

FACT SHEET: U.S.-CHINA SCIENCE AND TECHNOLOGY COOPERATION HIGHLIGHTS: 32 YEARS OF COLLABORATION

Today, the United States and China signed the extension of the U.S.-China Agreement on Cooperation in Science and Technology (S&T), renewing 32 years of collaboration on science and technology. An agreement between the two countries was first signed in 1979, launching an era of robust government-to-government science and technology collaboration that continues to this day. The exchanges fostered under the Agreement have advanced cooperative research in a diverse array of fields, including fisheries, earth and atmospheric sciences, basic research in physics and chemistry, a variety of energy-related areas, agriculture, civil industrial technology, geology, health, and disaster research. With today's signing of a new extension to this historic agreement, the United States and China renew their commitment to continuing such endeavors. The accomplishments of the participating agencies to date include:

In 2002, the Ministry of Science and Technology (MOST) and National Science Foundation (NSF) signed the U.S.-China Cooperative Arrangement for the Summer Institute in China Program that supports research by U.S. graduate students in China. Under this arrangement, renewed in April 2009, NSF selects 35 U.S. science graduate students annually to conduct research at universities and laboratories in Beijing, Shanghai, Xian, Kunming and Wuhan. Recognizing the significant growth of science and technology opportunities in China, NSF established a Beijing office in May 2006 to facilitate and strengthen collaboration between U.S. and Chinese scientists and engineers.

The Department of Energy's (DOE's) Office of Science has supported U.S.-Chinese collaborations for more than 30 years, starting with the Agreement on High Energy Physics (1979) and followed by the Protocol on Nuclear Physics and Fusion (1983) and the Fossil Energy Protocol (2000). In 1998, DOE's Office of Energy Efficiency and Renewable Energy assisted in the design and construction of a high-performance, energy-efficient demonstration building for the Agenda 21 Commission. DOE also assisted in the LEED application to the U.S. Green Building Council, leading to the building being the first in China to be designated LEED Gold. A \$150 million Clean Energy Research Center was established in November 2009 through collaboration among DOE and China's Ministry of Science and Technology and its National Energy Administration, with costs shared equally between the two countries. The Center will provide a home for joint research consortiums of research institutions, universities and industry participants from both countries, with an initial focus on clean coal, clean vehicles, and building energy efficiency. Further, DOE and the Chinese Academy of Sciences signed an agreement in January 2011 to facilitate and promote cooperation in research and development in a broad range of energy sciences.

Within the Department of Commerce, the National Institute of Standards and Technology (NIST) currently includes 10 collaborative arrangements with several Chinese governmental and academic institutions, and one formal protocol with the Chinese Academy of Sciences in the fields of chemistry, physics, materials science, and engineering measurement. NIST also serves as the coordinator for the Department of Commerce-State Administration for Quality Supervision Inspection and Quarantine Protocol, signed in 2008. NIST is currently hosting more than 100 Chinese guest researchers through its Foreign Guest Researcher Program and has hosted close to 1,000 Chinese scientists and engineers since 1980. Separately, the National Oceanic and Atmospheric Administration (NOAA) has collaborated with the China Meteorological Administration (CMA) for almost 30 years, helping the CMA modernize, provide the Chinese public with timely and accurate weather forecasts, and mitigate weather- and climate-related disasters. NOAA and CMA laboratories have for more than 20 years also cooperated to measure greenhouse gas (GHG) concentrations at Mt. Waliguan, China, with the resulting calibrated data contributing to a shared understanding of global changes in GHGs.

On December 7, 2007, the United States and China renewed the December 2002 protocol on cooperation in agriculture science and technology, which calls for cooperation between the Chinese Ministry of Science and Technology and the U.S. Department of Agriculture's (USDA's) Agricultural Research

Service in agricultural biotechnology, natural resource management, dairy production, food safety, agricultural products processing, water-saving agricultural technology, and bioenergy. Also the U.S. Forest Service has engaged in a number of cooperative ventures with the Chinese State Forestry Administration, including the establishment of demonstration sites in a variety of forest ecosystems across China with a focus on community-based protection and restoration. Economic tree farms were planted to improve local livelihoods, biogas stoves have been built for the villagers to decrease pressure on limited forest resources, and educational programs developed. Among the sites is a UNESCO World Heritage Site, the Foping Nature Reserve, where unique species such as the giant panda, the golden monkey, and the Asiatic black bear benefit from restored and protected forest habitat.

U.S. public health officials are working with Chinese counterparts under a variety of cooperative ventures in the areas of disease prevention and control, including conducting epidemiological research; investigating outbreaks of emerging and reemerging disease including pandemic influenza, salmonellosis, SARS, and enterovirus 71; providing more than 1,500 individuals with rapid-response training; and providing technical assistance in the area of HIV/AIDS. Also, in December 2007, the U.S. Department of Health and Human Services signed binding agreements with HHS/Food and Drug Administration (FDA) counterparts, the Chinese General Administration for Quality Supervision, Inspection and Quarantine and the State Food and Drug Administration. These agreements, among other things, set standards for food and medical products entering the United States from China. Separately, 19 of the National Institutes of Health's 27 Institutes and Centers have collaborative ventures underway with counterparts in China.

Since 1999, the U.S. Fish and Wildlife Service (FWS) within the Interior Department has provided \$1.1 million for conservation efforts in China, including information exchange and capacity building through the FWS Wildlife Without Borders Program. Emphasis is on training biologists, wetland specialists, and nature reserve staff from China with U.S. wildlife management and conservation practices.

In October 2010 in Beijing, the Environmental Protection Agency's (EPA's) Administrator and MEP Minister signed a Memorandum of Understanding on Scientific and Technical Cooperation in the Field of Environment, supporting collaborative efforts to tackle shared challenges posed by air pollution, water pollution, pollution from persistent organic pollutants and other toxic substances, hazardous and solid waste, and the development, implementation, and enforcement of environmental law. EPA introduced U.S. Superfund and Brownfields cleanup programs to MEP in 2006. EPA has provided China with long-term cleanup assistance using U.S.-developed technology to reduce dioxins emissions from cement kilns and to implement China's first-ever non-thermal PCB soil remediation project—both part of China's National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants. In 2007 China shut down five of its six remaining plants for production of chlorofluorocarbons (CFC) and halons. China and the U.S. continue to work together through the Montreal Protocol framework to encourage the use of safer substitutes to CFCs and halons and help China meet its growing demand for refrigerants.

The United States supports the efforts by all countries, including China, to create economic growth and prosperity through policies that promote innovation on terms that are fair and equitable to all and respect the principles of nondiscrimination, intellectual property rights protection, market competition, and ensuring no government interference in technology transfer. The United States and China have agreed to conduct intensive high-level and expert discussions on innovation issues under the U.S.-China Joint Commission Meeting on Scientific and Technological Cooperation, co-chaired by the Director of the White House Office of Science and Technology Policy and the Chinese Minister of Science and Technology. Meetings have been held and an expert working group is slated to convene in the United States in early 2011, with a follow-on senior-level meeting to occur before the next meeting of the S&ED in 2011.