Extending the Climate Data Initiative to GeoPlatform.gov

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NASA

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

IMPACT
Interagency Implementation and Advanced Concepts Team

Climate Data Initiative

- The CDI data collection is composed of approximately 700 freely available federal datasets curated by subject matter experts into 9 thematic areas.

- NASA was appointed as the lead agency in developing the Climate Data Initiative's web presence (climate.data.gov launched March 19, 2014).

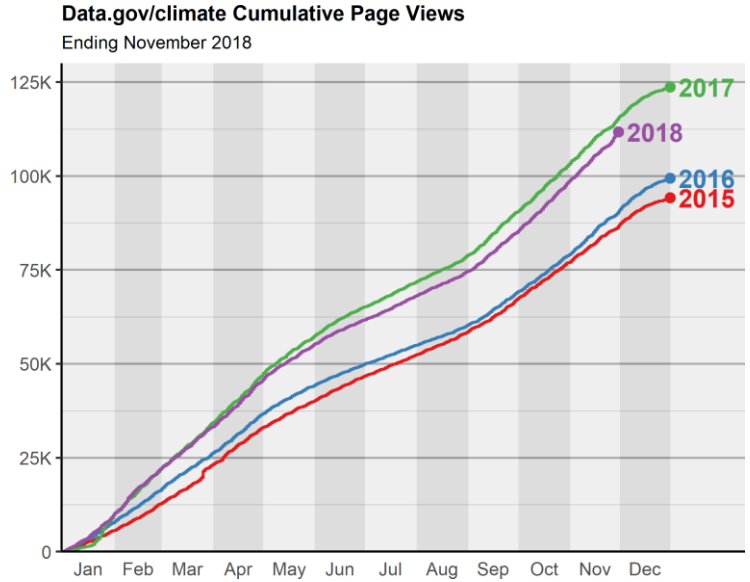
- We continue to maintain the collection and provide periodic updates as needed.

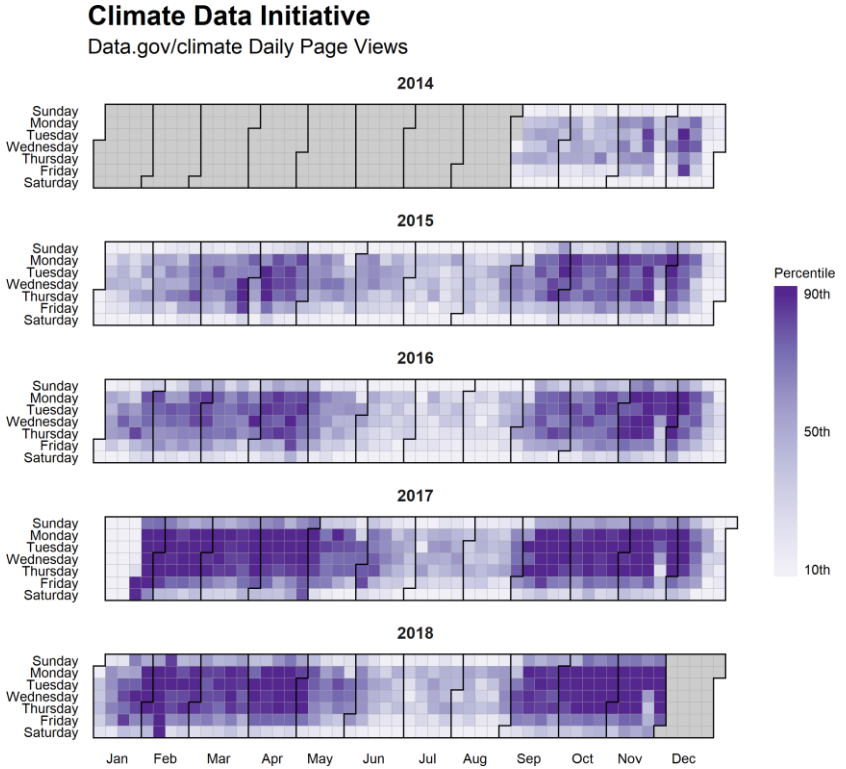
- See Ramachandran et al. 2016 in *Computers & Geosciences* for more.

