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Communicating Climate Risks and Opportunities:

A Proposal for a New Consortium

The ideas in this proposal arose from meetings in Aspen, Colorado in October 2005 and New York City in November 2006 convened by the Yale School of Forestry and Environmental Studies. This proposal was prepared principally by James Baker, John Ehrmann, and Gus Speth with many helpful contributions from participants in these meetings.

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1. Rationale: Understanding and Acting on Climate Risks

There is broad agreement today that human-induced climate change is transforming the world as we know it and bringing with it a very real risk of climate catastrophe. Societies must act soon to mitigate the effects. Climate risks must be understood, individuals and institutions need to take responsibility for reducing these risks, regulations and commitments need to be made by governments and private industry, and progress must be monitored and enforced.

Frustration exists in many quarters about the fact that so little real progress has been made in dealing with the issues – both in the United States and abroad. Much has been done to understand the science and economics, to propose technologies for mitigation and adaptation, and to analyze possible policies. These advances, made by many non-profit institutions, the private sector, and government agencies all tackling different parts of the issues, are to be commended.

Despite these efforts, societies and governments have not yet fully accepted the fact of real and imminent climate risk. As a result, the gap between science and action is unacceptably large. Extraordinary efforts to close that gap are warranted. Effective communication of climate sciences to decision makers and the public to stimulate action must be a high priority today, especially in the United States.

In October 2005 the Yale School of Forestry and Environmental Studies convened a meeting in Aspen, Colorado to develop specific strategies to close the gap between climate science and policy. One of the top recommendations to emerge from this meeting was the need to "create a 'bridging institution' (or augment an existing institution) to actively seek out key business, religious, political and civic leaders and the media to engage in close dialogue and deliver to them independent, reliable and credible scientific information about climate change from a range of disciplines." A follow-up to the Aspen meeting was held in New York City focused on the objectives and institutional design of such an institution. The proposal developed here has come from the summary of that discussion and input from the participants in both meetings, and the "we" used in the text refers to the consensus viewpoint of the meeting participants.

What is proposed here is not a new "bricks and mortar" institution, but rather a new set of institutional arrangements including a new consortium, that can bring focus and attention to the critical issues of climate risks and solutions. The proposed arrangements are intended to build on the work of many organizations that are addressing climate issues today. The consortium must get and stay in touch with the full range of the scientific community and be seen by scientists as helpful to them whether they work for academic, agency or NGO organizations. This is a much broader community than is generally appreciated, and of course, an evolving one, with new faces emerging as experts. And the consortium must reach out to social scientists, economists, and policy experts.

Given the magnitude of the global warming challenge and the rapidly accumulating scientific evidence that the affects are present today and are increasing in intensity and unpredictability, time is of the essence. Actions must be taken to curb greenhouse gas emissions of the order of magnitude necessary to make a very large impact on potential global warming. A range of technologies and strategies will be necessary. Many of these are currently in existence, but deployment must be accelerated. At the same time there is a need to stimulate the development of new technologies that can even more aggressively curb emissions in the future. There is a need to take actions now so that the tipping point for action occurs before the tipping point for a climate crisis. But the will to act will come only when key sectors of society are convinced that climate risk is real and imminent.

Thanks to a large investment in relevant research, the scientific and technical communities in the United States and abroad are now producing a veritable fire hose of scientific and technical findings and proposals. Yet only a modest fraction of this information is successfully informing public understanding or reaching decision makers. A strengthened and expanded effort at effective communication is urgently required.

This proposal focuses on the establishment of a consortium—the Climate Science Communications Consortium—that would oversee two efforts: 1) An authoritative source of information that is easily accessible and up-to-date about the risks of climate change including catastrophe scenarios and about what can be done, and 2) implementation of a communications strategy that incorporates the best understanding of risk perception and markets the message of climate risks and possible responses to a broad range of society—from the public to private industry to governments at all levels. These two efforts are discussed in parts 3 and 4 below.

