

**NATIONAL SCIENCE FOUNDATION
GEOGRAPHY AND SPATIAL SCIENCES (GSS) PROGRAM**

STRATEGIC PLAN, 2008-2012

The Geography and Regional Science (GRS) Program has been a program at the National Science Foundation since the mid-1970s. Since that time, geography has flourished as a discipline. Traditional dimensions of geographic inquiry have benefited from new technologies, conceptual frameworks, and societal demands. The spatial analytic tradition in geography has been transformed by new tools and techniques, such as geographic information systems (GISs), while the tradition of nature-society interactions focusing on the Earth's surface has become the most rapidly developing part of the field as new generations of scholars employ multiple methods to address human-environmental interactions. While growing rapidly at its core, geography also has become a field that actively seeks collaboration with scholars from other disciplines, making it an active player in the rapid development of interdisciplinary partnerships that characterize contemporary research.

The same decades that witnessed rapid growth in geography have seen the establishment and enhancement of other spatial sciences -- fields that also have strong spatial orientations. Geographic information science (the science that considers fundamental questions associated with the development and use of geographic information systems and related technologies), spatial analysis (the science that develops formal techniques to analyze the topological, geometric, or geographic properties of data), and spatial cognition and behavior have joined regional science as interdisciplinary fields that are closely aligned with geography. A diagram appended to the end of this plan shows a schematic view of how geography and other spatial sciences relate to each other and to many other fields.

As the NSF Geography and Regional Science Program looks ahead to the next five years, it envisions the communities it serves to extend beyond the boundaries associated with its historic name. The program officers therefore propose that the name of the program be changed to the Geography and Spatial Sciences (GSS) Program. This proposed change is accompanied by the following strategic plan, which calls for the GSS Program to meet the needs of the communities traditionally served by GRS but to also reach out more actively to support interdisciplinary research for which geographers, regional scientists, and other spatial scientists may be major participants.

As is done with many other strategic plans, the GSS Program will use this plan to guide its actions for a longer timeframe, but the effectiveness of the strategies employed to reach the program's goals will be evaluated annually, and modifications in the plan will be made to keep the program looking ahead for the next half-decade.

VISION

The Geography and Spatial Sciences (GSS) Program of the National Science Foundation (NSF) seeks to *advance discovery, basic understanding, and education in geography and the spatial sciences.*

MISSION

The mission of the NSF Geography and Spatial Sciences Program is:

- *To stimulate and support basic research in geography and the spatial sciences;*
- *To foster the involvement of geographers and spatial scientists in interdisciplinary research; and*
- *To advance the development and capabilities of geographers and spatial scientists.*

CORE VALUES

As core values to guide their work, program officers and those who serve on advisory panels or assist as staff members associated with the NSF Geography and Spatial Sciences Program aspire to be:

- ***Forward-looking.*** Anticipating and facilitating advances in basic scientific knowledge and methods in geography, spatial sciences, and related fields.
- ***Integrative.*** Fostering connectivity among geographic subfields and across disciplines in ways that enhance basic knowledge and methods that benefit all participating scholarly communities.
- ***Transformative.*** Exploring the potential for innovative approaches that provide new perspectives and insights.
- ***Inclusive.*** Encouraging participation of the broadest possible range of investigators, institutions, and scientific research approaches.
- ***Accountable.*** Conducting programmatic operations with integrity and transparency.

GOALS

The goals of the NSF Geography and Spatial Sciences Program are:

- *To promote scientific research in geography and the spatial sciences that advances theory and basic understanding and that addresses the challenges facing society;*
- *To promote the integration of geographers and spatial scientists in interdisciplinary research;*
- *To promote education and training of geographers and spatial scientists in order to enhance the capabilities of current and future generations of researchers.*
- *To promote the development and use of scientific methods and tools for geographic research.*

OBJECTIVES AND STRATEGIES

To attain its goals, the GSS Program will engage in activities in five major areas:

A. Research Competitions in Geography and Spatial Sciences

GSS will support research and related activities that have the highest intellectual merit and most positive broader impacts. Research support will be provided to those projects that are most effective in grounding research in relevant theoretical frameworks in geography and related fields, that seek answers to focal questions that emanate from the theoretical discussions, that use scientifically sound methods to explore the viability of answers to those questions, and that are likely to yield results that will enhance, expand, and transform fundamental theory and methods in geography, the spatial sciences, and related fields.