DATA.GOV

Sustained Relevance of the CDI Collection

- Curation should not be a one-off process. As long as the curated collection is relevant, it requires periodic updates and monitoring to maintain both its quality and value to end users (Ramachandran et al. 2016).
- Our primary responsibility is digital curation, i.e., maintaining, preserving, and adding value to digital research data throughout its lifecycle.





More Than Just Datasets

- Data are increasingly served through a variety of web services that offer access, visualization, and subsetting capabilities:
  - ESRI REST services
  - OGC web services (WCS, WMS, WFS, etc.)
  - OPeNDAP

1. Service endpoints are not always associated with the relevant dataset(s).
2. Service endpoints are sometimes mislabeled or buried among dozens of other related resources.
3. Services may have a steep learning curve for first-time users.

GeoPlatform.gov

- The Geospatial Platform is a Federal Geographic Data Committee (FGDC) initiative that provides shared and trusted geospatial data, services, and applications for use by the public and by government agencies and partners to meet their mission needs.

- The GeoPlatform is an online portal that enables the sharing of geographic data, maps, and online services with the public.

- Portfolio - A group of resources, assets, product and/or service offerings of an organization or community

- The **GeoPlatform Portfolio Model** is the information model of business objects representing the assets of a geospatial portfolio.

  - NOAA
  - NASA
  - DOI
  - FEMA
  - EPA
  - USCB
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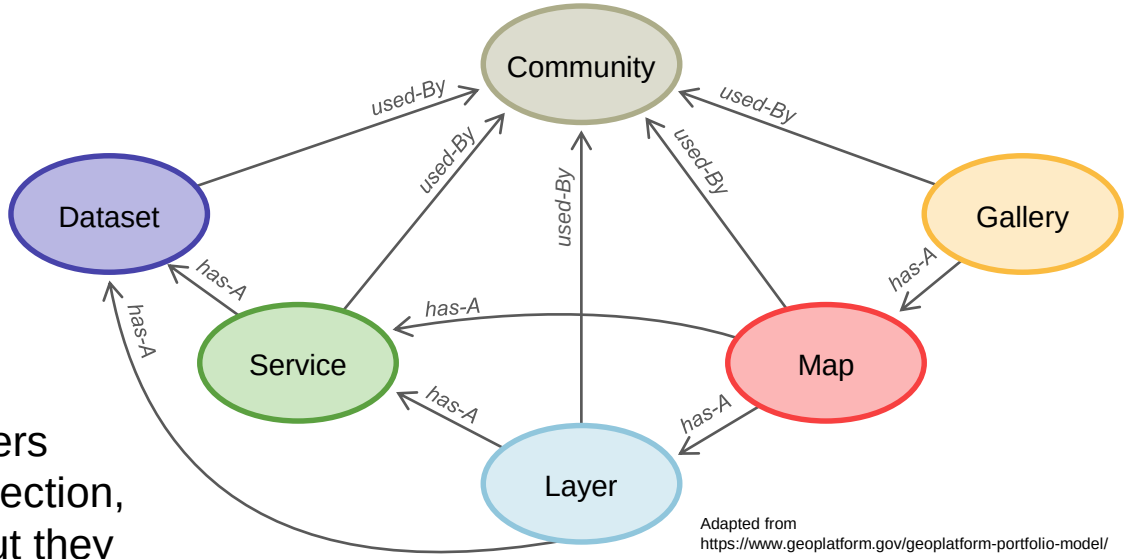
GeoPlatform.gov

