

The Potential Impact of Export Controls on Science and Technology as it relates to Disaster Reduction

By the **International Working Group of the Subcommittee on Disaster Reduction (SDR)**

The purpose of this paper is to alert those interested in science and technology issues related to disaster reduction that export control rules and travel restrictions on various nations and commodities need to be taken into consideration. These rules might be American, British or other. For example, just as the United States has rules governing travel to Iran, so does Iran.

Export, travel and transaction restrictions are implemented by law. Breaking the rules can mean a fine or even jail. That's the bad news. The good news is that government agencies are sensitive to the need to use science and technology to reduce the potential impact of disasters, so consideration is given to supporting license applications in this arena, as was done after the recent earthquake in Bam, Iran. Still, licenses can be denied if the risk to either national security or foreign policy is considered too high -- in other words threats to international and regional peace and security may arise from transfers of armaments or sensitive dual-use goods and technologies, or even just travel and contact.

Export controls fall into two categories, restrictions on **nations** and restrictions on **commodities**. The reasons vary quite widely, from human right concerns to national security, to the need to politically limit an adversary. A key concept to understand is that even if travel to a country is permitted, the export (even if temporary) of a controlled commodity might not be. Another key thing to understand is that US controls control the activities of US citizens, American and others under US law, such as permanent residents or aliens operating in the United States.

There are four basic export control regimes of interest to those involved in disaster reduction.

1. Arms Commodity and technology controls are managed by the Department of State (International Traffic in Arms Regulations, ITAR)
2. Foreign Policy Export Controls on travel and certain commodities and financial transactions are managed by the Office of Foreign Assets Control of the Department of the Treasury, with guidance from the Department of State.
3. Dual use commodities are generally managed by the Department of Commerce, Bureau of Export Administration (Export Administration Regulations, EAR)
4. Nuclear related commodities are generally managed by the Department of Energy

To paraphrase a researcher at UCLA, if you are currently engaged in international research or expect to be doing so in the near future, or are contemplating such work that might be governed by export controls, we urge you to confer with appropriate legal personnel to determine whether special licenses or other clearances are needed. SDR recognizes the tension between weighing national security interests against the traditional academic values of openness, but urges researchers to become familiar with the various regimes and how licenses are granted. Each regime is handled very differently than the others. Links to each regime are provided below.

Fundamental Research is one the areas of greatest interests to the SDR. In 1985, National Security Decision Directive (NSDD 189) defined fundamental research as "basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community..." and stated that fundamental research was not subject to the license requirements of the export control regulations.

Fundamental research is distinguished from research which results in information which is restricted for proprietary reasons or pursuant to specific U.S. government access and dissemination controls. University research will not be deemed to qualify as fundamental research if (1) the university or research institution accepts any restrictions on the publication of the information resulting from the research, other than limited prepublication reviews by research sponsors to prevent inadvertent divulging of proprietary information provided to the research by the sponsor or to insure that publication will not compromise patent rights of the sponsor; or (2) the research is federally funded and specific access and dissemination controls regarding the resulting information have been accepted by the university or the researcher

From a practical point of view, the only way now to restrict such work is through classification or intellectual property rules; but the rules can change. For example, an emerging body of science in disaster reduction revolves around the use of remotely sensed data, and until the late 1990's satellite technology was controlled by the Commerce Department as dual use; but then was transferred to the Department of State as arms technology under ITAR.

Common Definitions

- ◆ *Export* – the shipment of goods or items, including electronic or digital shipment, the release of specific technological data to any foreign national or the use by a foreign national of any covered technology.
- ◆ *Deemed export* – exists whenever a foreign national on U.S. soil may be able to access export controlled items. Deemed exports may require licenses and impose access restrictions. An export can occur whenever there is the transfer of a controlled item to an entity or individual outside the United States or to a foreign national, whether inside or outside the United States.
- ◆ *Export controls* – federal laws which control defense articles (information and hardware) identified in either the EAR or the ITAR. References are 15 CFR 730-774 (EAR) and 22 CFR 120-127. The list of controlled items appear at 15 CFR 774, Supp. 1 (the Commerce Control List (CCL)) and 22 CFR 121 (the Munitions Control List (MCL)), respectively. Both the EARs and the ITARs are on line at <http://www.access.gpo.gov/nara/cfr>.
- ◆ *Defense services* – the furnishing of assistance to foreign nationals in the development, manufacture, repair, testing, modification, operation, etc. of defense articles or technical data controlled under the ITAR regulations.
- ◆ *Fundamental research* – basic or applied research in science or engineering at an accredited institution of higher learning in the U.S. where the resulting information is intended to be publicly available.
- ◆ *Publicly available information* – information that is published or generally accessible or available

to the public and the scientific community. A sponsor's review of the publication solely to ensure that the publication will neither compromise patent rights nor inadvertently divulge proprietary information that the sponsor has furnished to you would not destroy the fundamental research exception. Any additional reviews or approvals would destroy an institution's fundamental research exception.

