# Partnerships for International Research and Education (PIRE)

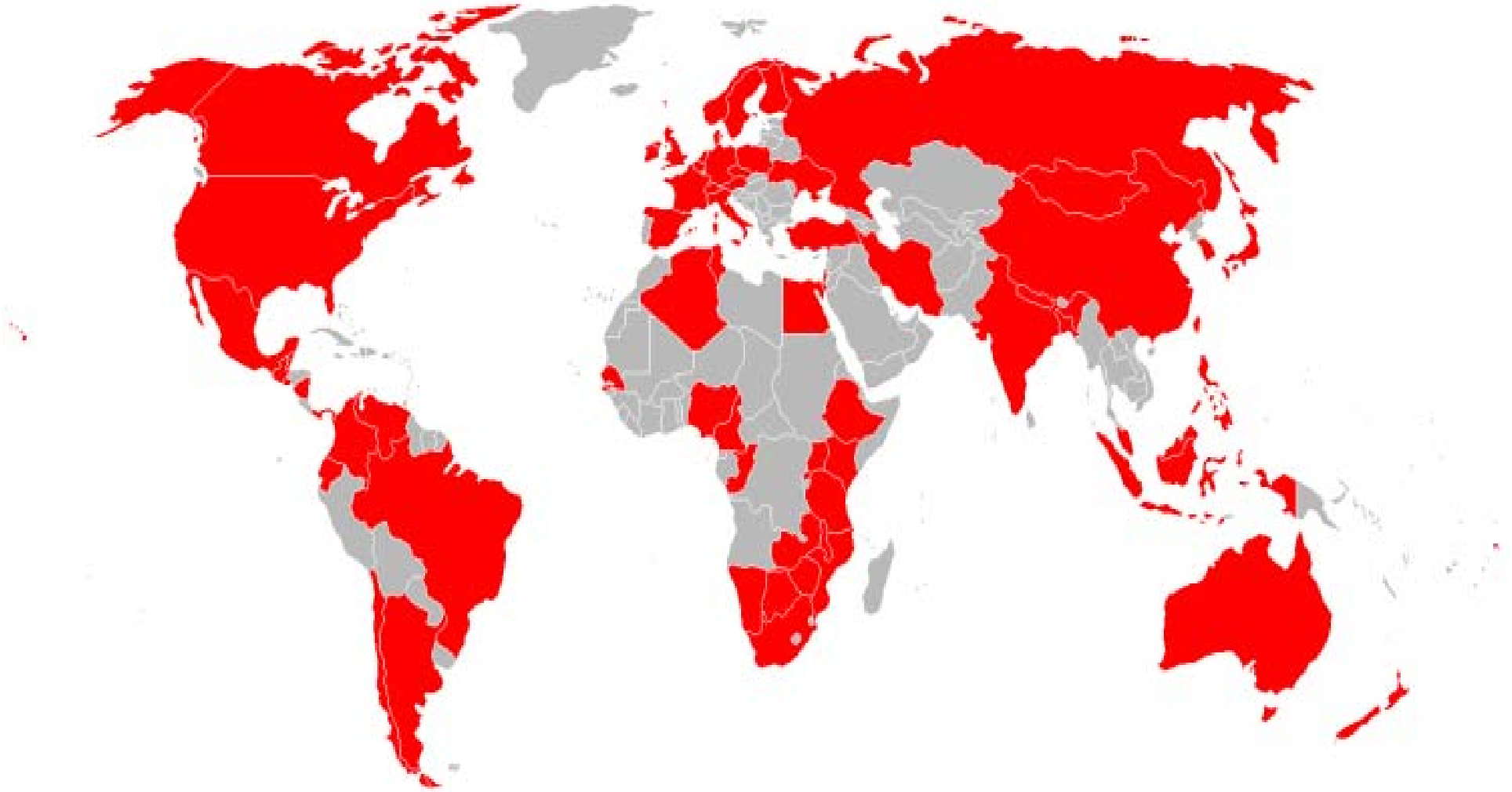
## Webinar for Pre-Proposals Due

## September 14, 2016

# What is PIRE? – Summary

- NSF-wide program managed by the Office of International Science & Engineering (OISE) that supports international activities across all NSF supported disciplines
- Funds the US-side of large collaborative international research and education projects
  - International collaboration is essential
  - Research and education are tightly integrated
  - Led by Project PI at a US Ph.D.-granting institution
  - 5 year awards
  - Often multi-institution and multi-foreign country