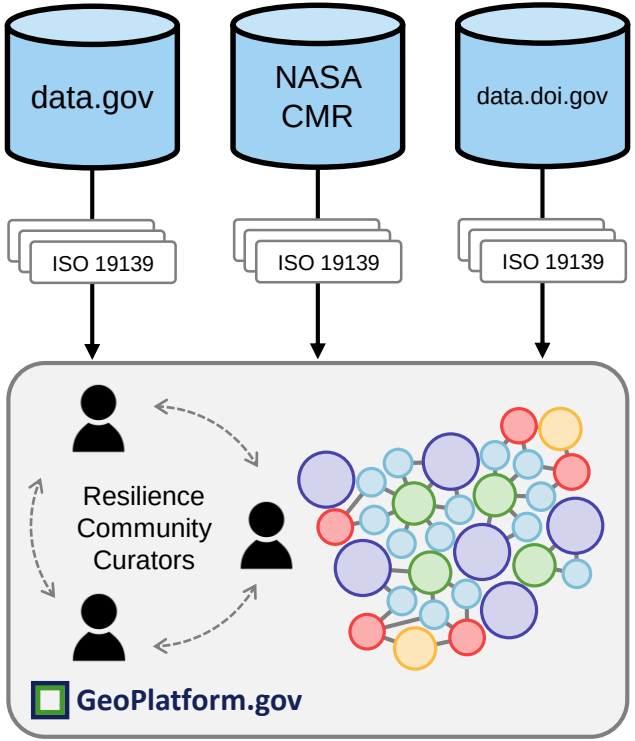
- Core business objects:
  - Datasets
  - Services
  - Layers
  - Maps
  - Galleries
  - Communities

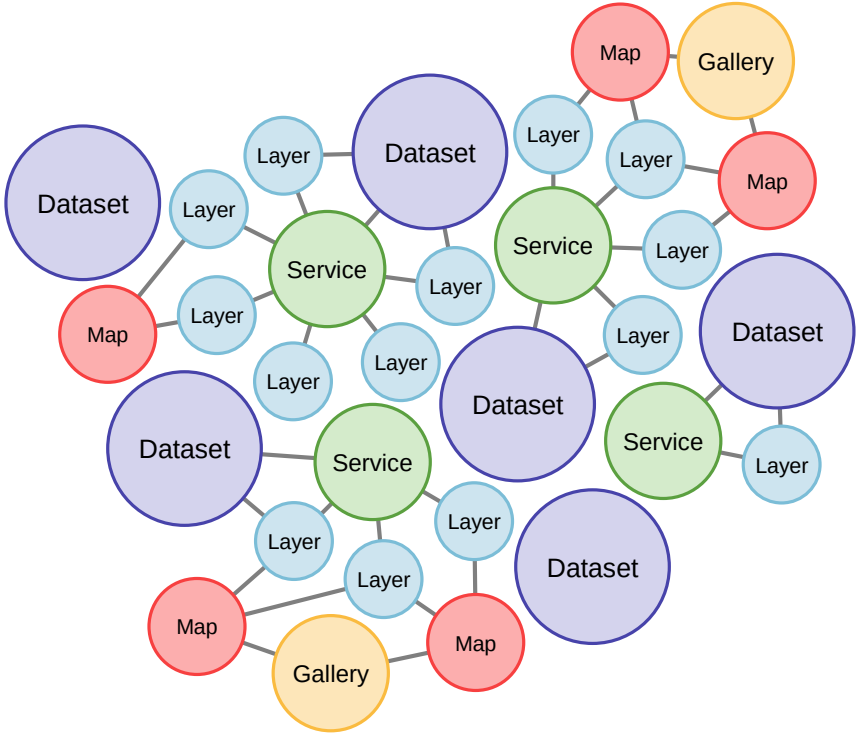


- Hundreds of services and layers were curated into the CDI collection, either explicitly or implicitly, but they are not always represented as such.

- Objects are often disjointed and scattered about the Web. We are attempting to overcome this by establishing relationships between objects.

