

Environmental Research and Management



RTI International is a world leader in environmental and health services. Our expertise in environmental research, management, and analysis enables our government clients to make scientifically based decisions about environmental policy and regulatory development and assists our private-sector clients with permitting, compliance, and management concerns.

Areas of Expertise

RTI's multidisciplinary staff of engineers, scientists, statisticians, economists, epidemiologists, survey specialists, policy experts, and modelers work together to provide our clients with environmentally sustainable practices and innovative, cost-effective solutions to a range of critical issues. Capabilities and services include the following:

- Environmental decision support system development
- Air quality research
- Water quality and water resources management
- Climate change research
- Environmental and natural resource economics
- Ecosystem management and services analysis
- Policy and regulatory development and analysis
- Environmental impact analysis and human health risk assessment
- Environmental information system development
- Environmental systems modeling
- Environmental technology evaluations
- Life-cycle analysis and sustainability
- Industrial sector expertise (in over 50 sectors, including petroleum, metals, electric utilities, mineral products, forest products, and agriculture)
- Geospatial science and technology
- Energy technology development and analysis
- Waste management technology evaluations and decision support
- Food safety risk assessment and modeling
- Environmental measurement and monitoring
- Site characterization, remediation, and brownfield redevelopment
- Outreach, communication, and training
- Information collection methods and survey research
- Epidemiology and environmental health.

Selected Project Highlights

Analysis of Land Use Change/Modeling of Biofuels

RTI economists and engineers are conducting an analysis of the impacts of alternative energy, climate change, and biofuels policies on the U.S. forest and agricultural sector, with a particular focus on the implications for land use change.

Greenhouse Gas (GHG) Reporting Rule

To support the rule-making efforts of the U.S. Environmental Protection Agency (EPA), RTI engineers assessed GHG emissions from 17 sectors of the economy, including developing methods and guidance on how each sector should measure and monitor GHG emissions, and estimating the cost burden associated with these measurement and monitoring methods. Based on this assessment, RTI economists prepared a regulatory impact analysis showing the economic impacts and benefits of each regulatory option for more than 30 sectors of the economy.

Defense Coastal/Estuarine Research Program

RTI is leading this Department of Defense-funded project to conduct environmental modeling and research in coastal, marine, and terrestrial ecosystems. The goals are to gain a better understanding of the impacts of natural and anthropogenic stressors on the ecosystems and then to develop methods, models, and tools that will lead to improved, sustainable management decisions.

Chesapeake Bay Restoration: Comparative Cost Analysis and Ecosystem Services Quantification

In this EPA-funded project, RTI is comparing the cost of traditional infrastructure technology for nutrient removal to land use alternatives such as buffer installation and forestry. RTI geographic information system (GIS) analysts have mapped land use in the watershed, N and P attenuation, and habitats for sensitive species. Researchers are compiling and analyzing the benefits of strategically substituted land uses and performing ecosystem services assessments to value and/or quantify the additional services associated with land use conversions.

Scientific Assessment and Evaluation of Food Safety Risks Throughout the Food Supply System from Farm to Fork

RTI is assisting the Food and Drug Administration (FDA) in developing models, methods, and data to rank, prioritize, and characterize food safety risks. FDA will use these methods to better understand food-related threats to public health, identify research priorities, and select optimal strategies to achieve the greatest reduction in health risks throughout the life cycle of a food product from “farm to fork.”

Abu Dhabi Environment Agency (EAD)—Environmental Assessment and Industry Compliance

RTI is working with EAD to manage their environmental protection programs, including evaluation of their environment, health, and safety management systems; review of environmental studies and impact assessments for new and existing developments; development of data and reporting systems; evaluation of industrial compliance with government regulations; and review of existing environmental strategies and policies with the goal of identifying strengths in the current program and opportunities for enhancements.

Shandong Flue Gas Desulfurization (FGD)

RTI engineers evaluated the feasibility of installing FGD and particulate matter-control technologies at coal-fired power plants in China’s Shandong Province. We focused on assisting electric utility owners and their design institutes to select and specify, based on their site-specific conditions, the most efficient FGD systems to control SO₂ air emissions from seven coal-fired power plants.

Chemical Speciation of PM_{2.5} Filter Samples

In support of EPA efforts to monitor ambient air quality, RTI is providing filter media and analytical support to state and local agencies in the operation of the nationwide PM_{2.5} chemical speciation monitoring network. We analyze more than 1,800 samples per month for this project as part of this effort to provide chemical speciation support to the more than 230 PM_{2.5} monitoring sites established throughout the United States and Puerto Rico.

More Information

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RTI International is an independent, nonprofit research institute dedicated to improving the human condition. Clients rely on us to answer questions that demand an objective and multidisciplinary approach—one that integrates expertise across the social and laboratory sciences, engineering, and international development. We believe in the promise of science, and we are inspired every day to deliver on that promise for the good of people, communities, and businesses around the world. For more information, visit www.rti.org.

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