PAKISTAN – U.S. SCIENCE AND TECHNOLOGY COOPERATION PROGRAM

FACT SHEET

HISTORY

In 2003, the Governments of Pakistan and the United States signed a comprehensive Science and Technology Cooperation Agreement that established a framework to increase cooperation in science, technology, engineering, and education for mutual benefit and peaceful purposes. In 2005, USAID-Pakistan along with the Higher Education Commission (HEC) and the Ministry of Science and Technology (MoST) began funding cooperative activities under this agreement with the Department of State (DOS) joining as US co-sponsor in 2008. On October 23, 2013 the S&T Agreement was renewed by both countries until 2018.

OBJECTIVES

The program aims to strengthen capacity of Pakistani public and private science and technology institutions by:

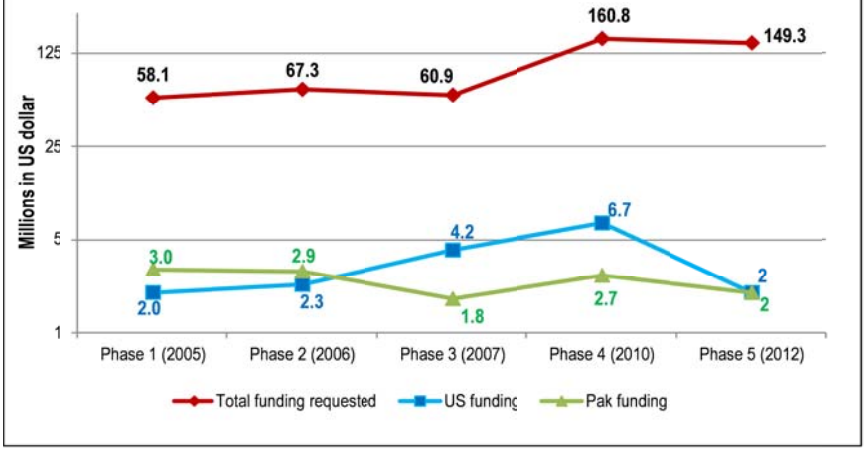
- Enhancing the ability of Pakistan's science and technology community to spur human and economic development;
- Improving the quality, relevance, or capacity of education and research at Pakistani institutions of higher education in the field of science and technology; and
- Improving the capacity of Pakistani research institutions to support industry competitiveness.

PEER REVIEW AND FUNDING

Proposals submitted jointly by American and Pakistani researchers undergo a two-step ***merit based peer review process*** emphasizing quality, relevance, and potential for impact. The first level of review is conducted by expert scientists and organized independently in each country. Highly ranked proposals are then discussed by a bilateral panel of sponsors with final project selection determined by **consensus**.

Each country contributes funding to support research partnerships. Since 2005, the U.S. received $17.2 million and Pakistan $12.4 million to fund 83 joint research projects but a significant gap remains between funding needs and funds available for joint research (Figure 1).

Figure 1 Funding Gap (total requested vs total available) by phase



PROGRAM SNAPSHOT (2005-2012)

US Implementing Partner: The National Academies (NAS)

US Sponsors: USAID, DOS

Pakistani Partners: HEC, MoST

Funding: $30 million available to fund projects (Pak+US); $496.4 million total requested by all proposals reviewed.

Awards: Funded 83 projects from 852 proposals reviewed.

Competitiveness: Award success rate ranged from 4-17% (Table 1).

Diaspora: 33% of the US project principal investigators are of Pakistani origin.

2012 Survey responses from project scientists:

"I would not have been able to collaborate with my counterpart without funding from this program" (77%).

"This program was important in starting or continuing my research activities" (82%).

For more information, about the program and funded projects, please visit program website at www.nationalacademies.org/pakistan or contact us by emailing pkcontract@nas.edu. Updated January 2014.

