

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

GULF RESEARCH PROGRAM

Program Overview

Committee Orientation

3/1/17

Photo: SeaWiFS Project, NASA/GSFC, ORBIMAGE

The Gulf Research Program

- A \$500 million, 30-year program (until 2043) managed by the National Academies. Funds grants, fellowships, and other activities
- Directed to operate in three areas:
 - Oil system safety
 - Human health
 - Environmental resources
- Directed to work via three mechanisms:
 - Research & development
 - Education & training
 - Environmental monitoring
- Guided by *Strategic Vision* (2014)
- and 20+ member Advisory Board



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Strategic Vision Core Elements

Long-term, Cross Boundary Perspective

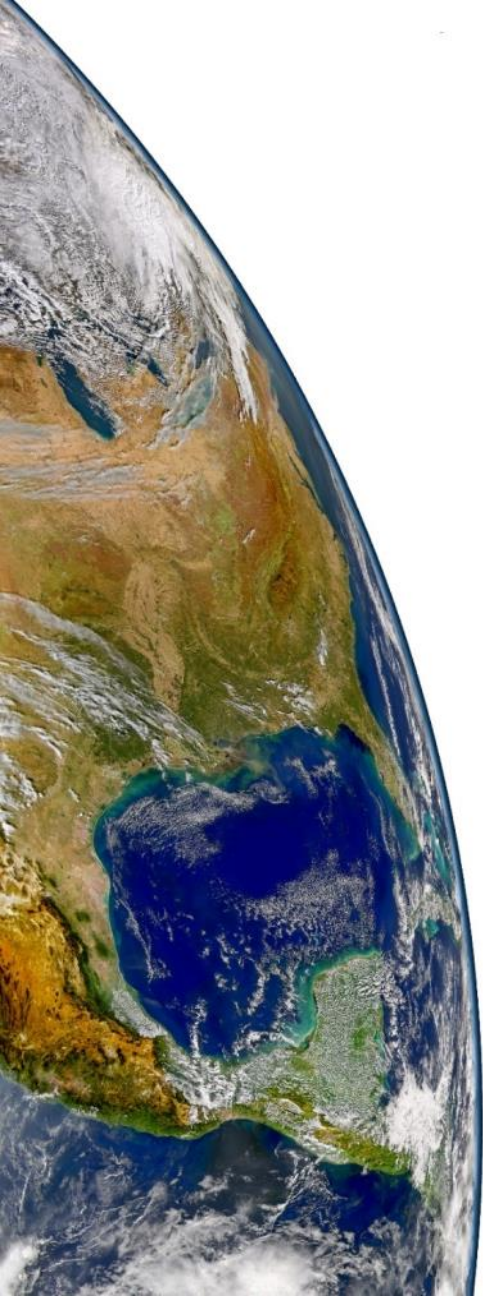
Science to Advance Understanding

Science to Serve Community Needs

Synthesis and Integration

Coordination and Collaboration

Leadership and Capacity Building



Program Initiatives & Lasting Impacts

Program Initiatives



- Reducing risk in offshore oil and gas operations



- Observation and monitoring for healthy ecosystems and coastal communities



- Planning and action for healthy and resilient coastal communities



- Building capacity to address cross-boundary challenges

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Reducing risk in offshore oil and gas operations



Comprehensive risk awareness can help both industry and regulators to better anticipate, reduce, and avoid risks in the offshore oil and gas environment. In collaboration with others, the GRP is working to identify risk-management approaches that can prevent oil spills, loss of life, and harmful exposures related to offshore oil and gas drilling, production, and transportation.

Featured Activities:

- [2016 Exploratory Grants](#): Scenario planning to advance safety culture and minimize risk in offshore oil and gas operations
- [2015 Exploratory Grants](#): Exploring approaches for effective education and training of workers in the offshore oil and gas industry and health professions
- [2014 Education and Training Opportunity Analysis Workshop](#)

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Observation and Monitoring for Healthy Ecosystems and Communities



Managers and decision makers can better anticipate and mitigate environmental change and community and ecosystem disruptions with timely, accurate observation and monitoring information. We are working with others to improve how researchers and practitioners collect, interpret, and use monitoring and observing information. Our current areas of interest include the deep waters of the Gulf of Mexico, community resilience, and environmental restoration.

