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DELIVERABLES FROM AOSIS

In order for a summit to be successful, the United States would need to win the support of AOSIS on a number of issues. These issues could include some combination of the following. These alternatives are shown in ascending order of difficulty: i.e. the first should be the easiest to achieve and the last the most difficult.

- 1) **US domestic actions.** AOSIS has been extremely critical of the United States, as the world's single largest emitter, of failing to do more to lower our emissions. If AOSIS uses a summit to criticize the United States for failing to do more, it will strengthen the hand of those Parties in the negotiations that are seeking to tighten the Kyoto targets, by:

- imposing a cap,
- preventing trading of 'hot air',
- including bunker fuels in national totals, or
- limiting new activities under 3.4.

Using the Summit as a forum to criticize the United States could also lend momentum to those Parties who want to shift the focus to consideration and coordination of domestic policies and measures. While AOSIS may continue to press through the negotiations for more action by Annex I countries, AOSIS must refrain from using the summit to bash the United States as the South Pacific heads of state did to President Bush in 1990.

2) **Kyoto Mechanisms:**

- a) **Sinks:** AOSIS could agree to include sinks in the CDM. Currently, AOSIS appears to be opposing the inclusion of sinks as a bargaining chip to trade for imposing a share of the proceeds on all three mechanisms.
 - b) **Share of the Proceeds:** The heads of state could agree that the share of the proceeds – could be modest in order to promote the largest possible market in CERs, the CDM could not directly fund project activities; and specific criteria could be developed for access to the adaptation funds.
 - AOSIS could also drop its proposal that a share of the proceeds be skimmed from all three mechanisms. This would involve breaking ranks with the Africans and other G-77 members.
 - c) **Supplementarity:** AOSIS could agree that “supplement” and “part of” need not be further defined, either quantitatively or qualitatively. Due to the risk they face from sea level rise, AOSIS has been particularly keen to ensure that the Kyoto targets are interpreted as stringently as possible.
- 3) **Compensation:** The heads of state could acknowledge that Annex I parties should not be penalized for taking action by being forced to compensate oil producing states for reduced

revenue. Instead, AOSIS would call for the 4.8/4.9 debate to focus on those parties who are most vulnerable to impacts of climate change.

- 4) **Second Period Targets:** While still asserting that developed countries could act first, the AOSIS heads of state could state unequivocally that developing countries should adopt binding targets in the second and subsequent commitment periods. cu

- Alternatively, AOSIS could state that developing countries should take on targets in the second period without prejudicing whether some developing countries come forward to take on targets earlier.

5) **First Commitment Period Targets:**

- a) **For other countries:** AOSIS heads of state could call for other developing countries to follow Argentina's lead. Doing so would damage AOSIS's relations with China and India. AOSIS depends on those relations to achieve a number of its broader goals in the UN.
- AOSIS could not only support countries like Kazakhstan that wish to join Annex B but also pledge to work with Argentina to craft a third way. This would damage AOSIS's relationship with Brazil as well as China and India.
- a) **For AOSIS:** Small island states contribute a miniscule fraction of total global emissions. Nonetheless, their emissions per unit of output are higher than average, implying that relatively inexpensive reductions might be realized in these states. More importantly, assumption of targets by the Parties most at risk from climate change would help win broader acceptance within the G-77 of developing country targets. A commitment to adopt first period targets by AOSIS could prompt others to come forward.

MEMORANDUM

TO: Distribution
FROM: David Hales
SUBJECT: AOSIS

JAN - 6 1999

Small Island States are exceptionally vulnerable to the impacts of Climate Change; they stand to gain substantially from the stabilization of Green House Gases at safe concentrations. In addition, AOSIS States stand to gain economically from the aggressive implementation of the Clean Development Mechanism, and from full participation in a flexible emissions trading system. We believe that an accurate assessment of the self-interest of AOSIS states would lead to substantial convergence with the interests of the United States.

The task of a Diplomatic strategy with AOSIS states is to demonstrate this convergence, and help them create the independent analytic capacity to accurately determine and then act on their own national interest.

AOSIS states, for example:

- are exceptionally vulnerable to sea level rise and extreme weather events
- are extremely susceptible to food security concerns, and to extreme price impacts of production failures associated with Climate Change;

- have substantial potential to benefit environmentally and economically from the use of renewable energy - solar, wind, tidal and hydroelectric;
- have the organizational capacity and common interest to work together in ways that other nation states do not;
- are for the most part similarly situated so that research and development projects, and best practices are readily transferable;
- have a sophisticated and intense understanding of the risks associated with Climate Change;
- do not yet have a full and accurate comprehension of the opportunities associated with the Kyoto Protocol;

Our task is to craft a strategy which addresses the strengths and weaknesses of OASIS States and brings perception of common national interest to the point of cooperative action. To do so, we must acknowledge the salience of their concerns and address them directly. AOSIS Countries are concerned that:

- they will suffer most from the effects of climate change
- that developed countries, particularly the United

States, will not take aggressive domestic action to reduce emissions

- that aggressive commitments on their part will limit their growth and have little effect on GHG concentrations in the atmosphere.

Any such strategy should address vulnerability and adaptation issues, and emphasize the potential for support of sustainable development inherent in the Clean Development Mechanism. It is critical that we build confidence that the United States and other developed countries take their commitments seriously and that developing country action will not limit economic development. The key to successfully engaging AOSIS States (and other developing countries) is to make the risks of meaningful participation close to zero, while demonstrating substantial potential benefits.

Relevant capacities of the US Government in this regard include:

- disaster preparedness and response knowledge, experience and capacity (DOE; USAID)
- expertise in sustainable urban development in coastal zone areas (USAID, Puerto Rico, Hawaii, Florida)
- substantial renewable energy expertise and technology transfer capacity in both public and private sectors

(DOE; USAID; USDA)

- capacity in state and local government to work directly with Island states from a basis of common experience and interest (USAID; USDOJ; States)
- substantial NGO interest in the sustainable development of small island states, and USG cooperative agreements and funding capacities (USAID; DOE; Universities; NGO's)
- economic analysis and economic modeling expertise (CEA; DOE; EPA)

Our strategy should be constructed around four action areas:

1. An active partnership with AOSIS to understand, anticipate and prepare for the adverse impacts of climate change, with an initial focus on weather related disaster preparation, response and recovery.
2. Creating and supporting the capacity to identify and quantify the economic costs and opportunities associated with climate change and the full implementation of Kyoto's flexible mechanisms.
3. Establishment of opportunities and mechanisms (study tours,

pro-seminars, etc...) for AOSIS senior policy makers to become fully aware of USG domestic policy and actions to meet our FCCC commitments and responsibilities.

4. Promotion of technology transfer and private sector relationships with AOSIS members, including the negotiation of technology transfer agreements, establishment of Sister City/Resource City ties, Utility Partnerships, etc...

Opportunities for engagement are immediate. The 1999 Session of the Commission on Sustainable Development will review Ch 17 of Agenda 21, with special attention to the implementation of the recommendations of the 1994 SIDS Conference. This review culminates in a UNGA Special Session in September, 1999. The first meeting in this process will occur in late January, with a SIDS Donor Conference in February. State has formed an IWG to develop US positions for negotiations which is not yet fully integrated with AOSIS FCCC related efforts.

I recommend that we adopt (as amended/expanded) the strategic framework laid out here, establish a working group of interested agencies with sufficient overlap with the CSD IWG to facilitate coordination of the efforts. This working group would be asked to detail the strategic framework that we adopt, fixing Agency responsibilities and developing schedules for implementation.

As an example of how this strategy applies to specific actions,

I've attached the draft of the climate component of USAID's Caribbean Environmental Strategy. Also attached is the latest version of the preparation for SIDS in the UNGASS process, drafted by Mo Walker at State.

DRAFT

Caribbean Environmental Strategy: Global Climate Change Options

"The small size of small island developing States means that development and environment are closely interrelated and interdependent. Recent human history contains examples of entire islands rendered uninhabitable through environmental destruction owing to external causes; small island developing States are fully aware that the environmental consequences of ill-conceived development can have catastrophic effects. Unsustainable development threatens not only the livelihood of people but also the islands themselves and the cultures they nurture. Climate change, climate variability and sea level rise are issues of grave concern. Similarly, the biological resources on which small island developing States depend are threatened by the large-scale exploitation of marine and terrestrial living resources." - Preamble, Programme of Action for the Sustainable Development of Small Island States, Bridgetown, Barbados, 1994

L BACKGROUND

The nations of the Caribbean are neither major emitters of the greenhouse gases that contribute to climate change, nor, with the exception of Guyana and Suriname, in possession of major forest reserves that serve as 'sinks' for these gases. Why then, should the threat of climate change be an important enough consideration for inclusion in USAID's Caribbean Environmental Strategy? The answer lies in the region's vulnerability to climate change, the resultant changes to important natural cycles, and the inexorably link between these environmental threats and economic development and stability.

Most experts agree that the global climate is changing because of an increase in anthropogenic emissions of greenhouse gases and the consequential concentration of these gases in the atmosphere. Since 1860, atmospheric concentrations of carbon dioxide (CO₂), the most predominant greenhouse gas, have increased thirty percent and average global temperature has risen one-half degree centigrade. In 1995, the Intergovernmental Panel on Climate Change (IPCC) found that the "pattern of global warming is unlikely to be entirely natural in origin," and "the balance of evidence suggests a discernible human influence on global climate."¹ Under a relatively optimistic scenario of a doubling of CO₂ concentrations in the atmosphere during the next century, average global temperature will rise by 1 to 3.5 degrees centigrade. This change in temperature will disturb the hydrological cycle and seasonal precipitation patterns, and could increase flooding and storm damage due to sea-level rise and severe climatic events such as tropical cyclones, tornadoes and El Niño effects.

A look at the extreme weather events of the past year show, perhaps more poignantly than ever, that global climate change is linked to economic stability and growth. The costs of responding to floods, fires, droughts and other extreme weather events are being extracted in hard currency and human health, in agricultural yields and insurance claims. It is estimated that over eight billion dollars (US) were spent globally in response to the most recent El Niño event. These costs are proportionately higher for developing nations than for their developed counterparts, as their fragile ecosystems and economies, and the populations that depend upon them, are less resilient to change than the more diverse and established economies of the developed world. And for

¹ USAID's Climate Change Initiative, p 9.

developing *island* nations, whose vulnerability to the effects of global climate change threatens their very existence, the costs are extreme. Small island nations are the "canary in the coal mine" for global climate change issues: the first to be impacted and a warning to others that the effects of climate change have reached a state of crisis. Addressing these issues is therefore an urgent matter for the island nations of the Caribbean. This point has not been lost on the leadership of the Caribbean region.

II. EXISTING REGIONAL CLIMATE CHANGE POLICY

Both of the major hemispheric summits and a number of smaller regional summits since 1994 have included measures to directly or indirectly reduce the threat of climate change. For example, the Summit of the Americas (Miami, Florida; 1994) prescribes sectoral change, particularly pertaining to energy and terrestrial and coastal resources, that would result in a net reduction of greenhouse gas emissions. The Santiago Summit of the Americas (Santiago, Chile; 1998) specifically promoted cooperation toward achieving the objectives and goals of the United Nations Framework Convention on Climate Change, especially through technology transfer, efficiency improvements in the energy sector, and consideration of the flexibility mechanisms proposed at the Third Conference of the Parties (Kyoto, Japan; 1997). In addition, the declaration from the Santiago Summit encourages governments to apply science and technology to address the effects of climate variability on health, agriculture and water.

Equally pertinent to this exercise, at the 1994 Global Conference on the Sustainable Development of Small Island in Bridgetown, Barbados, a Plan of Action for the Sustainable Development of Small Island Developing States (SIDS/POA) was developed that identified fourteen priority areas for environmental intervention. Of these, climate change and sea-level rise was identified as a regional priority - rated sixth in regional importance in a 1997 survey carried out by the Economic Commission for Latin America and the Caribbean (ECLAC).² At least seven of the other priority areas (coastal and marine resources, natural and environmental disasters, energy resources, etc.) had direct links to climate change mitigation and adaptation. Not coincidentally, the SIDS/POA is a charter document for the Alliance of Small Island States (AOSIS), formed out of a recognition that "separately, they [small island States] could be ignored or discounted, but together, they could be a strong, new voice for a sustainable future and a political force to be reckoned with in the international arena."³

III. CLIMATE CHANGE RECOMMENDATIONS FOR A CARIBBEAN REGIONAL STRATEGY

The recommendations that follow are a result of a review of existing USAID environmental priorities and activities in the region; consideration of priorities identified in the SIDS/POA and other relevant regional documentation; consultations with technical experts in the region, as part

² Gardner, Lloyd. *Summary: Caribbean Environmental Priorities, Activities Underway, and Institutional Roles*. USAID, 1998.

³ AOSIS. *Small Islands, Big Issues: Sustainable Development of Islands*. p. 3, 1997.

of the overall regional environmental strategy development; consultations with AOSIS representatives, particularly Ambassador C. Boucher, Barbados; and consideration of existing climate-related activities funded by other donors in the region. In keeping with USAID's overall strategy for climate change, with the exception of activities that specifically address climate change vulnerability and adaptation and/or support flexible mechanisms recommended under the UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, recommendations for climate change mitigation stem from existing environmental sector priorities (i.e., energy, forestry, etc.).

The following are suggestions for USAID climate change-related intervention in the Caribbean:

Vulnerability Analysis/Planning for Adaptation:

Link scientists and planners in activities that strengthen the capability of indigenous institutions to understand, anticipate and prepare for the adverse impacts of climate change, with a focus on disaster preparation, response and recovery.

Improve small island nations' ability to adapt to climate change and withstand extreme storms through activities to preserve mangroves, wetlands, and coral reefs.

'Kyoto Mechanisms':

Develop and support the capacity to identify and quantify the economic costs and opportunities associated with climate change and implementation of the flexible mechanisms proposed in the Kyoto Protocol (Clean Development Mechanism, Joint Implementation, Emissions Trading).

Increase capacity to develop carbon offset programs and projects in the region.

Renewable Energy:

Develop common strategies to decrease reliance on fossil-fuel based energy production and expand renewable energy systems to take advantage of substantial solar, wind, and tidal resources, recognizing that small-scale renewable energy projects have the added benefit of being more resilient to natural disasters.

Identify and support innovative financing mechanisms(i.e., project bundling) and market opportunities that build on existing organizational capacity and common interest to address the challenges unique to small island states.

Carbon Sequestration:

Increase carbon stores through sustainable forest management and protection of the Guyana Shield.

Technology Transfer:

Promote technology transfer and private sector relationships through technology cooperation agreements, utility partnerships, etc.

Sustainable Tourism/Urban Development:

Encourage environmentally sustainable tourism through innovative applications of energy efficient technologies and incentive programs in the hotel industry and municipal services, particularly water and waste treatment.

Promote sustainable tourism/urban development in coastal zone areas through integrated management and planning.



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As indicated previously there will be a meeting on AOSIS tomorrow, Wednesday, January 20, 1999 from 3:30p.m. to 5:00p.m. in Room 4.08-E/F in the Ronald Reagan Building, 1300 Pennsylvania Ave. N.W. Please enter on the 14th Street side of the building.

Please bring your U.S. Government ID card with you for building entry. Please contact my office by Noon, if persons other than those on the distribution list plan to attend so that arrangements can be made.

Attached are background documents for the meeting.

David Hales,
USAID/G/ENV/DAA

From the desk of...

Barbara A. Adams
G/ENV/DAA
USAID
3.08-093 RRB
Washington, D.C 20520

tel: 202/712-1750
fax: 202/216-3174



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Promote sustainable tourism/urban development in coastal zone areas through integrated management and planning.

SMALL ISLAND DEVELOPING STATES
DRAFT US POSITION
DONOR'S CONFERENCE AND SPECIAL SESSION, 1999

Introduction: The 1999 session of the Commission on Sustainable Development will include oceans and coastal areas as a major item. It will focus on a review of the implementation of Chapter 17 of Agenda 21, including section G on Small Island Developing States, culminating in a Special Session in September, 1999.

The overall themes that the United States seeks to emphasize in preparations for the Commission on Sustainable Development are:

- a) National responsibility
- b) Sustainable development as an integrated whole
- c) Rule of law and transparency
- d) Capacity building - Human development

To the extent possible, these themes should be incorporated into all aspects of the CSD, including its review of the UN Global Program of Action on Small Island Developing States.

Background: The United States approach during the 1994 Global Conference on Small Islands (SIDS) emphasized the need for implementation by island States of obligations to protect the marine environment and conserve its resources. We succeeded in meeting our 3 objectives: 1) to highlight and develop responses to the issues faced by SIDS; 2) to avoid conflicts on traditionally troublesome issues such as financing; and 3) to promote the coral reef initiative.

