
Standing Committees

Committee on Earth Resources

The Committee on Earth Resources (CER) serves as the focal point within the Board on Earth Sciences and Resources for activities relevant to mineral and energy resources. The committee is responsible for organizing and overseeing studies on issues relevant to the supply, delivery, and associated impacts of hydrocarbon, metallic, and nonmetallic mineral resources, and mineral and non-mineral energy resource systems. The committee

- monitors the status of mineral and energy resource issues;
- identifies study opportunities and responds to requests from federal agencies; and
- provides a unique forum for discussion and exchange of information among scientists, engineers, and policy makers from government, universities, and industry.

SPONSORS

Bureau of Land Management
Department of Energy- Office of Fossil Energy
Department of Energy- Office of Geothermal Technologies
National Institute of Occupational Safety and Health
Office of Surface Mining

CER Reports 2000-2007

- *Managing Coal Combustion Residues in Mines*
- *Materials Count: The Case for Material Flows Analysis*
- *Future Challenges for the U.S. Geological Survey's Mineral Resources Program*
- *Safety is Seguridad*
- *Summary of a Workshop on U.S. Natural Gas Demand, Supply, and Technology: Looking Toward the Future*
- *Coal Waste Impoundments: Risks, Responses, and Alternatives*
- *Evolutionary and Revolutionary Technologies for Mining*
- *Geoscience Data and Collections: National Resources in Peril*

COMMITTEE MEMBERS

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Colorado School of Mines

Frank Burke
CONSOL Energy Inc.

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Bureau of Land Management (retired)

Michael Doggett
Queen's University

Thomas V. Falkie
Berwind Natural Resources Corporation
(retired)

Patricia M. Hall
BP America, Inc.

David D. Lauriski
John T. Boyd Company

Ann S. Maest
Stratus Consulting

Leland L. "Roy" Mink
Department of Energy Geothermal Program
(retired)

Reginal Spiller
Frontera Resources Corporation

Samuel J. Traina
University of California, Merced

Harold J. Vinegar
Shell Exploration & Production Company

NRC STAFF

Elizabeth Eide
Senior Program Officer

Nicholas D. Rogers
Senior Program Assistant

WEBSITE

<http://dels.nas.edu/besr/cer.shtml>

Geographical Sciences Committee

The Geographical Sciences Committee (GSC) serves as the focal point for activities within the Board on Earth Sciences and Resources relevant to geographical sciences. The committee is responsible for organizing and overseeing studies that bring geographic knowledge and methods to bear on societal and environmental questions, and meet the geographic research and policy needs of federal agencies and other organizations. The Committee also will continue to foster the long-standing ties between the National Research Council (NRC) and the U.S. geography community by providing advice to the National Academy of Sciences (NAS) on all matters pertaining to geography, emphasizing advice to the NAS Foreign Secretary on matters concerning international organizations, programs and research.

In addition, the Committee serves as the official U.S. liaison to the International Geographical Union (IGU), and promotes and facilitates participation of U.S. geographers in the IGU.

SPONSORS

National Science Foundation
U.S. Census Bureau
U.S. Geological Survey

GSC Reports 2000-2007

- *Tools and Methods for Estimating Populations at Risk from Natural Disasters and Complex Humanitarian Crises*
- *Contributions of Land Remote Sensing for Decisions about Food Security and Human Health: Workshop Report*
- *Learning to Think Spatially: GIS as a Support System in the K-12 Curriculum*
- *GIS for Housing and Urban Development*
- *Community and Quality of Life: Data Needs for Informed Decision Making*
- *Down to Earth: Geographical Information for Sustainable Development in Africa*
- *Research Opportunities in Geography at the U.S. Geological Survey*

COMMITTEE MEMBERS

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Pennsylvania State University

Brian J.L. Berry
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University of South Carolina

Ruth S. DeFries
University of Maryland

William E. Easterling III
Pennsylvania State University

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Arizona State University

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University of California, Santa Barbara

