified here. The establishment and implementation of these standards and principles will help ensure that US goals are achieved in the most effective and sustainable manner.

Sincerely,

A handwritten signature in black ink, reading "Laurie A. Wayburn". The signature is fluid and cursive, with a long horizontal line extending from the end of the name.

Laurie A. Wayburn
President



AMERICAN FOREST & PAPER ASSOCIATION

GROWING WITH AMERICA SINCE 1861

November 15, 2000

Mr. Frank Loy, Under Secretary
For Global Affairs
Room 7250
U.S. Department of State
2201 C Street NW
Washington DC 20520

Dear Mr. Loy:

The American Forest & Paper Association (AF&PA) would like to provide comments on critical issues that will be the subject of further negotiations on the Kyoto Protocol at The Hague, Netherlands from November 13th through the 27th. AF&PA is the national trade association of the forest, paper and wood products industry. Our organization represents approximately 400 member companies and related trade associations that grow, harvest, and process wood and wood fiber, manufacture pulp, paper and paperboard from both virgin and recycled fiber, and produce solid wood products. Additionally, AF&PA represents a vital national industry that accounts for over eight percent of the total U.S. manufacturing output. Employing some 1.4 million people, the industry ranks among the top ten manufacturing employers in 46 States, with an annual payroll of approximately \$46 billion.

As a leading industrial manufacturer in the United States, our business depends upon growing trees, managing forests and providing employment and income that contribute to sustainable communities. Our industry has a significant stake under the Kyoto Protocol and pending decisions to be made at The Hague. The U.S. forest and paper competes in the world marketplace. A U.S. commitment to the adoption of policies and programs that reduce greenhouse gas emissions without commensurate requirements on the growing production of our competitors in developing countries will impose a significant competitive disadvantage. We continue to urge the Administration to obtain similar commitments from those developing countries.

The role of forests, agriculture and land-use changes in the global carbon balance must be fully recognized and we commend the US for introducing the concept into the debate. We strongly support the inclusion of all forest benefits in the first commitment period rather than a phased-in approach. Without the inclusion of forest management and more scientifically defensible terms and concepts, it is our opinion that participants to the Protocol cannot contribute to one of its overarching goals: the promotion and advancement of sustainable forest management as described in Article 2. If not, the findings contained in the Intergovernmental Panel on Climate Change (IPCC) Land Use, Land-Use Change and Forestry Report would be undermined. That report indicates that worldwide land use changes including forestry and agricultural practices have been responsible for forty percent of total anthropogenic emissions of carbon since the year 1750. Clearly, any effort to reduce global emissions must factor in the ability to increase carbon sinks and promote sustainable forestry on all lands and not just areas afforested since 1990.

We believe the inclusion and participation by the USDA Forest Service in the development of the Administration's carbon sequestration position and their presence at the international meetings has provided reassurance to skeptical parties that indeed we have the technical and forest policy expertise to backup what we are promoting. The US August 1 submission to the Subsidiary Body for Scientific and Technological Advice (SBSTA) reflects the U.S. government's technical and measurement capabilities in this area. We are gratified to see that the U.S. position of full carbon accounting including all product pools, is the most scientifically defensible way to evaluate the global carbon balance.

Listed below are several issues with positions we also believe represent the most scientifically defensible and technically accurate view of forests, forest management and forestry activities. As the U.S. negotiating team discusses these issues with counterparts around the world, we would encourage you to

highlight the unique carbon sequestration and other opportunities that forests and their products contribute in the global carbon balance.

Forest Definition

The AF&PA has advocated the definitions adopted by the Food & Agriculture Organization and the International Union of Forest Research Organizations (IUFRO). If Parties to the Protocol adopt a full carbon stock system, a forest definition would not be critical since carbon is the critical commodity. In the absence of this approach, we believe that the national circumstances of each country must prevail and definitions would be based on those conditions.

Deforestation

The IUFRO defines deforestation as the conversion of forestland to non-forest cover. If article 3.3 is to be based on land use changes, than for symmetrical accounting purposes deforestation must be defined as a change in land use.

Forest Management

The AF&PA would urge the inclusion of "sustainable forest management and their products" as the additional activity under Article 3.4. Clearly, establishment of plantations would be considered part of sustainable forestry and an activity to be recognized. Forest management are prescriptions based on an assessment of silvicultural opportunities and consist of a combination of complimentary practices that are dependent upon forest types and geographic characteristics. Rather than specify individual practices, AF&PA recommends that each nation use their national circumstances to define the term.

Afforestation

The AF&PA supports the FAO definition. Artificial or natural regeneration of forests on areas not previously in forest cover.

Reforestation

Under the IPCC definition, reforestation is essentially the same as afforestation in that it requires a land use change but there is a period of time in which the land tract had been in a previous land use. The AF&PA would accept this definition under Article 3.3 contingent upon the acceptance that Article 3.4 must be expanded to include full carbon stock accounting on all managed forests. We believe that transparent and sound accounting is the solution to full carbon accounting.

Permanence/Leakage/Baselines

These terms are typically associated with avoidance of deforestation carbon sequestration projects under Article 12 Clean Development Mechanism. Permanence has to do with whether a sequestration project will permanently store the carbon or will it be released to the atmosphere. Leakage is the displacement of harvesting to another location as a result of a preservation project. Project-level baselines are initially established based on expected deforestation rates from locations nearby. A project level baseline is typically adjusted based on actual observation in the area thereby making carbon credit investment more uncertain.

Human-Induced versus Direct Human Induced

The AF&PA does not support any distinction between these events. So called human-induced activities are those due to man-made nitrogen and carbon dioxide fertilization that have resulted in an increase in terrestrial biosphere carbon. Direct human-induced are deliberate and specific actions designed to improve growth and productivity. The AF&PA would not favor a distinction between natural levels and man-made causes or deduction of any carbon credits that might accrue in national inventories or project level activities.

Phase-In/Threshold/Discounting

There has been considerable discussion regarding an U.S. proposal to discount, phase-in or establish a baseline for the allowance of carbon sequestration credits. The premise appears to be based on two different theories. First, that US carbon sequestration is greater than originally anticipated and therefore

The U.S. forestry community has been extremely successful in improving the growth and productivity of the nation's forestlands. We do not believe that this should be written off because it will occur anyway. Given existing domestic forest policy rules, regulations and the threats to maintain lands in forest cover, there is no guarantee that these are "anyway" tons. It all depends on the economics of forestry operations. If growing trees as a commercial enterprise is not cost efficient and profitable, we might see the disappearance of forests. We would therefore urge the Administration to obtain a broad recognition of the role of forests and allow the development of a domestic program to determine what and who would participate instead of suggesting a baseline, threshold or phase-in approach.

The AF&PA believes that it is essential that a full comprehensive carbon accounting system be deployed in the first commitment period and those countries that are able to verify, measure and quantify be permitted to add this to a country's assigned amount. A phase-in approach that fails to recognize certain carbon pools, including soils and wood products would not be scientifically or technically accurate. The AF&PA believes any ongoing forestry practices to improve long-term productivity should be recognized and establishment of a business-as-usual or some other baseline above which credits would be available is not practical.

Forest management activities are dynamic and evolve over time with interim management decisions selected to improve growth on a site. We believe that forest management activities are but one tool to achieve the targets contained in the Protocol but also recognize other emissions reduction programs will need to be taken to achieve national circumstances. The U.S. should not sacrifice its ability to maximize its forest sequestration potential.

We believe further discussions at COP-6 and afterwards would shed more light on this subject. We would therefore strongly encourage the US not to support any of these approaches until further discussions could be held.

Full Carbon Accounting

The AF&PA supports the IPCC Land-Based II approach. It takes account of all carbon pools including wood products. The IPCC states this to be the most scientifically defensible.

Market Mechanisms

The AF&PA supports efforts to use market-based mechanisms as a primary tool to encourage the lowest-cost, least bureaucratic method of achieving greenhouse gas emissions reduction targets. Among these opportunities is clearly the use of forest management in the Clean Development Mechanism, Joint Implementation and emissions trading programs, both internationally and domestically.

By way of support for these and other positions, enclosed is a letter endorsed by several state/region/product association affiliated members of AF&PA. If we can be of any further assistance, do not hesitate in contacting us.

Sincerely,



Sharon H. Kneiss
Vice President, Regulatory Affairs

cc: Mr. David Sandalow, Assistant Secretary
Mr. Roger Ballentine, White House

Forest Industry Association Council

November 15, 2000

Mr. Frank Loy, Under Secretary
For Global Affairs
Room 7250
U.S. Department of State
2201 C Street NW
Washington DC 20520

Dear Mr. Loy:

As leaders in the practice of sustainable forestry in the United States and worldwide, the American Forest & Paper Association and its affiliated organizations commend the Administration on recognizing the significant contribution that forests and their management play in reducing the build-up of carbon dioxide concentrations in the atmosphere. Our organizations and members represent the majority of private forest lands in the United States. We have diverse regional backgrounds, landownership patterns and forest management objectives. However, the common thread among these organizations is the recognition that carbon sequestration can provide additional incentives and motivations for landowners to continue the practice of sustainable forestry.

The August 1 submission by the U.S. government to the United Nations Framework Convention on Climate Change Subsidiary Body clearly describes and demonstrates that forests play a critical role in the global carbon balance. According to that report, U.S. managed forests currently offset seventeen percent of total U.S. greenhouse gas emissions per year. Even with expected growth in emissions, a realistic scenario show that U.S. forests will maintain that current offset percentage in 2010. Clearly, the power of forest sequestration is an enormous contribution to society including its ancillary environmental benefits of protecting water quality, wildlife and biodiversity. If the role of forests, agriculture and land-use changes in the global carbon balance are not recognized, the findings contained in the Intergovernmental Panel on Climate Change (IPCC) Land Use, Land-Use Change and Forestry Report would be undermined. That report indicates that worldwide land use changes including forestry and agricultural practices have been responsible for forty percent of total anthropogenic emissions of carbon since the year 1750. Clearly, any effort to reduce global emissions must factor in the ability to increase carbon sinks and promote sustainable forestry on all lands and not just areas afforested since 1990.

As the Administration pursues negotiations on the various forest sequestration Articles contained in the Kyoto Protocol at the Conference of the Parties (COP-6) in November, we strongly believe it is important for you to understand that forests can contribute to the

reductions in greenhouse gases both domestically and internationally. The Kyoto Protocol is attempting to use market-based mechanisms as a primary tool to hopefully encourage the lowest-cost, least bureaucratic method of achieving its targets. The adoption of sub-rules or misrepresentations of what would occur in the event that broader activities were included are diversions designed to thwart forest management as one method among many in reducing greenhouse gases. This is neither productive nor based on professional forestry practices or objectives. Including a range of forest management activities in all relevant articles of the Protocol, including the market mechanisms, will only serve to improve forest management worldwide and increase carbon sequestration.

The undersigned organizations support a comprehensive land-based carbon accounting system. This methodology will take into account all forest-related emissions but will also recognize all carbon pools including wood products. This system is measurable, verifiable and scientifically justified. The U.S. should not sacrifice its accomplishments over the past 50 years in improving forest productivity and its practices on the nation's forests.

Sincerely,

Arkansas Forestry Association
California Forestry Association
Douglas Timber Operators
Forest Resources Association
Intermountain Forest Association, Rocky Mountain Div.
Kentucky Forest Industries Association
Louisiana Forestry Association
Maine Forest Products Council
National Hardwood Lumber Association
National Lumber & Building Material Dealers Association
National Oak Flooring Manufacturers Association
North Carolina Forestry Association
Northeastern Loggers Association
South Carolina Forestry Association
Southern Forest Products Association
South Carolina Timber Producers Association
Southern Timber Council
Structural Board Association
Texas Forestry Association
Washington Contract Loggers Association
Western Red Cedar Pole Association
Wood Component Manufacturing Association

THE PACIFIC FOREST TRUST

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157 YESLER WAY, STE. 417
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(206) 292-4747

PRESERVING
PRODUCTIVE
FORESTLANDS

November 7, 2000

Dear Friends and Colleagues:

Enclosed is our report, *Forest Carbon in the United States: Opportunities and Options for Private Lands*. This report is a result of the collaborative work of many including our distinguished panel of scientists: Jerry F. Franklin, John C. Gordon, Clark S. Binkley, David J. Mladenoff, and Norman L. Christensen, Jr.

This report is intended to demonstrate how private forests offer a significant opportunity to reduce our country's net emissions of carbon dioxide. It outlines the specific conservation and management options needed to prevent forest carbon loss and increase carbon stocks. It also outlines the principles and mechanisms necessary for an effective forest carbon accounting system. The report further explores how utilization of market systems can prevent forestland loss and increase forest age, benefiting biodiversity.

While the report is extremely relevant to building a domestic forest carbon market, its release is timed to coincide with the Sixth Conference of the Parties to the Kyoto Protocol where delegates will be determining the inclusion of forests in the international carbon trading system. Done right, such inclusion will lead to great gains in forest conservation as well as the efforts to combat global warming.

We hope that you will find this report stimulating and enlightening and welcome your response.

Sincerely,

Laurie A. Wayburn
President

The Pacific Forest Trust has moved its main headquarters to Santa Rosa. The new address is 416 Aviation Blvd, Suite A, Santa Rosa, CA 95403. The phone number is 707-578-9950 and the fax number is 707-578-9943.

The Honorable David Gardiner
Washington DC 20500

November 16, 2000

Dear Mr. David Gardiner:

We are writing to express great concern and disappointment over the U.S. position on land use, land use change, and forestry rules under the Kyoto Protocol on Climate Change. These rules will be negotiated and adopted over the next two weeks at the Sixth Conference of the Parties to the U.N. Framework Convention on Climate Change in The Hague. The United States has proposed a lenient and environmentally unsound version of the rules. If adopted as written, they would result in a compromised Kyoto Protocol that would not adequately address the need to reduce carbon emissions at their sources. Furthermore, the lenient U.S. proposal would threaten forests and other native ecosystems here and abroad by encouraging the use of plantations, pesticides, herbicides, clearcutting, exotic and even genetically modified trees, and other harmful practices.

It is hard to imagine rules with more far-reaching effects. In the U.S. alone, their set of incentives and disincentives will strongly influence the future management of 500 million acres of American forestland, 20% of our nation's land area. Thus, it is imperative that the rules encourage only environmentally beneficial forestry practices such as the restoration of native forests.

There is still time for the U.S. to move to a position of environmental leadership at The Hague and embrace rules that benefit both forests and climate by promoting real forest protection, real additional carbon sequestration, and real greenhouse gas reduction. We ask that your Administration modify its position to support the following:

➤ **Binding environmental safeguards to prevent ecological degradation.** Unless LULUCF rules contain binding environmental standards, the Kyoto Protocol will end up encouraging practices that maximize carbon sequestration but devastate native ecosystems, including forests and grasslands. For example, the current U.S. proposal would grant emissions offset credits for planting fast growing poplar trees on rare native grasslands even if this activity would threaten endangered native plants or animals. We are extremely disappointed that your Administration has so far resisted including binding environmental safeguards in its rules position.

➤ **Removal of perverse incentives to log old growth prior to the start of the first commitment period (2008-2012).** We are pleased that the current proposal debits cutting or otherwise destroying old growth forests during this period. However, strong disincentives to discourage countries from "rushing to cut" old growth prior to this time must also be part of the rules package. These disincentives must cover activities under both Articles 3.3 and 3.4 of the Protocol.

➤ **No credit for "business-as-usual" forestry.** If carbon sequestration by business-as-usual forestry activities - those that would have occurred even in the absence of the Kyoto Protocol - is credited, then the U.S. will be able to escape from up to half of its emissions reduction commitment in the Protocol without actually reducing the amount of CO2 that it adds to the atmosphere each year. Moreover, in some countries such credit might result in financial incentives for current industrial timber practices. **Credit for business-as-usual forestry would seriously undermine the protocol.**

In order to avoid crediting business-usual-forestry, only forest carbon sequestration above the amount that would have occurred in the Protocol's absence should be counted as an emission reduction.

➤ **Removal of linkage between old growth protection and credit for business-as-usual forestry.** The current proposal stresses that its steps to protect old growth come only as part of a package that also includes crediting carbon sequestration by business-as-usual forestry. As described above, credit for that kind of forestry would drastically compromise the Protocol. It's shocking that your Administration would play off desperately needed forest preservation against equally desperately needed emissions reductions in this manner.

➤ **Full accounting for shifts of domestic logging to countries without binding emissions targets.** Forest protection activities in the U.S. and other developed countries (those with binding emissions targets under Kyoto) should not be credited as removing or sequestering carbon unless any resulting shifts of logging to undeveloped countries can be accounted for. Credit assigned to the forest protection should be discounted accordingly.

The measures described above will be opposed by a number of powerful special interests. However, they are necessary to ensure that the Protocol protects natural places while credibly addressing the buildup of CO2 in the atmosphere.

Finally, the U.S. public overwhelmingly supports protecting and restoring natural places. It will respond positively to steps that implement the Kyoto Protocol while protecting and restoring the native forests, roadless areas, and other special places that our citizens would like to leave for their children and grandchildren to enjoy.

Sincerely,

National and International Organizations:

American Lands Alliance, Washington DC
Center for International Environmental Law, Washington DC
Defenders of Wildlife, Washington DC
Forests.org, Inc., Cyberspace USA
Indigenous Environmental Network, Bemidji MN
Kyoto Now!, Portland OR

Declaration of Brazilian Civil Society on the Relations Between Forests and Climate Change and Expectations for COP-6

On global climate

- In 1992, when the heads of state signed the climate convention in Rio de Janeiro, they committed themselves to actions which, while vital to the survival of humanity, were socially and politically difficult. They undertook the reduction of global emissions of greenhouse gases. As a first step, the developed countries agreed to limit their emissions under the principle of common, but differentiated responsibility. In the years that followed, evidence accumulated of the worsening of global warming. In Brazil, the El Niño effect resulted in the floods that scourged the south, intense drought in the northeast and the loss of humidity in large part of the Amazon forest. Soon after the signing of the Kyoto Protocol a gigantic fire consumed 13,000 km² of forest in Roraima. Now, there is evidence that global warming may increase the frequency and intensity of El Niño.

On the responsibility of the principal historic contributors to global warming

- The signatories of this document, making common cause with international protests, demand that the USA, which is responsible for 25% of global emissions, ratify the Kyoto Protocol, take responsibility for limiting its emissions, and abandon its current defensive posture in favor of a leadership role on climate change. We hope that more ambitious goals are established internationally in the short term.
- The flexibility mechanisms included in the Protocol are only justified as means of making the reductions of Annex I countries feasible. They cannot be transformed into mechanisms that simply legitimate failure to reduce emissions or allow their increase. Consequently, Annex I countries access to any of the flexibility mechanisms should be conditioned on evidence that these countries have stabilized or cut back their own emissions. They should also lose such access that they may gain if they revert to increasing their emissions levels.

On the Clean Development Mechanism (CDM) and other flexibility mechanisms

- The flexibility mechanisms should stimulate the beginning of an effective process of emissions reductions, to which the Annex I countries have agreed. The regulation and implementation of these mechanisms should allow the involvement of all member countries in international efforts to mitigate climate change, according to their common but differentiated responsibilities. Initiating an international political process is indispensable to achieve effective reductions. In this context, the CDM is particularly important, since it is the only instrument of the Protocol that provides for the participation of developing countries.
- Implementing CDM projects will involve various difficulties. The possibilities of leakage, failure of monitoring and control, or the lack of guarantees of permanence, are common to energy projects as well those involving forests or land use activities. Rigorous criteria should therefore be established to avoid these eventualities and penalize those responsible for them.

- The difficulties that affect each sector specifically, such as the establishment of baselines to demonstrate the additionality of CDM projects, must similarly be addressed. Projects involving native forests, for example, may demand more complex criteria for defining baselines, but may result in additional benefits for the climate, the environment and society, beyond emissions offsets.
- We understand that the implementation of CDM projects and the other flexibility mechanisms, should be subject to independent audits that attest to their performance. Implementation should also be open to participation and monitoring of civil society organizations of recognized legitimacy and competence.

On forests and the CDM

- To exclude forest projects specifically from the CDM fails to recognize the fundamental importance of forests for climatic equilibrium, whether through their capacity for carbon sequestration, or through the significant volume of emissions from deforestation and fires. Native forests constitute the principal means through which many developing countries can participate in international efforts for emissions reductions. Latin America, for example, has great tropical forest reserves, while its energy sector emissions are relatively insignificant. Most Latin American countries will be unable to participate in the CDM if forest projects are ineligible.
- The case of Brazil is emblematic: producing between 4% and 5% of global emissions, with two-thirds of these from the forest sector, Brazil would make a sustained contribution to emissions reduction, if it could implement programs to protect forests threatened with deforestation. The country could invest in sustainable management of forest resources at a scale capable of affecting predatory economic practices, and make economic development for the populations that live in the forests feasible. Brazil's energy matrix is on the other hand relatively clean, and energy projects would add little to emissions reductions.
- If regulations for the CDM and the other flexibility mechanisms are formulated by COP-6 or future Conferences, developing countries should reserve the sovereign right to accept or reject implementation of flexibility mechanisms in their territories, and to establish their own rules and strategies, compatible with internationally established general criteria.

On the official Brazilian position

- The signatories understand that official Brazilian representatives in the negotiations have played an important role in overcoming impasses and convincing the principal historical sources of emissions to accept their responsibility before the international community. Brazil was the author of the proposal that led to the incorporation of the CDM into the Protocol. But for the Government to oppose including forest projects in the CDM is not coherent with the gains it has achieved. This incoherence is exacerbated in light of the government's failure to object to nuclear energy projects and homogenous plantation forests.
- We expect that the official Brazilian position at COP-6 and future Conferences will continue to hold the US and other Annex I countries responsible for initiating the process of global emissions reductions. We expect that, should negotiations move forward on the issues surrounding the implementation of the flexibility mechanisms, the Brazilian official position allow the

implementation in the CDM of projects in native forests, insofar as these comply with the principles of additionality, transparency, control of leakage, verifiability of results and such other rules and controls as may yet be determined.

- We ask that the Brazilian Government not stint in efforts to engage Brazilian civil society in a permanent dialogue on the question of climate and its implications for the country. In this sense, the creation of the Brazilian Forum on Climate Change is an initial step, but has not yet led to effective interaction between the Government and society, even on the eve of COP-6. We would also like to see greater effort from the Government to explain climate change and its effects to Brazilian society.

On criteria for the inclusion of forests in the CDM

- The implementation of the CDM has scientific, political and economic implications. With the objective of contributing to this discussion, the signatories of this document propose the following eligibility criteria for projects involving the protection and sustainable management of tropical forests at risk of deforestation or burning:
 1. **Baselines:** That an evaluation of the risk of carbon emission (via deforestation, burning, and timber extraction) and of socio-environmental objectives be taken into consideration in establishing baselines. All forests at risk of human-induced alteration should be included in defining baselines, independent of their legal status.
 2. **Monitoring:** Rigorous instruments for public social control and monitoring of CDM projects.
 3. **Certification:** Projects should be required to obtain ecological and socio-environmental certification as a condition for issuing credits.
 4. **Penalty for infractions:** Countries and project executors that do not follow established rules of access and implementation; or meet project objectives, should be excluded from the CDM.
 5. **Margin of security:** A margin of security should be established in the calculation of emissions or carbon sequestration, as well as a system of accountability that guarantees compensation to the atmosphere in case of Carbon leakage, accidents or failures.
 6. **Permanence:** Given that, in the Brazilian context, avoiding deforestation is, with regard to permanence, more like fossil fuel reduction than like forest plantations, project benefits should be considered on a time scale of years or decades.
 7. **Prioritization of areas at risk:** Each developing country that intends to implement forestry projects in the CDM should define areas at risk in the national territory, which should be prioritized for CDM projects.
 8. **Additional benefits:** Projects that emphasize biodiversity protection and socio-environmental value should be prioritized.
 9. **Recently deforested areas:** Reforestation and aforestation projects in areas of native forest, or non-forest native ecosystems, deforested after 1997, should be prohibited.

Belém, October 24, 2000.

Signed

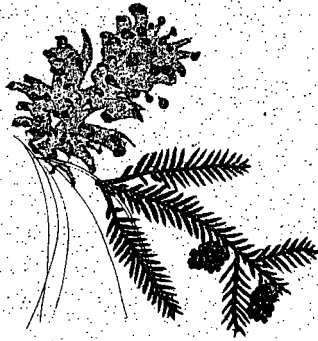
Institutions -

CNS - Conselho Nacional dos Seringueiros (National Council of Rubber Tappers)
 COIAB – Coordenação das Organizações Indígenas da Amazônia Brasileira (Coordinating Body of the Indigenous Organizations of the Brazilian Amazon)
 CPT-MT – Comissão Pastoral da Terra do Mato Grosso (Pastoral Land Commission – MT)
 FASE – MT – Federação de Órgãos para Assistência Social e Educação do Mato Grosso (Federation of Educational and Social Assistance Organizations – MT)
 FETAGRI – Federação dos Trabalhadores na Agricultura do Estado do Pará (Federation of Agricultural Workers of the State of Pará)
 FOE – Friends of the Earth - Amazônia
 FORMAD – Fórum Matogrossense de Meio Ambiente e Desenvolvimento (Mato Grosso Forum on Environment and Development)
 GTA – Grupo de Trabalho Amazônico (Amazon Working Group)
 ICV – Instituto Centro de Vida (Center for Life Institute)
 IMAZON – Instituto de Meio Ambiente da Amazônia (Amazon Environmental Institute)
 IPAM - Instituto de Pesquisa Ambiental da Amazônia (Amazon Environmental Research Institute)
 ISA – Instituto Socioambiental (Socio-environmental Institute)
 PRONATURA – Instituto Pró-Natura (Pro-Nature Institute)

Individuals -

Alcir Almeida (Manager, CIKEL)
 Carlos Augusto Klink (Professor, University of Brasília)
 Carlos Vicente (Secretary of Forests, Acre state government)
 Eduardo Viola (Professor, University of Brasília)
 Gilney Viana (Mato Grosso state legislator)
 Ima Vieira (researcher, Goeldi Museum, Pará)
 Júlio Eduardo (Senator, Green Party, Acre)
 Manuel Cesário (Professor, University of Brasília)
 Philip Fearnside (Researcher, National Institute for Amazon Research)
 Silvio Brienza (Researcher, Center for Agriculture Research in the Humid Tropics – EMBRAPA)
 Ronaldo Seroa (Researcher, National Institute for Applied Economic Research)
 Samuel Almeida (Researcher, Goeldi Museum, Pará)
 Silvio Brienza (Researcher, Center for Agriculture Research in the Humid Tropics – EMBRAPA)
 Tatiana Sá (Researcher, Center for Agriculture Research in the Humid Tropics - EMBRAPA)

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Nov. 2, 2000

Dear Roger

It was great to speak with
you today. I am delighted
that you will join us in December!
Here is the report I mentioned
to you vis a vis forest carbon,
with the economic analysis
of "opportunity costs" of
holding land on forest for

Printed on 100% Recycled Paper

Carbon. Net net - without
a durability standard, little
is gained, though some, for
10+ years, then it pays, &
more, to harvest or develop.

The durability or permanence
standard reverses that to
create real gains.

I also attach some brief
information on PFT, in
preparation for your talk

I look forward to meeting
you!

All the best -
June

Los Angeles Times

A12 SUNDAY, OCTOBER 15, 2000/NA

Trust Seeks to Harvest 'Carbon Credits' From Forests

■ **Alr:** In some places, paying to preserve a tree's ability to absorb the substance has attracted firms trying to offset pollution they create elsewhere. Group wants to bring the idea to California.

By KATHERINE ELLISON
SPECIAL TO THE TIMES

BOONVILLE, Calif.—Steve Snyder has a problem that begins with 80 acres of ancient, towering redwoods. Along with his nine siblings and cousins, he's due within two years to inherit the gorgeous trees, plus 700 more acres near this tiny Mendocino County timber town.

But three of Snyder's kin apparently don't agree that the pending gift is too lovely to lose: He says they want to sell to loggers or developers, hoping to reap as much as \$4.6 million, according to one appraisal.

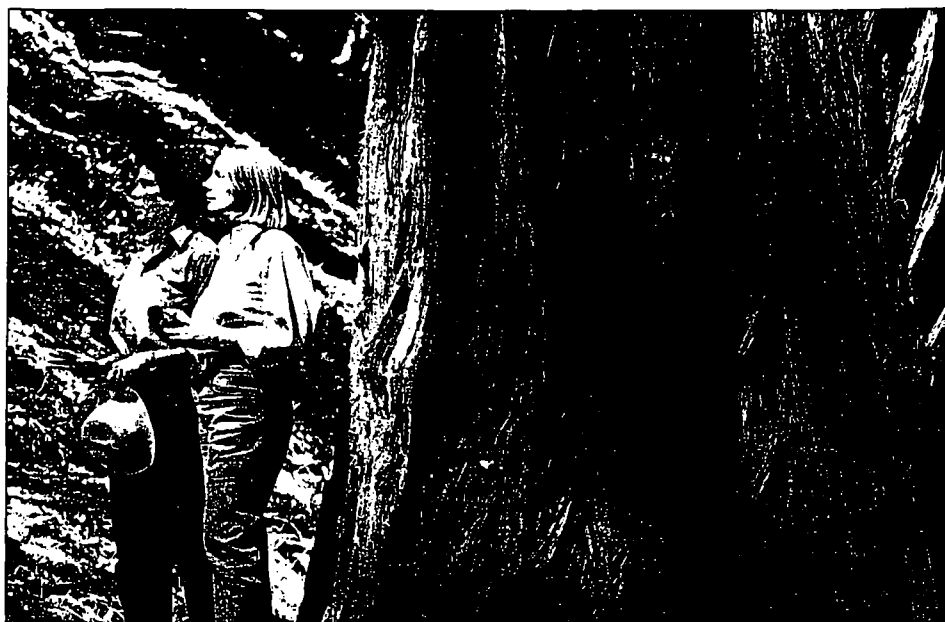
Until recently, Snyder feared that he would have to give up some of the redwoods to buy out those relatives. But last spring, he met Laurie Wayburn and Connie Best, environmentalists who offered intriguing alternatives—including a scheme in which his family might be paid for just letting the redwoods breathe: carbon dioxide in and oxygen out.

This basic labor of forests has become a marketable commodity in various parts of the world where the art of buying "credits" for preserving a tree's carbon-absorbing capacity has attracted industries interested in offsetting pollution that contributes to global warming.

The technique has yet to reach California forests, but Wayburn and Best hope to change that soon.

"California has a big advantage in the carbon trade," Wayburn said. "Redwoods hold the world record for carbon storage: They grow fastest, largest and longest."

Wayburn and Best are co-founders of the Pacific Forest



Laurie Wayburn, left, and Connie Best co-founded Pacific Forest Trust to create incentives for landholders to practice conservation.

Trust, a group committed to creating financial incentives for landholders to practice conservation. Wayburn is a Harvard graduate in geology and biology, and the daughter of an honored Sierra Club past president; Best is a former soft-drink mogul.

Both big-city transplants—Wayburn, 45, from San Francisco, and Best, 47, from New York—they've settled here, in a valley once thickly covered with forest but now pockmarked with plots in peril.

To them the timing is critical: In California about 77,000 acres of forest were cut down between 1992 and 1997, twice the annual rate of the previous 10 years.

"California has [legislated] some of the toughest forest practices around, but every coastal

watershed has salmon species under threat," Best said. "Clearly, regulation hasn't gotten us to where we want to go."

A practice much like carbon trading already goes on in the regulation of sulfur dioxide emissions from older electricity generators. Utilities can satisfy limits imposed by the Clean Air Act by buying credits from more efficient plants.

The carbon-trading concept got a major boost from the 1997 Kyoto Protocol, the global-warming agreement involving 84 countries and the European Union. The protocol advocates sales of carbon credits. The United States has specifically championed counting "carbon sequestration" from forests.

Some leading environmental

groups, however, including the Sierra Club and Greenpeace, oppose the idea of using forest purchases to excuse pollution elsewhere. They believe it's more important to focus on cutting emissions at their source.

"Where one could go with this is that we'd be protecting more trees but polluting more," said Daniel Becker, director of the Sierra Club's global warming and energy program.

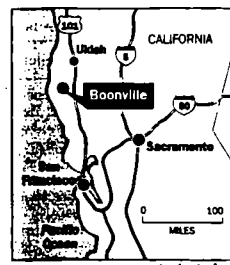
For now, Wayburn and Best have pledged to save Snyder's forest by paying his family for a "conservation easement" that would let them harvest some timber but not the old redwoods. Such easements attach to the deed and bind whoever may purchase the land to similar limits. They can also result in big tax de-

ductions, because the value of the land is usually reassessed when development rights are limited.

Wayburn and Best supervise easements on 15,000 acres of California forest.

Their approach has won admiration from philanthropists who have enriched the trust's coffers. This year, for instance, Pacific Forest got a \$5-million grant from the New York-based Surdna Foundation.

But locals such as Boonville resident Bruce Anderson, owner of the Anderson Valley Advertiser, are critical of the trust. He says it "provides tax breaks for the gentry" when stronger measures are needed to slow the destruction of local forests. "Confiscation would be fine with me," he said.



If Wayburn and Best cannot sell carbon credits from Snyder's property, the money to pay for his easement will probably come both from private foundations and federal and state funds set aside to protect threatened forests and salmon. (A stream populated by salmon runs through Snyder's property.)

The women feel confident that they can eventually market the credits, however, as they watch what has been going on in the rest of the world.

Trexler & Associates, a Portland, Ore.-based environmental consulting group, has been involved in about \$75 million in sales of carbon credits from forestry investments over the last decade, most of them in developing countries.

The buyers have been utility companies—including Detroit Edison, Wisconsin Electric Power and British Petroleum—whose directors believe it's just a matter of time until governments force them to cut back their emissions. They hope that regulators will consider the carbon deals as equivalent to emission reductions and that by acting early, they will pay lower prices before the demand for carbon-credit deals starts to rise.

In the U.S., for instance, Cincinnati-based Cinergy Corp. has invested \$500,000 to plant trees in Ohio and Indiana in return for potential carbon credits.

Pacific Forest has yet to close a deal itself but holds carbon rights donated by owners of 7,000 acres of coastal forests. Finding buyers has proved difficult, Wayburn concedes.



tnelson@tnc.org

11/06/2000 12:03:23 PM

Please respond to tnelson@tnc.org

Record Type: Record

To: Roger S. Ballentine/WHO/EOP

cc:

Subject: URGENT/COP6

Roger,

Can we talk for a minute about COP 6 and forests? The Working Group on Forests and Climate Change (EDF, TNC, UCS, CSDA, CI and Pacific Forest Trust) is working away,

trying to play a constructive role as the moderate enviro voice on the role of LULUCF in the Kyoto Protocol, especially in the CDM.