In addition we focused the SIDS upon the need to achieve widespread participation in and implementation of major global agreements. Since that time, new agreements have been reached involving not only the United Nations Convention on the Law of the Sea (UNCLOS), but also the Global Program of Action on the Protection of the Marine Environment from Land Based Activities, and the two new fisheries treaties - the U.N. Convention on Straddling Fish Stocks and Highly Migratory Fish Stocks and the FAO Compliance Agreement.

The United States will continue to emphasize these elements and to focus discussion on three issue areas:

- the components of a UNGA resolution to implement the Global Program of Action for Prevention of Impacts upon the Marine Environment from Land-Based Activities (GPA);
- fisheries, including follow-up to the the U.N. Convention on Straddling Fish Stocks and Highly Migratory Fish Stocks and the FAO Compliance Agreement; and
- the issue of a global forum to identify priorities for action on the marine environment.

Issues for the 1999 Session of the CSD: As a general matter, at the upcoming CSD session, the U.S. should continue to stress the need for full and effective implementation of existing obligations to protect the marine environment and conserve its resources. Procedurally, we will emphasize that the CSD should not seek to substitute itself as a negotiating forum for issues being addressed in existing oceans institutions or to re-open agreements reached in those institutions.

The starting point of CSD consideration should be examination of the implementation of its previous work on oceans - specifically Decision CSD IV-15 (Attachment A). It is clear that implementation of the GPA and fisheries will again be major priorities for the United States at the 1999 session of the CSD. There is clear need for States to take steps to ratify and implement the U.N. Convention on Straddling Fish Stocks and Highly Migratory Fish Stocks and the FAO Compliance Agreement as well as to implement the FAO Code of Responsible Fishing. In addition, ongoing efforts within FAO to address sharks, seabird mortality and over-capacity should be emphasized.

With respect to the GPA, it is important to resuscitate UNEP's catalytic role in the development of the clearing house mechanism, including full operation of the coordinating unit in the Hague. A related priority area for the GPA is identification of steps to address sewage problems that have been identified as among the most important challenges in all of the regional workshops UNEP has organized on the GPA.

Discussion at ^{Dec} Jan 15 IWG meeting on SIDS: AID and NOAA put their review of the 250 plus proposals from the SIDS in the context of our overall AID and technical assistance programs. They noted that the proposals covered everything from assistance with seismic activities to teacher training and solid waste disposal projects. The wide range of activities proposed and the short time before the Donors' Conference precluded a full or exhaustive review of these proposals.

Nevertheless the following consensus emerged from the meeting:

1. We should immediately dampen expectations that we be prepared to announce funding decisions in February.
2. We should consider structuring the Donor's Conference as the beginning of a partnership meeting designed to team donors with recipients.
3. We should consider proposing a representative sampling of successful case studies to begin the 3 day meeting, followed by a day on geographic related issues and a day focusing on the thematic areas of the Global Program of Action on SIDS.
4. We should emphasize U.S. goals on sustainable fishing and land based sources of marine pollution, particularly reference the partnership marketplace meetings.
5. We should bring in Energy, EPA and Interior to review those proposals related to their missions, with an eye to providing technical assistance.
6. Debt forgiveness was suggested.
7. The Peace Corps education initiative should be summarized and provided to the USDEL.
8. EPA, HHS and F&W should review proposals related to environmental enforcement in the event that they could provide technical assistance to SIDS.
9. The private sector should be energized by bringing in NGO's and private business and by holding a meeting with these groups in the next month.

10. Sea Grant Colleges in the Virgin Islands and Puerto Rico should be utilized to look at waste issues, in similar manner to the Land Grant Colleges.

11. New streams of funds should be identified including the EAP environment initiative.

12. Information regarding the GEF and its work in SIDS be summarized and made available.

13. We should continue to emphasize the coral reef initiative.

ATTACHMENT A

(will be brought to 3:30 meeting)

The benefits of such an approach would be to:

1.

(a) Strengthen the role of regional organizations, formed by the cooperating countries, in the planning and management of regional coastal and marine programs, without additional bureaucracy;

(b) Contribute to more "ownership" of programs and projects by the cooperating countries by increasing their role in planning and implementation process, thereby improving the chances of effective action;

(c) Support the development of broad based partnerships which, if sustained, would allow for more effective programs which reduce overlap and combine the knowledge and skills of the cooperating countries and participating outside parties;

(d) Improve coordination at the regional, national and local levels within the cooperating countries by providing a forum for open discussions of key issues and development of practical solutions; and

(e) Facilitate more effective use of loan, soft loan and grant funds from international sources for support of sustainable management of coastal and marine resources.

(f) Establish a process which permits greater flexibility for participating organizations.

The U.S. could suggest that the partnership market meeting approach is a new mechanism that could assist countries in addressing oceans issues. While initially this idea has been applied only to land-based degradation, it is equally applicable to other issues, for example over-fishing.

2.

Some regional seas organizations, for example HELCOM have technical/industry committees which focus on solutions to specific problems. This highly useful mechanism for "technology transfer", however, does not exist in most of UNEP's regional seas programs.

The U.S. could suggest that appropriate regional bodies consider establishing such committees for the express purpose of exploring existing technological solutions.

Attachment B

1. Partnership Market Meetings

Among the problems identified in implementing global or regional environmental agreements are: (a) too many plans (Biodiversity, Climate, Land-based pollution), all of which overlap to some degree; (b) lack of ownership by potential recipient countries - funding proposals often originating in donor organizations rather than being country-driven; (c) both overlap between and competition among donor organizations; (d) cumbersome U.N. rules and bureaucracy; (e) lack of negotiating flexibility among potential partners in the standard "donor conference" format.

These problems should be viewed in the context of the realization that no one existing (or imaginable) organization, either at the global or regional level, will be able to coordinate all aspects of desirable action programs.

With this as background, the U.S. has recently successfully promoted the concept of "partnership market meetings" as a partial solution. This idea has been endorsed in the context of dealing with land-based degradation at various levels in APEC and The Arctic Council bodies.

The proposal is simply to place the onus on a state or a region to create a credible assessment of environmental problems and an action plan to deal with those problems. Once completed, a state or region would invite potential partners to a market meeting at which their work would be presented. There would then ensue freeform discussions directed at identifying partners who would be willing to assist in the implementation of the action plan.

Invitees to a market meeting would include representatives from donor organizations, appropriate UN agencies, national foreign assistance agencies, national technical agencies, the private sector and the academic and non-governmental communities.



U.S. AGENCY FOR
INTERNATIONAL
DEVELOPMENT

January 12, 1999

MEMORANDUM

TO: DISTRIBUTION

FROM: G/ENV/DAA, David Hales

SUBJECT: Current Draft Climate Change Communique Language/
Central America

Below is draft communique language on climate change for the proposed POTUS visit to Central America. It incorporates all comments received, written or verbal, by 4:00p, 1-12-99.

This version proposes:

- * more ambitious language regarding developing country commitments, the "third way",
- * more details re the CDM regional approach, which attempts to take EPA concerns into account,
- * State/ USAID edits to bring it into conformance with common parlance in CA.

The Presidents note with satisfaction the progress we have made in achieving our goal of sustainable development, as articulated at San Jose, in 1997. We also note that much of our progress has been undermined by a series of natural disasters, including expansive forest fires and Hurricane Mitch.

The human, economic and environmental devastation created by such events demonstrates vividly the need for an integrated approach to sustainable development, and the need to look beyond our immediate needs and anticipate increasing threats to our security and prosperity.

"We recognize that global climate change has the potential to cause more frequent and more severe natural disasters, such as Hurricane Mitch, which will undercut our best efforts to achieve sustainable development.

We are committed to work together ~~in the Hurricane Mitch reconstruction effort~~ to implement a "climate friendly"

approach to development throughout the Region, emphasizing the utilization of renewable energy resources, the conservation of ecosystems, environmentally compatible land-use planning, and the transfer, on mutually agreed terms, of clean technology as well as technology to help Central America adapt to the likelihood of increasingly frequent extreme climatic events.

We acknowledge the urgent need for all countries to meet their responsibilities under the FCCC, and to build on the important framework outlined in the Kyoto Protocol.

Specifically, we welcome the efforts of all parties to openly and freely discuss all modalities and ways to reduce atmospheric concentrations of greenhouse gases consistent with the UNFCCC and decisions taken at COP 3 and 4.

We welcome the actions of all parties to meet their common but differentiated responsibilities, including those which have taken courageous domestic action, as well as those which have indicated a willingness to consider/take on binding targets when it is in their national interest to do so.

As we noted in our San Jose Declaration, we recognize the leadership of Central America in advancing the concept of Joint Implementation projects and in providing ongoing leadership in the evolution of the Clean Development Mechanism.

We welcome and reaffirm our commitment, expressed in the San Jose Declaration, to build a common regional approach to CDM as a means to further advance implementation of climate friendly projects, including clean energy development and the preservation of carbon sinks."

We are individually and jointly committed to the rapid implementation of measures that build our capacity to act in concert to identify projects capable of mitigating the emissions of greenhouse gases while promoting sound economic development.

To that end, we will establish a joint regional capacity to:
* identify and develop projects, including regional and sectoral projects, which promote regional integration,
* address technical issues so as to insure that reductions/sequestrations are real and additional,
* ensure that private sector investments are encouraged and integrated into national recovery and redevelopment regimes, and,
* document developmental lessons learned so that our experience serves as a guide to other parts of the world.

- 3 -

Our goal is to reduce and mitigate regional emissions at least equal to 5% of our combined 199? emissions by 2008.

cc: David Sandalow Mike Orsini
Melinda Kimble Sue Beniaz
David Gardiner Bill White
Rafe Pomerance Mark Mazur
Mark Hambley USAID C2 Distribution
Dan Reifsnyder

Drafted:DFHALES:G/ENV/DAA:1/4/99:POTUS.CA1
REVISED:DHALES : G/ENV: 1/12/99:POTUS.CA3



MEMBER

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL OF ECONOMIC ADVISERS
WASHINGTON, D.C. 20500

February 24, 1999

NOTE TO DAVID SANDALOW, CEQ

FROM:

JEFF FRANKEL

JF

Here is the summary (plus worked-out example for Argentina) regarding what seems to me to be the consensus in the Assistant Secretaries group regarding LDC targets.

I hope I haven't overstated the degree of support for CEA's ideas on this subject. The rest of the group should certainly read my summary and see if they agree that it is a fair characterization of the views of the group.

Attachment

Draft; close hold; JF, CEA 2/18/99

How should growth targets for developing countries be set?**Summary of tentative consensus**

This is an attempt to summarize some ideas that have received favorable inter-agency consideration, regarding how to formulate growth targets for developing countries (in the first budget period). It must be stated from the outset that nobody wants the USG to be aggressive in making this sort of proposal internationally, for fear of appearing to be trying to impose a rigid formula on others. Rather, the point is to collect our thoughts internally, to be used if we are asked, as appropriate.

There appears to be a consensus among the Assistant Secretaries group that the aim should be targets in a range where they are low enough to produce environmental advantages (including forestalling leaking, but perhaps also small cuts relative to BAU), while high enough to produce economic advantages (in the form of gains from trade to both buyers and sellers). That happy range is bounded by BAU on the upside and the "indifference level" on the downside (estimated, e.g., at BAU-12% for China, with one model). CEA results that extrapolate from the progressive pattern of existing targets observed among Annex B countries might help choose a "fair" point within that range (estimated at -5% for China).

There also appears to be a consensus in favor of considering "indexation" arrangements to cope with uncertainty between now and the budget period, i.e., to reduce the chance that a numerical target that was thought ex ante to be in the middle of the range turns out ex post to be either inadvertently stringent (imposing large economic costs) or inadvertently lax (creating hot air).

There is now a consensus that indexation is preferable to trying to impose a common absolute emissions/GDP standard across countries.

A majority favors a formula that turns into a numerical target in 2007, though EPA (David Doniger) favors continuing the indexation through the end of the budget period (2012).

All favor considering the idea of indexing the emissions target to GDP. There were a fair number of proposals for other variables to include in the formula in addition to GDP (population, temperature, coal production, oil prices, electricity output), either uniformly across countries or on a country-by-country basis. Some argued that it should be left to the discretion of the developing country to decide what economic and/or demographic variables best explain emissions. But each individual candidate for a variable to be added was strongly opposed by a number of people and arguments.

The most unsettled question was what X should be, in the formula to allow X% higher emissions for every 1% in unexpected growth.

There was also a proposal (Victoria Greenfield, State), that unexpected reductions in income be accorded Y% lower emissions, with $Y < X$.

Worked-out Example for Argentina

Step 1 -- setting expected target: BAU is for carbon emissions growth of 55% cumulatively from 1995 to 2010, or 3% per year (all data are from Argentine Government). Of this, 4.4% per year is GDP growth, -0.8% is decreasing energy/GDP, and -0.6% is decreasing emissions/energy. We could ask all LDCs to take targets that are expected to be 5% below BAU. For Argentina, the expected 2010 target would then be 50% above 1995 levels. An alternative, which might appeal to many countries, would be to let them pick their highest previous year, and set the target 50% above that.

Step 2: -- indexation to mitigate uncertainty: The forecast is for 2007 GDP to be 67% above 1995 (1.044 to the 12th power). If 2007 GDP in fact turns out to be that level, then the target is as agreed. But for every 1% higher (or lower) that 2007 GDP comes in, the target for 2008-2012 will be X% higher (or lower).

But the best way to phrase to Argentina this (exact same) contract is as follows: its target will be given by $[1995 + 55\% - 5\% - X(4.4\%)15] + [X(\text{average realized growth})15]$. This way of phrasing it makes clear that it is a "growth target", and makes the proposal sound like the country can only win, and not lose, from indexation.

For example, the implication of a tentative CEA calculation would be to set X at .7. (This is calculated as a statistical estimate of the average effect of growth on BAU, .9, minus an allowance for progressivity whereby richer countries are asked to make larger cuts, .2. But it is true that a more accurate forecast might use different coefficients for different kinds of countries. An alternative favored by some in our group would be to let X be negotiated separately for each country.)

Then, for concreteness, the Argentine target becomes:

$$[1995 + 50\% - .7(4.4\%)15] + [.7(\text{average realized growth})15]$$

$$= 1995 \text{ level} + 4\% + .7(\text{accumulated growth over next 15 years}).$$

Notice that if growth comes in as expected (4.4%), then the target is 50% above 1995 levels, or 5% below BAU.

OFFICE OF THE UNDER SECRETARY FOR GLOBAL AFFAIRS

Room 7250

2201 C Street, NW

Washington, DC 20520

F A X C O V E R S H E E T

DATE: March 30, 1999 **TIME:** 9:05 AM
TO: Roger Ballentin **FAX:** [(202) 456-6468]
FROM: Charmagne **PHONE:** [(202) 647-6240]
 FAX: [(202) 647-0753]
RE: Brainstorming Session on Developing Countries
Number of pages including cover sheet: [3]

Message

Draft

Climate Change
Developing Country Policy Development Session
2:00-5:00, Room 1105,
Main State Department Building

Notional Agenda

2:00-2:10 Introductory Comments

Developing Country Targets -- The 3rd Way

2:10-2:40 The Nature of Targets

What types of targets should developing countries assume - growth, indexed and/or other? Which countries are most likely to assume targets in the near future? What should be the organizing principle for determining the right target?

2:40-3:00 Incentives and Assistance

How can we get developing countries that want to take on a target in a position to do so? What incentives do developing countries have to assume targets? Are the tools adequate?

3:00-3:25 Operational Strategies

What are other countries proposing for the 3rd way? What should be the organizing principle for the 3rd way? Do we need a political mandate to create the 3rd way? What are possible mechanisms that could be used or created? What should we try to achieve by COP-6?

3:25-3:35 Break

International Steps Short of Targets

3:35-4:00 CDM and Other Forms of Participation

How should we use most effectively developing country interest in the CDM? How do we maximize its effectiveness? Are there other forms of international participation that would be helpful or appropriate for some key countries? Which countries, if any, should pursue these other forms of participation? What is the organizing principle?

4:00-4:30 Incentives and Assistance

How can we move countries toward sound policies short of targets? What are the incentives? Are our assistance tools adequate?

4:30-4:50 Operational Strategies

How should we advance our vision of CDM? How can we use our support for CDM to build ties to the G-77? Should we seek to develop a "4th way" for key countries that prove unwilling and/or unable to assume targets? What is our vision for COP-6 on CDM and non-target participation?

4:50-5:00 Blueprint for Future Policy Development

What issues remain unresolved? Which should receive priority attention? What process should we use?

Mechanics of Bringing In Developing Countries

must we?

- Assuming from a U.S. policy point of view, that "meaningful participation" needs to take the form of binding international obligations, there appear to be three basic ways to reflect new developing country commitments in an international agreement:

- in the Framework Convention;
- in the Kyoto Protocol; or
- in a new legal instrument.

