
U.S. Global Change Research Program

Overview of Multi-Agency Efforts

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October 27, 2016



U.S. Global Change
Research Program

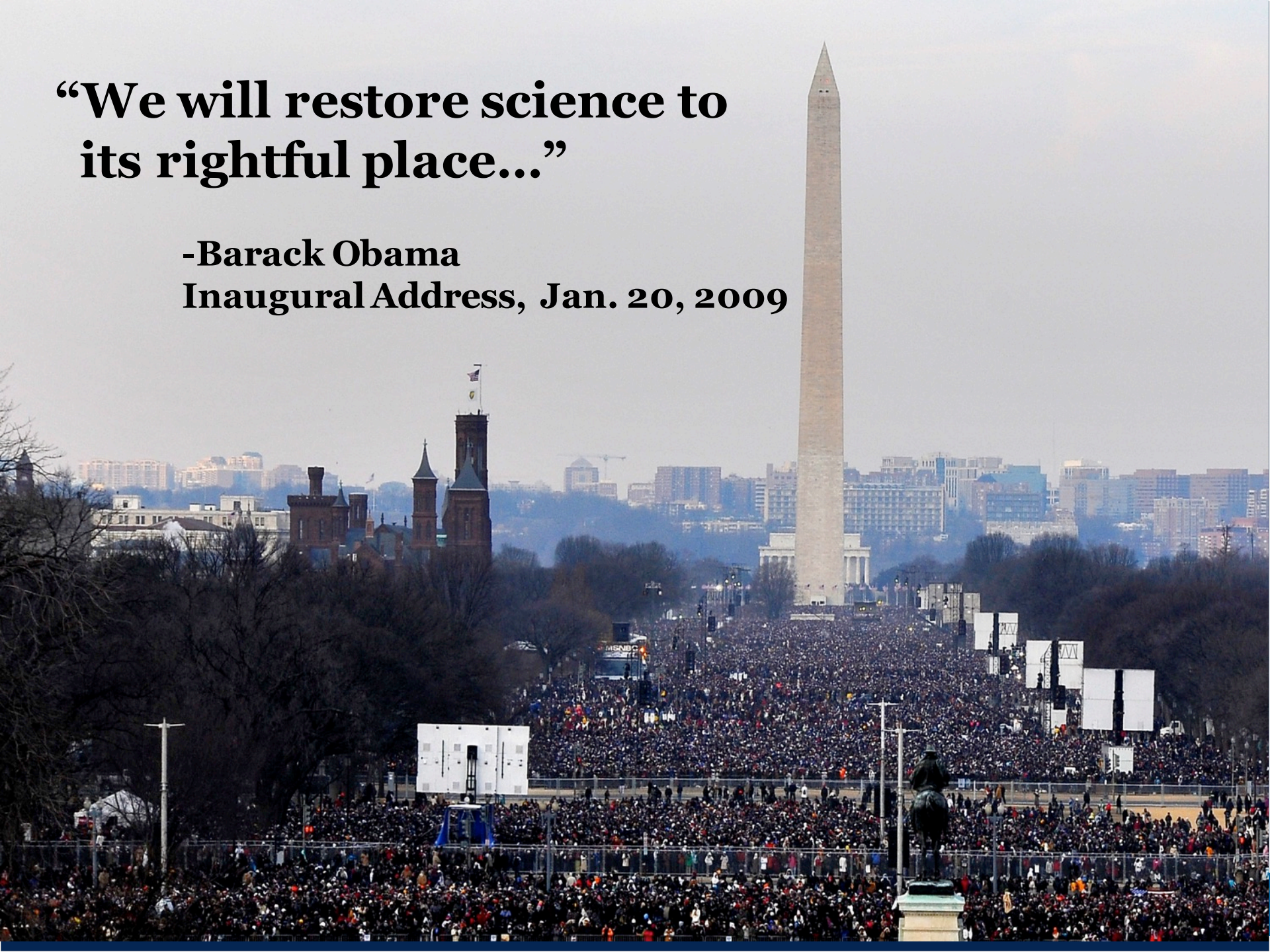
Who is this guy/Why is he here?

