

RE: Response to the National Academy of Sciences, Engineering, and Medicine Peer Review of the Draft Climate and Health Assessment: *The Impacts of Climate Change on Human Health in the United States*

Dear Dr. Greenbaum, Review Committee, NAS Board on Atmospheric Science and Climate, and NAS Board on Population Health and Public Health Practice,

On behalf of the Climate and Health Assessment authors and coordinators, thank you for such a thoughtful and thorough peer review of the draft *Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*. The review committee provided an excellent review report, which included recommendations that significantly strengthened the Climate and Health Assessment.

Since release of the NAS review report, the authors have been working to respond to each comment and to revise the Climate and Health Assessment based on these comments, as well as the comments received through the public review process. These revisions have ensured that the assessment meets its stated goals, accurately reflects the scientific literature, documents the process for arriving at our findings, and communicates these findings to the intended audiences. In responding to the peer review committee's comments and preparing the assessment for final interagency review and clearance, the document has undergone substantial edits that have enhanced and improved the overall report.

Please see the attachment below for a brief summary of the response to each overarching suggestion from the review committee on how the authors could enhance identification and assessment of the science and better communicate our conclusions to the target audiences.

Thank you again for your vital role in strengthening the USGCRP Climate and Health Assessment and we look forward to sharing the final report with you in Spring 2016.

Mike

J. Michael Kuperberg, Ph.D.

Executive Director, USGCRP,

White House Office of Science and Technology Policy (OSTP)

12/15/15

Attachment: Brief summaries of responses to overarching suggestions from the National Academy of Sciences, Engineering, and Medicine Peer Review of the Draft Climate and Health Assessment: *The Impacts of Climate Change on Human Health in the United States*:

1. **Committee Suggestion:** *Clearly outline the selection process and criteria used to choose the health outcomes and literature discussed within the chapters*

The assessment now includes a full Front Matter section that provides context for the report and a guide to reading the report, including how to interpret the exposure pathway diagrams. Four new appendices have been added, two of which describe the process for report development and the literature review. Criteria for choosing the health outcomes within each chapter, as well as explanations for the placement of topics within one chapter versus another, has been added to each chapter's Traceable Accounts sections.

2. **Committee Suggestion:** *Clarify the criteria used to judge likelihood and confidence statements and consider disaggregating confidence determinations in key findings to better reflect the diversity of the evidence*

A more comprehensive discussion of use and method for determining likelihood and confidence has been drafted for the Front Matter and descriptions have been revised in Introduction chapter and Technical Support Document. An appendix on determination of confidence and likelihood has been added. Where appropriate, the Key Findings have been revised to disaggregate confidence and likelihood statements to better identify sources of uncertainty. Finally, the traceable accounts sections in all chapters have been revised to clarify support for findings.

3. **Committee Suggestion:** *Reorganize some key findings to improve clarity and to highlight the evidence of health impacts of climate change first and foremost*

Guidance was provided to authors to reorganize and clarify Key Findings per this overarching comment as well as individual chapter recommendations, and each chapter author team has worked to revise their Key Findings accordingly.

4. **Committee Suggestion:** *Enhance the discussions of vulnerability from the earliest stages of the Assessment and review the discussion of vulnerability throughout the chapters for consistency*

The definition of vulnerability has been added to the Introduction chapter and descriptions have been revised in the Introduction and Populations of Concern chapter. Additional text has also been added to the Front Matter. Guidance was provided to authors on how to revise each chapter's discussion of populations of concern for consistency, and each chapter author team has worked to revise these sections accordingly.

5. **Committee Suggestion:** *Consistently discuss adaptive behavior in the context of each chapter and describe, to the extent that there is literature available, potential adaptive behaviors and interventions that could moderate the health impacts*

Contextual information on adaptive capacity has been included in the newly drafted Front Matter, and has been revised in the Introduction chapter and Populations of Concern chapter (including the figures). Guidance was provided to authors on how to include/strengthen and consistently describe adaptive capacity, and chapters were revised accordingly. The exposure pathway diagrams have also been revised to better represent the role of adaptive capacity. While the assessment does not provide recommendations for adaptation policies or advocate best practices for adaptive measures, it has been revised to more consistently acknowledge the role that adaptive capacity plays, particularly in projecting future climate impacts on health.

6. **Committee Suggestion:** *Provide methods for all featured modeling results, including uncertainties and information on accessing the underlying data*

The Technical Support Document (Appendix 1) has been revised and new text has been added to the Front Matter to better describe the role and methods of the research highlights sections. The research highlights sections were also revised to better address methods and uncertainty in the text. We are continuing to work on ensuring the six underlying papers are open access and readers are directed to those papers for full descriptions of methods. The coordinators are continuing to work with USGCRP to document methods and metadata for these analyses, and all figures in the assessment, in the public Global Change Information System.

7. **Committee Suggestion:** *Consider reordering the chapters to minimize overlap and to enhance opportunities for linkages between related issues*

The chapter on extreme events has been moved up in the assessment and the Traceable Accounts sections have been revised to better describe where in the assessment certain topics that relate to multiple chapters are covered.

8. **Committee Suggestion:** *Enhance the overarching graphic (Figure ES-1 and similar figures) to effectively portray the key concepts and ensure uniformity of the message*

These figures, including their captions and titles, have been revised across the report and Executive Summary. A simpler descriptive version of how to read these diagrams has been added to the Front Matter. Guidance was provided to authors on how to revise chapter diagrams to ensure consistency and the graphic design has been updated to better portray the key concepts.

9. **Committee Suggestion:** *Consistently identify the most important research needs within each chapter.*

After discussion with the chapter authors regarding the best way to represent research needs in this assessment, guidance was provided on how to make this section consistent in scope and level of detail across the chapters. These sections have all been revised accordingly.