Curating the CDI Geospatial Portfolio

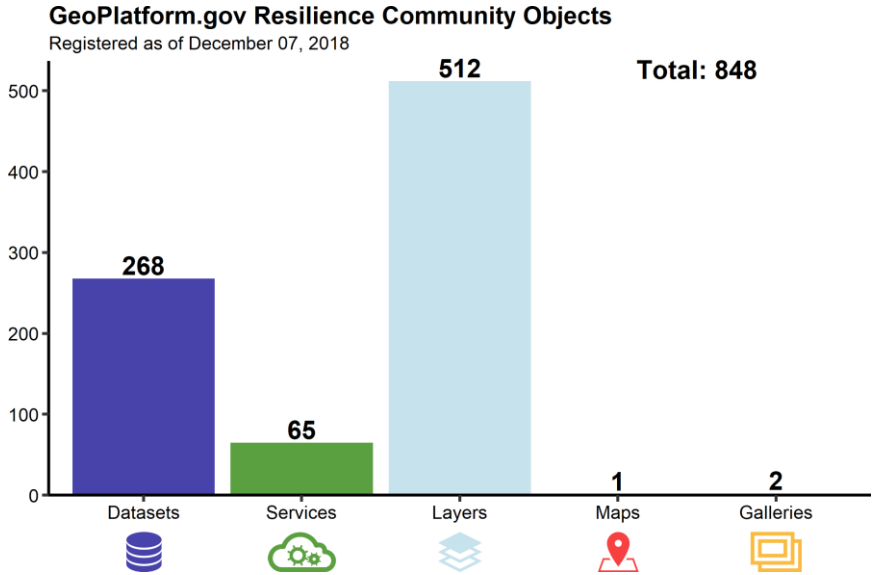




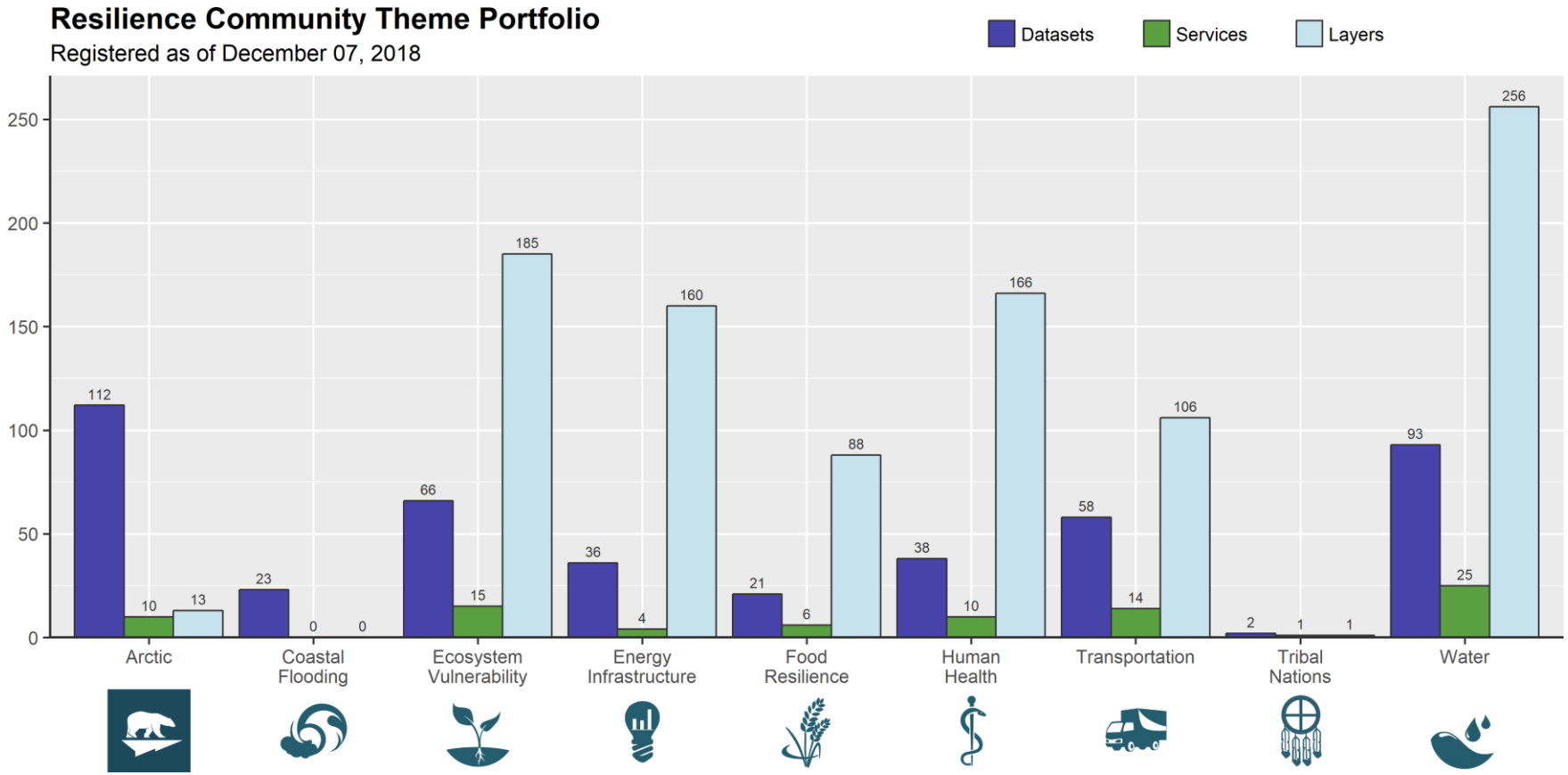
Network of linked portfolio objects

GeoPlatform.gov Resilience Community

- Our mission is to ensure CDI objects are discoverable, accessible, and usable within the GeoPlatform ecosystem.
- https://communities.geoplatform.gov/resilience UNDER CONSTRUCTION
- Relevant Data.gov/climate content PLUS:
  - Filtered search widgets (theme, object type, etc.)
  - Map widgets featuring related layers
  - Galleries to house related objects (e.g., NTAD, EnviroAtlas, etc.)



