

CLIMATE CHANGE SCIENCE PROGRAM FY 2006 BUDGET TABLES

The Climate Change Science Program (CCSP) integrates federally supported research on global change and climate change, as sponsored by 13 U.S. Government departments and agencies:

- Department of Agriculture (USDA)
- Department of Commerce / National Oceanic and Atmospheric Administration (DOC/NOAA)
- Department of Defense (DOD)
- Department of Energy (DOE)
- Department of Health and Human Services (HHS)
- Department of the Interior / U.S. Geological Survey (DOI/USGS)
- Department of State (DOS)
- Department of Transportation (DOT)
- Agency for International Development (USAID)
- Environmental Protection Agency (EPA)
- National Aeronautics and Space Administration (NASA)
- National Science Foundation (NSF)
- Smithsonian Institution (SI).



The CCSP incorporates and integrates the U.S. Global Change Research Program (USGCRP) with the Administration's U.S. Climate Change Research Initiative (CCRI). CCSP budget requests are coordinated through interagency research working groups and other mechanisms, but ultimate budget accountability resides with the participating departments and agencies. As a result of its interagency composition, activities of CCSP participating agencies are funded by Congress through nine of the 13 annual Appropriations bills.

The following tables summarize the CCSP budget:

- Tables 1 and 2 show the CCSP FY 2004-2006 budget aligned by CCSP goal.
- Table 3 shows the CCSP FY 2004-2006 budget by agency, with USGCRP and CCRI budgets listed separately and also combined in a single CCSP total.
- Table 4 shows the CCSP FY 2004-2006 budget by USGCRP research element.
- Table 5 shows the FY 2004-2006 CCRI budget.
- Subsequent tables show, for each CCSP participating agency, the FY 2004-2006 budget for both USGCRP and CCRI activities.

FY 2006 Budget Tables

**TABLE 1. FY 2004–2006 CLIMATE CHANGE SCIENCE PROGRAM
BUDGET BY GOAL AND FOCUS AREA**

Focus Area	Description ¹	Budgets (\$M) ²			Agencies
		FY 2004	FY 2005 Estimate	FY 2006 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)]	34.4	33.7	34.7	DOE, NASA, NOAA, NSF, USGS
Focus 1.2	Improve and harness the capability to forecast El Niño-La Niña and other seasonal-to-interannual cycles of variability	19.6	18.9	18.6	DOE, NASA, NSF, USGS
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	23.1	22.1	20.5	DOE, NASA, NOAA, NSF, USGS
Focus 1.4	Increase confidence in the understanding of how and why climate has changed	34.0	32.1	31.5	DOE, NASA, NSF, USGS, SI
Focus 1.5	Expand observations and data/information system capabilities	65.7	71.4	89.2	DOE, NASA, NOAA, NSF, USGS, SI, EPA
GOAL 1 TOTAL		176.8	178.2	194.5	
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	78.0	77.6	88.2	DOE, NASA, NOAA, NSF, DOT
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	27.0	25.2	24.9	DOE, NASA, NSF, USDA, SI
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	22.8	21.6	21.0	NASA, NSF, USDA

TABLE 1 (CONTINUED)

Focus Area	Description ¹	Budgets (\$M) ²			Agencies
		FY 2004	FY 2005 Estimate	FY 2006 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	132.1	129.4	139.1	DOE, NASA, NOAA, NSF, USDA, USGS, SI
Focus 2.5	Improve capabilities to develop and apply emissions and related scenarios for conducting “if..., then...” analyses in cooperation with CCTP	4.7	4.8	4.8	DOE
GOAL 2 TOTAL		264.6	258.6	278.0	
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	39.1	36.8	34.5	DOE, NASA, NOAA, 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	82.7	82.1	82.8	DOE, NASA, NSF, USGS
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	7.4	8.0	7.8	NASA, NSF, USGS
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	69.2	66.6	66.6	DOE, NASA, NOAA, NSF
Focus 3.5	Improve national capacity to develop and apply climate models	47.1	44.2	65.8	DOE, NASA, NOAA, NSF
GOAL 3 TOTAL		245.5	237.7	257.5	

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

² Minor differences between Tables 1 and 3 totals are due to rounding. Refer to Table 3 Notes for more detail.

