

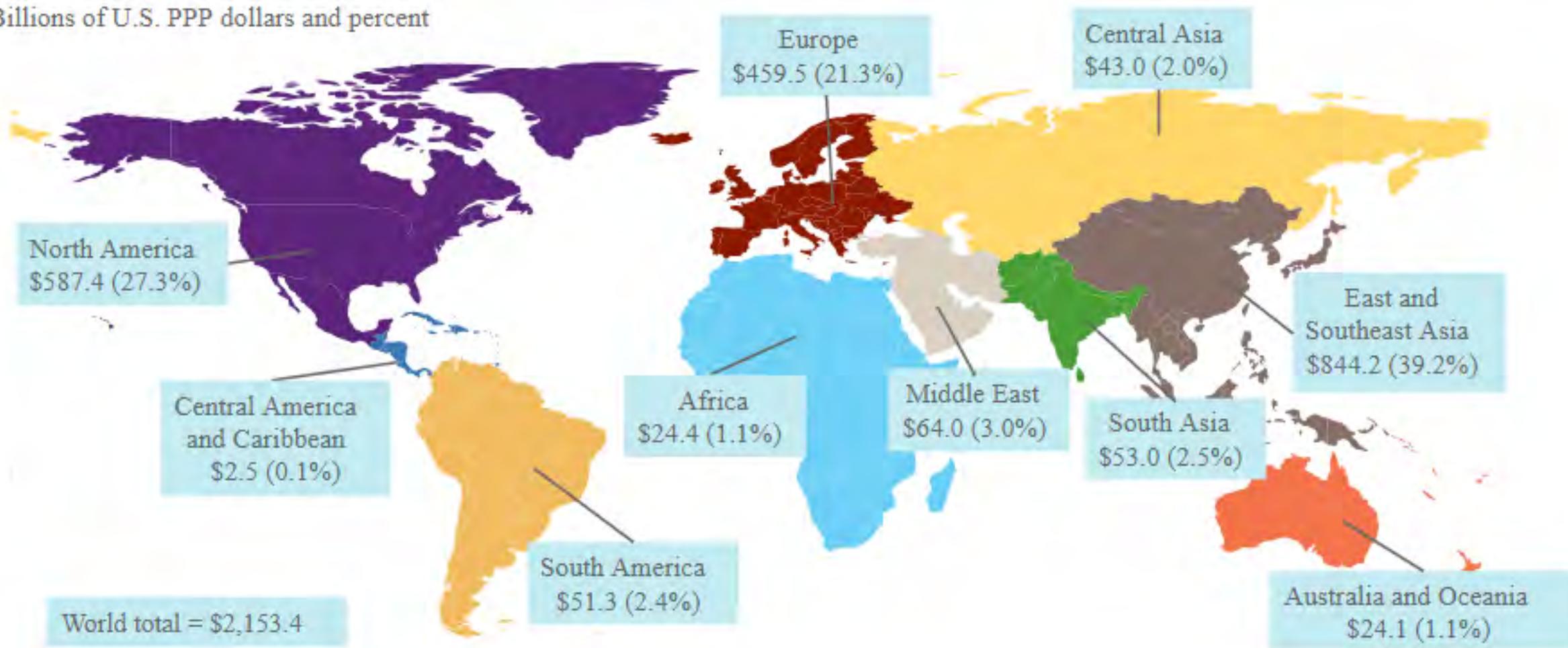
OISE Overview: Principles, Activities and Programs



