
U.S. Global Change Research Program

WCRP
2024



U.S. Global Change
Research Program

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“[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)

- Mandated by Congress: Global Change Research Act of 1990
- FY2023 budget crosscut is around \$4.2 billion (research)
- Led by the Subcommittee on Global Change Research – and now also the Subcommittee on Climate Services
- Coordinates global change research and climate services across the Federal Government



USGCRP 2022–2031 Strategic Plan



Four Pillars:

- Advancing Science
- Engaging the Nation
- Informing Decisions
- Collaborating Internationally

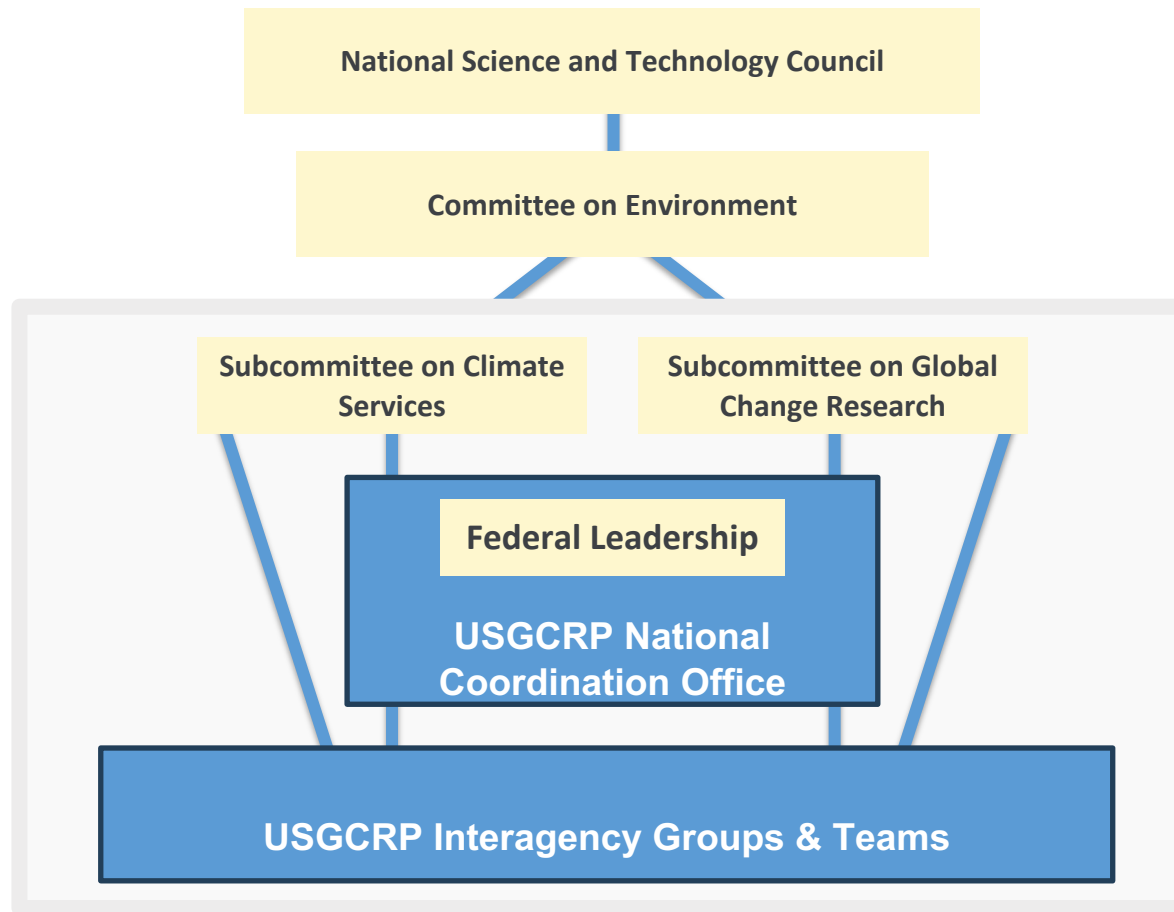


Participation

- Eleven departments and agencies were identified in the Global Change Research Act, plus “such other agencies and departments of the United States” as deemed appropriate
- The current SGCR includes these 11 members plus the Smithsonian Institution, USAID, DHS/FEMA, and HUD
- Participation in other USGCRP activities (e.g., the interagency groups) is **NOT** limited to these agencies (open to all Federal agency personnel)



USGCRP structure - 2024



International context of the Global Change Research Act

- *Promote international cooperation on global change research*
- *Coordinate the activities of the United States internationally*
- *Involve developing country scientists and decision makers while building capacity abroad in the realm of global change science*

USGCRP develops international partnerships that advance program priorities, link to program areas, and leverage investments by other entities

Supports non-Federal travel for international assessments

Leads U.S. review of international assessment products

Latin American and Caribbean Initiative

LACI's **overarching vision** is to provide opportunities for partnerships between countries in the Americas to enhance capacity for climate risk and vulnerability assessments that would support local and regional decision-making in response to climate change impacts.

**LACI IS A
VOLUNTARY
COLLABORATION
AMONG
COUNTRIES.**



El Salvador:

easy-to-use and reliable climate change vulnerability and risk atlas



La Plata:

develop an information observatory that assesses climate impacts on compound hydrological disasters to help facilitate informed decision-making



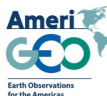
Amazonia:

developing user-friendly climate-informed decision support tools with Indigenous Peoples




Jamaica:


advance disaster resilience in Jamaica by co-developing geospatial decision-support tools and providing capacity building support



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Activities relevant to GPEx: Examples of US Modeling Capacities

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- Model Development (E3SM)
 - Model Analysis: Many core efforts focus on Extreme Events (CASCADE, WACCEM, CATALYST), Precipitation Diagnostics (PCMDI)
 - Storm feature tracking, dataset development and analysis, development of metrics and diagnostics (PyFLEXTRKR, TempestExtremes, TECA)
 - Database of large eddy simulations of deep convection from CACTI

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- NSF supported modeling research
 - NCAR CESM model development and research
 - NCAR Data Assimilation Research Testbed



- Airborne and ground data provide context for NASA global precipitation capabilities
- Observation-driven modeling (and assimilation): Two-way coupling of how observations help improve models and how models help us understand and exploit our observations



- NOAA PPGC Initiative/supplemental funding
- Global nested UFS & SPEAR Atmospheric River (AR) prediction system
- Improve model physics.data assimilation to improve precipitation for NCEP/GFDL models
- FY22 CPO/CVP and NWS/OSTI NOFO to improve the understanding and representation of precipitation in weather and climate models.
- GFDL high-resolution modeling



Recent priority topics of interest

Expanded scope

- "global change" research
- Climate Services – new subcommittee
- Expanded participation and membership

Fulfilling USGCRP's full global change mandate

National Nature Assessment (E.O. 14072)

Climate information and climate services

- Subcommittee on Climate Services
- Climate information/validation
- Greenhouse gas monitoring

Climate security

- Collaboration with intelligence/national security communities
- New interagency group (WGNS)



THANK YOU

Connect with us:



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