



Progress Report of the Interagency Climate Change Adaptation Task Force

March 16, 2010

Introduction

The impacts of climate change already are being felt across the United States and the entire world. The U.S. Global Change Research Program 2009 report, *Global Climate Change Impacts in the United States*, summarizes the science of climate change and the impacts of climate change on the United States, now, and some of those expected in the future.¹ These impacts will influence how and where we live and work as well as our cultures, health, and environment. In the years and decades to come, they will grow and affect future generations. It is therefore imperative to take action now to adapt to a changing climate. Given the uncertainty of many specific impacts, we also need to build resilience to help minimize the risks associated with climate change and maximize any opportunities that climate change may create.

Continuing to reduce greenhouse gas emissions is critical to limiting the extent of climate change impacts, and resulting damage. The Obama Administration is committed to creating a clean energy economy and mitigating climate change by reducing emissions. While increased mitigation efforts will reduce the effects of climate change, impacts will continue to occur, reinforcing the need for adaptation and a focus on resilience.

Adaptation is defined by the Intergovernmental Panel on Climate Change as “adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.”

Resilience is defined as “the capacity of a system to absorb disturbance and still retain its basic function and structure.”

Adaptation and resilience will require a set of thoughtful, preventative actions, measures and investments to reduce the vulnerability of our natural and human systems to climate change impacts. This will require new approaches and preparation, especially at the local level as regional impacts differ greatly. Adaptation and resilience will require action from all segments of society—the public sector, local to Federal government, the private sector, the nonprofit sector and individuals. This challenge provides Federal, Tribal, State, and local governments with significant opportunities for innovation.

Progress Report of the Interagency Climate Change Adaptation Task Force

Process

The U.S. Global Change Research Act of 1990 established the U.S. Global Change Research Program (USGCRP) “to understand, assess, predict, and respond to human-induced and natural processes of global change.” For more than 20 years, the USGCRP has been effectively delivering on understanding and predicting climate change. To further advance and coordinate Federal agency efforts to assess and respond, the USGCRP is currently conducting a national climate assessment and developing the research and science necessary to support a Federal adaptation strategy.

In parallel and in coordination with USGCRP, the White House Council on Environmental Quality (CEQ), the White House Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA) convened the Interagency Climate Change Adaptation Task Force to begin to develop Federal recommendations for adapting to climate change impacts both domestically and internationally. More than twenty Federal Agencies, Departments and Offices are participating in this Task Force and contributing their operational capabilities and expertise through a series of workgroups, coordinated with USGCRP, on specific topics related to climate change adaptation.ⁱⁱ President Obama placed special emphasis on adaptation when he ordered, on October 5, 2009, the establishment of an integrated strategy towards sustainability in the Federal Government. Part of this order referenced the work of the Task Force and called on it to report to him within a year on Agency actions in support of developing the domestic and international dimensions of a U.S. strategy for adaptation to climate change.

Goals of the interagency adaptation work include:

- Forming recommendations toward a national adaptation strategy that uses a set of best practices derived from the best available science and the experience and knowledge of governments and stakeholder groups across the United States and abroad.
- Integrating climate change resilience and adaptive capacity into Federal government operations, and coordinating interagency preparations for climate change impacts with domestic and international activities.
- Broadening the understanding of vulnerability to climate impacts, equipping communities with information to use in local adaptation policies, and learning from communities who have taken steps to adapt.

As required by Executive Order 13514, the Interagency Climate Change Adaptation Task Force will deliver a report to the President in the Fall of 2010. The report will detail the development of domestic and international dimensions of a U.S. strategy for adaptation to climate change, agency actions in support of that strategy development process, and recommendations for any further measures to advance towards a national strategy. The Task Force will not, however, deliver a complete U.S. adaptation strategy to the President.

Five workgroups (on science inputs to adaptation, agency process, water resource management, insurance, and international assistance) are currently reviewing existing policies, operations,

Progress Report of the Interagency Climate Change Adaptation Task Force

procedures, and other tools that affect the Federal government's ability to respond to and prepare for climate impacts. These workgroups will suggest options for improving the government's adaptive capacity as climate change continues. To date, the workgroups have reviewed relevant literature, analyzed existing agency adaptation activities, and conducted listening sessions with external groups and experts on managing climate impacts and adaptation efforts. Case studies, legislative proposals, and comparisons of other governments' approaches are also being reviewed and considered.