Framework Convention

- One option is to amend the existing Convention to add developing country targets. *non-binding*
- Under one scenario:
 - A new provision would be added to incorporate the new obligations. *get us nothing*
 - The amendment would require adoption by $\frac{3}{4}$ majority of the Parties to the Convention. Entry into force of the amendment would require ratification by $\frac{3}{4}$ of the Parties to the Convention.
 - In order to address the potential situation where the amendment might enter into force before the Protocol (in which we would have the ironic situation where developing countries had targets, but not developed countries), the developing country obligations could presumably be made contingent upon entry into force of the Protocol. *7*
 - Assuming that we want developing countries with targets to be able to participate in emissions trading under the Protocol, we would also need to modify the Protocol. (At the moment, Article 17 of the Protocol only permits trading among Annex B Parties.)
 - Other linkages between the Convention amendment and the Protocol would need to be considered, such as with respect to compliance. For example, the Protocol's provision could be incorporated by reference into the Convention amendment.
- Under another Convention scenario:
 - A new provision would be added to the Convention, but the provision (rather than providing the actual commitments) would provide for a procedure for the taking on of commitments. The provision would be akin to the "Article 10" that we proposed for, but did get in, the Protocol. A legal advantage of such an

approach is that we would not have to amend the Convention each time a new developing country decided to take on a quantitative commitment.

Kyoto Protocol

- Another option is to modify the Protocol itself.
- As in the case of the Convention, it could be modified either to reflect the actual commitments of specified developing countries or to set forth the procedure by which developing countries could take on such commitments.
- It is assumed that we would not want to wait for the Protocol to enter into force in order to "amend" it. If we did, we would be faced with a Catch-22 situation where we would not ratify until we get meaningful participation but would have to ratify in order to get it.
- As a result, we would need to adopt a modifying agreement that would change the Protocol upon its entry into force. That way, developing country commitments would enter into force at the same time as the U.S. commitment does.
- Because rules of procedure have not been agreed to the contrary, the decision-making rule for adoption of such an instrument would be consensus.
- In the same legal instrument that contained the new provisions, corresponding changes would be made to relevant articles of the Protocol, such as to allow developing countries with targets to participate in emissions trading, to clarify the status of such countries with respect to the CDM, etc.

New Legal Instrument

- If developing countries considered it undesirable, for some reason, to add their commitments to either the Convention or Protocol, a third option would be for an entirely new legal instrument to be devised to incorporate such commitments.
- Such an instrument, like a modifying agreement to the Protocol, would need to be adopted by consensus.
- Like both of the above options, the new instrument could either include the actual commitments or the procedure for adding them.
- As under both of the options above, the Protocol would need to be modified to allow developing countries to participate in emissions trading and to make the other necessary linkages to the new legal instrument.

- As was the case with the Kyoto Protocol, it is likely that a mandate would need to be negotiated in advance of the negotiation of the instrument itself.
- This option would add a third legal instrument to the climate change international legal regime (whereas, under either of the above options, there would still only be two instruments).

- A D.C. can join Annex I unilaterally; to join Annex B, they must have protocol amended.

Phone: 202/712-1750

Fax: 202/216-3174

USAID - G/ENV/DAA
Global Environment
Center

Fax

To: See Distribution**From:** David Hales**Fax:****Date:** 4/29/99**Phone:****Pages:** 5**Re:** AOSIS**CC:**☐ **Urgent**☐ **For Review**☐ **Please Comment****Please Reply**☐ **Please Recycle****•Comments:**

The attached paper on AOSIS is for discussion at today's Diplomatic Coordination meeting at 3:00p.m.

04/19/99 08:43 FAX 202 847 0753

U/S Global Affairs

001/004

Kimble Yeager Reifmeyer

Climate Change List of Participants
Policy Development

Greenfield

<u>Name</u>	<u>Organization</u>	<u>Phone</u>	<u>Fax</u>
Aldy, Joe	WH/CEA	395-1455	395-6958
Ballentin, Roger	WH/LEG	456-6493	456-6468
Boorstin, Robert	Treasury	622-0486	622-0073
Cumby, Robert	Treasury	622-0572	622-2633
Doniger, David	EPA	260-7400	260-5155
Frampton, George	WH/CEQ	456-6224	456-2710
Forrister, Dirk	WH/CCTF	395-2310	395-2311
Gardiner, David	EPA	260-4332	260-0275
Hales, David	USAID	712-1451	216-3174
Lawrence, Robert	WH/CEA	395-5046	395-6958
Mazur, Mark	DOE	586-7700	586-9626
Orfini, Michael	WH/OVP	456-9515	456-9500
Perjesepie, Bob	EPA	260-7400	260-5155
Reicher, Dan	Energy	586-9220	586-9260
Sandalow, David	WH	456-6224	456-2710
Stern, Todd	WH	456-1648	456-2215x
White, Bill	EPA	260-3711	260-4852x
GIBSON, JOHN	WH	395-2321	395-2342x

Kimble Yeager
Reifmeyer
Greenfield

STATE

GADMIN: Climate Change List of Participants

MEMORANDUM

TO: Distribution
FROM: David Hales
DATE: April 29, 1999
SUBJECT: AOSIS paper for discussion at today's Diplomatic Coordination meeting

Introductory Note: In December, 1998, and January, 1999, several working group meetings were held on a discussion paper on AOSIS originally drafted by USAID. The result of these meetings was the policy summary below, which has guided USG actions re AOSIS members. The Policy Summary was updated on 4/29/99, to reflect preparatory meetings for the UNGA Special Session on Small Island Developing States, and other initiatives. The section on opportunities for engagement has also been updated.

U.S. Position: The U.S. has the following strategic goals for AOSIS States:

- Increase participation, ideally through the acceptance of legally binding commitments, in the United Nations Framework Convention on Climate Change (FCCC) and the Kyoto Protocol. Less ambitious measures by some States may also be acceptable as 'meaningful participation'
- Achieve AOSIS member state support for core USG positions on climate change.
- Create U.S. business opportunities and demonstrate best practices with regard to greenhouse gas mitigation
- Address vulnerability of SIDS to impacts of climate change.

Background: Small Island States are exceptionally vulnerable to the impacts of climate change and are therefore critically concerned with the stabilization of greenhouse gases at safe concentrations in the atmosphere. The combination of being vulnerable to but not largely responsible for climate change makes AOSIS member states a significant voice and an important force to consider in the climate debate. Any international regime adopted to address climate change must be deemed fair and responsive to such extreme cases.

The high-profile vulnerability of AOSIS nations presents the U.S. with a unique opportunity to highlight innovative GHG mitigation efforts. By supporting SIDS own efforts to expand renewable and clean energy alternatives and attract financing for mitigation projects, the U.S. can demonstrate a significant commitment to equitable consideration for small islands, while furthering diplomatic goodwill. Such efforts are critical to participation in the mechanisms proposed in the Kyoto Protocol and eventual acceptance of emissions targets.

AOSIS nations stand to gain economically from the aggressive implementation of the Clean Development Mechanism and full participation in a flexible emissions trading system. SIDS conversion from fossil fuel to alternative sources of energy is key to their meaningful participation in emissions trading regimes. We believe that an accurate

assessment of the self-interests of AOSIS states would lead to substantial convergence with the interests of the United States.

Strategy: The task of a diplomatic strategy with AOSIS states is to demonstrate this convergence and help them create the capacity to accurately determine and then act in their own national interest. The USG strategy should address vulnerability and adaptation issues, and emphasize the potential for support of sustainable development inherent in the Clean Development Mechanism. It is critical that we build confidence that the United States and other developed countries take their commitments seriously, and that developing country participation is not seen to limit economic development. The key to successfully engaging AOSIS states (and other developing countries) is to make the risks of participation in Kyoto Mechanisms close to zero, while demonstrating substantial potential benefits.

Key action components must address disaster preparedness and response, sustainable urban development in coastal zone areas, renewable energy expertise and technology transfer capacity, economic analysis and modeling expertise, and the vulnerabilities of natural resource/fishery-based economies.

Our strategy should be constructed around four action areas:

1. An active partnership with AOSIS to understand, anticipate, and prepare for the adverse impacts of climate change, with an initial focus on weather-related disaster preparation and response.
2. Creating and supporting the capacity to identify and quantify the economic costs and opportunities associated with climate change and the full implementation of Kyoto's flexible mechanisms.
3. Establishment of opportunities and mechanisms (study tours, pro-seminars, etc...) for AOSIS senior policy makers to become fully aware of USG domestic policy and actions to meet our FCCC commitments and responsibilities.
4. Promotion of conversion to alternative sources of energy through technology transfer and private sector relationships with AOSIS member states, including the negotiation of technology transfer agreements, establishment of Sister City/ Resource City ties, utility partnerships, etc

Events/Opportunities for engagement: There are a number of current and upcoming opportunities for engaging SIDS on issues important to advancing climate coordination. These are:

- Continue to closely coordinate between climate policy and diplomatic efforts and the IWG on negotiations on SIDS issues for the September UNGA Special Session on Islands.
- An **Environmental Strategy for the Caribbean** was drafted by USAID in Fall 1998, with participation from 12 USG Agencies, Puerto Rico, and the States of the region. The strategy identifies priority concerns for the region based on the Barbados Plan of Action and addresses climate change through a number of key sectors. The \$30M Strategy will move into implementation in the summer and fall of 1999.

- In preparation for the twenty-second special session of the UNGA in September 1999, a Donor Conference was held in February to present **project proposals from SIDS countries**. These proposals have been reviewed by the IWG, and support will be considered for announcement at the Special Session. **USAID has offered support to AOSIS to assist them to identify which of the proposals could be considered or bundled for private sector investment.**
- AOSIS plans to hold a **Summit of AOSIS Heads of State in September**, in conjunction with the UNGASS. This will be the first Island Summit since Rio. Preliminary planning for the event is underway. AOSIS is open to combining this event with a White House Summit.
- USG support (through USAID) for an **AOSIS workshop on climate change and the CDM in July in the Marshall Islands** was announced at the Ad-Hoc Inter-sessional Working Group at the CSD in April 1999. Discussions on workshop design began on 4/28/99.
- USAID is considering support for a **regional workshop in the Caribbean on renewable energy technology.**
- AOSIS, through the UN system, will be recommending **annual regional reviews of implementation of the Barbados Programme of Action** for the SIDS. AOSIS sees these meetings as having potential to promote climate action on the part of SIDS, especially in the areas of energy efficiency and renewable energy.
- AOSIS and USAID/Commerce have had initial discussions regarding a **trade mission to the Caribbean to promote climate-friendly technologies.**
- AOSIS has expressed interest, and the U.S. could support, **diffusion of Ocean Thermal Energy Conversion (OTEC) through pilot projects in the South Pacific and the Caribbean.**
- Commerce and USAID have discussed with AOSIS the provision of a **climate advisor to SPREP** to ensure USG climate representation in the region, and assist AOSIS to implement climate activities, as outlined in the Barbados Plan of Action.
- State will hold **policy consultations with Caribbean States** the second week of May. As of yet, climate does not appear to be on the agenda for discussion. State G could seek additional visibility and focus in these and additional regional discussions.
- The President's Task Force on Coral Reefs has developed an aggressive program of cooperation with SIDS to protect coral resources. Elements of this program have been closely coordinated with climate policy efforts by State OES and USAID.

The most significant opportunity for engagement is the possibility of a **White House summit for Heads of State from AOSIS member countries in September 1999.** Ambassador Slade, Chairman of AOSIS, has expressed cautious support and has initiated discussion with AOSIS leadership.

Issues: AOSIS member countries are suspicious of U.S. motives, unconvinced of the appropriateness of including sinks (LUCF) in the Kyoto Protocol at this time, and convinced of the need for compensation mechanisms in CDM and emissions trading. We may also find significant differences regarding the definition of additionality, as well.

**Discussion Paper on
Korea, Mexico and Turkey
(5/17/99)**

This paper suggests medium and near term objectives for our climate change relationship with Korea, Mexico and Turkey but does not attempt to define or quantify meaningful participation.

Medium Term

◆ Targets.

- As OECD countries, Korea, Mexico and Turkey should adopt binding, first period targets. However, all three have expressed varying degrees of concern with the economic risk inherent in adopting Annex B targets. As described below, we should engage each in technical discussions about options for dealing with risk while still accepting binding commitments.

◆ Consideration of a third way.

- In the past, Korea has been open to the possibility of the concept of a third way. Mexico has in various fora expressed a willingness to let other developing countries adopt new types of binding commitments. We should seek the open support of all three countries for the development of a new type of binding commitment for developing countries.

◆ Elaboration of the mechanisms.

- To-date, Korea, Mexico and Turkey have not been active players in the mechanisms debate. We should seek their support for the development of rules that allow unfettered use of these market-based mechanisms.

◆ Draw into UG orbit

- The three countries have participated in JUSCANZ meetings in the past. We should continue to promote their participation in such meetings in the future. In addition, we should encourage our UG partners to engage bilaterally with these three countries. We should explore opportunities for broader UG interaction with these parties as well.

Near Term

◆ Korea: Indexed, growth targets

- The Asian Financial Crisis highlighted the high level of uncertainty in their overall growth and emissions levels: after several years of negative growth, they expect to achieve 5% annual growth next year. Because of these wide swings in growth and emissions, the Koreans are particularly worried about taking on a target which could unexpectedly become a binding constraint on growth. At recent meetings, they have indicated continuing interest in the possibility of indexed targets, including the WRI carbon intensity proposal.

- We should keep them engaged in a discussion on targets that minimize their risk. Toward that end, we should share with them the CEA paper on indexation and growth targets. At the same time, we should put the onus on them to suggest how to deal with their uncertainty within the framework of taking on a first period binding commitment.
- ◆ Turkey: Addressing its concerns while it takes a target
- The GOT has taken steps to address the problem of greenhouse gas emissions, including its efforts to limit air pollution. It is also working to complete its first national communication in accordance with Annex I guidelines - even though, as a non-Party to the Convention, Turkey is not formally obligated to do so.
 - Nonetheless, Turkey has said it will not ratify the Convention until it is removed from Annex I. Strong expected growth and increases in energy use over the next several decades have contributed to Turkey's reluctance to ratify. To-date, we have argued that deleting countries from Annex I detracts from, rather than adds to, the momentum needed to address climate change.
 - We should reiterate our willingness to work with Turkey, at the technical expert level, to develop possible options regarding an emissions target which would take into account both Turkey's expected rise in energy consumption, along with its need to continue to develop. In exchange, we would expect Turkey to undertake an appropriate target during the first commitment period.
- ◆ Mexico: bilateral bearhug
- During the multilateral negotiations the Foreign Ministry (SRE) has repeatedly said Mexico will not move forward until the Protocol comes into force, and developed countries have shown they are taking action to meet their targets. We have reminded the Mexicans repeatedly that Mexico is an OECD country, even though the Convention lists it as a developing country. Outside of the UNFCCC process they have sometimes indicated interest in moving toward taking on a target.
 - On April 6, Mexico presented its long-awaited National Plan. Unfortunately, the Plan does not reflect a substantial change from Mexico's position on climate change. In the Plan, emphasis is placed on the lack of technical capacity to measure or predict emissions consistently and accurately enough to consider taking on a target. Nevertheless, the report signals Mexico's willingness to consider mitigation measures to address their emissions, and notes the role of international cooperation to this end. We have a long history of working well together on a technical level. EPA, DOE, and AID all have active ongoing greenhouse gas emissions-related programs in Mexico.
 - We should build on this foundation by engaging them in an ongoing discussion about the possibilities for further reductions in their country and about their appropriate role, as an OECD country, in the Convention and Protocol. We should, therefore, seek to revitalize the working group on climate change under the BNC. In addition, climate change should be a central aspect of the agendas of the working group on sustainable development, led by DOE, and the working group on environment, led by Interior and EPA.

May 17, 1999

TO: Umbrella Group Members

FROM: Sue Biniarz

RE: Compliance

At our March meeting in Washington, we had a preliminary, interesting discussion about what the consequence might be for a Party whose emissions exceed its assigned amount at the end of a commitment period (after a so-called "grace" or "true-up" period). Bearing in mind that discussion, we have prepared the attached paper. It identifies various options and analyzes them on the basis of several factors.

We do not have a formal position on the issue. At this stage, we find ourselves gravitating towards the "hybrid" option described on pages 7-8, but are open to other ideas.

We would be interested in exploring the possibilities of a coordinated umbrella group position on this issue. In our view, such a position should be ready no later than COP 5 if we are finish the compliance work by the COP 6 deadline. We hope you will bring this paper to the attention of your delegation leaders and be able to review it in time for a serious discussion in Bonn.

Consequences for Exceeding Targets – Discussion Paper

This paper focuses on what the consequence(s) should be for a Party to the Protocol whose emissions exceed its assigned amount. It does not address the procedure through which non-compliance with Article 3 targets would be determined, which will be considered separately. For purposes of this paper, it is assumed that a non-compliance body would be necessary for determining non-compliance; what body would be appropriate (e.g., an independent body, a subset of the Parties) is a question that will be also be considered separately.