I want to push on something critically important that would be better done verbally. Alex Watson (former ambassador now our director of International programs) talked to Loy over the weekend. It has left us more worried. The message is vital to our ability to support forests.

Are you available for a few moments either by phone or in person? EDF and TNC have the other groups proxi and could run over to your office on a moments notice, or we could just talk by phone.

Tia

Tia Nelson, Deputy Director

Climate Change Program, The Nature Conservancy

Tel. 703/841-5372

For Immediate Release:
Oct. XX, 2000

For Further Information:
Joe Bridgman (707)578-9950

Press Release

Energy Company Buys Carbon Credits In Conserved California Redwood Forest

Santa Rosa, CA – In the first transaction of its kind in the United States, an energy-providing company is purchasing carbon emission reduction credits made available by the conservation and good management of forests, including a redwood forest in San Mateo County, California, the non-profit Pacific Forest Trust announced today.

By helping to fund conservation easements on older, private forestlands such as those in the Butano Creek drainage, Green Mountain Energy Company is paying for the increased storage of carbon in forests protected by the easements. Levels of carbon dioxide, a major greenhouse gas, are still rising in the earth's atmosphere. Conserving forests and managing them well can help counter this trend, because forests absorb carbon dioxide and store it as biomass over centuries and millennia. Forest loss and unsustainable management, on the other hand, are the second largest source of CO2 emissions worldwide.

The Texas-based energy provider sought a way to mitigate the carbon dioxide emissions attributed to its business operations, including electrical power used in its offices and fuel used in travel and in employees' commutes to work.

The Santa Rosa-based Pacific Forest Trust, founded in 1993, is a regional conservation organization dedicated to preserving private productive forestlands. A central goal of PFT's work is to help landowners derive financial return from conservation and stewardship. By selling the carbon gained from older forests, PFT helps pay landowners for forest conservation.

"Such transactions have occurred internationally, but our focus is balancing the carbon budget at home," said Laurie Wayburn, President of the Pacific Forest Trust. "These projects can be done just as cost-effectively here as overseas. And in the United States we can make the forest carbon projects permanent and enforceable.

(over)

“When you save a forest from loss you avoid significant carbon emissions. And when you improve forest management, you further increase the storage of carbon,” Ms. Wayburn said.

This transaction is especially timely in view of the sixth meeting of the Conference of the Parties, scheduled for mid-November in the Hague as part of the United Nations Framework Convention on Climate Change. Negotiations among participants at “COP 6” will include discussions of the role of forests in sequestering carbon and mitigating climate change.

Restoring forests to an older and more diverse condition provides many co-benefits, Ms. Wayburn said. The lands providing the carbon emission reduction credits, or “offsets,” to Green Mountain Energy Company also contain important habitat for threatened and endangered species such as Pacific salmon, steelhead, marbled murrelet and spotted owls.

The Pacific Forest Trust believes that forestlands in the path of development are especially in need of protection, since they are in danger of being permanently lost to residential or other development. California is losing 77,000 acres of forestland each year, and the Butano Creek lands are close to the encroaching Silicon Valley.

[QUOTE from Green Mountain Tom Rawls]

##

(over)

A Recipe for Diversity

The remnant of an ancient volcano, Pilot Rock stands out as one of the most striking features of the Cascade-Siskiyou National Monument. Below Pilot Rock lies a landscape that awakens the senses; a landscape where a short hike leads the explorer from the quiet grandeur of a cool, moss-covered forest to a wildflower and boulder-strewn meadow with hundreds of colorful butterflies. From the meadow, one looks out across the rocky ridges of the Siskiyou Mountains, the wide expanse of the Shasta Valley, and the towering snow capped volcanic peak of Mount Shasta. It is the forest and the butterflies, as well as the mountains, volcanoes and valleys that help tell the ecological story of the area.

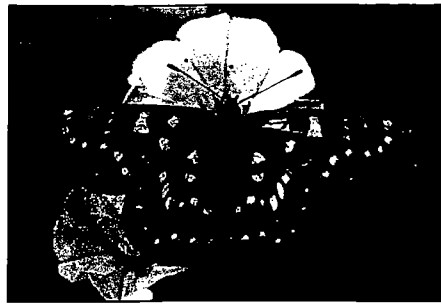
The Monument's ecology is influenced by the region's extremely complex geology. A majority of the Monument lies within the relatively young, volcanic Cascade Range. The southwestern portion of the Monument is in the much older Siskiyou Mountains. At 425 million years, the rocks of the Siskiyou Mountains are the oldest known in Oregon. The differences in rock types and ages provide the foundation for a variety of soil types and habitats.

The species in the Cascade-Siskiyou National Monument are representative of ecologically distinct regions known as ecoregions. Ecologists classify areas as ecoregions based upon unique combinations of topography, geology, soils, climate, and vegetation. In this area, multiple ecoregions meet, creating an ecologically jumbled landscape. Species typically found east of the Cascade Mountains, such as pygmy nut hatches and kangaroo rats, share habitat with western species such as rough-skinned newts and northern spotted owls.

Another important factor in the ecological makeup of the area is the unusual east-west orientation of the Siskiyou Mountains. The Siskiyou provide species with a critical connection between the two Cascade Mountains and the wet forests of the western coastal ranges. In addition, the Siskiyou Mountains were not heavily glaciated in the last ice age and served as a refuge for species whose habitat disappeared under tons of continental ice. The final ingredients in the recipe for ecological diversity are the sudden changes in elevation and aspect that affect sun exposure, moisture, and temperature throughout the Monument.

This region provided a home for native peoples for thousands of years. Numerous archaeological and historical sites are found throughout the Monument. The Monument also contains sections of the historic Oregon/California Trail.

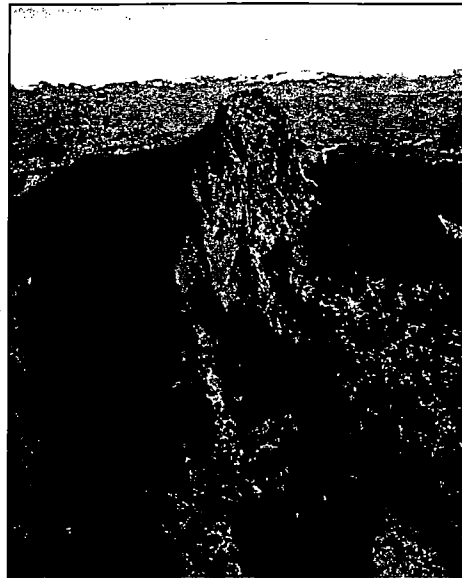
The Medford District BLM is currently working on a management plan for this special place. A draft management plan should be available by January 2001.



Paintbrush Checkerspot



Royal Polemonium



Pilot Rock with snow covered Siskiyou Mountains

Pilot Rock stands out as one of the Monument's most striking features. Visible from much of the Shasta Valley in northern California, and parts of Oregon's Rogue Valley, Pilot Rock provides viewers with a look at the inside of an ancient volcano. Over time, the exterior volcano eroded away leaving behind the now cooled magma of the ancient volcano's central vent. Fossil sites near Pilot Rock contain leaf impressions and conifer cones that became embedded in volcanic ash beds 25-35 million years ago.



Siskiyou Fritillary



Anise Swallowtail Caterpillar on Lomatium

CASCADE-SISKIYOU NATIONAL MONUMENT

Geological and climatological influences from the north, south, east and west converge in southwestern Oregon's Cascade, Siskiyou and Klamath mountain ranges. Plants and animals typically found in ecologically distinct regions come together in a spectacular array of species richness and diversity. The Cascade-Siskiyou National Monument represents the heart of this fascinating region.

The Cascade-Siskiyou National Monument does not have the dramatic landmarks that distinguish other national monuments and parks. Instead, this monument invites visitors to explore the subtle beauty and quiet solitude of a region brimming with ecological diversity and wonder. Explorers will discover towering fir forests, sunlit oak woodlands, wildflower-strewn meadows and rock gardens, steep canyons and sweeping vistas.

An even closer look reveals an astounding mixture of plant and animal species unmatched anywhere in the Cascade Mountains. When studied carefully, this remarkable landscape will provide scientists and visitors with answers to questions about the complex biological, geological and climatic history of the area.

A visit to the Cascade-Siskiyou National Monument evokes curiosity about the natural world. The Monument itself is but a small piece of a much larger ecologically important region.



Rocky Meadow Garden



Purplish Copper Butterfly



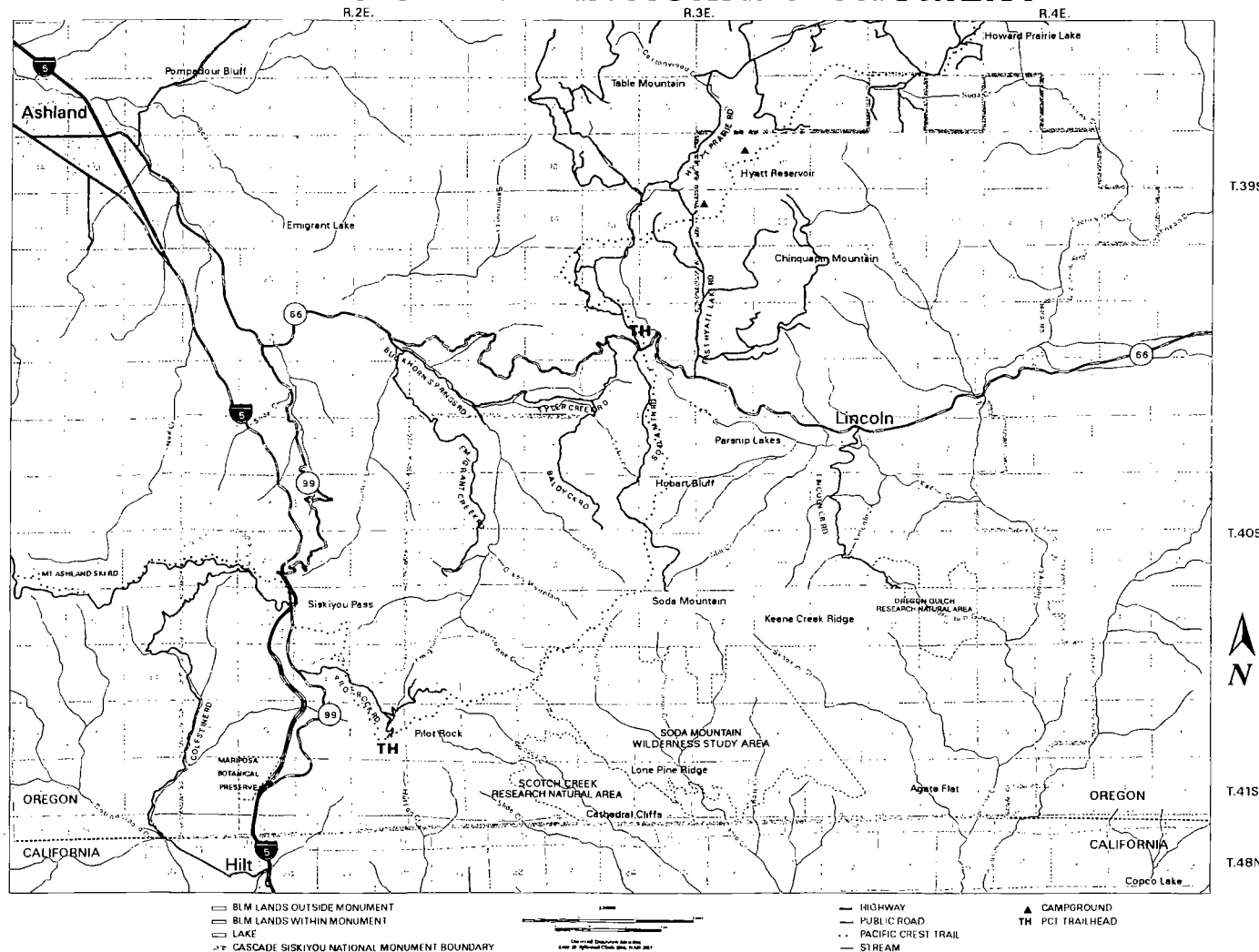
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT OREGON



For additional information, please call the Medford District at 541-618-2200, or visit our website at www.or.blm.gov/Medford.

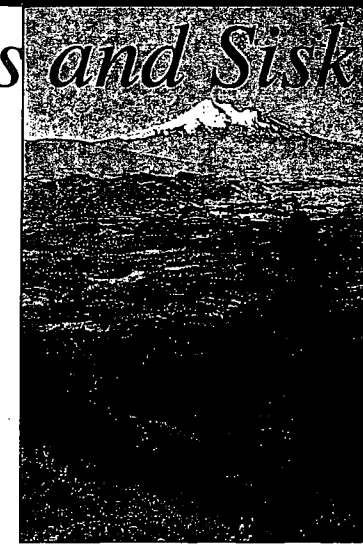
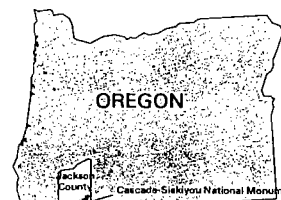
Exploration and Discovery in the Cascades and Siskiyou

CASCADE-SISKIYOU NATIONAL MONUMENT



During your visit, please remember...

- Much of the Monument is undeveloped and necessities such as water are not always readily available.
- Substantial amounts of private property are scattered throughout the Monument. Please respect and avoid private property in the Monument.
- Help protect fragile plant communities by staying on established trails. Cross-country travel by bicycles and vehicles is prohibited.
- Please follow "Leave No Trace" principles and pack everything out.
- Allow others a sense of discovery by leaving rocks, plants, archaeological artifacts and other objects of interest as you find them.



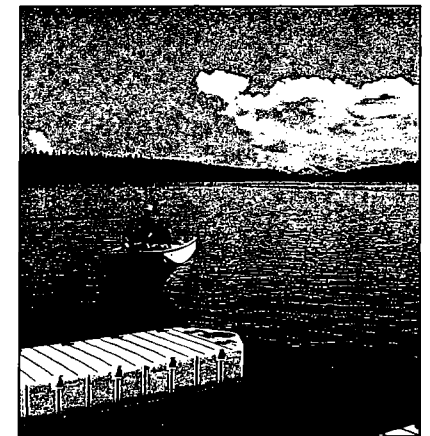
View of Mt. Shasta from the PCT

PACIFIC CREST NATIONAL SCENIC TRAIL

Hikers and horseback riders can traverse significant portions of the Monument on the Pacific Crest National Scenic Trail (PCT). The trail meanders through wildflower strewn meadows, old growth forests, and juniper covered hillsides. A portion of the trail stretches between Pilot Rock and Soda Mountain offering scenic views to the south of Agate Flat, the Soda Mountain Wilderness Study Area, and Mount Shasta.

HYATT LAKE RECREATION COMPLEX

Nestled in the Cascade Mountains in the northern part of the Monument, Hyatt Lake provides opportunities for camping, hiking, fishing and boating. The Bureau of Land management manages Hyatt Lake Campground, a full-service camping facility, with 56 campsites as well as a playground for kids. Approximately two miles north of the main campground on the east shore of Hyatt Lake is the semi-primitive Wildcat Campground with 12 primitive campsites. For information, call 541-482-2031.



Hyatt Lake with Mt. McLoughlin

DIRECTIONS

The easiest place to access the Pacific Crest Trail is at the Greensprings Summit. From Interstate 5, take exit 14 near Ashland. Turn on Highway 66 toward Klamath Falls. Take Highway 66 for 17 miles to the Greensprings Summit. A trailhead and parking area are located at the summit. From there, follow the Pacific Crest Trail six miles north to Hyatt Reservoir or 12 miles south toward Pilot Rock. To reach the Hyatt Lake Recreation Complex, continue past the Greensprings Summit to the Greensprings Inn. Turn left onto BLM's East Hyatt Lake Road. Follow this road for three miles until you reach the Hyatt Lake Recreation Complex. Stay to the right on the East Hyatt Lake Road. The main campground entrance is on the left.



Soda Mountain Wilderness Council

P.O. Box 512 • Ashland, Oregon 97520

December 2000

Needed Now

CALIFORNIA ADDITIONS TO THE CASCADE-SISKIYOU NATIONAL MONUMENT

**** SEND YOUR CHRISTMAS CARDS (ENCLOSED) TO DECISION MAKERS SOON ****

SODA MOUNTAIN MONUMENT STILL INCOMPLETE

We scored a touchdown June 9 with the President's national monument proclamation for over 52,000 Soda Mountain acres on the Oregon side. Now we've got to kick the extra point by adding about 11,000 acres on the California side by January 20. *You can help...*

President Clinton's proclamation recognized the new Cascade-Siskiyou National Monument as "...an ecological wonder with biological diversity unmatched in the Cascade Range." He called the area "...a biological crossroads – the interface of the Cascade, Klamath, and Siskiyou ecoregions...." But the southern boundary of this new national monument to biodiversity is the straight-line, state-line, California-Oregon border. Now *that's* an "ecological wonder."

President Clinton needs to finish the great job he began here before he leaves office. The 11,000 acres of California public lands described below need to be added to the Soda Mountain area's as-yet-Oregon-only Cascade-Siskiyou National Monument by January 20:

Horseshoe Ranch Wildlife Area. About 9,000 acres of BLM and California Dep't of Fish & Game (CFG) public lands provide crucial winter range for deer that summer as far away as Chiloquin, southeast of Crater Lake (Source: CFG). The Oregon Dep't of Fish & Wildlife (ODFW) says "The best deer winter range in Southern Oregon is located along the Oregon-California line" in this area (ODFW to BLM, 5/15/97). The deer seem not to know the difference between the two states here. What's a state line got to do with a national designation? For hikers, "the Horseshoe" is the first, best mud-and-snow-free access to the lower slopes of the Soda Mountain area in cabin-fever-late-winter or early-wildflower-spring.

Commercial livestock grazing is already technically illegal on the Horseshoe. But a private horse herd has been degradingly resident for years, and trespass cattle grazing and damage is rampant. Concurrent noxious invasives like yellow starthistle are epidemic. State and federal public land management agency enforcement efforts have been generally toothless in the face of a few loud locals spouting anti-government rhetoric laced with conspiracy theory fantasy.

Adding the Horseshoe Wildlife Area to the Cascade-Siskiyou National Monument will:

- 1) Put the now-bisected, diverse Scotch Creek watershed in the monument from top-to-bottom,
- and 2) Give BLM and CFG more needed muscle to address flagrant land abuse.

Grand Canyon of Jenny Creek and Jenny Creek Falls. Gallery, riparian forest. A seven-hundred-foot-deep, rim-rocked canyon. And a slot-chasm at the bottom with more than one spectacular waterfall. California's lower Jenny Creek Canyon is probably the best-kept secret of the Soda Mountain area. As striking below ground-level as Pilot Rock is prominent above,

(continued on other side)



a small portion of lower Jenny Creek Canyon is already designated a California BLM Area of Critical Environmental Concern/Research Natural Area to protect Bald Eagle and native fish habitat and Native American cultural values. Wild & Scenic River status is also possible here. Much of the upstream Oregon portion of Jenny Creek is in the monument. Public land in the downstream California stretch merits inclusion, as well.

Scattered California BLM Borderland Parcels. Besides the Horseshoe Wildlife Area and Jenny Creek ACEC/RNA, many isolated pieces of California public land are scattered near-to and contiguous-with the Oregon monument's southern, state-line boundary. Sadly, California BLM has sought to sell some of this public land to private individuals. This approach heads in exactly the wrong direction. Scattered California BLM and other public borderland parcels need to be included in the Cascade-Siskiyou National Monument. And as much nearby private land as possible should be purchased by BLM from willing sellers for inclusion in the monument.

Please tell the President and his staff that a *state* line should have nothing to do with Soda Mountain's Cascade-Siskiyou *National* Monument boundary – especially since this is a monument to biodiversity, which rarely follows political boundaries. ***Please use this alert and the enclosed cards to write your own short, personal letter to:***

President Bill Clinton *The White House Washington, DC 20500*

(Please also send copies to the officials below:)

Secretary Bruce Babbitt *Dep't of Interior 1849 "C" St., NW Washington, DC 20240*

Acting Director George Frampton, *Council on Environmental Quality*
722 Jackson Place, NW Washington, DC 20503

National monuments – and monument additions – usually happen only at the *end* of eco-friendly presidential administrations. The monument window-of-opportunity we have now closes January 20. When will a national monument window open again? At this late-November writing, nobody knows. Perhaps not in our lifetimes. ***Please write today.***

And while you're sending your holiday greetings to Clinton/Babbitt/Frampton, please send a tax-deductible holiday gift to the Soda Mountain Wilderness Council, as well. Your support is bedrock to our efforts. And we give you a "monumental" return on your investment – a lasting dividend that generations of all species will enjoy as long as wildland defenders are vigilant.

Thanks to all who have helped get us this far. (You know who you are.) The year 2000 now goes down in history as the best year yet for Soda Mountain public wildlands protection. We welcome your continued support as we push on to round out the boundaries of the Cascade-Siskiyou National Monument and help it become more than just a pretty name on a map.

For Wilderness and Wildlands,

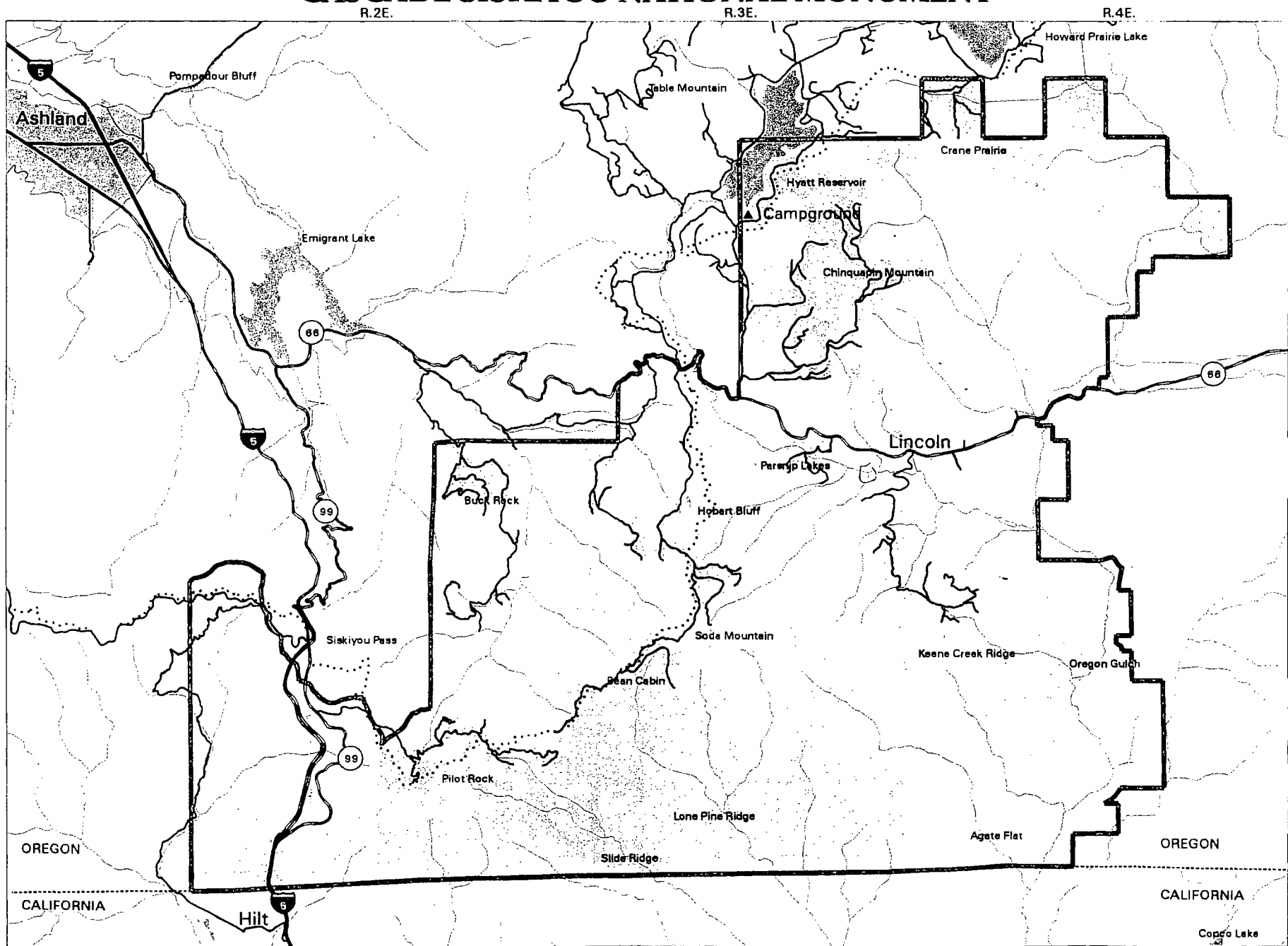


Dave Willis, Chair, for the Board of the Soda Mountain Wilderness Council:
Susan Hunt, Nancy Peterson, Chris Fowler, Lori Cooper, Alex Dykema, and Lori Valentine

P.S. Even if you can't send a letter or donation, please do send the enclosed cards.
The Clinton administration needs to hear from you now.

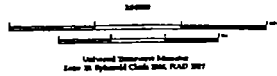
CASCADE SISKIYOU NATIONAL MONUMENT

1100



United States Department of the Interior
Bureau of Land Management
Oregon State Office
PO Box 204
Portland, Oregon 97208-0204

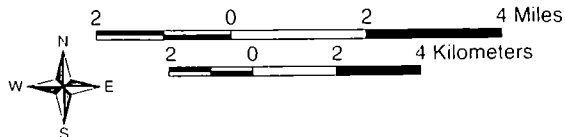
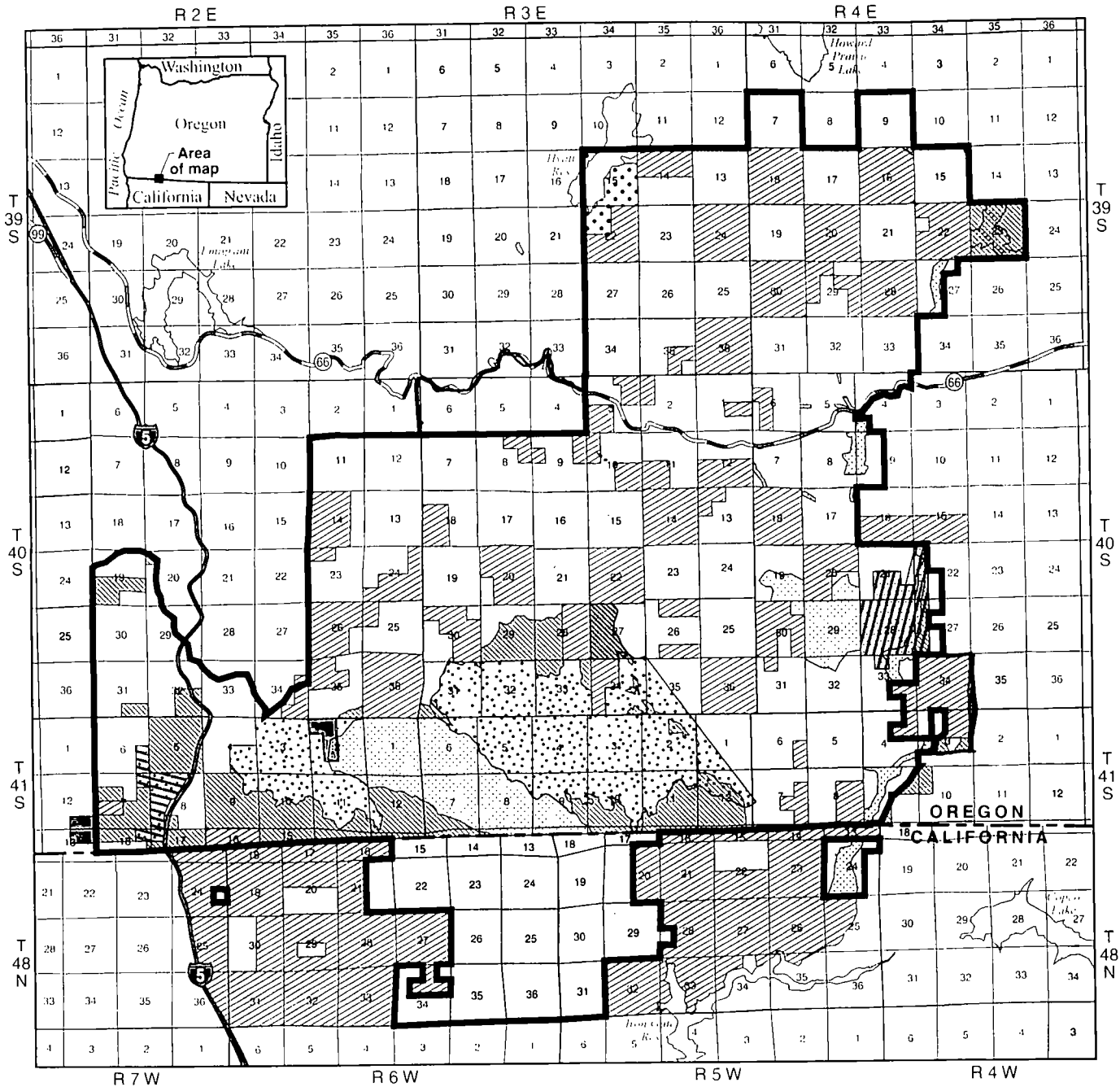
- BLM LANDS OUTSIDE MONUMENT
- BLM LANDS WITHIN MONUMENT
- LAKE
- CASCADE-SISKIYOU NATIONAL MONUMENT BOUNDARY



- HIGHWAY
- PUBLIC ROAD
- PACIFIC CREST TRAIL
- STREAMS

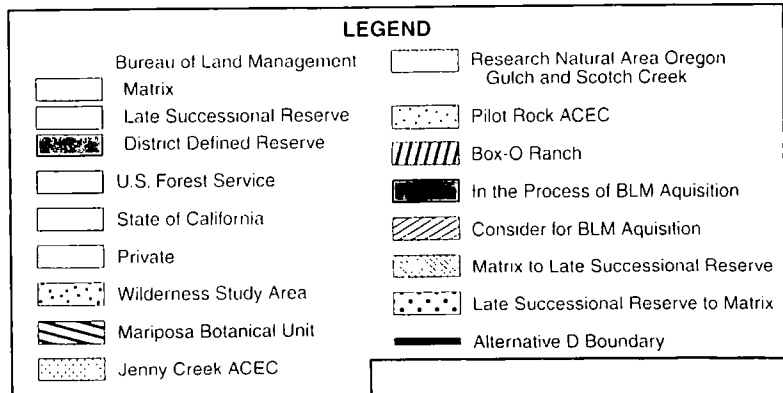
▲ CAMPGROUND

Cascade Siskiyou Ecological Emphasis Area Alternative D



U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Medford District
2000

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.



MAP 42

D01-03-2000.JR



U.S. Department of the Interior
Bureau of Land Management

Medford District Office
3040 Biddle Road
Medford, Oregon 97504

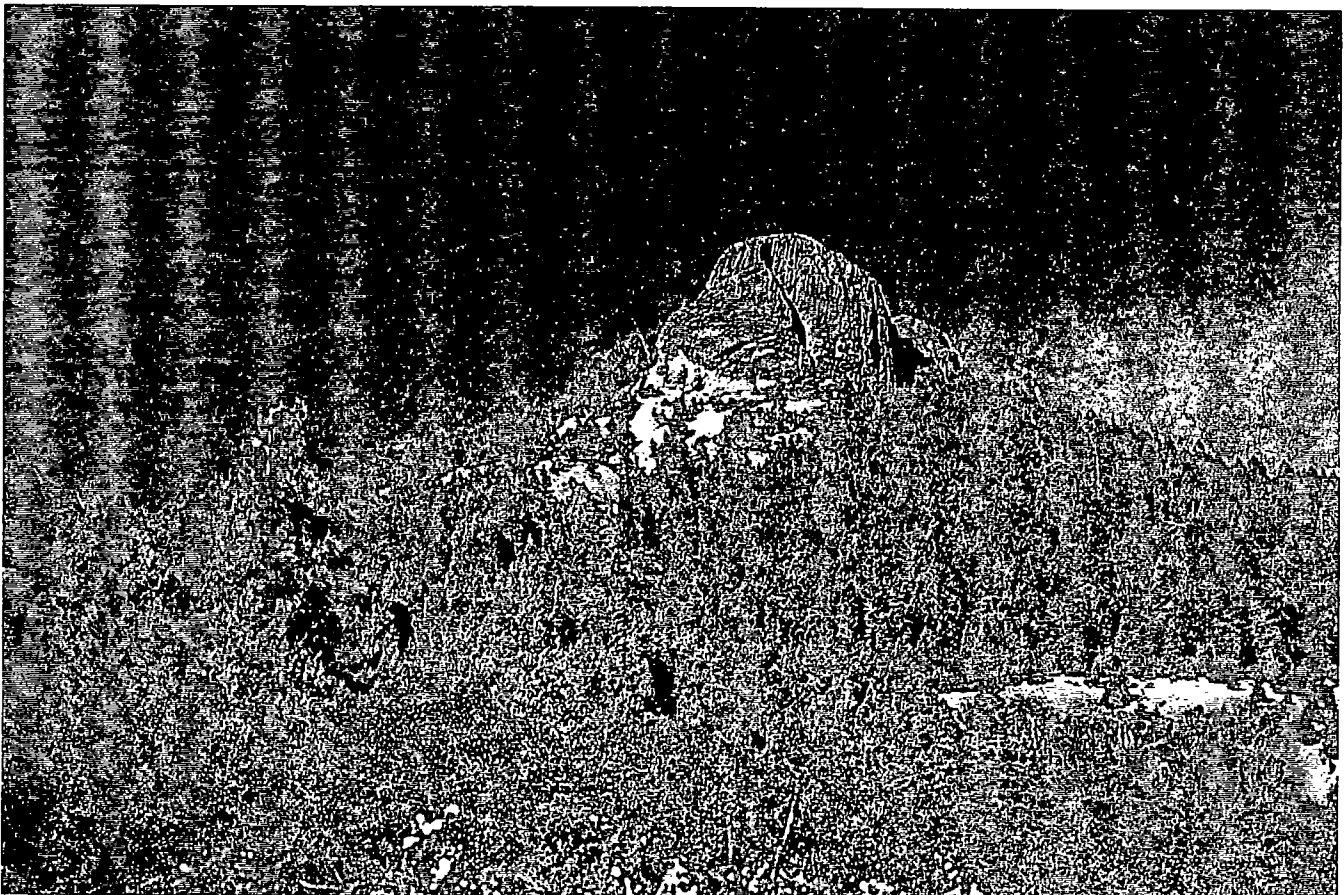
March 2000



Cascade Siskiyou Ecological Emphasis Area

Draft Management Plan/ Environmental Impact Statement

Volume II



United States Senate

HART SENATE OFFICE BUILDING
SUITE 112
WASHINGTON, DC 20510-0505
(202) 224-3553
senator@boxer.senate.gov
http://boxer.senate.gov

February 14, 2000

The Honorable Bruce Babbitt
Secretary of the Interior
1849 C Street, NW
Washington, DC 20240

Dear Mr. Secretary:

I am writing to you about the possible designation of a Soda Mountain National Monument.

