

# An Update on Building a Sustained National Climate Assessment: Vision & Reality

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# US 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.”



United States  
Global Change  
Research Program

13 Federal Departments & Agencies +  
Executive Office of the President

More information:

<http://www.globalchange.gov>



U.S. Global Change  
Research Program

# National Climate Assessment: GCRA (1990), Section 106

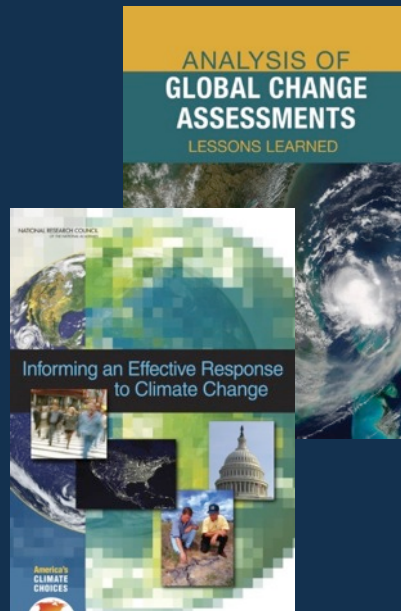
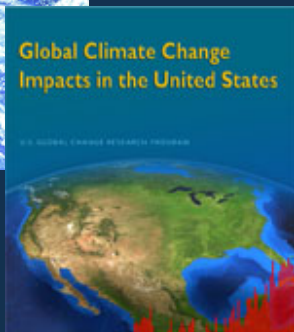
...not less frequently than every 4 years, the Council... shall prepare... an assessment which –

- **integrates, evaluates, and interprets** the findings of the Program (USGCRP) 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; and
- analyzes current trends in global change, both human- induced and natural, and **projects major trends for the subsequent 25 to 100 years.**



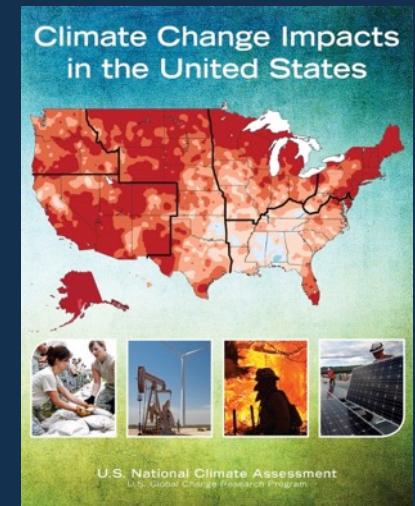
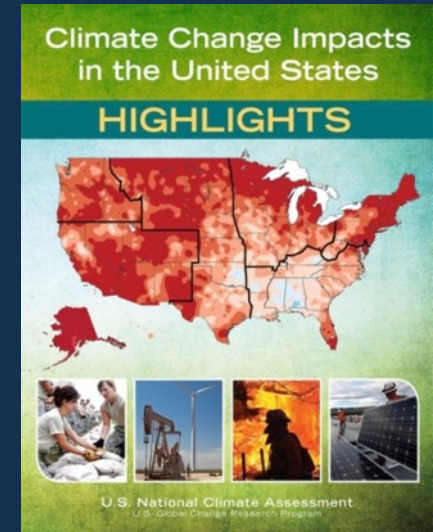
# THE NATIONAL CLIMATE ASSESSMENT

- The NCA is an ***inclusive, broad-based, and sustained process*** for assessing and communicating scientific knowledge of the impacts, risks, and vulnerabilities associated with a changing global climate in support of decision-making across the United States.



# NCA3: CLIMATE CHANGE IMPACTS IN THE U.S.

- Full report (Digital, 850 pages)
  - Interactive, web-based
  - Linked to data and sources
  - Graphics (high-res files, interactive figures)
  - Supporting information
  - Slides and other materials
- Highlights (Printed, 148 p)
- [NCA2014.globalchange.gov](http://NCA2014.globalchange.gov)
  - Over 150k web hits in the first 24 hours!
  - Over 1 Million in the first 3 months



# NCA SUCCESS

- Three aspects of NCA3 were crucial to success:
  - Stakeholder engagement
  - Clear communication principles
  - Transparency of process and information

# NCA: STAKEHOLDER ENGAGEMENT

Ongoing stakeholder engagement is crucial to the success of the NCA process and quadrennial reports.

