

Government Action and Climate Science

Executive Summary¹

Government actions currently account for a majority of climate cases. As more laws related to climate change are enacted, courts will increasingly confront questions about climate science across a broad array of administrative cases. To illustrate the scientific issues and questions that judges will face, this module focuses on litigation involving federal environment and land use planning laws. It explains how courts can use scientific data to evaluate legal obligations related to pollution control, environmental impact assessment, permitting, land use decisions, natural resource management, and endangered species protection.

Standing to sue for climate-related injuries is a commonly litigated issue in these cases. On this front, courts can use climate science to determine whether a plaintiff has suffered an injury and whether that climate change-related injury can be fairly traced to administrative action (or inaction) at issue. To flesh out the causal chain, detection and attribution science informs how greenhouse gas emissions are contributing to changes in the climate system and other connected systems, while predictive research lends insight to future climate impacts.

Courts confront cases involving the regulation of greenhouse gas emissions under climate and air pollution statutes. Specifically, courts will encounter arguments about climate science when governments defend greenhouse gas regulations, and when plaintiffs seek new or more stringent greenhouse gas regulations. In either context, courts will face the same scientific issue of whether there is evidence that greenhouse gas emissions from a given source are causing or contributing to harm. Courts may encounter research on the availability, efficacy, cost, and feasibility of greenhouse gas mitigation techniques for various industries, as well as attribution research and predictive science on the efficacy and impact of control measures.

Considerations of climate science arise in environmental review, permitting and land use litigation. Some cases primarily deal with government obligations to assess greenhouse gas emissions from project authorizations and land use decisions. In these instances, source attribution data and greenhouse gas estimate techniques can be used to evaluate the feasibility for an agency to quantify emissions, while physical climate science can be used to demonstrate the effects of greenhouse gas emissions on climate impacts. Other cases will confront the question of whether the government has considered the effects of climate change on proposed projects and land uses when conducting environmental, permit, and plan reviews. For litigation involving types of climate impacts and risk disclosures, climate science can help demonstrate that the effects of climate change on an area, activity, or facility are reasonably foreseeable.

Disputes regarding the use of climate science in administrative decision arise in the context of Endangered Species Act (ESA) litigation. In ESA litigation, courts confront questions about the scientific integrity of listing decisions (or denials of listing petitions), critical habitat

designations, biological assessments, jeopardy determinations, and recovery plans. ESA decision making relies on attribution and predictive science to inform the effects of climate change on species and habitats at present and in light of future climate trends.

Scientific research has generated valuable data that can be used to inform a wide array of administrative decisions and disclosures. Courts are integral to determining whether an agency has meaningfully engaged with and reasonably interpreted climate science. They have already played an important role in promoting the sound utilization of climate science by government agencies, holding that agency determinations must reflect changing environmental baselines and consider plausible future climate scenarios. As climate change becomes more severe, courts will confront an even broader array of climate science-related claims.

¹This is a summary of Government Action and Climate Science by Jessica Wentz.