I understand that you are considering recommending to the President that he use his executive authority to create a national monument at Soda Mountain. Should you do so, I urge you to include critical lands in California that are a significant part of the Soda Mountain ecosystem.

The Horseshoe Ranch Wildlife Area and Jenny Creek Area of Critical Environmental Concern (ACEC) management units are on the lower slopes of the Soda Mountain area. The Northwest Forest Plan recognized this area for its special biological values as a biological connectivity corridor between the Cascades and Siskiyou Mountains. The Bureau of Land Management's (BLM) own resource management plan developed in 1993 further noted the prime value of these management units for wildlife habitat, water quality, and non-motorized recreation, and the need for natural riparian restoration in the area. The BLM designated Oregon lands immediately adjacent to these lands as the Cascade-Siskiyou Ecological Emphasis Area in 1995.

Both the California and Oregon BLM lands are a single ecological unit. They are regionally, if not globally, significant. The state line means little to the migrating deer herd and other wildlife. This important area deserves the best coordinated interstate management possible to protect it from development and environmental degradation.

I urge you to recommend that the President designate the entire Soda Mountain area, including Horseshoe Ranch, Jenny Creek ACEC, Cascade Siskiyou Ecological Emphasis Area, and other scattered BLM borderlands in California, as a national monument.

Thank you for your attention to this matter. I look forward to your prompt reply.

Sincerely,



Barbara Boxer
United States Senator

1700 MONTGOMERY STREET
SUITE 240
SAN FRANCISCO, CA 94111
(415) 403-0100

312 N. SPRING STREET
SUITE 1748
LOS ANGELES, CA 90012
(213) 894-5000

501 "I" STREET
SUITE 7-600
SACRAMENTO, CA 95814
(916) 448-2787

1130 "O" STREET
SUITE 2450
FRESNO, CA 93721
(599) 497-5109

600 "B" STREET
SUITE 2240
SAN DIEGO, CA 92101
(619) 239-3884

201 NORTH "E" STREET
SUITE 210
SAN BERNARDINO, CA 92401
(909) 888-8525

MIKE THOMPSON

131 DISTRICT, CALIFORNIA

COMMITTEES:

AGRICULTURE

ARMED SERVICES



CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

August 18, 2000

The Honorable Bruce Babbitt
Office of the Secretary
Department of the Interior
1849 C Street, NW
Washington D.C. 20240

Dear Secretary Babbitt:

I am writing to offer my support for the expansion of the Cascade-Siskiyou National Monument to include critical habitat areas in California. These lands are home to several rare plants and animals and deserve special protection under the law.

There are five properties, already under the jurisdiction of the Bureau of Land Management (BLM), which should be added to the Monument. Specifically, they are the Jenny Creek Area of Critical Environmental Concern, the Horseshoe Ranch Big Game Management Area, the Upper Klamath River Scenic Canyon, the Shasta-Klamath Canyon Area of Critical Environmental Concern, and a collection of BLM parcels situated between the Klamath River, Interstate 5, and the Oregon Border. Taken together, these properties would add approximately 11,000 acres to the Monument.

Adding this land to the Monument would provide many significant benefits, including increased protection for salmonids, improved water quality, enhanced Elk habitat, and expanded recreational opportunities. I urge you to give serious consideration to protecting these areas and expanding the Cascade-Siskiyou National Monument.

Thank you for your attention to this matter.

Sincerely,

MIKE THOMPSON
Member of Congress

MT:cc

Thank you for your consideration



Soda Mountain Wilderness Council

P.O. Box 512 • Ashland, Oregon 97520

June 26, 2000

The Honorable Bruce Babbitt, Secretary
Department of the Interior
1849 "C" Street, NW
Washington, DC 20240

RE: ECOLOGICAL NEED TO ADD RELEVANT CALIFORNIA LANDS TO OREGON'S NEW CASCADE-SISKIYOU NATIONAL MONUMENT

Dear Secretary Babbitt,

The Soda Mountain Wilderness Council gratefully welcomes your May 31 recommendation, and President Clinton's June 9 proclamation, of the Cascade-Siskiyou National Monument. The new monument includes over 52,000 acres of Bureau of Land Management (BLM) federal public land in southwest Oregon on the Oregon-California border. The monument boundaries are identical to the Oregon side of Alternative D mapped on page 42, Volume II of the Medford District (OR) BLM's March 2000 Cascade Siskiyou Ecological Emphasis Area Draft Management Plan/Environmental Impact Statement (CSEEA DEIS) -- plus over two hundred more Oregon BLM acres in two locations not mapped in Alternative D.

The Cascade-Siskiyou National Monument is described as "an ecological wonder" and "a biological crossroads" in the President's proclamation language. But the monument's southern boundary is the straight-line, east-west, California-Oregon border. This ecologically curious state-line boundary bisects watersheds in midstream, severs what the Oregon Department of Fish & Wildlife calls "the best deer winter range in southern Oregon," and divides both BLM Cascade-Siskiyou Ecological Emphasis Area DEIS Alternatives C and D -- the only two ecologically viable alternatives in the CSEEA DEIS.

When protecting an area for outstanding ecological values -- "What's a state line got to do with a national designation?" We are at a loss to understand the scientific rationale for truncating the Cascade-Siskiyou National Monument at the Oregon-California border.

We respectfully urge you to recommend that President Clinton enhance and complete the ecological integrity of the Cascade-Siskiyou National Monument by at least:

1) Adding all lands already analyzed in Alternative D of the CSEEA DEIS, including the Jenny Creek Area of Critical Environmental Concern, Horseshoe Wildlife Area, nearby and adjacent scattered California BLM lands along the border, private lands the CSEEA DEIS identifies for acquisition from willing sellers, and other nearby and adjacent California lands not analyzed in Alternative D. Senator Barbara Boxer has already specifically or generally recommended the above lands to you for national monument designation in her February 14, 2000 letter to you (copy attached).



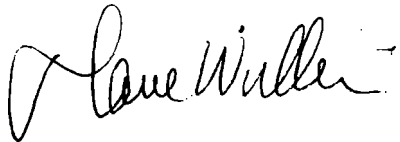
PAGE 2 OF 2 -- JUNE 26, 2000 -- SMWC TO SECRETARY BRUCE BABBITT
RE: CALIFORNIA ADDITIONS TO CASCADE-SISKIYOU NATIONAL MONUMENT

2) Adding Klamath River canyon and adjacent lands proposed by the Klamath Forest Alliance, California Wilderness Coalition, and other Californians with better local knowledge than ours of lands south of the Oregon-California border.

We strongly believe the ecological values and scientific objects the Cascade-Siskiyou National Monument was created to protect will be far better protected if both contiguous and nearby California border lands, as well as nearby Klamath River canyon lands, are added to the new monument. The area is a single ecological unit with greater than local ecological significance and needs to be managed as such. We respectfully urge you to finish the outstanding job you and the President have begun in Oregon by completing the Cascade-Siskiyou National Monument with the ecologically necessary and appropriate California additions outlined above.

Thank you again for the Cascade-Siskiyou National Monument. Please do not let our concerned request for these ecologically necessary California additions obscure our profound gratitude for the monumentally good thing you and the President have done here for the land and people of Oregon.

Sincerely,

A handwritten signature in black ink, appearing to read "Dave Willis". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Dave Willis, Chair
Soda Mountain Wilderness Council
15187 Greensprings Highway
Ashland, OR 97520
541/944-2247 or 482-0526
Fax 541/488-1682 sodamtn@mind.net

Attachment:

2/14/00 letter from Senator Boxer to Secretary Babbitt

cc: George Frampton, CEQ
Senator Barbara Boxer
Others



Kathryn S. Fuller
President

September 25, 2000

The Honorable Bruce Babbitt
Secretary of the Interior
U.S. Department of the Interior
1849 C Street, NW
Washington, DC 20240

Dear Mr. Secretary:

Once again, World Wildlife Fund deeply appreciates the work which culminated in President Clinton's proclamation of the 52,000 acre Cascade-Siskiyou National Monument. The designation was pivotal to protecting a crucial ecological gateway to and from the Klamath-Siskiyou ecoregion, one of the Global 200 -- the world's most important terrestrial and marine ecoregions.

I am writing now to urge you to recommend expansion of the monument to include at least 10,000 acres of public land in California that is vital to maintaining the ecological connectivity the monument was established to protect. The President's proclamation language rightly extols the monument as "an ecological wonder with biodiversity unmatched in the Cascade Range" and "a biological crossroads" between the "Cascade, Klamath and Siskiyou ecoregions." But the southern state-line boundary bisects watersheds, canyons, and ridgelines, severing what the Oregon Department of Fish and Wildlife considers, and the California Department of Fish and Game struggles to manage, as "the best deer winter range in the region." In a monument designed to protect diverse ecological values, including ecological connectivity, the state-line boundary stands as an artificial disruption.

WWF therefore strongly supports the addition to the monument of the Horseshoe Ranch Wildlife Area and Jenny Creek Area of Critical Environmental Concern/Research Natural Area, as well as scattered Bureau of Land Management (BLM) and U.S. Forest Service parcels also

World Wildlife Fund

1250 Twenty-Fourth St., NW Washington, DC 20037-1132 USA

Tel: (202) 293-4800 Fax: (202) 293-9211

Affiliated with World Wide Fund for Nature



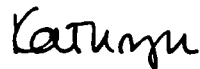
Processed Chlorine-Free Recycled Paper

The Honorable Bruce Babbitt
September 25, 2000
Page Two

between Interstate-5 and the eastern plateau of Jenny Creek. We also believe it important to include interspersed private lands in this area, to better facilitate future public acquisition from willing sellers. The proposed California additions to the monument are shown on BLM's Draft Environmental Impact Statement for the Cascade-Siskiyou Ecological Emphasis Area (Volume II, Alternative D, Map 42, p. 42).

Thank you again for your leadership. We look forward to working with you to include these critically important California additions.

Sincerely,



Kathryn S. Fuller

cc:

Hon. Barbara Boxer, U.S. Senate
Hon. Dianne Feinstein, U.S. Senate
Hon. Ron Wyden, U.S. Senate
Mr. John Podesta, Chief of Staff, The White House
Mr. George Frampton, Chairman, CEQ



Done With
No Freeman
M. S. T. mini

THE WILDERNESS SOCIETY

WILLIAM H. MEADOWS

President

November 13, 2000

The Honorable Bruce Babbitt
Secretary of the Interior
U.S. Department of the Interior
1849 C Street, N.W.
Washington, D.C. 20240

Dear Mr. Secretary:

Earlier this year, you took a critical step in protecting the Klamath Siskiyou ecoregion by designating the Cascades Siskiyou National Monument. This is one of the most spectacular places in the world and has been chosen by World Wildlife Fund as one of their Global 200 ecoregions. The Wilderness Society has identified the Klamath Siskiyou as one of its high priority regions, as well.

The one disappointment in the national monument designation was the exclusion of critical lands in California. We ask that you recommend that President Clinton expand the Cascade Siskiyou National Monument by adding lands already analyzed in Alternative D of the CSEEA DEIS, including the Jenny Creek Area of Critical Environmental Concern, Horseshoe Wildlife Area, and other nearby California BLM lands along the border. The CSEEA DEIS also identifies private lands that might be acquired from willing sellers; no doubt, there are other adjacent California lands not analyzed in Alternative D which would add to the ecological integrity of the Monument.

Again, what you and President Clinton have done in the Klamath Siskiyou region is remarkable. At times it must seem that the conservation community is never satisfied. Maybe. We are happy and pleased with what happened but see an opportunity to take an even more holistic, complete approach. Thank you for all you have done on this Monument and others.

Sincerely,

William H. Meadows

Editorials

Soda Mountain

Area's unique characteristics should earn it greater protection

Many environmental debates are philosophical in nature. But a proposal to protect an area encircling Soda Mountain in Southern Oregon and Northern California can be decided in a very practical manner: The costs are minor; the benefits are significant.

U.S. Secretary of the Interior Bruce Babbitt is in town today to meet with Second District Congressman Greg Walden and to discuss Soda Mountain's future. Among the possibilities is that President Clinton will declare a national monument encompassing some 70,000 acres.

Mr. Secretary, we urge you to urge the president to create a national monument in the Soda Mountain area. It just makes sense.

The land under consideration centers around a Bureau of Land Management study area called the Cascade-Siskiyou Ecological Emphasis Area. That area that could be included in a national monument stretching from near Interstate 5 and Pilot Rock on its western flank to Jenny Creek on the east, from several miles south of the Oregon-California border and north to an area near Highway 66. At its deepest points, it measures about 11 miles by 16 miles.

In simple terms, it is the area — often snow-capped in the winter — you see at the southern end of the Bear Creek Valley.

The BLM describes it as a region of "great ecological diversity." It serves as a high elevation land bridge between the Siskiyou Mountains and the Cascades and includes species from both as well as from the Great Basin and local valleys.

That diversity includes the rare Greene's Mariposa lily, a hundred varieties of butterfly species (ranking it among the most prolific butterfly areas in North America), the unique Jenny Creek redband trout and dozens of other rare species. The World Wildlife Federation calls it one of the top 10 temperate coniferous forests in the world and regards it as a critical corridor for large carnivores in the Cascades, Siskiyou and Klamath mountains.

Proponents of protecting the area note that the presence of rare species is not the defining element of the area. What really makes it a deserving candidate for protection is the juxtaposition of so many species representing so many different regions, all coming together in one special place.

It is breathtaking in its beauty and in its diversity. Its 4,000-foot variation in elevation takes you from high mountain forests marked by picturesque waterfalls to windswept, juniper-studded ranges sweeping south toward Mount Shasta. Walk its breadth and you'll encounter high mountain meadows and rugged rock outcroppings, gigantic Ponderosa and low-slung California chaparral.

The benefits of protecting the area are obvious. The costs are relatively few: It is not a significant source of timber production. Only four ranchers graze cattle there and they say they would be agreeable to a buyout of their grazing rights. Off-road vehicle users have their eyes on the prize, but there are already thousands of miles of forest roads elsewhere in the region they could use.

Whether 70,000 acres is the right amount to include for protection is beyond our knowledge. But certainly a significant portion of that should be included.

The creation of a national monument does not put the land off-limits. But it does set boundaries within which the BLM must carefully assess how best to ensure that the essential nature of the area is preserved for future generations.

So, Mr. Secretary, please carry this message back to your boss: Soda Mountain deserves your protection.

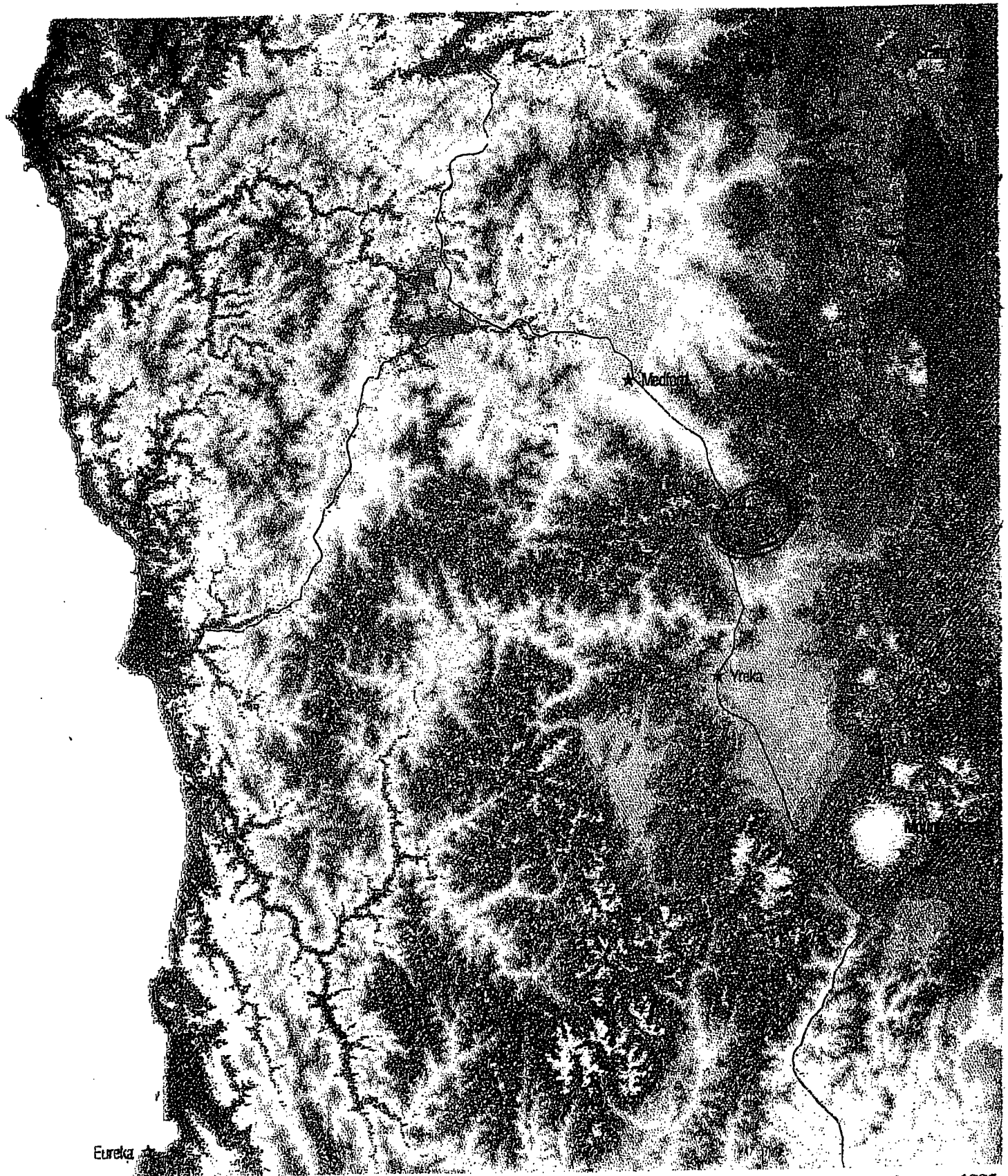
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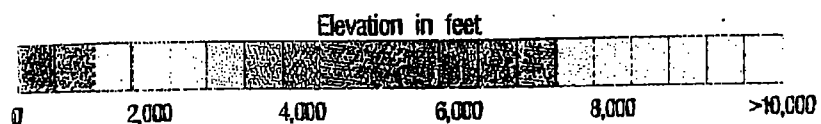
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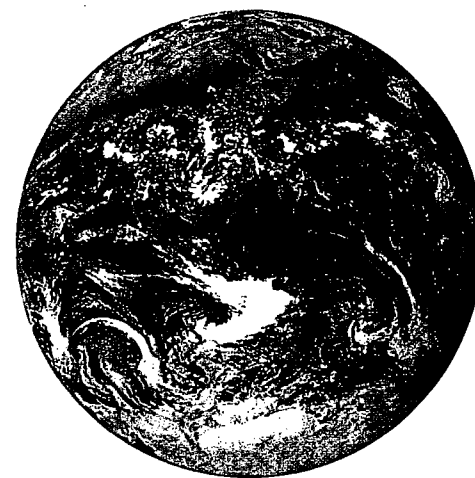
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R. Ballentine

THE WHITE HOUSE

WASHINGTON
November 10, 2000

11-10-00

✓
Dear Mr. President:

I am pleased to transmit to you: *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change*. This is the first national assessment submitted as required by the Global Change Research Act of 1990. The best scientific estimates indicate that the U.S. will warm by about 5-10 degrees Fahrenheit over the next century. While we are confident that climate is changing, we are not yet able to predict exactly how it will be manifested at smaller regional scales. The assessment is therefore not intended as a prediction of the future climate in any given place, but rather examines the impacts that could result from a plausible set of future climate scenarios. The report clearly indicates that climate change is a serious issue for our nation.

Climate change appears to pose a significant challenge for water resource management nationally. More intense precipitation and faster evaporation of water are very likely to lead to more floods and droughts; changes in rainfall patterns, snowpack thickness, and timing of snowmelt will affect water supply. Rising sea level is also a widespread concern, as it will threaten wetlands and expose many coastal communities to increased storm surges. Other projected national impacts are mixed and could change over time. Total U.S. crop productivity is very likely to increase over the next few decades, but some areas will suffer losses. Forest growth is also likely to increase in the near-term, but the composition of many forests will change and, over the longer term, changes in fires, insects, droughts, and disease are expected to decrease forest productivity. A range of negative human health impacts is possible from climate change, but surveillance and adaptation are likely to help protect much of the U.S. population.

Regional impacts will vary significantly. Some Southeastern barrier islands and Rocky Mountain alpine meadows may disappear entirely. Milder winters are likely to reduce cold-related stress in some areas, but summer heat waves are very likely to increase in frequency. The desert ecosystems native to the Southwest are likely to be replaced by grasslands and shrublands, and maple trees may disappear from New England. Increasing stream temperatures may harm migrating fish in the Northwest. Increased melting of permafrost threatens forested areas, roads, and buildings in Alaska.

This document was produced by a team of authors -- chartered under the Federal Advisory Committee Act -- which included experts from U.S. government agencies, the academic community and the private sector. It was created through a fully open, public process, with contributions from thousands of concerned citizens from around the country, including many of our nation's leading climate scientists. The report has been through multiple rounds of scientific peer review, with hundreds of experts providing detailed comments and suggestions, assuring its technical accuracy. The result is a document that responds to the information needs of local, regional, and national decision-makers in the public and private sectors by providing a picture of what is at risk from climate change. The report's identification of uncertainties and research opportunities is an important contribution to the U.S. government and the Congress as they consider the future agenda for U.S. global change research efforts.

CC:
Ballentine
Podesta

Neal

Neal Lane
Assistant to the President for Science and Technology

CLIMATE CHANGE IMPACTS ON THE UNITED STATES

THE POTENTIAL CONSEQUENCES OF CLIMATE VARIABILITY AND CHANGE

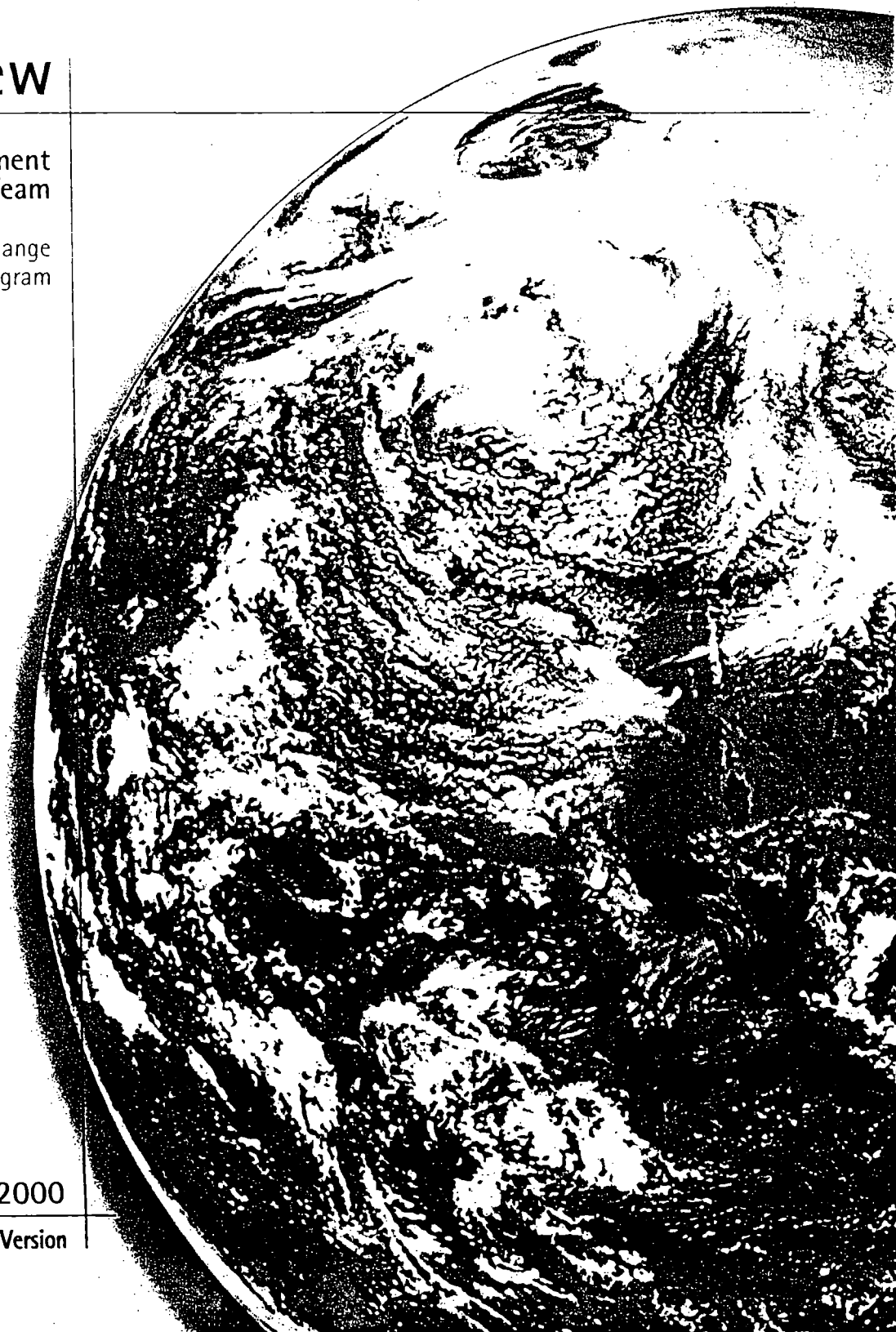
Overview

National Assessment
Synthesis Team

US Global Change
Research Program

November 2000

Pre-Publication Version



The recommended citation of this report is as follows:
National Assessment Synthesis Team,
*Climate Change Impacts on the United States:
The Potential Consequences of Climate Variability and Change*,
US Global Change Research Program, Washington DC, 2000

CLIMATE CHANGE IMPACTS ON THE UNITED STATES

The Potential Consequences of Climate Variability and Change

Overview

Humanity's influence on the global climate will grow in the coming century. Increasingly, there will be significant climate-related changes that will affect each one of us.

We must begin now to consider our responses, as the actions taken today will affect the quality of life for us and future generations.

A Report of the
National Assessment
Synthesis Team

US Global Change
Research Program

November 2000

Pre-Publication
Version

This report was produced by the National Assessment Synthesis Team, an advisory committee chartered under the Federal Advisory Committee Act to help the US Global Change Research Program fulfill its mandate under the Global Change Research Act of 1990. The National Science and Technology Council has forwarded this report to the President and Congress for their consideration as required by the Global Change Research Act.

Administrative support for the US Global Change Research Program is provided by the University Corporation for Atmospheric Research, which is sponsored by the National Science Foundation. Any opinions, findings and conclusions or recommendations expressed in this publication are those of the authors and do not necessarily reflect the views of the National Science Foundation or the University Corporation for Atmospheric Research.

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ABOUT THIS DOCUMENT

What is this Assessment?

The National Assessment of Potential Consequences of Climate Variability and Change is a landmark in the major ongoing effort to understand what climate change means for the US. Climate science is developing rapidly and scientists are increasingly able to project some changes at the regional scale, identifying regional vulnerabilities, and assessing potential regional impacts. Science increasingly indicates that the Earth's climate has changed in the past and continues to change, and that even greater climate change is very likely in the 21st century. This Assessment has begun a national process of research, analysis, and dialogue about the coming changes in climate, their impacts, and what Americans can do to adapt to an uncertain and continuously changing climate. This Assessment is built on a solid foundation of science conducted as part of the United States Global Change Research Program (USGCRP).

What is this document and who is the NAST?

This document is the Assessment Overview, written by the National Assessment Synthesis Team (NAST). The NAST is a committee of experts drawn from governments, universities, industry, and non-governmental organizations. It has been responsible for broad oversight of the Assessment, with the Federal agencies of the USGCRP. This Overview is based on a longer, referenced "Foundation" report, written by the NAST in cooperation with independent regional and sector assessment teams. These two national-level, peer-reviewed documents synthesize results from studies conducted by regional and sector teams, and from the broader scientific literature.

Why was this Assessment undertaken?

The Assessment was called for by a 1990 law, and has been conducted under the USGCRP in response to a request from the President's Science Advisor. The NAST developed the Assessment's plan, which was then approved by the National Science and Technology Council, the cabinet-level body of agencies responsible for scientific research, including global change research, in the US government.

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This report is also based on the work of hundreds of individuals and organizations participating in regional and sector activities across the country without whose input, support, and expertise, it would not have been possible. In addition, many reviewers provided comments on drafts of the report. Additional credits and acknowledgements can be found in the appendix.

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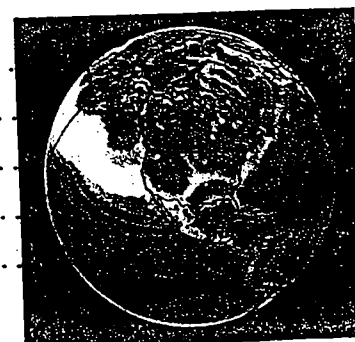
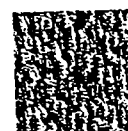
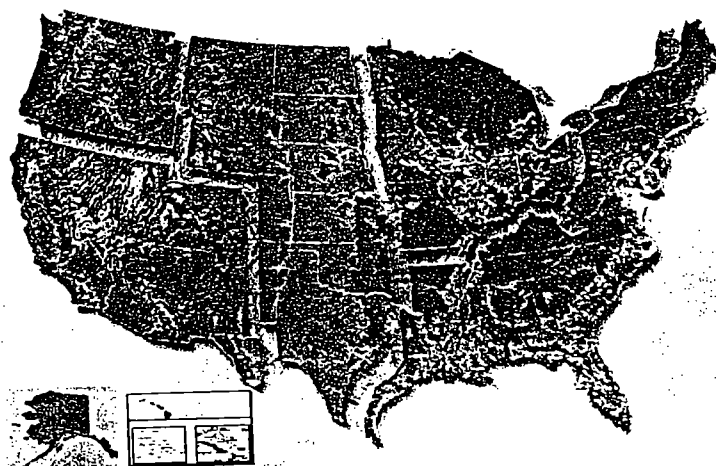
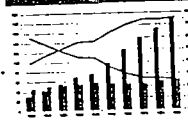
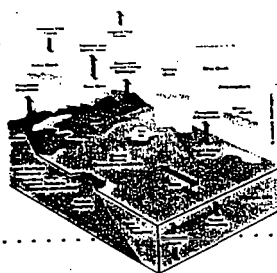
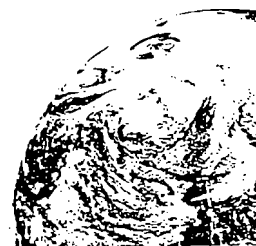
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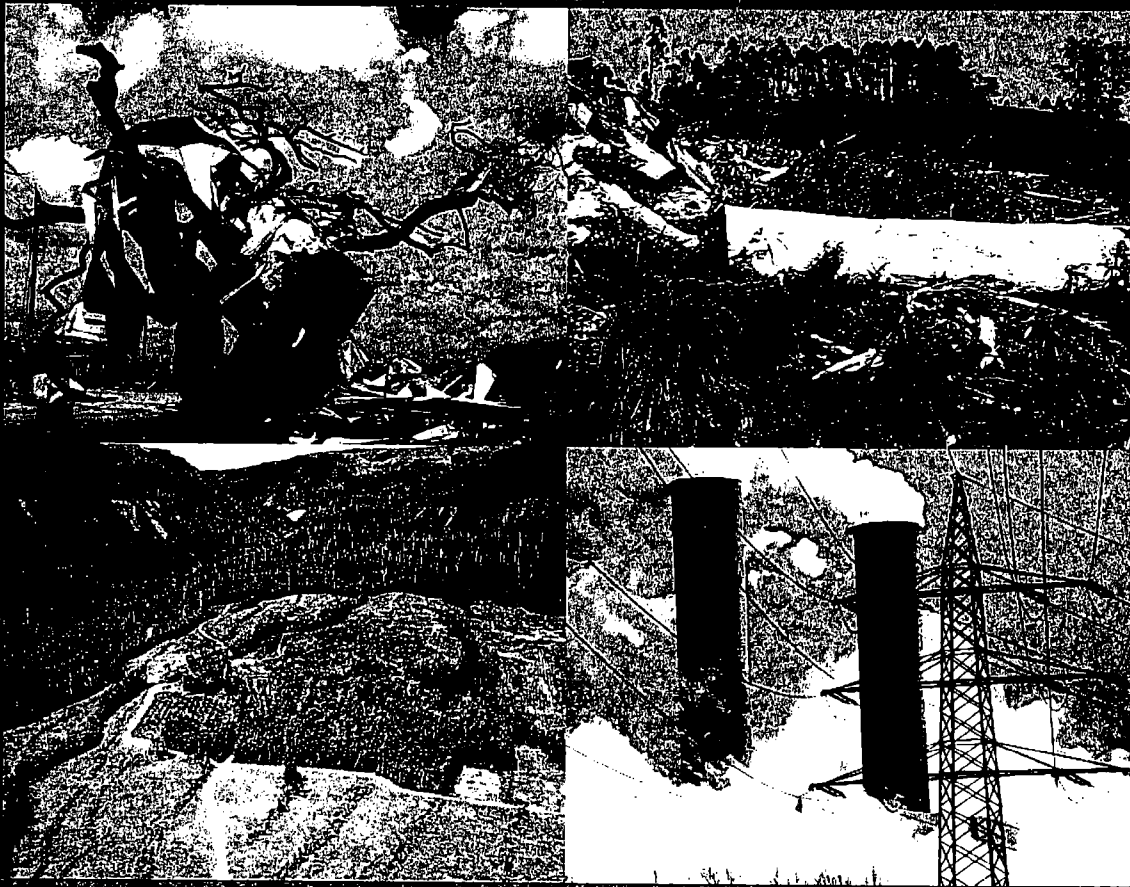


The impacts of climate change will be significant for Americans. Our climate is now changing at a rapid rate, and even greater climate change is very likely in the 21st century. Temperatures are projected to rise more rapidly in the next one hundred years than in the last 10,000 years.

