

Interagency and International Collaborations

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NASA Terrestrial Ecology Meeting 2019

Office of Science & Technology Policy (OSTP) National Science & Technology Council (NSTC): Committee on Environment

- Coordinates interagency work related to polar research, earth observations, environmental quality and health, ocean sciences, and other areas

RELATED SUBCOMMITTEES
Interagency Arctic Research Policy Committee
Subcommittee on Ocean Science and Technology
U.S. Group on Earth Observations
Subcommittee on Disaster Reduction
Subcommittee on Ecological Systems
Subcommittee on Global Change Research

Interagency Arctic Research Policy Committee (IARPC)



IARPC Arctic Research Plan 2017-2021 - Policy Drivers

U.S. Arctic research enterprise supports U.S. policy from community to global scales. The four policy drivers for the Plan are:

Enhance the well-being of Arctic residents (*Well-being*). Knowledge will inform local, state, and national policies to address a range of goals including health, economic development, and the cultural vibrancy of Indigenous peoples and other Arctic residents;

Advance stewardship of the Arctic environment (*Stewardship*). Results will provide the necessary knowledge to understand the functioning of the terrestrial and marine environments, and anticipate globally-driven changes as well as evaluate the potential impact of local actions;

Strengthen national and regional security (*Security*). Efforts will include work to improve shorter- term environmental prediction capability and longer-term projections of the future state of the Arctic region to ensure security and emergency response agencies have skillful forecasts of operational environments and the tools necessary to operate safely and effectively in the Arctic over the long term;

Improve understanding of the Arctic as a component of planet Earth (*Arctic-Global Systems*).

IARPC research will inform the important role of the Arctic in the global system, such as the ways the changing cryosphere impacts sea level, the global carbon and radiation budgets, and weather systems. These policy drivers support the Nation's *Arctic Region Policy* and its implementation through the *National Strategy for the Arctic Region* (NSAR).

Interagency Arctic Research Policy Committee (IARPC) and NASA

- NASA ESD provides a representative to the IARPC Staff Group –
Mike Falkowski
- Scientists at NASA Centers contribute to 67 of the performance elements identified in the current Arctic Research Plan
- NASA scientists serve as co-leads on four collaboration teams:
 - Atmosphere
 - Glaciers & Sea Level
 - Terrestrial Ecosystems (**Mike Falkowski**)
 - Sea Ice
 - Modeling

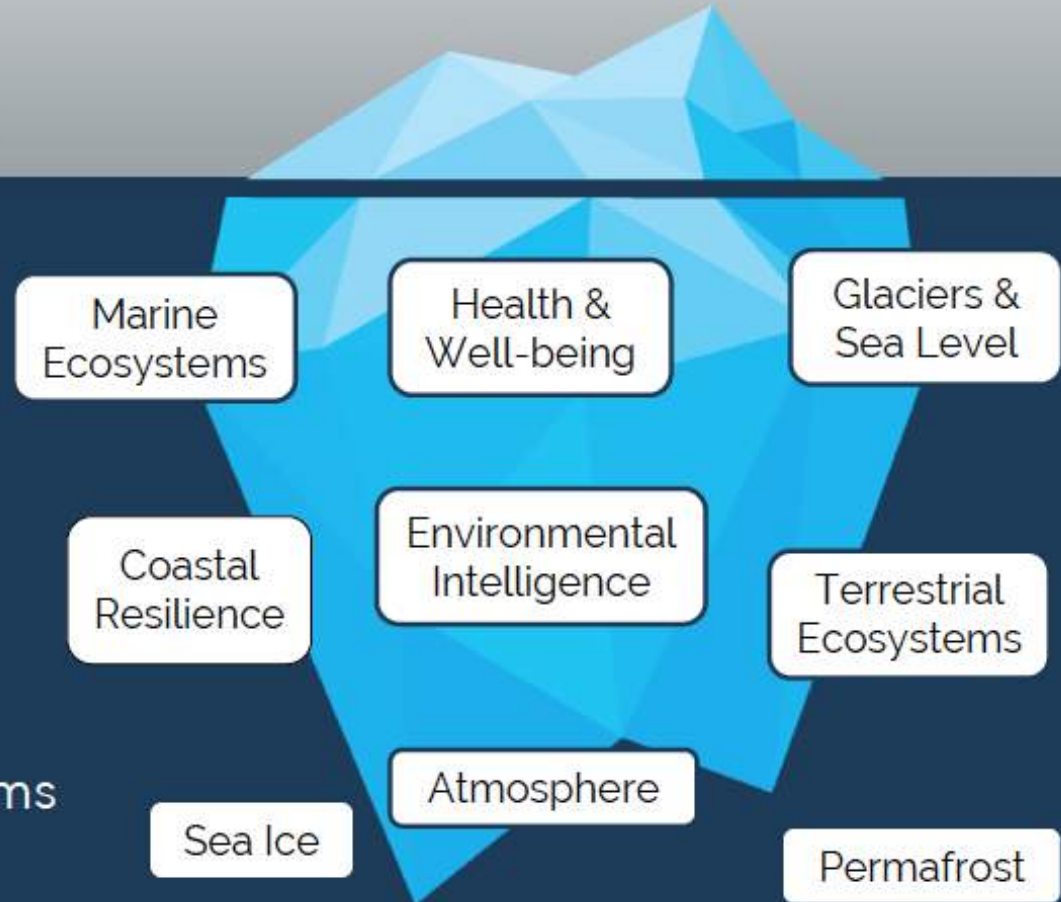
Through IARPC Collaborations we open our work to non-Federal Arctic researchers and stakeholders.