2. Mission, Goals, and Objectives

A. Mission

We recognize that knowledge leads to awareness which motivates the creation of opportunities to take action. Therefore, we propose institutional arrangements that would present the natural science and social science about the causes, effects, and implications human-induced climate change, the risk of climate catastrophes, possible solutions and their implications in a way that is scientifically credible and understandable by decision makers and the lay public. This would be done through the use of the best science, a good understanding of the perception of risk, and the most modern communications strategies.

B. Goals

Three specific goals have been identified:

1. To encapsulate and translate the science of human-induced climate change and associated climate risk into information that is useful and accessible to key decision makers and the portion of the public that is most likely to become active with respect to global warming.

   Rationale: While there are many organizations and activities in place that are articulating research results and conducting effective advocacy on climate change, there is still not an effective, coherent and focused capacity to bring the latest in understanding of the risks of climate change to decision makers and the active public utilizing effective messaging and communication strategies. New information needs to be presented in the appropriate context. There are significant amounts of information, but it needs to be delivered and made available more effectively.

2. To put forward solutions to address the causes of climate change and reduce the risk.

   Rationale: Events of the last year (most notably the warming in the Arctic leading to endangered designation for the polar bear) and coverage of climate change generally in the more popular media (e.g., *National Geographic*, *Time*, numerous TV specials, *An Inconvenient Truth*) has brought many people to a "tipping point" in their understanding. As a result, an increasing number of decision makers and the active public are now searching for potential solutions and ways to deal with increasing risk. Many such solutions have already been proposed, but there has not been the will or support for implementing them. It is important that any communications strategy offer solutions and a positive vision of what can be accomplished.

3. To bring the expertise of psychologists, social marketers, economists, and others who understand communication, perception of risk, and what motivates behavioral change together with natural scientists who understand the dynamics and implications of climate change.

   Rationale: Because the effects of climate change were first brought to the world's attention largely through the work of natural scientists, it is not surprising that when people think about the "science" of climate change they think about a wide range of natural science disciplines. The effective translation of the processes and risks of climate change into action will greatly benefit from the application of social science expertise. That community has a great deal to contribute, including an understanding of how best to communicate climate change science and the risks we face, what motivates action by decision makers and the public, and the evaluation of potential solutions.

C. Some short-term objectives

Examples of what could be done if such new arrangements were in place include:

1. Translate and put into context new information, such as the upcoming IPCC reports, so this information can be understood readily by decision makers and the active public. For example, the Union of Concerned Scientists and the Pew Center for Global Climate Change are now working together in coordination with the relevant scientific societies to help United States-based IPCC authors effectively communicate the findings of each of the forthcoming reports to the media, Congress and other audiences. More this kind of activity could be done by the new arrangements.

2. Inform the goal-setting policy process. It is very likely that legislation to address global warming will be progressing through the Congress. There are a number of very important policy choices, today and tomorrow, related to climate risk that will need to be made (e.g., emission goals and timetables) that should be informed by the scientific understanding and communication strategies of the proposed Consortium.

3. Increasingly the debate regarding global warming is turning to discussion and evaluation of possible solutions. A communications strategy could ensure that credible, objective analyses of possible solutions are brought into the public debate.

4. For too long the debate regarding the science of global warming has been clouded by intentional misinformation campaigns. It should be a priority of the communications strategy to inoculate decision makers against these efforts, both with respect to the science regarding global warming itself and the evaluation of the costs and implementation of potential solutions.

5. A specific initial focus of the information source and communications strategy should be to develop trusted working relationships with professional journalists and the media. If objective, synthesized information regarding global warming and climate risk is provided in an accessible way, it will assist journalists and others in their pursuit of information to report to the public and decision makers.

6. A specific idea that might be developed is to establish an annual "World Climate Forum" that focuses on climate science, risks, and opportunities. This could be started with a United States-centric activity, and then broadened internationally.