This Assessment has involved thousands of Americans in an ongoing national dialogue about climate change and its impacts. The report identifies key climatic vulnerabilities of particular regions and sectors in the context of other changes in the nation's environment, resources, and economy. It also explores ways Americans can adapt to an uncertain and continuously changing climate.

United States Global Change Research Program

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GREENPEACE

THE CLEARCUT CASE: HOW THE KYOTO PROTOCOL COULD BECOME A DRIVER FOR DEFORESTATION

A report for Greenpeace International and WWF

by Tim Cadman

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Author: Tim Cadman, M.A.

About the Author

Tim Cadman M.A. is a graduate of Girton College, Cambridge, and a Ph.D student in Applied Science at Canberra University. He specialises in research into sustainable forest management and certification and labelling. He is a founding member of the international NGO, Native Forest Network, and a Director of the New South Wales based Colong Foundation for Wilderness Ltd. and a member of the Forest Stewardship Council (Environmental Chamber).

EXECUTIVE SUMMARY

This report challenges the widely held assumption that carbon sequestration projects — so called “sinks” — are environmentally advantageous. The evidence presented shows instead that sinks projects can lead to significant negative environmental impacts. The report outlines how Tokyo Electric Power Company (TEPCO), Japan’s largest power utility and a pace-setter in the use of carbon sequestration, is implicated in native forest destruction in the Australian state of Tasmania through plantation investments designed to obtain “carbon credits” under the Kyoto Protocol. These native forests are areas of high conservation value. Some are old-growth forest, others represent significant habitats for threatened species.

TEPCO, along with Mitsubishi, has invested Aus\$10 million in a \$90 million plantations joint venture with Australian company North Forest Products (NFP) in the Australian state of Tasmania. The main product from the plantations will be pulp for Mitsubishi, but TEPCO’s investment will also yield an estimated 130,000 tonnes of “carbon credits”. Areas of land that will be cleared for North Forest Products’ plantations include areas of native forest (interview with NFP CEO Mike Beardsell 1/9/00 — see p10). TEPCO’s sequestration-related investment is an integral part of the joint venture’s overall capitalisation, and is therefore associated with this native forest destruction.

NFP may seek to distinguish between pulp production for Mitsubishi on cleared native forest, and previously cleared land for TEPCO’s carbon sinks. Yet there has been no disaggregation in terms of land ownership between NFP and TEPCO. Furthermore, making such a distinction is academic, as both forestry land uses are occurring on the same properties. TEPCO’s carbon plantation investment is inseparable from ecologically destructive management practices of NFP.

In addition, post-hoc attempts to pick and choose “previously cleared land” across NFP’s plantation holdings and delineate them as TEPCO sinks is both an unethical and potentially unauditible approach. Existing vegetation data sets are not always accurate and frequently conflict, further complicating attempts to independently assess land use history.

The TEPCO case is not an isolated example. This report also documents the attempts by Australian company Gunns Ltd to attract investment in their plantations by claiming that they are potentially eligible for “carbon credits” under Federal Government guidelines. An examination of Gunns plantations acquired from the Australian company BORAL and groundtruthing of available data on the Private Timber Reserve database reveals that many of Gunns’ plantations are on recently cleared native forest. This is the clearest evidence yet that carbon credits may become an economic driver for native forest destruction.

Furthermore, the clearance of native forest for plantations is an inevitable ramification of the Tasmanian Government’s plantations agenda. Forestry Tasmania states clearly:

“The objective is estimated to require around 100,000 hectares of new eucalypt plantation. Of the total area needed for plantation, both eucalypt and softwood, approximately 70% will come from native forest conversion...” [emphasis added].

Tasmania is obligated to maintain only 80% of its native forest estate under current policies (Tasmanian State Government, *State of the Forests Report*, p. 13). This means that as much as 20% of Tasmania's native forest cover, including areas of high conservation value with threatened species habitat, could be converted to plantations over the next few years. This report provides evidence that some in both industry and government would like to use carbon credits to help finance plantation expansion investments that include native forest clearance.

This November the Parties to the Climate Change Convention will meet in The Hague in The Netherlands to continue negotiations on the Kyoto Protocol. One of the most contentious issues will be whether sinks projects can be included in the Clean Development Mechanism (CDM) of the Kyoto Protocol. This mechanism is designed to promote greenhouse gas projects in developing countries while assisting them to achieve sustainable development. The question must be asked: if carbon credits are enhancing investments that may encourage native forest destruction in industrialised, first world countries, then surely there is an even greater risk that in poorer countries with less-developed institutional controls and civil society oversight, the potential for perverse outcomes is even higher? Another question is whether industrialised countries can include more sinks in their countries to meet their Kyoto targets. Thus far, no government advocating for this expansion has made a proposal with any environmental standards to prevent this type of project from occurring. The inescapable conclusion from this report is that not only are sinks projects a questionable method of addressing climate change, but they may also lead to negative environmental outcomes.

INTRODUCTION

The idea that a specified fragment of wooded land can “offset” a specified amount of industrial carbon dioxide emissions depends on false assumptions about calculatability. Large-scale ‘offset’ plantations, instead of mitigating global warming, could even make it worse. In delaying the transition to a more equitable distribution of emissions and more sensible energy regimes, such plantations could result in an increased amount of avoidable carbon emissions both from industry and from the land. Forestry, therefore, should not be integrated into climate negotiations. Policymakers must separate the issue of emissions reduction from that of carbon sink protection measures.

*Lohmann, Larry, “The Carbon Shop: Planting New Problems”,
World Rainforest Movement, Montevideo, 1999, p. 20*

Few people would now dispute that global warming and climate change will be a major challenge to life on earth over the coming decades. What was once dismissed as far fetched fantasy has been accepted by governments the world over. The “Kyoto Protocol”, and its measures to combat these problems has become the subject of intense public debate: will governments and industry take sufficient action in time to stop the predicted results of unfettered use of fossil fuels?

So far the track record has been poor: scientists estimate that global emissions of carbon dioxide must be reduced between 60-80% if we are to avoid dangerous climate change and its severe consequences yet so far agreement has only been reached for a reduction of 5.2% of 1990 levels.

Clearly, the most obvious solution to reducing global emissions is to reduce the use of fossil fuels and undertake energy conservation programmes. However, those countries and industries most responsible have been unwilling to take these steps. Instead, they are looking for alternatives that do not require reductions in fossil fuel usage, such as carbon storage or sequestration.

At first glance the idea of “sequestering” carbon in vegetation that naturally absorbs carbon dioxide as it grows looks like an appealing, “win win” solution for all concerned. Companies get to continue releasing CO₂ into the atmosphere and instead of implementing abatement and reduction programmes, they can “offset” those emissions by planting vegetation that “fixes” an equivalent amount of CO₂.

The trouble with this concept is that it encourages companies to neglect their responsibility to clean up their act, implement energy conservation measures and reduce emissions. But in the rush to find a quick and profitable fix, it seems objections are being ignored.

By far the most popular method of sequestration is to plant trees. Many companies around the planet are now seeking to plant trees wherever they can. Vehicle manufacturers, power utilities, oil companies, and many companies with a heavy “carbon profile”, are looking to plantations to offset their emissions levels so they can continue to pollute in a business-as-usual fashion.

However, rather than increasing carbon stocks, the use of plantations as “carbon sinks” may actually fuel increased logging and loss of biodiversity. These plantations are short rotation wood fibre crops; consider-

able accounting trickery is required to claim that they are contributing significantly to carbon sequestration. If industry can get away with this kind of activity in a developed nation like Australia, what hope have the other countries of the South that they will not be similarly exploited?

The global forest commons is facing its biggest challenge since the industrial revolution began. Many forest-dependent species are on the brink of extinction. How ironic it would be if the Kyoto Protocol were complicit in sending some of them over the edge.

THE USE OF PLANTATIONS TO RESPOND TO CLIMATE CHANGE IN AUSTRALIA

The Federal Government

"The National Greenhouse Strategy contains a number of measures to enhance sinks through revegetation programs and sustainable forestry and vegetation management Plantations for Australia: the 2020 Vision, which was launched by the Commonwealth, States and industry in October 1997, outlines a series of measures designed to remove impediments to plantation establishment, establish a commercial plantations culture and improve information flows. It aims to treble the area of Australia's plantation estate by the year 2020. This will require plantings of 80,000 hectares each year or a total of two million hectares by 2020."

Australian Greenhouse Office "National Emissions Trading: Crediting the Carbon. Discussion Paper 3", Commonwealth of Australia, 1999.

As a result of the Regional Forest Agreement process, Australia's forests have been deregulated and "opened up" to global free trade (strictly speaking the removal of export licensing arrangements including fixed level quotas). This has resulted in significant international investment, particularly by US and Japanese corporations.

Plantation establishment is also linked to the Federal Government's the "Farm Forestry Programme" and "Plantations for Australia: the 2020 Vision", which seeks to establish 80,000 ha. of new plantations every year to 2020, which will be funded to the tune of \$3 billion over the life of the scheme. At the same time, new taxation regulations and changes to capital gains tax provisions have increased tax deductibility rates available for plantation establishment and management costs.

Similarly, the Australian Federal Government is pursuing a private sector, non regulatory approach to greenhouse gas emissions. Through the Australian Greenhouse Office it has developed a voluntary programme with greenhouse producers - the "Greenhouse Challenge" - and is developing a "National Carbon Accounting System" to track carbon sequestration measures for the domestic carbon trading market in advance of formal intergovernmental agreements. As shown in the above excerpt, the Federal approach to carbon sequestration is to encourage plantation establishment prior to the Kyoto Protocol commitment period of 2008-2012 and whilst pointing out the risks to private companies to undertaking private sector sequestration initiatives it has not regulated this approach so far (http://www.greenhouse.gov.au/pubs/factsheets/fs_emissions.html).

In short, the messages coming from the Commonwealth are mixed, and have the potential for environmentally perverse outcomes on the ground, such as clearance of native forests for plantations which will be funded/capitalised partly through sale of carbon credits. This of course is being capitalised upon by the private sector, with forestry companies seeking to engage in deals with carbon producers to "offset" their emissions.

CLEARANCE OF NATIVE FORESTS FOR CARBON PLANTATIONS IN TASMANIA

State Government, associated agencies and plantation establishment

The objective is estimated to require around 100,000 hectares of new eucalypt plantation. Of the total area needed for plantation, both eucalypt and softwood, approximately 70% will come from native forest conversion on State forest.

Forestry Tasmania, "Post - Regional Forest Agreement (RFA) review of sustainable high quality Eucalypt sawlog supply from Tasmanian State forest" (1998)

As a result of the RFA native forests are being cleared for plantation establishment. This is the State Government's explicit policy, which is being executed via relevant agencies (Private Forests Tasmania -PFT - and Forestry Tasmania - FT). The RFA has developed an operational framework for the clearance of 20% of Tasmania's remaining native forest cover to plantations. Based on the available RFA plantation productivity data, this translates into a potential of over 600,000 hectares available for plantation establishment.

An analysis of the Bass District Forestry Tasmania Working Circle (which contains the Tamar valley) indicates that over the three year planning period 1998/99 - 2000/01 over 3,300 ha. of State Forest will be converted to softwood plantation, whilst over 2,400 ha. of State Forest will be converted to hardwood plantation (Forestry Tasmania, 1998-1999 to 2000-2001 Three Year Wood Production Plan, undated, pp. 38-40). A substantial part of the "Tamar Tree Farms" joint venture involving TEPCO is located within this area.

Forest types not adequately protected via the RFA process are being cleared for plantation establishment. This includes *E. ovata*, wet *E. viminalis* and *E. regnans* on more productive soils. The forest planning process does not allow for ecosystem-level protection, and consequently the cumulative impacts of a block by block approach is leading to aggregated ecosystem collapse on a landscape unit level.

This problem is compounded by the fact that the RFA and TASVEG 2000 vegetation mapping is inconsistent. It is therefore not possible to use these data sets to verify claims with any degree of certainty once the land has been planted to monoculture. Furthermore, once an area is cleared of native forest, and the data sets show conflicting vegetation types, how can it be proved what forest was originally there?

In addition, land clearance of important forest communities may also be predicated on the very fact that they have been identified as something else on the data sets (eg rainforest mapped as silver wattle). This possibility is historically linked to the fact that important data layers (such as timber harvesting histories) collated by Forestry Tasmania during the RFA process were not made available for public review

The Tasmanian Regional Forest Agreement clearly indicates that in addition to maintaining a permanent native forest estate, reservation levels of specific forest communities in each Interim Biogeographic Region of Australia (IBRA) must also be maintained (Tasmanian RFA, Attachment 9). Clearance of *Eucalyptus ovata* and

wet *E. viminalis* forest for plantation establishment in the IBRA regions that include the Meander Valley and Tamar Valley is clearly in contradiction of this. Furthermore, there are currently no monitoring and reporting provisions in place to address this problem.

There is also clear evidence that threatened species habitat is being cleared for plantation establishment. Threatened species management practices via the State fauna management manual is allowing for prescriptive logging, but this is not being properly implemented in some operations and is ineffective in others. One species, located within the state's most intensive native forest conversion area, the North east highland snail (*Anoglypta launcestonensis*) was delisted by the Scientific Advisory Committee despite intense academic dispute and insufficient information. All scientists agreed however that between 30-37% per cent of the remaining habitat for this species is now available for logging and conversion to softwood and hardwood plantations. (TASRMPAT 55, sections 33-39).

With the announcement of a proposed 800,000 tonne woodchip/sawntimber/biomass plant being sourced from the Southern Forests (<http://www.southwoodresources.com.au>) the clearance of native forests for plantations is set to escalate. Forestry Tasmania is a major partner for this proposal. This is one of several new large industrial wood processing complexes proposed for Tasmania.

CASE STUDIES

NORTH Forest Products, TEPCO and the Tamar Tree Farms Project

TEPCO's contribution to the TTF program will involve A\$10 million dollars allowing the total area under eucalypt plantation to expand by 3000 hectares to 25,500 hectares by 2011. TTF is a component of total plantation estate in Tasmania which covers 54,000 hectares which is managed by North subsidiary, North Forest Products.

NFP Media release 4/10/99

NORTH Forest Products is a large private landowner, currently owning about 120,000 ha of land and it is progressively converting its holdings from native forest and rainforest into softwood and (predominantly) hardwood plantations. These are exported as woodchips for conversion to pulp and paper products in Japan. The holding company is known as Australian Forest Holdings - AFH. It has undertaken a number of plantation establishment joint ventures. These include Timbercorp. (1,000 ha) and the joint venture with Mitsubishi Corporation, Mitsubishi Paper Mills (23,500ha.) and TEPCO (3,000 ha.). A joint venture company, Tasmanian Forest Holdings (TFH) has been established to manage the Japanese joint venture, which is 62% NFP owned, whilst the joint venture is divided amongst the three Japanese partners: Mitsubishi Corporation 35%; Mitsubishi Paper Mills 35%; TEPCO 30%. These AFH/TFH plantations are scattered across the north of the state.

The response of NFP CEO Dr Mike Beardsell to an interview by the researcher on sequestration issues associated with the project indicated that the company would comply with whatever the outcomes of COP6 would be. However, he expressed support for crediting plantations established on erstwhile native forest where there was a clear increase in carbon compared to the previous forest. Dr Beardsell also confirmed that the joint venture plantations would be logged for pulp.

Telephone interview with NFP CEO Mike Beardsell 1/9/00

1 *Is NFP establishing plantations on native forest that has been expressly cleared for subsequent plantation establishment?*

"Yes"

2 *Will any of these subsequent plantations be used for carbon sequestration/offset projects?*

"If someone gave us a system that worked we would use it"

3 *Are any of the plantations subject to the TEPCO joint venture established on erstwhile native forest cleared for the purposes of plantation establishment?*

"Yes"

4 *What is the relationship between the MPM and TEPCO plantations within the Tamar Tree Farms project, specifically:*

a *is there a segregation of plantations between MPM pulp utilisation and TEPCO carbon sequestration?*

Dr Beardsell declined to comment saying that matter was in commercial confidence

b *will any of the MPM plantations be utilised by TEPCO for carbon offset purposes?*

Dr Beardsell declined to comment saying that matter was in commercial confidence

c *will the TEPCO plantations be used for pulp production at any future stage?*

"Yes"

5 *Are there any third party verification mechanisms in place to track the TEPCO offsets?*

"This is not possible until there are some rules in place"

Tamar Tree Farms

"Tamar Tree Farms" applies to the TEPCO joint venture properties specifically, and which fall within the Tamar Valley (Exeter and Beaconsfield map sheets), as well as being a general term that can be applied to all "Tasmanian Forest Holdings" that occur within NFP's Tamar working circle. Media reports and NFP's own literature is contradictory. Of the 27 properties listed in the joint venture, 7 are found in the Tamar Valley itself, 13 outside the Tamar valley, but within the NFP Tamar working circle and 7 in the North East.

The properties investigated by the researcher show a mix of forestry land uses on the individual properties, namely:

- cleared native forest converted to plantations (or in the process of being converted);
- plantations established on previously cleared farmland; or
- both uses on the one property.

Investigations of a joint venture property at Porters Bridge Rd revealed these forests form part of a larger area for which NFP has entered into contracts and include endangered forest communities. This forest is *E. ovata* dominated along the drainage line, whilst the forest on the flat was most probably damp sclerophyll. Elsewhere "shrubby *Eucalyptus ovata*" forest was also evident. It is the researcher's understanding that either all or part of this property is proposed for conversion to plantation. Under the RFA, 100% of *E. ovata* is supposed to be protected under the IBRA targets for this bioregion. This would be in breach of the RFA.

Whilst it is possible that NFP may seek to justify its plantings as being separated between pulp production for Mitsubishi Paper Mills and Mitsubishi Corporation on erstwhile native forest, and cleared land for TEPCO's carbon sinks, there has been no disaggregation in terms of land ownership between NFP, TFH and TEPCO. Furthermore, making such a distinction is academic, as both forestry land uses are occurring on the same properties. This corporate structure makes tracking of ownership difficult.

Concerns over TEPCO's plantations include that they are part of a planned clearance regime by NFP and that the clearance regime may be contrary to the threatened community provisions of the RFA, and quite possibly the Forest Practices Code as well. It is not possible to disaggregate TEPCO's plantations from ecologically unsustainable management practices occurring due to the joint venture structure and the mix of forestry land uses on the single title.

It appears that TEPCO itself has placed its trust in NFP rather than develop independent monitoring provisions. Indeed, the responses indicate that TEPCO has placed all responsibility with NFP. TEPCO's responses give rise to questions as to its level of understanding of the complexities associated with carbon sequestration:

Thank you very much for your e-mail, dated 29 February, 2000, regarding the Australian plantation projects.

TEPCO has positively promoted the preservation of nature as one of the foremost management priorities in environmental policy. We will continue to make our best endeavors to promote environmental awareness. Based on the concept above, we are seeking ways for sequestration of carbon and we appreciate your comments.

For more information and inquiries regarding the plantation project in Tasmania, please contact the following: External Relations Manager, NORTH FOREST PRODUCTS, Telephone: 03 6221 1111, Facsimile: 03 6221 1108

TEPCO

Email to the researcher, 29/02/00

Verification mechanisms

The researcher has found no evidence that suggests NFP has developed independent, third party auditing procedures to verify previous land use on any of its properties at this stage. Dr Beardsell's comment "This is not possible until there are some rules in place" confirms this. Any claims it may make regarding prior land use will therefore be on trust, and the veracity of claims that TEPCO plantations have only been established on previously cleared agricultural land (albeit part of a multiple use regime that has also included land clearing) will not be able to be substantiated.

It is possible that NFP may go through an "audit process" once it has cleared and established the approx. 22,500 ha. of MPM/MC plantations and 3,000 ha. of TEPCO plantations, i.e. after the fact. That way, it may seek to pick and choose "previously cleared land" across its holdings, and delineate them as TEPCO sinks. This would be an unethical – and unauditible – approach. Alternatively, it may simply wait and see what the outcomes of COP 6 are, and badge its plantations accordingly. This would also be an unethical approach. Combined with the fact that it may not be possible to prove the previous land use, this approach could be doubly perverse.

Based on correspondence between TEPCO and the researcher, the company appears to have only a superficial understanding of the role of plantations in sequestering carbon and has apparently given no thought to the negative environmental consequences of the plantation establishment programme they have developed in Tasmania. The researcher was referred back to NFP when he raised concerns over environmental problems.

Gunns Ltd

October 26, 1999

After such successes as Great Southern Plantations and Timbercorp, timber, hardware retail and construction group Gunns Ltd has today announced that it has joined the bandwagon and will launch a public offering to finance a new plantation in Tasmania. The project will involve the plantation of Radiata Pine and Eucalyptus over an area of up to 5,000 ha/year, targeting an estate in excess of 50,000 ha.

The prospectus for the issue will be open to the public, the company said. It is anticipated that the project will produce resources including pulpwood, saw logs and veneer logs suitable for further processing in the company's milling operations.

<http://www.egoli.com.au> (accessed 13/09/00)

Companies other than NFP have also cleared native forest for plantation establishment in the Tamar Valley. This included BORAL, whose plantation assets have now been acquired by Gunns Ltd.

Through its own plantation prospectus offer, Gunns will establish and manage land for plantations. This land will be obtained from various sources: land from previous corporate acquisitions, and land leased from proprietors (including FT). 50,000 hectares are targeted over the life of the project. Gunns plantation even goes so far as to claim that some plantations are eligible as a sink under the Australian Greenhouse Office criteria (see below). Some of these prospectus plantations have been established on erstwhile native forest and rainforest, providing – in the absence of realtime groundtruthing – the clearest evidence to date that native forest has been cleared and earmarked for sequestration programmes.

In its most recent investment prospectus, Gunns Ltd identifies a number of plantations which it appears to claim are eligible as sinks under Australian Greenhouse Office methodologies.

If the Kyoto Protocol becomes a reality and appropriate supporting national protocols are developed it seems likely that afforestation and reforestation projects, undertaken since 1990, and involving land which has been under a different land use for an extended period (i.e. Kyoto forests), will produce sequestration, which is countable during the first commitment period (2008 to 2012).

It is understood that the majority of the plantations to be developed under the Prospectus will satisfy these conditions.

In predicting the likely sequestration rates of carbon by plantations it is important to apply accepted formulae to expected green wood growth to convert this to the equivalent carbon and carbon dioxide figures.

The Greenhouse Challenge Vegetation Sinks Workbook, produced by the Australian Greenhouse Office, provides details of appropriate formulae to use. VDFC [independent forestry consultant] has reviewed the methodology used by Gunns in the modeling process for the Prospectus and can confirm that the formula used for this conversion process is consistent with that provided in the Greenhouse Challenge Vegetation Sinks Workbook.

Gunns Plantations, Woodlot Project 2000 emphasis added)

At least one of these properties is comprised of plantations established on erstwhile native forest and rainforest, which was cleared and planted as late as 1998-1999. This clearance regime of "log now, sequester later", affects the "carbon integrity" of any of the holdings in the prospectus.

I am a resident of Western Creek and am aware of the Byrne block on Nells Bluff now managed by Gunns. The block was covered in native forest with rainforest until recently when much of it was cleared for plantation establishment.

Email to the researcher from L.Goldsworthy, 13/09/00

Other forestry companies

While trees are continually replanted and harvested, timber is much less a contributor to the greenhouse effect. In fact, plantation expansion will absorb carbon from the atmosphere, and if carbon trading becomes a reality, it may provide extra income for investors

Plantations 2020, "An Investment Opportunity. Australian Forest Plantations: Sustainable Returns in the New Century" (undated)

A number of other entities have a stated interest in trading the carbon sequestered in their plantations and refer to the financial value of sequestration in their promotional literature (e.g. Forestry Tasmania).

Plantation Investments investigated in Tasmania (my emphasis)

Company	Plantation Programme	Sequestration Potential
Grantham Mayo van Otterloo & Rayonier	"We are pleased to be manager for this 100,000-acre forest estate in Tasmania ," Lee Nutter, Chairman, President and CEO, said. Rayonier now manages, and in some cases holds equity in, 156,000 acres of joint-venture owned timberland in New Zealand and Australia. GMO Renewable Resources Ltd. is a unit of Grantham, Mayo, Van Otterloo & Co. LLC, an investment manager with approximately \$27 billion in assets. GMO has selected Rayonier as its forest manager of choice for timber investment and forest management opportunities worldwide. (http://www.rayonier.com accessed 15/09/00)	"Replacement of natural forest with plantations should, of course, be excluded." GMO Renewable Resources, email to the researcher 08/09/00
Gunns Ltd	After such successes as Great Southern Plantations and Timbercorp, Timber, hardware retail and construction group Gunns Ltd has today announced that it has joined the bandwagon and will launch a public offering to finance a new plantation in Tasmania. The project will involve the plantation of Radiata Pine Eucalyptus over an area of up to 5,000 ha/year , targeting an estate in excess of 50,000 ha . (http://www.egoli.com.au October 26, 1999)	<i>It is possible that you will receive proceeds from the sale of carbon rights during the course of the project...</i> (Gunns Plantations, Woodlot Project 2000)
Forestry Tasmania	The land available in this Offer is State Forest that was previously: Farmland which Forestry Tasmania has purchased; or Areas of native forest which have been harvested for sawlog and pulpwood and will be replanted as native forest. Under the National Forest Policy Statement, it is appropriate to undertake conversion of previous native forest areas to plantations, provided this does not adversely affect regional conservation or catchment management objectives. This also complies with the Regional Forest Agreement (p.16) Political and economic Tassie trees is consistent with the objectives set by the "2020 Vision" There has been no conflict with the Commonwealth over plantations, with the "2020 Vision" strategy encouraging plantation establishment. There seems little risk that the Commonwealth will act in a way that could reduce the chance of world parity pricing for plantation products (Forestry Tasmania, "Tassie Trees Trust 2000 Offer" pp. 21-22)	<i>Forestry Tasmania will retain all rights to carbon credits and similar rights which might attach to the land or trees at some time in the future</i> (Forestry Tasmania, "Tassie Trees Trust 2000 Offer")
NORTH Mitsubishi Paper Mills Tokyo Electric Power Co	Tepeco's contribution to the TTF program will involve A\$10 million dollars allowing the total area under eucalypt plantation to expand by 3000 hectares to 25,500 hectares by 2011 . TTF is a component of total plantation estate in Tasmania which covers 54,000 hectares which is managed by North subsidiary, North Forest Products. (NFP Media release 4/10/99)	<i>5) Carbon Sequestration quantity: 130,000 tons/year (estimate)</i> (Midori Sasaki, TEPCO, email to the researcher 28/02/00)
Private Forests Tasmania	Provides support and advice for any farmers leasing their land to plantation establishment, and has a number of small in house projects (about 1750 ha. to date). It also maintains a database of Private Timber Reserves (PTRs). It has however agreed to a confidentiality agreement with forestry companies ~~including the Tasmanian Forestry Corporation and the Tasmanian Forestry Corporation~~ (Des King, PFT, emails to the researcher, 7-12/09/00)	<i>Non wood values such as "carbon credits", while not specifically included, could readily be accommodated.</i> http://www.privateforests.tas.gov.au/jv.htm

CONCLUSIONS

Australian Federal and State Government forestry policies call for the establishment of 2 million hectares of new plantations in Australia by 2020. A complementary Federal/State initiative, the "Regional Forest Agreements" also channels taxpayers' money to fund this.

Both State Forest and private land is being earmarked for conversion to plantations, mixed between land uses currently in native forest and in agricultural production.

The native forest destruction for plantations agenda in Australia is inextricably linked to the "carbon credits" game. The system is already being exploited for potential commercial gain, and investments are going into various corporate plantation share offers due in part to the belief that money will be made by selling carbon rights and via joint ventures later on.

When examined holistically, the economics of the developing carbon sequestration market is becoming an additional economic driver for projects also clearing native forests, further enhancing their profitability. In the case of the TEPCO joint venture, the power utility paid \$10 million dollars for the Australian partner to establish "offset" plantations within the larger joint venture worth \$90 million. In turn, this money will have been used by NFP for logging and wood chipping of forests elsewhere in Tasmania.

The corporate structure of the project makes it hard to prove conclusively that any one area of forest was cleared for TEPCO, but the intertwining of these interests also makes it impossible for TEPCO to rule out the fact that is not the case.

To conclude, rules governing sinks projects are not adequate, because they allow integrated companies to mix and match investments with land use practices. Again, this points to the risk of carbon subsidies for commercial, industrial tree plantations.

This one case study demonstrates that the risks to forests and the climate are vast if these types of projects are permitted to enter into the Kyoto Protocol. Rather than sequester additional carbon, such activities would encourage cutting down native forests and planting large-scale industrial plantations. This benefits neither biodiversity nor the climate and would greatly undermine the credibility of the Kyoto Protocol. While ecosystems do absorb carbon, they also provide a broader range of services that will not be integrated into the sequestration crediting approach. It is therefore highly likely that the value associated with the carbon service of that ecosystem will undermine the others and lead to the Tasmania outcome.

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DEFINITION OF TERMS

Carbon sequestration:

The removal and storage of carbon from the atmosphere by green plants through the process of photosynthesis, in which carbon dioxide is combine with water to form carbohydrates that can be stored in plant tissues.

Carbon sink: An area where the rate of carbon uptake by living organisms exceeds the rate of carbon release, so that carbon is sequestered in organic or inorganic forms.

Climate change:

An alteration to measured quantities (e.g. precipitation, temperature, radiation, wind and cloudiness) within the climate system that departs significantly from previous average conditions and is seen to endure, bringing about corresponding changes to ecosystems and socio-economic activity. Associated with greenhouse gas emissions, of which fossil fuel combustion and forest decline are contributors.

Certification:

Certification is a process which in a written quality statement (a certificate) attesting to the origin of raw wood material and its status and/or qualifications following validation by an independent third party (Baharuddin and Simula, 1996 in: Tropenbos, 1997).

Ecological or Environmental sustainability:

This entails maintaining an ecosystem and adjacent ecosystem at the same or higher levels as the ecosystem in question to be able to maintain its productivity, adaptability and capacity for renewal. It requires that forest management respects, and builds on, natural processes (Tropenbos, 1997).

Ecosystem:

A community of all plants and animals and their physical environment, functioning together as an interdependent unit (Collins English Dictionary).

Forests:

An ecosystem characterised by a more or less dense and extensive tree cover. It means natural forest and does not include plantations or agroforests (National Forest Summit, Australia 1999).

Old growth forest:

Forest that is ecologically mature and has been subjected to negligible unnatural disturbance such as logging, mining, roading and clearing. The definition focuses on structural diversity and includes forest in which the upper stratum or overstorey is in the mature and late mature stage, and regrowth more than 120 years old produced through natural processes, ie. Wildfire or windstorm (National Forest Policy Statement, December 1992, and the Report to the Minister for the Environment, December 1999).

Plantations:

Treed areas lacking most principles characteristics and key elements of native ecosystems as defined by FSC-approved national and regional standards of forest stewardship, which result from the human activities of planting, sowing or intensive silvicultural treatments.

Wood chipping:

Process whereby trees are converted into small pieces of wood for subsequent conversion into pulp and paper products (Boycott Woodchipping Campaign, 1996)



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David Sandalow
Assistant Secretary of State, OES
Department of State
Washington, DC

November 9, 2000

Dear David,

I am enclosing, for your information, a case study that WWF and Greenpeace released yesterday. The study should provide you with the information you have been requesting regarding whether there is a need for environmental standards for sinks activities and/or projects. As you will see, in the name of carbon credits, there are currently native forests being cleared in Tasmania to make way for fast-growing plantations. The project is being funded by Tokyo Electric Power Company and Mitsubishi.

The problems we have all been raising are no longer theory. I do believe there is a substantive basis for our concerns and therefore for building environmental safeguards into the system. If there were no Kyoto Protocol, there would not be additional incentive to clear these lands. I have developed some thinking on how to integrate reviews of ecological criteria into the reporting and review process under Articles 5, 7, and 8. This would not need to be overly bureaucratic and could provide the necessary information and pressure to ensure that the Kyoto Protocol does not encourage these types of activities. It would be great to discuss these with you at your earliest convenience.

I look forward to working with you in The Hague to secure a sound Kyoto Protocol. My cell phone number in Washington is 359-2734. My number in The Hague will be +31 6 2909 1842.

Regards,

Jennifer L. Morgan
Director, Climate Change Campaign
World Wildlife Fund

Cc: Frank Loy, Undersecretary of State for Global Affairs
Roger Ballentine, Deputy Assistant to the President
Ian Bowles, Senior Director for Environmental Affairs, National Security Council
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FAX Memorandum: 6 pages

Date: June 8, 2000

Dear colleagues:

Beginning next week, climate change negotiators from around the world will gather in Bonn, Germany to decide on the rules for reducing greenhouse gas emissions. Approximately two thirds of greenhouse gasses comes from fossil fuel burning, but approximately 20-30% come from deforestation. However, the inclusion of forest conservation in the Protocol as an allowed emission reduction strategy is hotly contested. In the accompanying paper, which we send for your information, we show that protecting forests is one of the least expensive ways to reduce global levels of carbon dioxide in the atmosphere. In addition, forest conservation can provide significant economic benefits through sustainable use for local people living near forests, and protect endangered biological diversity.

Around the globe, however, forests are being destroyed by destructive logging practices followed by slash and burn agriculture. A recent World Wide Fund for Nature/World Resources Institute report, sponsored by the European commission, estimates that the principal remaining tropical forests of central Africa, the Caribbean rim and the South Pacific rim will be destroyed in the next five to ten years. Although there is enormous potential for deriving local and global economic benefits from protecting forests, many nations currently stand to gain far more by granting large logging concessions than from conservation. One mechanism for aligning economic signals across local, national and global scales would be provided by the Clean Development Mechanism of the Kyoto Protocol. The CDM allows developed nations to obtain emissions reduction credits by financing emission reduction projects in developing countries. If forest conservation were an allowed emissions reduction activity under the CDM, then a huge international market for carbon credits would be available to finance forest conservation projects. Such projects could provide equitable economic benefits across local, national and global scales.