- Employee of the Department of Energy, Office of Science, Office of Biological and Environmental Research, Climate and Environmental Sciences Division, Terrestrial Ecosystem Science (whew)
- On detail to the White House, Office of Science and Technology Policy, Environment and Energy Division, U.S. Global Change Research Program
- Crash course on the Executive Office of the President, OSTP, and coordination of global change research across the USG



**“We will restore science to
its rightful place...”**

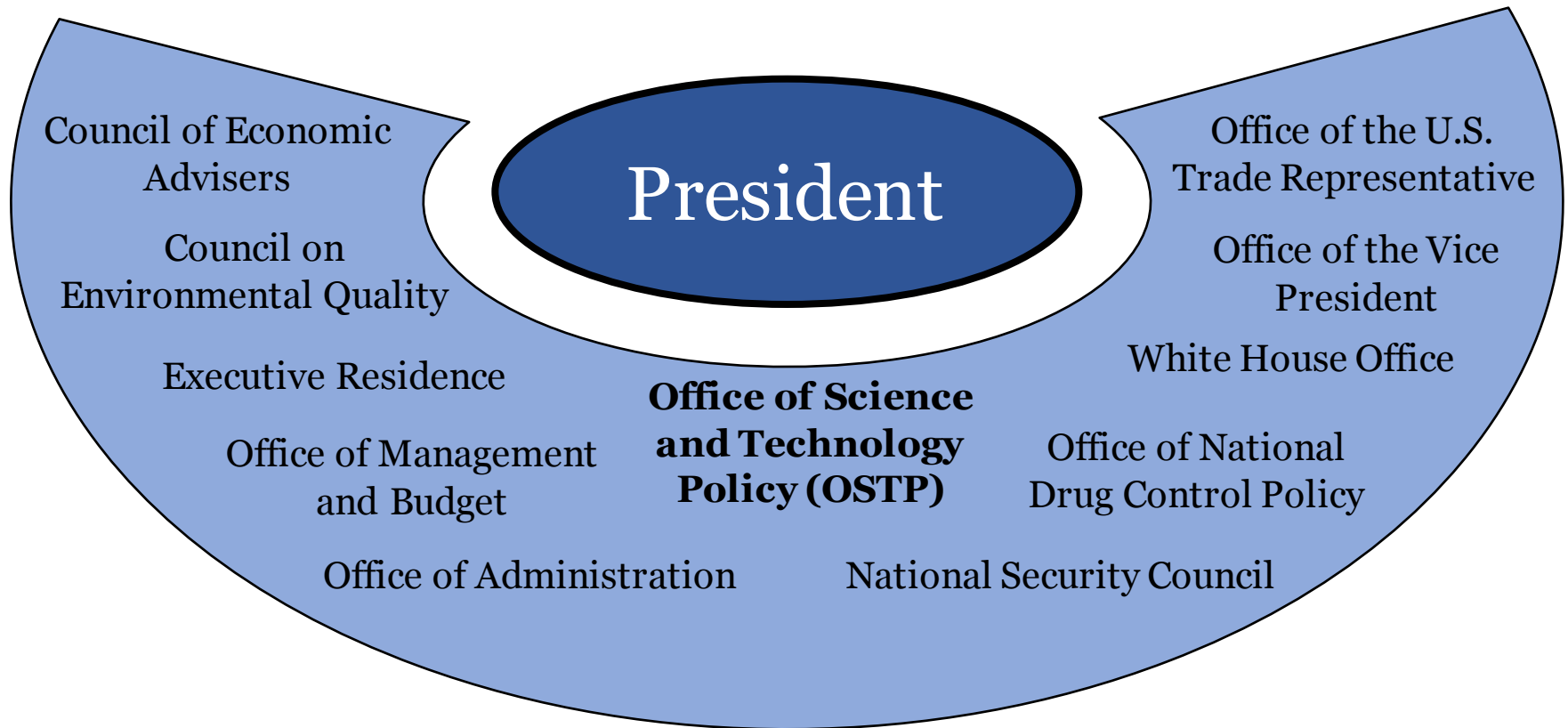
**-Barack Obama
Inaugural Address, Jan. 20, 2009**



