Science and Technology Capabilities of the Department of State: Letter Report

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SCIENCE AND TECHNOLOGY CAPABILITIES OF THE DEPARTMENT OF STATE

LETTER REPORT

Committee on Science and Technology Capabilities of the Department of State

Development, Security and Cooperation

Policy and Global Affairs

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The Honorable John Forbes Kerry
Secretary of State
Department of State
Washington DC

Dear Mr. Secretary:

We are pleased to submit this brief interim report of the National Research Council committee that, in response to a request from former Under Secretary Robert Hormats, is undertaking an assessment of the capabilities of the Department of State that are particularly important as science and technology become integral aspects of diplomacy. Based on our initial interviews and review of documents, we can report that during the past decade, the Department has significantly expanded its science and technology capabilities in Washington, but done less well at U.S. diplomatic missions abroad. We will continue our discussions with leaders and specialists within the Department and with others in the science and technology communities as we prepare a more expansive report for release in Fall 2014.

We commend your leadership in elevating the importance of addressing climate change across the relevant Department activities, holding a broad international conference on the state of the oceans, and continuing strong support for the PEPFAR program. Building on your initiatives, we intend to provide suggestions in our final report to support the Department's science and technology agenda in these and other areas.

Technological progress, especially in information and communications technology (ICT), has driven much of the world's dramatic political, economic, and social change in recent years. New discoveries in nanotechnology, synthetic biology, and other fields have unveiled a multiplicity of opportunities for improving human health, protecting the environment, and ensuring adequate food supplies while strengthening our nation's economic competitiveness. But new technologies also have the potential to increase threats to national security, disrupt international communications, and exhaust our natural resources. Achieving U.S. foreign policy goals in the coming decades will require novel strategies that leverage the impact of science and technology on significant global issues in creative ways.

Nearly every country is focused on innovation as a driver of its economic future and its national security. Advanced and emerging market economies are building their own innovative capacities, often looking at successes in the U.S. system while also developing new approaches of their own. Most countries are interested in working with U.S. universities, companies, investors, and governmental and non-governmental organizations to increase their capabilities.

Our collaboration with foreign science and technology counterparts should also deliver many economic and political benefits for the United States, and the Department and our embassies can often facilitate such efforts.

At the same time, the global innovation landscape itself is undergoing fundamental change. The development-related activities of private sector firms, often operating on a global scale, complement efforts of government research and development organizations in a number of sectors with investment in energy, information systems, and advanced manufacturing. Large research-oriented companies and innovative high-tech startups are not only designing and commercializing inventions, but they also are working with government and academic partners in driving the search for new discoveries. In some sectors, private firms and entrepreneurs are much more important players than governments in setting the pace and direction of technological change. This evolving reality calls for our diplomats to forge new partnerships with the private sector and other non-governmental organizations, while also taking advantage of the expertise of the many departments and agencies of the U.S. government.

Such an expanded perspective – global as well as national, private and academic as well as public sector– accords well with the four pillars of the foreign policy strategy set forth in the *FY2014-2017 Department of State and USAID Joint Strategic Plan* to enhance and protect the interests of American citizens, namely: promoting peace and stability, creating jobs at home by opening markets abroad, helping growth in the developing countries, and building partnerships to address global challenges.

To achieve these goals, insights into science, technology, and innovation systems need to be further woven into the fabric of the department, including the workings of the functional and geographic bureaus and the outreach of our embassies. The Department's work can benefit in many ways from creative approaches to strategic planning, to economic and environmental statecraft, to public diplomacy, and beyond. Enhancing and embedding science literacy throughout the department will strengthen its innovation capacity, and this capacity has never before been so important.

The committee is considering how the Department can draw more broadly on our nation's unmatched technical assets to further our foreign policy agenda. We are discussing activities in the four areas set forth below along with a few examples of approaches in each area that might be considered. We would appreciate comments on these preliminary topics and ideas, as well as suggestions of other ideas that the committee might consider.

- Capabilities of the Department's Work Force: Broadening the scope of hiring preferences to include AAAS Science and Technology Fellows serving in the Department who compete for civil service positions in regional and functional bureaus. Encouraging expanded use of electronic education capabilities by Foreign Service Officers and Foreign Service Nationals who are interested in improving their science literacy.
- Organizational Adjustments: Establishment of a Science and Technology Advisory Committee to the Secretary comprised of American experts in rapidly advancing fields. Increased involvement of the Science and Technology Adviser to the Secretary in the development of policies and diplomatic approaches with significant science and technology content.

- Embassy Capabilities and Interests: Improved preparation of Foreign Service Officers who assume environmental, science, technology, and health responsibilities at important embassies, including an enhanced short course directed to current and future science and technology challenges, and expanded consultations with U.S. science and technology agencies. Encouragement of U.S. ambassadors to draw broadly on U.S. governmental and nongovernmental in-country resources in addressing foreign policy issues with important science and technology dimensions.
- Interagency Coordination and Partnerships with Other Organizations: More strategic use of the bilateral science and technology agreements as platforms for initiating and scaling up successful activities of U.S. government agencies and their partners.

We greatly appreciate the strong support that we have received from bureaus and offices throughout the Department during this effort. We would welcome their views on the preliminary ideas described in this letter and any other approaches the committee might explore.

Sincerely,

Thomas Pickering
(Co-Chair)

Adel Mahmoud
(Co-Chair)

Enclosure

cc. Under Secretary Catherine A. Novelli

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Acknowledgment of Reviewers

This letter report has been reviewed in draft form by the following individuals to ensure that it meets institutional standards for quality and objectivity: Robert Frosch, Harvard University; Cutberto Garza, Boston College; Vaughan Turekian, American Association for the Advancement of Science; and Ghebre Tzeghai, Proctor and Gamble Company. The review was overseen by Stephen Fienberg, Carnegie Mellon University. Responsibility for the final content of the letter report rests with the authoring committee and the institution.