FY 2006 Budget Tables

TABLE 1 (CONTINUED)

Focus Area	Description ¹	Budgets (\$M) ²			Agencies
		FY 2004	FY 2005 Estimate	FY 2006 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	65.0	68.9	74.1	DOE, NASA, NSF, USDA, USGS, SI, EPA
Focus 4.2	Identify and provide scientific inputs for evaluating adaptation options, in cooperation with mission-oriented agencies and other resource managers	68.4	69.7	71.8	NSF, DOT, NIH, EPA, SI
Focus 4.3	Improve understanding of how changes in ecosystems (including managed ecosystems such as croplands) and human infrastructure interact over long time periods	26.3	25.6	26.9	DOE, NASA, NSF, USDA, SI
GOAL 4 TOTAL		159.7	164.2	172.8	
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	57.4	52.5	55.5	DOE, NASA, NSF, USDA, USGS, SI, DOS, EPA
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	56.5	50.4	48.0	NASA, NOAA, NSF, USDA, USGS, USAID, EPA
Focus 5.3	Support policymaking by conducting comparative analyses and evaluations of the socioeconomic and environmental consequences of response options	3.6	3.6	3.5	NASA, USDA, SI
GOAL 5 TOTAL		117.5	106.5	107.0	
CCSP PROGRAM TOTAL		964.1	945.2	1,009.8	

O U R C H A N G I N G P L A N E T

**TABLE 2. FY 2004-2006 CLIMATE CHANGE SCIENCE PROGRAM
BUDGET BY GOAL AND PARTICIPATING AGENCY/DEPARTMENT**

[DISCRETIONARY BUDGET AUTHORITY IN \$M]

	DOE	NASA	NOAA	NSF	USDA	EPA	USGS	DOT	NIH	USAID	SI	DOS	Res Subtotal	Obs Subtotal	TOTAL
FY 2006 Request															
Goal 1	14.8	51.9	68.4	42.0	0.0	0.8	16.2	0.0	0.0	0.0	0.4	0.0	194.5	262.8	457.3
Goal 2	40.3	100.2	48.1	53.0	31.9	0.0	3.0	0.6	0.0	0.0	0.9	0.0	278.0	282.4	560.4
Goal 3	61.2	82.0	55.9	57.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	257.5	267.7	525.2
Goal 4	14.8	12.1	0.0	28.3	26.3	13.0	7.0	2.4	65.5	0.0	3.4	0.0	172.8	68.0	240.8
Goal 5	1.0	34.7	8.5	16.7	30.3	6.7	2.1	0.0	0.0	6.0	1.0	0.0	107.0	0.0	107.0
TOTAL	132.1	280.9	180.9	197.0	88.5	20.5	29.7	3.0	65.5	6.0	5.7	0.0	1,009.8	880.9	1,890.7
FY 2005 Estimate															
Goal 1	14.8	54.3	50.6	42.0	0.0	0.0	16.1	0.0	0.0	0.0	0.4	0.0	178.2	285.8	464.0
Goal 2	39.3	104.2	29.0	54.0	27.7	0.0	2.9	0.6	0.0	0.0	0.9	0.0	258.6	324.9	583.5
Goal 3	58.9	85.6	34.7	57.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	237.7	289.8	527.5
Goal 4	14.6	12.6	0.0	28.3	15.5	15.6	7.2	2.4	64.6	0.0	3.4	0.0	164.2	71.0	235.2
Goal 5	1.0	35.4	9.4	16.7	29.5	4.4	2.1	0.0	0.0	6.0	1.0	1.0	106.5	0.0	106.5
TOTAL	128.6	292.1	123.7	198.0	72.7	20.0	29.8	3.0	64.6	6.0	5.7	1.0	945.2	971.5	1,916.7
FY 2004															
Goal 1	13.1	58.5	43.2	44.0	0.0	1.4	16.2	0.0	0.0	0.0	0.4	0.0	176.8	300.6	477.4
Goal 2	41.0	110.9	26.0	55.3	27.3	0.0	2.9	0.3	0.0	0.0	0.9	0.0	264.6	327.7	592.3
Goal 3	58.7	90.8	36.3	59.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	245.5	306.1	551.6
Goal 4	15.6	13.6	0.0	29.7	14.4	11.6	5.7	3.7	62.0	0.0	3.4	0.0	159.7	76.0	235.7
Goal 5	0.9	36.5	10.8	26.7	28.5	4.0	2.1	0.0	0.0	6.0	1.0	1.0	117.5	0.0	117.5
TOTAL	129.3	310.3	116.3	214.7	70.2	17.0	27.6	4.0	62.0	6.0	5.7	1.0	964.1	1,010.4	1,974.5