- 1. GSS will support "regular" research projects in geography and the spatial sciences.**
 - GSS will conduct two competitions annually to support the highest-quality basic scientific research across broad ranges of topics, approaches, institutions, and investigators.
 - Pending availability of funds and the quality of submitted proposals, GSS will seek to support at least 20 percent of the proposals it receives each round.
- 2. GSS will support Doctoral Dissertation Research Improvement (DDRI) awards in geography and the spatial sciences.**
 - GSS will conduct two Doctoral Dissertation Research Improvement (DDRI) award competitions annually to provide support for the highest-quality doctoral research.
 - Pending availability of funds and the quality of submitted proposals, GSS will support at least 25 percent of DDRI proposals it evaluates each round.
- 3. GSS will support Faculty Early-Career Development (CAREER) awards in geography and the spatial sciences.**
 - GSS will conduct an annual Faculty Early-Career Development (CAREER) award competition to provide support for the highest-quality integrated research and education programs by early-career faculty members.
 - Pending availability of funds and the quality of submitted proposals, GSS will support at least two CAREER awards each year.
- 4. GSS will support major interdisciplinary teams that conduct research that examines human system dynamics and that contributes to the enhancement of geographic theory.**
 - GSS will conduct at least one major competition annually to support major interdisciplinary teams that will conduct research that examines human system dynamics that contributes to the enhancement of geographic theory.
 - Pending availability of funds and the quality of submitted proposals, GSS will support at least one major team award each year.

B. Interdisciplinary Research Competitions

GSS will place greater emphasis than in the past on the support of interdisciplinary research and research-related education and training that draws on and contributes to the communities of geographers and spatial scientists as well as related fields.

- 1. GSS will collaborate with appropriate NSF programs to support interdisciplinary teams addressing topics in ways that will draw on and contribute to the enhancement of theory in all relevant fields.**
 - Together with other interested programs, GSS will attempt to conduct at least one major interdisciplinary competition to support research and methods development that will draw on and contribute to theoretical insights across the fields.
 - Pending availability of funds and the quality of submitted proposals, GSS and its partner programs will make at least two major awards or six smaller awards each year.
- 2. GSS program officers will participate in interdisciplinary competitions that span NSF divisions and directorates.**
 - GSS program officers will participate in the conduct of at least three interdisciplinary competitions that span NSF divisions and directorates each year.

C. Research Community Development

GSS will provide support for community-building activities that strengthen geography and the spatial sciences and lead to great collaborative interactions between those and other fields.

- 1. GSS will support activities designed to promote advanced research methods by geographers and spatial scientists.**
 - GSS will encourage the conduct of activities designed to promote the development, adoption, and use of advanced research methods by geographers and spatial scientists through research awards, training workshops, or other forms of activity.
 - Pending availability of funds and the quality of submitted proposals, GSS will attempt to support at least one methods-advancement award each year.
- 2. GSS will support activities designed to promote the sharing of perspectives, approaches, and/or methods between geographers/spatial scientists and researchers in other relevant fields.**
 - GSS will encourage the conduct of activities designed to promote the sharing of perspectives, approaches, and/or methods between geographers/spatial scientists and researchers in other relevant fields.
 - Pending availability of funds and the quality of submitted proposals, GSS will attempt to support at least one award to enhance interdisciplinary methodological activities each year.

3. GSS will support activities designed to diversify the composition of the geographic and spatial scientific workforces.

- GSS will encourage the conduct of activities designed to diversify the composition of the geographic and spatial scientific workforces.
- Pending availability of funds and the quality of submitted proposals, GSS will attempt to support at least one award to support diversity-enhancing activities each year.

D. Outreach and Communications

GSS will actively engage in outreach activities designed to share information about GSS and other NSF funding opportunities among researchers in geography, the spatial sciences, and related communities.

1. GSS program officers will disseminate information about funding opportunities and other relevant issues through professional society publications.

- GSS will prepare articles and notices for dissemination through professional society publications like the *Newsletter* of the Association of American Geographers (AAG).
- GSS program officers will prepare at least three articles/notices each year.