IARPC Federal only

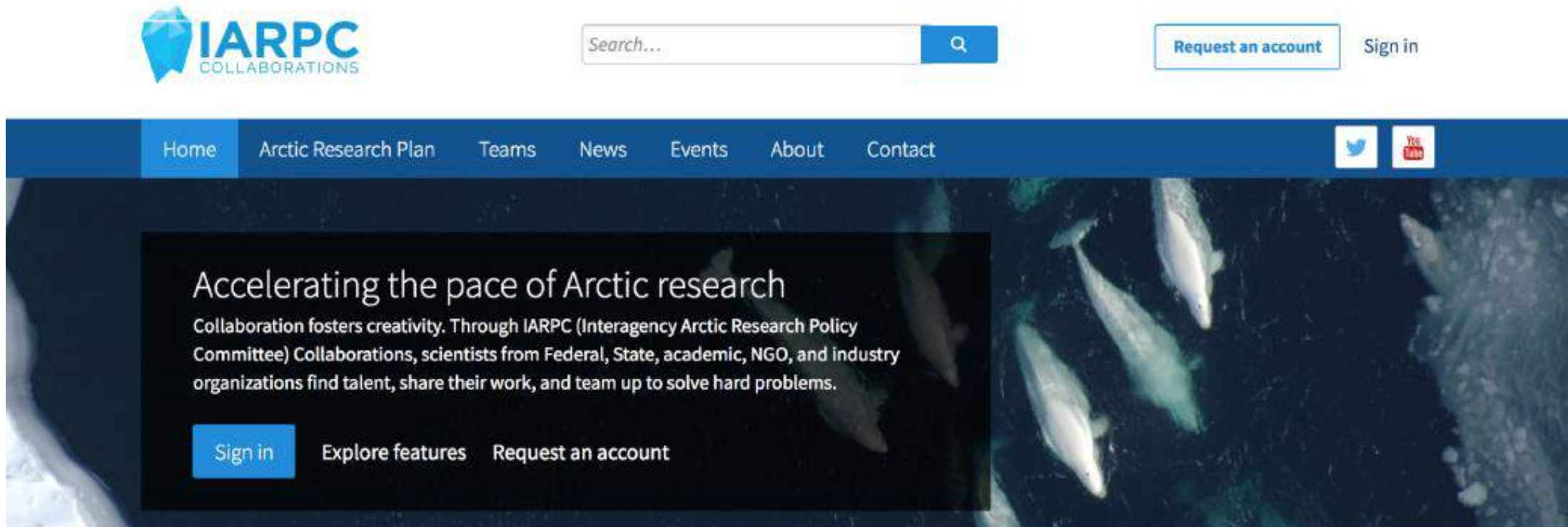
IARPC Collaborations

Federal & non-Federal

We welcome you to join one or more of our nine thematic Collaboration Teams



iarppcollaborations.org



9 Collaboration Teams led by **32** Federal Program Managers and Arctic research leaders, working on **122** performance elements, in collaboration with **1500** Arctic scientists and stakeholders, through a website with over **1500** views per month!