**TABLE 3. CLIMATE CHANGE SCIENCE PROGRAM:
FY 2004-2006 BUDGET BY AGENCY**

[DISCRETIONARY BUDGET AUTHORITY IN \$M]

Agency	FY 2004		FY 2005 Estimate		FY 2006 Request	
	USGCRP	CCRI	USGCRP	CCRI	USGCRP	CCRI
USDA	63.8	6.4	64.7	8.0	76.7	11.8
DOC / NOAA	82.6	33.7	74.7	49.0	123.3	57.6
DOE	102.5	26.8	103.6	25.0	105.2	26.9
HHS / NIH	62.0	-	64.6	-	65.5	-
DOI / USGS	27.6	-	29.8	-	29.7	-
DOS	-	1.0	-	1.0	-	-
DOT	-	4.0	-	3.0	-	3.0
USAID	-	6.0	-	6.0	-	6.0
EPA	17.0	-	20.0	-	20.5	-
NASA	269.3	41.0	249.5	42.6	238.3	42.6
NSF	184.7	30.0	173.0	25.0	172.0	25.0
SI	5.7	-	5.7	-	5.7	-
Scientific Research Total	815.2	148.9	785.6	159.6	836.9	172.9
NASA Space-Based Observations	986.7	23.7	914.4	57.1	873.2	7.7
CCSP Total	1,801.9	172.6	1,700.0	216.7	1,710.1	180.6
President's Request						1,890.7

Notes:

- 1) The National Aeronautics and Space Administration (NASA) FY 2005 budget is based on the initial operating plan submitted in December 2004, and is subject to change. The FY 2006 entries are based on the President's budget released in February 2005.
- 2) Because Department of Defense (DOD) research activities are conducted for defense-related missions, they are not included in the CCSP budget cross-cut. Related DOD research does contribute to CCSP goals, however.
- 3) Department of State (DOS) contributions to the Intergovernmental Panel on Climate Change (IPCC) are not normally reflected in the CCSP cross-cut budget. However, DOS-supported IPCC activities contribute to CCSP goals.
- 4) Operational space-based, surface, and *in situ* observing systems and programs are not included in the CCSP budget cross-cut, but contribute to achieving CCSP goals.
- 5) Minor differences between Tables 3 and 4 totals are due to rounding.

O U R C H A N G I N G P L A N E T

**TABLE 4. CLIMATE CHANGE SCIENCE PROGRAM:
FY 2004-2006 SCIENTIFIC RESEARCH BUDGET BY USGCRP RESEARCH ELEMENT**
[DISCRETIONARY BUDGET AUTHORITY IN \$M]

Agency	Atmospheric Composition	Climate Variability	Carbon Cycle	Water Cycle	Ecosystems	Land Use	Human Contributions	TOTAL
FY 2006 USGCRP Research Elements								
USDA	24.2	-	12.2	17.2	18.2	5.0	-	76.8
DOC / NOAA	24.3	76.7	7.3	8.3	-	-	6.7	123.3
DOE	12.6	55.1	13.7	-	18.7	-	5.1	105.2
HHS / NIH	-	-	-	-	-	-	65.5	65.5
DOI / USGS	-	10.5	4.4	4.9	6.8	3.1	-	29.7
EPA	7.1	-	-	-	8.1	-	5.3	20.5
NASA	50.9	60.0	40.7	44.6	27.1	15.0	-	238.3
NSF	16.1	80.5	23.2	12.3	27.7	-	12.2	172.0
SI	-	1.3	0.3	-	3.3	0.8	-	5.7
TOTAL	135.2	284.1	101.8	87.3	109.9	23.9	94.8	837.0
FY 2005 USGCRP Research Elements								
USDA	24.9	-	10.5	8.1	17.8	3.5	-	64.8
DOC / NOAA	6.9	42.9	8.1	9.9	-	-	6.9	74.7
DOE	12.8	55.1	11.8	-	18.7	-	5.2	103.6
HHS / NIH	-	-	-	-	-	-	64.6	64.6
DOI / USGS	-	10.7	4.0	4.8	7.2	3.1	-	29.8
EPA	7.3	-	-	-	8.1	-	4.6	20.0
NASA	53.3	62.8	42.6	46.7	28.4	15.7	-	249.5
NSF	16.1	81.5	23.2	12.3	27.7	-	12.2	173.0
SI	-	1.3	0.3	-	3.3	0.8	-	5.7
TOTAL	121.3	254.3	100.5	81.8	111.2	23.1	93.5	785.7
FY 2004 USGCRP Research Elements								
USDA	24.4	-	11.7	7.2	17.6	2.9	-	63.8
DOC / NOAA	9.3	44.1	10.6	10.2	-	-	8.4	82.6
DOE	14.4	55.2	11.9	-	15.8	-	5.2	102.5
HHS / NIH	-	-	-	-	-	-	62.0	62.0
DOI / USGS	-	10.4	4.0	4.6	5.5	3.1	-	27.6
USAID	-	-	-	-	-	-	-	0.0
EPA	6.4	-	-	-	6.3	-	4.3	17.0
NASA	57.5	67.8	46.0	50.4	30.6	17.0	-	269.3
NSF	16.7	85.1	24.2	12.3	29.2	0.0	17.2	184.7
SI	-	1.3	0.3	-	3.3	0.8	-	5.7
TOTAL	128.7	263.9	108.7	84.7	108.3	23.8	97.1	815.2