- **Workshops:** Numerous workshops on Assessment methods & process
- **Formal and informal conversations:** Listening sessions, town hall meetings, professional society meetings; other events
- **Technical inputs and special assessment reports:** Regional, sectoral, and response topics
- **Public comment periods:** on topics, draft reports, and ongoing activities
- **NCAnet:** network of +150 partner organizations, multiple “affinity groups”; online at <http://ncanet.usgcrp.gov>



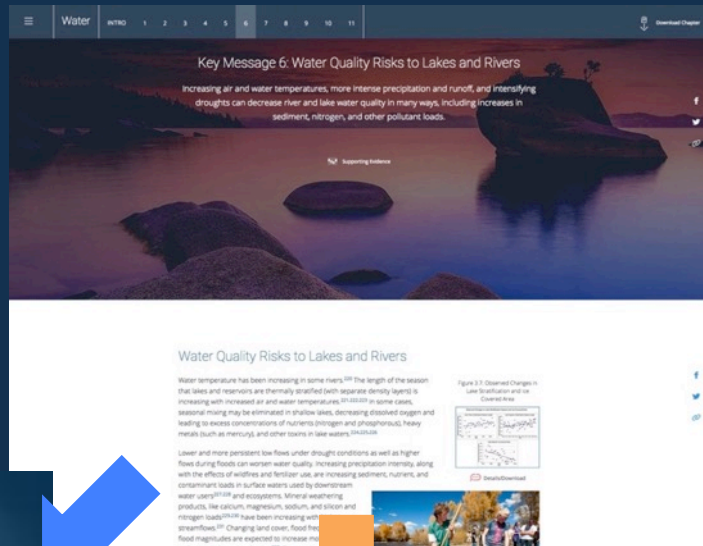


# NCA3 COMMUNICATION

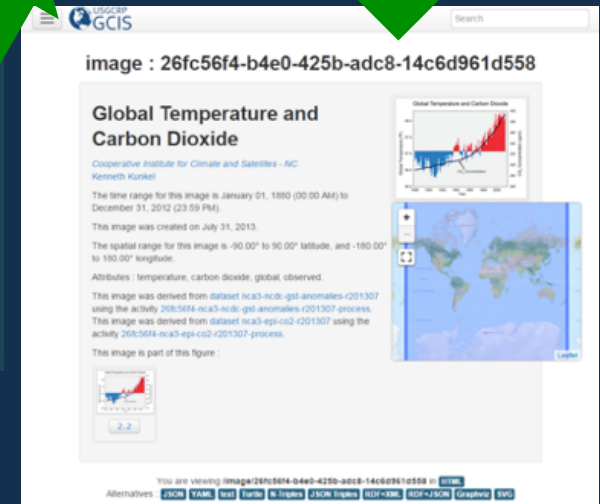
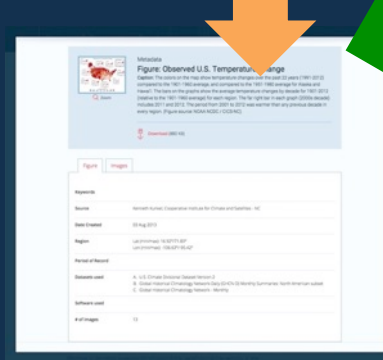
- Written in a popular style for non-technical audiences
- Chapters are arranged around key messages
- Lots of photos, case studies and examples
- “Risk-based framing” highlights impacts and opportunities that are important for decision makers
- Strong figures with access to supporting information (metadata) via Global Change Information System
- Access to underlying technical information, including traceable accounts, data sets, and reference material


# NCA3 TRANSPARENCY: GLOBAL CHANGE INFORMATION SYSTEM (GCIS)

[nca2014.globalchange.gov](http://nca2014.globalchange.gov)



[data.globalchange.gov](http://data.globalchange.gov)



 Supporting Evidence

PDFs in print layout and graphics files are also available:

[www.globalchange.gov/nca3-downloads-materials](http://www.globalchange.gov/nca3-downloads-materials)

# SUSTAINED ASSESSMENT: PROGRESS

# 2012 USGCRP STRATEGIC PLAN

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 and Educate**: Advance communications and education to broaden public understanding of global change and develop the scientific workforce of the future

# 2015: Updated Strategic Plan

Advance Science

Inform Decisions

Sustained Assessments

Communicate & Educate

Public comment period closed 30 January 2016

# SUSTAINED ASSESSMENT

- Build a **sustained assessment process** that improves our ability to understand, assess, anticipate, and respond to global change impacts and vulnerabilities
- Connect institutions and activities in regions and sectors through **networks** of information providers and users
- **Continuously** define climate-related risks & opportunities over time, at national, regional, and local scales
- Incorporate **ongoing evaluation** of effectiveness
- Embrace an **evolving framework** that encourages information providers and users to pursue new science and new knowledge to meet their own needs



