



Climate Program Office Review

May 24-26, 2022

Pre-Recorded Presentation

Supporting Review Activity Area 4:

Integrated Information Systems,

Risk Areas Initiative, Assessments

Assessments Program

Dan Barrie, Program Manager

Overview



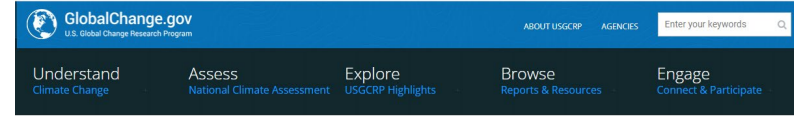
- **Briefing Purpose:** Overview of Assessments
- **Context:** Subactivity for Activity Area 4; the National Climate Assessment is an interagency product for which NOAA plays an outside role

Assessments 101, continued



- 75-85% of the Assessments Program budget goes toward the **Technical Support Unit**
- Essential support to complete the NCA
- Staff support provided for:
 - **Interagency Federal Steering Committee**
 - **Interagency Sustained Assessment Working Group**
 - **Continuity of leadership for Assessment process**
 - Support on behalf of the EoP including **legal guidance, Federal Register Notice publication, etc.**

Sustained Assessment Coordinators (RISA Partnership)

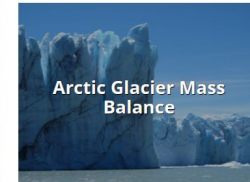


BROWSE & FIND > USGCRP INDICATORS > CATALOG

USGCRP Indicators Catalog



Indicators are observations or calculations that can be used to track conditions and trends. Indicators related to climate—which may be physical, ecological, or societal—can be used to understand how environmental conditions are changing, assess risks and vulnerabilities, and help inform resiliency and planning for climate impacts.



Key Accomplishments (FY17-21)



Quality



- Volume I Cited 500+ Times
- Chapters and derivative papers from Volume II cited 1,300+ times
- Featured extensively in traditional media
- Nearly 1.5 million visits to NCA webpages -- 55% of traffic directly; 45% from social and traditional media
- Sites still receive 500-1000 visitors/day

- Beyond serving informational needs, the report is foundational for climate services and adaptation efforts
- The NCA is widely used for stakeholder and frontline community engagement, and education



There is a bizarre contrast between this report... and this administration's own policies.

US warns of dire climate risks
 Nation's economy could see 10% reduction due to warming, 13 agencies warn

Dire new forecast on global warming
 Fires, weather disasters predicted in U.S. report

By Peter Flaherty
 Global warming is intensifying and will result in more disastrous fires, like the ones that have ravaged California, and other weather catastrophes unless governments act now to reduce carbon emissions, according to a stark new assessment of the impact of climate change released Friday.

The Fourth National Climate Assessment, put together over 2 1/2 years by 300 federal and state-dependent scientists, predicts more hurricanes, forest fires, floods, fires, water shortages, heat waves and drought across the globe unless governments take action to stop the release of greenhouse gases and halt the relentless heating of Earth.

The report, prepared by 15 federal agencies, mandated by Congress and made public by the Climate Action on 10



U.S. climate report warns of extreme harm
 Findings, at odds with Trump, say worsening weather, fires will smash economy, environment

By NEW YORK TIMES
 White House report issued Friday warned that the United States is heading for a dire future unless it acts to curb global warming, a report that says the nation's economy could be hurt by as much as 10% by 2050.

The report says the last few years have been among the warmest in the United States, and that the next few years are expected to be even warmer. It says that the next few years are expected to be even warmer. It says that the next few years are expected to be even warmer.

MIAMI HERALD
Climate study warns of worsening U.S. disasters
 A major scientific report issued by 13 federal agencies presents the stark warnings of dire consequences of climate change for the United States.