2. GSS program officers will conduct workshops and make outreach presentations at a variety of gatherings.

- GSS program officers will conduct workshops and make outreach presentations at a variety of gatherings, including:
 - (1) The AAG Annual Meeting.
 - (2) Major meetings of spatial science societies (such as the North American Regional Science Council, the University Consortium for Geographic Information Science, and the Association of Collegiate Schools of Planning).
 - (3) Regional meetings (including meetings of the AAG regional divisions, meetings of the regional science regional divisions, or university-based presentations where researchers at other institutions in the regional are invited to participate).
 - (4) Meetings of societies or organizations that serve other research communities in order to promote interdisciplinary activities that link scholars in geography and the spatial sciences with scholars in those communities, with at least one presentation or session made every other year.
 - (5) NSF-organized outreach conferences, especially in EPSCoR states.
- GSS program officers will engage in outreach at the following expected rates:
 - (1) GSS program officers will conduct at least three workshops at AAG annual meetings each year.
 - (2) GSS program officers will conduct workshops or make presentations during at least one annual meeting of another spatial scientific society.
 - (3) GSS program officers will make presentations during at least three regional meetings.
 - (4) GSS program officers will make presentations or participate in panel discussions or other activities at least one meeting of an organization that

serves other disciplinary or interdisciplinary research communities at least once every two years.

- (5) GSS program officers will participate in NSF-organized outreach activities at least once every two years.

3. GSS will involve geographers and spatial scientists in the development of "highlights."

- GSS program officers will involve geographers and spatial scientists supported by NSF in the development of "highlights" to share noteworthy findings and activities resulting from their work.
- GSS will produce at least 12 highlights each year, submitting those for consideration of higher-level NSF leaders and using highlights for outreach and other kinds of activities within the program and the communities it serves.

E. Operating with Integrity, Commitment, and Accountability

GSS will maintain the high commitment to excellence in management that has characterized the GRS Program in the past. GSS program officers will strive to maintain high levels of responsiveness to investigators, reviewers, panelists, and others outside NSF as well as to staff members in all parts of NSF. GSS program officers also will strive to maintain the high standards for management of proposals and awards, providing timely, fair, transparent, and effective service when making decisions and addressing other tasks. In all aspects of their work, GSS program officers will demonstrate the highest standards of integrity and accountability.

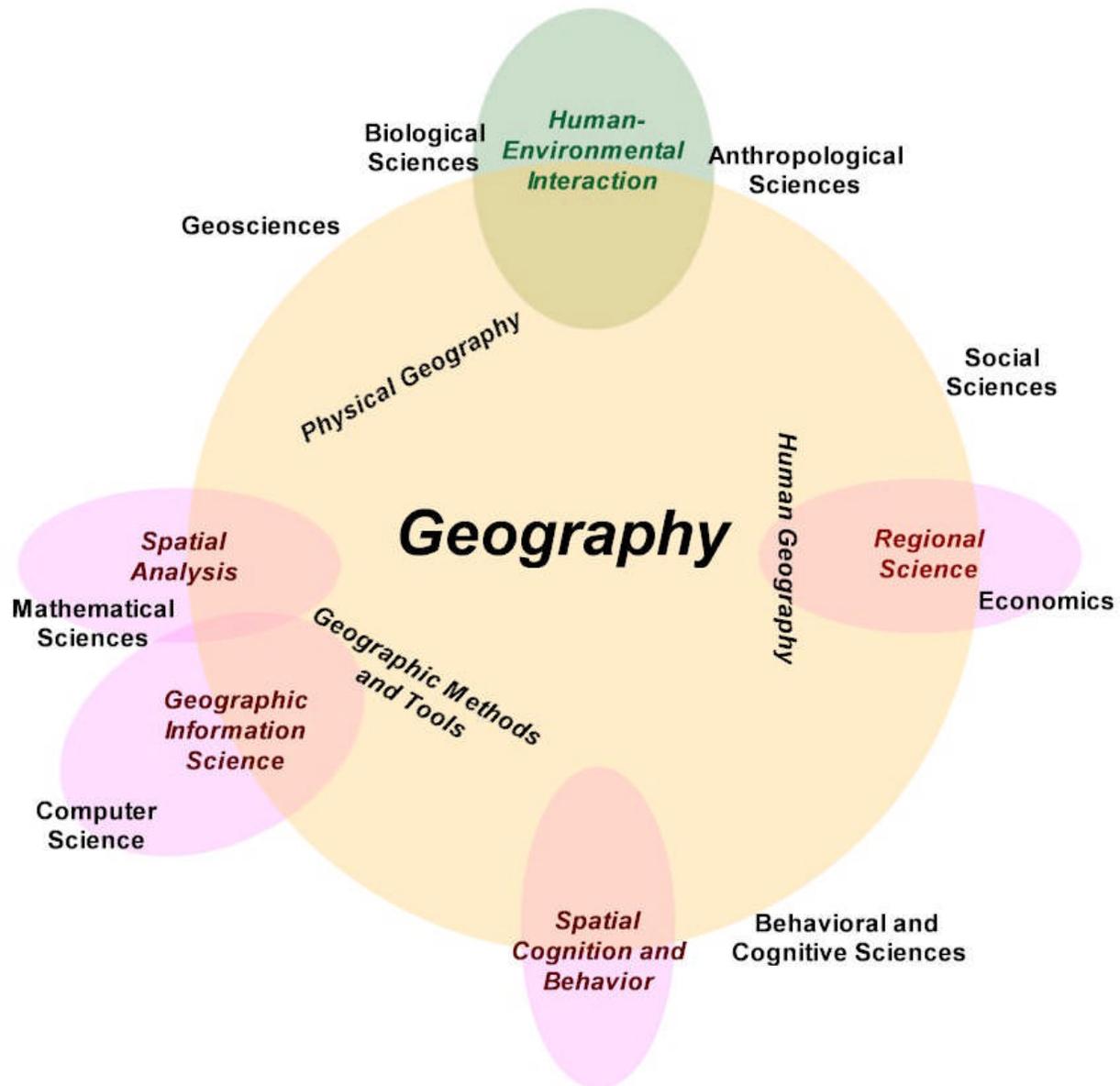
1. GSS program officers will manage the evaluation of proposals in timely, fair, transparent, and effective ways.