May 3, 2020

Global R&D expenditures, by region: 2017

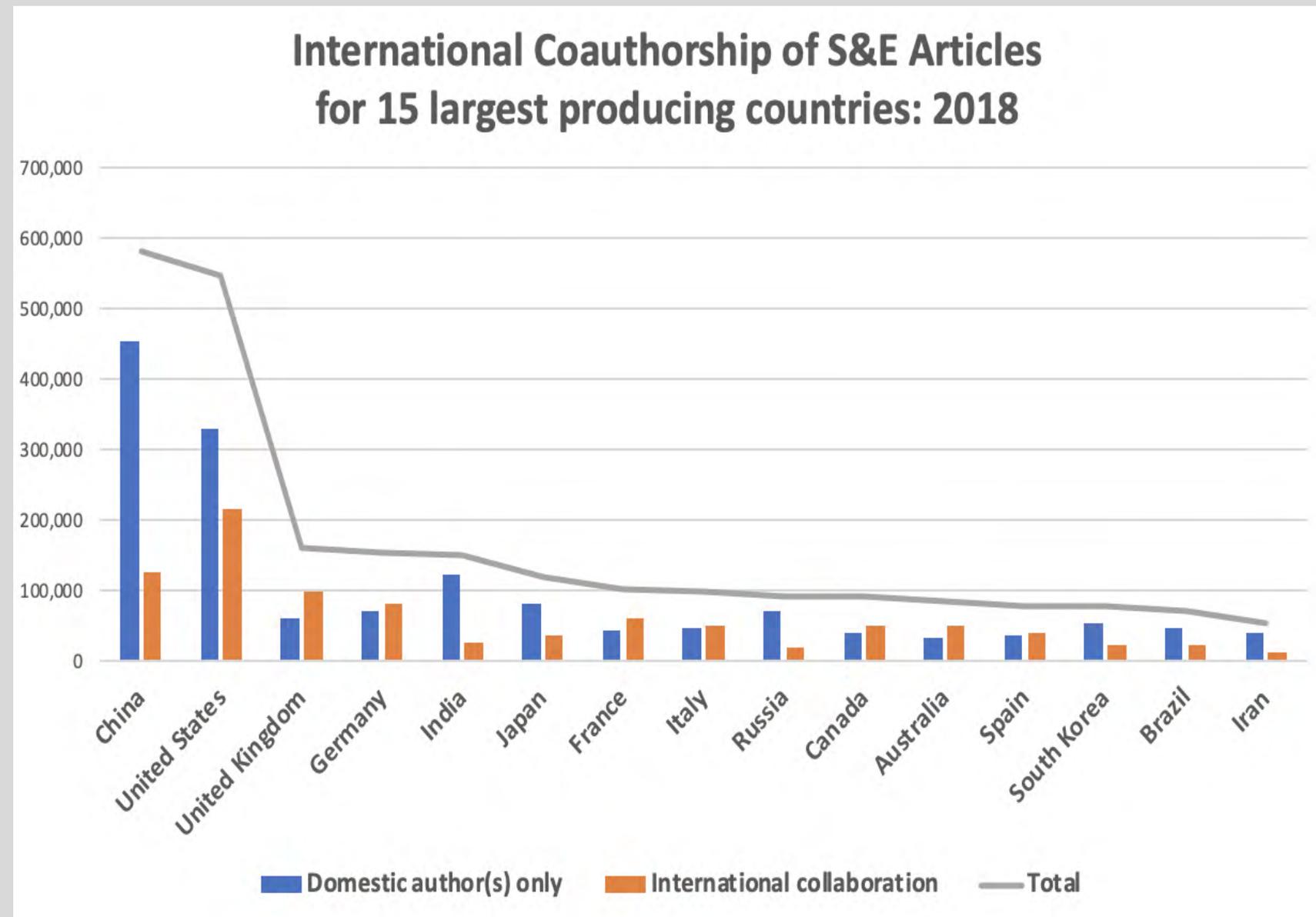
Billions of U.S. PPP dollars and percent



PPP = purchasing power parity.

Sources: NCSES, National Science Foundation, estimates as of October 2019. Based on data from OECD, *Main Science and Technology Indicators* (2019/1), and the UNESCO Institute for Statistics Data Centre.

International Co-authorship of S&E Articles 2018



What is NSF's role in international engagement?

Promoting the development of a globally engaged science and engineering workforce

Facilitating and supporting beneficial international research partnership

Providing opportunities for U.S. leadership to shape the global science and engineering agenda



NSF Criteria for International Engagement

Intellectual Merit, Broader Impacts Strengthened

Mutual benefit for all partners

True intellectual collaboration among all collaborators

Leverage of complementary skills, facilities, sites, resources

Active engagement of students and early career researchers

NSF Funding for International Activities

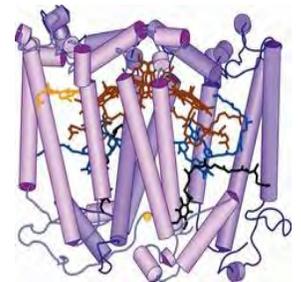
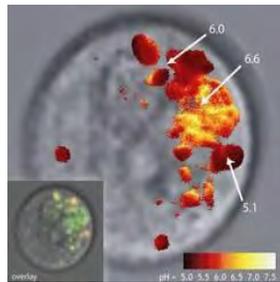
Most international research and education activities are funded by NSF disciplinary programs as:

- Part of regular awards
- Supplements to regular awards



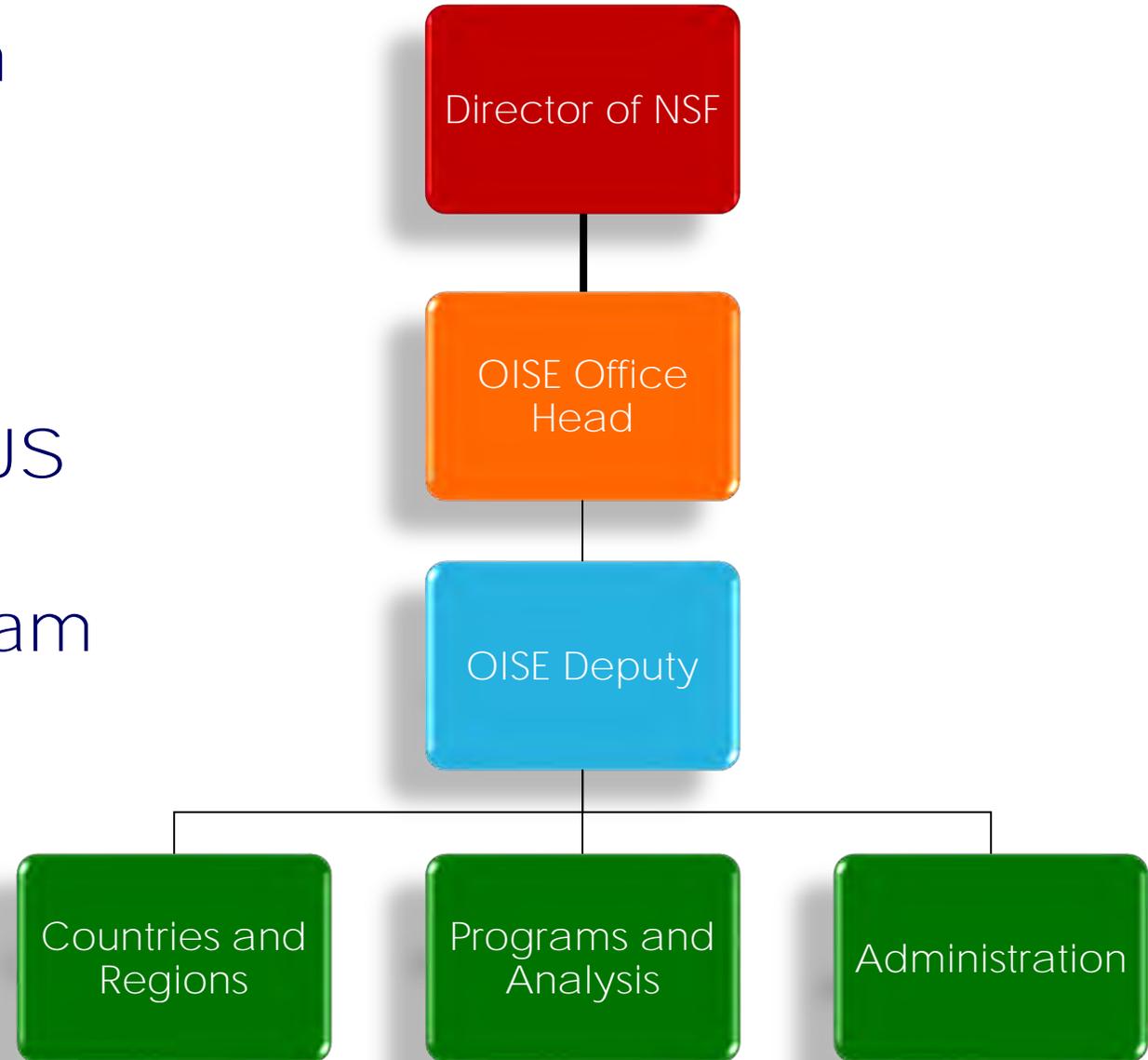
Sample NSF International Interactions

- International Arctic Scientific Cooperation
- Dear Colleague Letters highlighting directorate/ division-specific opportunities
- DCL on Research Opportunities in Europe
- DCL on International Opportunities in Quantum Science
- Lead agency agreements with UK, Israel for coordination in funding
- Co-review, co-funding Agreements with other foreign funding agencies



Office of International Science & Engineering

- Promotes development of an integrated, NSF-wide international strategy
- Partners with research directorates on international opportunities that enhance US research and education
- Manages international program
 - Innovative
 - Catalytic
 - Responsive to NSF priorities



Coordination of International S&E Activities

Internal to NSF

- **Diplomatic “desk officers” for NSF**
- Support NSF Research Directorates and Offices
- Leverage Resources and Expertise
- Test New Models for international engagement

External

- Engage the U.S. Research Community
- Strengthen Partnerships with Foreign Counterparts
- Cooperate with other U.S. Government Agencies, e.g., Department of State



OISE Funding Programs

- *Accelerating Research through International Network-to-Network Collaboration – AccelNet*
 - NSF 19-501
- *International Research Experience for Students – IRES*
 - NSF 19-585
- *Partnerships for International Research and Education – PIRE*
 - Update to NSF 16-571 expected in ~ late 2020



Partnerships for International Research & Education – PIRE

- OISE-managed flagship research program
- Frontier research that leverages complementary expertise of all partners
- Extensive overseas research opportunities for U.S. students/early career researchers
- 5 year awards; recent average award \$4.5M
- ~39 active awards across all NSF disciplines
- Solicitation under revision. Release expected in late 2020;



International Research Experiences for Students – IRES

- NSF 19-585
- Supports overseas research opportunities for US STEM students, undergraduate and graduate.
- Develops a diverse, globally-engaged and competitive U.S. STEM workforce.
- Active research in all disciplines and multidisciplinary or convergent areas of research funded by NSF.



