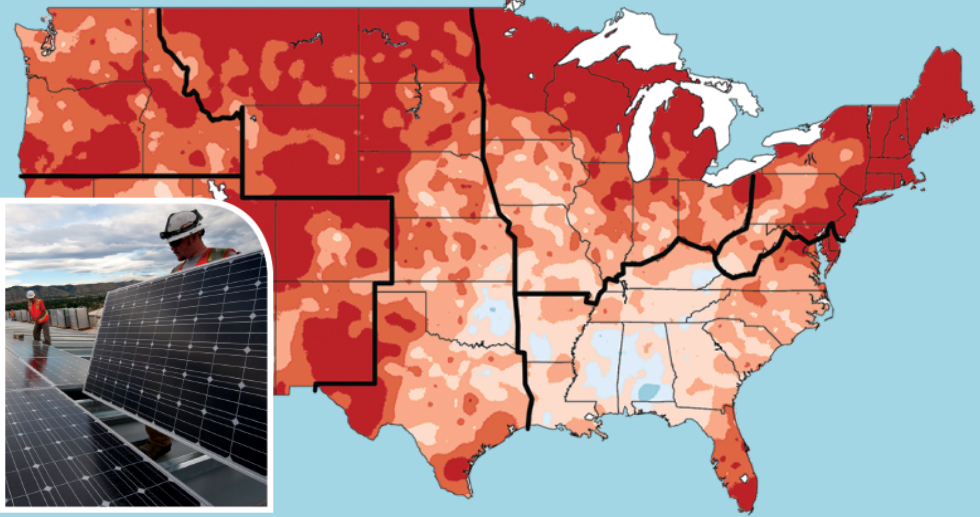


USGCRP's role at the boundary of science advancement and application: Potential Interactions with CMS



Dr. Fred Lipschultz
NCA Regional Coordinator
National Coordinating Office
U.S. Global Change Research Program

Goals

Ensure CMS investigators are current on USGCRP activities relevant to CMS

Explore pathways to future interactions with CMS & its PIs



United States Global Change Research Program

Global Change Research Act (1990):

“To provide for development and coordination of 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.”



13 Federal Departments & Agencies +
Executive Office of the President

More information at
<http://www.globalchange.gov>

US Global Change Research Program

Strategic Plan Goals

Advance Science: *Study Climate and Global Change*

- Advance scientific knowledge of the integrated natural and human components of the Earth system

Inform Decisions: *Prepare the Nation for Change*

- Provide the scientific basis to inform & enable timely decisions on adaptation & mitigation

Conduct Sustained Assessments: *Assess the US Climate*

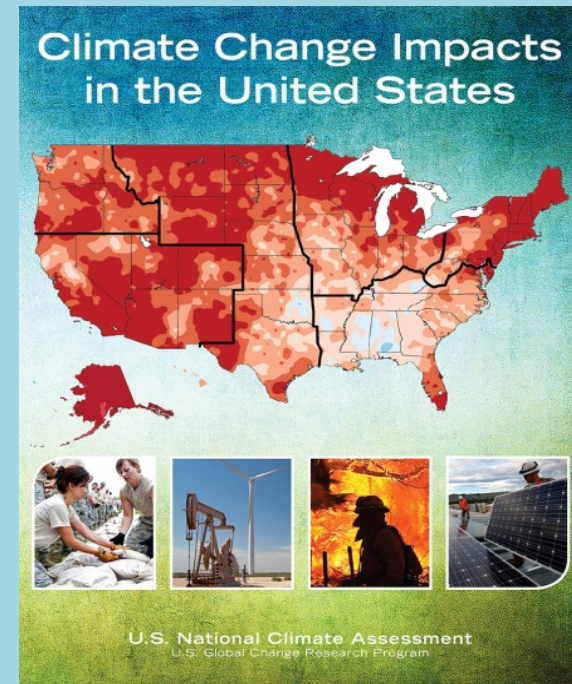
- Build sustained assessment capacity that improves the Nation's ability to understand, anticipate, & respond to global change impacts & vulnerabilities

Communicate & Educate: *Make Our Science Accessible*

- Advance communications & education to broaden public understanding of global change & develop the scientific workforce of the future

The Federal Space

- Climate Action Plan & Executive Orders
 - linked to quadrennial NCA's,
 - climate information both U.S. & global,
 - consistency & training
- Climate Data and Tools (CDAT)
- NCA3 -> Sustained Assessment






Third National Climate Assessment portal

nca2014.globalchange.gov



National Climate Assessment

   GlobalChange.gov



SEARCH



DOWNLOAD

Highlights

Explore highlights of the National Climate Assessment including an Overview, the report's 12 overarching findings, and a summary of impacts by region.

