

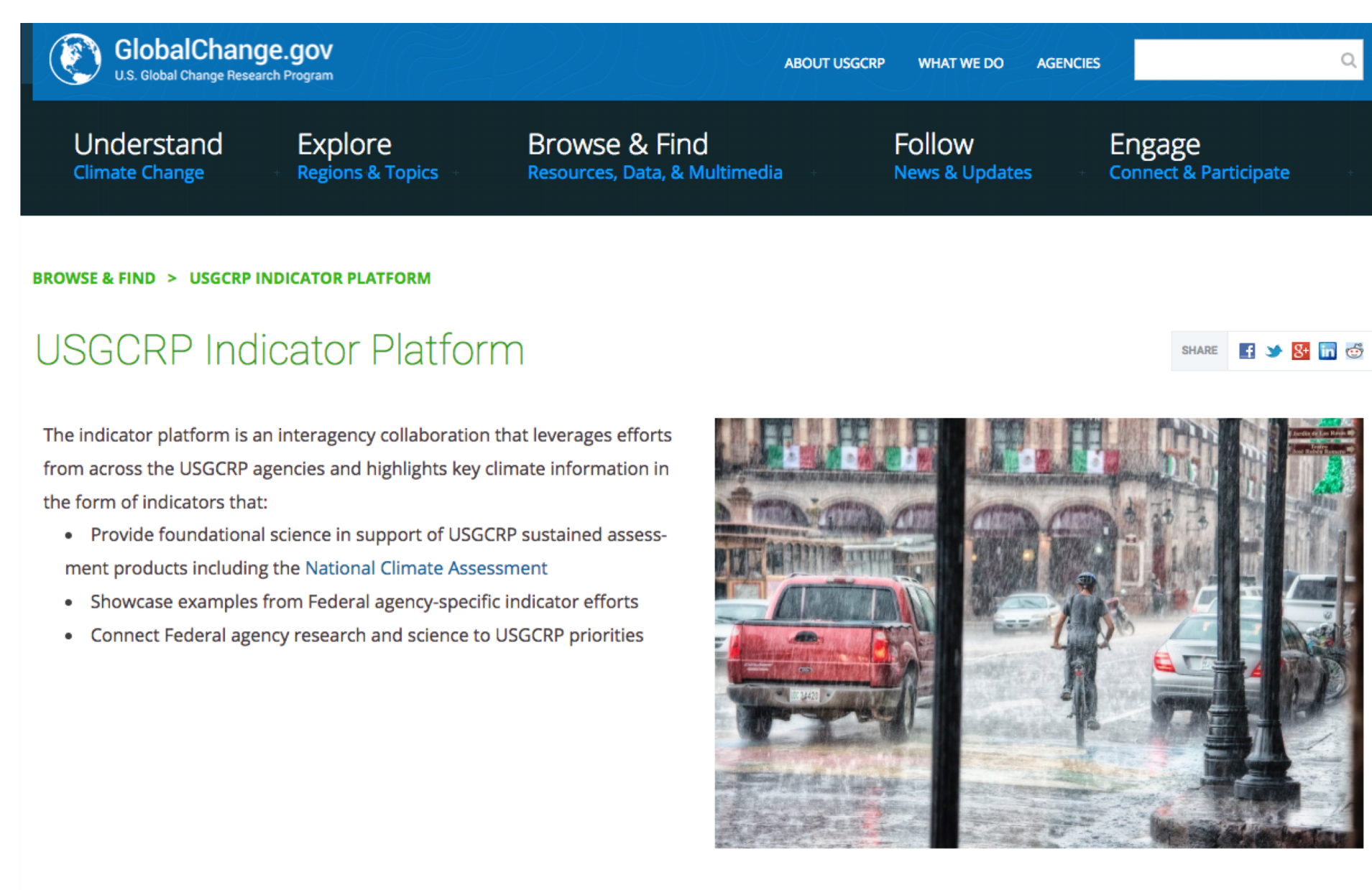
# Curating a Multi-Agency Set of Federal Climate Indicators

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## The USGCRP Indicators Platform

The **Indicators Interagency Working Group (IndIWG)** facilitates the development of a **U.S. Global Change Research Program (USGCRP)** indicators effort. The IndIWG's primary focus is leveraging existing operational and research-oriented indicator efforts to support USGCRP sustained assessment activities.