FY 2006 Budget Tables

TABLE 5. FY 2004-2006 BUDGET FOR THE CLIMATE CHANGE RESEARCH INITIATIVE (CCRI)

Agency	Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USDA	Agricultural Research Service Carbon Cycle Research	0.9	1.1	1.4
	Forest Service Carbon Cycle Research	3.3	3.3	3.6
	Carbon Management Research	1.8	2.7	3.0
	Regional and Sectoral Impacts of Climate Change	0.4	0.9	3.1
	Strengthening Basic Climate Change Technology Research	0.0	0.0	0.7
U.S. Department of Agriculture CCRI Total		6.4	8.0	11.8
DOC /	Aerosols Climate Interactions	2.0	5.2	7.3
NOAA	Carbon Cycle and Monitoring	4.1	8.9	9.1
	Climate Modeling Center	7.9	8.4	8.9
	Global Climate Atmospheric Observing System	3.6	3.9	3.0
	Climate Variability and Predictability (CLIVAR)	6.7	6.6	6.7
	Global Ocean Observing System	8.4	15.0	18.8
	Explaining Climate Conditions and Enhancing Climate Forecasts	0.0	0.0	2.0
	Regional Integrated Sciences and Assessments	1.0	1.0	1.8
Department of Commerce CCRI Total		33.7	49.0	57.6
DOE	Atmospheric Radiation Measurement Program	4.1	4.1	5.6
	CCRI Climate Modeling	16.3	15.3	15.4
	CCRI Carbon Cycle	3.5	2.7	2.9
	CCRI Integrated Assessment	2.9	2.9	3.0
Department of Energy CCRI Total		26.8	25.0	26.9
DOS	Intergovernmental Panel on Climate Change	1.0	1.0	0.0
Department of State CCRI Total		1.0	1.0	0.0
DOT	Aviation Data and Modeling	0.3	0.6	0.6
	Center for Climate Change and Environmental Forecasting	3.7	2.4	2.4
Department of Transportation CCRI Total		4.0	3.0	3.0

O U R C H A N G I N G P L A N E T

TABLE 5 (CONTINUED)

Agency	Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USAID	Famine Early Warning System Network (FEWS NET)	6.0	6.0	6.0
U.S. Agency for International Development CCRI Total		6.0	6.0	6.0
NASA	Terrestrial and Marine Ecosystems	3.6	3.6	3.6
Science ¹	Land-Cover/Land-Use Change	3.6	3.6	3.6
	Carbon Cycle	3.6	3.6	3.6
	Water Cycle	3.6	3.6	3.6
	Climate Variability	3.6	3.6	3.6
	Atmospheric Composition	3.6	3.6	3.6
	Scientific Computing and Computational Technology	4.8	4.0	4.0
	Atmospheric Composition (non-CO ₂ forcing)	8.5	9.7	9.7
	Climate Variability (polar feedbacks)	6.1	7.3	7.3
NASA	Climate Variability (net primary productivity data set)	3.0	3.0	4.0
Space	Carbon Cycle	0.0	0.0	0.0
	Atmospheric Composition (APS)	12.2	54.1	3.7
	Data System Development	8.5	0.0	0.0
National Aeronautics and Space Administration CCRI Total		64.7	99.7	50.3
NSF	Black Carbon Measurement	1.0	0.0	0.0
	Carbon Fluxes and Cycle	7.0	10.0	10.0
	Human Dimensions of Climate Change	10.0	5.0	5.0
	Modeling	10.0	10.0	10.0
	Sensor Development	2.0	0.0	0.0
National Science Foundation CCRI Total		30.0	25.0	25.0
Total Climate Change Research Initiative		172.6	216.7	
President's Request				180.6