The Need for Reasonable Certainty

- A threshold issue is whether we need to decide in advance what the consequence(s) would be for a breach of Article 3, i.e., exceeding assigned amount.
- A number of options have been identified in this regard:
 - One approach would accord maximum discretion to the non-compliance body. The COP/moP would develop the procedure through which non-compliance with Article 3 will be assessed and leave it to the non-compliance body to decide the consequence(s) on a case-by-case basis.
 - At the other end of the spectrum, the non-compliance body would have minimal discretion. Under this approach, the COP/moP would decide in advance what the consequence(s) will be, with the only decision being left to the non-compliance body whether a Party has exceeded its assigned amount.
 - In-between options would accord some discretion to the non-compliance body. For example, the COP/moP could identify a limited range of potential consequences, with the non-compliance body being authorized to decide on the appropriate consequence(s) on a case-by-case basis. Alternatively, the COP/moP could agree in advance on criteria upon which the non-compliance body would evaluate specific cases. A further approach would (in line with Article 18, see below) have the COP/moP develop “indicative” (i.e., notional but not automatic) consequences for a violation of Article 3, which the non-compliance body could apply, but would not be bound to apply.
- We believe the non-compliance regime should provide “reasonable certainty,” i.e., that the non-compliance body should have minimal, or quite limited, discretion. Parties need to know in advance at least the major consequences of non-compliance. This is important for a number of reasons, including, for example:

-- We are assuming that the consequence for violating Article 3 would be binding, i.e., not optional. It is hard to imagine that many States would agree in advance to be bound by an unknown consequence. (It is the precise reason why Article 18 ended up the way it did, with procedures leading to binding consequences subject to an amendment process.)

-- It is more likely that advance notice of consequences will deter non-compliance than unknown consequences.

-- Ratification in many States would be complicated, if not impossible, if it could not be said what the consequences would be Annex I Parties for exceeding assigned amount.

-- Unless major consequences are automatic, a non-compliance body may be reluctant to impose any meaningful consequence when an actual case arises; imposition of a discretionary consequence may also be overly politicized.

-- Advance notice of major consequences can help ensure equal treatment of non-complying Parties and thereby further lend legitimacy to the process.

- As such, it seems we should be pushing for a well-defined and predictable consequence for Parties whose emissions exceed their assigned amounts, although we could explore whether any limited discretion might be accorded a non-compliance body.

What Should the Consequence(s) Be?

- In their submissions on compliance and Kyoto mechanisms, umbrella group members have signaled the need for a short period (grace or true-up period) after the end of a commitment period, during which a Party whose emissions exceeded its assigned amount has the opportunity to reduce or eliminate any emissions overage. Therefore, the consequences discussed below would apply in the case where an overage existed after such a grace or true-up period.
- At the outset, it should be stated that there is no perfect consequence for exceeding assigned amount, i.e., flaws can be found in all options. Therefore, the exercise involves identifying the best among flawed options rather than seeking a flawless option.
- Putting aside approaches that would simply empower a compliance body to devise consequences on a case-by-case basis, four general approaches (with many variants) have been proposed by various countries and/or outside groups:

Subtracting tonnes: One approach is the U.S. proposal from Kyoto, which would automatically subtract the number of excess tonnes, plus an extra number of tonnes based upon a penalty rate, from the Party's assigned amount in the subsequent commitment period. (This approach is similar to the approach taken domestically in the U.S. acid rain trading program.) For both environmental and economic reasons, the penalty rate should be set at a level that would make running overages unattractive. In Kyoto, the United States proposed a penalty rate of 1.3-to-1. Further work would need to be done to refine the appropriate penalty rate.

Financial penalty: The second approach would impose a financial penalty on a Party whose emissions exceed its assigned amount. Under one such approach, if, during the grace or true-up period, a Party whose emissions exceeded its assigned amount either could not or did not want to acquire tonnes through the Kyoto mechanisms, it could voluntarily buy tonnes from a dedicated Fund. Under one option, revenues would be used to finance GHG mitigation projects. If, after the grace/true-up period, a Party had not corrected its overage, an assessment would be levied against it. Under one option, an agreement would provide for mutual recognition in domestic courts of such assessments.

Loss of Access to Mechanisms: Under the third approach, the consequence(s) for exceeding assigned amount would be limited to losing full or partial access to Kyoto mechanisms, rather than include penalties from outside the system, such as financial penalties.

- (For clarification, it should be noted that, while some characterize so-called "buyer liability" as a non-compliance consequence, it is not. Discounting or invalidating portions of assigned amount transferred from a Party whose emissions exceeded its assigned amount merely shifts the shortfall from one Party to another; it does not provide a consequence for non-compliance.)
- An evaluation of various approaches to consequences should be guided by factors such as the following:
 - Incentives: Would the consequence provide appropriate incentives to comply? This factor includes the economic implications of the particular approach.
 - Environmental effectiveness: Would the consequence promote the environmental effectiveness of the Protocol, e.g., by somehow restoring the excess tonnes to the system?
 - Automaticity/administrability: Could the consequence be applied automatically (so that the consent of the non-complying Party would not be required)? How easy/difficult would it be to administer?

-- Equal application: Would the consequence apply equally to all Annex I Parties?

-- Political feasibility: Would the consequence be politically tenable, internationally and domestically in various countries?

Options

- Option 1 – Subtracting Tonnes

Incentives:

-- The prospect of having tonnes subtracted from the subsequent commitment period's assigned amount could provide an incentive to comply, particularly if the penalty rate is set appropriately. At the same time, an excessive rate could cause countries either not to join the regime or to leave the regime. A complication in terms of setting the rate is that the appropriate rate may be different for different countries.

-- Even if set in advance, the penalty rate will still be highly uncertain in economic terms, in that the additional cost will depend upon the expected future price of tonnes and the expected future costs of mitigation.

-- One of the criticisms of the approach is that Parties will not necessarily have an incentive to comply, because they will negotiate their second commitment period targets to accommodate any potential overage. A potential response is that this is a criticism that applies to all approaches, i.e., when we negotiate the second period targets, we will factor in any anticipated carryover economic consequences from the first period (whether they take the form of subtracted tonnes, a financial penalty, loss of access to trading, etc.).

Environmental effectiveness: Any excess tonnes would be returned to the system (although, theoretically, it might be possible to carry forward the excess tonnes indefinitely). The consequence would restore the tonnes through the same Party, in a different time period.

Automaticity/administrability. This consequence would apply automatically and would not require any affirmative action on the part of the non-complying Party.

Equal application: This consequence would apply equally to all Annex I Parties, whether they use any Kyoto mechanisms or not.

Political feasibility: Internationally, this approach will already be familiar, having been introduced at Kyoto (with some initial buy-in); a potential downside is that, although it is different from the earlier U.S. proposal for “borrowing” (in that “borrowing” did not involve non-compliance), some may continue to think of it as a borrowing proposal. This approach is likely to be more politically feasible for many Parties than a financial penalty.

Other: This approach, like a financial penalty (see below), could help alleviate price volatility during the grace/true-up period. Sellers cannot charge more than the expected value of (1 plus the penalty rate) multiplied by the expected future price.

- Option 2 – Financial Penalty

Incentives: The extent to which a potential financial penalty would provide an incentive to comply would presumably depend upon the structure of that penalty. Theoretically, a financial penalty could be structured so as to impose the same economic costs as the approach of subtracting tonnes. At some point, the prospect of too stringent a financial penalty could provide an incentive either not to join the regime or to leave the regime.

Environmental effectiveness: The extent to which a financial penalty would foster the environmental effectiveness of the Protocol would depend upon how the penalty revenues were used. Under the proposal that would put the money into GHG mitigation projects, the tonnes could be restored to the system in a different commitment period and presumably through a different Party than the non-complying Party (i.e., wherever the GHG mitigation project took place). Tonnes could also be restored if penalty money were used to purchase and retire remaining assigned amount from the previous period, or assigned amount from the second period. The extent to which excess tonnes would be fully restored could depend upon where mitigation projects were undertaken.

Automaticity/administrability: A financial penalty would normally require the cooperation of the non-complying Party in order to be collected. (The proposal that would require automatic enforcement of penalties in each other’s courts might be unrealistic.)

Equal application: A financial penalty would apply to all Annex I Parties equally (although it might be argued that its de facto impact would be greater upon poorer countries).

Political feasibility: Of all potential consequences, it has been pointed out by many that financial penalties would likely be the most politically difficult for many Annex I Parties. Financial penalties might, however, be the most desired

consequence from a developing country point of view; indeed, it appears that AOSIS is already hinting that financial penalties might be applied toward adaptation. One might imagine a similar argument being made by OPEC regarding “compensation.”

Other: This approach, like subtracting tonnes (see above), also could help alleviate price volatility during a grace/true-up period. A seller could not charge more than the price/tonne penalty. Other issues that would require further thought would be the currency denomination of any penalty and the management of currency risk.

- Option 3 – Loss of Access to Mechanisms

Incentives: Unlike subtracting tonnes and financial penalties, which are inherently calibrated to the actual offense (i.e., the greater the number of excess tonnes, the greater the number of tonnes subtracted or financial penalty), this approach would, unless somehow graduated, apply the same consequence regardless whether a Party exceeded its assigned amount by one tonne or a million tonnes. Loss of access to the mechanisms could be disproportionate for the Party that exceeded its limit by one tonne, and a mere slap on the wrist for the Party that exceeded its limit by a million tonnes. (It might be possible to introduce a degree of graduation by linking how long a Party loses eligibility to the size of its emissions overage; however, it might be difficult to establish a proportionate formula.)

Environmental effectiveness: In terms of environmental effectiveness, such an approach would not appear to have any restorative effect. In other words, taking away access in the subsequent commitment period would not remedy any overages during the first commitment period. (Such a potential deficiency might be remedied by restricting access to mechanisms until a Party restored its excess tonnes to the system.) Further, this approach may limit environmental effectiveness in the subsequent commitment period by making it more difficult for the Party to meet its assigned amount.

Automaticity/administrability: This approach would be automatic, i.e., not require any affirmative act on the part of the non-complying Party.

Equal application: This approach would not apply to all Annex I Parties equally. However, a major drawback is that it would not affect at all a Party not using any Kyoto mechanisms.

Political feasibility: Internationally, it may be easier to sell this approach than others, as it does not appear as threatening as, for example, subtracting tonnes or a financial penalty. For many countries, however, it might be difficult to sell a

proposal that automatically cuts off access to mechanisms that could be important to reaching assigned amount in the subsequent period. Finally, this approach needs to be considered in connection with any consequences developed in connection with the trading rules. A further consideration, in terms of international feasibility (as well as equal application) is whether loss of access to mechanisms would include loss of access to an Article 4 bubble.

Other Considerations

- It should also be considered, when weighing options, who would bear the burden of a given consequence. For example, subtracting tonnes and financial penalties would appear to impose the consequence on the non-complying Party. Other consequences, such as restricting access to Kyoto mechanisms, could end up penalizing the trading partners of the non-complying Party more than the non-complying Party itself.

- Each of the approaches above will have economic effects on the non-complying Party (and perhaps on collateral Parties as well, as noted above). The relative uncertainties in the magnitudes of the economic penalty differ among approaches. For example:

-- At one end of the spectrum, financial penalties, if imposed on a \$X/tonne basis, offer the greatest certainty in terms of economic impact.

-- At the other end of the spectrum, the economic penalties associated with limiting access to Kyoto mechanisms are very uncertain.

-- Subtracting tonnes will incur costs that depend upon the size of the assigned amount in the subsequent commitment period, domestic and world abatement costs, etc., which are quite uncertain at the time the nature of the consequence is determined. However, as noted above, the options of subtracting tonnes and financial penalty could, at least in theory, be structured so as to impose the same economic costs.

- Option 4 - Hybrid Option

- It might also be possible to combine the approach of automatically subtracting tonnes from a Party's assigned amount for the next commitment period with a voluntary version of the financial penalty approach.

- In terms of the voluntary payment portion of the approach, as an alternative (full or partial) to subtracting tonnes from its subsequent assigned amount, a Party with excess emissions could be allowed to purchase tonnes from a Fund, at an appropriate rate, during the grace/true-up period. (Presumably, tonnes could be purchased from the Fund even if they were otherwise available through the Kyoto mechanisms.) The money collected could be spent subsequently on GHG mitigation projects. (The Fund

- would resemble CDM, but the tonnes could be purchased in advance of actual reductions.)
- Under such a hybrid approach, a Party would in essence have options at the end of a commitment period: it could get itself back into compliance during the true-up/grace period through one or more Kyoto mechanisms; it could pay into the Fund; it could lose assigned amount in the subsequent period. A Party could combine some or all of these options as well.*
- This option would have all the benefits of Option 1 (subtracting tonnes), while according Parties additional flexibility and opportunities in terms of non-compliance consequences.

A Consideration about Placement

- At COP 4, in the context of developing the mandate for the non-compliance group, it was recognized that it was not necessary to decide at that time under which article(s) of the Protocol the non-compliance regime would be placed.
- At the same time, umbrella group members should be aware of the fact that substantive positions of other countries may be influenced by questions of placement.
- Specifically, the basic articles where elements of the non-compliance regime might be housed include:
 - Articles 6 (joint implementation), Article 12 (CDM), and Article 17 (emissions trading); and
 - Article 18 (general non-compliance article).
- Because of the potential “pig-in-a-poke” problem, Article 18 provides that “[a]ny procedures and mechanisms ... entailing binding consequences shall be adopted by means of an amendment to this Protocol.”

* Under another permutation of the hybrid option, a Party whose emissions had exceeded its assigned amount would not have to subtract tonnes in the subsequent period if it could demonstrate that its regulated entities or other covered sources had been domestically charged \$X/tonne (an internationally agreed price) for any tonnes emitted in excess of its assigned amount. Such an approach would ensure significant domestic mitigation incentives, while avoiding the more difficult political decision of an international financial payment.

- Because some countries want to avoid having to amend the Protocol to address non-compliance, they may be trying either to avoid binding consequences or to insert as much as possible of the non-compliance regime into the rules for the various mechanisms, which do not require amendment. (Some, including the EU, may also be seeking to build consequences into the mechanisms as a way of loading down or limiting the mechanisms.)
- However, such an approach would entail at least the following problems and is therefore not a viable option:
 - Whereas the regimes for the individual mechanisms might appropriately contain consequences for not complying with the rules for those mechanisms, they would not be the appropriate place to deal with consequences for violating Article 3, in particular for those Parties that are not even using that mechanism.
 - Even if the mechanism rules did somehow address binding consequences for violations of Article 3 by Parties using those mechanisms, there would be a gap as to the consequence for a Party not using any mechanism (which would include Parties using a bubble, which will not have an elaborated regime). Such a lack of parallelism would presumably be a fatal flaw in a non-compliance regime.
- The above problems with approaching non-compliance through the mechanisms do not, however, mean that Article 18 is a good approach. It has its own problems:
 - It could not be known upon ratification whether the non-compliance package (that would presumably be pre-negotiated by COP 6) would ultimately enter into force as an amendment.
 - Even if the amendment were likely to enter into force, no Party would be bound to ratify it. Thus, even a non-compliance regime that was perfectly parallel in its treatment of various Annex I Parties would have no guarantee of actually receiving the ratification of all such Parties.
- One answer to the dilemma is, in the context of modifying the Protocol before its entry into force to add developing country commitments, to add whatever non-compliance regime is negotiated. This would ensure that:
 - It would bind all Parties.
 - Any modification to it would require amendment, except as otherwise provided.
 - We could negotiate the non-compliance regime from the point of view of what makes sense, rather than having to worry about arbitrary placement issues.

- A problem with this approach is that some countries, particularly developing countries, may not necessarily be ready at this moment to agree on the need for a modifying instrument. Further, there may be concern that modifying the Protocol could open it to further changes.
- As a result, at least in the near term, we will need to manage this placement issue in the compliance negotiations. We cannot be too direct about the modifying instrument approach; at the same time, we cannot agree to substantive approaches that make us a slave to Article 18's requirements.

U.S. DEPARTMENT OF STATE
Office of the Spokesman

For Immediate Release

May 17, 1999

STATEMENT BY JAMES B. FOLEY, DEPUTY SPOKESMAN

U.S. Reaction to EU Move to Limit Emissions Trading

The United States Government is disappointed by today's statement of the European Union seeking to restrict the use of emissions trading under the Kyoto Protocol. Nonetheless, our basic position on such limits remains unchanged: The United States has consistently opposed such restrictions, and will strongly oppose them in future negotiations.

Market mechanisms, such as emissions trading, are essential to dealing with the global problem of climate change in the most cost-effective and environmentally effective manner. In the United States, emissions trading has been used with great success to control acid rain at a fraction of the anticipated cost.

The issue of whether emissions trading should be subjected to a quantitative limit was explicitly and thoroughly debated at Kyoto. The European Union favored quantitative limits at that time but, as part of the complex set of compromises that formed the Protocol, the EU accepted a text that includes no quantitative limit. Thus, this new action by the EU is an attempt to rewrite the Kyoto Protocol.

