Future Earth: North American Consultation
Interim Report: Short Summary
November 2013

INTRODUCTION:

The United States Global Change Research Program (USGCRP), the National Science Foundation (NSF), and the National Academy of Sciences (NAS) were approached by the International Council for Science to lead a North American consultation on Future Earth. The USGCRP and NSF have provided steady support for the World Climate Research Program (WCRP), the International Geosphere-Biosphere Program (IGBP), the International Human Dimensions of Global Change Program (IHDP), the DIVERSITAS program, and the Earth System Science Partnership on behalf of the United States, in order to create and foster opportunities for researchers from the United States to add value and advance their research through collaborations with partners across the globe. The National Academy of Sciences has long served as the home for the National Committees for the WCRP, IGBP, IHDP and DIVERSITAS and as the national member of the International Council for Science (ICSU) in behalf of the United States. In Canada, the Canadian Climate Forum promotes and tracks participation in WCRP, working with the National Research Council Canada to ensure support for WCRP. The National Research Council Canada is the national member of ICSU and Canadians hold leadership roles in several GCR programmes and projects.

Having a long-standing interest in the success of all the ICSU science programmes, the partners, USGCRP, NSF, NAS, the Climate Institute, the Canadian Climate Forum and the Natural Sciences and Engineering Research Council of Canada (NSERC) seek to introduce the Future Earth initiative to existing and potential new stakeholders, inform them of ways to remain or become involved with it, and provide feedback from North America to the interim Director and Secretariat and the Alliance for Global Sustainability, a group of sponsors of the Future Earth initiative.

APPROACH:

The organizing committee conducted the consultation over many months, with a primary focus on Canada and the United States, and using heavy focus on an online consultation questionnaire, two webinars and an in-person meeting. The timing was based on the understanding that the Initiative was still in its formative stages and that many in North America were unaware of the Future Earth initiative, its vision, mission and goals. The heavy focus on online consultation and webinars was chosen in order to compensate for the scale of Canada and the United States as well as the number of time zones involved.

PRELIMINARY FINDINGS FROM THE CONSULTATION:

Overall, the concept of Future Earth and its timing has been well received by the North American community. Most welcome the initiative and feel that the strategy that has been articulated by Future Earth has the potential to bring about a substantial change in

the way global environmental change research is developed, conducted, and delivered to the world. Very few throughout the consultation to date have questioned the potential value of Future Earth. What follows in the document is intended to be constructive and is based upon input received to date in the consultation.

The North American community looks forward to continued engagement with Future Earth as the initiative moves ahead.

POTENTIAL BENEFITS TO NORTH AMERICA FROM FUTURE EARTH

An in-depth focus on the Arctic, given the potential impacts of environmental change on society and economy of the region, would be of great value to the global community. The recently released Working Group I report from the Intergovernmental Panel on Climate Change (IPCC) report notes a number of substantial uncertainties that remain in our understanding of the Arctic. Additionally, emergence of the possibility of a seasonally ice-free Arctic Ocean will create both substantial potential economic benefits (e.g., by opening new routes for maritime commerce) and great potential risks for society (e.g., by increasing the risk of environmental damage).

Future Earth's focus on greater inclusion of social, behavioral, and economic sciences is welcome. Future Earth should foster social science research related to impacts, adaptation, and vulnerability. For example, research into the connections between economic systems, sustainability and justice would be valuable.

Future Earth can help build highly interdisciplinary, high-quality, policy-relevant scientific research. Such research could build a case for significant investments in climate change mitigation and adaptation.

Future Earth should foster greater communication, and data sharing between disciplines, which will improve understanding of changes to the North American climate and its impact on the ecosystems and social and economic structures.

GENERAL COMMENTS AND CONCERNS EXPRESSED ABOUT FUTURE EARTH DURING THE CONSULTATION

Build upon existing capabilities structures and entities: Future Earth should leverage existing global and regional research capacity rather than create potentially competing or redundant initiatives, networks, or structures. Future Earth should instead seek to understand the gaps and forge connections between existing programs.

Ambition of the strategy: The strategy document for Future Earth describes a broad, ambitious plan. Throughout the consultation, concerns were voiced about how broad and vague the plan is at this stage. Questions were also raised about the uptake and use

of results. Concerns focused on the ability of political and economic systems to respond. It was felt that Future Earth may be overpromising, despite very good intentions.