Progress to Date

The Task Force has found that climate change is affecting, and will continue to affect, nearly every aspect of our society and the environment. Some of the impacts are increased severity of floods, droughts, and heat waves, increased wildfires, and sea level rise. Climate change impacts are pervasive, wide-ranging and affect the core systems of our society: transportation, ecosystems, agriculture, business, infrastructure, water, and energy, among others. Climate change already is affecting the ability of Federal agencies to fulfill their missions. As a result of these changes, U.S. government interests, missions and operations must adapt to climate change and build resilience. It is imperative that adaptation to climate change and building resilience both help to manage climate change risks to human well-being and ecosystems and take advantage of the opportunities created by climate change. Both domestically and internationally, the U.S. government must better understand how to build resilience to climate change risks and adapt to its effects in order to make wise investments and effective policies. The U.S. government also will need to help support local, regional and international adaptation and resilience efforts.

The Task Force has found that there already is substantial U.S. government and non-government activity towards adapting and building resilience to climate change risks. Current activities include landscape conservation cooperatives supported by the Department of the Interior, to a comprehensive risk assessment of Gulf Coast transportation infrastructure by the Department of Transportation, to the Environmental Protection Agency's efforts to support local decision-makers through Climate Ready Estuaries and the Climate Ready Water Utilities Working Group, and the Department of Energy's research and development to reduce water intensity of energy technologies. However, there still are significant gaps in the U.S. government's approach to climate change adaptation and building resilience. These include:

- Coherent research programs to identify and describe regional impacts associated with near-term, long-term, and abrupt global climate change
- Relevant climate change and impact information that is accessible and usable by decision-makers and practitioners
- A unified strategic vision and approach
- Understanding of the challenges at all levels of government
- Comprehensive and localized risk and vulnerability assessments
- Organized and coordinated efforts across local, State and Federal agencies

Progress Report of the Interagency Climate Change Adaptation Task Force

- Strong links between, and support and participation of, Tribal, regional, State, and local partners
- A strategy to link resources, both financial and intellectual, to critical needs
- A robust approach to evaluating and applying lessons learned

A national strategy for climate change adaptation and resilience would help address these gaps. The strategy should emphasize two major changes in the way the U.S. government operates. First, agency climate change adaptation and resilience requires a flexible, forward thinking approach. This represents a shift away from using past conditions as indicators of the future, and a requirement for on-going investigation, revision and adaptive management. Second, responses to climate change challenges and opportunities should be integrated into current plans, processes and approaches of the U.S. government. This integration will allow adaptation and building resilience to become part of existing activities, and to be considered within the context of the broader system of stresses, risks and opportunities.

The approach to developing a national strategy should be guided by a set of principles informed by the Task Force's work to date. The national strategy should emphasize planning and preparation, ensuring the engagement of stakeholders, including States, Tribes, local governments, the private sector and non-government institutions, and understanding and accommodating differing vulnerabilities across people and places. It should include a systemic approach to the problem, considering how a range of risks and opportunities interact, as well as how existing and potential stresses reduce or amplify these risks and opportunities. Environmental sustainability and coordination with greenhouse gas mitigation efforts also are critical to national adaptation efforts.

At a minimum, a national strategy should include the following six elements:

- 1. Science Inputs to Adaptation Decisions and Policy.** In making recommendations toward a national strategy, the Task Force may recommend approaches for coordinating, developing, distributing and integrating science, from physical to socioeconomics, into all aspects of adaptation. Managers and planners need to understand how to best access and take advantage of science as improvements are made to guidance, standards, and best practices. Integrating science into the decision-making process will allow us to confront uncertainty about future outcomes with improved information about risks and opportunities.

Adaptation capacity also can be enhanced through participatory processes, improved communication, and better access to improved science translated for users. Finally, institutional changes are needed to enable the use of science that informs adaptation, including the translation of this science into decision-support tools and policy. The Task Force may develop recommendations on advancing and integrating science for users and increasing coordination with research communities.

Progress Report of the Interagency Climate Change Adaptation Task Force

- 2. Communications and Capacity-building.** A key communications goal is to build awareness and engage relevant stakeholders in developing adaptation approaches and ensuring the success of adaptation efforts. Additional capacity also will be required at multiple levels, within and outside of local, State and Federal governments, which will be essential for sustained adaptation and resilience. The Task Force may develop recommendations on communicating climate change impacts, adaptation, and resilience and on building capacity within the U.S. government, including prioritizing opportunities for additional training and resources.
- 3. Coordination and Collaboration.** Adaptation to climate change and building resilience will require collaboration and coordination between U.S. government entities. It is also critical to engage local stakeholders, including States, Tribes, local governments, the private sector and non-government institutions. A formal approach, with clear processes and facilitation, is required to ensure that this coordination and collaboration occurs. The Task Force may develop recommendations for structuring the national adaptation strategy within the Federal government and for increasing and improving coordination and collaboration across the government and with partners. Where appropriate, the Task Force may recommend approaches to address existing policies or public sector programs that work at cross-purposes with efforts to build resilience or adapt to climate change, including those that subsidize behavior or investments that increase vulnerability to climate risks.
- 4. Prioritization:** Since climate change has multiple impacts and resources are limited, it will be critical to identify priority areas for a coordinated government response. The Task Force may consider and make recommendations on how to identify priorities; this discussion of how to identify priorities could include such criteria as the presence of co-benefits and resource needs for the areas. Combined with the structural elements of a national adaptation strategy, these priorities will require coordinated planning, and in some cases, collaborative actions. The Task Force has begun work on several areas that may require a coordinated government response, and is developing recommendations for water resource management and for international adaptation and resilience.