2016 White House Science Fair



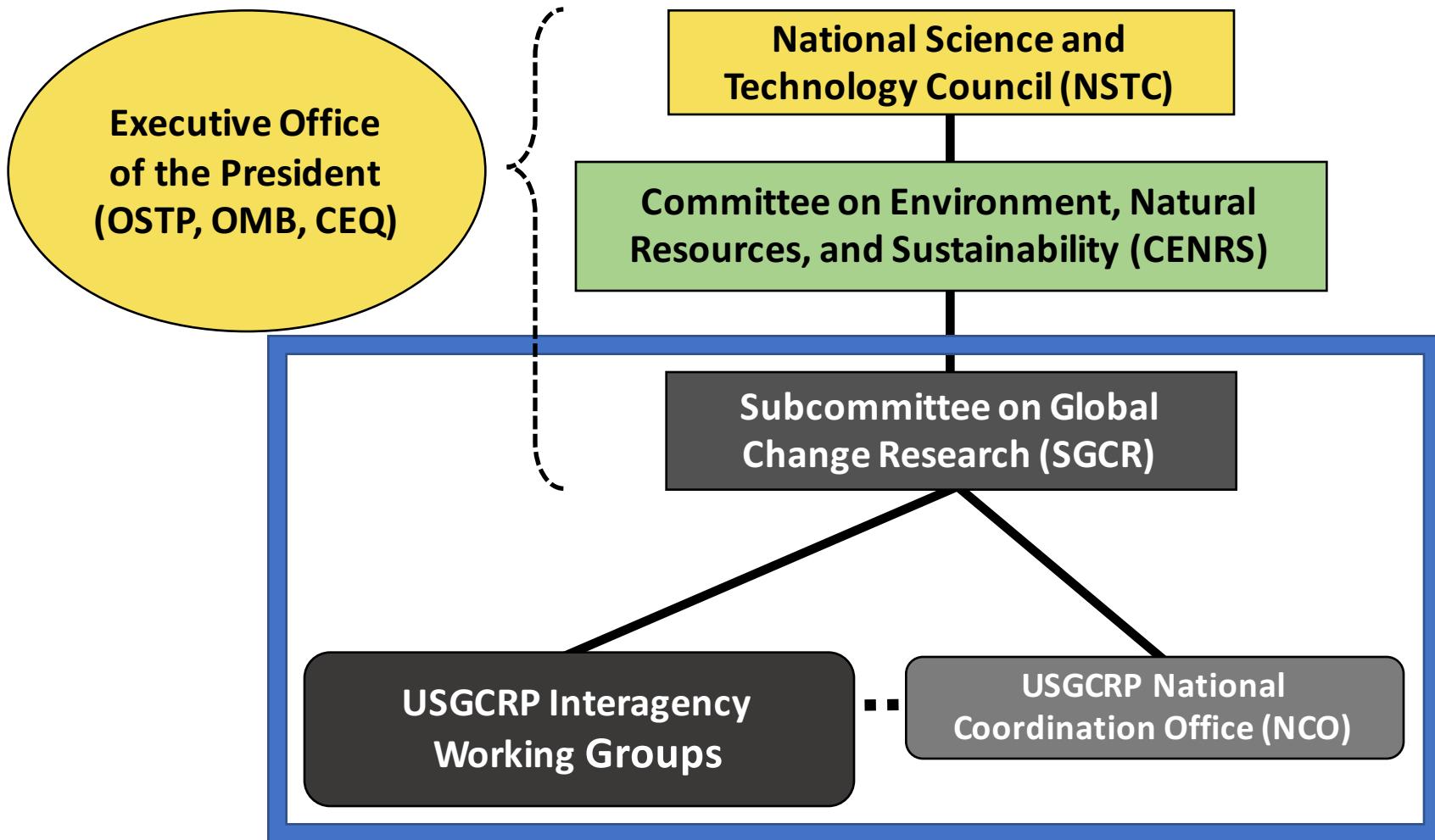
Executive Office of the President



White House Office of Science and Technology Policy (OSTP)