Negotiators to the Conference of the Parties on the Kyoto Protocol this fall thus will have a key opportunity to mitigate climate change, protect biodiversity and provide economic benefits equitably to many people.

We hope that you will find this paper of interest.

Sincerely,

Claire Kremen, Ph.D.
Senior Research Scientist

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15. Fz1, Fz2, and the chimeric receptors were expressed with *sevGal4* in the developing eye, in a specific subset of photoreceptor precursors (in R3 and R4 at the time of polarity determination). For analysis in imaginal discs, the enhancer trap line H123 was used as a marker for R4 and detected as described [M. Fanto and M. Mlodzik, *Nature* **397**, 523 (1999)]. Eye imaginal discs and sections of adult eyes were prepared, photographed, and processed as described [D. I. Strutt, U. Weber, M. Mlodzik, *Nature* **387**, 292 (1997)].
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18. Several independent lines were generated for these and the chimeric constructs, and at least four were tested in the functional assays, all giving equivalent results. The transgenic strains showed comparable protein expression levels as determined by Western blotting with the inserted myc-epitope tag.
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20. Capped synthetic RNA of the different receptors was injected into both blastomeres of the two-cell embryo. At stage 9, animal cap ectoderm was explanted and cultured till sibling embryos reached stage 11. Reverse transcriptase-polymerase chain reaction (RT-PCR) was done as described [T. Bouwmeester, S.-H. Kim, Y. Sasaki, B. Lu, E. De Robertis, *Nature* **382**, 595 (1996)]. Protein levels were checked by Western blot analysis with anti-myc and anti-Fz1 antibodies. Dsh relocalization assays were done as described [J. D. Axelrod, J. R. Miller, J. M. Shulman, R. T. Moon, N. Perrimon, *Genes Dev.* **12**, 2610 (1998)]. For Xnn3 and Sia induction, 100 to 800 pg of RNA was injected; for Dsh relocalization, Fz receptors were injected at 100 to 200 pg of RNA together with 100 pg of Dsh-EGFP RNA.
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24. Both Fz1 and Fz2 recruited Dsh to the membrane at a concentration of 25 pg of injected RNA and were unable to do so at 12.5 pg, indicating that both receptors have the same threshold in this assay.
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27. We generated Fz1 and Fz2 chimeric constructs by assembling their CRD (Fz1, amino acids 1 to 166; Fz2, 1 to 219), seven-pass transmembrane region (Fz1, amino acids 167 to 557; Fz2, 220 to 617), and cytoplasmic tails (Fz1, amino acids 558 to 585; Fz2, 618 to 694). In brief, chimeric receptors consisted of 10 base pairs of the Fz1 5'-untranslated region, the CRD domain (except for Δ CRD) linked to the transmembrane region (inserted by generating a Hind III site), and a myc tag in a nonconserved region. For COOH-terminal swaps, a Xho I site was created after the last transmembrane domain. We created chimeric receptors by assembling different fragments in pBS-SK and then shuttling them into *Drosophila* and *Xenopus* expression vectors. Constructs were confirmed by sequencing. For each construct, several independent transgenic *Drosophila* lines were generated and tested in the assays described.
28. The chimeric receptors were expressed under the control of the *apGal4* driver in the dorsal wing and notum. The chimeras that showed mild dominant-negative behavior did not affect *wg* expression at the dorsal/ventral (D/V) margin, indicating that the observed effect is due to *wg* read-out defects in the third larval instar. Planar polarity was analyzed in the wing cell hairs (Fig. 3) and by the orientation of the microchaetae on the notum. Effects on planar polarity in the notum were seen with Fz1 and Fz2-1, as is the case in the eye and wing.
29. To analyze the effects of the chimeric receptors in the legs, we used *DllGal4* as a driver (other *Gal4* drivers resulted either in all chimeras having a wild-type appearance irrespective of the Fz receptors expressed or were lethal). *DllGal4>Fz1* gave no detectable planar polarity phenotype, whereas *DllGal4>Fz2* was lethal. Fz2-1 and Fz2-2-1 were pupal lethal, showing loss of distal leg structures, a dominant-negative *wg*-related effect. Fz1-2 and Fz1-1-2 showed a mild *wg* GOF phenotype, as judged by loss of the dorsally derived claws (indicating a transformation to ventral *wg*-induced structures) [W. J. Brook and S. M. Cohen, *Science* **273**, 1373 (1996)].
30. To determine the affinity of the different Fz chimeras for *wg*, we expressed them with a *dppGal4* driver perpendicular to the normal *wg* expression. All chimeras containing the Fz2 CRD behaved like Fz2 or Fz2CRD-GPI [K. M. Cadigan, M. P. Fish, E. J. Rulifson, R. Nusse, *Cell* **93**, 767 (1998)], leading to *wg* stabilization (Fig. 3). The inverse chimeric receptors with the Fz1 CRD had no effect on *wg* stability.
31. The Fz1- and Fz2-1-induced GOF planar polarity eye phenotype depends on the amount of Fz expressed in the R3 and R4 precursor cells. At high expression levels (as with *Gal4*-driven expression), the phenotype is the same in wild-type and in *fz^{-/-}* eye discs. At lower overexpression levels, the presence of the endogenous protein is important for the overall amounts to reach the threshold necessary for constitutive activation.
32. A small difference in Fz signaling levels between the neighboring R3 and R4 cells is critical to establish correct ommatidial polarity and leads reproducibly to correct polarity; the small difference is amplified by Delta/Notch signaling [M. Fanto and M. Mlodzik, *Nature* **397**, 523 (1999); M. T. Cooper and S. J. Bray, *Nature* **397**, 526 (1999); A. Tomlinson and G. Struhl, *Development* **126**, 5725 (1999)]. The rescue experiments demonstrate that the CRD of Fz1 and a putative ligand are important to establish this difference. Fz2-1 cannot respond to the ligand and establish this difference. Nevertheless, for constitutive activation of downstream pathways the Fz1 CRD is not required.
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38. Wing imaginal discs were dissected from larvae and stained by standard methods. The discs were incubated with mouse antibody to Ae (1:200 dilution; gift of S. Carroll) or to *wg* (gift of S. Cohen). Fluorescent-labeled secondary antibody mix (1:500 dilution).
39. We are grateful to P. Adler, K. Basler, S. Carroll, R. Carthew, S. Cohen, R. Nusse, and M. Strigini for fly strains and reagents. We thank members of the Bouwmeester and Mlodzik labs and M. Strigini and S. Cohen for discussions, and J. Curtiss for helpful comments on the manuscript. M.B. was supported by a predoctoral fellowship from the Boehringer Ingelheim Fonds. J.M. is a recipient of a long-term fellowship from the European Molecular Biology Organization.

14 December 1999; accepted 5 May 2000

Economic Incentives for Rain Forest Conservation Across Scales

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Globally, tropical deforestation releases 20 to 30% of anthropogenic greenhouse gases. Conserving forests could reduce emissions, but the cost-effectiveness of this mechanism for mitigation depends on the associated opportunity costs. We estimated these costs from local, national, and global perspectives using a case study from Madagascar. Conservation generated significant benefits over logging and agriculture locally and globally. Nationally, however, financial benefits from industrial logging were larger than conservation benefits. Such differing economic signals across scales may exacerbate tropical deforestation. The Kyoto Protocol could potentially overcome this obstacle to conservation by creating markets for protection of tropical forests to mitigate climate change.

Each year, an estimated 13 million ha of forests are destroyed (1), 5.6 to 8.6 Gt of carbon are emitted (2), and 14,000 to 40,000 species disappear from tropical forests (3). Greenhouse gas emissions are likely to increase Earth's temperature by 1° to 4° C in the next century, leading to the possibility of increasingly severe droughts and floods, enhanced rates of species invasion and extinction (4), and thus significant economic harm.

Tropical deforestation alone is responsible for 20 to 30% of carbon emissions (5) and most species extinction worldwide (6). Conserving tropical forests could therefore reduce both global warming and biodiversity loss (7). Despite conservation efforts, many "protected areas" in the tropics continue to be degraded, while unprotected forests are being converted by logging and agriculture (8). We analyzed the economic benefits of forest con-

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servation from local, national, and global perspectives to determine the structure of incentives; ultimately, it is the interaction of these incentives across scales that will determine the fate of forests.

We used the Masoala National Park Integrated Conservation and Development Program (ICDP) in Madagascar as our case study, because it provided ample data for economic evaluation (9–13). The park (2300 km²) is composed of primary rain forest and is surrounded by a 1000-km² buffer of unprotected forest. Slash-and-burn farming for subsistence rice production represents the current principal threat to these forests. At current rates, farmers may reach the park boundaries in as few as 9 years. To counter

deforestation, the Masoala ICDP's strategy is to create economic incentives for conservation, by working with local communities to develop markets for forest products from the buffer areas and nature-based tourism in the park (9).

Although local incentives are important, incentives at national and global scales are also essential to the success of conservation efforts, because national governments often make large-scale natural resource decisions affecting conservation, and the international community sponsors conservation through foreign aid and technical assistance. Conservation is most likely to succeed when benefits outweigh costs at the scales of all relevant decision-makers. To assess benefits and costs, we developed an opportunity-cost scenario and compared estimates of net benefits from the ICDP against the net benefits from the opportunity-cost scenario at local, national, and global scales. All estimates were calculated as net present values (NPVs) based on market values or shadow prices obtained with standard valuation techniques and appropriate local, national, and global data sources (see footnotes to Table 1). Two time-frames

(10 and 30 years, based on the length of a forestry concession in the opportunity-cost scenario) and three discount rates [3% (14), 10% (15), and 20% (16)] were used to test sensitivity. We report results as ranges (in U.S.\$ 1996) over these time frames and discount rates. In some cases, ranges also include results from two other opportunity-cost scenarios (see below).

The opportunity-cost scenario is the land use that produces the highest alternative return. At the national level, the highest return would come from large-scale industrial forestry concessions. We assumed that such logging enterprises would be foreign-owned, bounded in scale based on the required capital investment, respect Malagasy laws, and invest the minimum in infrastructure to export high-value roundwood from Madagascar (17). It is unlikely, however, that Madagascar would receive all the financial benefits legally due from a large-scale logging operation (18). Thus, we also calculated a lower bound opportunity cost assuming that only a portion of the benefits (about 33%) would be captured by the nation (17). In both cases, we assumed that while logging "selectively,"

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Table 1. Local, national, and global net benefits for the integrated conservation and development program [ICDP; see (17) for further details].

Discount rate	3%		10%		20%	
	10 years	30 years	10 years	30 years	10 years	30 years
Time span of net present values						
Local economy: impact of ICDP per community			U.S.\$ 1996 × 10 ³			
Sustainable community forestry (9)	129.7	315.6	88.5	143.6	55.1	68.3
Ecotourism (17)	2.7	19.1	1.9	6.1	1.3	2.2
Nontimber forest products (NTFPs)*	86.6	221.6	61.9	101.0	41.9	51.0
Hill rice†	–11.5	–26.5	–8.3	–12.7	–5.7	–6.7
Opportunity cost: Large-scale forestry‡	–1.4	–3.2	–1.0	–1.5	–0.7	–0.8
Local net benefit	206.1	526.6	143.1	236.5	91.9	113.9
National economy: impact of ICDP			U.S.\$ 1996 × 10 ⁶			
Donor investment§	7.81	9.95	6.01	6.80	4.43	4.66
Ecotourism/park employment (17)	7.06	42.49	5.10	12.91	3.50	5.16
Sustainable community forestry/biodiversity products (9, 13)	2.96	13.08	1.33	3.29	0.50	0.80
Sustained use of NTFPs*	7.28	28.57	4.71	11.01	2.77	4.27
Watershed protection value	0.58	3.40	0.38	1.13	0.22	0.38
Park/buffer zone management costs§	–8.97	–13.06	–6.70	–8.07	–4.79	–5.15
Internal benefit from ICDP project	16.73	84.44	10.83	27.07	6.64	10.12
Opportunity cost: Industrial logging concession‡	–92.57	–333.89	–56.36	–127.89	–30.02	–47.14
Opportunity cost: Hill rice farming†	–6.53	–15.00	–4.70	–7.22	–3.21	–3.81
Total opportunity costs	–99.10	–348.89	–61.06	–135.10	–33.23	–50.95
National net benefit	–82.38	–264.45	–50.23	–108.03	–26.59	–40.83
Global Economy: impact of ICDP¶			U.S.\$ 1996 × 10 ⁶			
Carbon conservation value @ \$20/t C (27, 28)	188.94	655.41	122.35	260.66	71.97	105.11
Donor investment in ICDP	–7.81	–9.95	–6.01	–6.80	–4.43	–4.66
Global net benefit	181.13	645.46	116.34	253.85	67.54	100.45

*We calculated annual flows from NTFPs by cumulating the hectares of deforestation avoided each year, and multiplying by the annual value for sustained use of NTFPs [~\$15/ha (9)]. NPVs were then calculated from these annual flows. †The value of one rice harvest after logging was estimated at \$69/ha on the basis of typical rain-fed rice productivity on the Masoala Peninsula (13). ‡The national opportunity costs to Madagascar for not granting a large-scale logging concession included stumpage fees, taxes, employment, and infrastructure development. We based our model on similar timber companies operating in developing countries, assuming that expatriate investors (i) invest in minimum infrastructure, (ii) hire national staff primarily, (iii) harvest all currently exported hardwoods, (iv) export roundwood to mills outside of Madagascar, and (v) pay all taxes and fees legally due to Madagascar (full capture scenario). We used timber inventory data from Masoala (9, 13) to assess per hectare harvest levels, values and stumpage fees, and GIS to determine where harvesting was profitable (26). We assumed that half of the wood would be exported, and the rest sold domestically. At the local scale, opportunity costs equaled lost local employment from large-scale logging. See (17) for further details. §Donor investment and project costs were based on the current Masoala ICDP budget, assuming 5 years of aid for park management and 20 years for development, with diminished inputs after 10 years. ¶We calculated the annual value of watershed protection to irrigated rice agriculture and to marine fisheries by first obtaining a per hectare annual value for each watershed component, and then multiplying this value times the cumulative number of hectares deforested each year. For irrigated rice agriculture, we calibrated a watershed study from a nearby park (37). For fisheries (38), we divided the annual value of the artisanal marine fishery on Masoala (13) by the number of hectares of forest and multiplied by 0.5, because it is unlikely that forest clearing would reduce fisheries to zero. ††To calculate global impacts of the ICDP, we estimated public values that are nonexcludable and nonrival benefits. We did not evaluate the net impact of forest conservation versus exploitation on private actors (e.g., logging, ecotourism, or international airline companies) or private goods (e.g., timber, souvenirs, or planes).

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forests would be extensively damaged from road-building and mechanized harvest (19). Then, subsistence farmers would follow logging roads to slash-and-burn the high-graded forests (18); thus, the value of one rice harvest was calculated as part of the total opportunity cost. In 1995, however, Madagascar enacted environmental laws to prevent industrial-scale activities from degrading the environment (20). Consequently, we also developed and evaluated a "best management practices" scenario to compare with industrial logging (21).

To evaluate the ICDP scenario, we estimated projected financial costs and benefits from establishing and maintaining the Masoala National Park and its buffer zones. Benefits included employment, foreign aid, tourism, and the sustainable production of forest products, watershed protection, and carbon conservation resulting from prevention of projected deforestation. Costs included management of the park and implementation of development activities around the park. A major source of uncertainty in estimating these benefits was whether the ICDP would meet its stated goals, which include (i) arresting deforestation in the area, (ii) implementing community-based sustainable forestry projects in 50,000 ha over 15 years, and (iii) reaching ecotourism targets of 10,000 visitors per year within 5 years (22). Complex devel-

opment projects in developing countries have high failure rates (15). Our projections assumed that this ICDP will succeed; by comparison, the uncertainty resulting from data error is a minor problem.

At the local level, we found that communities would lose significant economic benefits if lands they were to use for community-based sustainable forest management and tourism were placed in large-scale logging concessions, whether sustainable or not. With the ICDP, communities would enjoy surpluses of \$92,000 to \$527,000 (23) over the industrial logging scenario (Table 1). A large proportion of this value is due to the subsistence use of nontimber forest products (NTFPs) for artisanal production, food, fuel, fiber, and construction (10, 11), all key to quality of life for local residents.

While initially dependent on foreign aid in our model, we terminated aid to the Masoala park in year 5 and to the development component in year 20. Gross benefits to Madagascar from the ICDP, ignoring opportunity costs, ranged from \$7 million to \$84 million (Table 1) and were positive within 10 years. The ICDP would thus be a reasonable business proposition for Madagascar in comparison to current slash-and-burn land use on the peninsula.

The financial benefits from industrial logging concessions, however, exceeded the

ICDP's value (Table 1) even when the lowest estimates of revenue generated by logging were used. Although uncertainties exist in the estimate of opportunity cost, these three scenarios show that any large-scale logging operation would be significantly more profitable to the state than the ICDP, by \$6 million to \$265 million (Table 2).

Lucrative large-scale logging operations are leading to the destruction of many forests, particularly in Africa and Asia (24, 25). We found no physical or economic barriers that would prevent large-scale logging companies from accessing the entire forest on the Masoala Peninsula (26). We estimated net annual returns on investment to large-scale logging companies and found profit margins of \$2.37 million/year even for the least-profitable scenario, best management practices. Thus, large-scale logging is a realistic prospective land use for Masoala and similar areas.

Several timber companies were prospecting for concessions on the Masoala Peninsula during the time that the National Park was being established, and the government nearly abandoned the park project in favor of a logging company. The conservation and diplomatic community played a large role in persuading the government to reject the logging companies' proposals, using both political and economic arguments. Without this

Table 2. The cost of conserving carbon. Regardless of opportunity-cost scenario, when Madagascar conserves forests, it pays most of the costs of preventing transfers of carbon from the biosphere to the atmosphere.

Units		Full capture scenario for opportunity costs			Partial capture scenario for opportunity costs			Best management practices scenario for opportunity costs		
		3%	10%	20%	3%	10%	20%	3%	10%	20%
Discount rate										
Timespan of NPV						10 years				
Net value of ICDP to Madagascar of logging including	U.S.\$ 1996 $\times 10^6$	-82.38	-50.23	-26.59	-21.29	-13.31	-7.18	-15.60	-10.14	-5.83
National opportunity cost of land	U.S.\$ 1996/ha	-250	-152	-81	-65	-40	-22	-47	-31	-18
Madagascar's cost to conserve greenhouse gases	U.S.\$ 1996/t CO ₂ C	-3.91	-2.38	-1.26	-1.01	-0.63	-0.34	-2.47	-1.60	-0.92
Donor countries' cost to conserve greenhouse gases	U.S.\$ 1996/t CO ₂ C	-0.37	-0.29	-0.21	-0.37	-0.29	-0.21	-1.24	-0.95	-0.70
Total	U.S.\$ 1996/t CO ₂ C	-4.28	-2.67	-1.47	-1.38	-0.92	-0.55	-3.70	-2.55	-1.62
Proportion borne by Madagascar		0.91	0.89	0.86	0.73	0.69	0.62	0.67	0.63	0.57
Timespan of NPV						30 years				
Net value of ICDP to Madagascar of logging including	U.S.\$ 1996 $\times 10^6$	-264.45	-108.03	-40.83	-42.02	-23.29	-9.98	-19.81	-15.53	-7.60
National opportunity cost of land	U.S.\$ 1996/ha	-801	-327	-124	-127	-71	-30	-60	-47	-23
Madagascar's cost to conserve greenhouse gases	U.S.\$ 1996/t CO ₂ C	-4.18	-1.71	-0.65	-0.66	-0.37	-0.16	-1.04	-0.82	-0.40
Donor countries' cost to conserve greenhouse gases	U.S.\$ 1996/t CO ₂ C	-0.16	-0.11	-0.07	-0.16	-0.11	-0.07	-0.52	-0.36	-0.25
Total	U.S.\$ 1996/t CO ₂ C	-4.34	-1.82	-0.72	-0.82	-0.48	-0.23	-1.57	-1.18	-0.65
Proportion borne by Madagascar		0.96	0.94	0.90	0.81	0.77	0.68	0.67	0.70	0.62

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pressure, the Masoala Peninsula, one of Madagascar's most important reservoirs of biodiversity, would perhaps have become a forestry concession instead of a national park. However, many other countries do not have vigilant watchdog organizations and strict environmental laws (20), so logging often constitutes a serious threat to forests (24, 25).

The loss of Masoala's forests would be a significant economic cost to the international community (\$68 million to \$645 million) (Table 1). We estimated their global value on the basis of the damages avoided by preventing greenhouse gas emissions from the deforestation that would otherwise occur without the ICDP (17). To develop a conservative estimate, we used a damage cost of \$20/t C (27), used an estimate of net committed emissions, and developed a schedule for the gradual release of greenhouse gases over a 10-year period (28). We did not include costs or benefits to private actors such as logging or ecotourism companies, because our concern at the global scale was with public goods and services. Nor did we include other significant global benefits, such as the option or existence value of biodiversity in Masoala's forests, because a market in these values is unlikely to emerge. These values would be high relative to other regions, however, because Madagascar is among the top five countries for plant and vertebrate endemism per unit area (29), with a globally unique and species-rich biota, and Masoala is one of its most significant biodiversity areas (9).

We then estimated the unit cost of conserving carbon [in metric tons of CO₂ C equivalents (28)] between \$0.23 and \$4.34 (Table 2); this range is comparable to per metric ton C costs for trial climate-related forestry and conservation projects (30). The unit cost can be partitioned into the global cost (foreign aid for forest protection) and Madagascar's cost (opportunities foregone). Madagascar, one of the world's poorest countries (31), is paying 57 to 96% of the total costs (Table 2), but itself would benefit relatively little from reducing global greenhouse gas emissions. While the Masoala ICDP was established to conserve biological diversity, not terrestrial carbon, the global community is reaping the concurrent public benefit of carbon conservation at the low cost of \$0.07 to \$1.24/t C.

Both Madagascar's opportunity costs (\$18 to \$801/ha) and the costs of conserving carbon vary by more than an order of magnitude, depending on the logging scenario, discount rate, and time-frame. Madagascar and many developing countries have high private rates of discount and poor ability to capture local rents from forestry concessions (16, 18). Thus, the partial capture scenario with a discount rate between 10 and 20% is the most realistic estimate of the minimum market rate

required for compensation for carbon conservation (Table 2: 10-year NPV, \$22 to \$40/ha; 30-year NPV, \$30 to \$71/ha), corresponding to a cost of \$0.16 to \$0.63/t CO₂ C equivalents (32).

Estimates of damages from carbon release range from \$5 to \$100/t C, but probabilistic studies showed that \$20/t C is a conservative estimate of mitigation of damages (27). Thus, by conserving carbon at <\$1/t, one could generate a 20-fold surplus to pay transaction costs and buffer against the risk of individual project failure [e.g., one out of two development projects in Africa (15)]. Paying the opportunity cost for forest conservation is an economical mechanism for securing reduced greenhouse gas concentration (7), while promoting other benefits including the protection of a threatened biota of incalculable value (29), maintenance of ecosystem services, and promotion of human welfare. If Madagascar could receive the opportunity cost, it would then receive \$10 million to \$23 million (Table 2: 30-year NPV, partial capture scenario, discount rate 10 to 20%) for the value of the Masoala National Park and its surrounding buffer zone, instead of the \$4.7 million to \$6.8 million that we project it will receive (Table 1: 30-year NPV, donor investment, discount rate 10 to 20%). These funds would be sufficient to ensure the long-term protection of the park, whereas current budgets may be insufficient (22).

This case study suggests that the conservation and sustainable-use approach could provide significant economic benefits at all scales. At the national level, however, where decisions about conservation are generally made, large-scale logging currently provides better economic returns. We believe that similar split-incentive situations exist in many humid forested areas (24, 25) and other ecosystems (33) in the developing world.

The Kyoto Protocol, however, could secure not local, national, and global benefits equitably by recompensing nations for the opportunity costs of conservation through global transfers under the Clean Development Mechanism (34, 35), which would allow industrialized countries to exceed domestic emissions quotas by creating equivalent emissions reductions in a developing country (36). If such transfers do not occur, we can expect that many developing nations will continue to liquidate their forests for foreign exchange, although it is not in their best long-term interest (24, 25).

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- Mise en Compatibilité des Investissements avec l'Environnement (MECIE), Decree No. 95-377. The International Tropical Timber Organization also has a goal of achieving trade in sustainably managed timber by 2000 [Asia Pacific Forestry Sector, "Asia-Pacific Forestry towards 2000" (Food and Agricultural Organization, Rome and Bangkok, 1998)].
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- aires would succeed in preventing slash-and-burn farming in 70% of the concession. For further details, see (17).
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26. We used Geographic Information System (GIS) to determine if road-building costs or transport costs limit access to particular areas. A cost-surface, calculated as the total distance to the nearest existing road or port multiplied by the cost per kilometer of building new roads and transporting timber, was consistently offset by the financial benefits of harvesting the timber up to 50 km; thus, no constraints operated within an area the size of the Masoala Peninsula (~4000 km²). See also (17).
27. S. Fankhauser, *Valuing Climate Change: The Economics of the Greenhouse* (Earthscan, London, 1995). For the year 1995, 50% of simulation runs estimated an optimal carbon tax > \$20/t C, and optimal tax levels associated with a given probability increased each year [T. Roughgarden and S. H. Schneider, *Energy Policy*, 27, 415 (1999)].
28. Net committed emissions take into account the total weighted emissions of greenhouse gases over time from deforestation and the uptake of gases due to regrowth, and are calculated in CO₂ C equivalents that account for varying greenhouse gas potentials and ratios of different gases. We assumed that burning a hectare of primary rain forest, with regrowth every ~3 years, would result in the net release of ~191 metric tons of CO₂ C equivalents [P. M. Fearnside, *Climatic Change* 35, 321 (1997)]. We further assumed that release of carbon would be amortized over 10 years. Due to the time value of money, this time release reduced the NPVs of greenhouse gas conservation by ~1.8 times.
29. R. Mittermeier, N. Myers, J. Thomsen, *Conserv. Biol.* 12, 516 (1998).
30. R. Schwarze (*Ecol. Econ.* 32, 255 (2000)) found an average cost per tonne of CO₂ of \$2.6 for land use, cover change, and forestry projects; see S. Brown et al. in (5).
31. Population Reference Bureau, "World Population Data Sheet 1995" (Population Reference Bureau, Washington, DC, 1997).
32. Although the best management practices scenario generates similar opportunity costs, it would be more difficult for Madagascar to implement than simple protection of the forest (see I. A. Bowles et al. in (21)), and therefore less likely to prevent deforestation reliably and to obtain carbon credits (36); nor would it provide the biodiversity benefits of strict conservation [J. Robinson, *Conserv. Biol.* 7, 20 (1993)].
33. For example, semi-arid savannahs [B. Walker, *Envir. Dev. Forum* 4, 204 (1999)]; see also references in (18).
34. J. O. Niles and R. Schwarze, in *Proceedings of the IEA Bioenergy Task25 Workshop: Bioenergy for Mitigation of CO₂ Emissions: The Power, Transportation and Industrial Sectors*, K. Robertson and B. Schlamadinger, Eds. (International Energy Agency, Graz, Austria, 2000).
35. S. H. Schneider, *Climatic Change* 39, 1 (1998).
36. Preventing deforestation is an emission reduction, whereas planting trees is a sequestration process. Currently, conserving forests has stronger legal status under the Clean Development Mechanism because it is an emission reduction. The Kyoto Protocol requires verification of real, measurable, voluntary, and long-term reductions. Costa Rica has evolved strategies for dealing with leakage and additionality [D. C. Goldberg, R. Castro, S. Mack, "Carbon conservation: Climate change, forests and the Clean Development Mechanism" (Center for International Law, Centro de Derecho Ambiental y de los Recursos Naturales, Washington, DC, 1998)]. Ultimately, however, industrialized countries will also have to reduce their own

- omissions in order to meet the goals of the United Nations Framework Convention on Climate Change.
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38. H. J. Ruitenbeek, *Ecol. Econ.* 6, 57 (1992).
39. We are grateful to C. Ramilison, I. Raymond, R. Lomax, B. Simeone, B. Delaite, and M. Hatchwell for providing pricing information and unpublished reports. We thank K. Chomitz, N. Myers, B. Delaite, P. Frumhoff, J. Hardner, G. Haal, J. Hellman, L. Coulter, J. McNeely, J. Paddock, D. Rico, R. Schwarze, S. Schneider, and P. Vitousek for discussions and/or

critical readings of the manuscript. The Center for Conservation Biology, the Wildlife Conservation Society, the Heinz Foundation, and the Morrison Institute for Population and Resource Studies supported the authors during this work. We appreciate the assistance of the Masoala Project, run by CARE International Madagascar and Wildlife Conservation Society under the guidance of the Direction des Eaux et Forêts and the Association pour la Gestion des Aires Protégées.

6 December 1999; accepted 14 February 2000

mGluR1 in Cerebellar Purkinje Cells Essential for Long-Term Depression, Synapse Elimination, and Motor Coordination

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Targeted deletion of metabotropic glutamate receptor-subtype 1 (mGluR1) gene can cause defects in development and function in the cerebellum. We introduced the mGluR1α transgene into mGluR1-null mutant [mGluR1 (–/–)] mice with a Purkinje cell (PC)-specific promoter. mGluR1-rescue mice showed normal cerebellar long-term depression and regression of multiple climbing fiber innervation, events significantly impaired in mGluR1 (–/–) mice. The impaired motor coordination was rescued by this transgene, in a dose-dependent manner. We propose that mGluR1 in PCs is a key molecule for normal synapse formation, synaptic plasticity, and motor control in the cerebellum.

mGluRs are G protein-coupled glutamate receptors and are implicated in modulation of synaptic transmission and plasticity (1). mGluR1 (–/–) mice have characteristic cerebellar symptoms such as ataxic gait, intention tremor, and motor discoordination (2–4). The blockade of mGluR1 by antisense to mGluR1 results in ataxia, suggesting that mGluR1 is required for motor coordination (5). In mGluR1 (–/–) mice, the anatomy of the cerebellum, the morphology of PCs, and the synaptogenesis onto PCs from parallel fibers (PFs) are normal. However, developmental transition from multiple to mono-innervation of PCs by climbing fibers (CFs) (6), the other excitatory input to

PCs (7), is impaired during the third postnatal week (8). Long-term depression (LTD) at PF-PC synapses is clearly deficient in mGluR1 (–/–) mice (3, 4). Thus, mGluR1 is thought to be essential for CF synapse elimination and LTD induction, and its disruption may contribute to motor deficits of mGluR1 (–/–) mice. However, mGluR1 is expressed in various cell types in the central nervous system (CNS) other than PCs. Hence it is not clear to what extent mGluR1 in PCs contributes to these phenotypes.

We introduced a transgene (L7-mGluR1) that expressed mGluR1α under the control of the PC-specific L7 promoter (Fig. 1, A and B) into the mGluR1 (–/–) mice. One line of transgenic mice homozygous mutant for endogenous mGluR1 allele showed the cerebellum-restricted expression of the transgene (Fig. 1C) (9). (We refer to these mice as mGluR1-rescue mice.) The amount of mGluR1α protein in mGluR1-rescue cerebella was about 80-fold less than that in wild-type cerebella (Fig. 1C). mGluR1α immunoreactivity was abundant in the cerebellum, olfactory bulb, and thalamus in wild-type mice, whereas it was restricted to the cerebellum in mGluR1-rescue mice (Fig. 1E) (10). High-magnification micrographs revealed

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April 26, 2000

The Honorable Bill Clinton
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Washington, D.C. 20500

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Dear Mr. President:

The preliminary findings of the United Nations Intergovernmental Panel on Climate Change (IPCC) Special Report on Land Use, Land-Use Change, and Forestry (SR-LULUCF) indicate that forestry and agricultural management strategies to sequester carbon are scientifically credible ways of mitigating climate change effects due to excess carbon dioxide in our atmosphere. Furthermore, such strategies are shown to be cost-effective and globally implementable so that all countries, developed and developing, can join in solving this important environmental problem.

This draft report has been written by a team of international scientists in academia and industry from developed and developing countries. Their technical expert opinion has converged on the definitive result that the forestry and agricultural sectors can significantly reduce carbon dioxide concentrations with simple and cost-effective natural and managed land use strategies. In fact, reductions of greenhouse gases by implementation of forestry and land use practices rival those achieved by emissions reductions alone.

Forestry and agriculture play a significant role in sequestering atmospheric carbon over the long-term and at low cost. Forestry and agricultural conservation and management strategies such as tree planting, sustainable forestry, and conservation tillage achieve not only greenhouse gas reductions, but a host of other environmental benefits such as protection of watersheds and critical wildlife habitat and increased soil productivity and decreased soil erosion. Furthermore, when forest products and biomass energy conversion are integrated into a comprehensive strategy for long-term emissions reductions, additional carbon benefits results. Such strategies present the real advantages for both the environment and economy.

We urge you to publicize the scientific conclusions of the report and lead the world by making sequestration a cornerstone of our national climate change strategy. We further urge you to direct the U.S. representatives to make sure

that the preliminary findings from the report are fully recognized through the United Nations Framework Convention on Climate Change (UNFCCC) at its upcoming IPCC Plenary in Montreal May 1-8, 2000 and at the Conference of the Parties (COP) meeting in The Hague later this autumn.

We appreciate your attention to our call for a strong commitment to partnering with the forestry and agricultural sectors in addressing this important environmental issue in an inclusive and cost-effective manner.

Sincerely,



RON WYDEN
U.S. Senator



RICHARD G. LUGAR
U.S. Senator

Mr. Roger Ballentine
Deputy Assistant to the President for Environmental Initiatives
The White House
Rm. 107/EW
1600 Pennsylvania Ave., NW
Washington, DC 20502

April 10, 2000

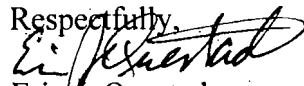
Dear Mr. Ballentine:

Please receive the enclosed letter that is signed by over 100 environmental, religious, hunting and fishing citizens' groups. This version of the letter has been updated from the one that was faxed to you on April 6. It now includes even more signatures.

The letter demonstrates the overwhelming national support for LULUCF rules that protect old-growth forests, restore native forests and provide sound environmental standards for carbon sequestration projects.

I thank you for considering the points raised in the letter as you prepare for the upcoming LULUCF negotiations.