→ EXPLORE HIGHLIGHTS



Full Report

Explore the entire report covering our changing climate, regions, cross sector topics, and response strategies in full detail.

→ EXPLORE THE REPORT



Sustained Assessment

Foundational reports:

Scenario development • Indicators • Valuation

Improved use-based science:
CMIP 5+ • Decision support tools

Other assessment efforts:

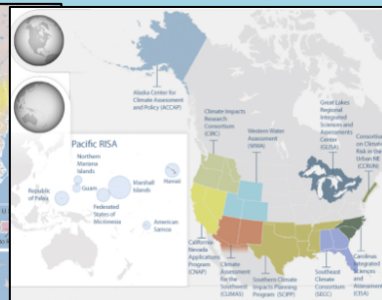
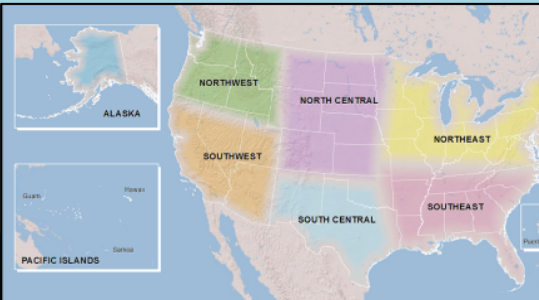


Special topics reports:
Food security • Health • Drought

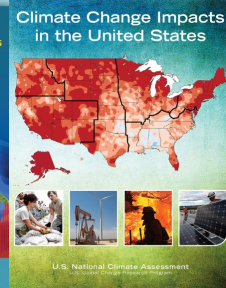
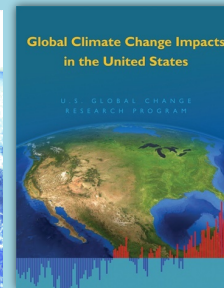
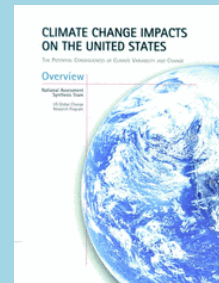
Technical Information:
Regional analyses • Literature reviews • Data & model results

Connecting to and building networks:

Quadrennial National Climate Assessment Reports



**NCAnet:
Partners in
Assessment**



U.S. Global Change Research Program
DOI Climate Science Centers

Regional Integrated Sciences & Assessments

U.S. Scenario Planning

- 1) Climate Scenarios & nesting/boundary issues
 - ✧ Ensembles
 - ✧ Downscaling – statistical, dynamical, hybrid
 - ✧ Uncertainties
 - ✧ Regional climate & sea level rise scenarios

- 2) Human Dimensions
 - ✧ LULCC & Population/migration (e.g. ICLUS)
 - ✧ Regional economics (e.g. CIRA)

- 3) Risk-based framing and contextual basis

NCA4 Process

- **Timeline:**
 - Scoping, Authors, Writing, Several reviews, release mid-2018
 - **Chapters** still uncertain - Mitigation chapter in NCA3
- **Reports:**
 - **Technical**
 - Regional Climate
 - State Fact Sheets
- **Special Reports**
 - Climate Change & Human Health
 - Climate Change, Global Food Security, & the U.S. Food System
 - Climate Science
 - **SOCCR2**
 - **Others??**

2nd State of the Carbon Cycle Report (SOCCR-2)

- Follow-up to the 1st SOCCR (2007)
- Led by CCIWG
- Highly Influential Scientific Assessment
- US and North American carbon stocks and fluxes in managed and unmanaged systems
- Including **relevant carbon management science perspectives** and tools for supporting and informing decisions addressed in/ related to

White House Climate Action Plan (2013),

US Carbon Cycle Science Plan (2011),

National Climate Assessment, and

USGCRP 2012-2021 Strategic Plan (formally called the National Global Change Research Plan 2012-2021)