# PIRE Awards Map



# What is PIRE? – Summary

- No budget ceiling BUT on average ~$4M total per award
- @ 220 preliminary proposals expected
- @ 50 will be invited to submit full proposals
- 8-12 awards anticipated
- Competition cycle:  PIRE 6 (awards made in 2017)

# PIRE Program Objectives

- Research Excellence
  - Support science and engineering at the research frontier
- International Partnerships
  - Build partnerships with foreign counterparts
- Students and Early Career Researchers
  - Provide strong international research experiences and opportunities to build their personal networks
- Institutions
  - Engage institutional resources, catalyze change and continuing impact
- Models
  - Develop new models for international research and education

# PIRE Pre-Proposal Requirements

(**not exhaustive**)

- Project Summary (1 page maximum)
  - Separately addresses intellectual merit and broader impacts
  - Includes why international partnership is critical to project success

- Project Description (6 page maximum)
  - Administrative Summary (1 page maximum)
    - Estimated total budget (not itemized)
    - List of partner institutions & key researchers
    - Identify "Additional Funding Opportunities"
  - Research Summary (3 page maximum)
    - Main ideas and essence of the research
    - Includes the synergy that each participant brings to the project
  - Education Summary (2 page maximum)
    - Goals of the education activities
    - Includes how integration of research and education will advance the PIRE project in a way that other funding mechanisms cannot
- Biographical Sketches of PI, Co-PIs and key domestic and international partners partners

# PIRE Pre-Proposal Requirements

**(not exhaustive)**

- Conflicts of Interest
  - Single copy document – alphabetically ordered list of people
- Optional Supplemental Documents
  - Informal evidence indicating agreement to collaborate is highly encouraged
  - Partner institutions and key participants may not be changed in subsequent full proposal
- Optional Reviewer Information – Single Copy Documents Section
- No other items or appendices – will be returned without review

# NSF Merit Review Criteria

## Intellectual Merit – the potential to advance knowledge

- What is the potential for the proposed activity to advance knowledge and understanding within its own field or across different fields?
- To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
- Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
- How well qualified is the individual, team, or organization to conduct the proposed activities?
- Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

# NSF Merit Review Criteria

## Broader Impacts – the potential to benefit society and contribute to the achievement of specific, desired societal outcomes

- How well does the activity advance discovery & understanding while promoting teaching, training & learning?
- How well does the proposed activity broaden the participation of underrepresented groups?
- Will the results be disseminated broadly to enhance scientific & technological understanding?

# NSF Merit Review Criteria

## Broader Impacts – Improving Society

NSF values the advancement of scientific knowledge and activities that contribute to the achievement of societally relevant outcomes. Such outcomes include, but *are not limited* to:

- Building STEM talent: finding creative ways to broaden participation in science, ensuring everyone has an opportunity to succeed in all fields of science and engineering;
- **Innovating for the future:** fundamental research both expands the limits of human knowledge and uncovers insights that could save lives
- **Improving our society:** research that tackles societal challenges (adaptive technologies/bionic eyes, harnessing powerful supercomputers/to help fight HIV);
- **Reaching beyond borders:** the impacts of NSF research extend beyond the borders of an institution or country (responses to Ebola, predicting ice sheet collapse);
- **Engaging a wider audience:** science education and exploration aren't limited to the classroom or lab (rainforests of Puerto Rico, museum maker spaces, galaxy zoos)
- **Engaging citizens in research:** helps increase public understanding of science and the scientific process itself.