¹NASA's FY 2005 budget is based on the initial operating plan submitted in December 2004, and is subject to change.

FY 2006 Budget Tables

U.S. DEPARTMENT OF AGRICULTURE

USDA	Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP				
	Global Carbon Cycle	11.7	10.4	12.1
	Agricultural Research Service	1.6	2.1	1.8
	Cooperative State Research, Education, and Extension Service	2.8	1.0	3.0
	Economic Research Service	0.1	0.1	0.1
	Forest Service	7.2	7.2	7.2
	Water Cycle	7.2	8.1	17.2
	Agricultural Research Service	4.0	4.1	3.8
	Cooperative State Research, Education, and Extension Service	1.8	2.6	12.0
	Forest Service	1.4	1.4	1.4
	Land-Use / Land-Cover Change	2.9	3.5	5.0
	Cooperative State Research, Education, and Extension Service	2.9	3.5	5.0
	Understanding Atmospheric Composition and Chemistry	20.7	21.2	20.0
	Agricultural Research Service	18.0	18.2	17.0
	Cooperative State Research, Education, and Extension Service	2.7	3.0	3.0
	Understanding Ecosystems Changes	17.6	17.8	18.2
	Agricultural Research Service	11.6	11.8	11.6
	Cooperative State Research, Education, and Extension Service	2.5	2.5	3.0
	Forest Service	3.5	3.5	3.6
	Support the UV-B Monitoring Network	2.0	2.0	2.5
	Cooperative State Research, Education, and Extension Service	2.0	2.0	2.5
	Other National Research Initiative	1.7	1.7	1.7
	Cooperative State Research, Education, and Extension Service	1.7	1.7	1.7
USGCRP TOTAL		63.8	64.7	76.7
CCRI				
	Carbon Cycle Research (ARS)	0.9	1.1	1.4
	Carbon Cycle Research (FS)	3.3	3.3	3.6
	Carbon Inventory and Analysis (FS)	0.6	1.1	1.1
	Carbon Management Research (FS)	1.2	1.6	1.9
	Regional and Sectoral Impacts of Climate Change (ARS)	0.4	0.9	3.1
	Strengthening Basic Climate Change Technology Research (ARS)	0.0	0.0	0.7
CCRI TOTAL		6.4	8.0	11.8
Department of Agriculture Total		70.2	72.7	
President's Request				88.5

ARS Agricultural Research Service
 FS Forest Service

O U R C H A N G I N G P L A N E T



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Department of Agriculture CCSP activities are funded under Title I—Agricultural Programs, within the ARS, CSREES Research and Education Activities, and ERS accounts; and under Title II—Conservation Programs, within the NRCS Conservation Operations account. Also in the Appropriations Committee reports, U.S. Department of Agriculture CCSP activities are funded in the USDA FS section under Title II—Related Agencies, within the FS Forest Research account.