Resilience Community Portfolio



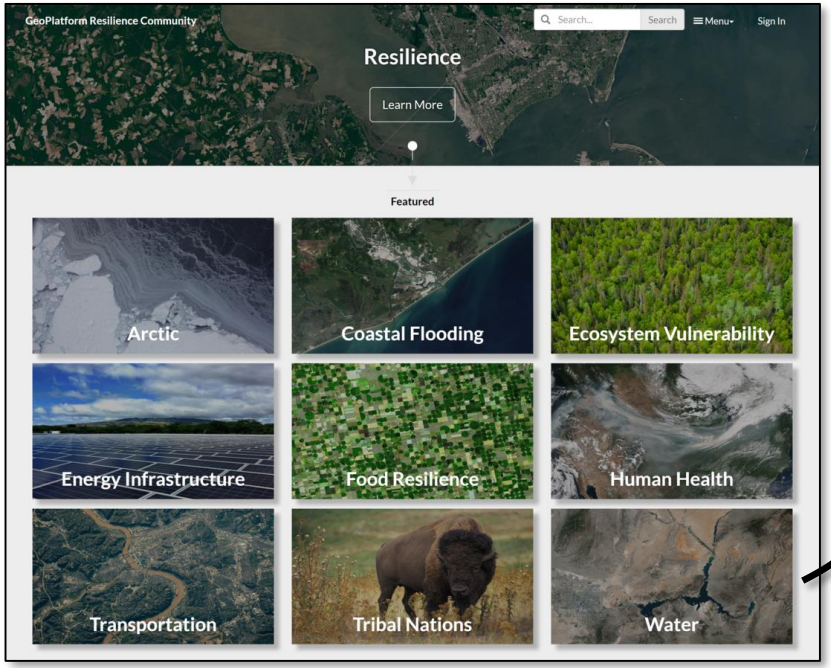
Discovery and Use of Objects

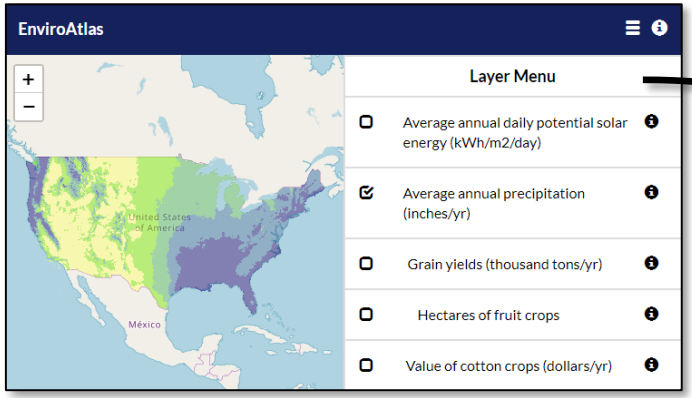
Resilience Community

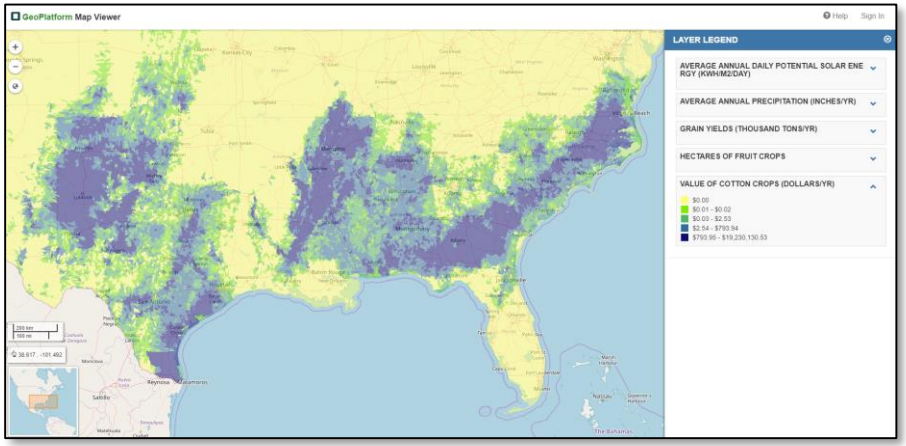
What does curation of the CDI collection on the GeoPlatform enable?

- Users can search and discover datasets, then access them via the providing agency.
- Users can discern whether or not the dataset is service enabled. → **Service Enabled?** YES NO
- Users can search and discover services and determine the status before attempting to use. → **Service Status?** ONLINE OFFLINE
- Layers are made available for use by other communities.
- Users can search and discover layers and add them to their target map.