 - Recommendations for water resource management may include those addressing: coordinated planning and evaluation for water resources adaptation and resilience; water resources and climate change data; assessing vulnerability of water resources to climate change; water use efficiency; integrated water resources management; and education of water resource managers.
 - Recommendations for international adaptation may include those addressing: increasing the integration of adaptation into existing inter-agency international efforts; increasing coordination among U.S. government agencies on international adaptation and increasing collaboration with international partners to build knowledge, increasing

Progress Report of the Interagency Climate Change Adaptation Task Force

the harmonization of efforts, more effectively supporting multilateral organizations, and further developing the role of the private sector.

Additional areas will be added as the Task Force continues its work.

- 5. A Flexible Framework for Agencies.** U.S. government agencies and entities need a consistent but flexible framework to understand, analyze, and respond to climate change challenges and opportunities. Adapting to climate change and building resilience requires planning within and across agencies. There is no single planning approach appropriate for all agencies, but each should use a consistent framework to facilitate coordination across agencies and allow agencies to leverage common tools and methods. This flexible framework will help agencies identify and address climate vulnerabilities and opportunities and build resilience to climate change.

The framework includes a set of principles to guide agency adaptation and resilience activities, an approach to climate change adaptation and resilience agency planning, and a proposed set of government-wide priorities to support the effective implementation of the planning framework. Critical components of the planning approach are: building agency skills and capacity; developing an adaptation mandate with success measures; assessing the substantial risks, vulnerabilities, and opportunities posed by climate change; developing adaptation and resilience-building actions; and assessing the results and learning from the process to improve future adaptation and resilience.

Implementing the framework will require a focus on common tools and information. These tools could include common scenario-based analyses, integrated climate change database management, or new modeling tools that match downscaled climate information with other data collected by individual agencies such as demographics, land use, or energy production. The Task Force may implement agency pilots to further develop and test the framework, and will continue to develop recommendations on the common tools required to support implementation.

- 6. Evaluation.** Adaptation to climate change and building resilience must come with a commitment to dynamic engagement, iterative understanding of results, and rigorous evaluation. Though the evidence base for many stressors influenced by climate change is established, assumptions and models for implementation and evaluation have to change as scientific knowledge increases and the climate continues to change. Also, lessons learned and information collected in one effort may contain useful lessons for others.

Adaptation plans must allow for a “feedback” mechanism, whereby new information, lessons learned, and modified priorities can be incorporated into ongoing adaptation processes. Evaluation and lessons learned will help provide clear guidance for decision-making that enhances adaptation and resiliency. The Task Force may develop recommendations on how to evaluate the success of adaptation and resilience building efforts.

Progress Report of the Interagency Climate Change Adaptation Task Force

Next Steps

Over the next seven months, the Interagency Climate Change Adaptation Task Force may refine recommendations around structural issues such as improving and integrating science results in developing policy and a framework for Federal agency adaptation, as well as cross-cutting topics, including water resources management and international adaptation. The Task Force also may establish additional workgroups, in cooperation with USGCRP, including those to inform the development of a national strategy in the areas of communications and capacity-building, coordination and collaboration across government and with partners, evaluation and learning, and other priority issues. Through a series of regional outreach meetings and pilot activities, the Task Force will continue moving towards recommendations on the development of a national strategy on climate change adaptation.

This report is available and public comment is being accepted on our website at www.whitehouse.gov/ceq/initiatives/adaptation.

ⁱGlobal Climate Change Impacts in the United States, Thomas R. Karl, Jerry M. Melillo, and Thomas c. Peterson, (eds.). Cambridge University Press, 2009.

ⁱⁱUSDA, DOC, DOD, DOEd, DOE, HHS, DHS, HUD, DOI, DOS, DOT, Treasury, USAID, EPA, NASA, NIC, CEQ, OECC, OSTP, NSC, OMB, CEA, NEC.