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GOVERNMENT AFFAIRS CONSULTANTS

Memo

To: Marlowe & Company Clients
From: Toby Hicks, Legislative Intern
Re: Current Challenges Hindering Climate Change Adaptation
Date: November 12, 2009

Background

In the past 50 years in the U.S. average temperature has risen by more than two degrees Fahrenheit, precipitation has increased by 5%, extreme weather events have become more frequent, and sea levels have risen along most of the coast. According to a recent National Research Council report, individuals and institutions that will be affected by climate change are unprepared for what that means. To successfully adapt to these climate changes, decisions must be made that cut across traditional economic, agency, and government boundaries.

The Government Accountability Office (GAO) was asked to 1) study current federal, state, and local actions taken to adapt to climate change, 2) identify challenges that officials have encountered while trying to adapt, and 3) identify actions that Congress and federal agencies could take to respond to these challenges. Their report consists of two parts: first, a qualitative analysis of current adaptation steps taken in three areas within the United States and also in the United Kingdom; and second, a quantitative survey of local, State and Federal officials with the goal was of further identifying current challenges faced and possible courses of action.

Current Adaptation Efforts

The GAO found that most adaptation actions taken fell into one of seven categories including 1) information for decision making, 2) federal land and natural resources management, 3) infrastructure design and operation, 4) public health research, 5) national security preparation, 6) international assistance to developing countries, and 7) government-wide adaptation strategies.

In the four locales the GAO analyzed, they found that there were three common factors which led to the community taking adaptive actions in each case. First, there was high public awareness of the potential impact of climate change. Public awareness often emerged because of natural disasters like heat waves, storms or flooding. Second, community leaders in each location used legislation and

other top-down strategies to focus attention on climate change adaptation. Finally, each of the localities had access to site-specific information from universities and other non-government entities from which they could specifically plan and act.

The first locale GAO looked at was New York City. The adaptation efforts in New York arose from the increased public awareness of the city's vulnerability to natural disasters. The city experienced flooding in 2007, and their extensive coastline makes them very vulnerable to sea level changes. City leaders took formal steps like assigning adaptation oversight to The Office of Long Term Planning and Sustainability, holding a panel on climate change, and creating a Climate Change Adaptation Task Force which included both public and private entities. New York City's adaptation efforts were aided by access to site-specific information provided by the New York City Panel on Climate Change and the U.S. Global Change Research Program. Additionally, New York cooperates on adaptation issues locally and beyond jurisdictions with its State and County neighbors.

King County, Washington also went through the three steps that GAO identified. First, unusually severe winter storms led to increased public and official awareness of climate change. Second, officials developed a Climate Change Plan, instituted the evaluation of climate impact for county operations like transportations, waste and land planning, and designated officials who would identify and recommend adaptation initiatives. Third, site specific information was available to King County leadership through the University of Washington's Climate Impacts Group and Extension Office.

In Maryland, adaptation efforts were spurred by the public's realization of their particular vulnerability to coastal flooding and severe storms. Thirteen Chesapeake Bay islands have already disappeared due to a one foot increase in sea level over the last 100 years, and a two to three foot sea level increase now could cause thousands of acres of Maryland wetlands to disappear. Maryland officials formalized their response to climate change by establishing the Maryland Commission on Climate Change, passing the Living Shoreline Protection Act of 2008, and updating state maps to reassess critically threatened areas. Site-specific information was made available to counties using State funding and Maryland cooperated with local universities and federal agencies for relevant information and made it readily available online.

Outside the U.S., the U.K. took similar steps during the establishment of their climate change program. A combination of severe weather events and reports like *London's Warming* led to an increase in awareness. London's leadership enacted laws that gave the British Secretary of State for Environment, Food and Rural Affairs and other public authorities responsibility and oversight of some aspects of climate warming information reporting. Finally, as the third GAO-identified factor, site specific information for London was generated by the United Kingdom Climate Impacts Programme and The Met Office Hadley Centre.

Challenges Faced by Government Officials

Through their quantitative survey, GAO identified three types of challenges common to officials considering adaptation efforts. The first challenge is that competing priorities make it difficult to use limited funds on adaptation efforts. Respondents indicated that lack of funding (83.8%), higher priority non-adaptation activities (71.1%), lack of clear priorities for adaptation activities (70.2%), and lack of public awareness or knowledge of adaptation (61.4%) were the officials' largest difficulties related to competing priorities.

