PEER PROGRAM

CONNECTING YOUR RESEARCH WITH NSF SUPPORTED RESEARCH

Dr. Jessica Robin, PEER Program Director, National Science Foundation

NSF AND USAID PERU WORKSHOP (2009)

Adapting to a World without Glaciers

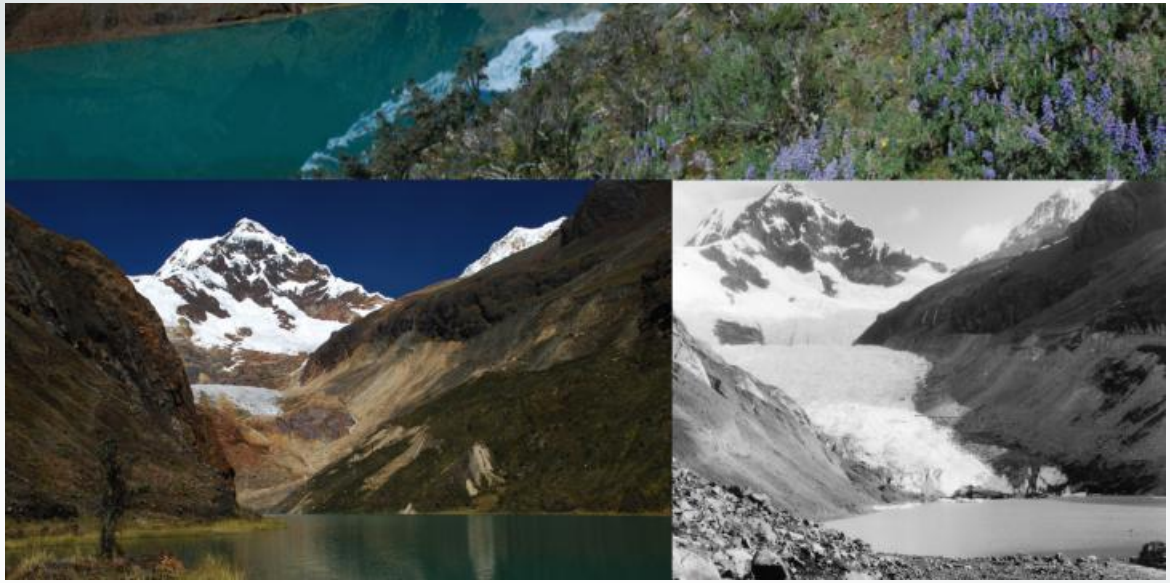

Photo Credit: High Mountain Adaptation Partnership

2010 NSF AWARD

Hydrologic Transformation and Human Resilience to Climate Change in the Peruvian Andes

Photo Credit: Bryan Mark

2014 PEER AWARD

Glacial Retreat and Water Resource Sustainability in the Peruvian Andes: Informing Adaptation Strategies through Collaborative Science

PI: Cirilo Pablo Lagos, Instituto Geofísico de Perú

U.S. Partner: Bryan Mark, Ohio State University


water
climate
change
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development
Development
Biodiversity
biodiversity
resources
Climate
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Water
Indonesia
Assessment
impacts
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Change
using
Basin
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quality
systems
Strengthening
agricultural
Analysis
Amazon
Modeling
Building
Lake
River
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building
adaptation
Bangladesh
Jordan
conservation
Lebanon
food
wetlands
Kenya
improving
tropical
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Research
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Freshwater
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POTENTIAL
Sustainable
Evaluating
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Impacts
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Improving
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Leaf
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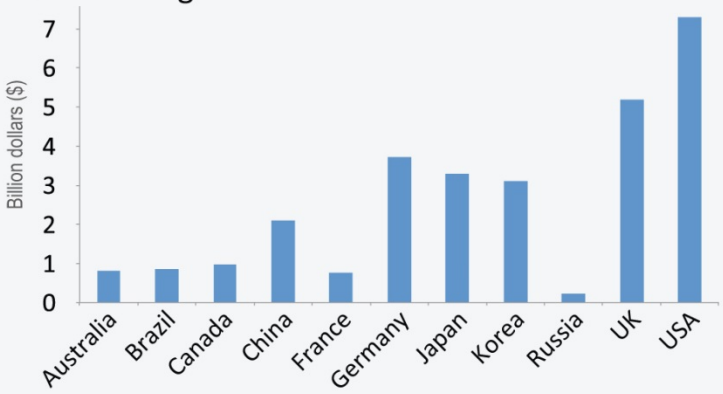
Egypt
sensing
Towards
Improved

National Science Foundation

NATIONAL MISSION, INTERNATIONAL IMPACT

With an annual budget of over $7 billion, the National Science Foundation has a mandate to support all fields of basic science and engineering, as well as research into STEM education. Because of this comprehensive commitment to science, NSF has helped keep our nation at the forefront of scientific discoveries for more than six decades, and those discoveries have had worldwide impact.