DEPARTMENT OF COMMERCE / NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

DOC	Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP				
NOAA	Atmospheric Composition and Climate Program (ACCP)	7.1	6.9	5.7
NOAA	Climate and Societal Interactions (CSI)	7.0	6.9	5.8
NOAA	Climate Change Data, Detection, and Assessments	7.0	6.3	5.6
NOAA	Climate Dynamics and Experimental Prediction (CDEP)	18.5	17.9	14.9
NOAA	Climate Variability and Predictability (CLIVAR)	7.0	7.9	6.6
NOAA	Global Carbon Cycle (GCC)	4.6	5.2	4.3
NOAA	PACS/GAPP	10.2	9.9	8.3
NOAA	Climate Observations and Services (COSP)	21.2	13.7	17.1
NOAA	NOAA Laboratories	0.0	0.0	55.0
USGCRP TOTAL		82.6	74.7	123.3
CCRI				
NOAA	Aerosols Climate Interactions	2.0	5.2	7.3
NOAA	Carbon Cycle and Monitoring	4.1	8.9	9.1
NOAA	Climate Modeling Center	7.9	8.4	8.9
NOAA	Global Climate Atmospheric Observing System	3.6	3.9	3.0
NOAA	Climate Variability and Predictability (CLIVAR)	6.7	6.6	6.7
NOAA	Global Ocean Observing System	8.4	15.0	18.8
NOAA	Explaining Climate Conditions and Enhancing Climate Forecasts	0.0	0.0	2.0
NOAA	Regional Integrated Sciences and Assessments	1.0	1.0	1.8
CCRI TOTAL		33.7	49.0	57.6
Department of Commerce Total President's Request		116.3	123.7	180.9

Note: Starting in FY 2006, funding to NOAA's laboratories is included as part of the NOAA activities. This is a result of the evolution of NOAA's role in CCSP.



Mapping of Budget Request to Appropriations Legislation. In Appropriations Committee reports, funding for NOAA CCSP activities is specified in the Climate and Global Change and Climate Observations and Services Programs of the Oceanic and Atmospheric Research budget within NOAA's Operations, Research, and Facilities account, and Procurement, Acquisition, and Construction account.

FY 2006 Budget Tables

DEPARTMENT OF ENERGY

DOE	Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP				
BER	Climate and Hydrology	55.2	55.1	55.1
BER	Atmospheric Chemistry and Carbon Cycle	26.3	24.6	26.3
BER	Ecosystem Processes	15.8	18.7	18.7
BER	Human Interactions	5.2	5.2	5.1
USGCRP TOTAL		102.5	103.6	105.2
CCRI				
BER	Atmospheric Radiation Measurement Program	4.1	4.1	5.6
BER	CCRI Climate Modeling	16.3	15.3	15.4
BER	CCRI Carbon Cycle	3.5	2.7	2.9
BER	CCRI Integrated Assessment	2.9	2.9	3.0
CCRI TOTAL		26.8	25.0	26.9
Department of Energy Total		129.3	128.6	
President's Request				132.1

BER Biological and Environmental Research



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Department of Energy CCSP activities are funded under Title III—Department of Energy, within the Energy Supply, Research, and Development Activities account. Also in these Appropriations Committee reports, funding for Department of Energy CCSP activities is included as part of the appropriation for Biological and Environmental Research.

DEPARTMENT OF HEALTH AND HUMAN SERVICES /
NATIONAL INSTITUTES OF HEALTH

HHS	Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP				
NCI	Health Effects of UV Radiation	36.6	38.6	39.3
NEI	Health Effects of UV Radiation	10.0	10.3	10.4
NIEHS	Health Effects of UV Radiation	14.6	14.9	15.0
NIAMS	Health Effects of UV Radiation	0.8	0.8	0.8
USGCRP TOTAL		62.0	64.6	65.5
CCRI				
	None Reported	0.0	0.0	0.0
CCRI TOTAL		0.0	0.0	0.0
Department of Health and Human Services Total		62.0	64.6	
President's Request				65.5

NCI National Cancer Institute
 NIAMS National Institute of Arthritis and Musculoskeletal and Skin Diseases
 NIEHS National Institute of Environmental Health Sciences
 NEI National Eye Institute



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Department of Health and Human Services CCSP activities are funded under the National Institutes of Health section of Title II—Department of Health and Human Services.

FY 2006 Budget Tables

DEPARTMENT OF THE INTERIOR / U.S. GEOLOGICAL SURVEY

DOI	Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP				
USGS	Global Change Research	27.6	29.8	29.7
USGCRP TOTAL		27.6	29.8	29.7
CCRI				
	None Reported	0.0	0.0	0.0
CCRI TOTAL		0.0	0.0	0.0
Department of the Interior Total President's Request		27.6	29.8	29.7



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Department of the Interior CCSP activities are funded under Title I—Department of the Interior. Funding for U.S. Geological Survey CCSP programs is included within the USGS Survey, Investigations, and Research account.