Respectfully,


Erin J. Questad



American Lands ALLIANCE

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Atlanta, Georgia

April 10, 2000

Mr. Roger Ballentine
Deputy Assistant to the President for Environmental Initiatives
The White House
Rm. 107/EW
1600 Pennsylvania Ave., NW
Washington, DC 20502

Dear Mr. Ballentine:

We are writing to express our serious concerns about the U.S. position in the upcoming negotiations to develop Land Use, Land Use Change, and Forestry (LULUCF) rules under the Kyoto Protocol. We are concerned that the United States does not support strong, environmentally-sound, land use and forestry rules. Lenient rules could result in a compromised Kyoto Protocol, which would not adequately address the need to reduce carbon emissions from their sources. Furthermore, lenient rules could threaten forest ecosystems and their biodiversity here and overseas by encouraging clearcutting, logging of old-growth, conversion of natural forests to plantations, and other harmful logging practices.

As you know, the wood products industry, represented by the American Forestry and Paper Association (AF&PA), has been calling for Kyoto rules that support business-as-usual forestry by awarding credits for activities such as producing wood products and chipping plantation trees for fuel. It is clear that the industry is not primarily concerned with reducing greenhouse gas emissions or maintaining ecological land management standards.

We fear that the U.S. position, which seeks to credit the broadest range of forestry activities (including those stated by the AF&PA), could embrace these and other destructive practices. If the Kyoto rules sought by the U.S. credit questionable forestry practices, then more certain steps to reduce greenhouse gasses will be curtailed (such as reducing powerplant and industrial emissions, strengthening CAFE standards for cars and trucks, and protecting and restoring native forests). Weak Kyoto forest rules will lead to fewer reductions in greenhouse gas emissions, less effective mitigation of climate change, and greater negative impacts on our forests.

We support strong rules in the Kyoto Protocol and in domestic legislation that will cut carbon emissions and place a high priority on protecting and restoring native forests. Before the discussions of these issues take place in the Australia Ministerial in April, 2000, we ask that the U.S. Administration take a proactive approach to reducing climate change and clarify its position to support the following:

1) Protection of Old-Growth Forests

In order for forest carbon sequestration to most effectively reduce the amount of atmospheric carbon dioxide, Kyoto land use rules must place the highest priority on protecting existing old-growth and native late successional forests. Numerous scientists, such as Drs. Jerry Franklin and Mark Harmon, have found that the level of carbon storage increases with forest age. Conserving native and old-growth forest ecosystems is thus much more beneficial than logging these stands and planting younger trees. Logging older forests releases substantial amounts of carbon that has been stored over hundreds of years. Younger replacement forests do not quickly sequester this carbon; most of it is released into the atmosphere. Besides sequestering massive amounts of carbon, old-growth forests provide clean water and vital habitats for threatened and endangered species.

2) Accounting for Logged Timber as a 100% Carbon Emission

The U.S. should support the IPCC (Intergovernmental Panel on Climate Change) Guidelines on logging of timber, that recommend assuming that "all carbon in biomass harvested is oxidised in the removal year", that is, that the carbon in trees is considered to be 100% emitted at the time it is logged. International carbon sequestration accounting systems cannot track short-term sequestration adequately in wood and paper products.

3) Forest Restoration and Long-Rotation Timber Management

Restoring degraded forests and moving to long rotations (e.g. 140 years) in privately-owned managed forests will benefit the forest ecosystems, the public, the climate, and timber production. We support using restoration and long rotations to greatly increase both the level of carbon sequestration and the quality of forest ecosystems on land currently under industrial timber management.

4) Accurate and Symmetrical Accounting Rules

International rules are needed so that accounting and crediting for carbon sequestration projects are responsible, comprehensive and accurate. The rules must address, but not be limited to: accurate and symmetrical accounting of carbon credits and debits; additionality; permanence; leakage; and the full life-cycle of projects. Otherwise, Kyoto rules could foster increased logging of old-growth forests, continued poor management of national forests, and conversion of other ecosystems to plantations. Please refer to the enclosed paper for details on the specific standards that should be adopted.

5) Safeguards Against Plantations, Irresponsible Biomass Fuel Production, and Genetically Modified Trees

Land use change and forestry activities must not degrade, destroy, or create risks for existing native ecosystems. While production of biomass fuels can be appropriate in some situations, the conversion of native ecosystems into plantations for biomass production or for other purposes should not be encouraged or allowed under Kyoto rules.

Plantations store relatively low amounts of carbon, fail to provide necessary wildlife habitat, and typically depend on short logging rotations and on chemicals that adversely impact biodiversity, water quality and soils. At present, the U.S. should oppose the use of genetically engineered trees in any Kyoto activities or projects because of the significant environmental risks associated with their use; among other things, the modified trees could disperse into native forests and harm other species.

6) Strong International Environmental Standards for All Forest Projects and Activities

Strong, environmental standards are absolutely necessary within the Kyoto Protocol for all forest projects and activities to protect environmental values such as native biodiversity and natural ecological processes. The enclosed paper provides a detailed explanation of appropriate standards. Looking at the U.S. submissions on the Protocol, we can find no support for environmental standards, no support for criteria for sustainable development, and no support for consistency with other international environmental treaties.

Land use changes, including logging, account for up to 20 percent of annual carbon dioxide emissions. Over the past 150 years, forest conversion was responsible for an estimated 30 percent of the excess carbon present in the atmosphere. But thankfully, the U.S. public overwhelmingly supports forest protection and will respond positively to an Administration that implements the Kyoto Protocol, while safeguarding the Ancient Forests, roadless areas, and other special places that people want to enjoy and leave for their children and grandchildren.

Business-as-usual forestry threatens our national and global forests. An analysis by the World Resources Institute suggests that four-fifths of the world's original forest cover has either been lost or significantly degraded by human activity. Every year another 16 million additional hectares are logged and forever lost to future generations of wildlife and people. Here in the U.S., intact forests are critical to the survival of half of our endangered species.

We urge you to make clear that the U.S. will work for Kyoto rules that do not credit business-as-usual forestry, but do protect and restore native forests and insure that the benefits of these and other natural ecosystems are undiminished for our generation and all generations to come.

Sincerely,

National and International Organizations:

American Lands Alliance, Washington DC
 Center for Environmental Citizenship, Washington DC
 COSYDDHAC: Comision de Solidaridad y Defensa de los Derechos Humanos A.C., Chihuahua Mexico
 Defenders of Wildlife, International Counsel, Washington DC
 International Primate Protection League, Summerville SC
 Ozone Action, Washington DC
 Save Our World, London England

Regional Organizations:

Active Students for a Healthy Environment, UNC, Asheville NC
 Alaska Center for the Environment, Anchorage AK
 American Wildlands, Bozeman MT
 Aspen Wilderness Workshop, Aspen CO
 Audubon Society of Portland, Portland OR
 Bark for Mt. Hood, Portland OR
 Blair Mountain Historical Organization, Blair WV
 Blue Mountain Native Forest Alliance, Baker City OR
 Buckeye Forest Council, Athens OH
 Cascadia Forest Alliance, Portland OR
 Cascadia Wildlands Project, Eugene OR
 Center for Biological Diversity, Tucson AZ
 Center for Environmental Economic Development, Arcata CA
 Center for Social Justice and Global Awareness, San Antonio, TX
 The Clinch Coalition, Coeburn VA
 Coalition for Jobs and the Environment, Abingdon VA
 Coast Range Association, Corvallis OR
 Colorado Wild, Boulder CO
 Concerned Citizens' Coalition, Spencer WV
 Conservation Action Project, Concord NH
 The Concerned Citizens of Rutherford County, Rutherfordton NC
 Concerned Friends of Ferry County, Curlew WA
 Constitutional Law Foundation, Eugene OR
 Corvallis Audubon Society, Corvallis OR
 Dakubetede Environmental Education Programs, Ashland OR
 Devil's Fork Trail Club, Dungannon VA
 Dogwood Alliance, Brevard NC
 Earth Justice Ministries, Santa Cruz CA
 Eastern Old-Growth Clearinghouse, Georgetown KY
 Eastside Conservation Ontology, Bend OR
 EnAct, University of Michigan, Ann Arbor MI
 Environmental Action, El Paso TX
 Environmental Action Group, Hampshire College, Amherst MA

The Environmental Forum, Georgia Tech, Atlanta GA
 Forest Conservation Council, Boca Raton FL
 Forest Guardians, Santa Fe NM
 Forest Watch, Montpelier VT
 Forests Forever, San Francisco CA
 Friends of Neotropical Migrants, Bend OR
 Georgia Forest Watch, Ellijay GA
 Gifford Pinchot Task Force, Olympia WA
 GREAN, Pacific Lutheran University, Tacoma WA
 Great Old Broads for Wilderness, Salt Lake City UT
 Greater Laurentian Wildlands Project, South Burlington VT
 Green Party of Arkansas, Parks AR
 Hells Canyon Preservation Council, La Grande OR
 Hickory Alliance, Danbury NC
 Idaho Conservation League, Boise ID
 Indiana Forest Alliance, Bloomington IN
 Institute for Fisheries Resources, Eugene OR
 Kalmiopsis Audubon Society, Port Orford OR
 Klamath Forest Alliance, Etna CA
 Klamath-Siskiyou Wildlands Center, Williams OR
 Land Air Water, University of Oregon School of Law, Eugene OR
 The Larch Company, Ashland OR
 Leavenworth Audubon Adopt-a-Forest, Leavenworth WA
 LightHawk, Aspen CO
 The Light Party, Mill Valley CA
 Magic, Stanford CA
 Marion Co. Water Watch, Lebanon KY
 Montana Wilderness Association, Flathead Chapter, Kalispell MT
 Native Forest Network, Yellowstone Branch, Bozeman MT
 Newton County Wildlife Association, Jasper AR
 North-Eastern Californians for Wilderness, Etna CA
 Northwest Ecosystem Alliance, Bellingham WA
 Office of the River Keeper, Sale Creek TN
 Oregon Natural Resources Council, Portland OR
 Oregon Watersheds, Salem OR
 Oregon Wildlife Federation, Portland OR
 Oregonians for Environmental Rights, Eugene OR
 Pacific Coast Federation of Fisherman's Associations, Oakland CA
 Pacific Environment and Resources Center, Oakland CA
 Pacific Green Party, Portland OR
 Protect Our Public Lands, Eugene OR
 Public Forestry Foundation, Eugene OR
 Rainier Audubon Society, Auburn WA
 Redwood Action Team, Stanford University, Stanford CA

Redwood Region Audubon, Eureka CA
 RESTORE the North Woods, Concord MA
 Rogue Valley Audubon Society, Medford OR
 Salem Audubon Society, Salem OR
 Save the West, Joseph OR
 SAFE: Save Our Ancient Forest Ecology, Modesto CA
 SEAC, Bucknell University, Lewisburg PA
 Seattle Audubon Society, Seattle WA
 Sequoia Forest Alliance, Weldon CA
 Seventh Generation Fund For Indian Development, Arcata CA
 Shenandoah Ecosystems Defense Group, Charlottesville VA
 Sierra Club, New York City Group, New York NY
 Sierra Club, Oregon Chapter, Portland OR
 Sierra Club, Oregon Columbia Group, Portland OR
 Sierra Club, Oregon Many Rivers Group, Eugene OR
 Sierra Madre Alliance for Land, Culture, and Economy, El Paso TX
 Siskiyou Regional Education Project, Cave Junction OR
 Soda Mountain Wilderness Council, Ashland OR
 South Carolina Forest Watch, Westminster SC
 Southeast Forest Project, Washington, DC
 Southern Appalachian Biodiversity Project, Asheville NC
 Stop Mountain Top Removal, Blair WV
 Sustainable Petaluma Network, Petaluma CA
 Tennesseans, Alabamans, and Georgians for Environmental Responsibility, Chattanooga TN
 Texas Committee on Natural Resources, Austin TX
 Threatened & Endangered: Little Applegate Valley, Buncom OR
 Trout Unlimited, Mountaineer Chapter, Buckhannon WV
 Umpqua Watersheds Inc., Roseburg OR
 Virginia Forest Watch, Wytheville VA
 Whidbey Environmental Action Network, Langley WA
 Witness Against Lawless Logging, Portland OR

Individuals:

Jason Anderson, Bozeman MT
 Richard and Marian Anderson, Las Cruces NM
 Scott, Madeleine and Asa Anderson, Boise ID
 W. John Berigan, Omaha NE
 Tracey Bliss, Ventura CA
 Darryl Braun, Inkster MI
 Carl and Shirley Brown, Sublimity OR
 Brenda Burgess and Family, Blair WV
 Rex Burgess and Family, Blair WV
 Catherine Decker, Berkeley CA

Bobbie D. Flowers, New York NY
 Michele L. Garrett, Gambrills MD
 Randall Gingrich, El Paso TX
 Cliff Ginn, New York NY
 Brad Gleim, Kingston PA
 Dennis Grover, Reno NV
 Maria Teresa Guerrero, Chihuahua Mexico
 Tracie Sue Hawks, Chicago IL
 Daniel Jones, New York NY
 Richard Katz, D.O., East Stroudsburg PA
 Nova M. Kim, Barton VT
 Henry M. Lagergren, Bellingham WA
 Tonya Lander, Barro Colorado Island Panama
 Mia Margaret, Sedona AZ
 Horld Porter, Blair WV
 Lisa Portor and Family, Blair WV
 Jonathan B Ratner, Pinedaly WY
 Erin Riddle, Ithaca NY
 David C. Stevens, Golden, CO
 Larry Stewart, Albuquerque NM
 John Thornton, Grants Pass OR
 Joseph Vaile, Williams OR
 Sarah Wallace, Boise ID
 James S. Weekley, Blair WV
 James Weekley, Blair WV
 Lucindia R. Weekley and Family, Blair WV
 Sibby R. Weekley, Blair WV
 Timothy Weekley and Family, Blair WV

Enclosure: 1(11 pages): "Saving Forests and Cooling the Planet" by American Lands

Cc: The Honorable William J. Clinton
 The Honorable Albert Gore, Jr.

George Frampton, Jr., U.S. Council on Environmental Quality
 David Gardiner, White House Climate Change Task Force

Frank E. Loy, U.S. Department of State
 Jan L. MacAlpine, U.S. Department of State
 David Sandalow, U.S. Department of State
 Adrienne Stefan, U.S. Department of State

Margot Anderson, U.S. Department Of Energy
William S. Breed, U.S. Department of Energy
Ray Prince, U.S. Department of Energy

Robert Hendricks, US Forest Service
Jim Hrubovcak, U.S. Department of Agriculture
David T. Peters, U.S. Department of Defense

Donald Barry, U.S. Department of the Interior
Jamie Clark, U.S. Department of the Interior
Marshall Jones, U.S. Department of the Interior

C J Rushin-Bell, USAID

SAVING FORESTS AND COOLING THE PLANET

GOALS AND STANDARDS FOR FOREST SEQUESTRATION

January, 2000

AMERICAN LANDS

American Lands - Capitol Office

726 - 7th St., SE, Washington, DC 20003

202-547-9400

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American Lands - Forest Biodiversity Program

5825 N. Greeley, Portland, OR 97217

503-978-0511

Overview

This paper provides guidance on the following issues and related concerns, based on the experience of climate and forest policy experts, forest ecologists, grassroots conservationists, and other interested parties, in the US and elsewhere:

- *The essential role that forests play in global climate change, and problems with unsustainable industrial logging practices;*
- *Exciting new opportunities to conserve forests, protect biodiversity, increase timber production, and help remove and store (or “sequester”) excessive greenhouse gases from the atmosphere; and*
- *Greenhouse gas accounting standards and environmental safeguards needed at the international and domestic level to ensure that sequestration projects do not undermine broader climate efforts, to maintain project credibility, and to protect broader ecological and environmental values.*

The paper also begins to discuss the implementation of sequestration projects in the US.

The Problem: Climate Change and Industrial Logging

With their immense trees and biomass, old growth and native forests store vast quantities of atmospheric carbon, including in the soil, while providing diverse, healthy ecosystems and watersheds.¹ Historically, such forests helped stabilize the earth’s atmospheric carbon levels and climate. Unfortunately, old growth forests have been eliminated across most of the US and other “developed” nations. Native forests are also highly threatened in many “developing” nations.

Logging native old growth forests releases substantial amounts of greenhouse gases (GHGs). Logging, roading and other soil disturbances, slash burning, fertilizer applications, and other industrial practices all release carbon dioxide (CO₂), nitrogen oxides, and other GHGs.² Managing logged-over sites as short-rotation tree plantations or non-forest land uses keeps subsequent CO₂ uptake and storage at low levels, and does not begin to replace the carbon stored in more natural, older, diverse forests.³

In other words, industrial forest practices not only harm native biodiversity and forest ecosystems, they also exacerbate problems with global climate change. Natural forests and habitats that are fragmented by intensive logging, roading, and other practices will also be more vulnerable to unnaturally rapid climate shifts. Fragments of natural forests and habitats simply cannot “move” fast enough to track rapidly shifting climate gradients — especially when tree plantations lacking biological diversity are in the way.

Ironically, short-rotation tree plantations also produce less timber, per/acre profits, and ecosystem services than do long-rotations and other more sustainable commercial forest practices.⁴ In the US, publicly-held wood products companies typically use short-rotations because of their internal investment and accounting practices – not because it's good forestry.

Our international and domestic climate change strategies must address the link between forests and climate. Failure to address climate change will jeopardize the future of our forest ecosystems and resources. Failure to conserve forests and improve forest management will undermine our climate efforts – and miss major opportunities to promote sustainability.

Opportunities for Forest Conservation, Sustainable Forestry, and Climate Mitigation

The synergy between forests and climate change can also be positive. Projects that genuinely conserve and restore older, more natural forests can help remove and store (or “sequester”) excess atmospheric carbon while producing broader ecological and social benefits.⁵ Such projects can provide much-needed sources of funding for the protection and restoration of natural forests, and for encouraging landowners to adopt more sustainable forestry regimes in areas remaining in commercial timber production.

Priority Project Types:

Three basic types of forest carbon sequestration projects will be most effective at removing and storing excess atmospheric CO₂, guarding against additional forest-related GHG emissions, and producing other environmental and social benefits both here and abroad:

- 1) *Protecting remaining old growth and native forest areas on both public and private lands.*
- 2) *Acquiring, restoring, and protecting former industrial tree farms and other degraded forests in high priority conservation areas. (Acquisition of both full fee ownership and conservation easements can be made by both public and private entities.)*
- 3) *Shifting forest management to long rotations and other more sustainable practices in commercial forest areas, by providing incentives to landowners, and by funding forest investments and acquisition by ownerships capable of adopting sustainable practices.⁶*

Priority conservation areas include areas where key watersheds need to be restored and protected to recover salmon, wide-ranging carnivores, and other imperiled species; where public lands are lacking; and where forest connectivity needs to be restored across landscapes, elevations, and other environmental gradients.

The broader environmental and social benefits of such projects include:

- ◆ Protecting old growth,
- ◆ Increasing the per/acre production of timber and non-timber forest products,
- ◆ Establishing public lands in regions where they are lacking,
- ◆ Restore watershed function and improve water quality,
- ◆ Restoring older forests and habitats for threatened and endangered species,
- ◆ Protecting open space, and
- ◆ Enabling forest ecosystems to better adapt to future climate shifts.

These are all goals that the American public strongly supports.

Implementing Sequestration Projects in the US:

The three priority project types listed above should be particularly cost-effective to implement on non-federal forestlands in the US. Fee simple acquisition by public or private entities is well suited for high-priority watersheds and conservation areas held by the wood products industry, which typically takes an “all or nothing” approach to logging, and which often simply views specific land parcels as investments. Acquisition of interests in land through conservation easements is ideal where non-industrial owners wish to conserve their land but retain ownership. Land acquisition and financial incentives strategies can also be an efficient way to support the adoption of longer timber rotations. These and other considerations are discussed in more detail elsewhere.⁷

On federal lands, public policies should be used to protect and restore carbon reservoirs — including old growth forests and roadless areas. Logging these areas will result in CO₂ releases that will take hundreds of years to offset, assuming the sites are restored at all. Expanding these protections can help meet our national climate change goals and budgets. However, public lands should not be used as mitigation for private companies’ GHG emissions.

The Risks -- Why Standards and Safeguards Are Needed

To avoid misuse of sequestration programs, forest projects should only be given credit as climate mitigation if the accounting system for projects’ carbon flows is credible, accurate, and comprehensive, and if basic environmental safeguards are met.

These standards and safeguards will be particularly important if our international and domestic climate policies authorize sequestration projects beyond the three priority project types listed above. Without the following standards and safeguards, climate policies -- including those currently found in the Kyoto Protocol -- may encourage increased logging of

old growth forests and other natural areas, continued poor management of plantation forests, and conversion of other ecosystems to plantations. Our climate, forest ecosystems, and human society will suffer if we simply “log it and landfill it” without accounting for the opportunity costs and emissions associated with short-rotation industrial plantations.

Equally important, sequestration projects alone cannot address climate change problems. It makes little sense to remove excess GHGs from the atmosphere only to replace them with continued high emissions. We must also reduce GHG emissions if we are to successfully reduce the risk of catastrophic climate disruptions.

Basic environmental safeguards are also needed to ensure that old growth forests, endangered and sensitive species, and remaining native ecosystem areas are protected by sequestration projects, regardless of how this affects the projects’ GHG flows. While the three priority project types identified above will generally maximize the synergy between forest conservation, biodiversity, and climate mitigation, some sensitive species and other values may not be directly associated with older forests.

Role of Sequestration in Climate Policies

As noted above, sequestration is not a substitute for reducing GHG emissions. The most effective use of forest sequestration is to reduce existing atmospheric CO₂ levels. Existing CO₂ levels are already high enough to trigger significant climate changes and harm to forests and other ecosystems.

In the US, funding would ideally be appropriated to finance domestic sequestration projects, and these projects would not be used as credits to offset emissions. Should sequestration be financed principally through the private sector as emissions credits, then these credits should be “capped” at some fraction of our national emissions budget. A suitable cap might be on the order of 20 to 25% of our national budget.

Similar emissions “caps” may be needed at the international level.

Accounting Standards for Sequestration Projects

Forest-based carbon sequestration and storage projects must only be “counted” by international and domestic climate policies if the accounting system for projects’ GHG inventories and flows is credible, accurate, and comprehensive.

Specifically, international and domestic policies must ensure that:

- 1) *Accounting is balanced and both sides of the carbon budget "ledger" are addressed.*
- 2) *Only "additional" sequestration and storage is counted (the "additionality" principle).*
- 3) *The project's full life-cycle is counted.*
- 4) *All significant components of the forest ecosystem and forest management are counted.*
- 5) *Long-term project implementation is assured.*
- 6) *The best science is used to measure, project, monitor, and verify project benefits.*
- 7) *Wood product-related emissions are thoroughly counted.*
- 8) *"Leakage" is addressed reasonably.*

1. *Accounting is balanced and both sides of the carbon budget "ledger" are addressed.*

- Logging, slash burning, application of nitrogen fertilizers, and other industrial forestry operations must be recognized and counted as sources of CO₂ and other GHG emissions. If only reforestation and tree growth are counted, then project reporting will grossly exaggerate net carbon sequestration and inventories, and a perverse incentive to log existing old growth forests and other carbon reservoirs may be created.

2. *Only "additional" sequestration and storage is counted (the "additionality" principle).*

- Credit must be limited to increased CO₂ sequestration and/or GHG emissions reductions that would not otherwise occur, were it not for the project. Tree planting after commercial logging, for example, is already required in major timber producing states in the US. Likewise, credit should only be given for growing and protecting trees beyond the ages they would normally be grown, i.e., 50 years or so in the Western US.
- The project's GHG flows and inventories must be compared with those that would occur in lieu of the project, *across the project's entire lifespan*. Simply comparing project outcomes with GHG levels at the project's inception could give credit for tree growth and sequestration that would also have occurred anyway.
- The effects of potential "carbon fertilization" from increased atmospheric CO₂ levels needs to be factored out.
- Credit should not be given for mitigation already required for other impacts.

3. *The project's full life-cycle is counted.*

- Logging and other operations that will occur before and after any particular reporting period must be counted. Otherwise, projects could be arbitrarily defined to begin after intact forests are logged and significant GHGs have been released. Likewise, failure to account for future logging and other operations could grossly exaggerate project benefits.
- Operations within the 25 years proceeding any project should be documented and counted, as should all operations within at least 100 years after the project's inception.
- For projects which begin more than 25 years after the baseline year of 1990, all operations between the baseline year and the project start date should be counted.⁸

4. *All significant components of the forest ecosystem and forest management are counted.*
 - Carbon and other GHGs in soils, down woody material, litter layers, leaves, and other organic material must be accounted for as potential emissions sources, inventories, and/or sequestration.
 - Application of nitrogen fertilizers, slash burning, fossil fuels use, etc., must be counted as emissions, as should decay of woody debris and other material.
 - The project must also account for the effects of fires and other natural disturbances.
5. *Long-term project implementation is assured.*
 - Projects need to include agreements that provide credible and enforceable guarantees of long-term project implementation. In the US, credible implementation mechanisms include public land acquisition and private conservation easements.
 - Projects should not be counted if they fail to include credible guarantees of permanent forest protection or management improvements.
 - The specific forest management and protection measures must be explicitly identified and made enforceable, including by third parties. With public acquisition projects, third parties would include the public.
 - At the very least, project credits should be scaled to the length of the project and the enforceability of project implementation mechanisms.
6. *The best science is used to measure, project, monitor, and verify project benefits.*
 - Standardized, verifiable, and scientifically credible methods must be used to project and monitor forest carbon budgets on a site-specific basis. It should not be assumed, for example, that logging operations used the best available technology.
 - Actual carbon flows and storage must be monitored and verified. It is not safe to assume that landowners are following their management plans and other projections. Existing management plans also frequently lack the detail necessary to develop accurate carbon budgets.
 - The site's management history and baseline future management scenario must be credibly and thoroughly documented.
7. *Wood product-related emissions are thoroughly counted.*
 - Wood products should be counted as an emission once they leave the landowner or project manager's ownership and control.
 - If wood products are not automatically counted as an emission, then their actual carbon budgets must be calculated. Most of the biomass removed during logging does not wind-up in durable wood products.
 - Emissions associated with product processing, utilization, and decay must also be counted.
8. *"Leakage" is addressed reasonably.*
 - Concerns that conservation projects might shift logging demand (and GHG emissions) from one site to another should be kept in perspective. Because of the growth in global

demand for wood products, agricultural lands, etc., all unprotected forests are likely to be logged, converted to non-forest, etc., in the foreseeable future.

- Any remaining concerns with “leakage” are best addressed by requiring projects to contribute to recycling efforts and/or demand-side reductions for wood products. This is the most effective and consistent way to ensure that market forces will not undermine projects’ benefits.
- Forest management and carbon flows across the landowner’s entire ownership should also be counted, to ensure that logging is not simply shifted from one unit to another.

Defining Forest Sequestration:

Forest-based carbon sequestration and storage should be carefully defined to focus on natural forest ecosystems managed for conservation purposes or which are commercially managed under genuinely sustainable forestry regimes such as long-rotation, multi-species approaches.

Promoting the dumping of wood and paper products in landfills, or tree planting in grassland ecosystems, is not *forest* sequestration, and fails key environmental tests. Counting wood products and landfills as climate mitigation projects could also facilitate continued growth in demand for paper and other wood products – to the detriment of actual forest-based carbon reservoirs and efforts to reduce CO₂ emissions. Tree planting can be ecologically beneficial on forestlands which were historically converted to farmlands or other uses. However, planting trees in native grasslands is likely to result in ecological harm.

Environmental Safeguards for Sequestration Projects

The following basic environmental safeguards must also be incorporated into international and domestic climate policies that relate to sequestration. Failure to adopt these standards could result in credit being given to sequestration projects that have unintended environmental consequences.

While additional standards could be developed at national and regional levels, the following environmental safeguards are broadly applicable, and are the minimum necessary:

- 1) *All projects must enhance environmental values or at least have no negative environmental impacts.*
- 2) *Existing old growth, late successional, and native forest stands must be fully protected.*
- 3) *Native forests, grasslands, and other natural ecosystems must not be converted to tree plantations.*
- 4) *Projects must contribute to landscape level conservation or at least avoid impacting broader ecosystems.*
- 5) *Detailed management plans must be developed and supported by ecological data.*

1. All projects must enhance environmental values or at least have no negative environmental impacts.

- Key values include: native biodiversity, sensitive fish, wildlife, or plants, and their habitats; water quality; roadless areas; and rare ecosystem types.
- Impacts must be avoided both on site and across the landscape.
- Impacts must be avoided across the project's entire lifespan.

2. Existing old growth, late successional, and native forest stands must be fully protected.

- Logging, road construction, and all other significant impacts must be precluded.
- To avoid creating perverse incentives, projects should be precluded if situated on former old growth and native forest sites logged after the 1990 baseline year.

3. Native forests, grasslands, and other natural ecosystems must not be converted to tree plantations.

- Plantations include commercial wood products operations that use short rotations, single or few species management, intensive chemical inputs, and/or large-scale clearcutting.
- Projects should be precluded if situated in areas converted from native ecosystem conditions after 1990.
- Native non-forest ecosystems should not be converted to forest conditions more generally.

4. Projects must contribute to landscape level conservation or at least avoid impacting broader ecosystems.

- Landscape level ecosystem analyses must be completed.
- Projects must either avoid impacting or help protect and restore priority areas.
- Priority areas include existing and potential habitat reserves, buffers, and corridors, to provide for ecosystem level conservation, the needs of wide-ranging wildlife, forest connectivity and adaptability, etc.

5. Detailed management plans must be developed and supported by ecological data.

- Plans must be supported by inventories and surveys of key ecological values.
- Key values include: forest structural components and timber stocking; fish, wildlife, and plant species; water quality; and watershed functions.
- Areas and resources to be protected and/or restored should be mapped and marked on the ground.

Additional Environmental and Sustainability Goals:

Mechanisms should also be adopted to promote the most environmentally beneficial projects. For example, greater credit should be given to projects which:

- Restore and maintain the native diversity of forest tree species, age classes, understory, and forest structure, including late successional forest stands;

- Protect and restore habitats for threatened, endangered, or otherwise sensitive species;
- Restore and maintain natural hydrological function, water quality, and aquatic habitats, including for fish, invertebrates, and domestic water supplies;
- Protect and restore naturally occurring non-forest habitats within forest areas, such as meadows, talus slopes, caves, etc.;
- Restore and maintain soil biota and productivity, including through retention of patches of trees and other vegetation during logging, use of selection logging, and/or use of protected areas;
- Limit the rate of logging to the rate of timber growth; *and/or*
- Maintain basic levels of timber stocking at all times, to ensure future timber supplies and help protect ecological values. (An appropriate measure might be retention of at least 25% of each site's potential timber stocking.)

Relation to Other International Environmental Standards:

While often valuable, existing international, intergovernmental forest management standards do not appear sufficient as environmental safeguards for forests and forest sequestration projects.

While the Montreal Process Criteria and Indicators (C&I), for example, monitor a number of important environmental factors, they lack specific goals and measurable and verifiable standards for resource management. Likewise, the C&I fail to protect important ecological resources, including native forests and old growth areas. The C&I may also be internally contradictory, inasmuch as they could be taken to imply that both timber production and environmental protection can be maximized simultaneously.

Additional Considerations for Overseas Sequestration Projects

(Section to be developed.)

Additional Considerations for National GHG Accounting

(Section to be developed.)

Notes

¹ While the amount of carbon stored in forests varies by forest type, older forests generally store more carbon.

² See, for example, Harmon, Mark, et al. 1990. "Effects on Carbon Storage of Conversion of Old Growth Forests to Young Forests." *Science*. v. 247.

³ See, for example, Harmon et al (1990); Harmon, Mark, et al. 1996. "Modelling Historical Patterns of Tree Utilization in the Pacific Northwest: Carbon Sequestration Implications." *Ecological Applications*. 6;2; and Cohen, Warren, et al. 1996. "Two Decades of Carbon Flux in Forests of the Pacific Northwest." *BioScience*. 46;11.

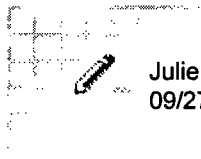
⁴ See ALA & CRA. 1999. "Long Rotation Forestry: Making the Most of Our Commercial Forests." American Lands and the Coast Range Association, Portland, OR, and Corvallis, OR.

⁵ Franklin, Jerry. 1999. "Great Opportunities are Emerging From Changing Climate, Changing Markets, and Changing Forestry." *Pacific Forests*. Pacific Forest Trust, Boonville, CA.

⁶ See ALA & CRA (1999).

⁷ See ALA & CRA (1999) and Hall, Daniel. 1999. "Incentives and Land Acquisition: Key Tools for Restoring Fish and Wildlife Habitat." *Endangered Species Update*. 16;3.

⁸ 1990 is the baseline used in the Kyoto protocol. The baseline year also needs to be early enough to avoid encouraging landowners to log more intensively in anticipation of counting subsequent regrowth as a carbon credit.



Julie M. Anderson
09/27/99 07:02:17 PM

Bio

Record Type: Record

To: Roger S. Ballentine/WHO/EOP@EOP, Jefferson B. Seabright/WHCCTF/EOP@EOP, Angela C. Mizeur/WHO/EOP@EOP

cc:

Subject: talking points for ag meeting tomorrow

I've been doing outreach to hill and some of these groups today to hopefully smooth the way. Linda Delgado will not be able to attend and I think its ok to have the meeting without USDA there. These folks have not met with the WHCCTF since they were in to talk to todd last year. I think showing that the WH is fully committed to moving this important dialogue forward is critical. We can say that USDA is full y committed as well -- including funding of course. This process is going to be slow and consist of baby steps. Its going to need cajoling and assurances, not bullying. I think we need to reassure these folks that we are not looking to have them stand up with the VP next year and endorse the PRotocol.



Meeting with Agriculture Industry 928

Meeting with Agriculture Industry to Discuss Dialogue Process

I. When.

Tuesday, September 28, 1999. 3:00pm Room 180 OEOP.

II. Who.

Christopher Schepis, National Farmers Union

Deborah M. Atwood, National Pork Producers Council

- Robert Bor, USA Rice Federation

- Jack Pettus, National Barley Association

- John Doggett, American Farm Bureau

Wayne Hammond, National Association of Wheat Growers (filling in for Jack Eberspacher of same association)

John Gordley, American Soybean Association

Billy Senter, American Corn Growers Association

Alfred John Maguire, National Cotton Council

Robert James Looney, Cenex Harvest States Cooperative (filling in for Jay Howell of National Council of Farmers Cooperative)

- John McClellan

III. Purpose.

To meet with the new White House Climate Change Task Force and to discuss how to move forward with an Administration/Ag Community dialogue on climate change. This meeting follows up on the meeting hosted by Senators Kerrey, Baucus and Roberts in March. At that time, the ag groups were going to have further discussions amongst themselves regarding the proposal placed on the table by John McClellan of the National Corn Growers and get back to the Administration. This has not happened. Thus, the purpose of this meeting is to take the initiative and get the discussions going. Our goals are (1) to provide a forum for educating these groups on climate change, (2) to neutralize some of the groups' opposition, (3) to develop consensus on ag/climate change policy decisions.