- ◆ *Commodity jurisdiction ruling* – when an article is arguably covered by both the EAR and the ITAR, an institution can apply to the State Department for a commodity jurisdiction ruling to determine which agency will have jurisdiction over the export of the article.

The consequences of violating export controls can be severe, especially if the violation was intentional or if it was reasonable to expect that the violator had reason to know that that law was being violated. As a result, it is crucial that to examine the rules and when in doubt, consult expert within the relevant Departments.

Securing an export license can be daunting. A foreign policy controlled transaction might take months, even years to process - except in an emergency. Substantial documentation is required to let the administering agency know what is transferred, who will do it, who will benefit, and what the risks might be, what has been done to mitigate against diversion. In more sensitive situations, background checks will be done on the recipient of a license.

- ◆ who is working on the project?
- ◆ with whom will they share their work and how do you know?
- ◆ What appropriate physical precautions exist to
 - To prevent unauthorized access?
 - To restrict to authorized individual computer passwords/authentication for access to project data?

The issue of security classification

Classification is one of the ways to impose publication restrictions. On November 1, 2001 the Assistant to the President for National Security Affairs, Condoleezza Rice, reaffirmed in a letter that "this Administration will review and update as appropriate the export control policies that affect basic research in the United States. In the interim, the policy on the transfer of scientific, technical, and engineering information set forth in NSDD-189 shall remain in effect...."

Important Internet Links

Government Agencies and Departments Involved in Exports/Imports and Foreign Visitors/Foreign National Employees

the Potential Impact of Export Controls on

White House

[National Security Council \(NSC\)](#)
[Office of Science and Technology Policy](#)

Department of Commerce (DoC)

[Bureau of Industry and Security \(BIS\)](#)
[Bureau of the Census \(Census\)](#)
[National Oceanic and Atmospheric Administration \(NOAA\)](#)
[NOAA Remote Sensing Satellite Licensing](#)
[Office of Space Commercialization \(OSC\)](#)

Department of State (DoS)

[Office of Defense Trade Controls \(ODTC\)](#)
[Visa Services](#)
[Arms Control and International Security](#)
[J-1 Visa Program](#)

Department of Defense (DoD)

[Defense Threat Reduction Agency \(DTRA\)](#)
[Defense Security Service \(DSS\)](#)
[DoD Acquisition](#)
[Joint Chiefs of Staff \(JCS\)](#)

Department of Energy (DOE)

[The Office of Defense Nuclear Nonproliferation](#)
[Office of Security and Emergency Operations](#)

Department of Treasury

[Office of Foreign Assets Control \(OFAC\)](#)
[Committee on Foreign Investment in the United States](#)
[Bureau of Alcohol, Tobacco and Firearms \(BATF\)](#)

Department of Justice

[Federal Bureau of Investigation \(FBI\)](#)
[Foreign Agents Registration Act Unit](#)

Department of Homeland Security

[Bureau of Citizenship and Immigration Services](#)
[Customs Service and Border Patrol](#)
[The Transportation Security Administration](#)

Nuclear Regulatory Commission

[NRC Import/Export](#)

NASA

[NASA Automated Systems Incident Response Capability \(NASIRC\)](#)
[NASA Scientific and Technical Information Program \(NASA STI\)](#)
[ARC Export Compliance Homepage](#)
[DFRC Export Control Homepage](#)

[JSC Export Control Homepage](#)

[KSC Export Control Homepage](#)

[LaRC Guidelines for Export Control](#)

[LaRC Information Protection Council \(LaRC IPC\)](#)

[MSFC Export Control Homepage](#)

[Stennis Space Center Export Control Program](#)

[Federal Aviation Administration, Office of Commercial Space Transportation \(FAA/OCST\)](#)

[U.S. Copyright Office](#)

[Links to U.S. Government Agencies](#)

