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# Introduction to the U.S. Global Change Research Program for the Economics Community

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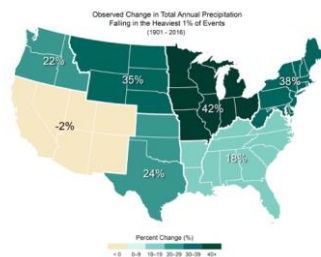
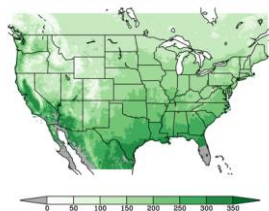
# About USGCRP

- The U.S. Global Change Research Program began as a Presidential initiative in 1989 before being mandated by Congress in the U.S. Global Change Research Act of 1990
  - Goal is “to assist the Nation and the world to understand, assess, predict, and respond to **human-induced and natural** processes of global change”
- Overseen by the Subcommittee on Global Change Research, composed of representatives from the science arms of each of USGCRP’s 13 member agencies



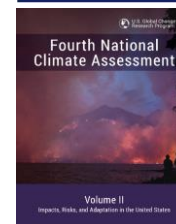
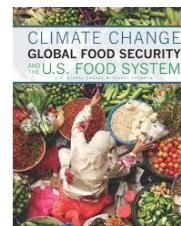
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# USGCRP activities



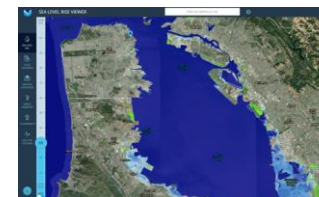
**Advance  
Science**

**Deliver  
Mandated  
Products**



**Enhance International  
Cooperation**

**Inform  
Decisions**



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# 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)*

- Draft prospectus currently out for public comment **until January 11**
  - <https://www.globalchange.gov/notices>
- New plan expected **in late 2022**



# Economics in USGCRP: looking backward

- USGCRP was created to coordinate climate research
- Over time, feedback from the National Academies and the public has driven USGCRP to integrate economics and other social sciences
- The National Climate Assessment has been a motivating force for multi-sectoral modeling efforts
  - E.g. EPA's 2017 report "Multi-Model Framework for Quantitative Sectoral Impacts Analysis" (CIRA II) was an input to the Fourth National Climate Assessment
  - <https://www.epa.gov/cira>



# Economics in USGCRP: looking forward

- Social sciences, including economics, are receiving increasing attention
  - Interagency group focused on approaches to benefit cost analysis in the context of climate change
  - Integrating economic models with hydrological, terrestrial, and climate models
    - This includes efforts to connect the Integrated Assessment Modeling and MultiSector Dynamics communities with other physical modeling communities
- Building relationships with economic agencies

**We welcome input on how we can be useful to the economics community**



# National Climate Assessment (NCA)



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# Purpose of the NCA

*Global Change Research Act of 1990, Section 106:*

Not less frequently than every 4 years [USGCRP] shall prepare and submit to the President and Congress an assessment which:

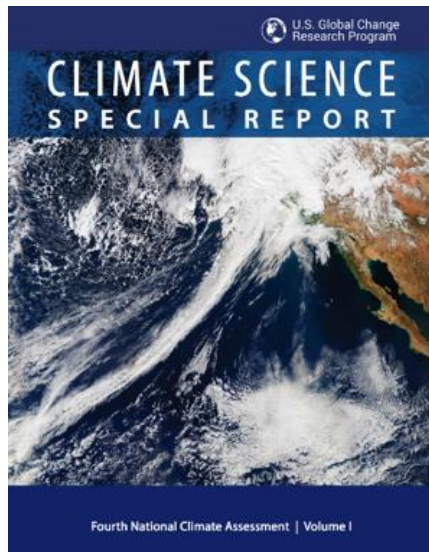
- Integrates, evaluates, and interprets the findings of [USGCRP] and discusses the scientific uncertainties associated with such findings
- Analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, **human health and welfare, human social systems**, and biological diversity
- Analyzes current trends in global change, both human- induced and natural, and projects major trends for the subsequent 25 to 100 years.



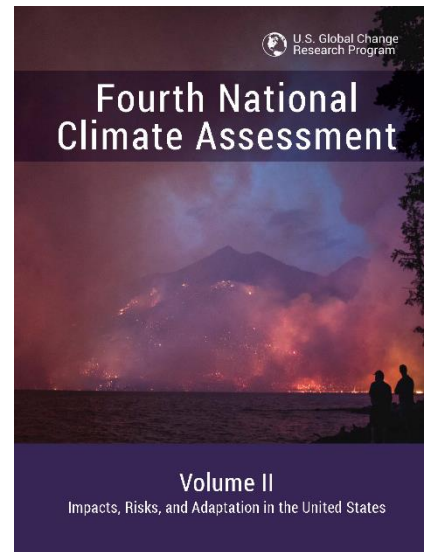


# Fourth National Climate Assessment

- The Fourth NCA (NCA4) was developed in two volumes
- Summarizes current and future impacts of climate change