DEPARTMENT OF STATE

Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP			
None Reported	0.0	0.0	0.0
USGCRP TOTAL		0.0	0.0
CCRI			
Intergovernmental Panel on Climate Change	1.0	1.0	0.0
CCRI TOTAL		1.0	0.0
Department of State Total President's Request		1.0	1.0
			0.0

Note: Department of State (DOS) contributions to the Intergovernmental Panel on Climate Change (IPCC) are not normally reflected in the CCSP cross-cut budget. However, DOS-supported IPCC activities contribute to CCSP goals.



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Department of State CCSP activities are funded under Title IV—International Organizations and Programs account.

O U R C H A N G I N G P L A N E T

DEPARTMENT OF TRANSPORTATION

Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP			
None Reported	0.0	0.0	0.0
USGCRP TOTAL	0.0	0.0	0.0
CCRI			
Aviation Data and Modeling	0.3	0.6	0.6
Energy Efficiency and Climate Change Implications for Transportation	3.7	2.4	2.4
CCRI TOTAL	4.0	3.0	3.0
Department of Transportation Total President's Request	4.0	3.0	3.0



Mapping of Budget Request to Appropriations Legislation. Since 2000, the Department's climate change research has been funded by contributions from eight of DOT's operating administrations and the Office of the Secretary.

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP			
None Reported	0.0	0.0	0.0
USGCRP TOTAL	0.0	0.0	0.0
CCRI			
Famine Early Warning System Network (FEWS NET)	6.0	6.0	6.0
CCRI TOTAL	6.0	6.0	6.0
U.S. Agency for International Development Total President's Request	6.0	6.0	6.0



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, U.S. Agency for International Development CCSP activities are funded under Title II–Bilateral Economic Assistance: United States Agency for International Development.

FY 2006 Budget Tables

ENVIRONMENTAL PROTECTION AGENCY

Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP			
Air Quality Research and Assessment	5.0	7.3	7.1
Ecosystem Research and Assessment	5.8	7.3	7.4
Human Health Research and Assessment	0.3	0.2	0.3
Water Quality Research and Assessment	0.5	0.8	0.7
UV Monitoring Network	1.4	0.0	0.0
Research and Assessments of the Integrated Effects of Global Change	4.0	4.4	5.0
USGCRP TOTAL	17.0	20.0	20.5
CCRI			
None Reported	0.0	0.0	0.0
CCRI TOTAL	0.0	0.0	0.0
Environmental Protection Agency Total	17.0	20.0	
President's Request			20.5



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Environmental Protection Agency CCSP activities are funded under the EPA section of Title III—Independent Agencies, within the Science and Technology account. Appropriations Committee report language may specify more directly the funding for global change research.

O U R C H A N G I N G P L A N E T

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP			
Carbon Cycle	46.0	42.6	40.7
Ecosystems	30.6	28.4	27.1
Water Cycle	50.4	46.7	44.6
Climate Variability	67.8	62.8	60.0
Atmospheric Composition	57.5	53.3	50.9
Land-Cover/Land-Use Change	17.0	15.7	15.0
USGCRP Global Change Science Program Total	269.3	249.5	238.3
Carbon Cycle	130.8	121.2	115.7
Ecosystems	108.8	100.9	96.3
Water Cycle	237.8	220.3	210.4
Climate Variability	209.1	193.8	185.1
Atmospheric Composition	179.5	166.4	158.9
Land-Cover/Land-Use Change	120.7	111.8	106.8
USGCRP Global Change Observation Program Total	986.7	914.4	873.2
USGCRP TOTAL	1,256.0	1,163.9	1,111.5
CCRI			
Terrestrial and Marine Ecosystems	3.6	3.6	3.6
Land-Cover/Land-Use Change	3.6	3.6	3.6
Carbon Cycle	3.6	3.6	3.6
Water Cycle	3.6	3.6	3.6
Climate Variability	3.6	3.6	3.6
Atmospheric Composition	3.6	3.6	3.6
Scientific Computing and Computational Technology	4.8	4.0	4.0
Atmospheric Composition (non-CO ₂ forcing)	8.5	9.7	9.7
Climate Variability (polar feedbacks)	6.1	7.3	7.3
CCRI Global Change Science Program	41.0	42.6	42.6
Climate Variability (net primary productivity data set)	3.0	3.0	4.0
Atmospheric Composition (APS)	12.2	54.1	3.7
Data System Development	8.5	-	-
CCRI Global Change Observation Program Total	23.7	57.1	7.7
CCRI TOTAL	64.7	99.7	50.3
National Aeronautics and Space Administration Total	1,320.7	1,263.6	
President's Request			1,161.8

Notes: NASA's FY 2005 budget is based on the initial operating plan submitted in December 2004 and is subject to change. The FY 2006 entries are based on the President's budget released in February 2005.

