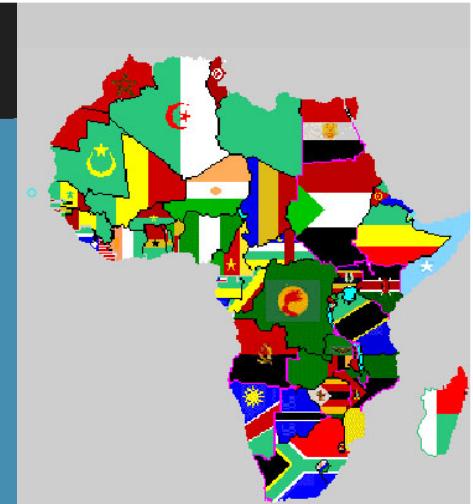




# PEER PROGRAM OVERVIEW

## History, Purpose, Significance & Future



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

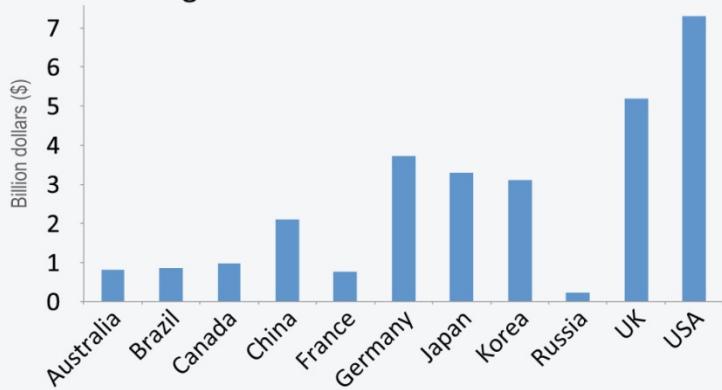




National Science Foundation

# NATIONAL MISSION, INTERNATIONAL 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 CHEMIS-  
TRY, ECONOMICS, PHYSICS AND  
PHYSIOLOGY AND MEDICINE SINCE  
1951.

## Merit Review



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

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 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.