3. Elements of an Authoritative Information Source

A. Overall need for accessible authoritative information

Key to the success in achieving action will be the ability to deliver impeccably credible information about the risks of climate change to key audiences in a timely way. The

information must be authoritative, up-to-date, and easy to access. Achieving a free flow of information requires a full use of the latest techniques of the internet and communications technology on the one hand and, on the other, a sophisticated understanding of how people accept and deal with information about slowly changing systems. A group of information technology experts together with social scientists expert in communications, fed with information from vetted sources, needs to put together a web site that can provide answers to questions. Such information will be critical to informing government members and leaders so that they can show the responsibility that is critical for success.

B. Web-based search and collaborative information technology

This effort must be web-based, using all the latest web and communications technology. Wiki-like collaborative engines combined with Google-like or JSTOR-like access to information and question-answering technology must be included. There must generally agreed-on criteria for inputs, and authoritative review and vetting—this can be in many ways, for example, editorial boards for encyclopedias or dictionaries. Many inputs from diverse sources are expected. There are good examples of providing such information from the medical world (e.g. the work by the Kaiser Foundation).

An important aspect of the information function will be to deal with new information. There will always be new scientific information coming to the fore, and therefore, there is an ongoing need to communicate the evolving scientific understanding. New information (whether it deals with 'how does the climate system work?', 'how are we affecting it?', 'what are the consequences?' and 'what are the solutions?') will constantly be emerging and needs rapid, strategic communication. Any new information needs to be set in context, but the new information provides news hooks as well as new insight.

C. Institutional arrangements

The information function is one that could be done by a small group, embedded in an existing institution with strong scientific credentials and with adequate funding to build the cyberspace function. The information that comes in must be carefully vetted and prepared so that it is authoritative. The activities of the information source would be overseen by the Consortium.

4. Elements of a Communications Strategy

A. Overall strategy

It is important to have effective communication that both genuinely informs and motivates action, rather than mere dissemination of information. How this is done requires careful collaboration among scientists, social scientists and others who understand communication and the perception of risk. The strategy must include close and highly responsive interactions with journalists and the news and other media, and

must use innovative channels to reach various audiences, internet-based and otherwise. Getting news of new scientific findings and analyses out of the (at best) science news sections and onto the front pages, figuratively and literally, should be a priority.

The strategy needs to develop plans for the best way to get information out to people, identify target audiences, use a multi-media approach with internet websites, blogs, podcasts (note that Queen Elizabeth's 2006 Christmas Message was podcast), newspapers, TV, movies, books. Video games of all types should be considered—the UN Food and Agriculture Organization has had good success with its "Food Force" game. These are good ways to reach a younger audience. The highly popular "Second Life" interactive game involves a virtual world—imagine if that world also faced climate risk. Much interaction and rapid response will be required if this is to be successful, particularly in meeting disinformation campaigns.

B. Addressing many communities

It is clear that despite awareness, the public hesitates to support action if it does not believe there are solutions that can be readily applied to the problem. Too often, those in the scientific community and elsewhere who are attempting to communicate about global warming blame their audience for not "getting it". In reality, the burden to communicate effectively rests with those doing the communicating, not the audience. The social sciences bring an important and critical dimension to the process of understanding and bringing climate change science to decision makers and the active public.

Communication efforts would include marketers, psychologists, economists, all of whom understand the basic climate issues, but in particular know how people respond to warnings, economic and political choices, and how to craft a message to the public about the importance of climate change. Since the decisions that will be made by governments and industry will necessarily be political and economic, the business and political side should be addressed by the Consortium.

An important aspect of communication will be dealing with business leaders and policymakers at the state and regional levels. Many of the impacts of climate change and risk are regionally specific, and progress in mitigating and adapting to climate change has begun at the state level. The development of messages about climate risk and its effects that are designed to emphasize the particular concerns of a state or region may prove very effective. As an example, policymakers in New Jersey seem particularly concerned about sea level rise and possible effects on water resources. Further north, impacts on fall and winter tourism may be more prominent concerns, while the spread of tropical diseases may be more of a focus in the Southeast.

