Communicating GIS and Climate Impacts with the Public Using Data.gov Geospatial Data

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Project Overview
This project created a workbook which teaches Earth Science to undergraduate and graduate students through guided in-class activities and take-home assignments organized around climate topics which use GIS to teach key geospatial analysis techniques and cartography skills.

Methods and Resources
The workbook is structured around the White House’s Climate Data Initiative (CDI) climate change themes. Each theme provides access to framing questions, associated data, interactive tools, and readings. Thematic areas were divided over the course of a semester. Time was divided between identifying and discussing issues and addressing them using CDI-catalogued datasets and GIS techniques. Each climate change theme thus formed a module.

Lesson Structure
Lessons include instructions and explanations, along with questions to guide further exploration:
- Beginner lessons serve as an introductory study and rely on freely available interactive tools to reach audiences with fewer resources and less familiarity.
- Advanced lessons present a case study and focus on supporting common commercially available tool use and real-world analysis techniques.

Results and Conclusions
Within the thematic approach, we ensured that critical geospatial concepts were adequately explained and demonstrated to the student, and then performed by the student. Additionally, by relying on the CDI, we were able to foster a greater familiarity with issues and data, and to ensure students acquired the critical skill of locating appropriate data with minimal guidance.

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