U.S. Global Change Research Program

Structure & Responsibilities



U.S. Global Change
Research Program

Subcommittee on Global Change Research

- Composed of representatives (Principals) from 13 federal agencies as established by the Global Change Research Act (GCRA) of 1990 (P.L. 101 – 606)
- **Acts as a Board of Directors for U.S. Global Change Research Program**



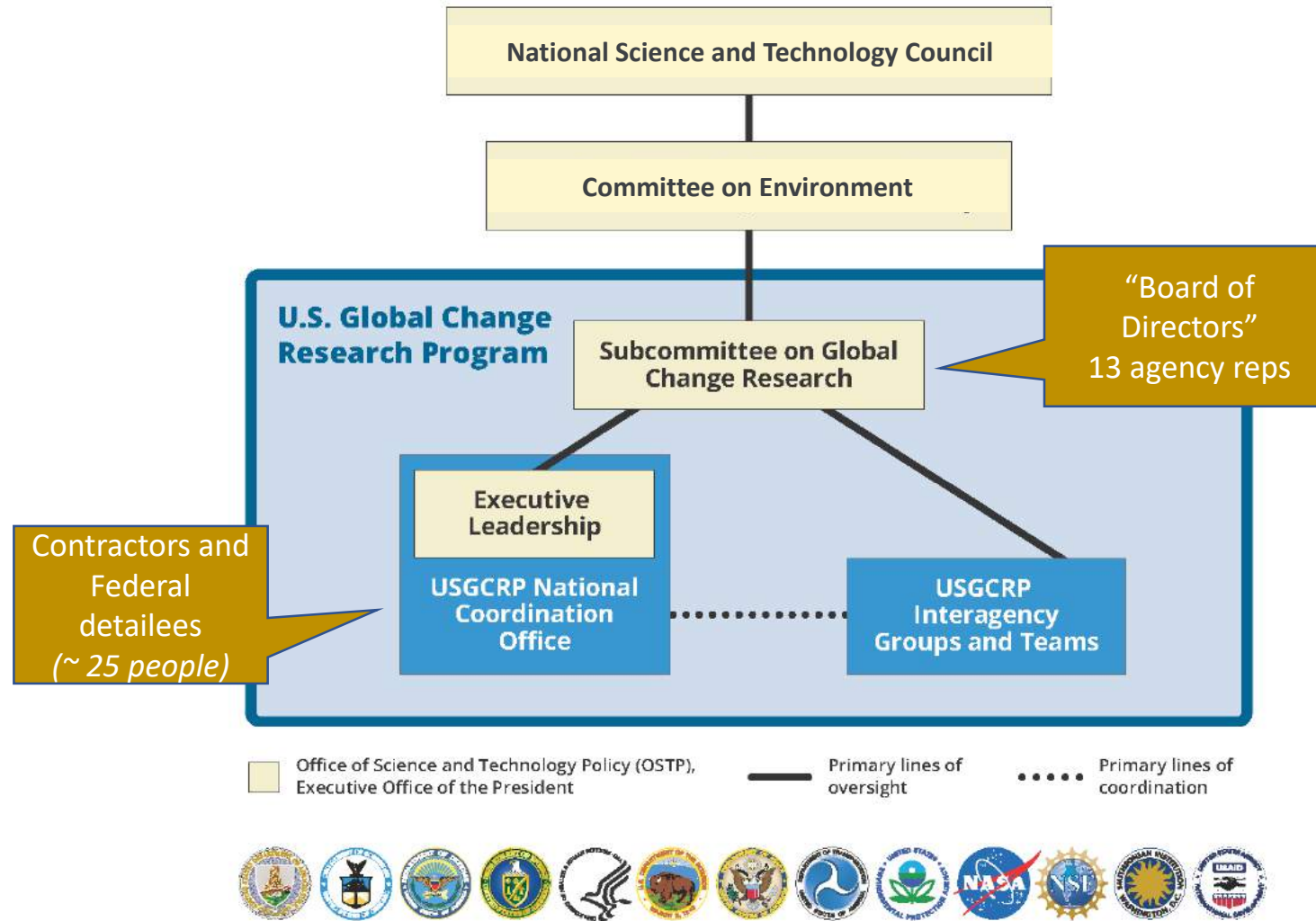
U.S. Global Change Research Program

- USGCRP began as a Presidential Initiative in 1989
- Mandated by Congress in the Global Change Research Act of 1990
- Comprises the science arms of 13 agencies with responsibilities in global change
- FY2017 budget crosscut \$2.565 billion (essentially flat since 2009)
- Interagency “Distributed Cost Budget” supports the NCO and activities of the organization