Resilience Community Widgets







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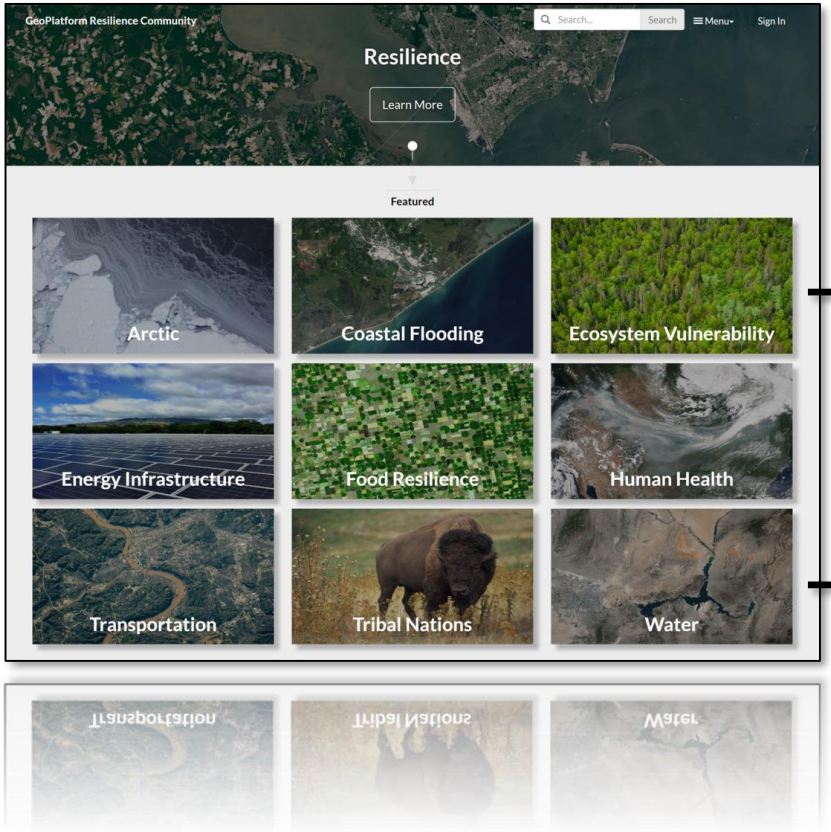
