

Summary of the 2nd Neureiter Science Diplomacy Roundtable¹

Educating for Science Diplomacy

December 18, 2013

A roundtable meeting organized by the Center for Science Diplomacy of the American Association for the Advancement of Science (AAAS) in Washington, DC, USA.

About the Meeting

With science and technology (S&T), its practice and products, becoming increasingly important to and in international relations and diplomacy, the capacity to understand “science diplomacy”² is necessary for international relations professionals to use it effectively. Formal and informal education and training of these individuals, ranging broadly from international science administrators and technology-based corporate managers to official diplomats and development specialists, are key components of increasing this capacity. The 2013 roundtable gathered twenty-eight experts, practitioners, and thought leaders from U.S. and non-U.S. academia, government, and nongovernmental organizations. During the day-long event, the group discussed the current “who, what, and how” of various aspects of science diplomacy education and training and provided insights on advancing them in the future.

The goals of the roundtable were to identify gaps (in topics, resources, and mechanisms) in the current science diplomacy education and training to meet future needs and to articulate integrated or systemic approaches to science diplomacy education and training that may be generally applicable to all international relations professionals.

Three sessions comprised the roundtable:

- Who Needs Science Diplomacy Education and Training
- Resource and Topic and Gaps
- Providing Education and Training—Mechanisms, Programs, and Tools

¹ The roundtable, on an annual basis, addresses contemporary topics in science diplomacy by bringing together a diverse group of individuals in an informal, not-for-attribution dialog that can make real contributions to science diplomacy practice. The roundtable is named in honor of Dr. Norman Neureiter, who has served as a science diplomat in the U.S. Foreign Service and White House, a senior executive at Texas Instruments, and the first science advisor to the U.S. Secretary of State, and was initiated on the occasion of his eightieth birthday in January 2012. The roundtables are supported in part by generous grants, through the AAAS Center for Science Diplomacy, from the Golden Family Foundation and the Richard Lounsbery Foundation. The first roundtable, held on January 25, 2012, in Washington, DC, focused on “Building the Capacity of Foreign Ministries in Science Diplomacy.”

² The Royal Society and the American Association for the Advancement of Science, *New Frontiers in Science Diplomacy*, January 2010. http://www.aaas.org/sites/default/files/New_Frontiers.pdf.

Who Needs Science Diplomacy Education and Training

Because science diplomacy has numerous aspects and encompasses a wide range of subjects—such as water diplomacy, climate policy, and arms control—professionals and interested students in sectors that are inherently international in nature and necessitate strong connections between technical and policy expertise (even beyond the more established areas of trade, environment and natural resources, and security) should benefit from some type of science diplomacy education and training. Who are these individuals, what are and where are they in their career paths, and why is this education and training valuable?

Foreign Ministries

- As governments no longer have the monopoly on the management of international affairs, all types of managers of globalization may serve diplomatic functions. They not only come from foreign ministries but also international organizations, NGOs, media, etc. It is more important that these diplomats understand the practice of diplomacy. For example, for S&T experts, such as academic or corporate scientists, to better understand and more effectively support the official diplomatic process, on-the-job training within a foreign ministry like the U.S. Department of State is important.
- American diplomats (the foreign service officers), who are typically generalists without a technical background, can benefit from a better understanding of how S&T can be a door opener and a game-changing force in diplomacy. The purpose is not to teach scientific knowledge, but to focus on developing an appreciation of S&T in foreign policy issues and practical links to the S&T community (e.g., research laboratories).

Higher Education

- At one international relations school, graduate students are increasingly interested in S&T-related themes, such as energy, environment, and development, but they also traditionally have no formal underpinning in S&T as an undergraduate. While there are also increasing numbers of students with technical backgrounds, these students often have no background in policy and politics. Both groups of students would benefit from finding common ground together. After graduation, there is an increasing shift toward the private sector, with continued interest in the public and NGO sectors.
- At one S&T-focused university, there are increasing numbers of engineers interested in exposure to international security issues through a minor studies (at the undergraduate level) or specific programs in international affairs outside of research (at the postgraduate level).

- International affairs undergraduates tend to be sensitive toward global issues, such as public health, which have an S&T basis. Those that have some S&T education may provide higher value to employers and can serve as a bridge to the scientific community. An important challenge is to overcome the non-science undergraduates' often fear of science and develop a respect for science along with healthy skepticism. At one university, these undergraduates can have concentrations in areas of environment, health, security, or business development, and after graduation they go to consultancies, the intelligence sector, or development sector, or they obtain an advanced degree.
- The label "science diplomacy" may connote being science led, which is comfortable for scientists but may be discouraging to non-scientists.
- One new graduate program related to public policy and science expects students with a wide range of social science and natural science backgrounds. Graduates should have a toolkit for interventions, knowing where scientific knowledge can come from and how it can be used.
- Do not know the full extent of the "demand" for science diplomacy at the university level and may be able to create demand through currently non-existent programs and courses.

Potential Action Steps

- Develop a framework for understanding how various groups may need science diplomacy education or training. Divided into professional diplomats; government and nongovernment scientists and other technical experts serving in formal diplomatic roles (e.g., at embassies); international relations professionals in the private sector or in NGOs who work in S&T-based issues; international affairs graduate students; international affairs undergraduates; S&T graduate students in global issues; and S&T undergraduates interested in global issues.