Featured Activities:

- [2016 Synthesis Grants](#): Scientific synthesis connecting environmental, social, and/or health data to improve monitoring of human impacts of offshore oil and gas development *or* to improve health risk and exposure assessment.
- [2015 Consensus Study](#): *Effective Monitoring to Evaluate Ecological Restoration in the Gulf of Mexico* (report released in July 2016).
- [2015 Synthesis Grants](#): Synthesis of existing environmental monitoring data to inform efforts to restore and maintain the Gulf of Mexico's ecosystem services *or* enhance understanding of the Deep Gulf or its physical and biological connectivity to coastal communities
- [2014 Environmental Monitoring Opportunity Analysis Workshop](#)

Photo: NASA image courtesy Norman Kuring, Ocean Color Team

Planning and Action for Healthy and Resilient Coastal Communities



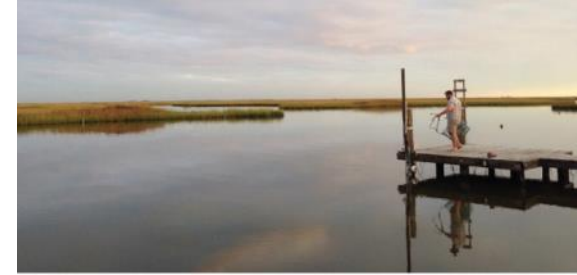
Natural disasters, climate change impacts, and other environmental stressors, such as those resulting from oil spills, present complex challenges to the health and well-being of coastal communities and to the integrity of the environments upon which they depend. In collaboration with others, the GRP will support the work of researchers, communities, and public- and private-sector actors to enhance the resilience of coastal communities to the adverse impacts of environmental challenges in ways that also improve well-being.

Featured Activities:

- [2016 Research and Practice Grants](#): Broad call for scientifically-valid research and practice projects that will develop information, test strategies, and provide evidence that can be used by communities to enhance their resilience to the adverse impacts of climate change, severe weather, and major environmental disasters, in ways that also improve well-being. (Developed and funded in collaboration with RWJF)
- [2016 Capacity Building Grants](#): Enhancing community networks that improve coastal environments, health, and well-being
- [2016 Exploratory Grants](#): Helping communities impacted by offshore oil and gas operations plan for, mitigate, and adapt to environmental change
- [2014 Community Resilience and Health Opportunity Analysis Workshop](#)

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Building Capacity to Address Cross-Boundary Challenges



Collaboration and communication among individuals in communities, industry, universities, and the public sector are essential to understanding and addressing the interwoven scientific, social, and environmental challenges associated with offshore oil and gas operations. By supporting the development of new approaches, tools, and education and training experiences, the GRP seeks to foster cross-boundary leadership and capacity for solving complex challenges in coastal regions along the U.S. outer continental shelf.

Featured Activities:

- [2017 Open Science for Synthesis Training](#): A training event that will revolve around scientific computing and scientific software for reproducible science.
- [2016 Capacity Building Grants](#): Enhancing community networks that improve coastal environments, health, and well-being
- [2015-Ongoing](#): Science Policy Fellowships
- [2015-Ongoing](#): Early Career Research Fellowships
- [2014 Education and Training Opportunity Analysis Workshop](#)

Photo by Kelly M. Darnell

Lasting Impacts

1. Engage **multiple generations of scientists**, through fellowships grants, and other career building activities, in research and policy making.
2. Catalyze long-term monitoring and research that will advance scientific understanding of **deep water ecosystems and processes** in the Gulf of Mexico
3. Support long-term monitoring and research to improve the science and practice **environmental restoration and restoration monitoring**
4. Participate and provide leadership in an **oil system safety** network of stakeholders
5. Strengthen the science and practice of **coastal community resilience** in regions along the US outer continental shelf through research and capacity building
6. Encourage and develop capacity for **scientific synthesis** (e.g., integration of data and methods; application of scientific research) to improve the safety of energy production and protect human well-being and the environment



2016 Highlights

Examples that will help you see “what the GRP does”

2016 Grants

2016 Exploratory Grants - \$4 million, 10-20 projects, 1-2 years

- TOPIC 1: **Scenario planning to explore risks in offshore oil and gas operations**
- TOPIC 2: Helping **coastal communities plan and adapt to environmental change in regions** with offshore oil and gas operations

2016 Synthesis Grants - \$5 million, 10-15 projects, 2-years

- TOPIC: **Scientific synthesis connecting environmental, social, and/or health data**

2016 Capacity Building Grants – \$1 million, 5-10 projects, 1-2 years

- TOPIC: **Cross-boundary networks to address regional environmental challenges** in U.S. OCS regions

2017 Research-Practice Grants – \$10 million, 3-6 projects, 3 years

- TOPIC: Enhancing **coastal community resilience** and well-being in the Gulf of Mexico region