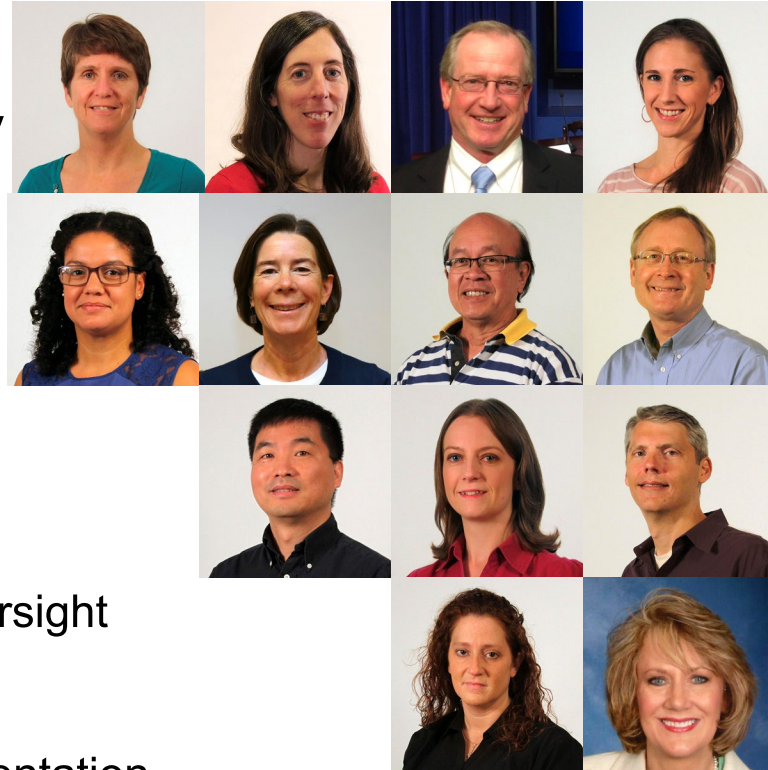
The report says the last few years have been among the warmest in the United States, and that the next few years are expected to be even warmer. It says that the next few years are expected to be even warmer.

Key Accomplishments (FY17-21)



Quality - TSU

- The Technical Support Unit provides approximately 18 FTE of staff to support a number of essential aspects of NCA development:
 - dataset development and analysis (e.g., obs and downscaling)
 - software, IT, and web development and support
 - author tools and support
 - scientific, technical, and grammatical editorial oversight
 - graphic design and layout
 - metadata development, preservation, and documentation
 - certification of information quality and traceability



Key Accomplishments (FY17-21)



Quality - TSU

NOAA National Centers for Environmental Information | State Climate Summaries 2022 15-18

IOWA

Key Messages

Temperatures in Iowa have risen more than 1°F since the beginning of the 20th century. Warming has been concentrated in winter and fall, with a general lack of summer warming. Under a higher emissions pathway, historically unprecedented warming is projected during this century.

Spring precipitation has been above average since 1990, affecting agriculture both positively (adequate soil moisture) and negatively (delays in spring planting). Projected increases in winter and spring precipitation pose a continued risk of spring planting delays.

Severe flooding and drought have occurred periodically in recent years, with major impacts on several communities. Future increases in the frequency and intensity of extreme precipitation events may increase the frequency and intensity of floods, while increases in evaporation rates due to rising temperatures may increase the intensity of naturally occurring droughts.

Iowa's location in the interior of North America and the lack of mountains to the north and south expose the state to incursions of bitterly cold air masses from the Arctic in the winter and warm, humid air masses from the Gulf of Mexico in the summer. As a result, its climate is characterized by wide-ranging temperatures.

Temperatures in Iowa have risen more than 1°F since the beginning of the 20th century (Figure 1). Temperatures in the 2000s have been higher than in any other historical period, with the exception of the early 1930s Dust Bowl era. The warming is due to increases in nighttime minimum temperatures, daytime maximum temperatures, however, show no trend. Increases in humidity may be one cause of this asymmetric warming between night and day. The hottest year on record was 2012, with an annual average temperature of 52.1°, which is 4.5°F above the long-term (1895–2020) average. Warming has been concentrated in winter and fall, while summers have not warmed substantially (Figure 2a), a feature characteristic of much of the Midwest. This lack of summer warming is reflected in a below average number of very hot days (Figure 2b) and no overall trend in warm nights (Figure 2c). The winter warming trend is reflected in a below average number of very cold nights since 1990, with the exception of the 2010–2014 period (Figure 2d).

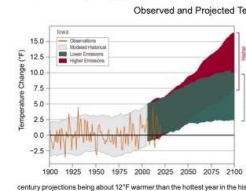
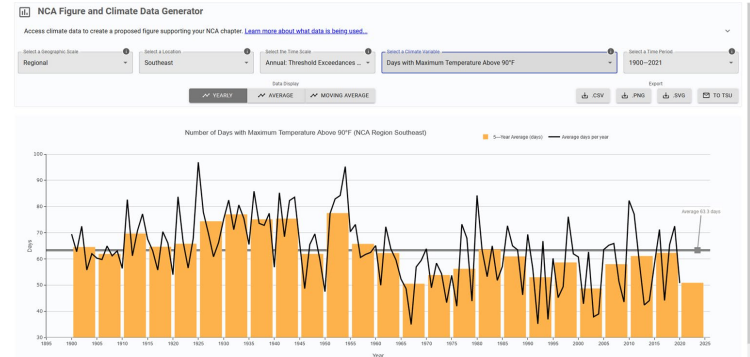


