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Science Diplomacy and Congress: How Better Coordination Benefits the United States and the World

Russ Carnahan

AS a member of the House Committee on Foreign Affairs and a former member of the House Committee on Science, I believe that the coordination of international science and technology (S&T) diplomacy is paramount to U.S. interests. The United States has the potential to build more positive relationships with other countries through science. Our country can better advance U.S. national security and economic interests by helping build technological capacities in other nations and working with international partners to solve global challenges. This is why I have worked in a bipartisan manner to lead the introduction of four bills at the intersection of science and diplomacy: the International Science and Technology Cooperation Act; the Global Conservation Act; the Global Science Program for Security, Competitiveness, and Diplomacy Act; and the Startup Act 2.0.

International challenges are just that: global in their scope and in their solutions. The United States cannot solve multifaceted, multinational problems in scientific or diplomatic isolation. Forging networks with scientists and institutions abroad helps the United States and its partners find technical solutions to key global challenges. In an era where international skepticism about U.S. foreign policy abounds, civil society—including scientists and engineers—plays a critical role

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in reinforcing U.S. foreign policy priorities via engagement with its counterparts abroad.

While many federal departments and agencies work with international counterparts on S&T projects and issues, a coherent interagency strategy does not exist. In addition to the Department of State and the U.S. Agency for International Development, which both work regularly with international entities, any federal agency that does its own research or funds academic research engages in international S&T cooperation. This includes the Departments of Agriculture, Defense, Energy, Commerce, and Health and Human Services as well as the National Aeronautics and Space Administration, the Environmental Protection Agency, and the National Science Foundation (NSF). Further, some of the explicitly research-oriented agencies have offices or programs dedicated to international science, including the NSF, National Institutes of Health, and Department of Agriculture.

With so many diverse—and oftentimes divergent—agencies involved in international S&T, it is critical that the United States develop a mechanism to set federal priorities and achieve interagency coordination. This ensures the United States is deriving maximum scientific and diplomatic benefit from such cooperation and in the most efficient manner: yielding the greatest bang for the taxpayer buck. That is why, along with Rep. Ileana Ros-Lehtinen (R-FL), the chair of the House Committee on Foreign Affairs, I am serving as the lead sponsor of the International Science and Technology Cooperation Act. The legislation establishes a body under the National Science and Technology Council at the White House Office of Science and Technology Policy that will identify and coordinate the U.S. interagency strategy for international S&T cooperation. Such a strategy will strengthen the U.S. S&T enterprise, improve economic and national security, support U.S. foreign policy goals, and ensure efficient use of federal resources.

The bipartisan Global Conservation Act, which I am leading with Rep. Jeff Fortenberry (R-NE) who is my colleague on the House Committee on Foreign Affairs, uses a comprehensive and cost-effective International Conservation Strategy to better coordinate U.S. programs that work to prevent the loss of our world's natural systems. The Strategy will align key, ongoing U.S. and international conservation efforts, strengthening the United States' ability to advance and compete for economic development opportunities and improve stability and security both domestically and abroad.

Specifically, this legislation will help to limit environmental destruction in areas vulnerable to conflict and instability; improve identification and protection of the most ecologically and economically significant natural areas and resources outside our borders; and address illegal and unregulated hunting, angling, logging, and wildlife trafficking in key regions, while maintaining properly managed wildlife for recreation and local use. The benefits of helping to preserve critical ecosystems, which comprise the fundamental building blocks of the world economy, national and regional security, and human health, are clear and indisputable.

The global population recently surpassed 7 billion people and it is on track to hit 9.3 billion by 2050. A coordinated, strategic approach to resource conservation is needed to ensure that the world can feed, clothe, and shelter current and future generations. This will promote global security and stability while preserving the natural environment for our children and grandchildren.

To support public diplomacy and encourage international scientific collaboration, I have introduced the Global Science Program for Security, Competitiveness, and Diplomacy Act. This bill creates a new research program where scientists from the United States and the developing world can come together to solve the great global challenges of our generation including ocean acidification, drug-resistant diseases, food shortages, proliferation of weapons of mass destruction, and dependence on nonrenewable energy sources.

Further, this legislation encourages U.S. scientists to become a part of U.S. diplomatic efforts through participation in three Department of State-led programs. The Scientific Envoys Program appoints esteemed U.S. scientists to serve as envoys on behalf of the United States on short tours abroad. The Embassy Science Fellows Program places federal scientists on temporary assignment to U.S. embassies to augment the on-the-ground scientific capacity of the Department of State in targeted nations. The Jefferson Science Fellows program enhances the scientific capacity of the Department of State by incorporating senior academic scientists in year-long fellowships. This bill will provide congressional authorization for these existing programs, helping them to become a lasting component of U.S. diplomacy.

In my home district of St. Louis, Missouri, we have a tremendous diversity of organizations working every day at the forefront of science diplomacy. They provide an important model of the potential benefits of international science engagement, especially in parts of the United States where there exists a mix of universities, research centers, and research-focused industries. These organizations are able to think globally and act locally to effect positive change through science and public diplomacy. This translates into tangible benefits for the region, the United States, and indeed the entire world.

I had the honor of meeting scholars from the McDonnell International Scholars Academy of Washington University of St. Louis. This program, launched in 2005, is a multifaceted partnership model for international engagement and provides the infrastructure for collaborative education and research programs with twenty-seven premier institutions located across the globe in Asia, Australia, the Middle East, Latin America, and Europe. This is just one example of the numerous international programs that are facilitated by the exemplary educational institutions throughout the St. Louis region and the United States.

With the help of the bipartisan Startup Act 2.0, which I am leading in the House, international students who earn advanced degrees in science and technology fields through programs such as the McDonnell International Scholars Academy

will be able to remain in the United States, creating jobs by starting high-tech businesses or otherwise contributing their talents and innovative ideas toward advancing products and services that strengthen our economy and international competitiveness.

Other St. Louis entities are working to provide solutions to food shortages. The Donald Danforth Plant Science Center researches and utilizes advancements in plant science to alleviate poor nutrition, hunger, and poverty in developing countries. Additionally, Monsanto is working with African organizations to train farmers in pursuit of more sustainable agricultural development. Through cutting-edge biotechnology and advanced breeding, Monsanto develops drought tolerant agriculture and builds cropping systems that produce more bountiful harvests.

The Center for World Health and Medicine at Saint Louis University dedicates itself to medical research that helps the world's most underserved. Their programs, along with those at the Washington University School of Medicine and other local universities, help develop treatments and interventions for diseases like malaria and tuberculosis, as well as neglected tropical diseases that sharply undercut growth in Africa and throughout the developing world.

Public-private partnerships like these in St. Louis help unite policy goals with U.S. industry and innovation, leveraging the indispensable tools each bring to the table. These partnerships create jobs in our communities, which benefit our neighbors and loved ones here at home while contributing to the greater scientific and diplomatic goals of the United States. Our local communities are essential partners in solving pressing global challenges and helping to create a more stable, prosperous world.

I have the great honor of working across the aisle with my colleagues in Congress to strengthen these and other initiatives. Progress depends on the reaffirmation of America's national interests and engagement from our government and private citizens alike. **SD**