Moreover, under the terms of the Protocol, European nations have asserted an unlimited capacity to trade emissions rights among themselves under their so-called 'bubble'. In today's statement, the EU proposes to restrict every flexibility mechanism agreed to at Kyoto other than its own.

International emissions trading alone, of course, will not achieve our objectives. The United States is taking vigorous domestic action to reduce greenhouse gas emissions and will continue to do so. But restricting trading simply limits one of the most effective tools in the world's arsenal for combating global warming.

Loy Policy Mtg 5/17

Turkey, Mexico + Korea

- should we have CEA do a study of results of indexed target? Frankel doing one at Brookings
- BNC: - Bi National Commission (w/ Mexico)
- Korea may be interested in transitional targets.
Hard for them is fact that they are already very efficient.
- Turkey have "Joint Commission" bilat process setup in which can discuss climate.
Maybe we should not make Turkey a priority country for us now, because it is too hard.
 - Turkey also benefit from targets if Caspian pipeline goes forward, bc they would be able to switch from coal to gas.
- Mexico - AID, EPA projects ongoing.

Growth Targets for GHG Emissions from Developing Countries:

Introduction and Summary of Findings

The United States has advocated emissions growth targets for non-Annex I countries. As these countries consider the possibility of adopting such targets, several have solicited assistance from the United States. The tasks of providing technical assistance to these countries and working with the international community to develop an understanding of what constitutes “appropriate non-Annex I targets” require a further refinement of the US position on developing country growth targets. This paper presents some basic principles for growth targets and discusses several proposals.

Principles Recognizing the interests of developing countries, the United States interest, and the economic and environmental impacts of emissions targets, there are three basic guiding principles for emissions growth targets:

- **Targets should result in environmental benefits;**
- **Targets should be consistent with continued economic development; and**
- **Targets should be of a form that allows developing countries to participate in international emissions trading, to reduce the economic costs of attaining given targets.**

Findings While there is a general consensus on these basic principles, a further elaboration on some of the key issues involving these principles can help facilitate the effort toward a position on the form, magnitude, and timing of a developing country growth target. In reviewing existing data, ongoing research, and in conducting our own analyses, we have found that:

- Growth targets even as high as BAU can yield significant reductions in global emissions by forestalling the leakage that would otherwise occur.
- Targets can result in economic gains from trade for all sides, if they are not too stringent.
- A “fair” allocation to expect of potential new participants might be a target that fits the apparent pattern among Annex B countries. This approach turns out to imply some degree of “progressivity” -- with richer countries asked to make bigger sacrifices than poor ones.
- Given uncertainty about the future, to fix the precise quantitative target now would create great risks regarding the ultimate stringency of the target; it would raise concerns that a target unintentionally constrains economic development, on the one hand, or that the target could result in hot air, on the other hand. These risks would be reduced by indexation approaches.
- Approaches to index targets to income growth between now and the commitment period have some advantages over carbon efficiency target approaches.
- CO₂ is the dominant greenhouse gas in developing countries (from fossil fuels and land-use). Measurement of other gases might be too difficult to justify their inclusion.

Guide to Contents

(I) Benefits of Targets-and-Trade A scheme in which non-Annex I countries are invited to adopt binding emission targets in the general vicinity of their BAU paths, and then to trade emission permits internationally, is a scheme that has real potential economic and environmental benefits, not just for Annex I countries, but for the developing countries as well. This gives them a genuine incentive to join, which would otherwise be lacking.

(II) What Should Determine Desired Targets? Non-Annex I countries could be asked to take on targets that make some small reductions relative to BAU, and still benefit. But large cuts would render them worse off, and therefore unlikely to agree to participate. Conversely, large increases relative to BAU are unlikely to be acceptable to the Annex I countries. We explore the range of targets that the developing countries could be expected to take on. A reasonable upper bound is their BAU paths.

Even a target as generous as this would result in global environmental benefits, by forestalling leakage, as shown in **Memo II.1: *Emissions leakage from Annex I to non-Annex I countries***.

A reasonable lower bound is the “indifference target” which entails cuts large enough that participation no longer brings them economic benefits, because the gains from selling permits are fully offset by the losses from a stringent target. (See **Memo II.2: *The Trade-off between target stringency and gains from trade***).

An alternative approach to formulating a “fair” target for developing countries is to estimate statistically what pattern holds among targets already accepted by Annex I countries, and then to extrapolate to developing countries. This statistical approach is explained in **Memo II.3: *Progressivity of existing targets, as a guideline for developing-country targets***. This approach turns out to imply some degree of “progressivity” -- with richer countries asked to make bigger sacrifices than poor ones -- without going nearly so far as the redistribution of wealth that some poor-country representatives seem to be asking for. As an example, when the pattern is extended to China, the implied target is a 5 percent cut relative to BAU. This happens to lie inside the range spelled out in Memo II.2.

(III) Uncertainty of Measurement and Forecasting complicates the analysis further. Because BAU forecasts are uncertain, a given numerical target could turn out to be unintentionally stringent (inflicting economic costs on the country) or unintentionally lax (creating “tropical hot air”). **Memo III.1, *Uncertainty about Target Stringency, and proposed solutions***, explores this problem and approaches to deal with it by indexation.

Another difficulty of extending targets to developing countries is measurement of emissions. **Memo III.2, *What greenhouse gases are necessary to include?***, suggests simple CO2 targets might be good enough for these countries.

I. Benefits of Targets-and-trade

It would be useful to get developing countries to agree to binding limits, even if they involved only small (or no) cuts below Business as Usual (BAU) in the first budget period. Such targets, with trading, imply gains for their economies, gains for ours, and gains for the environment.

Reasons:

- We want to forestall increases over BAU, that would occur in response to Annex I cuts if others do not take on targets. (This is leakage, as explained in Memo II.1 below.)
- The ability for Annex I countries to buy reductions from LDCs would greatly reduce the costs of meeting our targets (as CEA testimony showed). In particular, it is estimated that trading with developing countries would lower U.S. costs more than 80 percent relative to the costs of achieving the Kyoto targets solely through reductions in domestic emissions. (This is as compared to 57 percent savings from trading among Annex I countries alone).
- With targets close to BAU, the developing countries would benefit from the ability to sell emission permits achieved at costs below the world price. This actually gives them a genuine economic incentive to join, which is otherwise lacking. Illustrative calculations by CEA suggest that China would stand to gain \$3.6 billion/year by joining Annex I, and India to gain \$1.6 billion/year. (See Table 2. The United States would save a preliminary-estimate \$11.6 billion if China joined, or \$2.5 billion if India joined.)
- Further, when permits are sold, reductions in carbon dioxide emissions generate ancillary air quality benefits in the developing countries through lower particulate matter, sulfur dioxide, and nitrogen oxides emissions.
- Establishing developing country targets now would meet the requirements of the Byrd-Hagel resolution. Agreement on modest targets in the nearer term is the first step to drawing LDCs into the system, where larger cuts relative to BAU might be possible in the longer term (in some proportion to the cuts made by richer countries that have gone before them).

II.1 Emissions leakage from Annex I to non-Annex I countries

Even if developing-country targets did no more than to hold developing countries at BAU emission levels, this would be a major environmental benefit. Several economic analyses indicate that for every 3 to 5 tons of carbon abated in Annex I countries, emissions in non-Annex I countries will increase by 1 ton. Often referred to as "leakage," this shifting in emissions reflects two economic impacts of abating emissions in Annex I:

- **World Oil Market Price Effects.** Abating carbon dioxide in Annex I countries reduces the demand for oil, thereby lowering the price of oil. With lower oil prices, some non-Annex I countries will consume more oil and increase their emissions relative to what they would have without the Annex I abatement policies.
- **Energy-Intensive Industry Migration.** Annex I abatement policies that increase the price of energy may provide an incentive for energy-intensive firms to relocate to non-Annex I countries.

Leakage is positively correlated with permit prices: higher Annex I permit prices (and higher energy price effects) will likely result in higher rates of leakage.¹ Several modeling teams participating in the Stanford Energy Modeling Forum (EMF-16) have estimated the extent of leakage associated with an Annex I trading regime. These analyses assume that Annex I countries participate in international emissions trading while non-Annex I countries neither adopt targets nor participate through the CDM. While these results represent a wide range, they all reflect significant increases in emissions above BAU for non-Annex I countries. Thus, even if non-Annex I countries' emissions were only capped at business-as-usual levels, without reductions, that would yield significant environmental benefits in that it would forestall leakage.

Table 1. Increase in Non-Annex I Emissions Under Annex I Trading

MERGE (Manne and Richels)	MRT (Charles River Assoc.s)	G ³ (Shackleton et al)
325 MMTCE	115 MMTCE	55 MMTCE

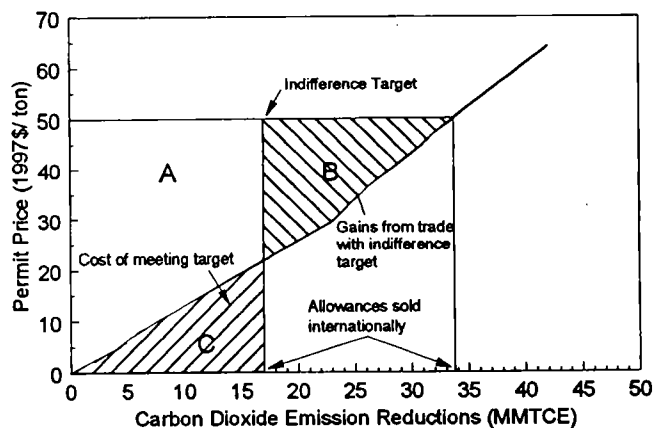
¹ However, international emissions trading can eliminate leakage among all trading participants. An effective trading market that results in equal marginal costs of abatement across all participating countries also results in equal energy price effects in all participating countries. Thus, there is no economic incentive for energy intensive firms to relocate to another country participating in trading. A full global trading system would then eliminate leakage completely. Some economic analysis indicates that while the CDM would lower costs some to Annex I countries, the project-by-project approach does not equalize energy price effects across all participating countries, and would not eliminate leakage to developing countries.

II.2 The trade-off between target stringency and gains from trade

The Administration has stated in bilateral and multilateral meetings, Congressional testimonies, and other public fora that if developing countries adopt emissions growth targets and participate in international emissions trading, they can enjoy economic gains from trade. Among other issues, this conclusion is sensitive to the stringency of the emissions growth target. The environmental gains from emissions reductions below BAU come at the price of economic costs incurred by a developing country that adopts the below-BAU target. In addition, in the cases of large non-Annex I countries, more stringent targets could have economic costs for buyers in international emissions trading. More stringent developing country targets could raise U.S. costs by restricting the supply of permits in world markets and so raising the price of permits relative to less stringent targets.

To assess the magnitude of this effect consider the target which just leaves a country no better off than no target at all. This “indifference” target is where the costs of meeting the target through domestic action just equal the net gains from selling permits in world markets.² Figure 1 illustrates gains from trade for a small country. The upward-sloping curve shows the rising marginal cost of increasingly stringent reductions. For small reductions from BAU, the cost is far less than the price they fetch on the world market. For a target that is equivalent to a reduction of 17 MMTC, net gains from foreign exports are B, and the cost of meeting the target is C. Since $B = C$ in this example, the net costs from participation are nil.³

Figure 1. Illustrative 2010 Marginal Abatement Cost Curve and Indifference Target



Note: For simplicity, this indifference target is illustrated for a country whose participation in world permit markets does not affect world permit prices.

As a numerical example of the effects of increasing the stringency of an emissions growth target, we present results from some modeling scenarios of Annex I trading with China. These analyses assume

² This analysis presumes that non-Annex I countries abate their emissions cost-effectively, e.g., through a tradable permit system or a carbon tax.

³ This hypothetical example assumes that the country in question does not consider participation in the Clean Development Mechanism (CDM). If this country were to participate in CDM if it did not adopt a target, then its indifference target would not be at the level where net gains from trade are zero, but where expected net gains from trade would equal expected net gains from the CDM. The CDM option implies that the indifference target would be less stringent. However, including the ancillary air quality benefits associated with abating carbon dioxide, especially in countries with significant local air pollution problems, could imply that the indifference targets should be *more* stringent.

that no other non-Annex I countries participate in international emissions trading or the CDM. If other non-Annex I countries did participate in either flexibility mechanism, the world trading price could be lower, resulting in lower gains from trade and a less stringent indifference target for China.

Table 2 provides an illustration of the effects of emissions targets more stringent than BAU on China with Annex I plus China trading. A small reduction below BAU has no real effect on the Annex I trading price, and thus no economic effects on the U.S. However, as the target becomes more stringent the trading price increases, resulting in higher total costs of compliance for the U.S.

Table 2. Effects of Various Chinese Emissions Targets with Annex I Trading

Emissions Target ¹	Permit Price (1997\$/ton)	Chinese Emissions Reductions (MMTC)	Chinese Emissions Sales (MMTC) ²	Chinese Gains from Trade (1997\$)	Increase in Total U.S. Cost Relative to China BAU Target
BAU	\$26/ton	276	276	\$3.6 billion	not applicable
BAU - 1%	\$26/ton	276	262	\$3.2 billion	~\$0
BAU - 5%	\$29/ton	304	235	\$2.4 billion	\$1.3 billion
Indifference	\$36/ton	343	172	\$0 billion	\$4.2 billion

¹ We employ the SGM BAU for China for the purposes of these calculations.

² Reductions in Chinese emissions less Chinese emissions sales yields net global reductions.

Imposing this "indifference" target on China, given that its participation lowers world permit prices, leads to the following conclusions.⁴

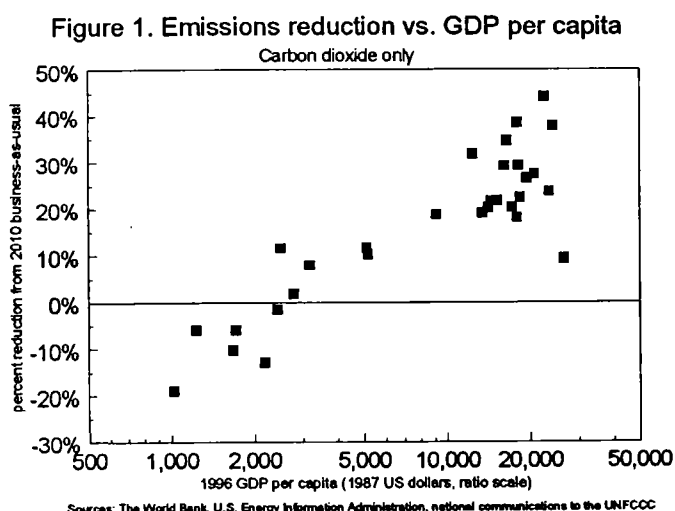
- An indifference target for China results in it foregoing \$3.6 billion relative to the gains it would obtain if it were to take a BAU target.
- An indifference target for China increases annual U.S. costs by \$4.2 billion or about 33% relative to a BAU target for China.

⁴ The reason that Chinese participation lowers world permit prices is because BAU or near BAU targets result in more permits available on the world market.

II.3 Progressivity of existing targets, as a guideline for developing-country targets

It appears reasonable on grounds of fairness that wealthier countries should undertake greater efforts to address climate change than less-wealthy countries. While the emission targets in the Kyoto Protocol reflect the outcome of political negotiations, it is possible to discern systematic economic patterns in them. A fair target for developing countries might one that fits whatever pattern seems to hold among existing targets. In particular, this approach would allow some degree of progressivity, with richer countries making larger reductions than poor ones -- without going nearly so far as the redistribution of wealth that some poor-country representatives seem to ask for.

The Annex B targets (including the EU bubble allocation), when presented in terms of reductions below 2010 BAU, follow a pattern of progressivity (see figure 1). Note that this pattern holds for CO₂ as well as for all greenhouse gas emissions (although data on some non-CO₂ GHG emissions are not available for some Annex I countries; see memo III.2). For the 30 Annex I countries presented in this figure, the average reduction from BAU is 16.1%. For the lower half of Annex I countries by per capita income, the average reduction is 5.2% below BAU.



We conducted statistical analyses to better understand the progressivity of the Annex B targets. We used data on Annex B countries' per capita income, emissions growth projected between 1990 and 2010, coal as a share of total energy consumption, and whether a country is a transition economy, to explain the trend in emissions targets in terms of deviations from BAU. The statistical analyses illustrate a pattern of progressivity among the existing targets: each 1% increase in per capita income implies a 0.11 to 0.17% greater sacrifice, expressed as emissions reductions from BAU. Levels of statistical significance are relatively high, suggesting that the results are meaningful. In absolute terms, an increase in income is associated with an increase in the level of the emission target. But the increase in income also implies an increase in the BAU level. The increase in BAU is *greater* than the increase in the target, implying that richer countries are making greater sacrifices. As an example, when the pattern is extrapolated to China the implied target is a 5 percent cut relative to BAU. This happens to lie inside the range spelled out in Table 2 of Memo II.2: both China and the rest of the world gain.

