Key Observations and Recommendations:

The EAB continues to be impressed by the high-quality work already accomplished under CRED 2 and the extensive lab and field research currently in progress. We are very pleased to observe CRED graduate students and post-doctoral students maturing, moving to other institutions and still maintaining research and collegial links with CRED. They are taking the CRED interdisciplinary, lab/field interactive approaches to new arenas, increasing the impact of CRED’s work, and creating new synergies. We also are pleased to see the impressive new students and researchers who have joined CRED. They are clearly drawn by the opportunity to work with CRED faculty and researchers who are internationally acknowledged and widely read and cited leaders in their fields.

Researchers are continuing to work thoughtfully toward integration of the three “pillars” of the CRED approach - decision architecture, social context and technical information - in both lab and field applications. Such interdisciplinary integration is very challenging within both academic and field environments and requires a deep level of trust and collegial good will. It is a major success of CRED and a tribute to the principal faculty and staff that the broader CRED community functions with a strong culture of mutual trust and respect.

Since last year there have been an increasing number of projects in which lab and field researchers have collaborated, with new insights gained by both. We know that these collaborations will continue to emerge and be documented as CRED fosters lab/field efforts.

Significant progress has also been made in outreach during the last year. We applaud the changes to the website and the new web platform, which facilitates updating. CRED’s Internet presence and website content is greatly improved and does an excellent job of showcasing key aspects of CRED’s work. This was and will be a major investment of time and resources and one that makes an important contribution to all four of the key outreach audiences. Continued investment in the content updating is an important priority. Other noteworthy outreach activities that are particularly impressive include the over 25 elements of curriculum developed by CRED researchers that are now incorporated into courses and the translation of the Psychology of Climate Change Communication into other languages. The guide has become a widely-used and frequently referenced document and is an excellent example of the integration of
decision architecture, social context and communication of technical information. We look forward to seeing it updated with new insights from CRED research.

The success and growth of CRED creates a number of challenges well known to the CRED leadership. The EAB wishes to draw attention to the following five key areas that merit particular focus during the next year:

**Long-term Planning Horizon** – The EAB believes that the Center has become an important nexus for critical research on environmental decision-making under uncertainty. It is producing high quality research and multi-disciplinary lab getField synergies that could not occur without the center. We suggest that the leadership consider making an immediate commitment to seek ongoing funding for the Center through NSF (“CRED 3”) and adopting the longer (5-7 year) planning horizon that decision would entail. Such a clarification of intent would aid effective strategic planning and decision-making about research and administration. Concurrent with making such a commitment would be a commitment to address long-run leadership issues, as discussed in the next paragraph.

**Leadership/Management** – CRED 2 was initially designed with a multi-person leadership structure that facilitates cross-disciplinary/lab-field approaches. This structure has been quite successful, though often challenging for the individuals involved. Because of the positive working relationships and generous contributions of the faculty and staff leaders, who have all gone well beyond what could be expected, CRED’s success has resulted in a center that is increasingly more complex and multi-faceted than originally envisioned. Managing the administration and research oversight of 50 or more CRED projects spread over multiple continents is difficult and time consuming.

At the same time, the individual commitments and careers of a number of the leaders are naturally evolving and thereby reducing the time they have available to commit to CRED management. As noted last year, this leadership structure cannot be expected to meet the needs of CRED going forward, especially if it moves towards a CRED 3 phase. Moving forward the center needs a plan for leadership transitions that will sustain the center’s excellence in psychology and decision science as well as anthropology and will ensure that leaders have enough time to devote to the center and to future proposals.

The EAB urges the Center to consider hiring a mid-career or senior researcher to serve as a full time research director reporting to the CRED director(s). The ideal person would have an established research and research administration background in behavioral decision theory, as well as documented interest in environmental issues and an ability to lead intellectual initiatives and publish. We are aware of the institutional challenges associated with this proposal and also that creative thinking already underway about the type of person who would best fill this position and possible funding possibilities. We encourage that this be a priority area for action.

*Response:*  
*Initially we pursued two additional hires of full-time faculty (one senior who is expected to take on a major leadership role and one junior) with relevant social science expertise*
and willingness to participate in CRED governance and research activities.