Resource and Topic Gaps

Certain S&T-related international relations issues have been well covered in areas such as international security, especially related to weapons of mass destruction. More recently, environmental science policy, water diplomacy, and other natural resource issues have also received attention. However, these are relatively narrow topics that are not necessarily presented in relation to one another. Given the pervasive nature of S&T, topics and resources can and should be directed at both a wide range of specialists and generalists in international relations.

- Need an analytical framework for science diplomacy, not just case studies, which can be applied to many types of issues and situations.
- From the perspective of scientists interested in global issues and diplomacy, need better understanding of the actors and organizations in international science and science diplomacy.
- Embed S&T in the diplomacy process and training (not theoretical).

- In terms of development and diplomacy, topics to address include scalability from pilot projects to full-scale deployment, transmission of knowledge to implementation, deployment of business models and financing.
- Differentiate between “liberal arts” versus vocational/professional approach to teaching science diplomacy. Address how to think of problems, not what to think.
- While the defense component/driver of development/diplomacy solutions is well recognized, S&T is not explicit. Science diplomacy is an area that can bridge security/defense sectors and the traditional diplomatic sector.
- Incorporating “diplomacy” beyond nation-state, government-to-government relations.
- At one international relations school, economics is so dominant and pervasive that it is a challenge to also view issues through the lens of S&T.

Potential Action Steps

- Develop an analytical framework that can reach across practitioners and theoreticians, diplomats and other international relations professionals, and scientists.

Providing Education and Training—Mechanisms, Programs, and Tools

The means to teach science diplomacy is intimately connected with who is learning (the “demand” discussed in the first session) and what is to be taught (discussed in the second session). Different institutions and programs from public policy and international affairs professional schools to foreign ministries can offer a spectrum of courses, workshops, and even laboratories that reflect their individual expertise and satisfy the needs of these international relations professionals. Graduate schools and programs offer individual courses, specialty seminars, and even entire degrees on various topics of science diplomacy. Diplomatic academies can help train a country’s diplomats in addressing S&T-related foreign policy priorities. Foreign ministries themselves can have on-the-job training programs.

- The Foreign Service Institute (FSI) of the U.S. Department of State focuses on training diplomats for their intended positions. FSI offers a two-week course in environmental, science, technology, and health (ESTH) responding to the needs of its client bureau to provide training to foreign service officers, who typically have liberal arts backgrounds, and foreign service nationals in support of their ESTH-related responsibilities at embassies. The survey course covers the major players in the United States and overseas, policy postures, and current state of negotiations on the latest issues. FSI also offers a three-day course on global health diplomacy that is open to non-Department of State organizations, including other executive agencies.

- In Japan, the National Graduate Institute for Policy Studies (GRIPS) with Kyoto and Tokyo universities offers a joint graduate program in science, technology, and innovation related to governance, policy, and diplomacy.
- Undergraduate minors for science and engineering students, for example at Georgia Tech Nunn School and Georgetown.
- Georgia Tech Nunn School has a security program focused on doctorate level engineering and science students to spend one year outside of the laboratory learning about global public policy.
- At Princeton international policy aspects can be addressed within an engineering undergraduate dissertation.
- University College London is developing an entirely new program within the engineering school to prepare professionals to make evidence-based policy. Formal degrees range from Master of Professional Studies in science or engineering in public policy to various doctorates.
- In public health schools (e.g., Cornell, George Washington University) at the upper undergraduate and Master of Public Health levels, the focus is on practical training and providing a broader national security view that includes threats such as energy, food, and water insecurity.
- Elective graduate courses are offered at several universities, some focused on science students and some on international affairs students. For example, Rockefeller University offers a course for life science graduate students that addresses the global effects of biomedical research and its products and scientific cooperation between countries with difficult histories. Johns Hopkins SAIS and Georgetown offer elective graduate courses on S&T and international affairs to its students.
- Train both scientists and diplomats together. Co-design/co-development to address the complexity of the topic. Can benefit from other interdisciplinary subjects like sustainability science. Interdisciplinarity is at the heart of the water diplomacy program at Tufts.
- Diplomats, particularly those directly engaged on S&T-related issues, can benefit from wider exposure to the S&T community including visits to research laboratories and hands-on experience with technology.
- Mixing diplomacy practitioners (professionals) and theoreticians (academics).
- For undergraduate minors, student projects and problem-based curriculum are important.
- Internships for students and fellowships for professionals to learn and gain experience on the job not only in government but in international policy organizations.
- Use of simulations and team-building exercises with experts.

Potential Action Steps

- Develop online overview course that can easily be accessed, taught, and scalable.
- To understand the landscape of science diplomacy and develop networks and make connections, generate a bibliography of courses and glossary of organizations (with URL links). Should have an organized structure. Can be created by community.
- Develop network for sharing resources and knowledge, such as case studies. These should be presented using a common template.

Disclaimer

The summary highlights the main discussion points of the meeting, but it is neither a consensus view of the participants nor does it necessarily represent the views of AAAS or the authors.

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