Figure 1: Observed and projected changes (compared to the 1901–1960 average) in mean surface air temperature for Iowa. Observed data are for 1900–2020. Projected changes for 2006–2100 are from global climate models for two possible future: one in which greenhouse gas emissions continue to increase (higher emissions) and another in which greenhouse gas emissions increase at a low to medium rate (lower emissions). The projected changes are based on the RCP4.5 scenario. The projected changes are based on the RCP4.5 scenario. The projected changes are based on the RCP4.5 scenario.

Published updated climate summaries for 50 states and PR+USVI



NCA Author Sandbox for graphs from observed climate data

new Assessments Collaboration Environment site for NCA authors

ACE GUIDANCE RESOURCES CHAPTERS FIGURES PHOTOS

FIFTH NATIONAL CLIMATE ASSESSMENT

Upcoming Deadlines

Next Milestone:
First Order Draft due March 4 by 5pm ET.
OCR submissions due Feb 28 (link to submit).
1-act chapter meeting requests due March 11 (link to submit).

Next 6 months:

- Public comment on 200 Public Engagement Workshops: Jan 7 Feb 20, 2022
- Initial development of First Order Draft (FOD): Jan 13 Mar 4, 2022
- Final Review of Cross-Cutting Topics due Feb 25, 2022
- FSC selects CCR topics no later than March 7, 2022
- 100 Technical Review of 100: Mar-Apr 2022
- Chapter Leadership Meeting #2: April 4-15, 2022 (Virtual meeting; agenda to be provided shortly)
- 100 & Author Teams meet on 100: Apr-Jun 2022
- Second Order Draft (200) due May 27, 2022
- Responses to public comment due May 27, 2022

Public Engagement	Chapter Teams	Technical Support Unit	Federal Agencies
January	Public Comment on 200 & 100: Jan 7-20, 2022	Development of First Order Draft (FOD) due March 4	
February			

Announcements

NCAS Director's Weekly Email #20: February 15, 2022
 02-16-2022 19:12 UTC by Allison B. Cimmins
 Welcome to the FRAC, WEST of the Public: Engagement Workshops marathon!

- Update: The end of our workshops
- Reminder: End of Public Comment Period in February 20, 2022

NCAS Director's Weekly Email #28: February 8, 2022
 02-08-2022 7:34n UTC by Allison B. Cimmins
 Welcome to Week 9 of the Public Engagement Workshops marathon

- Home stretch of workshops
- End of Public Comment Period in February 20, 2022

Registry of Open Data on AWS

Coupled Model Intercomparison Project 6

Description
 The sixth phase of global coupled ocean-atmosphere general circulation model ensembles.

Update Frequency
 Core CMIP6 datasets are added as soon as they are available.

Licenses
<https://www.cesm.ucar.edu/CMIP6/Team/CMIP6/TeamCMIP6.html>

Documentation
<https://www.cesm.ucar.edu/CMIP6/Team/CMIP6/TeamCMIP6.html>

Managed By
 ESGF and Pangeo

Contact
 See all datasets managed by ESGF and Pangeo.