We have worked with the Dept of Psychology and Earth Institute on the recruitment of junior faculty member Coren Apicello, Biological Anthropology (Ph.D.) and Evolutionary Psychology (MS), yet went to U Penn. The efforts to establish an attractive junior position jointly by 2 schools for this highly desirable candidate ended in plans for a temporary visiting position which the candidate declined. We need to revisit the options for establishing joint appointments, aiming to have at least one such position filled by Fall 2014.

We have began the exploration of creative options for creating a senior faculty appointment:

a) jointly through a set of departments and school (Psychology, SIPA, DEES, B-School – all plus Earth Institute)
   - We invited Tom Dietz for an informal visit and guest lecture
   - Strong mutual interest, practicalities unclear
b) through one department
   - planted seeds for the creation of a senior position at SIPA, in environmental policy and decision science (so far positive response from SIPA)
   - working with Dept of Psychology on the recruitment of senior social psychologist. Informal visit of the dept and CRED took place early April.

Note: The Earth Institute continues to recognize our need

Over the past year, we were pleased to see new hires to support the Center and the Managing Director. The recent loss of the assistant director creates a significant challenge and we are assured her replacement will an immediate management priority.

Response:
After a series of staff turnover in the administrative positions, we restructured the administrative body (re-allocation of responsibilities, creation of new positions, recruitment of new staff):

- Matt Sisco, program coordinator (newly created position, May 2012)
- Rise Fullon, program manager (formerly program coordinator, restructured)
- Lori Scally, assistant director (existing position, restructured)
- Courtney St. John, associate director for outreach (newly created position, September 2012)

- The administrative staff has recently completed a self-study through the hiring of an Organizational Consultant from Columbia’s Learning and Development Department. The purpose of the consultancy was to support CRED Administrative staff in considering ways to improve and further team success. This effort included discussions between the Managing Director and the consultant, one-on-one interviews with all administrative staff, an offsite team meeting/organizational retreat including a review of individual roles, responsibilities, and work flow; identification and sampling of tools for effective communication and team building; and development of and admin vision and strategic goals.

Also, the charter sets the size of the CRED External Advisory Board at 5-10 members representing “a cross-section of expertise from the environmental, climate and social and behavior sciences; individuals and institutions active in
decision sciences and its practical applications in the public and private sectors”. There are currently five members on the EAB. It would appear beneficial to add two or three more members selected for expertise that would be particularly useful to CRED in the future. Current board members could be helpful in identifying potential new members.

Response:
- We have identified additional candidates, but have not officially invited them to join the board:
  - Rear Admiral David Titley (retired), Oceanographer at the Navy, Navy Task Force Climate Change
  - Tom Dietz (see also above under leadership recruitment)
  - We contacted Mark Fulton of Deutsche Bank Climate Change Advisory Group, however his group has since then been dismantled.

Mission and Focus – As noted before, CRED’s growing success and multifaceted approach is creating a diverse and wide-spread group of researchers. Although CRED has a stated mission and articulation of the three core focal areas, it is not always obvious to outsiders how each of the current research efforts is related to the mission or the foci. Some of the presentations at the annual meeting seemed only loosely connected to the mission and the CRED2 proposal. We encourage leadership to review and reaffirm (or revise) the current mission and focus areas and then to integrate them explicitly into current communications and research efforts.

The EAB reiterates last year’s suggestion that each research project have a 1-2 page summary that succinctly explains the research question or hypotheses, the approach and the anticipated or obtained finding; where the research fits within CRED2’s mission/focus areas and in the wider research context; why it is important; and how it might be used. A CRED-wide format is encouraged. We believe this will serve both the purpose of creating greater cohesion and focus across the CRED researchers and also, if posted on the website, be a helpful outreach product of use to other researchers, educators, students and policy-makers. Although it may require significant effort during the first iteration, once established as an expectation, the on-going management should be less demanding. We hope this also could prove a useful tool for assessing whether proposed research is significant and aligned with CRED mission.

Response:
We have requested project updates from all researchers/project leads and asked them to check all themes, concepts, key words, methods, disciplines, etc. that are addressed or come to bear on their work. Based on this we created sessions for this year’s annual meeting. This exercise is also helping us identify overlap that we would otherwise not have been aware of.