“[A] comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict and respond to human-induced and natural processes of global change”

(P.L. 101-606)

USGCRP Oversight & Coordination



USGCRP activities

- Through USGCRP, member agencies work together to:
 - Coordinate and advance global change research across the government
 - Use research results and products to inform decisions relating to risk management in a changing climate
 - Deliver products mandated by the GCRA (i.e., National Climate Assessment, Our Changing Planet, Strategic Plan)
 - Foster international research cooperation
- The USGCRP confederation **does not** independently:
 - Set agency budgets or priorities (i.e., allocate the ~\$2.5B)
 - Issue funding calls
 - Conduct primary research
 - Develop federal policy

USGCRP Interagency Groups

Interagency groups are a key means of achieving USGCRP's strategic goals

CURRENT INTERAGENCY GROUPS	
Carbon Cycle	International Activities
Observations	Sustained Assessment
Modeling	Indicators
Human Health	Integrated Water Cycle
Social Science	Adaptation and Resilience

Our Changing Planet

“Each year at the time of submission to the Congress of the President's budget [the Program] shall submit to the Congress a report on the activities conducted by the Committee” (GCRA)

Our Changing Planet, USGCRP's annual report to Congress, includes:

- Summary of achievements of program for year
- Priorities for future global change research
- Budget cross-cut



National Global Change Research Plan

“[The Program] shall develop a 10-year National Global Change Research Plan for implementation of the Program and revise it every 3 years” (GCRA)

2012-2021 strategic plan goals:

- Advance Science
- Inform Decisions
- Conduct Sustained Assessments
- Communicate & Educate

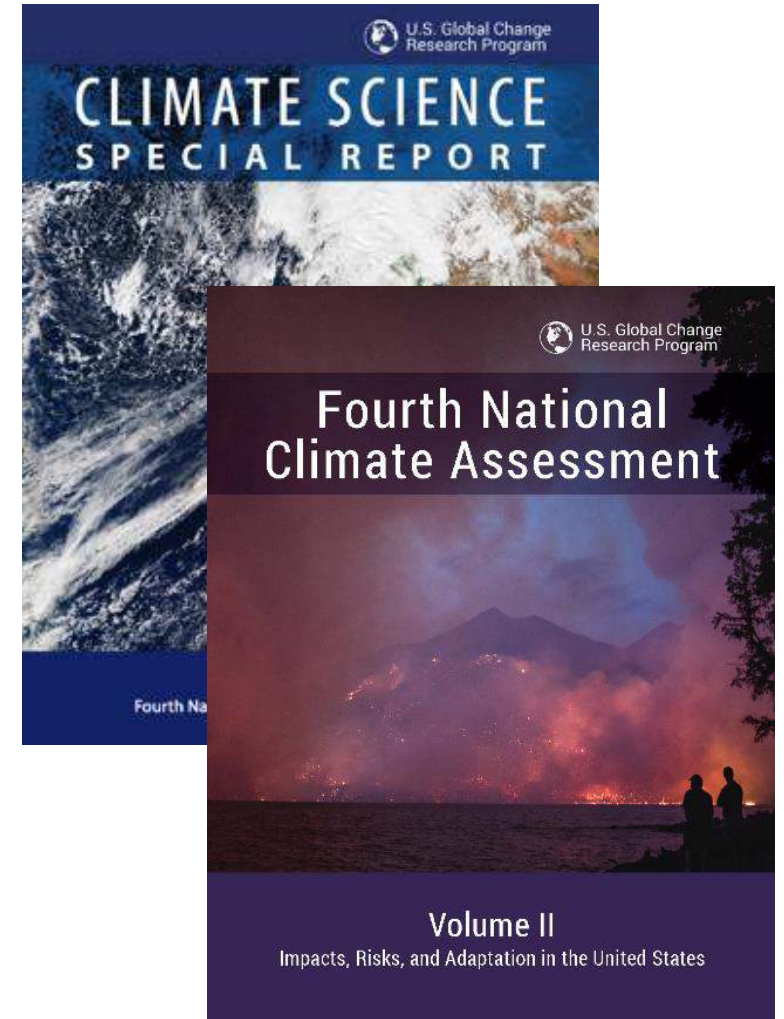


National Climate Assessment

- *“Not less frequently than every 4 years [the Program] shall prepare and submit to the President and Congress an assessment which:*
 - *Integrates, evaluates, and interprets the findings [of the Program] and discusses the scientific uncertainties associated with such findings;*
 - *Analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity;*
 - *Analyzes current trends in global change, both human- induced and natural, and projects major trends for the subsequent 25 to 100 years.”*
- To date, four assessments have been released