Intelligence Community

- [Director of Central Intelligence \(DCI\)](#)
- [Central Intelligence Agency \(CIA\)](#)
- [The National Imagery and Mapping Agency \(NIMA\)](#)
- [National Security Agency \(NSA\)](#)
- [Defense Intelligence Agency \(DIA\)](#)
- [National Reconnaissance Office \(NRO\)](#)
- [National Counterintelligence Executive \(NCIX\)](#)

Policy, Regulations and Other Useful Links

- [Fact Sheet on President's Nonproliferation And Export Control Policy - Sep 27, 1993](#)
- [Fact Sheet on Foreign Access to Remote Sensing Space Capabilities - March 10, 1994](#)
- [Fact Sheet on U.S. National Space Policy - Sep 19, 1996](#)
- [Fact Sheet on U.S. National Space Transportation Policy - Aug 5, 1994](#)
- [The International Traffic in Arms Regulations \(ITAR\)](#)
- [The Export Administration Regulations \(EAR\)](#)
- [What's New in the EAR ?](#)
- [The Militarily Critical Technologies List \(MTCL\)](#)
- [Missile Technology Control Regime \(MTCR\)](#)
- [The Harmonized Tariff Schedule of the United States \(HTS\)](#)
- [Schedule B Numbers](#)
- [The Shippers Export Declaration \(SED\)](#)
- [The Correct Way to Use the SED](#)
- [Nonproliferation and Arms Control Technology Working Group \(NPAC TWG\)](#)
- [NASA Policy and Procedures for Effecting Exports to Russia](#)
- [The Automated Export System \(AES\)](#)
- [The FAR, NFS and other Procurement Related Information](#)
- [Center for International Trade and Security](#)
- [Center for NonProliferation Studies](#)
- [Society of International Affairs \(SIA\)](#)
- [Federation of American Scientists](#)
- [Wassenaar Arrangement \(Used to CoCom, the Coordinating Committee\)](#)
- [National Industrial Security Program Operating Manual \(NISPOM\)](#)

[export-control issues related to technology and software exports](#)

[Institute for Science and International Security \(ISIS\) Roadmap to Responsible Export Controls: Learning from the Past](#)

[OFAC, Patriot Act and ITAR Regulations and Research: Balancing Homeland Security with Scientific Communication](#), UCLA Chancellor Albert Carnesale
Executive Vice Chancellor Wyatt R. Hume

Potential Impact of Export Controls on

Denied Parties, Specially Designated Nationals and Entities of Concern

- [BIS's Listing of Entities of Concern](#)
- [BIS's List of Denied Parties](#)
- [Debarred Parties Listing](#)
- [OFAC's List of Specially Designated Nationals](#) *(Adobe PDF format)*
- [List of Unverified Persons in Foreign Countries](#)

Links to Searchable Data Bases

- [Government Printing Office \(GPO\) Access - Federal Register, Congressional Bills, etc.](#)
- [Fedworld](#)
- [House of Representatives Internet Law Library - International Treaties, etc.](#)
- [Searchable Code of Federal Regulations \(CFR\)](#)
- [Thomas Legislative Information on the Internet](#)
- [National Technical Information Service \(NTIS\)](#)
- [Defense Technical Information Center \(DTIC\)](#)
- [Search DoD Directives/Regs](#)
- [Search DoE Directives/Orders](#)

Foreign and International Organizations**CANADA**

- [Canadian Export/Imports](#)
- [Canada National Research Council](#)
- [Environment Canada](#)

UNITED KINGDOM

- [United Kingdom Export Controls](#)

Travel Outside the United States**U.S. Customs Traveler Information**

- [Bureau of Consular Affairs, Dept of State](#)
- [Overseas Travel Information](#)
- [Overseas Security Advisory Council](#)
- [Foreign Country Travel Warnings](#)
- [Travel and Living Abroad \(State Department\)](#)
- [Publications Related to Travel Abroad](#)
- [Foreign Country Commercial Guides](#)
- [U.S. Passport Information](#)
- [U.S. Embassies](#)
- [Names/Addresses/Phone Numbers of U.S. Embassies and Key Personnel](#)
- [U.S. State Department Country Desk Officers](#)
- [Health Information for U.S. Citizens Traveling Abroad \(CDC\)](#)
- [Foreign Counselor Offices in the United States](#)

CIA world fact book
Russia Travel Information

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