NSF Compared to Worldwide Funding by Government Agencies*



Nobel Prizes

210

COLLECTIVELY, NSF-FUNDED RESEARCHERS HAVE WON MORE THAN 210 NOBEL PRIZES FOR WORK IN THE FIELDS OF CHEMISTRY, ECONOMICS, PHYSICS AND PHYSIOLOGY AND MEDICINE SINCE 1951.

Merit Review

GOLD STANDARD

THE NSF MERIT REVIEW PROCESS IS CONSIDERED THE INTERNATIONAL GOLD STANDARD FOR EVALUATING SCIENCE AND ENGINEERING RESEARCH PROPOSALS

NSF Beyond Borders

Graduate Research Opportunities Worldwide (GROW) enables Graduate Research Fellows to work with university faculty and researchers across the globe.

Total countries partnered with = 22

Science Across Virtual Institutes (SAVI) facilitates partnerships among NSF-supported U.S. scientists and engineers and their international partners for enhanced research collaboration, data sharing, networking, and technical exchanges.

Total countries partnered with = about 19

Partnerships for Enhanced Engagement in Research (PEER) is a USAID-funded program that provides opportunities for scientists in developing countries to work with NSF-funded scientists at U.S. institutions.

98 projects in 42 countries

Basic Research to Enable Agricultural Development (BREAD) is an NSF partnership with the Bill & Melinda Gates Foundation to support innovative basic research addressing constraints to smallholder agriculture in the developing world.

Total countries partnered with = 17

** Source: Approximations based on FY2015, or most recent fiscal year, budget reported by each research agency*

National Science Foundation

GOLD STANDARD IN MERIT REVIEW

Research proposals submitted to NSF are subjected to a rigorous merit review system – impartial, competitive, and transparent – ensuring that each proposal meets the highest standards of intellectual merit and broader impact on society. NSF's merit review process is widely regarded as the gold standard of scientific review and has been emulated in numerous countries around the world.

$7.3 billion NSF FY 2015 Budget Request

94% Funds research, education and related activities

INPUT

50,000
Proposals evaluated through competitive review process

38,000
Reviewers, including external experts and program staff

233,000
Total number of reviews, each proposal evaluated multiple times

OUTPUT

10,800
Competitive awards funded

1,922
U.S. colleges, universities, and other institutions receiving NSF funding

299,000
Estimated number of researchers, postdoctoral fellows, trainees, teachers and students NSF supports directly

IMPACT

47,800
Students supported by NSF Graduate Research Fellowships since 1952

210+
Number of Nobel Laureates supported by NSF

NSF-Supported Research
has spurred economic activity and improved the quality of life for all Americans