The **USGCRP Indicators Platform** highlights global change indicators and related federal activities: [globalchange.gov/browse/indicators](http://globalchange.gov/browse/indicators)



The **USGCRP Indicators Catalog** resides within the Platform and currently contains 16 climate change indicators:

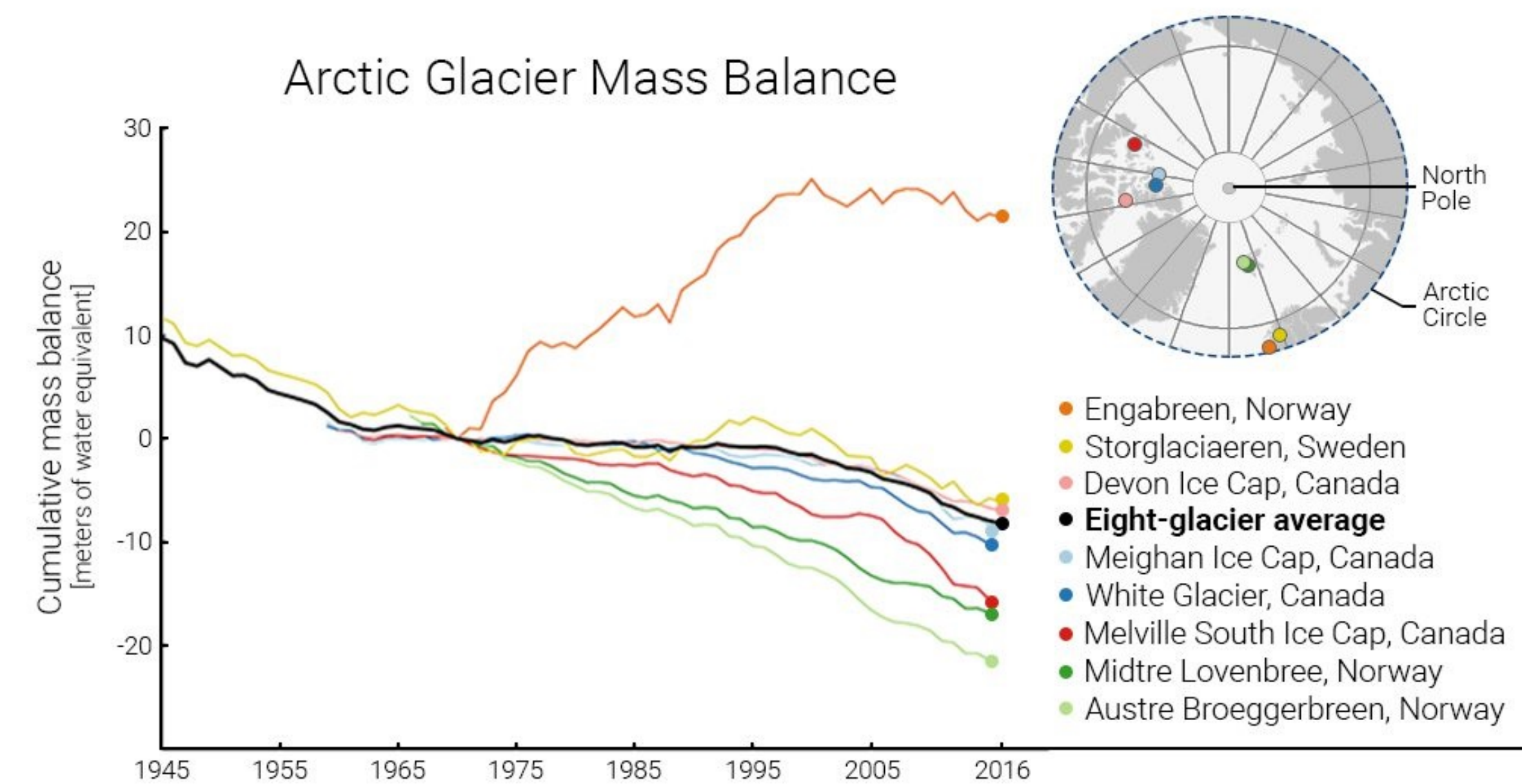
- Annual Greenhouse Gas Index
- Arctic Glacier Mass Balance
- Arctic Sea Ice Extent
- Atmospheric Carbon Dioxide
- Billion Dollar Disasters
- Frost-Free Season
- Global Surface Temperatures
- Heat Waves
- Heating and Cooling Degree Days
- Heavy Precipitation
- Ocean Chlorophyll Concentrations
- Sea Level Rise
- Sea Surface Temperatures
- Start of Spring
- Terrestrial Carbon Storage
- U.S. Surface Temperatures