IV. Talking Points.

- Thanks for taking the time to come in and meet with us. I know all of you are very busy with the farm crisis, floods, appropriations, etc.
- Although the threat of climate change may not be as immediate, we think it is important

to continue the dialogue on this important issue.

- First, I wanted to introduce myself and our new team here at the White House on this issue. I know a number of you met with Todd Stern before he left ...
- Second, I thought it would be helpful to follow up on the meeting hosted by Senators Kerry, Roberts, Lugar, Baucus and Harkin last spring. At that meeting, the Senators wanted to jump start a discussion between the commodity groups and the Administration on this issue. Unfortunately, the summer slipped by without any us of taking the next step.
- We would like to propose some next steps. As suggested, we will use a facilitator and USDA will provide the funding. We will also provide space for the meetings.
- We will commit staff to work on choosing a facilitator, figuring out the logistics for the first meeting, the participant list, etc. We would like to have a few staff people from your organizations to work as points of contact with our folks to get these decisions made.
- Once the facilitator is hired, the staff can then work with that person to establish the structure for the meetings. The basic blueprint for the meetings would be the suggestion made by John McClellan. We would like to shoot for having the first meeting in December – hopefully Congress will be out of session and things will be a little more calm.
- With respect to the meetings, I just want to be very clear that we do not view your participation in this dialogue as an endorsement of the Kyoto Protocol. We believe that we could all benefit from having facilitated, informed discussions on climate change and agriculture. In particular, I think it could be very valuable to have an informed discussion on the solutions side: for example, how USDA and producers could work together now to realize some of the multiple benefits of current conservation practices. Or the benefits to rural America of renewable energy – like bioenergy and wind energy.



Miotkes <miotkes@ix.netcom.com>
08/24/99 01:15:42 AM

Record Type: Record

To: See the distribution list at the bottom of this message
cc: Jeff at work <MiotkeJA@state.gov>
Subject: sinks submission

Please see the attached draft submission on sinks. Note that the request for these submissions asks specifically for input on the decision making framework and the role that data should play in that decision making process. We have reiterated the point made by Frank at the NGO outreach: we should take the long term view, deciding on what makes sense over the longer run while dealing with the issue of what can be claimed in the first period as a separate issue. Accordingly, we have stressed the need to share information and data relevant to deciding which sinks make long term sense. We note the information and analysis now underway relevant to this longer term decision.

We do not, however, commit to providing long term projections of what we might realize from our sinks in the first commitment period. We grappled with this issue at great length but were concerned that such projections were deliberative and directly related to our negotiating strategy. We would not reveal similar internal economic analyses underlying a particular target prior to negotiations. Moreover, such projections -- particularly at this far in advance -- are not precise and are not germane to deciding which sinks make environmental sense over the long term.

Please provide your comments/clearance as soon as possible. We are already 2 weeks late in providing this submission.

Jeff

> > -----Original Message-----

> > From: Margot Anderson [SMTP:MANDERSON@mailoce.oce.usda.gov]

> > Sent: Monday, August 23, 1999 10:48 AM

> > To: adele.morris@do.treas.gov; hohenstein.william@epamail.epa.gov;

> > william.breed@hq.doe.gov; pbacklun@ostp.eop.gov; miotkeJA@state.gov;

> > hhuppe@usaid.gov

> > Subject: submission group

> >

> > Group,

> >

> > I hope I have included the main points from our discussion

> > Friday afternoon.

> >

> >

> > Margot

>

August 1999

Land Use, Land Use Change and Forestry (LULUCF) Submission

Introduction

At its 10th meeting, the subsidiary body for Scientific and Technological Advice invited Parties to review, and where possible to respond to, the questions posed in tables 1 and 2 of document FCCC/SBSTA/1999/5, and to identify any additional policy or procedural questions. In addition, it requested Parties to provide submissions on the need for country-specific data and information and its relationship to a decision-making framework in the context of the requirements of the Kyoto Protocol. We have combined the two SBSTA 10 requests into one submission which focuses on decision making criteria, a decision making structure, and data and information needs.

The US strongly believes that the treatment of land use and land management under the Kyoto Protocol should be broadened by adding activities under Article 3.4. We have elaborated that position and our reasoning behind it in previous submissions. Our focus here is on the process by which we believe activities should be considered and approved for inclusion in inventories. The FCCC and the Kyoto Protocol offer the following principles that should guide decisions under Article 3.4:

Be cost-effective and comprehensive, cover all relevant sources, sinks and reservoirs of greenhouse gases;

Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs...including biomass;

Promote sustainable agriculture in light of climate change considerations;

The COP's and later COP/Mop's decisions with regard to new categories under Article 3.4 must first and foremost be concerned with environmental protection. We must take the long term view of how best to promote action with respect to sinks. Whether particular activities should be applied to Parties in the first commitment period, and how this might be accomplished, is a separate question. Thus, we suggest that there needs to be a two step process. First the Parties need to determine, on the basis of

relevant inputs (including those from the IPCC) which additional activities categories meet the criteria set forth in Article 3.4. Second, the Parties should decide how these additional categories can or should be made applicable to the first commitment period.

is Russia
open Q for
US?

Decision-Making Framework

The US looks forward to engaging in substantive discussions on land use and land management issues within the context of the Kyoto Protocol at SBSTA 11 and over the next year. The US recognizes that Parties may be considering candidate activities or categories, but the Parties have not yet established a process for considering those activities or guidelines to assess proposed activities. Considering the complexity associated with land use issues, the Parties need to lay out a structure for decision-making between SBSTA 11 and COP6, discuss the criteria for decision making, and the role of data and information within that framework.

Criteria

The main criteria for adopting additional activities are already stated in Article 3.4 of the Kyoto Protocol. Parties are asked to consider additional activities taking into account uncertainties, transparency in reporting, verifiability, and methodological work of the IPCC. In determining how these terms will be interpreted and measured, we should use the reporting requirements for other sources of greenhouse gases covered by the Kyoto Protocol as a guide. We should not hold additional land use activities to a higher standard of measurability and verifiability than other sources of greenhouse gases that are already included under the Protocol. Activity definitions should account for both sequestration and emissions – gains and losses. The US believes activities should be defined broadly in order to promote consistent incentives and provide opportunities to reduce net greenhouse gas emissions.

The role of data and information

Two types of data and information are needed to fulfill these criteria and meet Kyoto commitments. First, Parties will need data and information to demonstrate that an activity meets the agreed criteria, and second, Parties will need data and information for reporting changes in carbon stocks associated with these activities during the relevant commitment period. In our view, Parties do not need data and information on expected changes in carbon stocks that would occur during the second budget period in

order to make decisions about which activities to consider for inclusion in the Kyoto Protocol. Parties need to demonstrate that activities meet the criteria established by the Parties and be able to report on those activities—using approved reporting guidelines and meeting the approved criteria— as required under the Kyoto Protocol.

For example, for an activity to meet the criterion “transparency in reporting”, Parties will need to demonstrate that they have adequately described how data are collected and fully articulate how the data are used to compute carbon emissions or sequestration. Under the criteria of verifiability, Parties will need to demonstrate that the measurements of greenhouse gas emissions and removals associated with an Article 3.4 activity are based on scientifically supportable methods which can be verified. Demonstration could take the form of peer-reviewed scientific articles about measurement procedures and publication and documentation of data. If the activity is then added to or subtracted from a Party’s assigned amount, the Party will need the necessary data and information to report the calculated amount during the budget period to meet commitments and report stocks in the annual inventories.

Parties should be required to meet the criteria and measure changes in carbon stocks no later than the budget period in which the activities will apply. Allowing Parties the opportunity to meet this requirement through to the budget period will provide an incentive for future scientific advances that will enhance our ability to reduce net greenhouse gas emissions. Decisions on new activities should not be based solely on first generation accounting and measurement methods without allowing for future scientific advances effectively limits the ability of Parties to take action to reduce net greenhouse gas emissions.

Parties can and should draw multiple data sources, including primary data such as inventories, and experimental data, and process models, and large scale ecosystem models to support decision making. Data and information can take the form of raw data, aggregated data, model documentation, and estimates across any number of spatial and time scales, and across several different carbon pools. We should recognize that initial data and information will not be uniform or consistent across countries. The IPCC has not yet addressed the question of how countries should report “new activities” and that countries have not necessarily collected the information needed in a systematic and consistent way.

The US is fully committed to ensuring that necessary country-specific data and information are available to support decision making in these negotiations. The U.S.

is currently conducting several analyses to more fully understand carbon in agricultural and forestry systems that will help guide our decision-making and improve our ability to measure and report changes in carbon stocks associated with these systems. Projects include:

- Estimating of changes in agricultural soil carbon stocks for the annual US greenhouse gas inventory (will complete our annual inventory) ;
- Improving our measurement of total forest carbon stocks and fluxes using the most recent 1997 forest inventory statistics (will improve and update annual inventory);
- Conducting basic research on carbon in rangelands, croplands, and forested land to improve inventories and carbon models (will provide scientific soundness of reporting and measurement conventions to meet transparency and verifiability criteria).

Each of these efforts will undergo thorough peer review and the results will be made publicly available. We encourage other countries to provide their country specific data and other relevant information. The U.S. is concerned about the current provision of inventory data by the Parties. It is important for all Parties to provide complete reports; fill in gaps in those reports provided to date; address questions on the IPCC methodologies; and work together to improve the quality and accuracy of the inventories. The United States continues to develop an estimate for CO₂ emissions and removals from soils due to agriculture. We anticipate having an estimate in our next inventory, thus making the U.S. inventory complete and comprehensive.

We recognize the important role of the IPCC, in providing scientific and technical guidance to the decision-making process. The IPCC has been requested to accomplish two tasks. The first is to provide technical information to aid the Parties through the Special Report. The second task is to develop a work plan addressing methodological issues raised in the IPCC Special Report in the context of the IPCC 1996 Revised Guidelines for National Greenhouse Gas inventories in the areas of agriculture and land-use change and forestry.

We are encouraged by the progress of the IPCC on the Special Report and the valuable interaction with the IPCC as evidenced by the IPCC involvement in the two recent

SBSTA workshops. The U.S. looks forward to the two upcoming events agreed to at SBSTA 10, and to working constructively through the Government review process to assist the IPCC in the preparation of the final IPCC Special Report. This document will help guide our decisions, such as on how to characterize and measure activities. We recognize that the Special Report may not answer all questions and will likely point out a need for further research.

Time line for decision making

The US believes the Parties must be in a position at COP6 to take decisions on new activities under Article 3.4, based on the work to be done over the next eighteen months. To facilitate this, we should agree at the next SBSTA meeting on a timeline similar to the schematic developed by SBSTA at its 10th session.

COP5

- progress report from the IPCC;
- side event on the draft report;
- discussions on how to use data and information to support the decision making framework and request that Parties provide such data and information
- discussions on how to operationalize Article 3.4 activities
- plans for July 2000 workshop;

SBSTA 12

- discussion of IPCC Special Report;
- discussion of data and information that supports decision making;
- discussion of COP6 decision

Land Use Workshop:

evaluation of Special Report in context of COP6 decision
discussion of specific views and recommendations from Parties;
evaluation of data and information
adoption of additional activities under Article 3.4

August 19 Draft pre-decisional document — do not cite or distribute

COP 6

recommend decision of additional activities under Article 3.4



dlashof@nrdc.org (Dan Lashof)
08/12/99 05:28:39 PM

Record Type: Record

To: Roger S. Ballentine/WHO/EOP, doniger.david@epamail.epa.gov, rama@whrc.org
cc:
Subject: Fwd: US Submission on Article 3.4

FYI--

This was sent to Margo Anderson earlier in the week.

-Dan Lashof

Forward Header

Subject:
Author: Dan Lashof
Date: 8/10/99 5:28 PM

Margo--

Below are some notes to follow up on yesterday's meeting. This is by no means a complete discussion, but I thought it would be useful to you to informally convey these thoughts on information needs and generic procedural issues. I believe that these apply regardless of the conclusion that the US ultimately comes to regarding how to handle article 3.4

-Dan Lashof
NRDC

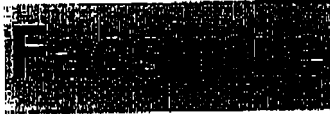
A preliminary list of candidate activities should be selected at COP5. This list would presumably consist of two sets: one set with very broadly defined activities (such as forest management, agriculture land management and range land management) and one set with more narrowly defined activities (e.g., changes in rotation length, changes in tillage practices, etc.). For each candidate activity, Parties shall provide the best possible estimate of:

1. The applicable land base.
2. The expected change in carbon stocks during CP1 under BaU activities.
3. The maximum potential for the activity to enhance carbon stock increases during CP1.
4. A proposed methodology for determining the BaU baseline and measuring the actual change in stock.
5. An assessment of the impact on sustainable development of including the activity

Generic procedural issues:

1. A Party deciding to apply any additional activity to CP1 must apply all of the approved additional activities.
2. A Party deciding to apply additional activities to CP1 must have in place a national system for monitoring and verifying changes in carbon stocks for the potentially applicable land base.
3. The land base for any activity used to generate credits in CP1 must be monitored in subsequent CPs and any decreases in carbon stocks shall generate debits.

Office of Global Change
Bureau of Oceans and International Environmental and Scientific Affairs
U.S. Department of State



To: David Sandalow, NSC/CEQ
Fax #: 456-2710
Phone #:
From: Duncan Marsh
Subject: clearance request on draft response letters to NGO
Date: 07/29/99
Pages: 17, including cover sheet

☐ Urgent☐ For Review☒ Please Comment☐ Please Reply

David,

← (and the letters)

Attached are the draft responses to ENGOs letters of May 25 (on sinks) and July 13 (on national communications, sinks and bunkers). The immediate use of these drafts are for Frank's briefing packet for the Loy/Ballentine briefing with NGOs on Monday, Aug. 2, 2:30-4:00pm which will focus on sinks but also discuss the other two issues. Following the briefing, we will consider whether we need to redraft these pieces, taking either the current detailed, substantive approach or a short, political assurances approach.

The response to the three-issue letter is a little empty on sinks now, after I deleted one of the two paras. I will ask Margot to provide a little more.

We would appreciate your comments on these by 3:00 Friday, if possible. Sorry for the rushed deadline.

Cc: Nigel, Dan R.,

Jeff, Mark

Office of Global Change
2201 C Street, Room 4330
Washington, DC 20520

tel.: (202) 647-4688
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MarshDR@state.gov

DRAFT - Do not cite or quote

Printed 07/29/99 9:17 PM

Dear Colleagues:

Thank you for your letter of July 13 regarding the June subsidiary body meetings of the UN Framework Convention on Climate Change (UNFCCC). We welcome the opportunity to clarify any misunderstanding of U.S. positions or tactics during those meetings.

Our positions and tactics during the subsidiary body meetings were fully consistent with the US commitment to transparency. The United States remains a strong advocate for transparency in the climate negotiations. As you know, the United States has been a leader in promoting the involvement of nongovernmental organizations in meetings of the Parties to the UNFCCC. Our governmental process and reporting is one of the most open in the world, as evidenced by the wealth of data and other information readily available on US emissions, climate change policy and related issues. We are one of the primary driving forces in the constant effort to improve inventory estimation and reporting, providing substantial scientific, technical and financial support for such efforts in the Intergovernmental Panel on Climate Change (IPCC) as well as the UNFCCC Subsidiary Body on Scientific and Technical Advice (SBSTA). Our reporting is thorough, straightforward and second to none, as evidenced by the UNFCCC in-depth reviews of our national communications. Our dedication to transparency is across the board, including the issues mentioned in your letter: reporting; land use, land use change and forestry; and bunker fuels.

National Communications and Inventory Guidelines

We welcome your attention to these crucial guidelines. Accurate and timely reporting is at the heart of efforts to understand and mitigate anthropogenic effects on the global climate system. Since it most directly relates to climate change, emissions data is the single most important information that must be reported. Improving the quality and timeliness of this reporting is therefore a key US objective. In fact, the US is one of a few nations pushing for full and timely annual inventory reporting, not just of data or aggregated estimates but of the assumptions and methods used in the inventory estimation process. Our goal is to provide observers with sufficient information to confirm the aggregate emissions data reported by Annex I Parties. In this manner, we are working diligently to build more accuracy and transparency into inventory reporting. Contrary to your perception, the US delegation was perfectly comfortable with using the term "shall" in relation to these requirements. At no time did the US delegation oppose the use of the term "shall" for inventory reporting requirements.

As was widely acknowledged at the SBSTA workshop on national communications in March, transparency can be diminished, not enhanced, by vague, unfocussed reporting. Some Parties noted that the sheer bulk of information currently being provided is overwhelming. With potentially more extensive reporting necessary under the Kyoto Protocol, this problem could become severe. The question then becomes: what information is absolutely necessary [and feasible to collect (?)] and what current reporting can be consolidated? In our view, high quality, timely and complete inventory information is the most important. With such information, observers will be able to reproduce a variety of other statistics, including the indicators mentioned in your letter.

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The US was therefore surprised when the Secretariat's draft guidelines expanded the focus on other, non-inventory reporting. The Secretariat's draft used the term "shall" in other reporting requirements more often than the current guidelines and much more often than in the requirements directly related to inventories. The US and other Parties had clearly noted in the March workshop that, for non-inventory reporting, it was important to consolidate the guidelines and distinguish between mandatory and optional requirements. The example regarding indicators mentioned in your letter was part of our effort to enhance the accessibility of reported information by focusing more on the most crucial information, particularly inventories.

Although it has not yet affected our position, we are increasingly concerned with the ability of other Annex I Parties ability to meet these requirements. The United States is providing technical and other assistance to the Parties with economies in transition (EITs) to improve their capacity to meet their reporting commitment. We are also very concerned with the recurring lag – as long as two years – in reporting by some other Annex I Parties. We would appreciate learning what efforts you have been making to assist the EITs and to urge other Parties to meet their commitments in a timely manner. In addition, we would appreciate hearing about your communications with other Parties on the need for the fullest possible annual inventory reporting.

LULUCF

The United States continues to recognize the importance of country-specific data in the debate over land use, land use change and forestry. We are looking forward to discussions on how such data should relate to the criteria and process for deciding how and which new activities should be included under Article 3.4. We also believe, of course, that discussion of country-specific data should not hinder development of the criteria and procedures for adding new activities. US actions during the subsidiary body meetings were fully consistent with this position.

Bunker Fuels

In order to reflect the unique challenges posed by international aviation and maritime transport, the Parties in Kyoto chose to deal with these sectors in a unique way separate from the national reduction commitments in Annex B. This choice is reflected in:

- Article 2.2, by which the Annex I Parties commit to work through the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) to pursue limitation or reductions in bunker fuel emissions;
- Article 5.2, by which the Parties adopted the IPCC methodologies that provide for reporting of bunker fuel emissions separately from national totals; and
- Decision 2/CP.3, paragraph 4, which recalls that the *Revised 1996 Guidelines for National Greenhouse Gas Inventories* of the IPCC state that bunker fuel emissions should not be included in "national totals," but reported separately.

Decision 2/CP.3, paragraph 4, also urges SBSTA to further elaborate on the inclusion of bunker fuel emissions in the "overall greenhouse gas inventories" of Parties. While we recognize that there are differing interpretations of this part of Decision 2/CP.3, we believe that a clear path

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forward exists to producing our shared goal of meaningful and timely reductions in emissions from the international aviation and marine sectors. There was agreement at SBSTA between the EU and ourselves that international bunker fuel emissions were not to be included in the national totals in the first budget period, but that actions to limit or reduce these emissions during this period were to occur through IMO and ICAO under Article 2.2 of the protocol. The U.S. has been and continues to be strongly supportive in working with these organizations to develop aggressive programs to reduce greenhouse gas emissions. We were also very pleased to note the recent action by ICAO to grant observer status for the first time to environmental NGOs to allow them to meaningfully participate in this process, a position the U.S. had strongly pushed. This action should enhance the transparency and, ultimately, the environmental effectiveness of actions taken by ICAO to address bunker fuel emissions and other environmental issues.

Both IMO and ICAO have taken up this task of developing programs to reduce or limit emissions and appear to be working toward a goal of concrete proposals for action by 2001. We believe that the focus of our energies should be to support these organizations in meeting this challenge. We welcome your efforts and suggestions in making this goal a reality.

Because there is agreement that the issue of allocation would not come into play until after 2012, if at all, we do not see the benefits, and we see some potential for harm, in focusing on this issue in the near-term. It makes sense, at a minimum, to wait and see what actions are proposed by ICAO and IMO. With this information, all countries will be in a better position of evaluating what positions they believe may be appropriate for future negotiations leading to a second budget period.

Finally, we would add that in addition to the work at IMO and ICAO on limiting emissions, we believe that our current priorities should include additional work on improving the reporting of data from these sectors as part of overall greenhouse gas inventories. This issue was highlighted as a shortcoming at SBSTA 10 and needs to be improved in the near-term for transparency and to serve as a basis for determining the effectiveness of future actions by ICAO and IMO. This was an important focus of our efforts in Bonn, and the U.S. will continue to actively participate in the IPCC and SBSTA processes to develop improved reporting guidelines for bunker fuels emissions.

Again, let us thank you for your letter. We look forward to continued dialogue with you on these and other issues related to climate change.

Sincerely,

Sincerely,

Frank Loy

Roger Ballentine

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Printed 07/29/99 9:17 PM

Drafted: OES/EGC - Jeff Miotke / Duncan Marsh 647-4069 or 647-4688 7/28/99

Cleared:

E - Anne Pence

EB - Mario Merida

G - Nigel Purvis

OES - Melinda Kimble

EPA - Steve Seidel

EPA - Bill Hohenstein

DOD - Dan Benton

USDA - Margot Anderson

WHCCTF - Jeff Seabright

NSC/CEQ - David Sandalow

OES to answer

US CLIMATE ACTION NETWORK

1367 Connecticut Avenue, NW, Suite 300
Washington, DC 20036
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FAX MEMORANDUM
Please Deliver Immediately

To: Frank Loy, 647-0753
Roger Ballentine, 456-6468

CC: Margo Anderson
Ken Andrasko
Peter Backlund
Rosina Bierbaum
Evan Bloom
Bill Breed
David Doniger
Joe Ferrante
David Gardiner
Mark Hambley
Bill Hohenstein
Heather Huppe
Ann Kinzig
Jeff Miotke
Adele Morris
Tom Peterson
David Sandalow

FROM: Nathalie Eddy, USCAN, International Coordinator

DATE: July 13, 1999

PAGES: 6

RE: US negotiating tactics in Bonn

Dear Messrs. Ballentine and Loy,

Attached please find a letter and memo from several US Climate Action Network members.

Sincerely,

Nathalie Eddy

Nathalie Eddy
International Coordinator, USCAN

July 13, 1999

Mr. Frank Loy
Under Secretary
Global Affairs
Department of State, Room 7250
2201 C Street, NW
Washington, DC 20520

Mr. Roger Ballentine
Deputy Assistant to the President for Environmental Initiatives
The White House, Room 107, East Wing
Washington, DC 20502

Dear Messrs. Loy and Ballentine,

A number of US Climate Action Network (USCAN) members would like to bring to your attention some very disconcerting negotiating tactics and policy positions of the U.S. delegation at the most recent session of the subsidiary bodies to the UNFCCC held in Bonn, May 31-June 11, 1999. We found the U.S. behavior to be surprisingly inconsistent with the U.S.' stated support for transparency and sound science in the climate change negotiations.

While the U.S. played a constructive role in Bonn on certain issues, it was dangerously off track on the items of national communications data, land-use, land-use change and forestry (LULUCFs) and international bunker fuels. The U.S. position on all three of these issues demonstrated an alarming lack of commitments to transparency, core principles of information sharing, and consideration of relevant data. This data forms the foundation of the Convention, and ensures the credibility of Parties' inventories and targets. By seemingly discrediting these issues in pursuit of negotiating tactics, the U.S. is contributing to the destabilization of the climate change agenda.

Attached please find a brief report on U.S. behavior in each of these above-mentioned arenas at the Bonn sessions. Please feel free to contact us if you would like more details on any of the issues raised. We look forward to working with you to strengthen the U.S. position. As you prepare for the next round of negotiations in Bonn, October 25-November 5 we would welcome the opportunity to meet with you to discuss these or other issues at greater length.

Sincerely,

Donald Goldberg
Center for International Environmental Law (CIEL)

Jon Sohn
Friends of the Earth (FoE)

Gary Cook

Greenpeace

Michael Noble
Minnesotans for an Energy-Efficient Economy

Boni Biagini
National Environmental Trust (NET)

Dan Lashof
Natural Resources Defense Council (NRDC)

John Passacantando
Ozone Action

Karen Hopfl-Harris
Physicians for Social Responsibility (PSR)

Dan Becker
Sierra Club

Alden Meyer
Union of Concerned Scientists (UCS)

Jennifer Morgan
World Wildlife Fund (WWF)

James K. Wyerman
20/20 Vision

UNFCCC Negotiating Sessions, SB10
Bonn, May 31-June 11, 1999

Report on U.S. negotiating tactics

National Communications and Inventory Guidelines

The unfortunate perception created in this contact group is that the U.S. does not support the transparent and full reporting of emissions data. The U.S. seems especially opposed to reporting on the progress it has made in reducing emissions through its policies. This contradicts the U.S. commitment to provide such a progress report under the UNFCCC (ratified by the U.S. Senate). Such a non-transparent approach opposes the highly prized "freedom of information" that is supposed to be paramount in American society. It is also inconsistent with standards in U.S. environmental policy as evidenced in the U.S. Toxic Release Inventory.

Together, national communications and inventory guidelines provide the basis for evaluating compliance with the Framework Convention on Climate Change and the Kyoto Protocol. These reports also allow one to evaluate the overall effectiveness of the treaties. For example, if Japan did not seem to be on a trajectory that would level off their emissions by 2006, one could question their ability to comply with the Kyoto Protocol.

The previous guidelines were approved in 1996 at COP2, but the IPCC has since provided improved recommendations.

The U.S. took on a fairly puzzling stance in the contact group discussions on inventory guidelines and national communications. Although the U.S. has been making a commendable investment in improving national inventory accuracy and transparency through the IPCC process, the general tenor of U.S. interventions in Bonn was to obfuscate the reported data and make it more difficult to consume. Here are just two examples that cause concern:

- **SHALL vs. SHOULD:** Almost all of these guidelines are couched using the terms "shall" or "should" such as, "Parties shall report the following information." The EU was the only group of countries arguing in favor of using the word "shall." This is a stronger, more binding, word. It is confusing why the U.S. did not support the EU on this issue. One would think that the U.S. would want it to be a requirement for all data that is to be reported to be required. This would allow the U.S. to evaluate the progress of others, and to determine whether another country has sufficient emissions credits to sell under an international emissions trading regime. Without solid data, it would be virtually impossible to engage in trading without substantial risk, and therefore, more costly. Reporting should not be optional. Does this mean the U.S. does not intend to be fully transparent and report all the data that it should to the world community and its own citizens?

By failing to support the use of the word "shall" the U.S. is weakening the existing mandatory guidelines. In addition, the Kyoto Protocol *mandates* such reporting when it states under Article 7, that "Each Party shall incorporate in its national communication the supplementary information necessary to demonstrate compliance with its commitments." The Framework Convention (Art. 12.2) is equally clear: "Each developed country Party and each other Party included in Annex I shall incorporate in its communication the following elements of information (emphasis added)."

- **INDICATORS:** The U.S. generally argued for eliminating the use of indicators, a standard practice in data presentation. For example, in a paragraph about measuring the results of

greenhouse gas mitigation, the U.S. made the following proposal (deletions stricken out, additions in bold):

Greenhouse gas mitigation monitoring and results. This should cover a description of the way in which progress with policies and measures to mitigate greenhouse gas emissions is monitored and evaluated over time. Institutional arrangements for monitoring of greenhouse gas mitigation policy may also be reported in this context. ~~Parties may also provide information about indicators which assist in the process of monitoring and evaluation. Such indicators may relate to aggregate statistics or detailed sectoral analysis.~~ (U.S.A) Parties may provide the results of monitoring activities, including values of indicators, if used, over time. (U.S.A)

A later draft of the negotiating text completely removed ANY reference to the use of indicators.

The use of indicators is a standard practice. An indicator is simply a combination of raw data, such as per capita emissions (emissions/population). It makes the data more useful and it also allows for easier comparison. Therefore, removing the use of indicators (or not requiring it) will make the reported data more difficult to understand. The U.S. delegate argued that indicators make the data more uncertain, but this is not a compelling argument. A great body of literature has been developed around the use of indicators. They are used all the time, as seen in the UNDP Human Development Index, the WRI Environmental Quality Index, or the World Bank Wealth of Nations Index.

These are but two examples that illustrate our concerns with the U.S. position at the recent Bonn session on national communications data and the review of inventory guidelines. The U.S. performance raised several concerns: Is the U.S. trying to hide the effects of policies on their emissions? Why is the U.S. trying to reduce the usefulness of the data and make it more difficult for average citizens to understand? Why would the U.S. be interested in making reporting requirements optional?

LAND-USE, LAND-USE CHANGE AND FORESTRY (LULUCF)

SBSTA10 was tasked with addressing the policy and procedural elements of taking a decision on the land-use change and forestry articles of the Kyoto Protocol. During the two weeks of SBSTA10, the "sinks contact group" met daily, working through the various elements of the draft conclusions for the session. The most contentious issue discussed was the role of country-specific data and information in the decision-making framework for Articles 3.3 and 3.4 of the Kyoto Protocol. In other words, should countries be requested to provide estimates of the carbon sequestration potential in their countries from various activities e.g. cropland, rangeland and forestry management? The role of data in this context is multi-fold.

Most countries now recognize that the land-use change and forestry decisions that were made in Kyoto were not well-informed due to a lack of data. Even if data had been provided, discussions on these items came much too late in the process to weigh the various factors adequately. For that reason, the Protocol now includes rather incomplete and problematic articles regarding LUCF. Countries attempted in their own calculations to figure the impact of the inclusion of afforestation, reforestation and deforestation on their Kyoto targets. This led to statements by the U.S. that the sinks language in the Protocol would account for 3% of the U.S. target.

It would be more effective to have these types of calculations occur in a more transparent and timely fashion. It is for this reason that the European Union and others at SBSTA10 requested

that country-specific data be part of the decision-making framework, i.e. one of the criteria that is taken into account when deciding which new and additional activities to add to Article 3.4 of the Protocol. The U.S. rejected this call for data throughout most of the SBSTA10 sessions. The U.S. did, however, in the sinks contact group, support language in the draft conclusions on the importance of such data. Those conclusions stated that "Given the importance of country-specific data and information, and of a decision-making framework, the SBSTA decided to begin the consideration, at its eleventh session, of the need for country-specific data and information and its relationship to a decision-making framework in the context of the requirements of the Kyoto Protocol." (FCCC/SBSTA/1999/L.9/(f)) Upon this understanding, members of the Climate Action Network noted that the U.S. had recognized the need for transparency and full provision of information, and we therefore applauded the U.S. for doing so.

This, however, was not the case. During the last session of the SBSTA, the U.S., along with others, moved to delete the first crucial clause of the sentence noting the importance of country-specific data. Such a position opposes to the principles of transparency that the U.S. has supported throughout these negotiations. It appears that the U.S. does not wish to provide data at this time on this highly complex and controversial article of the Protocol. This information is readily available, and one estimate was actually presented in Bonn by an independent scientist from Colorado State University. Preventing the inclusion of this information in the decision-making process is harmful to the international process in general and undermines the foundation of the Convention process. Full data disclosure should be a principle of operation of the United States in these negotiations, thus setting an example for others across the globe.

Bunker Fuels

Throughout the SBSTA10 meeting, the U.S. delegation tried to undermine the text proposed by the SBSTA Chairman on the issue of international bunker fuels. In particular, the U.S. called into question the implications of Decision 2/CP.3, and singled itself out as the only Party to deny that this decision calls for a discussion of the allocation of emissions of international bunker fuels.

Decision 2/CP.3 on Methodological Issues states in para. 4 that "emissions based upon fuel sold to ships or aircraft engaged in international transport should not be included in national totals, but reported separately; and urges the SBSTA to further elaborate on the inclusion of these emissions in the overall greenhouse gas inventories of Parties."

Furthermore, although the Kyoto Protocol requires ICAO (and IMO) to "pursue limitation or reduction of emissions from bunker fuels," a concrete proposal has yet to be placed on the table from these organizations. The U.S. suggestion of leaving the entire responsibility to ICAO and IMO would render a medium term decision highly unlikely. Such a delay in the further negotiation of a proposal is unacceptable.

Prior to SBSTA10, it seemed that the U.S. agreed on the importance of closing the international bunker fuel loophole in time for the negotiation of the second commitment period targets. This, however, is clearly not the case as the U.S. delegation did not see the need for Parties to submit their views on the IPCC Special Report on Aviation, nor the necessity for a formal review of the IPCC Special Report and its implications by the SBSTA or a future COP. Fortunately, the U.S. proposal to generally disregard the IPCC Special Report on Aviation was viewed unfavorably by the majority of Parties, and the final SBSTA10 decision calls for submissions to the secretariat by August 16. SBSTA11 and COP5 offer an opportunity for the U.S. to join other Parties in working toward closing the international bunker fuel loophole and to elaborate an approach to bunker fuel allocation into Parties' targets for the second commitment period.

not in ICAO

– DRAFT –

, 1999

Howard Geller, American Council for an Energy-Efficient Economy
Donald Goldberg, Center for International Environmental Law
Annie Petsonk, Environmental Defense Fund
Gary Cook, Greenpeace
James Lyon, National Wildlife Federation
Daniel Lashof, Natural Resources Defense Council
Kert Davies, Ozone Action
Stephanie Matheny, Seattle Audubon Society
Ann Mesnikoff, Sierra Club
Katherine Silverthorne, U.S. PIRG
Emily Smith, National Environmental Trust
Peter Frumhoff and Darren Goetze, Union for Concerned Scientists
Kilaparti Ramakrishna, Woods Hole Research Center
Jennifer Morgan, World Wildlife Fund
Tia Nelson, The Nature Conservancy
Carol Werner, Environmental and Energy Study Institute
Jim Jontz, American Lands Alliance
Joan Reiss, California Wilderness Coalition
Jym St. Pierre, Restore: The North Woods
Rene Voss, Earth Island Institute
Laurie Wayburn, The Pacific Forest Trust
Randall White, Georgia Forest Watch

Dear Colleague,

Thank you for your letter of May 25th regarding land use, land use change and forestry (LULUCF). As you know, we are actively supporting the work on the *IPCC Special Report on Land Use, Land Use Change and Forestry* to help clarify issues that arose under the Kyoto Protocol. We are encouraging the IPCC to examine the full range of options to Article 3.3 and 3.4, and identify those that, over the long run, will provide the greatest incentives for Parties to minimize emissions and enhance sequestration from their forest and agricultural resources -- consistent with sound science. Naturally our positions on these issues will take into account the results of the IPCC Special Report.