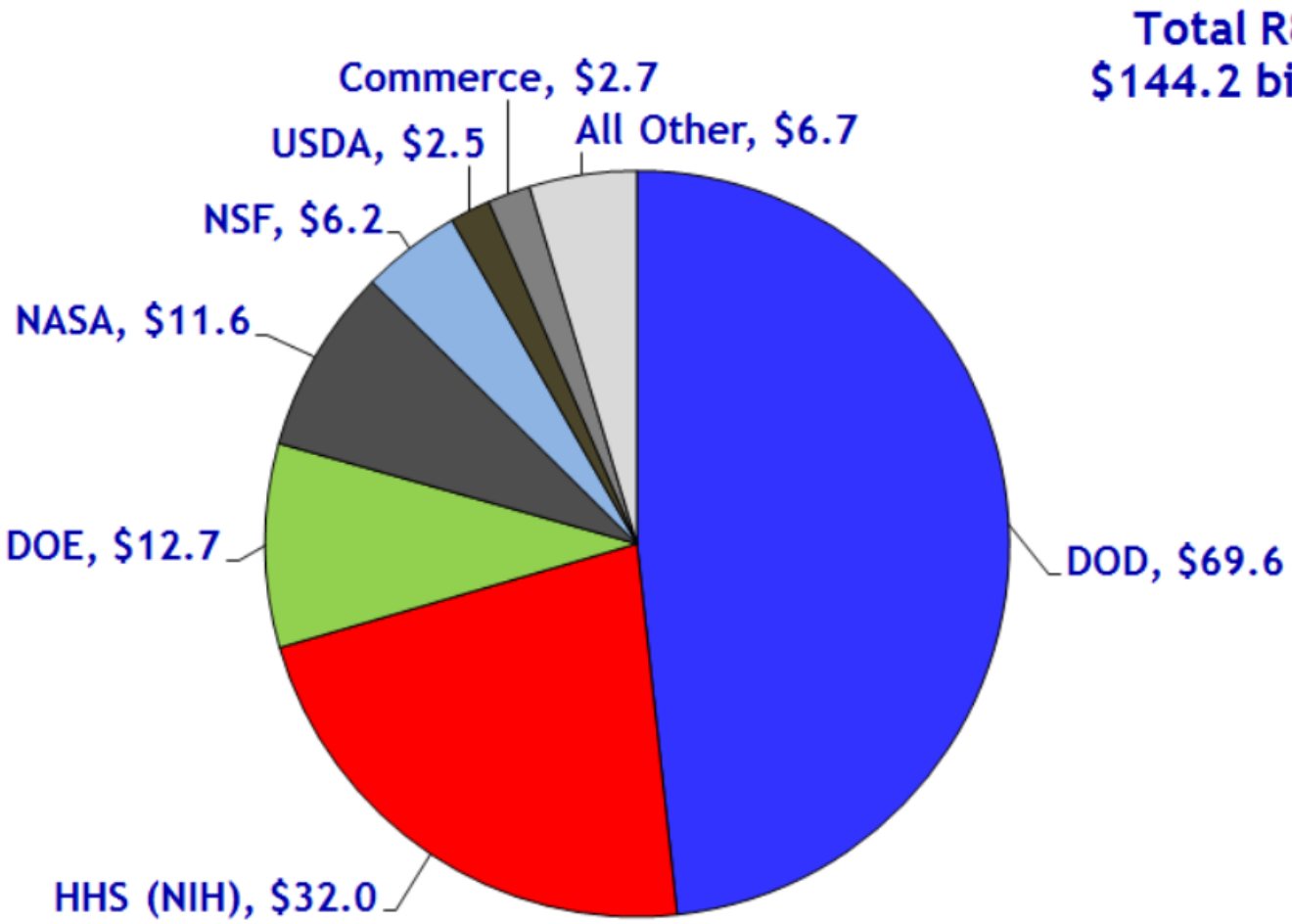
STEM Workforce Development
supports students, teachers and tools to enable the development of a diverse and highly qualified science and technology workforce

Figures other than Budget Request represent FY 2013 actuals

Data Current as of 2014

Total R&D by Agency, FY 2014

budget authority in billions of dollars



Source: OMB R&D data, agency budget justifications, and other agency documents.
R&D includes conduct of R&D and R&D facilities.

NSF PROGRAMMATIC ORGANIZATION

NSF Office of the Director

- **Office of International and Integrative Activities (OIIA)**

NSF Directorates

- **Biological Sciences (BIO)**
- **Computer and Information Science and Engineering (CISE)**
- **Education and Human Resources (EHR)**
- **Engineering (ENG)**
- **Mathematical and Physical Sciences (MPS)**
- **Geosciences (GEO)**
- **Social, Behavioral and Economic Sciences (SBE)**

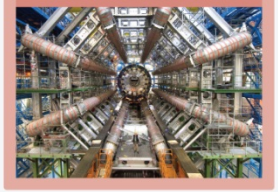
National Science Foundation

NSF GLOBAL PRESENCE

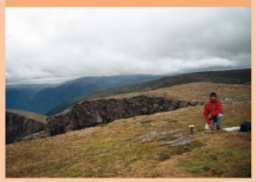
In a changing world full of opportunity, multidisciplinary research and international cooperation in science are more important than ever. With major scientific collaborations in all corners of the world, NSF continues to oversee global scientific exchanges and lead U.S. participation in international scientific efforts. We can only imagine what new discoveries this innovation and collaboration will spark in the years to come.