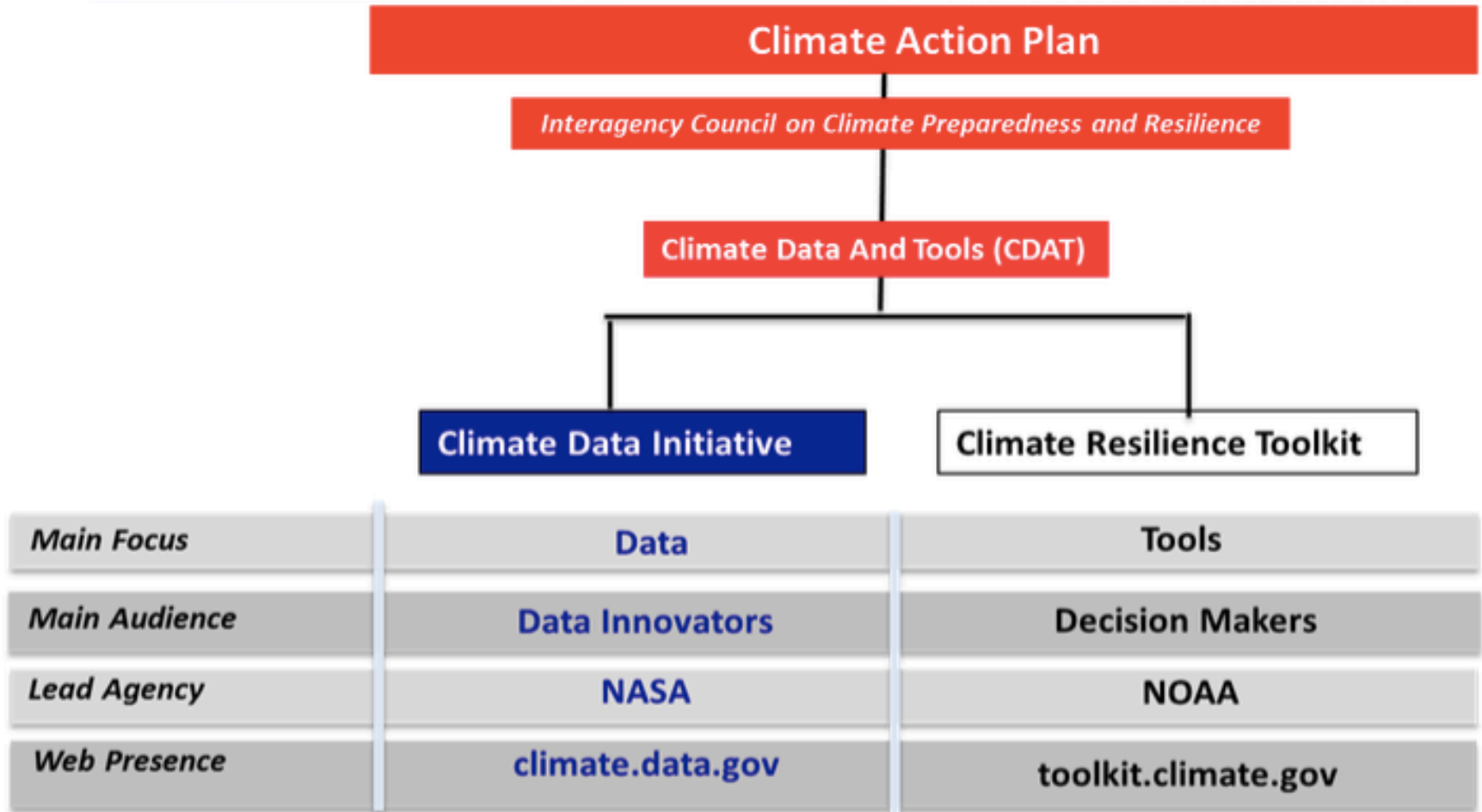
SOCCR-2 broad assessment framework

- 1) Carbon Cycle at Scales (Global Perspective, North American Perspective, US Perspective, Regional Perspective)
- 2) Role of carbon in systems (Soils; Water, Oceans, Vegetation; Terrestrial-Aquatic Interfaces)
- 3) Interactions/Disturbance/Impacts from/on the carbon cycle
- 4) **Carbon Management Science Perspective and Decision Support** (measurements, observations and monitoring for research and policy relevant decision-support etc.)