2016 Fellowships

Early-Career Research Fellowships

- Facilitate academic, intellectual, and professional development of individuals who have outstanding scholarship promise
- Recognize early-career researchers for past performance and future potential for substantial contributions to advancing scientific understanding
- Provide funding and mentorship at critical pre-tenure phase of fellows' academic careers

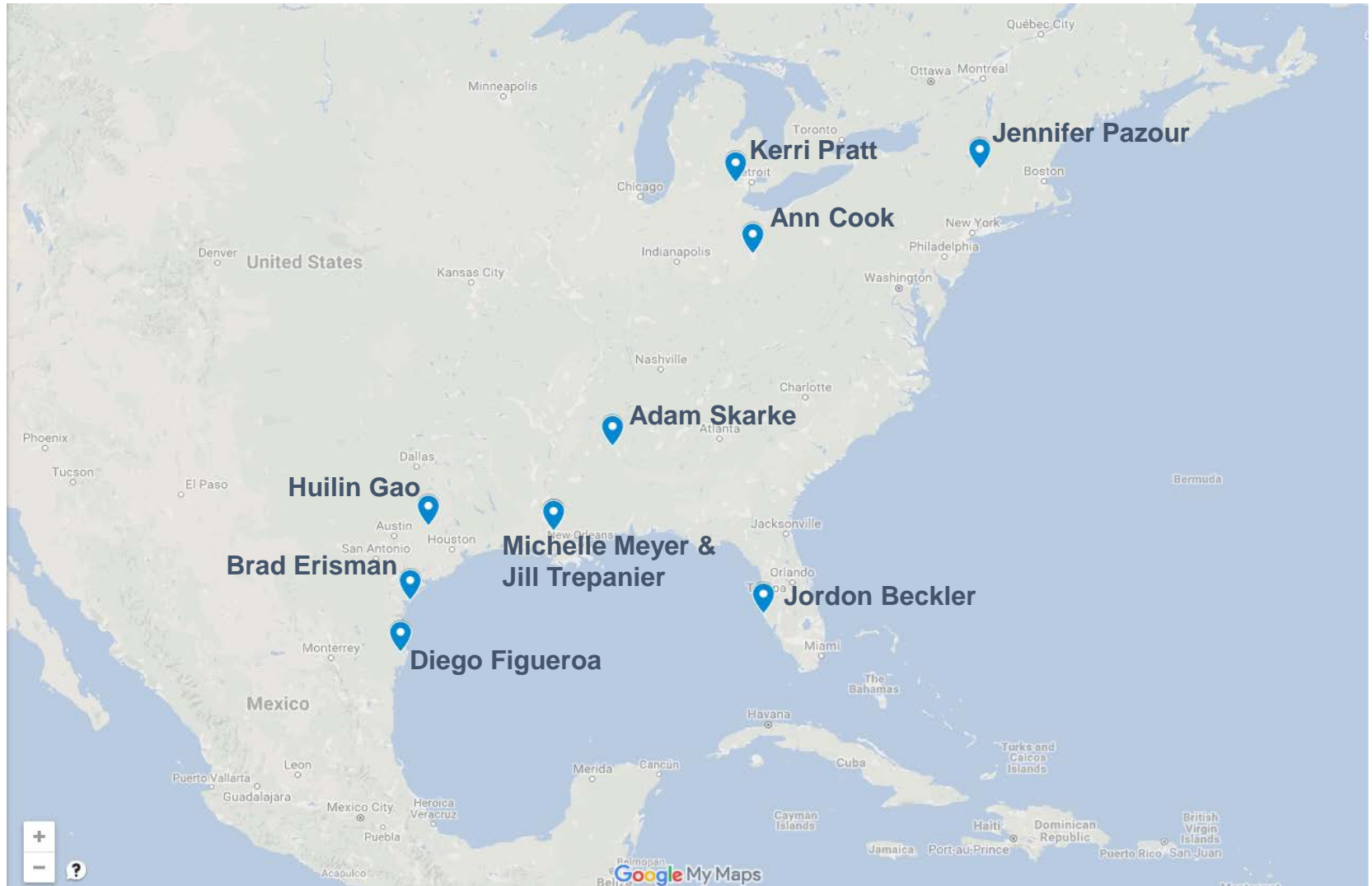
Science Policy Fellowships

- Provides valuable experience at science-policy interface through one-year placement on staff of state environmental, natural resources, oil and gas, or public health agency; or regional offices of relevant federal agencies.
- Fellows participate in and contribute to state or federal policymaking process. Duties vary by placement but can include analysis and synthesis of scientific information to support policy development, writing policy memos, and drafting legislation.