# PIRE Program-Specific Review Criteria


## Value added through International Partnership

- To what extent is the international partnership essential to the proposed project?
- How does each participating institution contribute to advancement of the PIRE project?
- Is the whole greater than the sum of its parts?

## Educational Activities

- How do the proposed educational activities of the PIRE project promote educational excellence via international collaboration and development of a globally-engaged US science and engineering workforce?

# PIRE Program-Specific Review Criteria

## Institutional Engagement

- How clearly presented are the roles and contributions of each participating organization?
- How well defined are anticipated benefits that each of the project's partners will gain in the proposed partnership?

## Project Management

- How well is the management structure described and how appropriate is that structure for effective management, coordination, logistics and oversight of the PIRE activities?
- How effective is the proposed plan likely to be in measuring project outputs and outcomes?
- How clear and appropriate are the proposed metrics and criteria for measuring project accomplishments according to a well-defined schedule?

# PIRE Partner Agencies

- PIRE is working with counterpart funding agencies to lower barriers to international collaboration for U.S. scientists, engineers and students, and to encourage jointly funded, bilateral and multilateral projects.

- For PIRE 6 there are 22 formal PIRE Partnership Agencies from 19 countries, including the USAID PEER program.

- Important to remember that this list of partnerships is not restrictive

# Partnerships for Enhanced Engagement in Research (PEER)

- USAID through the National Academies provides support to foreign researchers in USAID locations.

- US partner must have ACTIVE award from NSF (or NIH, USDA, USGS, Smithsonian, NASA, NOAA). New Solicitation is expected ~Sept. 2016.

- Only certain countries eligible
  - Depends on USAID Mission interests
  - Development impact crucial
- Variety of programs for specific topics / regions
- Managed by National Academies nationalacademies.org/PEER

The National Academies of SCIENCES · ENGINEERING · MEDICINE

# PIRE Awards by Discipline

| | |
|---|---|
| • Engineering | – 22 |
| • Math/Physical Sciences | – 16 |
| • Geosciences | – 14 |
| • Biological Sciences | – 13 |
| • Social Sciences | – 6 |
| • Computer Sciences | – 4 |
| • Education/Human Resources | – 1 |
| | 76 |

All Science and Engineering disciplines are represented (PIRE 2012 focused on Sustainability)

# PIRE Process is Very Competitive

- 2012 PIRE
  - 179 prelim proposals → 52 invitations (29%)
  - 12 Awards (23% of invitations; 7% of prelim)

- 2015 PIRE
  - 218 prelim proposals → 63 invitations (28%)
  - 17 Awards (26% of invitations; 12% of prelim)

# Recent History of PIRE Awards

- 2012 PIRE Awards
  - 12 awards -- $3.8 - $5.0 M (avg $4.4 M)
  - NSF Investment of $50 million over 5 years

- 2015 PIRE Awards
  - 17 Awards – $3.0 - $5.0 M (avg $4.0 M)
  - NSF Investment of $69 million over 5 years

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## Partnerships for International Research and Education (PIRE)

**PIRE Program News - Update June 2016**

The Program is open and currently accepting preliminary proposals.

Please see solicitation - 16-571

**DUE DATES**

Preliminary Proposal Deadline Date: September 14, 2016

Full Proposal (By Invitation only) Deadline Date: April 24, 2017

**WEBINAR**

Please join us on July 7, 2016 from 2 pm - 4 pm (EST) for an informational webinar session about the current PIRE competition.

Event address for attendees: https://nsfevents.webex.com/nsfevents/onstage/g.php?MTID=e31228536425f6b99deae6167998fbf75

Event password: pire

Audio conference information

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Toll #1-203-607-0666
Toll Free #877-951-7311
Participant passcode: 4732016
Audio will be teleconference only


# Questions?