

SCIENCE & DIPLOMACY



A quarterly publication from the AAAS Center for Science Diplomacy

Vaughan C. Turekian and Norman P. Neureiter, "Science and Diplomacy: The Past as Prologue," *Science & Diplomacy*, Vol. 1, No. 1 (March 2012).

<http://www.sciencediplomacy.org/editorial/2012/science-and-diplomacy>.

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Science and Diplomacy: The Past as Prologue

Vaughan C. Turekian and Norman P. Neureiter

THIS past December marked twenty years since the dissolution of the Soviet Union quietly and peacefully ended the Cold War. While that era saw the Cuban Missile Crisis, proxy wars, and policies of mutual assured destruction, it was also a period when people on both sides of the conflict looked for ways to bridge differences and increase the chances for peace and resolution. In a 1985 address to the nation days before meeting with Soviet leader Mikhail Gorbachev for the first time, President Ronald Reagan stated "We can find, as yet undiscovered, avenues where American and Soviet citizens can cooperate fruitfully for the benefit of mankind In science and technology, we could launch new joint space ventures and establish joint medical research projects." Two years later, John Negroponte, the President's Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs (OES), further articulated the Administration's view during congressional testimony: "It would be short-sighted of us not to recognize that it is in our national interest to seek to expand scientific cooperation with the Soviet Union." In many ways, the Cold War was a time of highly effective use of science diplomacy to build bridges and connections despite the existence of great political tensions.

While perhaps the interactions between the United States and the USSR provide the most well-known historical case of linking science and diplomacy, it

Vaughan C. Turekian is the Editor-in-Chief of Science & Diplomacy.

Norman P. Neureiter is the chair of the Science & Diplomacy Senior Advisory Board. He served as the first Science and Technology Adviser to the U.S. Secretary of State from 2000-2003.

was by no means the only example. Throughout the second half of the twentieth century, science also played other important roles in diplomacy. At a White House state dinner for Japanese Prime Minister Hayato Ikeda in 1961, President John Kennedy made U.S. diplomatic history by announcing the U.S.-Japan Committee on Science Cooperation, the first of its kind. Kennedy had followed the advice of his Ambassador to Japan—the illustrious Japan scholar and Harvard professor Edwin Reischauer—and created the committee as part of a broad effort to repair “the broken dialog” between the intellectual communities of the two countries. The National Science Foundation’s implementation of that cooperative science program has endured for over half a century, evolving with the times and delivering great benefits to both countries.

The year 1972 saw two brilliant and totally unexpected diplomatic initiatives that rearranged the geopolitical construct of the world—and science played a role in each. For President Richard Nixon’s historic visit to China, his National Security Advisor Henry Kissinger had asked the White House Office of Science and Technology (then headed by Edward David) to prepare specific proposals for science cooperation. Nixon and Kissinger wanted to offer the Chinese something concrete, something substantive beyond the policy changes that were at the heart of the visit. In the remarkable Shanghai Communiqué, which was signed at the end of the visit, they included science as one of the areas noted for future cooperation between the United States and China. Today, U.S. science and technology (S&T) collaboration with China is one of America’s largest cooperative programs, and productive relationships exist across multiple disciplines. While for many Americans today, China is seen more as a competitor than a partner in applying science to solve the broad challenges facing the world, the reality is that science cooperation has provided great benefits to both countries in areas ranging from climate change and environment to energy and food security, among others. These relationships have also made it possible for AAAS to convene joint U.S.-China workshops on ethical standards in the practice of science—essential to effective long-term cooperation.

A few months after the signing of the Shanghai Communiqué, during the summit meeting of Leonid Brezhnev and President Nixon, five major S&T agreements were signed with three more added at their Washington summit a year later. This ushered in seven years of unparalleled cooperation with the USSR, including the joint space docking experiment between U.S. and Soviet spacecraft, a broad program of cooperation on protection of the environment, an agreement on medical science and public health, and a general agreement on S&T cooperation. To paraphrase Henry Kissinger’s own words, “there is nothing more international than science.” The Nixon-Kissinger administration drew heavily on the staff of the President’s science advisor and the Office of Science and Technology in bringing science diplomacy (though no one called it that then) to a new level in U.S. international relations.

Today, efforts are underway to build on this legacy, especially where politics are challenged and official relationships are strained or limited. This new era of science diplomacy, which often involves non-governmental scientists and academics, has provided connections to important communities in countries that include Cuba, Burma, Iran, and North Korea, even in the absence of formal government-to-government relations and despite occasional political crises.