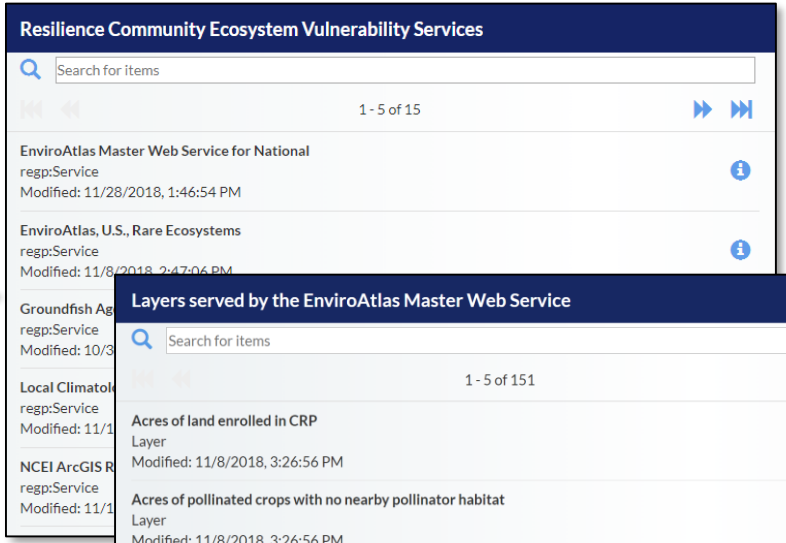
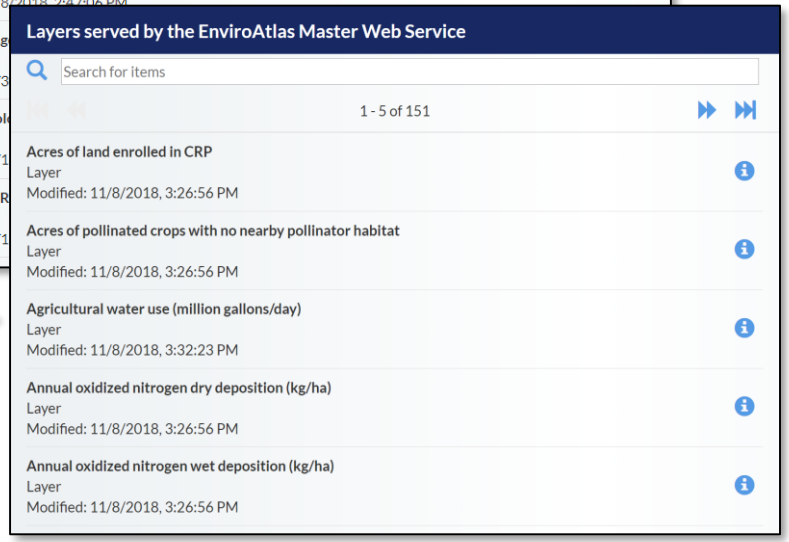
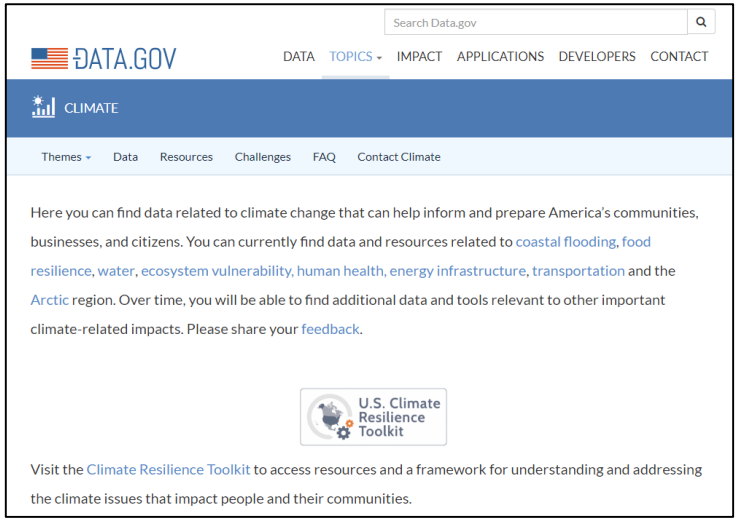