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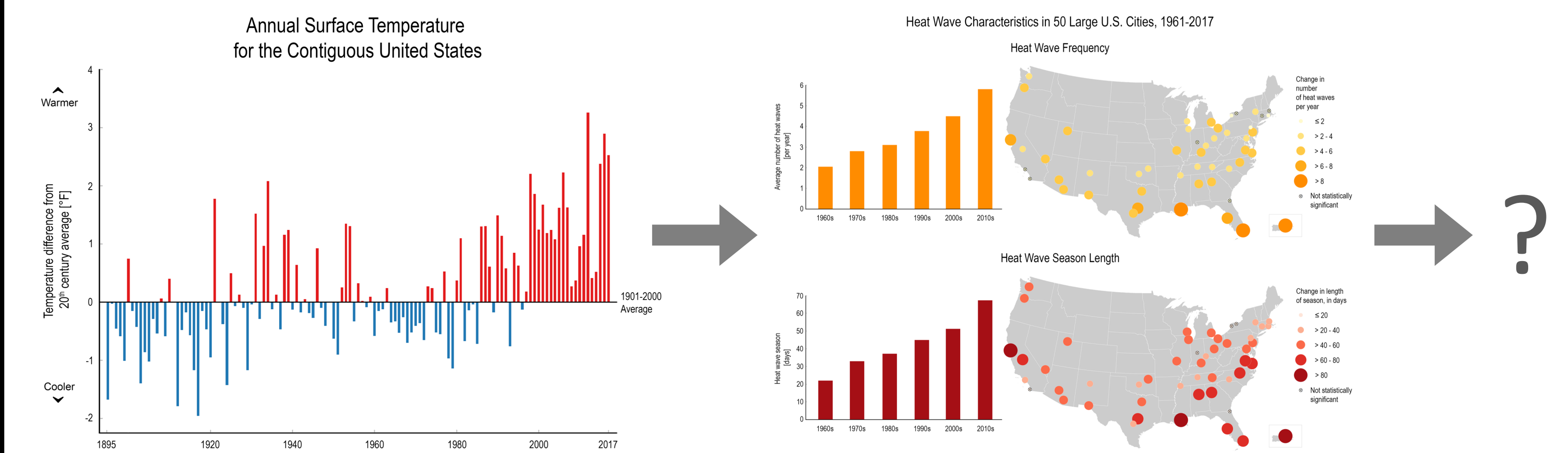
## What is an Indicator?

**Indicators are observations or calculations that can be used to track conditions and trends.** Indicators of climate change can communicate key aspects of our changing environment, identify vulnerabilities, and inform decisions about policy, planning, and resource management. Such indicators are an important part of the vision for the sustained National Climate Assessment.



## Expanding the Indicators Set

Current plans include expanding the indicators set beyond pure climate science to include **climate change impacts, social and economic indicators, and measures of vulnerability and resilience.**