Initiatives such as those being led by the U.S. National Academy of Sciences in Iran have provided one of the few enduring links between the United States and Iran over a decade that has been marked by great mistrust and tension. University collaborations, such as the nearly decade-old relationship between Syracuse University and Kim Chaek University of Technology in North Korea, have enabled people-to-people contacts between two countries that have almost no sustained connections. Such examples demonstrate the strong capability and interest of nongovernmental organizations (NGOs) in the conduct of science diplomacy. NGOs can often do what governments cannot.

While there are many successes in science diplomacy, the difficulties should not be underestimated. Barriers such as visa restrictions, resource limitations, and sensitivities to issues being discussed can complicate the process. Abrupt political changes can seriously impact activities. For instance, promising opportunities with Syria have been sidelined by the present internal conflict wracking that country. Under such circumstances, patience and perseverance become essential elements of efforts to identify mutually beneficial and productive paths forward.

As NGOs look for unofficial ways to conduct effective science diplomacy, the U.S. government continues to pursue its own approach to defining the role that science can play in its diplomatic efforts. During his speech in Cairo in which he outlined efforts to build new partnerships with Muslim-majority countries, President Obama stated that “all of us must recognize that education and innovation will be the currency of the 21st century, and in too many Muslim communities there remains underinvestment in these areas.” In laying out his vision for the role of science in U.S. foreign policy with these countries, Obama announced that the United States would “open centers of scientific excellence in Africa, the Middle East and Southeast Asia, and appoint new science envoys to collaborate on programs that develop new sources of energy, create green jobs, digitize records, clean water, and grow new crops.”

However, the intersection between science and diplomacy goes well beyond the building of bilateral relationships and speaks to broader foreign policy objectives. Science and its applications are central to almost every major global challenge. In 1999, the U.S. National Academy of Sciences concluded that thirteen of the sixteen U.S. foreign policy goals have science, technology, and health considerations. Their influential report led to the appointment of a science adviser to the Secretary of State and a more than fifteen-fold increase in the number of Ph.D. scientists receiving fellowships to work in the State Department or USAID. These actions

have helped the U.S. foreign policy community both to build much stronger links to the U.S. scientific community and to increase its internal scientific capacity to deal effectively with the many technical issues that arise in contemporary U.S. foreign policy.

Big scientific endeavors, including international space research, global health programs, and massive experimental energy programs such as ITER, require close interaction between scientists and diplomats to agree on multinational cooperation in technical areas where sharing the costs, resources, or risks among many partners is preferred or even essential. Further there are areas central to foreign policymaking—such as climate change, security, pandemics, and protection of shared natural resources, including open oceans and fisheries—where diplomats have greatly benefited from the information, suggestions, and advice coming from scientists.

While the link between science and diplomacy is seeing a renaissance in the United States, it is not the only place where such interactions are taking place. Around the world, countries use scientific cooperation as a way to build stronger links to friends and strategic partners. Given its international nature, science is also providing a way for countries to exercise their own soft power. In describing the importance of his country's research and discoveries in its broader global strategies, Peter Gluckman, Chief Science Advisor to New Zealand's Prime Minister, said, "As a small nation we must compete hard to maintain our relevance in a world where we can easily be forgotten. We have to demonstrate that small countries can indeed, make a difference." A country's attempts to project influence and importance on a global scale through its national scientific community is another fascinating aspect of science diplomacy in action.

Science cooperation has a powerful role in helping countries as they look to build stronger regional partnerships. Within the East African Community, a presidential-level initiative to better align and integrate this diverse and populous region with a history of instability is drawing on science cooperation. By sharing costs and resources and increasing the interaction of students and researchers, such technical cooperation can help the region increase its prosperity while contributing to more sustainable regional links.

In view of the increasing activity and attention to the role of science in foreign policy at the highest political levels, we believe the time is right to catalyze greater thought and discussion about issues at the interface of science and diplomacy. We hope that our new online publication *Science & Diplomacy* will achieve this goal and also help to build a diverse new community of stakeholders. Over the coming years, the publication will allow practitioners, academics, and scholars to contribute their ideas and insights about opportunities to develop, implement, teach, and critique all aspects of science and diplomacy, from both U.S. and international perspectives. In short, we hope that *Science & Diplomacy* will be a resource for foreign policy makers and analysts, scientists and research administrators, and educators and students in

their efforts to better bridge science and foreign affairs. Our goal is a foreign policy that can fully address the increasingly complex technical dimensions of twenty-first century international relations. **SD**