



The International Science Partnership (ISP)

Overview

Science and technology is a key strength of the U.S. both for its transformative potential and for its positive international reputation. The most highly regarded aspect of the U.S.—above its government, culture, economy, and society—American science and technology is widely admired for being of high caliber, for producing innovative research and technologies, and for possessing attributes such as transparency and merit-based recognition. In order to capitalize upon its strengths and positive reputation in science and technology, the U.S. must actively and deliberately engage in science diplomacy, a fact recognized by the government in its new science diplomacy mandates, the creation of international scientific centers of excellence and in the passing of H.R. 1736, the International Science and Technology Cooperation Act of 2009.

However, these science diplomacy initiatives have focused almost entirely on promoting scientific relationships, exchanges, and conferences with countries with which the U.S. already has a substantial (if contentious) relationship. Little attention has been paid thus far to countries with which the U.S. has limited engagement. However, these nations share many of the same challenges the U.S. faces in environmental and resource management, energy and water availability and security, and in building more efficient, sustainable economies, cities, and transportation. These shared challenges represent opportunities for America to engage and partner with scientists and government officials in these countries, thereby developing stronger, more diverse, and more stable relationships with these nations.

To meet this need for positive science and technology engagement between America and countries with which it has a limited formal relationship, the Federation of American Scientists (FAS) has developed the International Science Partnership (ISP). This partnership program seeks to engage in a science diplomacy founded on seeking solutions to shared environmental challenges; to promote transparency and knowledge sharing between scientists and between science and government; and to build the science capacity of both the U.S. and its partner nations by building long-term science and engineering partnerships between young academics in both countries.

The ISP Pilot

The International Science Partnership (ISP), initiated in 2010, will open its first environmental partnership program in Yemen in early 2011. The partnership is envisioned as a long term, project based collaboration with young researchers from the United States and Yemen equally

sharing their own experiences and expertise. All participants will benefit from the program as it provides opportunities for interdisciplinary and international collaboration, publications, and long term research funding. Moreover, the scientific communities of both countries will benefit from the increase in knowledge transfer and information sharing between young scientists; from the capacity growth of the young science participants; from the opening of new research sites; and from engagement in a dialogue over how to develop long-term science partnerships and centers that are mutually beneficial to Yemen and to the United States.

Yemen was chosen as a pilot project as this Middle Eastern country poses a strategic security concern for the U.S. and also because while the country comes under the purview of the Middle East Science Diplomacy Initiative, thus far the Initiative has yielded no U.S.-Yemeni one-to-one and limited regional science exchange or partnership. Moreover, the United States has a limited formal or informal relationship with Yemen; the current relationship consists almost entirely of realist-defined security and terrorism issues.

As both the countries have considerable expertise in and need for innovative water and electricity solutions for high desert, interior urban areas, the topic of this first collaboration will be sustainable water and electricity solutions. This topic will allow a valuable knowledge exchange between Yemeni water management scientists and electrical engineers and the leading young American engineers, hydrologists and water resource researchers, and environmental social scientists.

The ISP pilot in Yemen will be designed in three phases: an opening workshop to be held in Yemen, a phase where the participants remotely develop their joint project, phase consisting of a week-long meeting for scientists to begin concretely collaborating and undertaking original research, and a long-term support phase that consists of structured engagement of participants with potential funders, journals, and experts.

In phase one, FAS will bring a group of U.S. scientists and engineers to Yemen to meet and explore project ideas with a group of their Yemeni colleagues and discuss how to integrate their research and skill sets into a cohesive project. In this phase, the participants will also receive training in how to develop a fundable project proposal and business plan for their research.

During phase two, the participants will remotely develop their project proposal and business plan, using web-based collaboration tools to communicate and share ideas and knowledge. Upon completion of the business plan, the participants will be brought together for one more week to meet, further develop their projects, and carry out original research.

In phase three, either the Yemeni scientists will be brought to the United States or all participants will be brought to Amman, Jordan, depending upon visas and facility requirements. At the conclusion of phase three, all participants should have a structured one-year collaboration and research plan that will be supported by FAS throughout this period and potentially beyond, dependent upon funding. By requiring the participants to develop a fundable proposal and supporting them in designing the proposal, acquiring funding, seeking out publication opportunities, and facilitating communication, FAS seeks to create a sustainable project that lasts well beyond the initial grant period and continues to develop and produce useful, innovative research for years to come.