You are correct that, at this time, the United States advocates a comprehensive, or full, carbon accounting for sequestration and emissions of greenhouse gases from the land use, land use change and forestry (and all sources). By ensuring that all verifiable emissions and sequestration are counted we will provide the greatest possible incentive for the conservation and enhancement of carbon reservoirs in our agricultural and forestry systems. Promoting sequestration in agriculture and forestry may in turn provide important ancillary benefits while helping to address climate change. Including a broad range of LULUCF activities under the Protocol is therefore crucial over the long term.

– DRAFT –

1 We would also like to respond to your statement that the United States took the position post-
2 Kyoto that sinks would account for only 3% of the U.S. target. In fact, the sinks provision in the
3 Protocol that the United States was referring to was Article 3.7 -- which excludes sinks from the
4 1990 baseline. Our original goal of stabilizing U.S. emissions at 1990 levels assumed that the
5 1990 baseline would be lowered by sink removals; however, at Kyoto, it was agreed in Article
6 3.7 to exclude sinks from baselines. As the State Department Fact Sheet of January 15, 1998,
7 states: "Because the 1990 level baseline is thus higher under the Kyoto agreement, the U.S.
8 target becomes somewhat less stringent. Specifically, had the U.S. maintained the same level of
9 effort assumed by the President in October, and no other factors had changed, the shift in the
10 accounting method for carbon-absorbing activities would, alone have transformed the President's
11 goal of 1990 levels into a goal equivalent to at least 3% below 1990 levels." The Fact Sheet
12 went on to state parenthetically that "...certain carbon-absorbing activities will count against
13 emission reduction commitments in the budget period." However, this reference to Article 3.3
14 and 3.4 did not involve any quantification.

15
16 In Kyoto Parties clearly understood that Article 3.4 could provide additional carbon benefits to
17 countries whose land use activities led to net sequestration, although we did not know the actual
18 quantitative effect of adding 3.4 activities on our own country's targets or that of any other
19 country. We approached the negotiation with the understanding that in order to capture the real
20 effect of LULUCF impacts on the atmosphere it was necessary to go beyond Article 3.3. In
21 addition, Article 3.4 could provide a mechanism to help deter land practices that lead to carbon
22 emissions. We had every expectation that a comprehensive evaluation of the carbon impacts of
23 land use practices in the United States would help us meet our target and, in the process, provide
24 a significant environmental tool to encourage further expansion of the many environmental
25 benefits provided by improved land use practices. Further we maintain that an integrated and
26 comprehensive approach is required as part of our long-term commitment to address this issue.

27
28 Once again allow us to reiterate our invitation to share with us your thoughts on this issue and on
29 other aspects of a possible framework for including new LULUCF activities. How, for instance,
30 might Parties demonstrate that emissions and sequestration from proposed activities are human-
31 induced, measurable, and verifiable? We would also appreciate your suggestions on the
32 appropriate process under the Protocol for deciding whether proposed activities meet these
33 criteria.

34
35 Thank you again for your interest. We look forward to receiving further input from you on this
36 and other climate change issues.

37
38 Sincerely,

Sincerely,

39
40
41
42 Frank Loy
43 Under Secretary
44 Global Affairs

Roger Ballentine
Deputy Assistant to the President
for Environmental Initiatives

- DRAFT -

1 Drafter: JBrennan 647-4689]
2 Document: H:\CCIssues\Sinks\Ltr WH-Loy to EnviroLUCF ver3
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4 Cleared:
5 OES/FO:MKimble
6 G:NPurvis
7 EB:MMarida
8 E:APence
9 USDA:MAAnderson
10 EPA:BHohenstein
11 DOE:BBreed
12 Treasury: AMorris
13 OSTP: AKinzig
14 WH:DSandalow
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*original series
sent to G + WH*

American Council for an Energy-Efficient Economy • Center for
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Federation • Natural Resources Defense Council • Ozone Action
• Seattle Audubon Society • Sierra Club • U.S. PIRG • Union of
Concerned Scientists • Woods Hole Research Center • World
Wildlife Fund

May 25, 1999

Todd D. Stern
Assistant to the President
for Special Projects
Special Projects Office
The White House
Room G/WW
1600 Pennsylvania Avenue, NW
Washington, D.C. 20500

Frank E. Loy
Under Secretary
Global Affairs
Department of State
Room 7250
2201 C Street, NW
Washington, D.C. 20520

Dear Messrs. Stern and Loy:

Within the past several months the Administration has made known some of its views on land use, land use change, and forestry (LUCF) under the Kyoto Protocol. We are writing, first, to request that the Administration clarify its position with regard to certain critical issues, and second, if our present understanding of the Administration's position is correct, to express our concerns about that position.

It is clear from the U.S. submissions to the climate secretariat, as well as presentations and statements in recent briefings and workshops, that the Administration favors a "comprehensive" approach to LUCF under the Protocol. It appears that the Administration seeks to enable Parties to take credit for much, if not all, of the

sequestration attributable to biotic sinks that can be scientifically verified, regardless of whether this sequestration exceeds levels projected under "business-as-usual."

Presumably, the United States would seek credit for this sequestration during the first commitment period, by considering forest, agriculture and range management to be additional activities under Article 3.4 of the Protocol.

If this correctly characterizes the Administration's views on Article 3.4, we are deeply troubled. According to the most recent available U.S. government study, such an approach could give the United States 192 million tons of carbon equivalent credit each year during the first commitment period for "business-as-usual" activities, not including agricultural soils and rangeland.¹ This is equivalent to a 13% increase in the U.S. assigned amount during the first commitment period, or approximately a 40% reduction of the level of effort relative to reference case projections that would be required for the United States to meet its Kyoto target. Put another way, it is tantamount to converting the U.S. target from a 7% reduction to a 5% *increase* from 1990 levels. Such a result would be a substantially weaker commitment than President Clinton originally proposed prior to the Kyoto Conference.

In Kyoto parlance, the U.S. approach, as we understand it, amounts to a full "gross/net" accounting of sinks. The compromise adopted in Kyoto, however, was a *limited* gross/net approach. As evidence that the Administration understood and accepted the Kyoto bargain, we note that it announced immediately afterward that the sinks language in the Protocol would account for 3% of the U.S. target—not the 13% change that could result from a full gross/net approach.

In deciding which new activities should be adopted under Article 3.4, care must be taken to preserve the level of effort agreed for the first commitment period by each of the Annex I Parties. Allowing Parties to receive substantial additional credit for "business-as-usual" activities would undermine the Protocol and put the climate at greater risk.

If we have misstated the U.S. position on LUCF, or the impact it would have on the level of effort required of the United States during the first commitment period, we request clarification. If, on the other hand, our characterization of the U.S. position and its implications for the first commitment period is correct, we request that the position be revised to take account of our concerns.

Respectfully,

¹ Joyce, L.A. (ed.), *Productivity of America's Forests and Climate Change*, USDA Forest Service, General Technical Report RM-271. September 1995.

Howard Geller
American Council for an Energy-
Efficient Economy

Donald Goldberg
Center for International Environmental
Law

Annie Petsonk
Environmental Defense Fund

Gary Cook
Greenpeace

James Lyon
National Wildlife Federation

Daniel Lashof
Natural Resources Defense Council

Kert Davies
Ozone Action

Stephanie Matheny
Seattle Audubon Society

Ann Mesnikoff
Sierra Club

Katherine Silverthorne
U.S. PIRG

Emily Smith
National Environmental Trust

Peter Frumhoff and Darren Goetze
Union of Concerned Scientists

Kilaparti Ramakrishna
Woods Hole Research Center

Jennifer Morgan
World Wildlife Fund

cc: David Sandalow, CEQ
David Gardiner, EPA
Margo Anderson, USDA
Interagency "Sinks" Group

Send to:

*Mr. Daniel Lashof
Natural Resources Defense Council
1200 NY Ave NW
Suite 400
Wash DC 20005*

*you can
call
Nigel Purvis
to confirm
the addressing.*



Roger
United States Department of State

Washington, D. C. 20520

- They want to propose some limitations on applicability of 3.4 activities in first budget period.

BRIEFING MEMORANDUM
S/S

SENSITIVE BUT UNCLASSIFIED

TO: G - Under Secretary Loy

FROM: OES - R. Tucker Scully, Acting *RAM* for

SUBJECT: Meeting with environmental NGOs, Monday, August 2, 1999, at 2:30-4:00 p.m. in Room 1207

Meeting Details

You will meet with about 25 representatives of environmental non-governmental organizations (ENGOS) on Monday, August 2, 1999, at 2:30 p.m. in Room 1207. We have set aside an hour and a half for the meeting. Roger Ballentine and David Sandalow will participate, as will technical experts from EPA and USDA. The meeting's purpose is to discuss their two letters (May 25 and July 13), which express concern about several aspects of U.S. climate change policy. We have drafted responses to both letters; they are in the final stages of interagency clearance but have not yet been sent. Our objectives for the meeting are to:

- show that the Administration is paying attention
- ensure that we understand their concerns
- explain the rationale for our approaches and correct misunderstandings
- adjust our direction, if appropriate, and
- elicit their support

Background - May 25 Letter

The May 25 letter from the ENGOS dealt with sinks. It asked that we clarify our position, and expressed concern about our policies. The authors fear that the Administration may be seeking to weaken its Kyoto commitment by adding new sequestration activities (e.g.,

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forest, agriculture and range management) under Article 3.4. They question these additions on three grounds:

- 1) they represent "business-as-usual" in many cases, with no net gain to the environment
- 2) their inclusion would upset the level of effort agreed for the first commitment period by each of the Annex I Parties (i.e., "renegotiate Kyoto")
- 3) their inclusion would undermine the Protocol and put the climate at greater risk

If their understanding is inaccurate, the authors ask for clarification. If not, they ask that the U.S. position be "revised" to take into account their concerns. The underlying principle they espouse is adherence to the level of effort for the first commitment period represented by Annex I commitments now contained in Annex B to the Kyoto Protocol.

The authors fear that our current approach would increase the U.S. assigned amount by 13 percent - they allege that this would change our 7 percent reduction commitment to a 5 percent increase from 1990 levels.

Sinks -- U.S. Position

Article 3.4 allows for expanding the list of human-induced sink activities that may be used to offset emission limitation commitments (e.g., sequestration in agricultural soils, land use changes, forest conservation practices) if Parties can agree on them by consensus.

Any such decision would apply in the second commitment period and later (i.e., after 2012); but a Party could also choose to apply the decision to offset its commitment in the first budget period, if the activities claimed had taken place since 1990.

"pull back" provision

Environmental NGOs largely see the Article 3.4 issue in terms of how it will affect the U.S. target in the first budget period, and they oppose weakening that commitment through the addition of "business-as-usual" activities.

But there are two issues at work here, and it may be useful to separate them:

- 1) what makes sense in terms of the development of the Convention and our efforts to address climate change over the long term; and
- 2) how would decisions that make sense in that context affect commitments in the first budget period?

We believe that it is important to "get it right" for the long term. Separately, we can consider whether and to what extent Parties should be able to benefit from such a decision in the first commitment period.

Now is the time to come to grips with the real issues surrounding the potential addition of new categories of activities - can they be accurately measured, monitored and verified? This is what the Intergovernmental Panel on Climate Change (IPCC) is seeking to do, among other things, in its Special Report on Land-Use, Land-Use Change and Forestry (LULUCF) that will be completed later this year. We should base our decisions on sound science and on what makes sense over the long term. This is fully consistent with the "comprehensive approach" we have long endorsed.

We can deal later with the issue of how these decisions that make sense for the long term would affect commitments in the first budget period. At the same time, we acknowledge that all Parties will be anxious to preserve the delicate balance achieved in Kyoto. Because of this, and because additional categories under Article 3.4 can only be added by consensus, we anticipate that Parties will approach this exercise conservatively, based on sound science.

July 13 Letter

On July 13, many of the same organizations wrote a longer, more comprehensive letter that raised three sets of issues:

- 1) national communications data
- 2) land-use, land-use change and forestry
- 3) international bunker fuels

The authors of this letter asserted that, "The U.S. position [as reflected by actions of the U.S. delegation at the June meetings in Bonn of the Convention's subsidiary bodies] demonstrated an alarming lack of commitments to

transparency, core principles of information sharing, and consideration of relevant data." The three main areas of concern to the authors are described below.

National Communications and Inventory Guidelines

The authors contend that U.S. "behavior" in Bonn created the impression that the United States does not support transparent and full accounting of emissions data. They maintain that the "U.S. seems especially opposed to reporting on the progress it has made in reducing emissions through its policies." While giving the Administration high marks for its efforts to improve national inventory accuracy and transparency through the IPCC process, the authors criticize our stance in Bonn, saying that "the general tenor of U.S. interventions... was to obfuscate the reported data and make it more difficult to consume."

The authors cite two examples: U.S. "failure" to support the E.U. in advocating use of the word "shall" versus "should" in the guidelines for national communications, and lack of U.S. support for the use of indicators, which assist in the process of monitoring and evaluation. The authors ask, "Is the U.S. trying to hide the affects of policies on their emissions? Why is the U.S. trying to reduce the usefulness of the data and make it more difficult for average citizens to understand? Why would the U.S. be interested in making reporting requirements optional?"

Communications and Inventories -- U.S. Position

Since it most directly relates to climate change, emissions data is the single most important information that must be reported. Improving the quality and timeliness of this reporting is therefore a key U.S. objective. In fact, the U.S. is one of the few nations pushing for full and timely annual inventory reporting, not just of data or aggregated estimates but of the assumptions and methods used in the inventory estimation process. Our goal is to provide observers with sufficient information to confirm the aggregate emissions data reported by Annex I Parties. In this way, we are working diligently to build more accuracy and transparency into inventory reporting.

In Bonn, contrary to the view expressed by the authors, the U.S. delegation was perfectly comfortable

using the term "shall" in relation to greenhouse gas inventory requirements; at no time did the delegation oppose use of the term "shall" for inventory reporting requirements. The U.S. delegation did oppose the use of "shall" in relation to certain other, non-inventory reporting requirements, as explained below.

At a SBSTA workshop on national communications in March, participants noted that transparency can be diminished, not enhanced, by vague, unfocussed reporting. Some Parties noted that the sheer bulk of information now being provided is overwhelming. With even more extensive reporting likely to be necessary under the Kyoto Protocol, this problem could become severe. The issue then becomes: What information is absolutely necessary (and feasible) to collect, and how can current reporting be streamlined? In addition, participants at the workshop also noted that, for non-inventory reporting, it was important to distinguish between mandatory and optional requirements.

We have taken the view that high quality, timely and complete inventory information is the most important. With such information, observers are able to reproduce a variety of other statistics.

In Bonn, we opposed the Secretariat's effort to extend use of the word "shall" to a variety of other, non-inventory, reporting requirements. We did so both because some of these requirements are unfocussed (for example, what are "new and additional" financial resources?), and because of the burden involved, particularly for less advanced members of Annex I, e.g., the Economies in Transition. In the discussion over "indicators" we sought to enhance the accessibility of reported information by focussing on the most critical information, particularly inventories.

We are increasingly concerned about the ability of other Annex I Parties to meet their overall reporting requirements. We are providing technical and other assistance to EIT Parties to improve their capacity to meet these requirements. At the same time, we are deeply concerned at the recurring lag - as long as two years - in reporting by some other Annex I Parties. Extending mandatory reporting requirements, particularly to more marginal, less focussed issue areas, has significant implications for Parties' abilities to provide accurate,

timely reports with respect to information vital to combating global warming.

Sinks

The authors believe that national estimates of the carbon sequestration potential in each country from various activities, e.g., cropland, range land and forestry management, will be important to decisions that will be taken under Article 3.3 and 3.4 of the Kyoto Protocol. They note that the E.U. and others asked that such estimates be part of the decision-making framework, i.e., one of the criteria taken into account when deciding which new or additional activities may be added to Article 3.4 of the Protocol. They maintain that, while the U.S. delegation supported such a criterion in the sinks contact group in Bonn, the U.S. and others moved to delete an important clause -- "Given the importance of country-specific data and information, and of a decision-making framework" -- in the final session of the Subsidiary Body on Scientific and Technical Advice (SBSTA).

In their view, "such a position opposes to the principle of transparency that the U.S. has supported throughout these negotiations." They maintain that these data are readily available, but that "it appears that the U.S. does not wish to provide data at this time on this highly complex and controversial article of the Protocol." They believe that, "Full data disclosure should be a principle of operation of the United States in these negotiations, thus setting an example for others across the globe."

U.S. Position

ENGO criticism on this point likely results from a misunderstanding of our position and of our assessment of the tactical situation in the final SBSTA plenary.

We recognize the importance of country-specific data in the debate over land use, land use change and forestry (LULUCF). We look forward to the discussions on how such data should relate to the criteria and process for deciding how and which new activities should be included under Article 3.4. In our view, however, discussion of country-specific data should not hinder the development of criteria and procedures for adding new activities.

In the final SBSTA discussion in Bonn, another Party questioned whether it was appropriate to include a reference anywhere in the decision to a "decision-making framework." Whereupon, still another Party seized the opportunity to reopen the issue of whether the Parties could even begin discussing a decision-making framework over the next year - something we have felt to be very important to making further progress on Article 3.4.

At that juncture, the SBSTA Chair suggested deleting the clause. We worried then that the entire sentence might disappear. For this reason, we (and other delegations) supported the Chair's suggestion - to save the operative portion of the sentence, which we accomplished.

In other words, this was a judgment call, and our judgement was to agree with the Chair's suggestion to delete the questioned clause in order to save the operative portion of the sentence.

Bunker Fuels

The authors allege that the U.S. delegation in Bonn tried to undermine the text proposed by the SBSTA Chairman on the issue of international bunker fuels (fuels used for international aviation and marine transport). "In particular," they say, "the U.S. called into question the implications of Decision 2/CP.3, and singled itself out as the only Party to deny that this decision calls for a discussion on the allocation of emissions of international bunker fuels."

The authors seem to acknowledge, as did the EU in Bonn, that Decision 2/CP.3 rules out allocating international bunker fuels to national totals (i.e., including emissions from bunker fuels in national targets) for the first commitment period. But in their view, it is important now to work toward "closing the international bunker fuels loophole and to elaborate an approach to bunker fuel allocation into Parties targets' for the second commitment period."

They contend that, "the U.S. suggestion of leaving the entire responsibility to ICAO and IMO would render a medium term decision highly unlikely" and that, "such a delay in the further negotiations of a proposal is unacceptable."

The authors were particularly disturbed because "the U.S. delegation did not see the need for Parties to submit their views on the IPCC Special Report on Aviation, nor the necessity for a formal review of the IPCC Special Report and its implications by the SBSTA or a future COP." They were relieved that the final SBSTA decision nevertheless calls for Parties to submit views to the Secretariat by August 16.

U.S. Position

While there was agreement in Kyoto that control of bunker fuels emissions would be pursued through the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO), and that these emissions "should not be included in national totals, but reported separately", Decision 2/CP.3 also "urges SBSTA to further elaborate on the inclusion of these emissions in the overall greenhouse gas inventories of Parties." While the U.S. has interpreted this clause to refer to the need for improved reporting of bunkers emissions data, others have read it as a call to reconsider allocation to national totals (i.e., inclusion in national targets).

Because the Kyoto targets are fixed, there seems to be agreement that the issue of allocation will not come into play until after 2012. For this reason, we see no benefit in focussing on this issue in the near term.

In fact, efforts to deal with this issue in the near term under the Convention could raise questions about the exemption for military operations, which is also contained in Decision 2/CP.3. We have gone to great lengths to rebut accusations that the Kyoto Protocol will somehow undermine our national security. It would not be prudent to run this risk in order to resolve an issue that cannot arise until, at the earliest, the second commitment period.

At a minimum, we think it makes sense to see what actions ICAO and IMO take to limit or reduce these emissions in the period before 2013. After considering those actions, Parties will be in a better position to evaluate what further steps, if any, may be appropriate in future negotiations leading to a second budget period.

With the ENGOs, we should emphasize that the focus of bunkers control efforts needs to be on ICAO and IMO, and that spending time and valuable political capital on second budget period issues now is counter-productive. We should applaud the recent ICAO decision to grant environmental NGOs observer status. This action should enhance transparency and, ultimately, the environmental effectiveness of actions taken by ICAO to address bunker fuel emissions and other environmental issues.

We should also highlight the need for further methodological work to improve the quality, consistency and comparability of bunkers emissions data reporting. Finally, we should welcome the IPCC Special Report on Aviation and the Global Atmosphere, which will soon be taken up by ICAO.

Attachments:

- Tab A - Talking Points
- Tab B - ENGO Letter of May 25
- Tab C - Draft Administration Response
- Tab D - ENGO Letter of July 13
- Tab E - Draft Administration Response

Drafted:OES/EGC:DAREIFSnyder:647-3935:7/31/99

Clearance: OES/EGC:JAMiotke - ok
OES/EGC:DMarsh - ok
OES/EGC:JBrennan - ok
L/OES:SKBiniaz (info)
OES:MGHambley - ok
G:NPurvis - ok



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constituencies\ENGO Briefer1, 8-2-99.doc

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Talking Points

Welcome

- First, let me thank you and your organizations for coming today, and for your letters of May 25 and July 13.
- We have wanted to hold this meeting to discuss the points raised in those letters and to clarify our position with respect to them.
- Having reviewed the substance of the letters in detail, it would seem that, for the most part, we have the same objectives, although we could do a better job of explaining some of our tactical approaches and the reasons for them.
- I would like to walk through both the May 25 letter and the July 13 letter to address each of the points raised; along the way, I am sure further questions will arise, and we will do our best to respond.
- We have a number of our senior climate change officials and experts with us today, and perhaps it would be best to start with a few introductions.

May 25 Letter

- Turning first to the May 25 letter, we understand that there is concern about additional activities under Article 3.4 of the Kyoto Protocol for several perceived reasons:
 - 1) they represent "business-as-usual" in many cases, with no net gain to the environment
 - 2) their inclusion would upset the level of effort agreed for the first commitment period by each of the Annex I Parties
 - 3) their inclusion would undermine the Protocol and put the climate at greater risk

- As you know, Article 3.4 allows for expanding the list of human-induced sink activities that may be used to offset emission limitation commitments (e.g., sequestration in agricultural soils, land use changes, forest conservation practices) if Parties can agree on them by consensus.
- Any such decision would apply in the second commitment period and later (i.e., after 2012); but a Party could also choose to apply the decision to offset its commitment in the first budget period, if the activities claimed had taken place since 1990.
- In my view, there seem to be two issues at work here, and it may be useful to separate them:
 - 1) what makes sense in terms of the development of the convention and our efforts to address climate change over the long term; and
 - 2) how would decisions that make sense in that context affect commitments in the first budget period?
- We believe that it is important to "get it right" for the long term.
- Separately, we can consider whether and to what extent Parties should be able to benefit from such a decision in the first commitment period.
- Now is time to come to grips with the key issues surrounding the potential addition of new categories of activities - can they be accurately measured, monitored and verified?
- This is what the Intergovernmental Panel on Climate Change (IPCC) is seeking to do, among other things, in its Special Report on Land-Use, Land-Use Change and Forestry (LULUCF) that will be completed later this year.
- We should base our decisions on sound science and on what makes sense over the long term.
- We can deal later with the issue of how these decisions that make sense for the long term would affect commitments in the first budget period.

- At the same time, we acknowledge that all Parties will be anxious to preserve the delicate balance achieved in Kyoto. Because of this, and because additional categories under Article 3.4 can only be added by consensus, we anticipate that Parties will approach this exercise conservatively, based on sound science.
- I hope that we can agree to work together for the long-term inclusion of real sink activities can be monitored and verified; once we have agreement on this, let's come back and look at how the addition of these activities might affect each countries 1st budget period level of effort.

Encourage discussion

(If pressed or appropriate)

- Let me make a political point: U.S. ratification of the Kyoto Protocol will require broad support from the American public and major constituencies.
- Need to build support; architecture is more important than the numbers; don't make this seem any harder than it needs to be.

Ask Sue Biniaz to speak to the misperception regarding the 3% reduction figure.

- Before leaving the points raised in the first letter on sinks, allow me to ask Sue Biniaz of the legal adviser's office to correct a misperception about the commitments we make at Kyoto.

July 13 Letter

- Your July 13 letter raised three sets of issues:
 - 1) national communications data
 - 2) land-use, land-use change and forestry
 - 3) international bunker fuels

- The overarching claim in the letter is that our policies impede transparency and will retard climate protection.
- Let me say at the outset that our record on transparency and openness is second to none, and I believe that the concerns you identified have arisen out of miscommunication or misunderstanding.
- There has been no change whatsoever in our firm support for the fullest possible transparency and openness, either with respect to our domestic climate change policies or our positions in international fora.
- Let me ask Ambassador Mark Hambley and Climate Change office director Jeff Miotke, who led our delegation in Bonn, to address the specifics of your concerns on communications, inventory guidelines, sinks and bunker fuels.

Talking Points for Mark Hambley and Jeff Miotke

National Communications and Inventory Guidelines

- While you gave us high marks for our efforts to improve national inventory accuracy and transparency through the IPCC process, you criticized our stance in Bonn, saying that "the general tenor of U.S. interventions ...was to obfuscate the reported data and make it more difficult to consume."
- You cited two examples: U.S. "failure" to support the E.U. in advocating use of the word "shall" versus "should" in the guidelines for national communications, and lack of U.S. support for the use of indicators, which assist in the process of monitoring and evaluation.
- You asked: "Is the U.S. trying to hide the affects of policies on their emissions? Why is the U.S. trying to reduce the usefulness of the data and make it more difficult for average citizens to understand? Why would the U.S. be interested in making reporting requirements optional?"

U.S. Position

- Since it most directly relates to climate change, emissions data is the single most important information that must be reported. Improving the quality and timeliness of this reporting is therefore a key U.S. objective.
- In fact, the U.S. is one of the few nations pushing for full and timely annual inventory reporting, not just of data or aggregated estimates but of the assumptions and methods used in the inventory estimation process.
- Our goal is to provide observers with sufficient information to confirm the aggregate emissions data reported by Annex I Parties.
- In this way, we are working diligently to build more accuracy and transparency into inventory reporting.

- In Bonn, contrary to the view expressed in the letter, U.S. delegation was perfectly comfortable using the term "shall" in relation to greenhouse gas inventory requirements; at no time did the delegation oppose use of the term "shall" for inventory reporting requirements.
- The U.S. delegation did oppose the use of "shall" in relation to certain other, non-inventory reporting requirements, which I will explain.
- At the SBSTA workshop on national communications in March, participants noted that transparency can be diminished, not enhanced, by vague, unfocussed reporting.
- Some Parties noted that the sheer bulk of information now being provided is overwhelming.
- With even more extensive reporting likely to be necessary under the Kyoto Protocol, this problem could become severe.
- The issue then becomes: What information is absolutely necessary (and feasible) to collect, and how can current reporting be streamlined?
- In addition, participants at the workshop also noted that, for non-inventory reporting, it was important to distinguish between mandatory and optional requirements.
- We have taken the view that high quality, timely and complete inventory information is the most important -- with such information, observers are able to reproduce a variety of other statistics.
- In Bonn, we opposed the Secretariat's effort to extend use of the word "shall" to a variety of other, non-inventory, reporting requirements.

- We did so both because some of these requirements are unfocussed (for example, what are "new and additional" financial resources?), and because of the burden involved, particularly for less advanced members of Annex I, e.g., the Economies in Transition.
- In the discussion over "indicators" we sought to enhance the accessibility of reported information by focussing on the most critical information, particularly inventories.
- We are increasingly concerned about the ability of other Annex I Parties to meet their overall reporting requirements.
- We are providing technical and other assistance to EIT Parties to improve their capacity to meet these requirements.
- At the same time, we are deeply concerned at the recurring lag - as long as two years - in reporting by some other Annex I Parties.
- Extending mandatory reporting requirements, particularly to more marginal, less focussed issue areas, has significant implications for Parties' abilities to provide accurate, timely reports with respect to information vital to combating global warming.

Sinks

- Your letter noted that national estimates of the carbon sequestration potential in each country from various activities, e.g., cropland, range land and forestry management, will be important to decisions that will be taken under Article 3.3 and 3.4 of the Kyoto Protocol.
- It also noted that the E.U. and others asked that such estimates be part of the decision-making framework, i.e., one of the criteria taken into account when deciding which new or additional activities may be added to Article 3.4 of the Protocol.

- You stated that, while the U.S. delegation supported such a criterion in the sinks contact group in Bonn, the U.S. and others moved to delete an important clause - "Given the importance of country-specific data and information, and of a decision-making framework" - in the final session of the Subsidiary Body on Scientific and Technical Advice (SBSTA).
- You said that, "such a position opposes to the principle of transparency that the U.S. has supported throughout these negotiations.

U.S. Position

- In this instance, I believe that there may have been a misunderstanding of our position and of our assessment of the tactical situation in the final SBSTA plenary.
- We recognize the importance of country-specific data in the debate over LULUCF.
- We look forward to the discussions on how such data should relate to the criteria and process for deciding how and which new activities should be included under Article 3.4.
- In our view, however, discussion of country-specific data should not hinder the development of criteria and procedures for adding new activities.
- In the final SBSTA discussion in Bonn, another Party questioned whether it was appropriate to include a reference anywhere in the decision to a "decision-making framework."
- Whereupon, still another Party seized the opportunity to reopen the issue of whether the Parties could even begin discussing a decision-making framework over the next year - something we have felt to be very important to making further progress on Article 3.4.
- At that juncture, SBSTA Chair Chow Kok Kee suggested deleting the clause.
- We worried then that the entire sentence might disappear.

- For this reason, we (and other delegations) supported the Chair's suggestion - to save the operative portion of the sentence, which we accomplished.
- In other words, this was a judgment call, and our judgement was to agree with the Chair's suggestion to delete the questioned clause in order to save the operative portion of the sentence.

Bunker Fuels

- Your letter also alleged that the U.S. delegation in Bonn tried to undermine the text proposed by the SBSTA Chairman on the issue of international bunker fuels.
- "In particular," you said, "the U.S. called into question the implications of Decision 2/CP.3, and singled itself out as the only Party to deny that this decision calls for a discussion on the allocation of emissions of international bunker fuels."
- I think it is clear that Decision 2/CP.3 rules out allocating international bunker fuels to national totals (i.e., including emissions from bunker fuels in national targets) for the first commitment period. There was broad agreement among Parties in Bonn on this point.
- So this concern really arises with respect to subsequent commitment periods.
- You suggest that it is important now to work toward "closing the international bunker fuels loophole and to elaborate an approach to bunker fuel allocation into Parties targets' for the second commitment period."
- You also believe that, "the U.S. suggestion of leaving the entire responsibility to ICAO and IMO would render a medium term decision highly unlikely" and that, "such a delay in the further negotiations of a proposal is unacceptable."

- You suggest that "the U.S. delegation did not see the need for Parties to submit their views on the IPCC Special Report on Aviation, nor the necessity for a formal review of the IPCC Special Report and its implications by the SBSTA or a future COP."

U.S. Position

- I think we agree that the issue of allocation to national totals (i.e., inclusion in national targets) of bunker fuel emissions will not come into play until after 2012.
- For this reason, we see no benefit in focussing on this issue in the near term.
- We are all aware that there are a great many hurdles in the international negotiations to make the Protocol a reality. To add an issue as politically contentious as allocation - which would not even be considered until the second budget period - would be unwise.
- In fact, efforts to deal with this issue in the near term under the Convention could raise questions about the exemption for military operations, which is also contained in Decision 2/CP.3.
- We have gone to great lengths to rebut accusations that the Kyoto Protocol will somehow undermine our national security.
- It would not be prudent to run this risk in order to resolve an issue that cannot arise until, at the earliest, the second commitment period.
- As you know, Article 2.2 of the Kyoto Protocol commits Annex I Parties to work through ICAO and IMO to pursue limitation and reductions in bunker fuel emissions.
- At a minimum, we think it makes sense to see what actions ICAO and IMO take to limit or reduce these emissions in the period before 2013.
- After considering those actions, Parties will be in a better position to evaluate what further steps, if any,

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may be appropriate in future negotiations leading to a second budget period.

- We are working closely through our delegations to ICAO and IMO to develop aggressive programs to control greenhouse gas emissions, and we are encouraging other Parties to do likewise.
- We were pleased to note the recent action by ICAO to grant observer status for the first time to environmental NGOs to enable them to participate meaningfully in its work, a position we had also strongly pushed.
- This action should enhance transparency and, ultimately, the environmental effectiveness of actions taken by ICAO to address bunker fuel emissions and other environmental issues.
- We hope you will join us in actively pursuing and monitoring the efforts of these two organizations.
- The Bonn meetings highlighted the need for improved data reporting in the aviation and maritime sectors as part of national inventories.
- The quality, consistency and comparability of this reporting need to be improved in the near-term for transparency and to serve as a basis for determining the effectiveness of future actions by ICAO and IMO.
- This was an important focus of our efforts in Bonn, and we will continue to participate actively in the IPCC and SBSTA processes to develop improved reporting guidelines for bunker fuel emissions.
- As a final point, we saw no pressing need for the Parties to the Framework Convention to comment on the IPCC Special Report on Aviation and the Global Atmosphere.
- We agree that this Special Report is both timely and an important step toward improving our understanding of how aviation affects both climate change and depletion of the stratospheric ozone layer.

- This Report was requested by ICAO and will be carefully considered by that body with the active participation of the US delegation. We expect its conclusions to provide an analytical basis for ICAO's actions.
- Still, we were aware of the multiple requests in Bonn for views of Parties in a very short time frame; we have been struggling - as large as we are with as many people and resources as we have - to meet the deadlines for all of these comments.
- And if we are struggling, we can imagine what it must be like for other, smaller countries that do not begin to have our resources.
- We did not think it necessary to add an additional requirement to submit views on the IPCC Special Report when it would soon be taken up in ICAO.