[science2017.globalchange.gov](https://science2017.globalchange.gov)



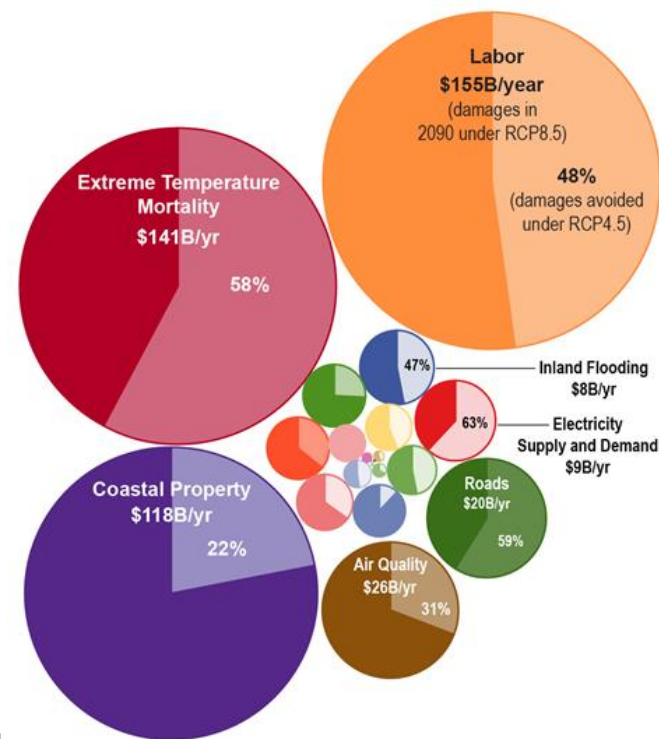
[nca2018.globalchange.gov](https://nca2018.globalchange.gov)



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# Economics Integration in NCA4

- NCA4 made large advances in integrating economic information into discussions of climate impacts and adaptation
  - This is partially due to an explosion in the climate economics literature
- Economic benefits of climate action and inaction
- Economic impacts of climate change
- Economics appears as a component of complex models, and some multi-sectoral models are called out



# Fifth National Climate Assessment (NCA5)

- The upcoming NCA5 contains 32 chapters that fall into four categories: climate science, national impacts, regional impacts, climate response
  - See [globalchange.gov/nca5](https://globalchange.gov/nca5) for the full list
- A few example chapters of relevance to economics:
  - Sector Interactions, Multiple Stressors, and Complex Systems
  - Adaptation
  - Mitigation
  - **(New)** Human Social Systems
  - **(New)** Economics



# NCA5 Economics Chapter

- Chapter team leadership
  - Federal Leads: Jeremy Martinich (EPA), Monica Grasso (NOAA), Rudy Schuster (USGS)
  - Lead Author: Solomon Hsiang (UC Berkeley)
  - USGCRP point of contact: Austin Scheetz
  - Author team hailing from a variety of agencies and institutions
- The chapter is charged to cover the impacts of climate change on U.S. economic systems and the implications of these impacts for Americans
- Specific content of the chapter is still largely TBD, and we are about to launch a public input period to collect feedback on this



# Broader Economics Consideration in NCA5

**Content is determined by NCA5 authors and changes in response to several rounds of review**

A few possibilities for NCA5:

- Quantification and monetization of climate impacts where appropriate
- Economic dimensions of climate change
  - Microeconomic and macroeconomic impacts
  - Economics of adaptation and mitigation
- Economic inequality and environmental justice
- Economic drivers of climate change



# NCA5 process update

## Near-term

- Regional/Sectoral Engagement Workshops
  - Economics workshop: January 31, 2022 (link for info on next slide)
- Public comment on Zero Order Draft

## Longer-term

- 3<sup>rd</sup> order draft planned for fall 2022 for public & NASEM review
- Report release in late 2023



# Engagement opportunities

## ✓ Provide feedback on NCA5

- Workshops start this week, and the public release of the Zero Order Draft is expected imminently
- Visit [globalchange.gov/nca5](https://www.globalchange.gov/nca5) for more information and links to register for the workshops

## ✓ Comment on the strategic plan Draft Prospectus before January 11

- Visit [globalchange.gov/notices](https://www.globalchange.gov/notices) for more information

## ✓ Stay in the Loop

- Newsletter: <https://www.globalchange.gov/newsletter-signup>
- Twitter: @usgcrp



Questions or comments?





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# Thank you!

Austin Scheetz  
Fred Lipschultz

Connect with us:



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## Additional questions or suggestions?

Feel free to reach out: [ascheetz@usgcrp.gov](mailto:ascheetz@usgcrp.gov), [flipschultz@usgcrp.gov](mailto:flipschultz@usgcrp.gov)



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