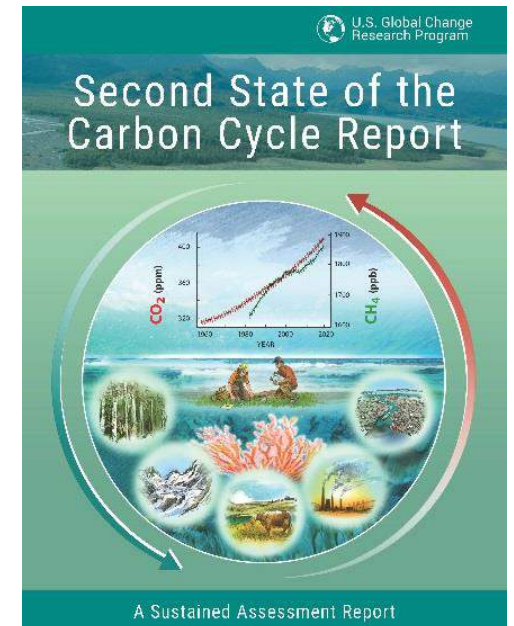
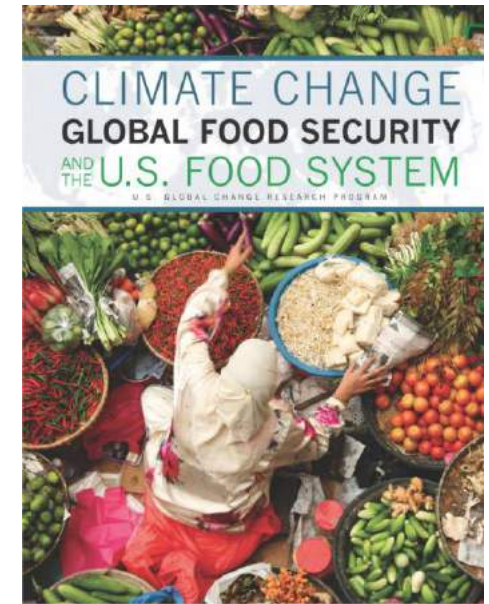
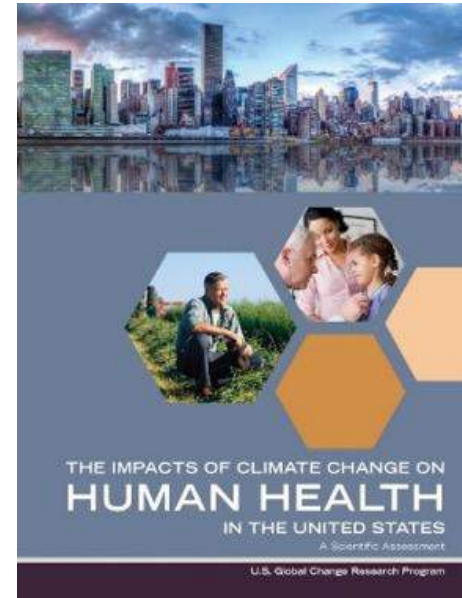
Fourth National Climate Assessment

- The Fourth NCA (NCA4) was completed in November 2018
 - Climate Science Special Report (2017)
 - Impacts, Risks, and Adaptation in the United States (2018)
- Summarizes current and future impacts of climate change
- Working toward a sustained process that culminates in a quadrennial report



Sustained assessment

- Avoid “boom and bust” cycles of producing a report, with focus on a sustained process
- Examples of special reports:
 - Carbon Cycle (2018)
 - Human Health (2016)
 - Food Security (2015)
- Associated datasets, analyses and indicators
 - State Climate Summaries
 - Climate Resilience Toolkit
 - Scenario Products



International engagement

Through the International Distributed Cost Budget, USGCRP supports the following international organizations:

- FutureEarth
- World Climate Research Programme
- START



International assessment support

The USGCRP coordinates and supports U.S. participation in and travel for:

- Intergovernmental Panel on Climate Change assessment reports and related meetings
- Arctic Monitoring and Assessment Programme
- World Meteorological Organization/UN Environment Programme Scientific Assessments of Ozone Depletion
- Specified activities of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

THANK YOU

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