The global fiscal environment: The global fiscal environment, particularly in the United States and Canada, was raised as a concern in a variety of ways throughout the consultation. It was felt that while the goals of the initiative are well timed, funding may likely be a challenge in the current fiscal environment. While care must be taken in order to maintain the independence and credibility of its research, Future Earth's funding strategy should be as diversified as possible going forward.

The World Climate Research Program (WCRP): Interactions with the WCRP should be improved and expanded in order to encourage fuller engagement by climate research scientists with Future Earth.

The North American community has a long history of scientifically fruitful engagement with the WCRP. As a result, the WCRP has a lot of credibility with the North American and global community. While it is understood that WCRP has been involved in the development of Future Earth and there are understandable reasons why it has not fully engaged with the initiative, it would be useful to clarify its role and that of the World Meteorological Organization in Future Earth going forward. This is especially important given the Global Framework for Climate Services, which would presumably be an important partner organization for Future Earth.

Basic science: Involvement of the social, behavioral, and economic sciences and other sciences is entirely appropriate for Future Earth. The emphasis on moving beyond so-called "over-the-transom" research through greater engagement of stakeholders and decision makers is appropriate. However, throughout the consultation, commenters noted concern about the many remaining questions in global change research that do not necessarily require co-design or a great deal of interdisciplinary engagement.

The global change research programs have a long history of individually fostering basic discovery-driven research in their respective fields. While Future Earth has articulated that basic research is indeed the foundation for the program, it remains unclear to many in the North American community how the program will continue to foster advances in this area while branching out into many new ones.

Process and inclusiveness: Several during the consultation expressed concerns about the process that was undertaken to develop Future Earth. They felt that it was not as consultative and transparent as they would have desired for an initiative of its scale, impact, and potential appeal. This has resulted in two issues identified during the consultation. Some who participated in the consultation expressed feelings that ranged from alienation to indifference regarding the process of developing the initiative. Others, some of whom who were contacted able to reach during the consultation were

completely unaware of the initiative. Engaging individuals of influence in both of these groups in Future Earth is important, but will be a challenge going forward.

Engaging additional communities, particularly private sector: Many felt that engaging additional communities would be essential to Future Earth's success and laud the initiative's intent to do so. Communities of particular interest are private sector organizations, legislators/parliamentarians, national leaders, and leaders of global organizations that span the environmental and development agendas.

In addition to engaging those communities, participants felt that it would be very important for Future Earth to engage engineers, architects, and organizations responsible for developing international standards and codes for built infrastructure.

Observing systems: Given its emphasis on greater inclusion of social, behavioral and economic sciences, several people expressed interest in the entirely new observations that may become available as a result of Future Earth. Given ongoing concerns about the state of Earth observations, several expressed hopes that Future Earth would continue to foster and advocate the continuation and expansion of observing systems. Future Earth should engage with and build upon existing global observation and coordination systems (e.g. LTER, NEON, etc.) rather than creating additional potentially competing or redundant structures.

Implementation of co-design and co-delivery may impact the review and awards system: Co-design and co-delivery of research with stakeholders has the potential to greatly increase and/or complicate the review process for research proposals. Going forward, the leadership of Future Earth and the S&T Alliance will have to take great care in providing clear and well thought out guidance on how these concepts are integrated into the review process.

Co-Design, co-production and, co-delivery of knowledge: Most everyone who has participated in the consultation agrees that greater involvement or interaction with stakeholders in the design of research is critical to making advances politically and socially on global environmental change, and to the uptake and use of results. However, several were concerned that such intimate involvement as seems to be suggested by the research strategy, may go beyond "policy-relevant, but policy-neutral."

Great care must be taken to maintain the objectivity and credibility of science by understanding and generating guidelines for how research should be conducted when these concepts are integrated into the process.

Concern about the program becoming advocacy- versus science-based: There were mixed messages on this issue from the community. The broad community view is that maintaining the objectivity and credibility of science by avoiding even the appearance of

conflicts of interest and/or political influence on research is critical for making science-informed advances. Future Earth can speak frankly and plainly about the opportunities and tradeoffs associated with global environmental degradation and climate change through the research it intends to undertake.