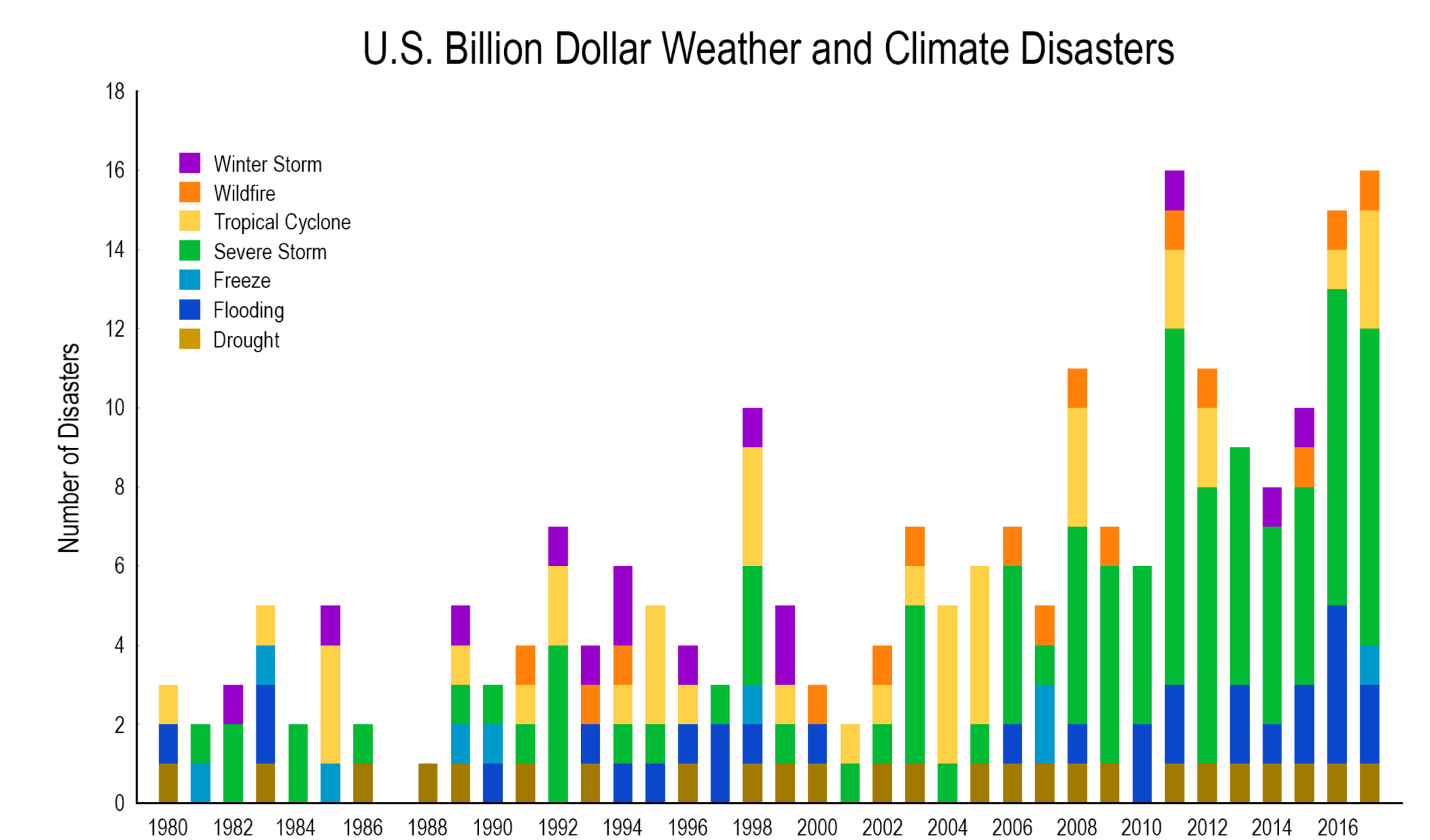
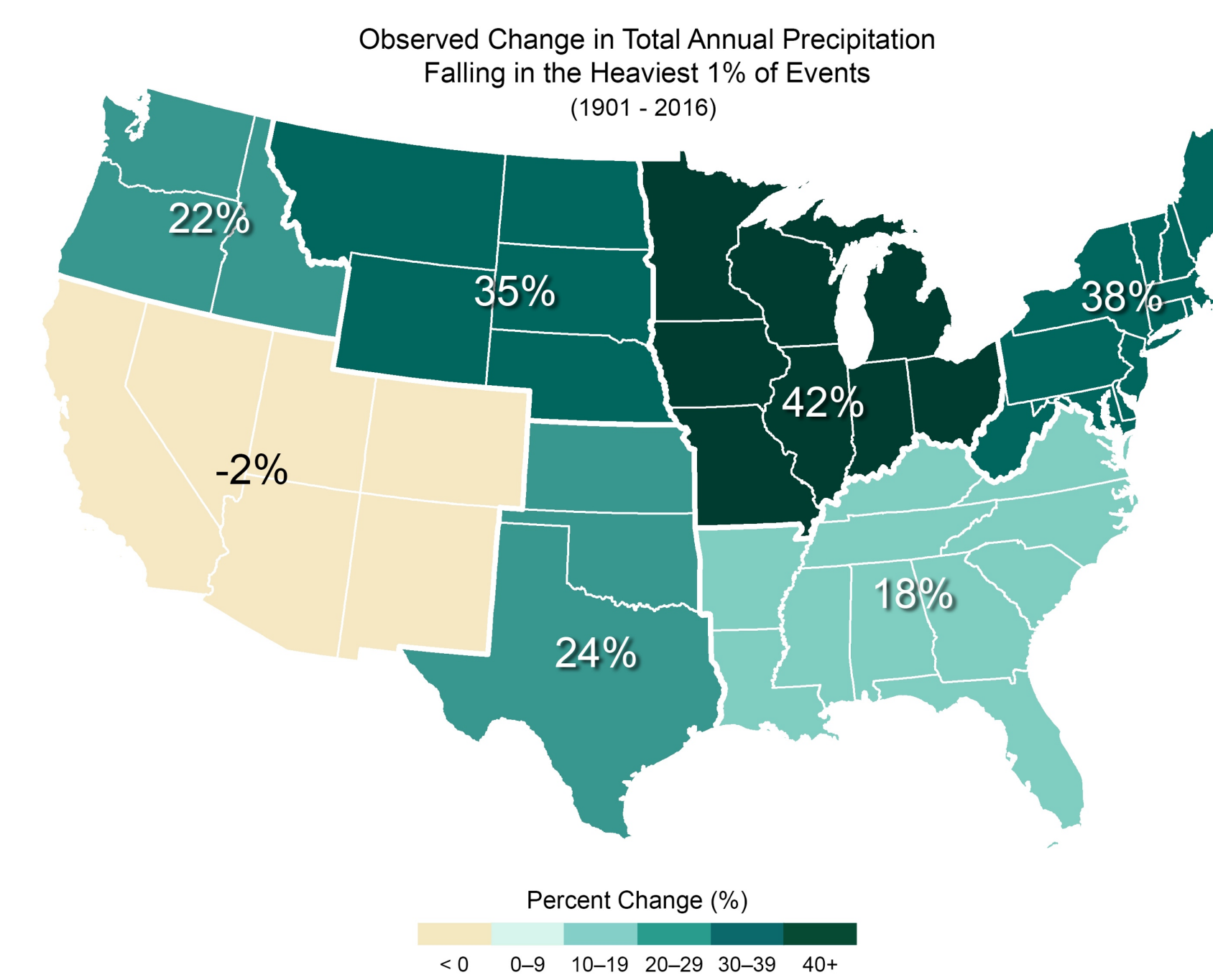