This statistical approach certainly has limitations, and the results reported here are preliminary. They are sensitive to decisions about the data used. Per capita income data can change depending on the year and exchange rate used to compare countries. Estimates of BAU emissions can vary too.

III.1 Uncertainty about target stringency and proposed solutions

Some developing countries have claimed that the uncertainty regarding projected economic performance is so great that they cannot risk adopting a binding emissions target for the first commitment period at this time. A natural response to this concern is that international agreements on these countries' targets should be structured to reduce the risk of inadvertent stringency and in particular to reduce the possibility of a target so stringent as to cause large economic losses to the developing countries. In addition to the concern expressed by some developing countries that adopting a binding target now for 2008 risks it being inadvertently stringent and constraining economic development, some have also expressed concern the symmetric concern on the other side, that a target may be too lax, creating "tropical hot air" and thus failing to result in environmental benefits in terms of actual emissions reductions. Thus, it is desirable both to mitigate the risk of inadvertent stringency and also mitigate the risk of inadvertently laxity. The idea is to reduce the variability of the effective stringency of the target without loosening or tightening the intended target, i.e., to reduce the variance without changing the expected value.

To attempt to address this uncertainty issue, a number of ideas have been forwarded. CEA has called its proposal an indexation or formula approach; EPA has referred to its proposal as efficiency standards. They are all versions of the general notion of agreeing today on a contract under which the numerical emission target is to depend in a specified way on future variables whose values are as yet undetermined. (The analogy is with a cost-of-living adjustment clause in a labor contract, that specifies a given increase in the wage for every cent increase in the Consumer Price Index -- thus reducing uncertainty over *real* wages.) In what follows, we assume that a country's aggregate emissions are indexed to future income alone. (We are thus omitting from past CEA proposals the possibility of including in the formula other variables like population; and are omitting from past EPA proposals the possibility of separate "efficiency standards" for individual sectors within an economy.)

It is useful to distinguish four proposals that appear in earlier memos.

(1) CEA approach (Special-case): For every percentage point that GDP in 2007 turns out to be higher (or lower) than forecast, the emissions target is raised (or lowered) by 1%.

(2) CEA approach (General): For every percentage point that GDP in 2007 turns out to be higher (or lower) than forecast, the emissions target is raised (or lowered) by X%, where X is a number less than 1. An advantage relative to proposal (1) is that countries that do well over the coming decade are asked to contribute a bit more than those that do not, while not being penalized unduly.

(3) EPA approach (Special-case): For every percentage point that GDP in the years 2008-2012 turns out to be higher (or lower) than forecast, the emissions target is raised (or lowered) by 1%. (EPA phrases this as setting a number for the ratio of emissions to GDP; but that is the same thing.) The advantage relative to the CEA approach is it allows even more uncertainty-

protection, with respect to fluctuations in income in the years after 2007. The disadvantage is that the country does not know how many tons it is entitled to until the end of the budget period, which could make trading difficult.

(4) EPA approach (General). The target ratio of emissions/GDP that is set for the budget period (2008-2012) does not depend only on the country's own past emissions level (such as 1997 or 1990 plus K%, or BAU minus X%) but also on a common standard established for all countries. It seems to CEA that this approach has two serious drawbacks:

(i) Because emissions/GDP varies widely across countries, a request that countries agree to a common standard would imply far greater sacrifice for some than for others (relative to their current positions, or to BAU). We wouldn't hear of this approach in setting the US target at Kyoto, and neither will many others who would be disadvantaged.

(ii) A comparison of GDPs across countries can easily vary by 100% or more, depending on whether a PPP basis is used or market exchange rates, what year is chosen, and how PPP or the exchange rate is measured; the implied large year-to-year swings in targets (tons of GHG emissions) would be unworkable. Note that approaches (1)-(3) do not have this problem, because measurement problems in yearly growth rates for a given country amount to a couple of percentage points at most.

III.2 What greenhouse gases are necessary to include?

In the Kyoto Protocol, Annex B countries have targets specified in terms of a basket of six types of greenhouse gases. These targets include both emissions sources and sinks. While this comprehensive approach provides more environmental benefits, it does increase the required effort and cost of inventorying greenhouse gas emissions. Many developing countries lack the monitoring infrastructure to assess emissions of all six types of greenhouse gases. Must developing country growth targets include all greenhouse gases, or is a subset of the Annex A list of gases sufficient?

In evaluating this question, it may be useful to consider several issues.

- **Greater Climate Benefits.** A developing country growth target set below what emissions would be otherwise for only one greenhouse gas (e.g., CO₂) would generate greater environmental benefits relative to a scenario where that country does not adopt a target.
- **Leakage Across Gases Unlikely.** There appears to be little opportunity in most economies for intergas leakage. For example, most efforts to abate fossil fuel-related carbon emissions would result in efficiency improvements, switching to leaner fossil fuels (e.g., natural gas) and to carbon-free sources of energy (e.g., hydropower, nuclear, wind), none of which have emissions of other types of greenhouse gases. Moreover, efforts to abate carbon dioxide in fossil fuel combustion may have ancillary reductions of energy-related methane.
- **CO₂ is Significant Majority of Greenhouse Gas Emissions.** In the United States, carbon dioxide comprises 85% of all greenhouse gas emissions (weighted by carbon equivalence). Across Annex I, carbon dioxide is, on average, 80% of each country's emissions. This trend appears to hold for some non-Annex I countries as well. In 1990, carbon dioxide comprised 88% of Korea's emissions, 85% of Mexico's emissions, and 85% of Kazakhstan's emissions. In Argentina, carbon dioxide comprised 63% of 1990 emissions, with methane comprising most of the rest. It appears that carbon dioxide dominates most countries' emissions, with methane a distant second (depending on the extent and nature of agriculture). Non-Annex I countries have not reported their emissions of the synthetic gases in their national communications to date. It is not clear how revisions to the N₂O emissions estimation methodology could affect estimates of non-Annex I countries' emissions.
- **Land Use Change Could be Significant.** Carbon dioxide emissions from land use change in non-Annex I countries appear to be quite significant. Some estimate that by including land use change emissions, non-Annex I emissions exceeded Annex I emissions in 1994 (Panayotou and Sachs 1998). Emissions from land use change in non-Annex I countries in 1994 were more than one-fifth of global carbon dioxide emissions. Some statistical analysis indicates that countries' land use change activities do not become net sinks, *ceteris paribus*, until per capita income exceeds \$3,600.

98 OCT 6 PM 6:09



The Secretary of Energy
Washington, DC 20585

October 5, 1998

MEMORANDUM TO THE PRESIDENT

FROM: BILL RICHARDSON *BR*

SUBJECT: WINNING DEVELOPING COUNTRY COOPERATION
ON CLIMATE CHANGE

Our collective efforts to persuade key developing countries to adopt binding emissions targets have not yet been fruitful. Only with Argentina are we beginning to see real progress. These developing countries have managed to characterize this disagreement as a North-South issue and have maintained remarkable group discipline. With a concerted effort I believe we can divide and conquer this group, persuade at least a few key countries to adopt voluntary or binding targets for the 2008-2012 time period, followed by binding targets beginning in 2013. It will require an interagency effort, a willingness to link some forms of cooperation to progress on climate change and some cabinet level pressure on our friends and partners. I am willing to lead this effort with your support, the support of the Vice President and cooperation from Treasury, State, EPA and USAID.

The key argument we must make is that it is in the economic interest of developing countries to adopt binding emissions targets. While we can make our case on environmental and political grounds, these arguments are not compelling to countries struggling for development and fearful of the current economic turmoil. We must shift our diplomatic focus away from the Foreign Ministries, which make their trade in G-77 cooperation, and towards the Trade and Finance ministries, which are looking for any lifeline they can get. We must also make a concerted effort to wage a public diplomacy campaign in the media of the countries we are targeting. We must make the case that cooperation on climate change is the key to technological cooperation and the generation of cash from the international emissions trading regime.

You made this argument in your meetings with President Jiang Zemin and President Kim Dae Jung. The high level working groups you offered to create have met and are beginning to make some progress. I would like to expand on your idea and target additional countries that are in more dire economic straits or with whom we have the greatest leverage. We will have to work with them to develop their own analyses indicating the economic benefits of entering the emissions trading



-2-

system. We must provide them with the analysis that shows them the international capital flows that could accompany the adoption of an emissions target. My Department has the analytical firepower and resources to develop this analysis and present it with credibility abroad.

While access to capital is the carrot, ultimately each country's decision to cooperate with us will be a political decision. We need a more political strategy to win their cooperation. We need to begin by targeting the countries that we have the best chance of splitting away from the G-77. These can be Allies like Israel and friends like Singapore, who are well off and have low emissions levels now. We should work on Mexico and continue to push South Korea -- countries in need of a capital boost and likely to see the benefits from emissions trading. We can also target those countries over which we have, for a variety of reasons, great leverage.

With your support I will use my travel abroad to press our case and gain agreement to create a series of these multi-agency working groups. I can begin this month when I visit Mexico and Venezuela and continue with the Caspian nations, South Korea and the Gulf States later this Fall.

What I need is your support to let me lead these bilateral efforts. My counterparts in other countries need to know that we will meet at ministerial level when their Presidents come to town or when we host major binational events. I will work hand in glove with the Vice President, Todd Stern and my colleagues at State, Treasury, EPA and USAID. But if we want to break the current logjam and persuade the Congress that we are making a serious effort to win "meaningful developing country participation" we need to start fresh, work as a team and start now.

You have set a new course for our efforts with China and South Korea, one which has shown some promise. I think we need to turn this into a concerted campaign. I'm ready to hit the trail.

FAX COVERCOMMITTEE ON GOVERNMENT REFORM
AND OVERSIGHTDEMOCRATIC STAFF OFFICE

HON. HENRY A. WAXMAN

RANKING MINORITY MEMBER

511 FORD HOUSE OFFICE BUILDING

PHONE (202) 225-5420

FAX (202) 226-3348

DATE: 3/27TO: Roger Ballentine FAX # 456 2604FROM: Alys CampaigneSUBJECT: fact sheetNO. OF PAGES 3
(EXCLUDING COVER SHEET)COMMENT: Hi -

11/1 fax over the Approps letter later today - it has over 40

signs & is bipartisan (!).

This is the latest fact sheet in a series we
started last year. fyi.

Alys

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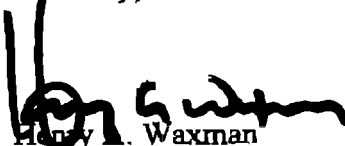
March 25, 1998

Dear Colleague:

Attached is a fact sheet addressing five main myths that are repeated in current debates about the role of developing countries in climate change.

I hope that you find this information useful and informative. If you have questions or would like more information please contact me or Alys Campaigne (5-5420).

Sincerely,



Henry A. Waxman

Ranking Minority Member

CLIMATE CHANGE FACTS

Issue 7

U.S. House of Representatives
Minority Staff, Committee on Government Reform and Oversight

March 25, 1998

Five Myths about Developing Countries and Climate Change

Industrial countries account for over two-thirds of global annual carbon dioxide emissions. The six largest developing countries -- China, India, Mexico South Africa, Saudi Arabia and Brazil -- emit approximately 22% of global emissions. The other 120+ developing countries contribute another 12% of emissions. While developing nations must be included in the global effort to address climate change, the developed world has yet to fulfill its voluntary obligations set forth under the 1992 Framework Convention on Climate Change. Rather than addressing concrete steps to involve developing nations in the Convention, many industry skeptics are using developing countries as a scapegoat for U.S. inaction. This fact sheet addresses five main myths that are repeated in current debates about the role of developing nations in climate change.

1. Developing Nations Arc Excluded From The Treaty.

While developing nations are not bound by quantified emissions reductions under the Kyoto Protocol, they are in no sense excluded from participation. Developing nations have obligations to improve energy efficiency, inventory emissions sources, and develop pilot national programs to adapt to climate change and reduce emissions from energy, transportation, industry, agriculture, forestry, and waste management sectors. Developing countries may opt in to a binding reduction under the Protocol by amendment to an Annex at any point. One major incentive to opt in is that in order to participate in emissions trading, countries must take on quantified emissions targets.

2. Developing Countries Aren't Taking Steps to Reduce Emissions.

The six largest developing countries have already begun to take important steps to reduce emissions, and have cut their carbon emissions twice as fast as industrialized countries promised in 1992. On a per capita basis, energy consumption in China is 1/10 that of developed countries. China has reduced oil subsidies to 2% and reduced coal subsidies by 8%. India subsidizes renewable energy sources such as wind turbines, and one quarter of India's total national consumption of primary energy is provided by renewable sources. Mexico has instituted national energy efficiency standards for new boilers, refrigerators, air conditioners, buildings, and electric motors. In comparison, U.S. efficiency standards are way behind schedule for being upgraded and improved. U.S. federal building code standards haven't been substantially upgraded since 1989.

3. Without Full Developing Country Participation, U.S. Jobs Will Go Abroad

Only five percent of manufacturing jobs and less than one percent of total U.S. employment is in

energy-intensive industries that would be affected if energy costs were to rise. Energy costs comprise less than 3% of the value of sales for more than 90% of U.S. manufacturing firms. Of the industries that would be most affected by the Protocol, 80% maintain their principal overseas investments in countries with higher energy costs than the United States. High transportation costs limit importation of competing energy intensive products such as cement. Transportation, energy use in buildings, and electric power generation constitute over 273 of U.S. emissions, and by their very nature cannot be exported. Targeted policies to address the needs of the few industries that would be affected could be instituted to protect against worker displacement.

4. Delay Will Benefit the U.S. Economy.

Current claims that near-term U.S. action to curb emissions without developing country commitments will destroy the economy are unfounded on two counts. First, delaying emissions reductions will be much more costly since turnover of capital stock (factories, machinery, and power plants) is least expensive if done over a long time span. Every year of delay means that premature capital replacement in the future will be more likely. Second, by acting now to develop and implement new technologies, some estimate that overall costs to reach the same emission concentration level could be reduced by 75%. Energy efficiency often creates more jobs than it displaces, and the world market for energy efficient and renewable technology is expected to reach \$125 billion per year by 2015. Two recent studies found that more than 800,000 new jobs could be created in the next 15 years from an emphasis on energy efficiency and technology innovation. In addition, decreased dependence on foreign oil frees up more money for domestic investment and creates jobs at the expense of oil exporting countries.

5. Developing Countries Should Reduce Current Emissions Levels in Tandem with the U.S.

While there is no question that climate change is a global issue requiring the participation of all nations, "meaningful" developing country participation has yet to be defined. Developing countries have an obligation to limit the growth of their greenhouse gas emissions, but in most cases they will not be making reductions from their current emissions. This is a concept enshrined in the original Framework Convention on Climate Change, which recognized the need for developing nations to have growing economies. In order to devise future quantified emissions targets for developing countries, growth budgets based on emissions as a percentage of GDP or population may be a useful way of limiting emissions growth in an equitable manner.

J. ROBERT KERREY
NEBRASKAUnited States Senate
WASHINGTON, DC 20510-2704

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MESSAGE:

Roger — as I briefly indicated,
I think the Administration has to
address / be prepared to respond to
these statements by Estrada. I
question his motivations on some of
these — perhaps you guys understand
them better ??? My biggest concerns
are: E.T. phaseout, sequestration (we need this
for ag), and enforcement.

Amy Probold (H)

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B.K. —
This is a
pretty good update,
fyi.
-Dobie

No. 51
Tuesday March 17, 1998

Regulation, Law & Economics

Environment Chairman of Kyoto Talks Pursuing Developing Nation Voluntary Emission Limits

The chairman of recent negotiations on climate change said March 16 he hopes to resurrect a plan that would allow developing countries voluntarily to accept binding limitations on greenhouse gas emissions.

During the last hours of the December 1997 talks that produced the Kyoto Protocol, developing countries vetoed draft treaty text allowing voluntary acceptance of emission controls. Under this draft text, developing countries that voluntarily took on emission limitations could have sold offset allowances through a trading system established by the Kyoto Protocol.

The protocol, an addition to the 1992 United Nations Framework Convention on Climate Change, will require industrialized nations to curb their emissions of greenhouse gas emissions. The treaty opened for signature March 16 and has not yet entered into force.

But Raul Estrada Oyuela, who chaired negotiations on the protocol in Kyoto, Japan, told reporters in Washington that the concept of developing countries voluntarily taking on emission limitations is not yet ready for burial. It is "a matter to discuss and negotiate," he said.

In addition to limits on developing countries' emissions, Estrada also discussed development of the international trading system for greenhouse gas emission allowances and a clearinghouse for emission offset projects sponsored by industrialized countries in developing nations. It is unlikely that these issues will be settled by the next conference of the parties to the climate change convention, he said. That upcoming gathering of treaty partners is scheduled for Nov. 2-13 in Buenos Aires, Argentina.