State climatologists may be an impediment to conveying an accurate message about climate change. For example, the policy statement of the American Association of State Climatologists on climate variability and change, available on the web at http://www.stateclimate.org/publications/files/aascclimatepolicy.pdf, provides evidence that state climatologists, at least in a collective sense, may be inclined to view climate

change with a good deal of uncertainty or skepticism. Television weathercasters are often regarded by the general public as credible sources of information about climate. The American Meteorological Society has been promoting the concept of the TV meteorologist as "station scientist," or someone who can provide a scientific perspective on issues beyond just the daily weather forecast. Since many weather forecasters could be better informed about climate change, any contribution communicates an accurate understanding of climate change to them could leverage the access to the public that they have on a daily basis.

C. Institutional arrangements

The ongoing development and implementation of a science-based communications strategy must obviously be a broadly inclusive, highly interactive team effort. Like the website initiative, it could be based in a highly credible existing institution and overseen by the Consortium.

5. Potential Institutional Arrangements

A. Overall guiding principles

It is important that the organization and work of the proposed Consortium and its information and communication efforts be guided by a set of principles to ensure that all involved share a common view of how the institution is to achieve its objectives. These include:

- *Science-based:* Work must be based upon the best available science.
- *Transparency:* Openness and transparency of governance and operations are key to establishing and maintaining trust.
- *Independence and integrity:* The scientific judgments and messages developed by the information source and the communications strategy need to be made in an independent manner, free from influence related to funding or political agendas.
- *Non-partisan:* All governance and operations must be non-partisan in nature. The Consortium and its efforts cannot be seen as promoting the political agenda of any particular political party.

B. Institutional characteristics

To achieve these objectives will require the creation of organizational capacity with the following characteristics:

Convening and facilitative: The Consortium needs to draw upon a wide range of disciplines and areas of expertise from across the natural and social sciences. In addition, it needs to have the capacity to build trust with a diverse set of stakeholders. Incorporation of these capacities will require that the Consortium be able to convene

people to work together in new and innovative ways. The Consortium should become known for its ability to draw skilled and knowledgeable people together to accomplish given objectives.

Communication expertise and delivery: The Consortium needs to have staff and partners that understand how to communicate effectively with "difference makers". This will require the early and meaningful involvement of social scientists working collaboratively with colleagues from the natural sciences as well as with professionals from the media and journalism.

Ability to work in partnership with other institutions and organizations: The objectives of the Consortium will only be accomplished if the capacity and culture of working in partnership are established from the outset. There are many, many organizations working on the human-induced global warming and associated climate risks that can bring expertise and experience to bear on achieving the objectives of the new Consortium.

Funded adequately: Securing independent funding in support of the efforts of the Consortium will be key to establishing credibility and trust. The funding will need to be secured in an incremental fashion so that work can be initiated as soon as possible. Since scale of the challenge is significant, funding will need to be significant enough over time to match that challenge.

Initially focused on making change happen in the United States: Global warming with all of its associated risks is, of course, a global issue, but it is important that the Consortium focus on the United States initially given the need to stimulate action domestically. Care should be given, however, to lay an appropriate foundation so that over time the scope can be expanded to be more international if desired.

Ability to change and adapt: Both the phenomenon of global warming itself and the political and public response to the very real risks will be dynamic in nature. It is very important that the Consortium be flexible and dynamic in its organizational structure and character to be able to adapt as needed over time.

C. Operations

Governance: It is very important that the governance of the Consortium be seen as credible, diverse and non-partisan by decision makers, the media and the public.
A possible mechanism would have an Organizing Committee evolving into a Governing Board consisting of a combination of scientists, social scientists and representatives from diverse stakeholder groups.

Staff: Staff need to have expertise in the natural and social sciences, communication and media relations. The core staff of the Consortium should limited in number both to keep expenses down and so that contractual and loaned staff capacity can be brought on to address specific needs and priorities.

Funding: Funding to support the work of the Consortium should be raised in stages, so that work can be initiated as soon as possible while a more substantial fund raising effort can be planned and implemented. It is assumed that the majority of funding will come from foundation and individual donors.

Web capacity: Given the objectives, operating principles and institutional characteristics that are envisioned for the Consortium, a sophisticated web capacity will be very important.