- Established by Congress in 1976 to:
 - Advise the President and others within the Executive Office of the President on the effects of science and technology on domestic and international affairs
 - Lead interagency efforts to develop and implement sound science and technology policies and budgets
 - Work with the private sector; state, tribal, and local governments; the science and higher education communities; and other nations
- Leads the National Science and Technology Council (NSTC) and co-chairs the Committee on Environment, Natural Resources and Sustainability (CENRS)
- The Subcommittee on Global Change Research (SGCR) is under CENRS





U.S. Global Change Research Program

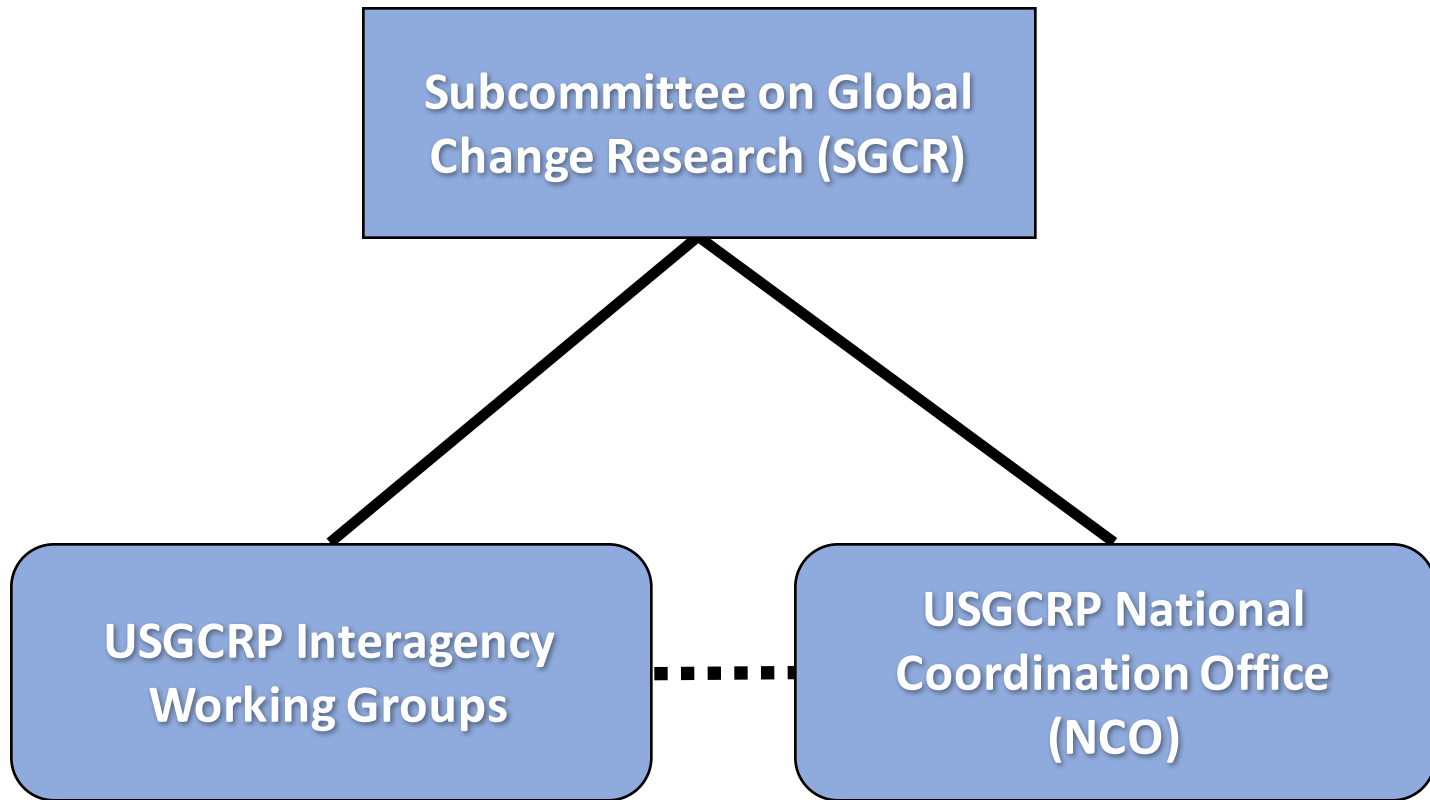