IRES PIs tests a prototype ac-electrospinning device (left); IRES scientist works with a new nanofiber yarn-making machine (right)



IRES students at work.



International Research Experiences for Students – IRES

OISE program to develop a globally engaged STEM workforce

- Track - I: IRES Sites
 - Faculty-led cohort of undergrads and/or grad student
- Track-II: Advanced Studies Institutes
 - Seminar-style training for graduate students
- Track - III: New Concepts in International Graduate Experience
 - Varied models of international research and research-related professional development for graduate students



Accelerating Research through International Network-to-Network Collaborations (AccelNet)

The AccelNet program supports strategic linkages among U.S. research networks and complementary networks abroad that will leverage research and educational resources to tackle grand scientific challenges that require significant coordinated international efforts.

NSF 19-501:

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505584



Partnerships for Enhanced Engagement in Research - PEER

A USAID program to support developing country collaborators of USG-funded researchers

- **USAID** provides funding to developing country researchers
 - US partner must have an active award from NSF, NIH, NASA, NOAA, USDA, USGS, Smithsonian
- Administered by National Academies for USAID
- US team may request supplement if partner receives funding
- See website for country, topic eligibility

<https://sites.nationalacademies.org/pga/peer/index.htm>

The National Academies of
SCIENCES · ENGINEERING · MEDICINE

PARTNERSHIPS FOR ENHANCED
ENGAGEMENT IN RESEARCH (PEER)
DEVELOPMENT, SECURITY, AND COOPERATION
Policy and Global Affairs

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U.S. GLOBAL DEVELOPMENT LAB

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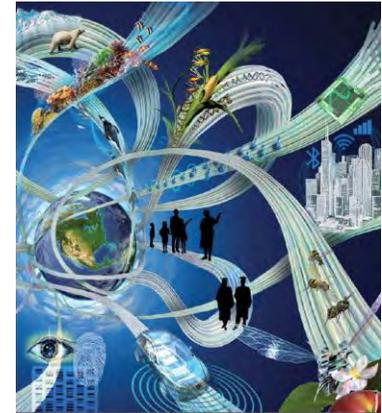
The United States Agency for International Development (USAID) has joined with several U.S. Government (USG) supported agencies to support Partnerships for Enhanced Engagement in Research (PEER). Administered by the U.S. National Academy of Sciences (NAS), PEER is a competitive grants program that invites scientists in developing countries, partnered with USG-supported collaborators, to apply for funds to support research and capacity-building activities on topics with strong potential development impacts. This innovative program is designed to leverage the investments other USG-supported agencies have made in scientific research and training while supporting the initiatives of developing country scientists. [Learn more.](#)



WHERE DISCOVERIES BEGIN

Proposals with International Collaboration

- In principle, NSF funds the U.S. side of the collaboration, not the foreign institution
- Demonstrate how the international collaboration enhances the research
- Involve U.S. students and junior researchers, with attention to diversity
- Include bio-sketch of key collaborator(s) (in Supplementary Documents)
- Include letter(s) of commitment from collaborator(s)
- Consult country-specific OISE program officer early in process <https://www.nsf.gov/od/oise/country-list.jsp>





- NSB**
- Research Areas
- Funding
- Awards
- Document Library
- News
- About NSF

- Biological Sciences (BIO)
- Computer and Information Science and Engineering (CISE)
- Education and Human Resources (EHR)
- Engineering (ENG)
- Environmental Research and Education (ERE)
- Geosciences (GEO)
- Integrative Activities (OIA)
- International Science and Engineering (OISE)
- Mathematical and Physical Sciences (MPS)
- Social, Behavioral and Economic Sciences (SBE)

- RELATED LINKS
- Interdisciplinary Research
 - NSF Organization List
 - Responsible and Ethical Conduct of Research
 - Staff Directory
 - Understanding NSF Research

NSF-FUNDED RESEARCH

Steering a virtual hurricane to understand impacts

FULL STORY

Inspiring & Educating



Stream pollution from mountaintop mining doesn't stay put in the water
April 9, 2020



Coastal pollution reduces genetic diversity of corals, reef resilience
April 8, 2020