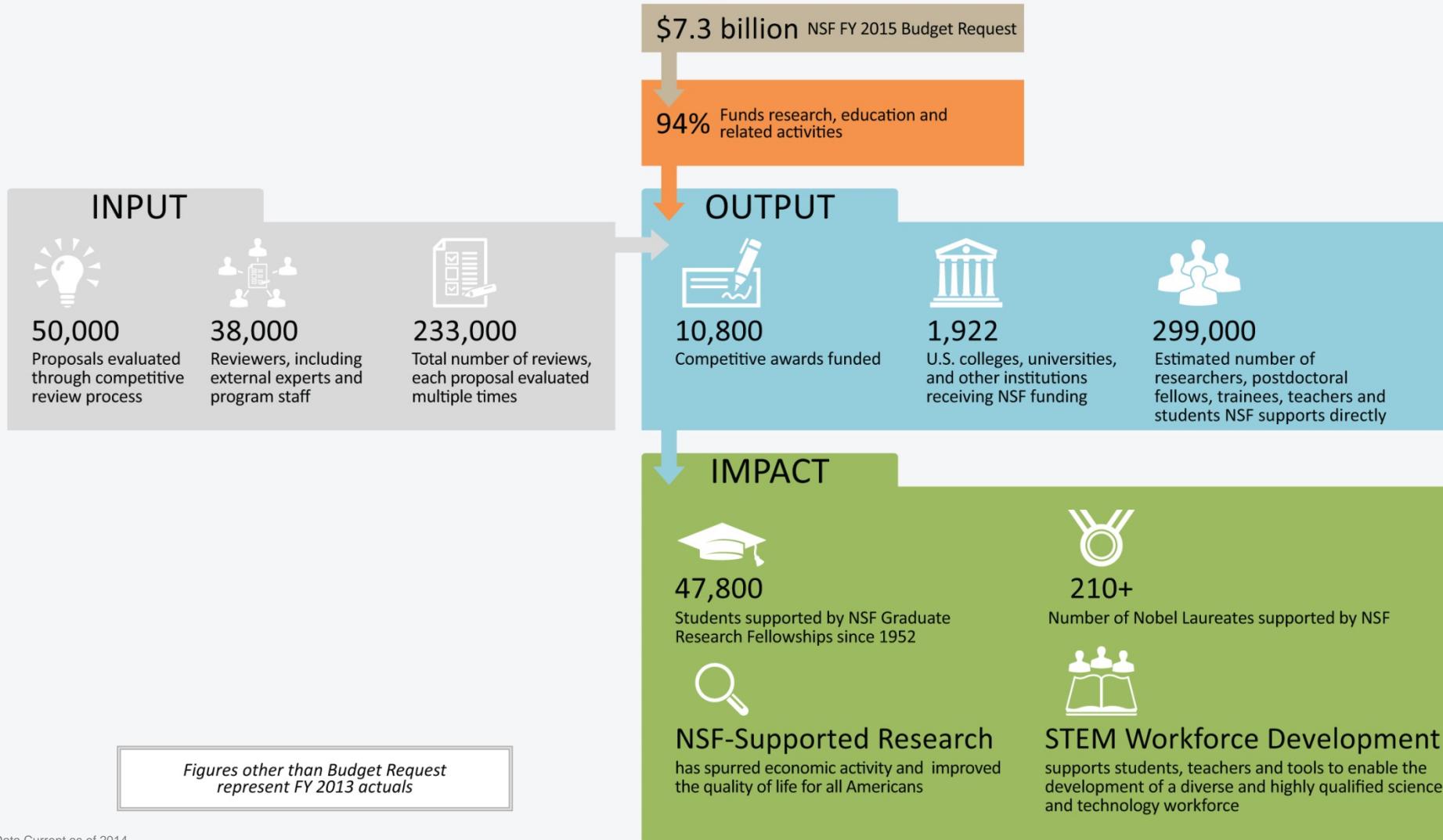
Total countries partnered with = 17



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# 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.





# 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





# SYNERGY BETWEEN NSF & USAID

## NSF

- Congressional mandate is **scientific research**
- Primary client is the **US science community**
- Funding is allocated to **US institutions**
- **Merit review** for research proposals is fundamental

## USAID

- Congressional mandate is **foreign assistance**
- Primary clients are **developing countries**
- Funding flows to **foreign partner** and/or US institution
- Bureaus, regions, and missions need **buy-in**