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Clark University

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University of Washington

Emilio F. Moran
Indiana University

David L. Skole
Michigan State University

NRC STAFF

Paul M. Cutler
Senior Program Officer

Caetlin M. Ofiesh
Research Associate

Verna J. Bowen
Administrative Associate

WEBSITE

<http://dels.nas.edu/besr/gsc.shtml>

Committee on Geological and Geotechnical Engineering

The Committee on Geological and Geotechnical Engineering (COGGE) is the focal point within the Board on Earth Sciences and Resources for scientific, technical, and public policy issues related to geoen지니어ing. The committee's scope encompasses Earth processes and materials, including the mechanics of rock and soil, and focuses on safe and responsible human development, risk assessment, and mitigation of natural and anthropogenic hazards. The committee organizes and oversees studies in the following areas:

- to identify, investigate, and report on questions relating to geological and geotechnical engineering to government, industry, academia, and the public;
- to improve public policy on geological and geotechnical engineering issues;
- to identify new technologies and potential applications; and
- to promote the acquisition and dissemination of knowledge.

In addition, the committee provides a forum for discussion among academic and professional groups, government agencies, and private industry to enhance national and international cooperation and exchange of information.

SPONSORS

National Institute of Occupational Safety and Health
National Science Foundation
Nuclear Regulatory Commission

COGGE Reports 2000-2007

- *Geological and Geotechnical Engineering in the New Millennium: Opportunities for Research and Technological Innovation*
- *Conceptual Models of Flow and Transport in the Fractured Vadose Zone*

COMMITTEE MEMBERS

Gregory B. Baecher. *Chair*
University of Maryland

Thomas W. Doe
Golder Associates

Sandra L. Houston
Arizona State University

Wesley C. Patrick
Southwest Research Institute

J. Carlos Santamarina
Georgia Institute of Technology

A. Keith Turner
Colorado School of Mines

NRC STAFF

Sammantha L. Magsino
Program Officer

Nicholas D. Rogers
Senior Program Assistant

WEBSITE

<http://dels.nas.edu/besr/cogge.shtml>

Committee on Geophysical and Environmental Data

The Committee on Geophysical and Environmental Data (CGED) was established in 1967 to provide oversight to the U.S. portion of the World Data Center (WDC) System. Although that function is maintained today, the committee has the broader role of organizing and overseeing studies that provide advice to federal agencies and data centers on a wide variety of national and international data management issues and policies. Members of the committee are selected to represent the research areas of atmospheric, ocean, land, solid earth, and computer science, but all collect, manage, or use large amounts of data.

CGED Reports 2000-2007

- *Fair Weather: Effective Partnerships in Weather and Climate Services*
- *Government Data Centers: Meeting Increasing Demands*
- *Review of NOAA's National Geophysical Data Center*
- *Resolving Conflicts Arising from the Privatization of Environmental Data*

COMMITTEE MEMBERS

Jeff Dozier. *Chair*
University of California, Santa Barbara

William J. Emery
University of Colorado

Cherri M. Pancake
Oregon State University

Kelly T. Redmond
Desert Research Institute

David S. Schimel
National Center for Atmospheric Research

Catherine van Ingen
Microsoft Corporation

Dawn J. Wright
Oregon State University

Ferris Webster, *Liaison Representative*
University of Delaware

NRC STAFF

Anne M. Linn
Senior Program Officer

Jared P. Eno
Senior Program Assistant

WEBSITE

<http://dels.nas.edu/best/cged.shtml>

Mapping Science Committee

The Mapping Science Committee (MSC) organizes and oversees National Research Council studies that provide independent advice to society and to government at all levels on geospatial science, technology, and policy. It also addresses aspects of geographic information science that deal with the acquisition, integration, storage, distribution, and use of spatial data. Through its studies, the committee promotes the informed and responsible development and use of spatial data for the benefit of society.

To conduct its task, and recognizing that the mapping sciences are highly interdisciplinary, the committee draws upon the experience and knowledge of its members in a wide variety of mapping science-related disciplines, including cartography, geography, environmental science, engineering, computer science, geodesy, surveying, remote sensing, photogrammetry, cognitive psychology, mathematics, information science, and other disciplines. Furthermore, the committee tracks and hosts discussions on mapping science industry initiatives and advancements, with the goal of increasing collaboration and synergy among business, government, and academia where it has value for the nation. Similarly, the committee tracks international mapping science research and technology advancements that may have value to the nation.