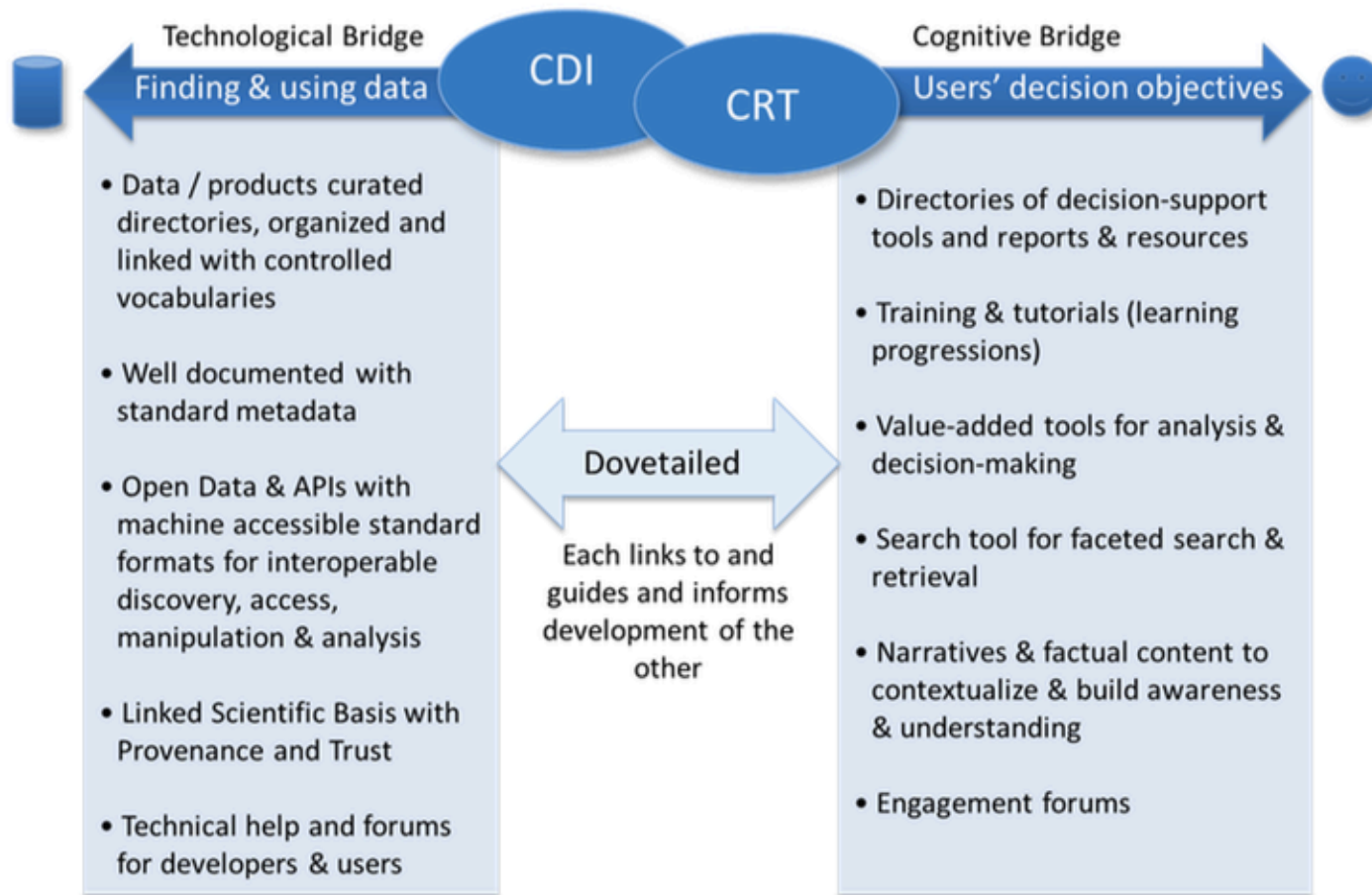
Next Steps, Public Engagement

- Several opportunities for Public Engagement
- FRN release soon
- Request for individual input on draft Prospectus, Notional Table of Contents/Themes, contributor nominations
- Public Forum in DC area on February 2, 2016
- To register & details on the event, detailed instructions on CarbonCycleScience.us/news
- **Expected release by mid-2017**
- For now, see www.CarbonCycleScience.us

Communications & Dissemination: Federal Collaborations



CDI & CRT: two sides of a coin



Collaboration Opportunities

- Case studies/ technical reports
 - Urban carbon
 - Biogeographical with IAM & valuation
- EO13677 on international aid – mitigation & tools
- CRT – case studies, mitigation tools
- Others??

More Information

<http://www.globalchange.gov>

<http://nca2014.globalchange.gov>

<http://toolkit.climate.gov>



GlobalChange.gov
U.S. Global Change Research Program



facebook.com/usgcrp



@usgcrp
#NCA2014