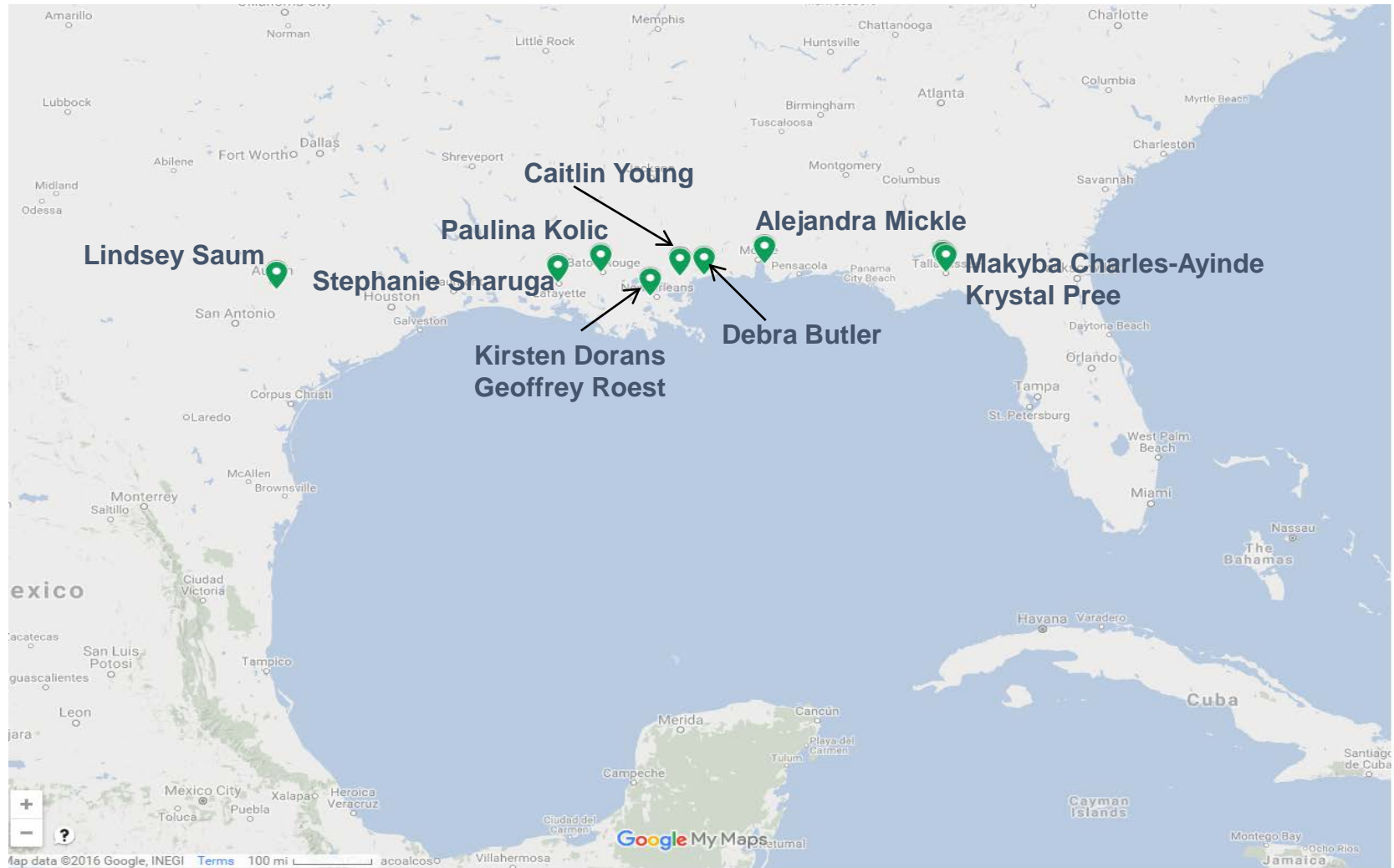
2016 Gulf Research Program Fellows

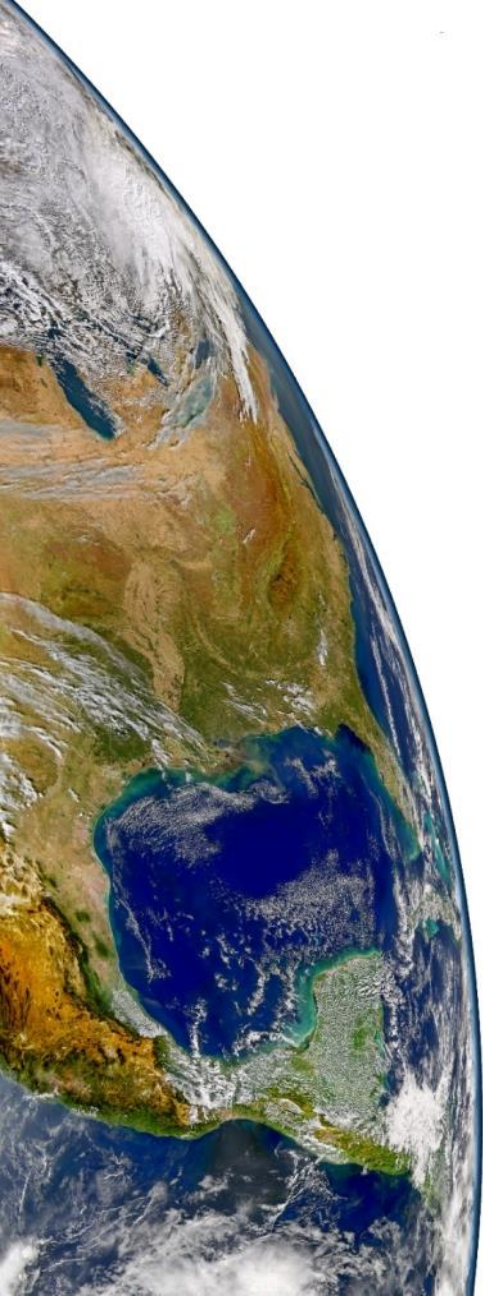


2016 Early-Career Research Fellows



2016 Science Policy Fellows





2016-2017 GRP-Sponsored Expert Reports

Why Does GRP Support Studies?

- To take advantage of extensive expertise and capabilities of existing NASEM units

NASEM studies and workshops can be funded with GRP funds:

- When study can help inform GRP work
- When study is judged to be of “wide community value”

Expert Reports - Completed

- **Effective Monitoring to Evaluate Ecological Restoration in the Gulf of Mexico** (available at www.nationalacademies.org/gulf/resources). This report, completed in July 2016,
 - Identifies best practices for monitoring and evaluating restoration activities to improve performance of restoration programs and increase effectiveness and longevity of restoration projects
 - Provides general guidance for restoration monitoring, assessment, and synthesis that can be applied to most ecological restoration
 - Offers specific guidance for subset of habitats and taxa to be restored in the Gulf including oyster reefs, tidal wetlands, and seagrass habitats, as well as a variety of birds, sea turtles, and marine mammals

Expert Reports in Process

- Advancing Understanding of Gulf of Mexico Loop Current Dynamics.
- Measuring Community Resilience (PGA)
- Long-term Coastal Zone Dynamics: Interactions and Feedbacks between Natural and Human Processes and their Implications for the U.S. Coastline (DELS)
- International Workshop on Experience with Performance-Based Regulation in the Offshore Oil and Gas Industry (run by TRB)