# EXAMPLES

- **Special reports:** In-depth reports on topics of emerging need or new science
  - Climate and Health
  - Food Security
  - Carbon Cycle
  - Climate Science
  - Others: Drought, Forests



# EXAMPLES

- User-focused assessment products
  - Indicators system:
    - Climate indicators that help users connect to relevant datasets and information
    - Pilot stage, ongoing development
  - Extremes Assessment:
    - Exploring the idea of producing a series of small, interactive assessment products addressing types of extreme weather events
    - Focus on new science AND user needs



# EXAMPLES

- **User Engagement**
  - Ongoing **NCAnet** activities
    - New “affinity groups” on Scenarios, Valuation
  - New **Federal Advisory Committee**
    - Will advise on user needs, user engagement, user perspective
    - Will connect the NCA with user communities
    - Member nominations are being reviewed

**NCANet**

**Business & Industry**

**Professional Societies**

**Faith**

**Issue-Based NGOs (Enviro, Health, etc.)**

**Education (K-12, Higher Education, Informal)**

**Government (Local, State, Federal)**

**Tribal**



**U.S. Global Change Research Program**

# EXAMPLES

- **Data availability**
  - Global Change Information System (GCIS)
    - Continuing to build the system in a sensible way
    - Adding info from all special reports
    - Connecting to other Federal efforts
      - Climate Data Initiative
      - Climate Resilience Toolkit
    - Adding content that is **useful**

# EXAMPLES

- **Scenarios decisions**
  - Early selection of climate projections for 2018 NCA
  - **CMIP5 and RCPs 4.5 and 8.5** as focus for impacts
  - Other information – i.e., RCP2.6 – to be included as appropriate
  - Hope this early decision will result in more literature using these scenarios for impacts studies!

# EXAMPLES

- **Social Sciences**

- New interagency group focused on integrating social sciences into USGCRP activities
- Providing actionable suggestions for NCA4
- Providing input to improve human aspects of Indicators

# PROGRESS

- Requests for Information
  - Opportunities for formal public input, published in the Federal Register
  - **Summer 2015**
    - General questions about sustained assessment
    - Major input received:
      - Regional information will be important in future
      - Engagement is very popular & critical to NCA process
  - **Winter 2016** – coming soon!
    - More details about ideas and outline for NCA4

# CHALLENGES

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- Coordination – ruled by committee
- Funding mechanisms – no control
- Budget – OMB
- Federal rules – FACA, PWR
- Engagement – New and scary
- User needs impacting science
- Status quo