Agreement Unlikely by November

Estrada, an Argentine, said his country will shop around internationally the idea of developing country voluntary opt-in for emission limits. But he said negotiators may not be ready by November to adopt formally a system for developing countries to accept voluntary emission controls.

"We're not going to be frustrated if we don't get it [a voluntary opt-in system] in Buenos Aires," Estrada said. Talks on this issue could continue after that November gathering, he said.

Estrada said he did not foresee negotiators at Buenos Aires setting compulsory, quantified emission limitations for developing countries.

"The lead is supposed to be taken by the developed countries," he said of international controls on greenhouse gas emissions. Before they would agree to emission limitations, developing nations want to see how industrialized countries act on the emission reduction commitments in the Kyoto Protocol, Estrada said.

The most optimistic outcome for the Buenos Aires gathering would be creation of the framework for voluntary emission controls by developing countries, he said.

Emissions of greenhouse gases, which stem mainly from the burning of fossil fuels, have to expand in the developing world for these countries to fuel their economies, Estrada said. But developing countries may be willing to accept limits to their emission growth, he said.

Review of Convention

In Buenos Aires, countries will be reviewing whether the approach taken under the 1992 framework convention—for industrialized countries to take on quantified emission targets—is sufficient to address the threat of climate change.

"It clearly is not enough" for the industrialized world to act alone to reduce greenhouse gas emissions, Estrada said. But negotiators may not decide in Buenos Aires what to do about this situation, he said.

There are perhaps seven key developing countries that should have to take on emission limitations, he said without naming them. Small, relatively undeveloped nations such as Burkina Faso, a small African country, should not be expected to accept emission controls, Estrada said.

China

Estrada also discussed China, a country that is expected to become the world's top emitter of greenhouse gases in the next 15 to 20 years. Chinese officials have said repeatedly that they have no intentions of accepting emission limits.

Estrada, formerly Argentina's ambassador to China, said negotiators should not query China on whether it will reduce emissions. Rather, they should ask China when will it be prepared to limit emissions, he said.

Meanwhile, the Chinese should be asked what they are going to do to increase energy efficiency until they are ready to control emissions, Estrada said. **→ They are taking steps, and have decoupled their 1:1 ratio of industrial growth to GHG emissions — unlike the U.S. — Private Money not to say they can't/mustn't do more...**

Estrada said the private sector is critical in providing and funding the technology the developing world needs to become more efficient in the production and use of energy. This would make developing nations more able and willing to limit their greenhouse gas emissions, he said.

Sending the right signals to business is critical to fostering energy efficiency in the developing world, Estrada said. The billions of dollars in foreign direct investment flowing to developing countries can be channeled to more efficient technology through policy changes in both recipient nations and in industrialized countries, he said.

Industrialized nations could offer incentives for companies that make foreign investments in more energy efficient technology, Estrada said. For example, export credit agencies may offer favorable conditions to loans or loan guarantees for energy efficient technology, he said.

Emission Trading

The Kyoto Protocol established a trading system for industrialized nations to swap emission allowances—but left details for future negotiations.

Estrada said discussions leading up to and at Buenos Aires will probably flesh out the principles on trading but probably will not complete all work on the new system. One of those principles, Estrada said, is apt to be that having allowances does not give a country a right to emit greenhouse gas emissions simply because it released these gases in the past. Basing allowances solely on emissions history—which favors industrialized nations—is unfair to developing countries, he said.

Trading should be viewed as a policy tool to transition to energy technologies that do not emit greenhouse gas emissions, Estrada said. "Sometime, trading will be over." **→ I've not heard Estrada say this before — I can't imagine the U.S. position would change — except in the long, long-term (i.e., post-stabilization) Clean Development Mechanism**

The Kyoto Protocol also established the Clean Development Mechanism, a clearinghouse for emission offset projects in developing nations that are funded by entities in industrialized countries. The two countries involved in the project are expected to split emission credits.

But like with the trading system, the protocol gives no details on how the Clean Development Mechanism will operate.

"I have a lot of doubts about this system," Estrada said. Standard investment practices for offset projects would involve fewer transaction costs than the new clearinghouse will, he said.

Despite this concern, Estrada said one issue negotiators must address is whether the mechanism should cover projects that sequester carbon dioxide—such as tree planting. He said he thinks the clearinghouse should not deal in sequestration projects. **— He was a problem on Compliance this in Kyoto — they don't want forests to count due to reforestation/deciduous activities —**

Estrada said he did not expect further talks on how to ensure that countries will comply with international emission control obligations. **→ THIS WILL BE DISCUSSED IN BUENOS AIRES! & others.**

"We have a relatively good enforcement mechanism for the protocol," Estrada said. He dismissed the idea of international sanctions for noncompliance. **→ THERE IS NONE!!**

Under the Kyoto deal, countries are to produce reports on their progress toward compliance with binding emission goals and inventories of their greenhouse gas emissions. Review teams will analyze those reports and forward assessments to the conference of the parties, Estrada explained.

"Commitments either are fulfilled or non-compliance will be exposed," Estrada said. Countries generally do not want to be exposed as being out of compliance with international agreements, he said.

This type of enforcement system has worked effectively for the Montreal Protocol on Substances that Deplete the Ozone Layer, Estrada said.

U.S. Ratification

Estrada said he did not expect the United States to ratify the Kyoto Protocol before 2001. "Perhaps in three years," he said of U.S. ratification. **→ good assessment, I would think**

Estrada noted that the U.S. Senate has said in a resolution that it would reject the Kyoto Protocol if it did not include emission control commitments by developing countries.

"The Congress seems to be acting in isolation as if the rest of the world doesn't exist" on a variety of international issues, Estrada said. For example, he said, Congress is attempting to condition the United States payment of U.N. dues on a prohibition against U.S. foreign aid money

going to family planning organizations that use their own funds to perform abortions or to lobby for abortion rights in other countries.

"Matters related to climate seem to be similar," Estrada said.

Many members of Congress "sincerely believe that the U.S. is the most [energy] efficient country ... in the world," Estrada said. Once they realize that the United States could make major improvements in efficiency--which would help reduce greenhouse gas emissions--the Senate is more likely to give the advice and consent required by the Constitution before the Kyoto Protocol can be ratified, he said. 

By Cheryl Hogue

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DELIVERABLES FROM AOSIS

In order for a summit to be successful, the United States would need to win the support of AOSIS on a number of issues. These issues could include some combination of the following. These alternatives are shown in ascending order of difficulty: i.e. the first should be the easiest to achieve and the last the most difficult.

- 1) **US domestic actions.** AOSIS has been extremely critical of the United States, as the world's single largest emitter, of failing to do more to lower our emissions. If AOSIS uses a summit to criticize the United States for failing to do more, it will strengthen the hand of those Parties in the negotiations that are seeking to tighten the Kyoto targets, by:

- imposing a cap,
- preventing trading of 'hot air',
- including bunker fuels in national totals, or
- limiting new activities under 3.4.

Using the Summit as a forum to criticize the United States could also lend momentum to those Parties who want to shift the focus to consideration and coordination of domestic policies and measures. While AOSIS may continue to press through the negotiations for more action by Annex I countries, AOSIS must refrain from using the summit to bash the United States as the South Pacific heads of state did to President Bush in 1990.

- 2) **COP-6 Dates:** The Parties remain divided over the question of whether to hold COP-6 in November 2000 or early 2001. A change in AOSIS' stated support for 2000 could help shift the balance in favor of the U.S. preference for 2001.
- 3) **Kyoto Mechanisms:**
 - a) **Sinks:** AOSIS could agree to include sinks in the CDM. Currently, AOSIS appears to be opposing the inclusion of sinks as a bargaining chip to trade for imposing a share of the proceeds on all three mechanisms.
 - b) **Share of the Proceeds:** The heads of state could agree that the share of the proceeds could be modest in order to promote the largest possible market in CERs, the CDM could not directly fund project activities; and specific criteria could be developed for access to the adaptation funds.
 - AOSIS could also drop its proposal that a share of the proceeds be skimmed from all three mechanisms. This would involve breaking ranks with the Africans and other G-77 members.
 - c) **Supplementarity:** AOSIS could agree that "supplement" and "part of" need not be further defined, either quantitatively or qualitatively. Due to the risk they face from sea level rise, AOSIS has been particularly keen to ensure that the Kyoto targets are interpreted as stringently as possible.
- 4) **Compensation:** The heads of state could acknowledge that Annex I parties should not be penalized for taking action by being forced to compensate oil producing states for reduced

revenue. Instead, AOSIS would call for the 4.8/4.9 debate to focus on those parties who are most vulnerable to impacts of climate change.

5) **Second Period Targets:** While still asserting that developed countries could act first, the AOSIS heads of state could state unequivocally that developing countries should adopt binding targets in the second and subsequent commitment periods.

- Alternatively, AOSIS could state that developing countries should take on targets in the second period without prejudicing whether some developing countries come forward to take on targets earlier.

6) **First Commitment Period Targets:**

a) **For other countries:** AOSIS heads of state could call for other developing countries to follow Argentina's lead. Doing so would damage AOSIS's relations with China and India. AOSIS depends on those relations to achieve a number of its broader goals in the UN.

- AOSIS could not only support countries like Kazakhstan that wish to join Annex B but also pledge to work with Argentina to craft a third way. This would damage AOSIS's relationship with Brazil as well as China and India.

a) **For AOSIS:** Small island states contribute a miniscule fraction of total global emissions. Nonetheless, their emissions per unit of output are higher than average, implying that relatively inexpensive reductions might be realized in these states. More importantly, assumption of targets by the Parties most at risk from climate change would help win broader acceptance within the G-77 of developing country targets. A commitment to adopt first period targets by AOSIS could prompt others to come forward.

Types of Possible Assistance to Island States in Support of Climate Goals

In a brainstorming session at DOE on June 9, 1999 with officials from AID, EPA, and State, eight types of deliverables were identified which could be offered at a summit with island states:

Four types of possible assistance are general in nature:

- 1) Private sector coalitions for development
 - tourism industry is one which might provide support
 - computer industry might donate equipment
 - Business Council for Sustainable Development might help
- 2) Project analysis and review
 - accelerate AID review of 300+ proposals made at SIDS donors conference
 - find a corporate sponsor for one or more of the donor proposals
- 3) Capacity building for dealing with foundations and international financial institutions
 - facilitate loan applications at multilateral financial institutions (Asian Development Bank, Inter American Development Bank, Caribbean Development Bank)
 - facilitate grant applications to foundations
 - draw upon expertise and programs of NGOs
 - utilize resources of university extension programs
- 4) Aquaculture/fisheries/forestry development
 - build upon University of Hawaii "Seagrant" program

Another four types of assistance seem particularly climate-related:

- 5) Disaster mitigation (response to tropical storms intensified by climate disruption)
 - early warning systems for storms
 - training on how to respond to storms
 - reinforcement of ports against storms
 - reinforcement of buildings against storms
 - use expertise of AID and FEMA
- 6) Desalinization (response to reduction of fresh water reserves caused by sea level rise)
- 7) Coral reef conservation & reconstruction (response to damage from sea temperature rise)
 - build upon President's existing coral reef initiative
 - use reconstruction techniques developed by Austen Kirby in Fiji
 - use experts from Palao Coral Reef Center (part of US/Japan common agenda)
- 8) Energy efficiency and renewables projects (increased resiliency to natural disasters)
 - wind/diesel and PV/diesel systems particularly well adapted to island applications

- economics favorable on islands, which have high costs for imported fossil fuel

DEPARTMENT OF STATE
OFFICE OF THE UNDER SECRETARY FOR GLOBAL AFFAIRS
2201 C Street, N.W., Room 7250
Washington, D.C. 20520

F A X C O V E R S H E E T

DATE: June 4, 1999

TIME: 7:30 p.m.

TO: DISTRIBUTION

FROM: Frank Loy

RE: CLIMATE CHANGE SCHEDULE

Number of pages (including cover sheet): 3

- 1) The climate change policy meeting at 4:00pm Monday, June 7th is cancelled.
- 2) We will use our diplomatic strategy meeting at 3:00pm Thursday, June 10th to discuss the viability of the proposed AOSIS summit with the President. DOE will prepare a description of possible "deliverables" for AOSIS. Commerce/NOAA, EPA, AID and State should participate in that process prior to the Thursday meeting.
- 3) I will be in Europe, the Middle East and Africa from June 12 to July 4. Melinda Kimble and David Sandalow will ensure that we maintain momentum during this period.
- 4) Attached for your review and comment is a list of past and proposed issues for discussion.

Climate Change Interagency Process

The purpose of this paper is to review our
(i) development of climate change policies and
(ii) articulation of diplomatic objectives for a number of
key countries and regions.

Review of Progress

Over the past two months we have discussed the
following:

Policy Issues

Developing Country Targets
Compliance
Policy Issues for Bonn (June)

Diplomatic Strategy

AOSIS
China
Korea/Turkey/Mexico
OPEC
Sub-Saharan Africa

I believe we have made real progress in all three
policy areas. Quite clearly, however, each of the topics
we have discussed will require further review. We will
need to reprise both our developing country policy and our
compliance policy, in addition to the topics listed below.

Preview of Future Issues

In the weeks and months ahead, we intend to prompt
discussion of the following:

Policy Issues

Sinks (NGO and international criticism)
Organizing Principle for 3rd Way
CDM (environmental additionality and baselines)

Diplomatic Strategy

India
Russia and Ukraine
Kazakhstan and Other NIS
Central America
Argentina/Chile
South Asia
AOSIS (Take II)
Sub-Saharan Africa (Take II)

After July 4, we will continue to meet twice a week (Monday's at 3:00 p.m. to discuss policy issues and Thursday's at 4:00 p.m. to analyze diplomatic strategies). Please feel free to contact Nigel Purvis (647-8745) to suggest other topics you believe warrant interagency discussion.

Developing Country Growth Targets

Targets for non-Annex I countries should help promote their sustainable development. To do so, such targets should accommodate emissions growth. However, such targets should also result in real abatement in emissions below levels that would otherwise occur during the commitment period -- that is, below the projected business as usual (BAU) emissions level. This kind of target, often referred to as an emissions growth target, would provide for continued economic development but with a lower emissions growth rate.

If developing countries were to agree to binding limits, even if they involved only small cuts below Business as Usual (BAU) in the first budget period, then such targets, with trading, would imply gains for their economies and gains for the environment. The figure to the right provides an illustration of an emissions growth target.

Emissions growth targets could provide several economic and environmental benefits:

- * With targets close to BAU, the developing countries would benefit from the ability to sell emission permits achieved at costs below the world price. This actually gives them a genuine economic incentive to join, which is otherwise lacking. Illustrative modeling calculations indicate that most developing countries, with growth targets set slightly below BAU, are made better off under international emissions trading.
- * Developing country emissions targets set below BAU would lower global emissions relative to what they would have been otherwise. This would increase the climate benefits generated during the first commitment period.
- * Reductions in carbon dioxide emissions generate ancillary air quality benefits in developing countries through lower particulate matter, sulfur dioxide, and nitrogen oxides emissions.

In evaluating the potential for emissions growth targets, there are several important issues worthy of consideration:

- * Targets can result in economic gains from trade for all sides, if they are not too stringent.
- * A “fair” allocation to expect of potential new participants might be a target that fits the apparent pattern among Annex B countries. This approach turns out to imply some degree of “progressivity” -- with richer countries asked to make bigger sacrifices than poor ones.
- * Given uncertainty about the future, to fix the precise quantitative target now would create risks regarding the ultimate stringency of the target; it would raise concerns that a target unintentionally constrains economic development, on the one hand, or that the target could result in hot air, on the other hand. These risks would be reduced by “indexing” targets.

The trade-off between target stringency and gains from trade

If developing countries adopt emissions growth targets and participate in international emissions trading, they can enjoy economic gains from trade. Among other issues, this conclusion is sensitive to the stringency of the emissions growth target. The environmental gains from emissions reductions below BAU come at the price of economic costs incurred by a developing country that adopts the below-BAU target.

To assess the magnitude of this effect consider the target which just leaves a country no better off than no target at all. This “indifference” target is where the costs of meeting the target through domestic action just equal the net gains from selling permits in world markets. The figure to the right illustrates gains from trade for a small country. The upward-sloping curve shows the rising marginal cost of increasingly stringent reductions. For small reductions from BAU, the cost is far less than the

price they fetch on the world market. For a target that is equivalent to a reduction of 17 MMTC, net gains from foreign exports are B, and the cost of meeting the target is C. Since $B = C$ in this example, the net costs from participation are nil.¹

Progressivity of existing targets, as a guideline for developing country targets

It appears reasonable on grounds of fairness that wealthier countries should undertake greater efforts to address climate change than less-wealthy countries. While the emission targets in the Kyoto Protocol reflect the outcome of political negotiations, it is possible to discern systematic economic patterns in them. A fair target for developing countries might one that fits whatever pattern seems to hold among existing targets. In particular, this approach would allow some degree of progressivity, with richer countries making larger reductions than poor ones -- without going nearly so far as the redistribution of wealth that some poor-country representatives seem to ask for.