Table 1 Proposal Statistics (US+Pakistan)

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total
Reviewed	85	119	115	267	266	852
Awarded	11	16	19	27	10	83
Award Success rate	12.9%	13.4%	16.5%	10.1%	3.8%	-

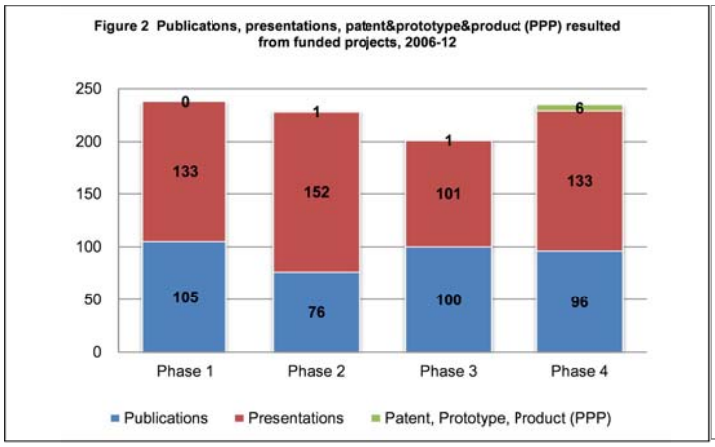
OUTCOME INDICATORS

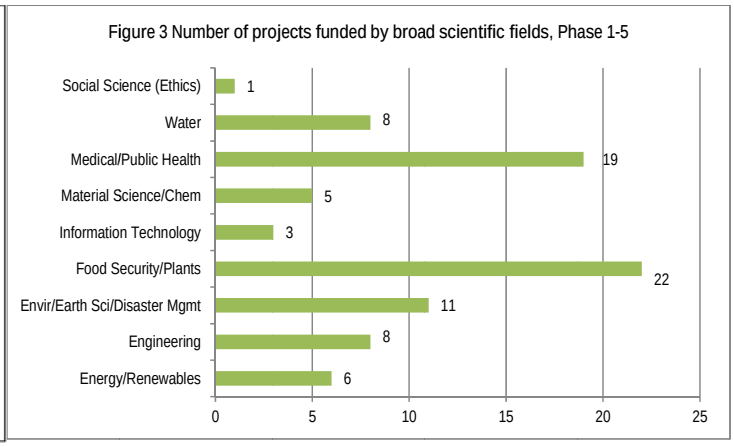
Linkages: Established links between 38 Pakistani higher education and research institutes with 63 US universities and scientific institutions. Additional 557 partnerships were formed beyond initial project scope.

Trainings: 10,457 Pakistanis received training through these projects. Among them, 455 were trained directly in research and 10,002 (36% women) were trained through workshops/seminars/courses conducted as part of project activities.

Exchange visits: 178 exchange visits were made by Pakistani scholars, students and technicians to US counterpart institutions. Women represented 30% of the total exchange visitors.

Project Output: Although publications (e.g. research papers and book chapters) and conference presentations compose majority of research output (377 and 519 respectively), seven projects reported developing prototypes, products or submitted patents (one project developed 2 prototypes).





MOVING FORWARD: ECONOMIC GROWTH THROUGH TECHNOLOGY TRANSFER

To highlight a new program focus on commercialization and innovation in research, the first Pakistan – U.S. Science and Technology Program Symposium on Economic Growth was held in Islamabad, Pakistan in January 2013. Covering diverse topics such as forming university technology transfer offices, to composing elevator pitches, to intellectual property rights, and forging public-private partnerships, the symposium brought together scientists, entrepreneurs, government officials, and the media. Seven projects funded by this program were showcased for their commercial application potential. Four of the projects are shown below.

"A hybird solar water heating system using CO_2 as working fluid": a project between North Dakota State University and COMSATS Institute of Information Technology, Islamabad

"Development of guidelines for asphalt pavement recycling in Pakistan": a project between Michigan State University and National University of Science and Technology, Islamabad.

"The development, optimization and application of a high-performing engineered fertilizer": a project between USDA Agricultural Research Service and Nuclear Institute of Food and Agriculture, Peshawar.

"Small scale sewage treatment and wastewater reuse system for Pakistan": a project between George Washington University and Quaid-i-Azam University. Islamabad.