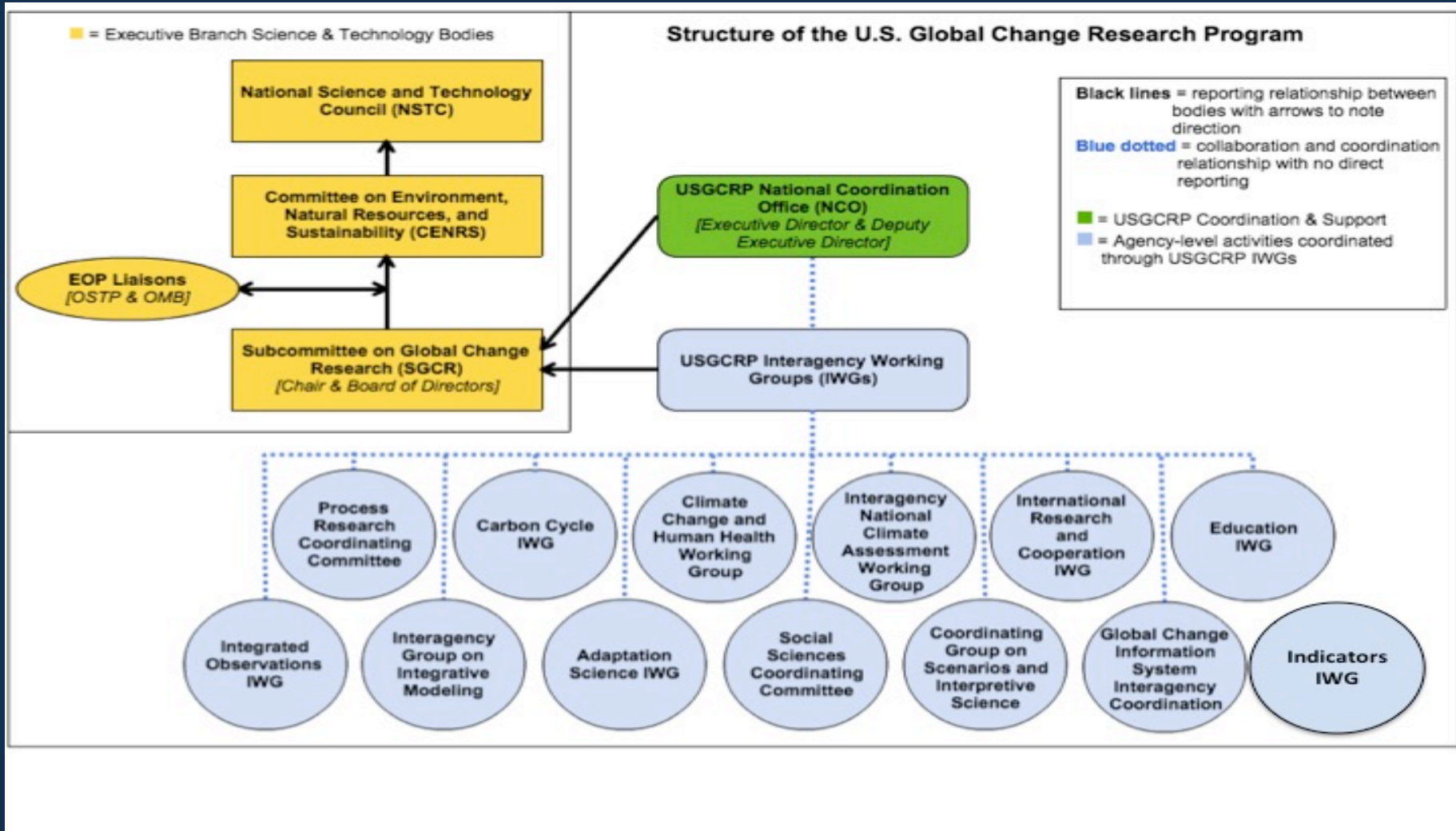
# COORDINATION

GCRP is comprised of the global change R&D arms of 13 Federal agencies, including Departments of

- **Agriculture** (many agencies)
- **Commerce** (NOAA & NIST)
- **Defense** (ONR)
- **Energy** (Office of Science)
- **Health & Human Services** (NIH/ NIEHS)
- **Interior** (USGS)
- **State**
- **Transportation** (FAA)
- **EPA**
- **NASA**
- **NSF**
- **Smithsonian**
- **USAID**
- Some are “Mission” and some are “User” agencies
- Lots of global change expertise is not involved



# COORDINATION



# COORDINATION

- Subcommittee on Global Change Research (SGCR) = Board of Directors
  - Make all decisions about Program and budget
- Interagency Working Groups (IWGs)
  - ~15 groups organized around specific topics
  - ~5 – 100 members per group
  - Members do not necessarily represent their whole agency
  - Do most of the work of the program
- National Coordination Office (NCO)
  - ~20 staff and federal detailees
  - Coordinate across agencies – coordinate all IWG activities
  - Led by Director who reports to OSTP