The second challenge is that a lack of site-specific information limited officials' adaptation efforts. Respondents indicated that they did not have the certainty to justify the costs of adaptation efforts

(79.3%), were overwhelmed by the size and complexity of future climate change impacts (76.7%), had trouble translating climate change information into actual impact at the local level (74.7%), and encountered a deficit of information at a local and relevant scale (74.3%). In order to help rectify this information deficit GAO suggested that global climate data be downscaled to a local level where there is oversight, that raw climate change data must be translated into actual impacts at the global level, that local impacts must be translated in costs and benefits, and that decision makers need baseline monitoring data to evaluate whether observed climate changes are within the normal range of variability, and to monitor adaptation actions.

The third and final challenge is that adaptation efforts are constrained by a lack of clear roles and responsibilities. Respondents indicated that adaptation is everyone's problem but no one's duty (69.7%) and that the authority and capability to adapt is diffused among many federal agencies (58%). Sometimes local adaptation efforts can even be hindered by national legislation like the Endangered Species Act, the Clean Water Act, and the Clean Air Act which were passed before there was official recognition of the effects of climate change.

Federal Actions that Would Aid Local Officials

The GAO identified three different types of Federal efforts which would aid local officials. The first type of effort is Federal training and education initiatives targeted to help adaptation efforts. The Federal training and education actions that were considered most useful by respondents were the development of regional workshops tailored to local officials' responsibilities (74.7%), creation of lists of "no regrets" actions or actions whose benefits always exceeded costs (73.5%), creation of official lists of policy options (71.3%), and development of a public education campaign to increase climate change awareness (70.1%).

The second type of effort is Federal assistance to provide and interpret site-specific climate change data. The actions which respondents considered most important were the creation of impact and vulnerability assessments would be useful to them (80.3%), the identification and sharing of best practices (80.3%), and the availability of processes and tools to access, interpret, and apply climate data (80.0%). Additionally, the utility of local site-specific climate change data shoots up to 87% when reviewing responses from only local and State officials, and not Federal officials.

The third type of effort is the clarification of roles and responsibilities by Congress and Federal agencies. The actions which respondents considered most important were development of a national adaptation fund for a consistent revenue stream to draw from (84.4%), development of a national adaptation strategy with defined priorities and responsibilities (71.3%), and a review of existing programs to identify those that hinder adaptation efforts (67.8%).

GAO Conclusions and Recommendations

The GAO concludes that preemptive adaptive steps taken now could head off much more expensive and complex solutions in the future. GAO notes that many current federal programs were designed decades ago based on now outdated conditions and technologies. Even the assumed continuation of past climate changes, for example, is now known not to be the case. GAO's sole recommendation is that a clear strategy and plan of action be developed within the Executive Office of the President that 1) defines federal priorities related to adaptation, 2) clarifies the roles between federal, state and local entities, 3) identifies mechanisms through which to gather more information for decisions, 4) addresses how resources will be made available for said plan, and 5) further builds and increases adaptation efforts.

Comments from the Council on Environmental Quality

The Council on Environmental Quality (CEQ) generally agreed with the report but voiced three areas of concern. The CEQ felt that federal government inexperience regarding climate adaptation efforts may have resulted in misleading results. GAO dismissed this by pointing out that the individuals in the sample who took the survey were specifically identified by their organizations as informed about climate change. Second, the CEQ felt that the report confuses cost-benefit analysis with scientific uncertainty. GAO dismissed this by pointing out that uncertainty – whether scientific or not – is generally incorporated into cost-benefit analysis. Finally the CEQ was concerned with the fact that the report does not address implementation challenges. GAO responded that their focus was not on implementation because that would "put the cart before the horse"; a plan is necessary before implementation.

Citations

Government Accountability Office. *GAO-10-113: Climate change adaptation: Strategic Federal planning could help government officials make more informed decisions.* (Washington DC, U.S.A., October 2009).

London Climate Change Partnership. *London's Warming: The Impacts of Climate Change on London* (London, United Kingdom, November 2002). Available at http://www.london.gov.uk/lccp/publications/impacts.jsp.

Common acronyms used

GAO	[The] Government Accountability Office
CEQ	[The] Council on Environmental Quality

For further information on this issue, please contact your Marlowe & Company team leader or email legislation@marloweco.com