FY 2006 Budget Tables



Since FY 2004, NASA has employed full-cost practices to improve the cost effectiveness of mission performance. NASA program budgets are now calculated in full-cost mode, meaning institutional activities such as personnel and facilities (which had been held in separate centralized accounts) are now included in each benefiting program's budget, thus reflecting the true cost of each program and enabling managers to make better economic decisions.

Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, National Aeronautics and Space Administration CCSP activities are funded under the NASA section of Title III—Independent Agencies, as part of the Science, Aeronautics, and Technology account, within this account Appropriations Committee reports specify funding for the Earth Science program.

O U R C H A N G I N G P L A N E T

NATIONAL SCIENCE FOUNDATION

Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP			
Atmospheric Composition	16.7	16.1	16.1
Carbon Cycle	24.2	23.2	23.2
Climate Variability and Change	85.1	81.5	80.5
Human Dimensions of Climate Change	17.2	12.2	12.2
Terrestrial and Marine Ecosystems	29.2	27.7	27.7
Water Cycle	12.3	12.3	12.3
USGCRP TOTAL	184.7	173.0	172.0
CCRI			
Black Carbon Measurement	1.0	0.0	0.0
Carbon Fluxes and Cycle	7.0	10.0	10.0
Human Dimensions of Climate Change	10.0	5.0	5.0
Modeling	10.0	10.0	10.0
Sensor Development	2.0	0.0	0.0
CCRI TOTAL	30.0	25.0	25.0
National Science Foundation Total	214.7	198.0	
President's Request			197.0



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, National Science Foundation CCSP activities are supported under the NSF section of Title III—Independent Agencies within the NSF Research and Related Expenses account.

FY 2006 Budget Tables

SMITHSONIAN INSTITUTION

SI	Program Title	FY 2004	FY 2005 Estimate	FY 2006 Request
USGCRP				
NMNH	Archaeobiology Program (human ecology history)	0.3	0.3	0.3
NMNH	Paleoecological Effects of Climate Change, including Evolution of Terrestrial Ecosystems	0.9	0.9	0.9
NMNH	Global Volcanism Program	0.2	0.2	0.2
NMNH	Human Origins Program (human ecological history)	0.3	0.3	0.3
NMNH	Nile Delta Subsidences / Sea-Level Rise	0.2	0.2	0.2
NMNH	Tropical Biodiversity Program	0.6	0.6	0.6
SERC	Ecological Effects of Ultraviolet Radiation	0.2	0.2	0.2
SERC	Effects of Increasing Atmospheric CO ₂ on Ecosystems	0.3	0.3	0.3
STRI	Temperate and Tropical Forest Canopy Biology	0.4	0.4	0.4
STRI	Tropical Forest Science	0.9	0.9	0.9
STRI	Biodynamics of Forest Fragments	0.1	0.1	0.1
STRI	Tropical Agroforestry	0.2	0.2	0.2
NZP	Migratory Birds	0.3	0.3	0.3
NZP	Predicting Species Responses	0.7	0.7	0.7
MAB	Monitoring and Assessment of Biodiversity Program	0.1	0.1	0.1
USGCRP TOTAL		5.7	5.7	5.7
CCRI				
	None Reported	0.0	0.0	0.0
CCRI TOTAL		0.0	0.0	0.0
Smithsonian Institution Total		5.7	5.7	
President's Request				5.7

MAB Monitoring and Assessment of Biodiversity
 NMNH National Museum of Natural History
 NZP National Zoological Park

STRI Smithsonian Tropical Research Institute
 SERC Smithsonian Environmental Research Center



Mapping of Budget Request to Appropriations Legislation. In the Appropriations Committee reports, Smithsonian Institution CCSP activities are funded in the Smithsonian section of Title II—Related Agencies, within the Salaries and Expenses account. Appropriations Committee reports specify funding for a Sciences line item component of this account, which includes CCSP programs.