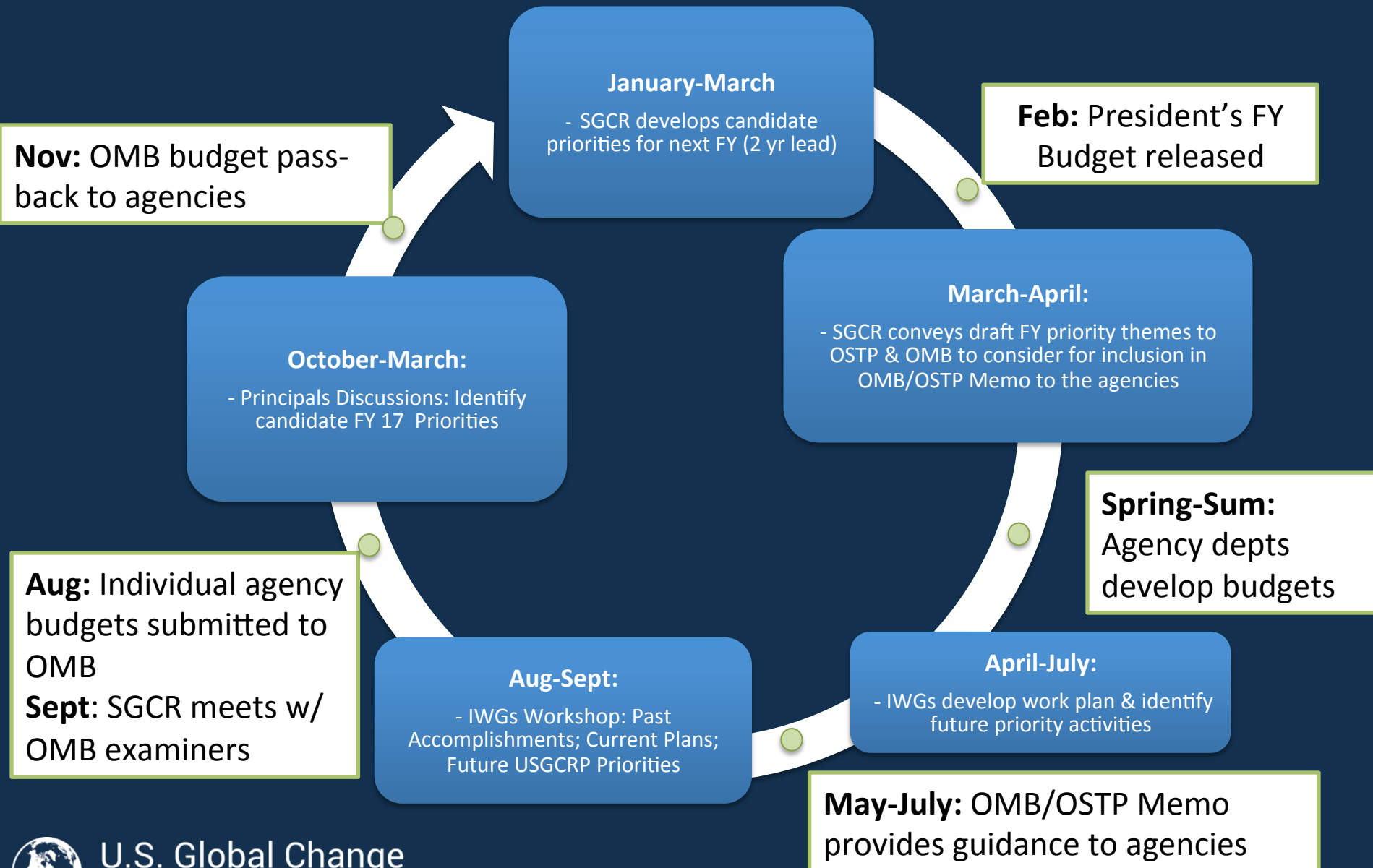
# FUNDING & BUDGET

- USGCRP does not control its own budget
  - WE HAVE NO MONEY!
- Partner agencies pay a small “tax” on their global change work
- The “taxes” fund all the activities of the NCO
  - Office space, Staff, Travel
  - International cooperation (IPCC, Future Earth, etc)
  - National Academies
- SGCR decides the budget annually
- Anything additional must be paid separately by agencies



# USGCRP Cycle for Setting Annual Budget Priorities

With Key Budget Cycle Milestones



# FEDERAL RULES

Two rules (in particular) complicate outreach efforts:

- Federal Advisory Committee Act (FACA)
  - Going back to the same people repeatedly
  - Getting advice or recommendations from 2+ people
- Paperwork Reduction Act
  - Asking the same questions of >9 people



# USER ENGAGEMENT

- Program's traditional strengths are in Physical Science
- Uncertainty about what users will ask for
  - Concerns about potential requests to “go beyond the science”
- User fatigue
  - History of asking users what they want and not being able to provide it
- Unlimited potential for expansion

# STATUS QUO

- Change is hard
  - Budget uncertainty
  - Committee decisions
  - Justifying budget changes
  - Anticipating political wishes





# SOLUTIONS?

- Continue to pursue engagement and transparency
  - Beginning to be better understood and supported
- Boundary organizations
  - Organizations extend the reach of our small NCO
  - Share our information widely, bring stakeholder information back to the agencies
- Involve more Federal departments
  - Many agency programs are starting to use climate info

# SOLUTIONS?

- **Keep working!**
  - Success is a huge motivator

# ARIZONA OPPORTUNITIES

- Sign up for the USGCRP newsletter
- Respond to calls for comment, input, etc.
- Come to DC!

# Third National Climate Assessment

## Climate Change Impacts in the United States

<http://nca2014.globalchange.gov>



[facebook.com/usgcrp](https://www.facebook.com/usgcrp)



[@usgcrp](https://twitter.com/usgcrp)

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