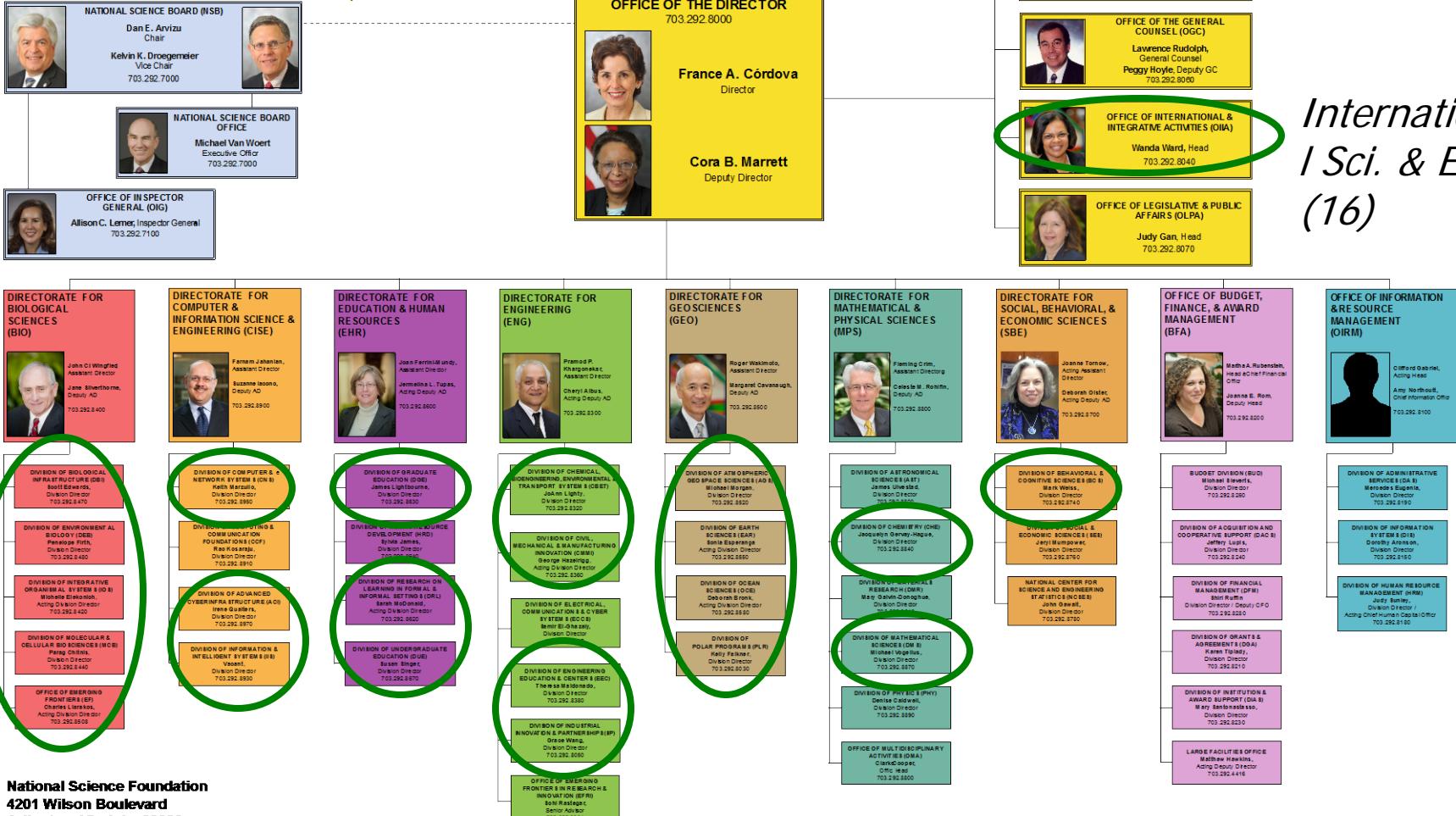
MOU



- **U.S. scientific community advocated for resources to balance partnerships with their international collaborators**
- **Prior jointly supported activities**
  - Supporting Infrastructure Reconstruction (Haiti)
  - Geospatial Technologies & Biodiversity (Kenya)
  - Climate 1-Stop Geoportal (Panama)
  - Earthquake Monitoring (Malawi)
  - Recession of Tropical Glaciers (Peru)
  - Geophysical Hazards Workshop (Costa Rica)



# NATIONAL SCIENCE FOUNDATION



*International Sci. & Eng. (16)*

National Science Foundation  
4201 Wilson Boulevard  
Arlington, Virginia 22230

TEL: 703.292.5111 | FIRS: 800.877.8339 | TDD: 800.281.8749

**Biological Sciences (25)**

**Computer & Information Sci. & Eng. (5)**

**Education & Human Res. (7)**

**Engineering (12)**

**Geosciences (23)**

**Mathematical & Physical Sci. (3)**

**Social, Behavioral, & Economic Sci. (6)**

June 2014

# Bioassessments

extreme potentialDeveloping Supply data

# Biopesticide assessment: developing rice

## data to enhance agricultural impact

associated pollution River divers analysis financing Amazon Peru Develop natural needs genetic livelihoods potential Sustain Evaluat Build socioecon cur m Opportunit global

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Strengthening  
systems  
Impact  
development

# Water, Climate, and Development



# 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)



Dr. Burton Mwamila makes a presentation at The National Academies in Washington, D.C. (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



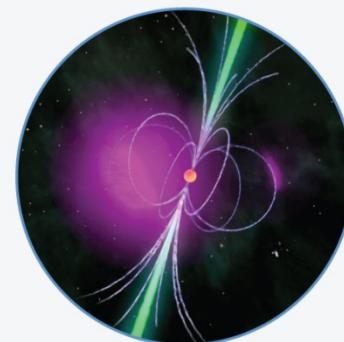
## SAVING LIVES ON A RESTLESS PLANET



## PROTECTING PASSWORDS WITH ADVANCED ALGORITHMS



## DNA FINGERPRINTING



## INVOLVING CITIZEN SCIENTISTS IN TOMORROW'S DISCOVERIES



## EDUCATING TOMORROW'S HIGH-TECH TEACHERS



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