- Committee on Advancing Understanding of Gulf of Mexico Loop Current Dynamics (GRP)
- Preparing for a Rapid Response to Major Offshore Oil and Gas Spills: A Workshop on Research Needs (HMD)

Why This Study?

1. How does this study fit GRP mission and goals?
2. Why is this project important?
3. Who is the audience?
4. What is the GRP role during the study process?
5. How will GRP use the final report?
6. Is the study “Gulf only” or broader?
7. What kinds of outputs might GRP be seeking?



2017 Funding Opportunities

2017 Opportunities & Application Deadlines

Details about 2017 funding opportunities and application links will be available via www.nationalacademies.org/gulf

Opportunity	Deadlines (tentative)
Early-career research fellowships <i>Applications open Dec. 1, 2016)</i>	Feb. 22, 2017
Science policy fellowships <i>Applications open Dec. 1, 2016</i>	Feb. 22, 2017
Research & development grants <i>Applications open Dec. 7, 2016</i>	Feb. 1, 2017 (required LOI) Apr. 12, 2017 (full proposal)
Research-practice grants (TBA) <i>Applications open Mar. 1, 2017</i>	April 26, 2017 (required LOI) July 12, 2017 (full proposal)
Summer synthesis training <i>Applications open early 2017</i>	TBD
Mirzayan fellowship <i>Applications open summer 2017</i>	Fall 2017

For up-to-date information about funding opportunities and deadlines, sign up for email updates on our website.



Contact Information

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Questions about funding opportunities?

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Sign up to receive email updates at

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