OBSERVATORIES

OFFICE & INSTRUMENTS



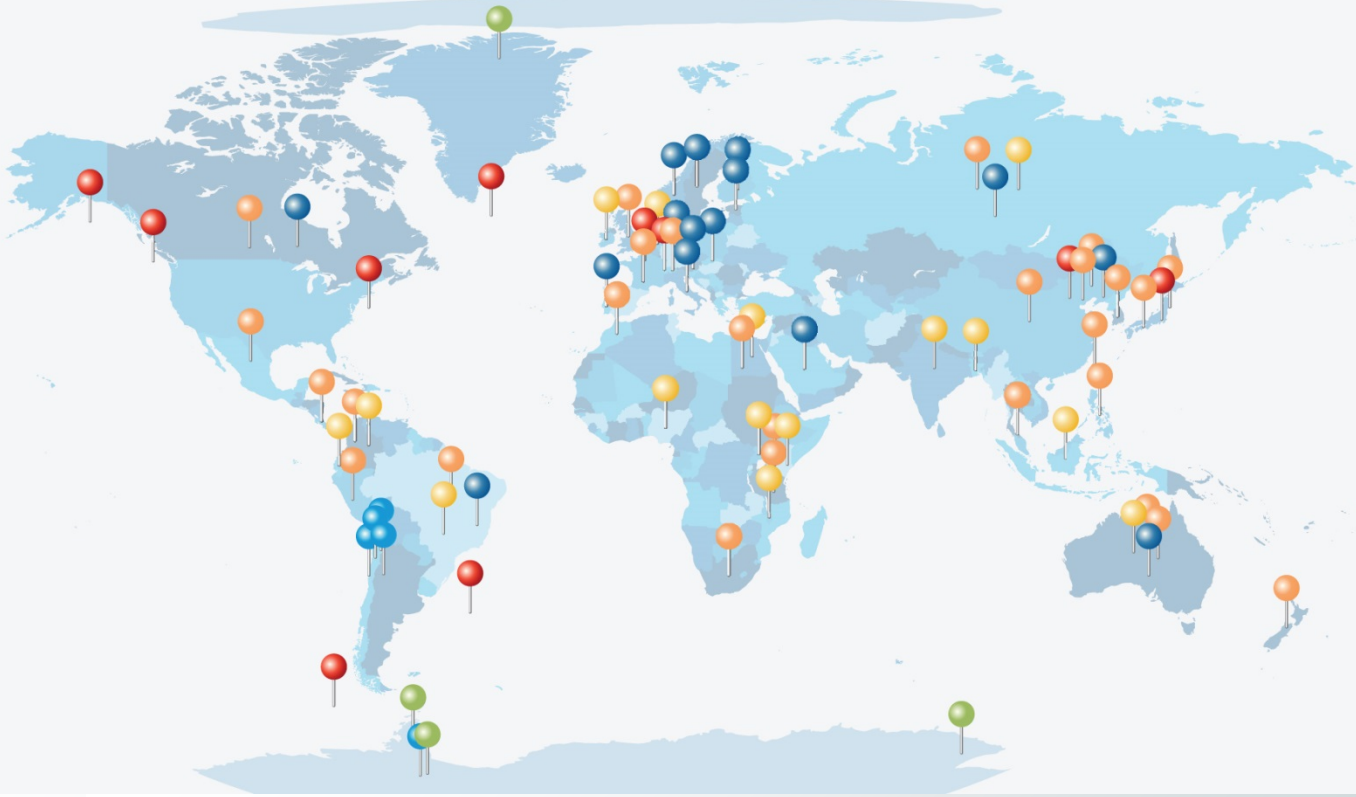
EDUCATION



INTERNATIONAL PARTNERSHIPS

POLAR

COLLABORATIONS



Data Current as of 2014

CORE VALUES FOR INTERNATIONAL ENGAGEMENT

- Intellectual partnerships and mutual benefit are clear
- U.S. students and junior researchers are engaged internationally
- Global networks linking expertise and resources are common

HOW PEER BENEFITS U.S. SCIENCE

- **Unique access to facilities and sites**
- **Strengthens collaborations between U.S. and international researchers**
- **Workforce development**

Abandoned South African Gold Mine
(Photo courtesy of Dr. Tutu)

Photo courtesy Dr. Najib

U.S. Graduate Student
Meghan Miller in Kenya

National Science Foundation

PUSHING THE FRONTIER FORWARD

NSF remains on the leading edge of discovery in areas from astronomy to geology to zoology. As Vannevar Bush forecast at NSF's inception: "The pioneer spirit is still vigorous within this nation. The rewards of such exploration both for the nation and the individual are great. Scientific progress is one essential key to our security as a nation, to our better health, to more jobs, to a higher standard of living, and to our cultural progress."

FIGHTING FUTURE FOREST FIRES

UNLOCKING THE BRAIN'S MYSTERIES

SAVING LIVES ON A RESTLESS PLANET

PROTECTING PASSWORDS WITH ADVANCED ALGORITHMS

DNA FINGERPRINTING

INVOLVING CITIZEN SCIENTISTS IN TOMORROW'S DISCOVERIES

EDUCATING TOMORROW'S HIGH-TECH TEACHERS

Data Current as of 2014

Science Across Virtual Institutes (SAVI)

- SAVI provides a platform for teams of NSF-funded investigators to ***network*** with partners abroad, ***leverage*** *resources* to advance shared research interests, and ***engage students*** in international collaboration.
- SAVI is a mechanism, not a stand-alone program

REGIONAL NETWORKS

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