U.S. Global Change Research Program

- USGCRP began as a Presidential Initiative in 1989
- Mandated by Congress in the Global Change Research Act (GCRA) of 1990 (P.L. 101 – 606) “to assist the Nation and the world to understand, assess, predict and respond to human-induced and natural process of global change”.
- Consists of the science arms of 13 agencies with responsibilities in global change
- FY 2015 budget crosscut \$2.459 billion
- Major coordination through Interagency Working Groups (IWGs), supported by the National Coordination Office (NCO)
- Interagency “Distributed Cost Budget” supports the NCO and activities of the organization



USGCRP at a glance



USGCRP at a glance

Disciplinary

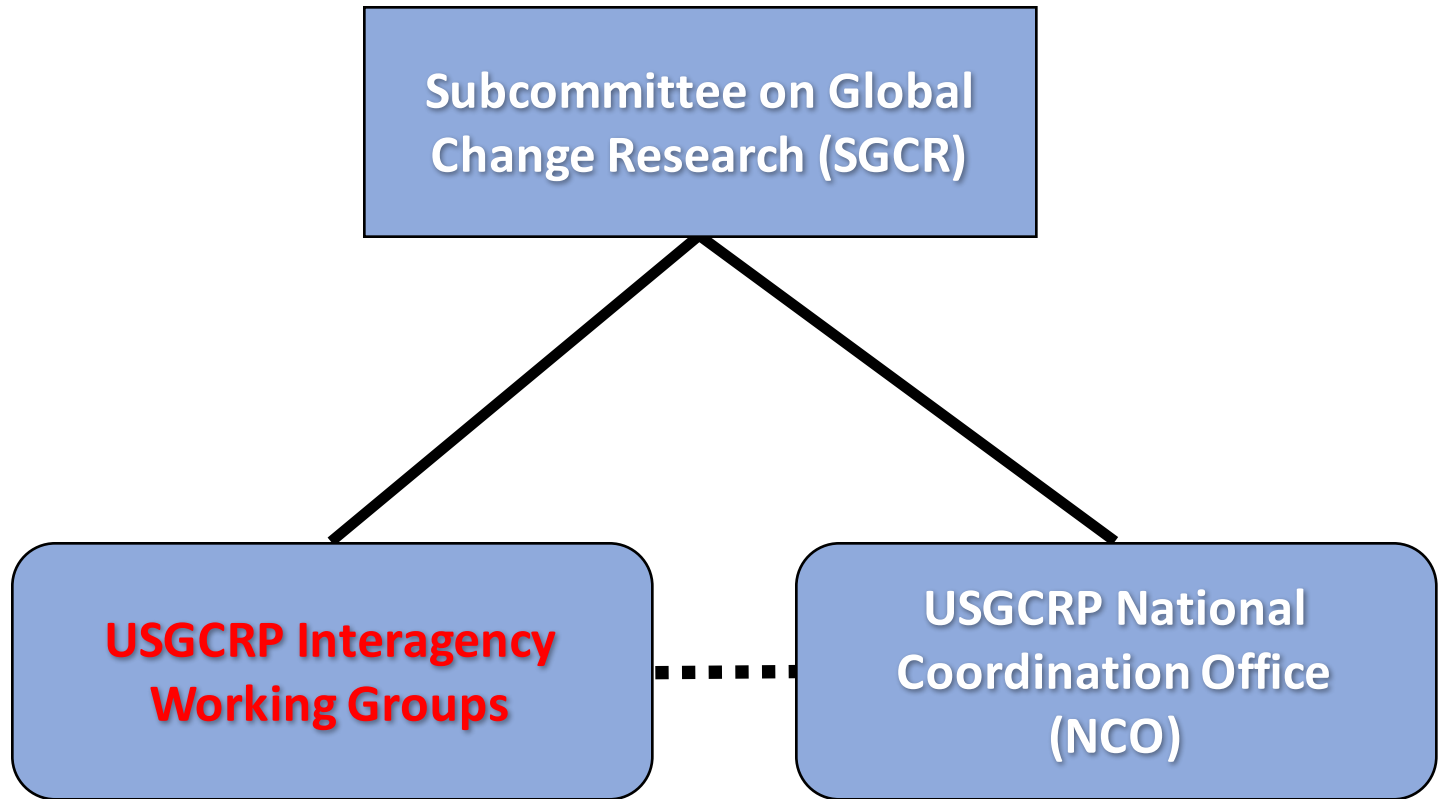
Groups:

Carbon cycle
Observations
Modeling
Health
Social sciences
Education

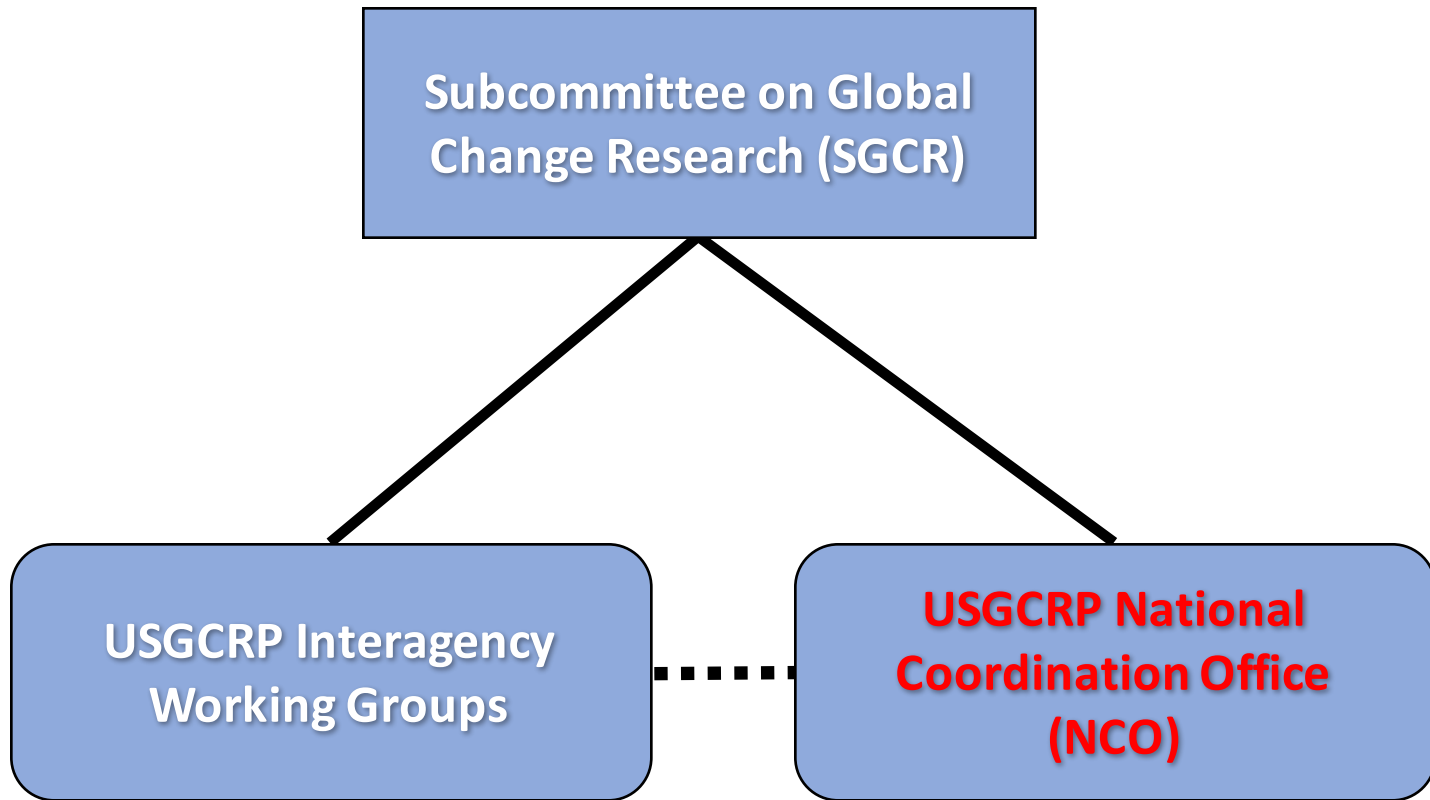
Operational

Groups:

International
Assessment
Indicators
Scenarios
Information system



USGCRP at a glance



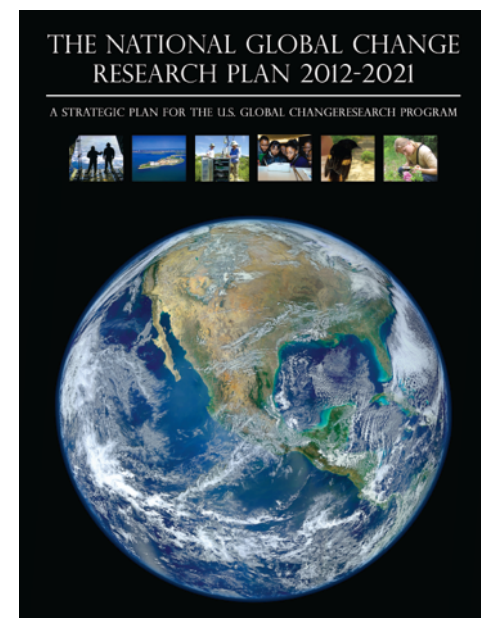
USGCRP Decadal Strategic Plan

Overview: <http://globalchange.gov/what-we-do/strategic-planning>

Document: <http://library.globalchange.gov/u-s-global-change-research-program-strategic-plan-2012-2021>

2012-2021 Strategic Plan Goals

- **Goal 1 - Advance Science:** Advance scientific knowledge of the integrated natural and human components of the Earth system.
- **Goal 2 - Inform Decisions:** Provide the scientific basis to inform and enable timely decisions on adaptation and mitigation.
- **Goal 3 - Conduct Sustained Assessments:** Build sustained assessment capacity that improves the Nation's ability to understand, anticipate, and respond to global change impacts and vulnerabilities.
- **Goal 4 - Communicate & Educate:** Advance communications and education to broaden public understanding of global change and develop the scientific workforce of the future.



Advance Science

- Earth System Understanding
- Science for Adaptation and Mitigation
- Integrated Observations
- Integrated Modeling
- Information Management and Sharing

USGCRP works to connect these approaches together to advance fundamental science, and to provide a science foundation for societal decision making



Inform Decisions, Sustained Assessment, Communicate and Educate

- The “other side” of USGCRP, these goals work together, with the aim of making USGCRP science actionable and accessible.
- USGCRP assessments identify societal science needs and feed them into the Program’s science planning and prioritization.
- Engagement—with those planning for and responding to climate change and with the science producing community is central to connecting across USGCRP’s four goals in ways that serve the Nation.



USGCRP Priorities

- Focus on activities that require or benefit from the engagement of multiple agencies
 - Arctic
 - Water cycle extremes
 - Carbon cycle: methane
- In addition, USGCRP recognizes key enabling capabilities upon which the program depends
 - Observations
 - Modeling
 - Actionable science
- Encourage support from agencies and the administration for these priority areas



