Project Summary

Overview

Addressing climate change effectively requires understanding the interplay between policy, politics, and public opinion. Understanding how public opinion on climate change affects policy—especially across partisan lines, urban-rural divides, and gender differences—is crucial as polarization challenges the implementation and sustainability of climate reforms. Research in this area, however, has been impeded by the absence of data on public opinion that is comparable across countries and over time. The Climate Change Public Opinion Database (CCPOD) aims to overcome these challenges by using a Bayesian Item Response Theory latent-variable model on survey data drawn from national, regional, and global projects to generate a time-series cross-national dataset. We have currently collected data from 93 different survey projects from 1992 to 2022, providing a foundation for further data expansion and latent variable measures. The proposed research comprises four principal activities: (1) acquiring more surveys to expand the source data, (2) assessing and improving the latent-variable model to ensure its estimates are comparable when and where survey data are particularly sparse, (3) developing and testing various methods for generating estimates of polarization in climate-change views, and (4) implementing a web-based system for disseminating the CCPOD to researchers, educators, and policymakers worldwide.

Intellectual Merit

Scholars in political science, economics, public policy, environmental engineering, ecosystem science, and other social and natural sciences have long sought to address climate change due to its lasting effects on economic development, human rights, social justice and equality, voting behaviors, and political violence. Understanding public opinion is crucial for the feasibility and sustainability of policy interventions. Policies that align with public attitudes are more likely to gain the necessary support for implementation and endure over time. Without robust public backing, even the most scientifically sound and economically beneficial policies risk failure. Therefore, comprehensive and reliable public opinion data is indispensable for crafting effective and enduring climate policies across various fields. Building and supporting the CCPOD database is central to promoting scientific progress on these topics and aligns with NSF priorities outlined in the NSF Strategic Plan 2022-2026, particularly in advancing frontiers of research by building research infrastructure and data access, facilitating international engagement in science, and capitalizing on interdisciplinary developments to advance responses to global environmental change.

Broader Impacts Of The Proposed Work

The CCPOD will serve as a crucial research infrastructure for researchers, educators, students, policymakers, non-governmental organizations, and news agencies worldwide, fostering both within-country and cross-national work on public opinion, polarization, and the response to climate change. Dissemination of the resulting estimates will enhance our understanding of the relationship between public opinion and climate policies, ultimately contributing to more informed and effective climate change action. We will achieve broad dissemination through conference presentations, scholarly publications, and a web interface. This aligns with NSF's commitment to making knowledge accessible to policymakers, the public, and researchers. Moreover, this project will promote teaching by providing CCPOD's web-based graphical interface with user-friendly functionality to facilitate its use for teaching and learning data analytics and by employing graduate research assistants, especially members of marginalized groups, who will develop valuable new skills in this important interdisciplinary field.