Courtney St. John has drafted 1-2 page project descriptions with a focus on key questions/hypotheses/goals, key findings, and broader impacts. These were distributed to the EAB prior to the annual meeting. The next step is to edit them for posting on the center’s public website.
Additionally, we asked all presenters at the annual meeting to make reference to any current outreach, policy relevance, or other broader impact associated with or expected of their research.

**CRED Research in a Broader Context** - The credibility of CRED research depends on adequate secondary literature reviews, careful research protocols, quality data management and effective reporting and on articulation of how CRED research contributes to the larger fields of behavior, decision-making and environmental policy. In some cases it is not clear where a CRED research project fits within the broader literature, how it builds on or extends it, and how the CRED research complements or contrasts with the work of other researchers and research centers. It would benefit CRED to have a more systematic oversight process to ensure continued quality as the center continues to grow. We are pleased to see increasing attention to managing and archiving data. The internal and external advisory board members could be helpful in identifying literatures that may be relevant to CRED projects.

*Response:*
*Matt Sisco has worked closely with Dave and Sabine on a Data and Research Management Plan, which will be presented at this year’s annual meeting (Friday).*

In addition, and very importantly, outreach and educational efforts must be accompanied by short-term and long-term evaluations to assess their effectiveness. We urge that every such effort include from the beginning a plan for evaluation, which then is implemented as early in the process as is feasible. Applied research efforts that include, for example, climate information, environmental communication or education also should be designed from the start with ongoing and rigorous evaluation methods so that CRED and others can learn from experience.

*Response:*
*Courtney St. John has established criteria that help Sabine decide which outreach requests and invitations to accept or decline. Criteria include expected impact, time and financial effort, type of audience reached, potential benefits for us. Courtney has drafted and presented an Strategic Outreach Plan, which we are currently refining. This includes evaluations of outreach activities, by asking each researcher to report back on a (for now) small list of questions. Courtney is monitoring outreach more closely and reports to CRED membership on a bi-monthly basis in form of an outreach update. Courtney will report on these efforts during her presentation on Friday afternoon. This is work in progress.*

**Strategic Planning for the Future** – By adopting a longer-term time horizon for planning, CRED leadership will have the opportunity to clarify its future directions and ensure maximum impact. We urge the present leaders to work on strategic planning issues this year. The planning process should focus on clarifying CRED’s “centers of gravity” where the unique combination of CRED’s capabilities has significance as the globe faces increasingly difficult hazards and decisions. We continue to think it would be reasonable to reduce the number of projects conducted and researchers working under the auspices of CRED 2 and 3, so that
the remaining ones can be clearly articulated, funded as necessary and highly visible.

Response:
The co-directors and the managing director have reviewed all projects and subprojects last Fall. We have identified a handful of sub-projects that have been dormant for a while and should not be continued. It proved very difficult to eliminate or drop any projects. However, we have assigned at least one director to each project as the person responsible for oversight until completion of the project.

At last year’s annual meeting we discussed 2 possible directions: Hazards and Moral & Ethical Dimensions of Environmental Decision Making. The topic of natural hazards seems to be gaining interest, and will be discussed and further developed at this year’s annual meeting.

This is work in progress.

CRED has undergone a so called Unit Review by the Earth Institute, which includes a review of the past 3-5 years on all levels from research, education, collaborative efforts, finances, proposals, etc. as well as setting 3 priorities for the coming 1-3 years. This resulting document has been shared with the EAB.

To aid in efficiently developing a longer-term plan, EAB recommends obtaining the assistance of an external strategic consultant who may be able to do some external assessments as well as moderate and facilitate the necessary group discussions.

Response:
The managing director has identified a list of potential consultants, yet we are still debating the benefits of such a consultation.

In closing, the EAB again acknowledges CRED’s excellent achievements and strongly supports CRED continuing in a sustainable way. We are looking forward to the next Annual Meeting of CRED in May 2013. In preparation for the 2013 Annual Meeting, the EAB would appreciate receiving summaries of (or web-links to) CRED research projects and, if available, a draft of the annual report being prepared for submission to NSF.

As External Advisory Board members, we feel fortunate to be involved and would be happy to be called on for advice at other points during the year.

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