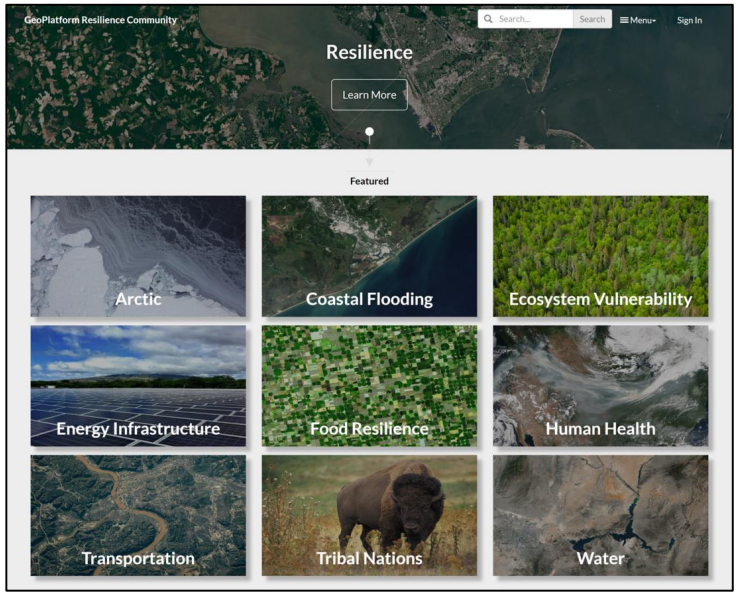


GeoPlatform.gov Resilience Community

Data.gov/climate



GeoPlatform Resilience Community



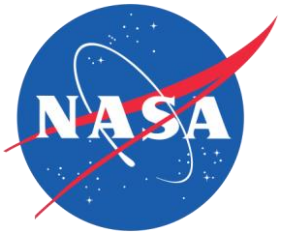
Outcomes and Next Steps

- The sharing of trusted geospatial resources is achieved through:
  1) The publication of relevant content in individual communities
  2) Objects being “used by” or identified as important to any number of communities
     - Resilience & Homeland Infrastructure Foundation-Level Data (HIFLD)
     - Resilience & National Geospatial Data Asset (NDGA)

- Object Editor is adequate for curating “smaller” collections of objects.

- Agencies will need a more streamlined/hands-off method of ingest and curation; automated solutions are in development.

- Collaboration works:
  - We have added value to the CDI collection through object augmentation.
  - The process has allowed for significant testing and use of the GeoPlatform (identified bugs, suggested new functionalities, and offered new use cases).

Questions

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