The Annex B targets (including the EU bubble allocation), when presented in terms of reductions below 2010 BAU, follow a pattern of progressivity. Note that this pattern holds for CO₂ as well as for all greenhouse gas emissions (although data on some non-CO₂ GHG emissions are not available for some Annex I countries). For the 30 Annex I countries presented in this figure, the average reduction from BAU is 16.1%. For the lower half of Annex I countries by per capita income, the average reduction is 5.2%

¹ This hypothetical example assumes that the country in question does not consider participation in the Clean Development Mechanism (CDM). If this country were to participate in CDM if it did not adopt a target, then its indifference target would not be at the level where net gains from trade are zero, but where expected net gains from trade would equal expected net gains from the CDM. The CDM option implies that the indifference target would be less stringent. However, including the ancillary air quality benefits associated with abating carbon dioxide, especially in countries with significant local air pollution problems, could imply that the indifference targets should be *more* stringent.

below BAU.

We conducted statistical analyses to better understand the progressivity of the Annex B targets. We used data on Annex B countries' per capita income, emissions growth projected between 1990 and 2010, coal as a share of total energy consumption, and whether a country is a transition economy, to explain the trend in emissions targets in terms of deviations from BAU. The statistical analyses illustrate a pattern of progressivity among the existing targets: each 1% increase in per capita income implies a 0.11 to 0.17% greater sacrifice, expressed as emissions reductions from BAU. Levels of statistical significance are relatively high, suggesting that the results are meaningful. In absolute terms, an increase in income is associated with an increase in the level of the emission target. But the increase in income also implies an increase in the BAU level. The increase in BAU is *greater* than the increase in the target, implying that richer countries are making greater sacrifices.

This statistical approach certainly has limitations, and the results reported here are preliminary. They are sensitive to decisions about the data used. Per capita income data can change depending on the year and exchange rate used to compare countries. Estimates of BAU emissions can vary too.

Risk and uncertainty

Even under the best analytical circumstances, e.g., where accurate data and integrating tools are widely available, much uncertainty surrounds BAU emissions projections and estimates of the costs and benefits of deflecting from those projections. A country that takes on a fixed commitment for the 2008-2012 period *now*, faces the risk, for example, that its economy will grow more rapidly than expected, resulting in an inadvertently stringent target. Alternatively, a country's economy could grow less rapidly than expected, resulting in an inadvertently lax target. There are, however, ways of designing targets to reduce uncertainty and mitigate these risks. In particular, targets could be *indexed* to *future* values of economic and other, possibly demographic, variables. The following discussion explores this approach.²

Rather than establish a fixed target for 2008-2012 *now*, a target could, for example, be *indexed* to a country's economic performance between now and the start of the 2008-2012 commitment period. This approach is commonly used in the private sector, where contracts are similarly indexed. This approach is also used in the public sector (e.g., the USG provides cost-of-living adjustments for social security recipients). A target could then be specified in a way that depends on the *future* values of economic variables, such as GDP.³ Such targets would avoid the risk of inadvertent stringency associated with higher than projected economic growth between now and the beginning of the commitment period in 2008. Non-Annex I countries would face only the much smaller risk that emissions would be higher than expected, *given* the economic conditions realized in 2007. Similarly, such targets would also avoid the risk of inadvertent laxness associated with lower than expected economic growth between now and the start of the commitment period.

Basic principles for implementing such an approach are:

- * **“Reasonable” Forecasts:** The relationship between the target and chosen variables, when applied to emissions and the same variables during recent years, should predict emissions reasonably well and be without demonstrable statistical biases. Relationships that give reasonably reliable predictions reduce the risk of either inadvertent stringency or paper tons which could increase global emissions.
- * **No “Perverse” Incentives:** The target should depend on values of economic and other variables only indirectly or generally related to emissions, to avoid creating incentives for countries to increase emissions so as to have higher targets in the commitment periods. Moreover, the chosen variables should not be susceptible to intervention, for purposes of

² Most of the following discussion features examples of economic variables.

³ Other demographic factors may also be relevant.

manipulating the target. For example, the target should not depend on energy consumption in 2007, but could reflect GDP in 2007.

- * **Predetermined Targets:** To avoid uncertainty during the commitment period about the country's target, the target should not depend on contemporaneous values of economic and other variables. For example, the target generally should not vary with 2008 or 2010 GDP levels, but rather with 2006 or 2007 GDP. Eliminating this uncertainty would increase the opportunities for participation in international emissions trading.

This approach could take two basic forms. Both of these forms could address equally well the risks associated with uncertain economic performance over the coming decade. First, would be to establish a target, of the form "X%" below BAU, where BAU would be indexed to a set of economic and demographic variables that explain greenhouse gas emissions well. While the concept of a target and the X% deflection from BAU would be agreed to in the near term, the actual BAU, hence, the emissions level of the target, would not be set until these economic and demographic variables were known for, say, 2006 or 2007. The relationship between the BAU and these variables (e.g., GDP, carbon intensity, population, etc.) would be made explicit now, so there would be more certainty at the time the target is announced. For instance, it could be agreed that if GDP grew at a 5.7% annual rate between now and 2007, then the BAU would be "Y" and the target would be X% below Y. Moreover, given existing projections for these economic and demographic variables, an estimate of the BAU and target could be made now.

Second, would be to establish a target now and revisit it later based on specified economic conditions. For example, the target would be specified as 100 MMTCE, but reflect an estimate comparable to X% below BAU, where a BAU projection would be used to arrive at the target. At the time of setting the target, one or a small set of parameters would be established for evaluating the target just before the commitment period. For example, if the economy performed beyond a pre-specified rate between now and the beginning of the commitment period, then the target could be readjusted to reflect this additional growth. Conversely, if the economy performed at less than what was expected, the target could be readjusted downward.

DRAFT**Engaging developing countries in "meaningful participation:"
USG tools and incentives**

Building on several premises expressed in various policy papers over the past several years, this paper outlines incentives and tools which the USG might employ to achieve two goals, both of which are instrumental to US ratification of the Kyoto Protocol:

- Encourage developing countries to "participate meaningfully" in the UNFCCC and the Kyoto Protocol.
- Create developing country support for USG positions on key KP implementation issues (inclusion of sinks, unrestricted trading, compensation, compliance, etc).

This paper raises three key questions:

1. Can we improve the way we are **managing existing resources** in pursuit of our substantive and diplomatic objectives? Are we using the resources we have as well as we can?
2. Are our **existing negotiating options** – incentives – likely to lead to negotiating success? Can we make our desired outcomes sufficiently beneficial and attractive to others whose acceptance/support is necessary for success?
3. Is there a link between human and financial resources and diplomatic success? Can we be successful at our **current level of investment**?

Premises:

- The more countries understand about the environmental and economic impacts of climate change, the more likely they are to accept/endorse USG views and positions.
- The more countries understand about the Kyoto Protocol, and the greater confidence they feel in representing their own interests in FCCC activities, the more open they will be to USG positions and the more likely to support them.
- Developing countries can and will "do more" if it is in their interest to do so and if they so perceive it; for countries to work closely with us, the risks of engagement must be perceived to be small, and the potential benefits perceived to be substantial.
- The more the US is seen to be taking aggressive domestic actions to reduce GHGs, the more pressure there will be on developing country emitters to take strong action.

It makes three major recommendations:

1. US efforts to support basic capacity building are essential and should be expanded.
2. The US should develop specific incentives to motivate and reward countries that make commitments. It is essential that the US have a major momentum/debate changing proposal ready for deployment. The US should examine and analyze the costs and benefits of creating a fund for climate change and sustainable development through a surcharge on emissions trading.
3. The US must be prepared to respond specifically to technical assistance and support requests from developing countries that are willing to consider or commit to expanded obligations. There is widespread concern that USG does not have the capacity to respond to opportunities which diplomatic efforts could create. US capacity should be comprehensively analyzed against potential demand, and resource transfer or augmentation proposed. A coordinating mechanism for responding to these needs is also needed.

DRAFT**I. Basic capacity building**

Building capacity is both a tool and incentive. A key impediment to developing country commitments and support for key policies is the lack of capacity to understand specifically how and where climate actions and policies can advance national interests. The US has climate-related capacity building programs in at least 44 countries, under the auspices of several agencies. In addition, the USG financially supports and provides information for workshops and training sessions which focus on issues specific to the implementation of FCCC responsibilities.

More can and should be done in this area. Additional resources and coordination will be required. For most countries, however, these efforts will be necessary, but not sufficient to lead to additional commitments or support for US positions.

Recommendations:

1. Reconstitute and strengthen the Country Studies Program to help developing countries complete or update national emissions inventories, conduct national action plans, facilitate economic modeling and assessments, and facilitate technology cooperation.
2. Fully staff and fund the USAID Developing Country Climate Change Initiative, EPA developing country strategy and DOE developing country strategy, and coordinate actions to achieve maximum leverage and synergy.
3. Strengthen State OES Environmental Hubs, and target Environmental Diplomacy funding at capacity building in countries where USAID cannot operate, and on workshops and training sessions focused on the Kyoto Protocol.

II. Incentives:

If major US policy goals are to be achieved, developing countries will have to be convinced that measures to address climate change are either directly in their interests, or are effectively combined with measures that are. Developing country concerns regarding limits to their economic growth, ability to address climate-related vulnerabilities, and equity issues must be addressed through alternate and differentiated forms of "participation", increasing climate-related investments in developing countries, assisting in identifying and addressing impacts of climate change, and creating funding mechanisms that allow developing countries to share in climate-related economic benefits.

Some of these opportunities flow directly from the United Nations Framework Convention on Climate Change and the Kyoto Protocol without any additional action or commitment from the US. For others, the potential is created by the Convention and the Protocol, but would require additional action or investment from the US, either through USG actions or private sector engagement and investment, or a combination of USG action and private investment.

A. Climate Regime Incentives:

- Emissions Trading: By taking on a binding target, many countries could benefit significantly from participation in a carbon trading regime. The development of approaches that meet the needs and concerns of developing countries and provide additional incentives for countries that take on "targets" could include the following:
 1. Transitional targets
 2. Growth Reduction targets
 3. Measures to promote financing in specific regions/countries (regional or affinity group quotas, differentiated baselines, CER selective valuation; an LDC bubble),
- Clean Development Mechanism: CDM is intended to foment greater investment in climate friendly projects in developing countries. CDM can generate revenues and build confidence that sub-sectional and sectoral approaches to CDM (and eventually national targets) are in the national interest. The question of equity remains an important concern for less-developed countries, as evidenced in the African CDM proposal at COP-4. An expanded list of CDM-related incentives might include:
 1. Measures to ensure broad participation (CDM clearinghouse, support for comprehensive range of projects, project related capacity building),
 2. Measures to assist financing (bundling capacity support, tax credits for CDM mutual funds),
 3. Measures to promote financing in specific regions/countries (quotas, differentiated baselines, CER selective valuation),
 4. Support for creation of private sector operational entities in key developing countries.
 5. Promotion of investment in key developing countries via trade missions, credit guarantees
 6. Support for policies important to developing countries (sustainable development definition criteria, CDM participation requirements, share of proceeds and use of adaptation funds, prompt start).
- Technology Cooperation under Article 4.5: Developed countries have a commitment under article 4.5 to assist developing countries in acquiring technology to address climate change. Many G-77 members argue that some "new and additional" resources should be forthcoming from Annex 1 countries. Some positive initiatives in this area might be an inducement to greater engagement on the part of some countries.
 1. Trade Missions
 2. Technology diffusion initiative (TCAPP, USAID/USAEP, CSP)

B. Non Climate Incentives:

In addition to a menu of climate-related options, several other tools might be brought to bear to encourage participation. These include, but are not limited to the following:

- Debt relief: Debt for Climate swaps, conditionality.
- Trade: MFN status, free trade zones, export credit agency guidelines.
- Foreign and military assistance:
- Other foreign policy/diplomatic objectives: representation in international fora; membership in regional or global groups (OECD).

C. Surcharge on emissions trading :

A surcharge on emissions trading could raise "new and additional" revenues to assist developing countries with costs associated with reduction or sequestration of GHG emissions, adaptation to the impacts of climate change, technology cooperation programs or other G-77 needs. The fundamental concept involves a small transfer surcharge (<1%) on each trade or exchange of CERs. These funds would be allocated to developing countries for purposes and via a mechanism approved by the COP. Within this basic concept, a range of options exists.

The fund could be sunsetted at the end of the first or second trading period, or its purposes might be broadened to address broader sustainable development concerns at that time (debt relief for HIPC's, humanitarian relief for natural disasters, etc). The funds could be spent via the GEF, or a separate institution might be created. Progressively more stringent conditions for receiving benefits could be established to promote climate friendly development.

A "tax on trading" has several attractive features: it reduces the need for additional ODA appropriations, provides substantial new investment in sectors where US private sector is competitive, and provides most developing countries with vested interests in the success of the Kyoto Protocol.

Potential drawbacks include higher transaction costs for countries that rely heavily on a trading regime to meet their targets and political concerns about a climate change "Tobin Tax". In addition, the details of implementation could be difficult to negotiate, and could complicate the development of emission trading system.

II. United States Government Tools

The USG has many programs in place which are already providing assistance to developing countries on climate-related issues. These programs span a broad spectrum of effort -- from CEA policy-level dialogue; to USAID/EPA/DOE/USDA/DOI technical assistance and training programs on climate-related issues (energy efficiency, sustainable

forestry etc); to very specific climate interventions (CSP inventories and SNAPs).

- Country Studies Program: An inter-agency committee is currently drafting recommendations on the future of this program. A core function of support for inventories and national action plans is recommended, as well as facilitating developing country access to other USG programs of assistance.
- USAID: USAID is now in year two of a five year \$1 billion climate initiative. Ten key countries and regions are at the heart of the USAID effort, with almost all of the funding dedicated to "win win" approaches sources and sinks. FY99 budget is \$150 million.
- Department of Energy: The DOE launched an Africa initiative on April 1 and is revitalizing the Hemispheric Energy Initiative launched by Secretary O'Leary. DOE has targeted five countries for its climate change focus: China, India, Brazil, Mexico and South Africa. DOE also is providing support to the USIJI program. Total developing country budget in FY99 is \$ million.
- Environmental Protection Agency: EPA's developing country strategy targets policy development and capacity building related to the UNFCCC with a focus on China, Mexico, Brazil, Argentina, Chile, Korea. FY99 budget for this effort is about \$2.5 million.
- US Department of Agriculture: USDA works on soils, forest management and other resource issues in developing countries. Total budget for developing country activities in FY99 is \$ million. Most of these programs do not address the climate connection.
- Department of Treasury: Treasury provides a wide range of technical assistance in financial sector reform, infrastructure investment, and macroeconomic policy – as well as MDB oversight.
- Council of Economic Advisors: High level representation on climate economic issues and some analytic support has been provided to Korea, China, Argentina, Kazakstan and Mexico.

Currently, USAID is funding and managing assistance to Kazakstan on their efforts to take on a target. EPA is funding a similar effort in Argentina. These efforts are taking place on an ad hoc basis out of existing resources. It is clear that if additional countries were to come forward with requests for assistance, USG agencies would have a difficult time funding them. It is also clear that Agencies have developed programs and interventions somewhat independently, with clearance and coordination being uncommon. There is no central source of information on Agency actions or levels of investment.

A review of existing programs and activities should address the two key issues identified in the introduction: whether improvements can be made in the management of existing programs and activities; and whether current levels of resources are sufficient to meet our policy goals.

Climate Change List of Participants
Policy Development

<u>Name</u>	<u>Organization</u>	<u>Phone</u>	<u>Fax</u>
Aldy, Joe	WH/CEA	395-1455	395-6958
Ballentin, Roger	WH/LEG	456-6493	456-6468
Boorstin, Robert	Treasury	622-0486	622-0073
Cumby, Robert	Treasury	622-0572	622-2633
Doniger, David	EPA	260-7400	260-5155
Frampton, George	WH/CEQ	456-6224	456-2710
Forrister, Dirk	WH/CCTF	395-2310	395-2311
Gardiner, David	EPA	260-4332	260-0275
Hales, David	USAID	712-1451	216-3174
Lawrence, Robert	WH/CEA	395-5046	395-6958
Mazur, Mark	DOE	586-7700	586-9626
Orfini, Michael	WH/OVP	456-9515	456-9500
Perjesepie, Bob	EPA	260-7400	260-5155
Reicher, Dan	Energy	586-9220	586-9260
Sandalow, David	WH	456-6224	456-2710
Stern, Todd	WH	456-1648	456-2215
White, Bill	EPA	260-3711	260-4852
GIBSON, JOHN	WH	395-2321	395-2342

GADMIN: Climate Change List of Participants

Note: Please review the attached paper before the climate change meeting taking place at 4 p.m. on Mon. (4/19).

c/o Nigel Purvis
 Global Affairs
 (202) 647-6240.