The topics of interest to the committee cover mapping science and spatial data issues related to:

- (a) Science and technology for advancing geographic data collection, including global positioning and other location services, remote sensing, photogrammetric and surveying procedures, and sensor networks;
- (b) Science and technology on compilation, integration, sharing, and mining of spatial databases;
- (c) Research on policies affecting the development and use of spatial data throughout society (e.g., benefits, risks, and unintended consequences), including policies on relations among government, business, and academia in the conduct of mapping science research, programs, and activities;
- (d) Technological and institutional developments needed for improving spatial data use;
- (e) Coordination opportunities and efforts from local to global scales for the archiving, dissemination, and use of spatial data;
- (f) Human resources and education in support of the advancement of mapping science;
- (g) Hardware and software systems in support of the use of spatial data and services; and
- (h) The science, technology, and art of visualization and presentation of spatial information.

COMMITTEE MEMBERS

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University of California, Santa Barbara

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Mary L. Larsgaard

University of California, Santa Barbara

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Ross & Associates Environmental Consulting, Ltd.

Eugene Trobia

Arizona State Land Department

MSC Reports 2000-2007

- *Base Map Inputs for Floodplain Mapping*
- *Successful Response Starts with a Map: Improving Geospatial Support for Disaster Management*
- *Beyond Mapping: Meeting National Needs Through Enhanced Geographic Information Science*
- *Priorities for GEOINT Research at the National Geospatial-Intelligence Agency*
- *A Geospatial Framework for the Coastal Zone: National Needs for Coastal Mapping and Charting*
- *Licensing Geographic Data and Services*
- *Weaving A National Map: A Review of the U.S. Geological Survey Concept of the National Map*
- *Down to Earth: Geographical Information for Sustainable Development in Africa*
- *National Spatial Data Infrastructure Partnership Programs: Rethinking the Focus*

NRC STAFF

Paul M. Cutler

Senior Program Officer

Jared P. Eno

Senior Program Assistant

WEBSITE

<http://dels.nas.edu/besr/msc.shtml>

SPONSORS

National Geospatial-Intelligence Agency
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Committee on Seismology and Geodynamics

The Committee on Seismology and Geodynamics (COSG) serves as the focal point for community discussion and community-agency interaction on issues related to the structure, dynamics, and evolution of the Earth. The mission of the committee is to organize and oversee studies, workshops, and forums that will

- foster and encourage understanding of the structure, dynamics and evolution of the Earth;
- review and define basic and applied research activities in seismology, geodesy and geodynamics that contribute to federal agency missions;
- address the transfer of seismological and geodynamics knowledge to areas of public welfare and national need including topics such as earthquake science; geological hazards; energy, mineral, and water resources; national security; global climate change; land-use planning; and public education;
- foster long-term national efforts to collect, store and openly disseminate seismological, geodetic, and geodynamical data of all types; and
- foster long-term national efforts to monitor geodynamical events as well as nuclear testing treaties using geophysical technologies.

The committee also serves as the U.S. member of the Inter-Union Commission on the Lithosphere.

SPONSORS

Department of Energy- Office of Basic Energy Sciences
National Aeronautics and Space Administration
National Science Foundation
U.S. Geological Survey

COSG Reports 2000-2007

- *Improved Seismic Monitoring, Improved Decision-Making: Assessing the Value of Reduced Uncertainty*
- *Living on an Active Earth: Perspectives on Earthquake Science*
- *Review of EarthScope Integrated Science*

COMMITTEE MEMBERS

Chair, to be appointed

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University of California, Santa Cruz

James L. Davis
Harvard-Smithsonian Center for Astrophysics

Adam M. Dziewonski
Harvard University

William E. Holt
Stony Brook State University of New York

Louise H. Kellogg
University of California, Davis

M. Meghan Miller
Central Washington University

Aaron V. Velasco
University of Texas, El Paso

NRC STAFF

David A. Feary
Senior Program Officer

Verna J. Bowen
Administrative Associate

WEBSITE

<http://dels.nas.edu/best/cosg.shtml>