As an example, the current USGCRP Indicators Catalog includes global and national temperature indicators, as well as an indicator detailing heat wave characteristics in 50 U.S. cities. A logical next step may be to create an indicator related to climate impacts, such as heat-related deaths. A future indicator exploring how humans adapt to increasing temperatures could also be envisioned.

## What Makes a Good Indicator?

A quality indicator should:

- Have a **clear relationship to a changing climate.**
- Illustrate the **change in a relevant variable over time.**
- Be **understandable** and easy to interpret.
- Cover a **relevant geographic area.**
- **Fill a knowledge gap** in the current set of indicators.
- Be **based on federally supported data.**
- Be **updated at regular intervals.**
- Have been **scientifically vetted** (i.e., peer reviewed).
- **Link to related agency work** or resources.



USGCRP Indicators meet a **high standard of scientific integrity.** The IndIWG leverages tools and expertise from the National Climate Assessment Technical Support Unit in order to provide **full data transparency and reproducibility** for every indicator.

The indicators and their underlying datasets are **fully documented and publicly accessible** via USGCRP's Global Change Information System (GCIS).

[globalchange.gov/browse/indicators](http://globalchange.gov/browse/indicators)



[ncics.org](http://ncics.org)  
[ncsu.edu](http://ncsu.edu)  
[ncei.noaa.gov](http://ncei.noaa.gov)

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