Resilience Enterprise

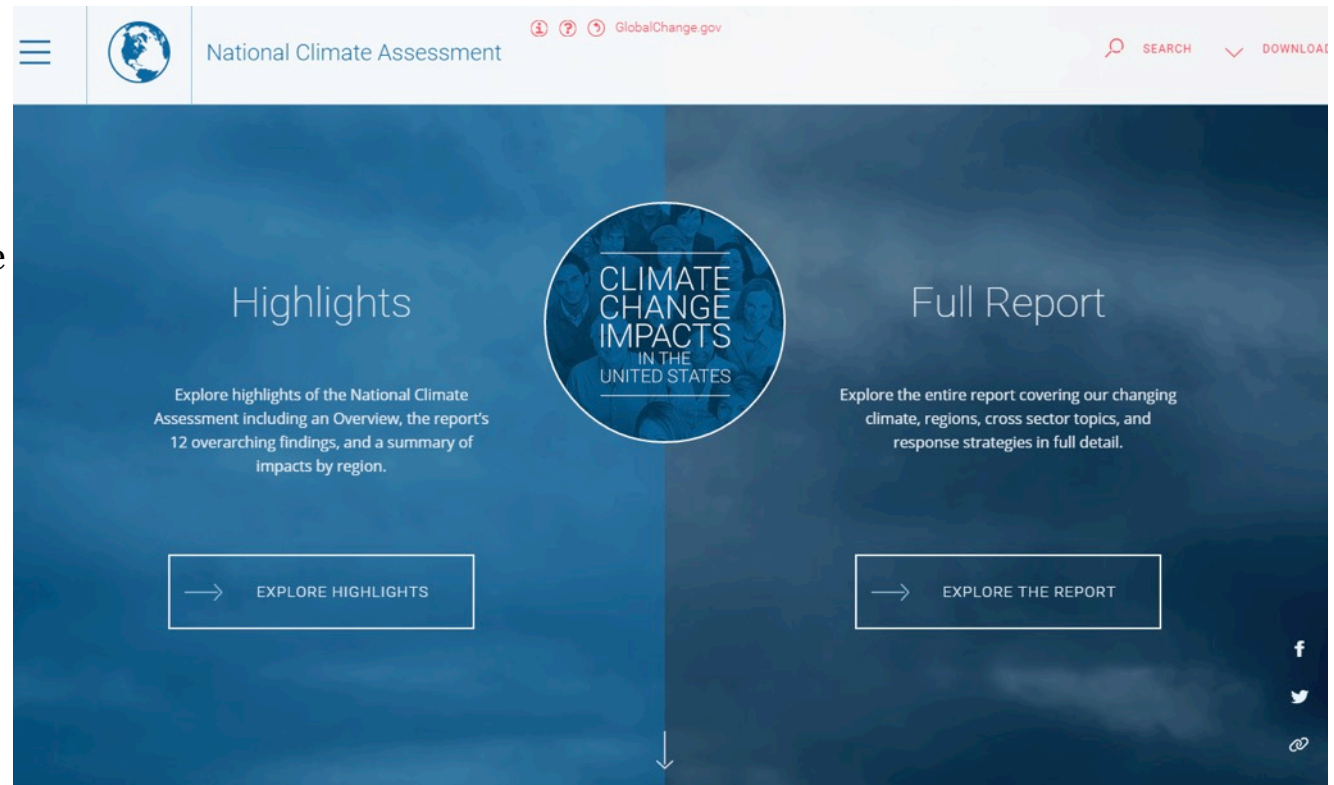
- Climate Data and Tools (Federal)
 - Climate Data Initiative (NASA led)
 - Climate Resilience Toolkit (NOAA led)
- Public-Private Collaborations
 - Partnership for Resilience and Preparedness (PREP) (rolled out September 22)
 - Connecting “communities” with subject matter experts to identify risks, and resources associated with a changing climate



National Climate Assessment

- Summarizes current and future impacts of climate change
- Now a sustained process culminating in a quadrennial report
- Most recent NCA(3) released May 2014

All content in the 2014 National Climate Assessment is available in a dynamic format online.





THE IMPACTS OF CLIMATE CHANGE ON
HUMAN HEALTH
IN THE UNITED STATES:
A SCIENTIFIC ASSESSMENT



U.S. Global Change
Research Program

Health2016.globalchange.gov

Circling back to USGCRP

- USGCRP represents the U.S. climate research enterprise
- Its goal “to assist the Nation and the world to understand, assess, predict and respond to human-induced and natural process of global change”
- Short-term help by providing information and connecting stakeholders with experts
- Long-term help through engagement to influence research investments
 - Transition
 - Budget Priorities for FY 2019-2020
 - Resilience Enterprise
 - Sustained Assessment/National Climate Assessment

What's this mean for DOE?

- DOE is the fourth largest supporter of global change research
 - \$238 million in FY 2016
- DOE's Climate and Environmental Sciences Division
- Lead/major players in multiple USGCRP working groups
- Major contributors to National Climate Assessment
- Plays an important role between the “pure” science and the mission-driven science agencies/programs
- A high profile platform for interagency collaboration to assist the Nation to understand, predict, assess and respond to global change

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