- GSS will employ appropriate NSF review procedures to evaluate proposals, using external "ad hoc" reviewers and advisor panel members who provide specific expertise and general perspectives to fairly and effectively evaluate the strengths and weaknesses of proposals.
- GSS will conduct its evaluations of proposals with attention given to both the intellectual merit and the broader impacts of proposed work.
- GSS will promote efforts to ascertain the potential transformative impact in its evaluation of proposals.
- GSS program officers will write up award and decline recommendations in ways that make clear how the proposal was evaluated and why a final decision was made.
- GSS program officers will ensure that investigators have sufficient information to enable them to understand the basis for the final recommendation to award or decline their proposals.
- GSS program officers will complete the evaluation of proposals managed by the program in timely ways, working with other division staff members in an effort to have at least 90 percent of all proposals acted on by division leaders in six months or less time after the target date or deadline of the competition for which proposals were submitted.

- 2. GSS program officers will strive to be prompt and responsive to all inquiries from prospective investigators as well as to those whose proposals are under review, those whose proposals have been declined, and those who received awards.**
 - GSS program officers will work together to be aware of and to respond in prompt and effective manners to inquiries from investigators at all stages of the process, from pre-proposal development through post-recommendation explanation of decisions to decline proposals and management of awards.
 - GSS program officers will work together to be responsive to sponsored research officers and to all others who seek information and feedback from them

- 3. GSS program officers will strive to demonstrate the highest standards of integrity and accountability in all facets of their work.**
 - GSS program officers will keep themselves informed about NSF conflict-of-interest rules and procedures, and they will seek counsel whenever appropriate to avoid conflicts of interest by themselves and others in the evaluation of proposals and the management of awards.
 - GSS program officers will be accountable to their superiors and all others in the conduct of their work.
 - GSS program officers will strive to interact with all other staff and with all individuals outside NSF in ways that are open, inviting, polite, respectful, and responsive.

- 4. GSS program officers will prepare annual reports to assess their work within the framework of this strategic plan, and they will review this strategic plan on an annual basis.**
 - GSS program officers will prepare an annual report each year, summarizing activities and accomplishments and assessing how well they have implemented the strategies and met the objectives specified in this strategic plan. This report will be completed during the summer months and presented to the division director. Following discussions with the division director and other relevant NSF staff members, the annual report will be accessible on the GSS web site.
 - GSS Program officers will review this strategic plan each year in order to keep the plan and program looking forward and operating in as effective a manner as possible.



Relationships among geography, other spatial sciences, and cognate disciplines.

This diagram is an abstract representation of the ways that geography relates to other fields. It is an admittedly geography-centric diagram. It is not meant to be a comprehensive inventory of all major subfields in geography and the spatial sciences or other related fields. It highlights those areas where NSF support has been most frequent.