Resources on AWS

Description
 Global forecasted data managed by the Earth System Grid Federation

Resource Type
 55 Bucket

Access Resource Name (ARN)
<arn:aws:s3::cmip6-forecast/100/100g/100g-act>

Access Key
 CMIP6-act

Access Key ARN (AWS account required)
<arn:aws:iam::100/role/CMIP6-act>

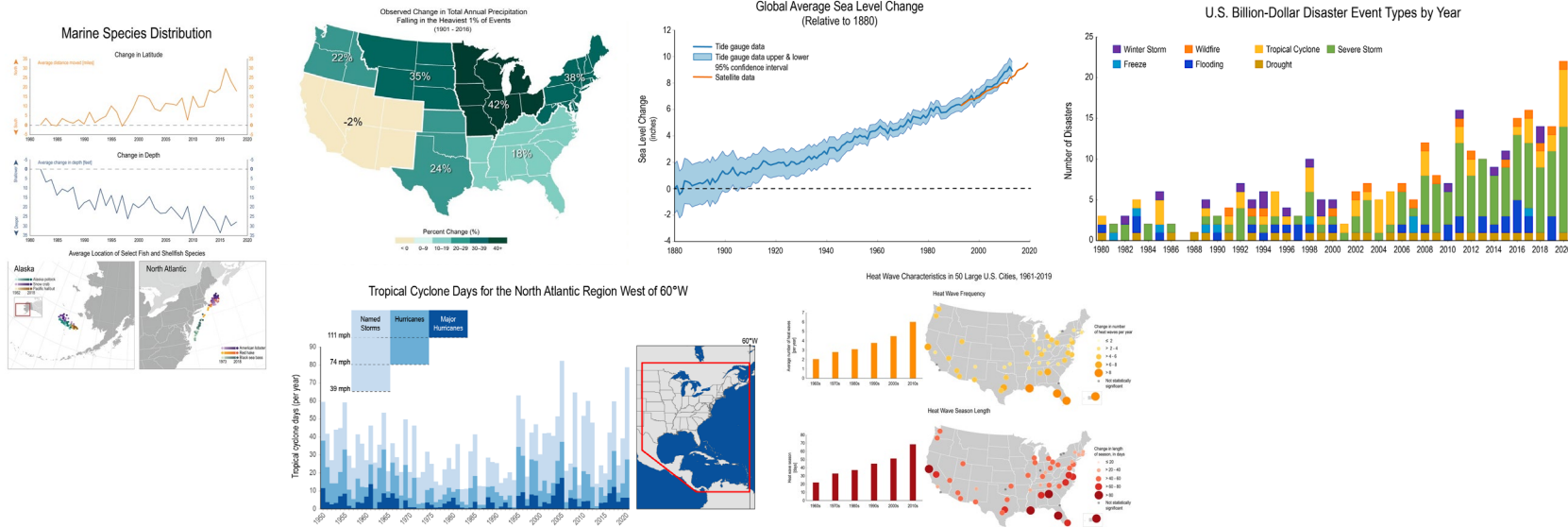
Explore
 Bucket Explorer
 Data Catalog

AWS cloud capability for CMIP6 + downscaled data evaluation

Key Accomplishments (FY17-21)



Quality - Indicators



- Maintain diverse set of 18 interagency Assessment-quality **climate indicators**
- Added **6 new indicators** since 2018
- Highlighted various agency indicator efforts

Key Accomplishments (FY17-21)



Quality - Program

Allison Crimmins, NCA5 Director:

“CPO is a crucial partner in developing the National Climate Assessment. CPO staff play an active role on the **Federal Steering Committee**, helping **guide decisions** on the scope of the report and the finer details of the development process. The **institutional knowledge** and expertise from previous assessments has supported the development of author guidance for NCA5.

The CPO office provides **input on technical questions** around the assessment, like choices of scenarios or downscaling methods, and provides thorough reviews of the report drafts. CPO is also critical in the "people" side of the report in their **support of our all-author meetings and translation services**, which ensures more people and more diverse perspectives can be included in the National Climate Assessment. CPO has already played a **key role in the communication** of the assessments and development of education materials derived from the NCAs and we hope that work will continue for NCA5.”

Key Accomplishments (FY17-21)



Relevance

Strategic Partnerships

NOAA

- **NESDIS:** Technical Support Unit, Data/Monitoring
- **NMFS:** Leadership on ecosystems and marine resources
- **NOS:** Leadership on sea level rise and coastal issues
- **OAR Labs:** Modeling, climate science
- **NWS:** Regional climate
- **OAR Programs:** OA, CPO (RISA)

Academia: Authors from dozens of institutions

Federal agencies: All 13 USGCRP agencies and departments

Private sector: Authors from a number of private sector organizations

Actively engaged with various NOAA/CPO priorities: Foundational to the adaptation and mitigation agency goals, and the authorizing legislation for the Climate Program Office and broad federal climate activities

NOAA staff are serving in **leadership roles on almost half of NCA5's 31 chapters** and NOAA has **35 authors serving on 19 of the 31 chapters** (around 20% of total interagency authors).

- **Drivers:**

- NCA5 slated for release in 2023
- NCA6 expected window 2024-2028

- **Some Strategic Considerations:**

- Deepen OAR laboratory involvement and engagement
- Provide opportunities for early career staff at NOAA
- Stabilize and grow support for Sustained Assessment Coordinators
- Enhance budget to support development of next-generation NCA capabilities
- Evolve NCA structure and delivery while still meeting Congressional mandate