

TABLE 1. FY 2007-2009 CLIMATE CHANGE SCIENCE PROGRAM BUDGET BY GOAL AND FOCUS AREA

Focus Area	Description (from <i>CCSP Strategic Plan</i>) ¹	Budgets (\$M) ²			Agencies
		FY 2007	FY 2008 Estimate	FY 2009 Request	
Goal 1 Improve knowledge of the Earth's past and present climate and environment, including its natural variability, and improve understanding of the causes of observed variability and changes					
Focus 1.1	Better understand natural long-term cycles in climate [e.g., Pacific Decadal Variability (PDV), North Atlantic Oscillation (NAO)]	39.6	43.6	47.3	DOC, DOE, DOI, NASA, NSF
Focus 1.2	Improve and harness the capability to forecast El Niño-La Niña and other seasonal-to-interannual cycles of variability	37.0	35.4	37.1	DOC, DOE, DOI, NASA, NSF
Focus 1.3	Sharpen understanding of climate extremes through improved observations, analysis, and modeling, and determine whether any changes in their frequency or intensity lie outside the range of natural variability	35.8	37.0	42.0	DOC, DOE, DOI, NASA, NSF
Focus 1.4	Increase confidence in the understanding of how and why climate has changed	38.4	39.2	43.8	DOE, DOI, NASA, NSF, SI
Focus 1.5	Expand observations and data/information system capabilities	173.7	191.1	240.4	DOC, DOE, DOI, NASA, NSF, SI
GOAL 1 TOTAL		324.5	346.3	410.6	
Goal 2 Improve quantification of the forces bringing about changes in the Earth's climate and related systems					
Focus 2.1	Reduce uncertainties about the sources and sinks of greenhouse gases, emissions of aerosols and their precursors, and their climate effects	94.1	96.2	103.9	DOC, DOE, DOI, DOT, NASA, NSF
Focus 2.2	Monitor the recovery of the ozone layer and improve the understanding of the interactions of climate change, ozone depletion, tropospheric pollution, and other atmospheric issues	27.3	28.1	30.8	USDA, DOE, NASA
Focus 2.3	Increase knowledge of the interactions among emissions, long-range atmospheric transport, and transformations of atmospheric pollutants, and their response to air quality management strategies	39.1	40.4	43.0	NASA, NSF

¹ See Chapter 2 of the *Strategic Plan for the U.S. Climate Change Science Program* for a detailed discussion.

² Any minor discrepancies within this table and between this table and others are due to rounding.

Appendix B

TABLE 1 (CONTINUED)

Focus Area	Description (from <i>CCSP Strategic Plan</i>) ¹	Budgets (\$M) ²			Agencies
		FY 2007	FY 2008 Estimate	FY 2009 Request	
Goal 2 (continued)					
Focus 2.4	Develop information on the carbon cycle, land cover and use, and biological/ecological processes by helping to quantify net emissions of carbon dioxide, methane, and other greenhouse gases, thereby improving the evaluation of carbon sequestration strategies and alternative response options	127.6	132.0	134.2	USDA, DOC, DOE, DOI, NASA, NSF, SI
Focus 2.5	Improve capabilities to develop and apply emissions and related scenarios for conducting “if..., then...” analyses in cooperation with CCTP	3.0	3.0	3.0	DOE
GOAL 2 TOTAL		291.0	299.6	314.8	
Goal 3 Reduce uncertainty in projections of how the Earth’s climate and related systems may change in the future					
Focus 3.1	Improve characterization of the circulation of the atmosphere and oceans and their interactions through fluxes of energy and materials	37.6	38.5	44.4	DOC, DOE, DOI, NASA, NSF
Focus 3.2	Improve understanding of key “feedbacks” including changes in the amount and distribution of water vapor, extent of ice and the Earth’s reflectivity, cloud properties, and biological and ecological systems	66.0	66.8	69.4	DOE, DOI, NASA, NSF
Focus 3.3	Increase understanding of the conditions that could give rise to events such as rapid changes in ocean circulation due to changes in temperature and salinity gradients	7.5	11.8	12.6	DOE, DOI, NASA, NSF
Focus 3.4	Accelerate incorporation of improved knowledge of processes and feedbacks into climate models to reduce uncertainty in projections of climate sensitivity, changes in climate, and related conditions such as sea level	84.1	89.8	103.0	DOC, DOE, NASA, NSF
Focus 3.5	Improve national capacity to develop and apply climate models	41.8	43.3	50.6	DOC, DOE, NASA, NSF
GOAL 3 TOTAL		236.9	250.1	279.8	

TABLE 1 (CONTINUED)

Focus Area	Description (from <i>CCSP Strategic Plan</i>) ¹	Budgets (\$M) ²			Agencies
		FY 2007	FY 2008 Estimate	FY 2009 Request	
Goal 4 Understand the sensitivity and adaptability of different natural and managed ecosystems and human systems to climate and related global changes					
Focus 4.1	Improve knowledge of the sensitivity of ecosystems and economic sectors to global climate variability and change	62.5	60.8	62.8	USDA, DOE, DOI, DOT, EPA, NASA, NSF, SI
Focus 4.2	Identify and provide scientific inputs for evaluating adaptation options, in cooperation with mission-oriented agencies and other resource managers	56.5	57.9	57.5	HHS, DOI, DOT, EPA, NSF
Focus 4.3	Improve understanding of how changes in ecosystems (including managed ecosystems such as croplands) and human infrastructure interact over long time periods	40.1	43.1	39.7	USDA, DOC, DOI, DOT, NASA, NSF, SI
GOAL 4 TOTAL		159.1	161.8	160.0	
Goal 5 Explore the uses and identify the limits of evolving knowledge to manage risks and opportunities related to climate variability and change					
Focus 5.1	Support informed public discussion of issues of particular importance to U.S. decisions by conducting research and providing scientific synthesis and assessment reports	57.9	52.2	52.8	USDA, DOI, EPA, NASA, NSF, SI
Focus 5.2	Support adaptive management and planning for resources and physical infrastructure sensitive to climate variability and change; build new partnerships with public and private sector entities that can benefit both research and decisionmaking	62.0	66.1	72.0	USDA, DOC, DOI, USAID, EPA, NASA, NSF
Focus 5.3	Support policymaking by conducting comparative analyses and evaluations of the socioeconomic and environmental consequences of response options	18.4	20.8	19.0	USDA, DOE, DOI, EPA, NASA, NSF, SI
GOAL 5 TOTAL		138.3	139.1	143.8	
CCSP PROGRAM TOTAL		1,149.8	1,197.0	1,309.0	