

## ENHANCING NUCLEAR SECURITY

*MacArthur's grantmaking in the area of nuclear security seeks to prevent nuclear terrorism, promote stabilizing nuclear weapons reductions, and address the security challenges posed by Iranian and North Korean nuclear aspirations.*

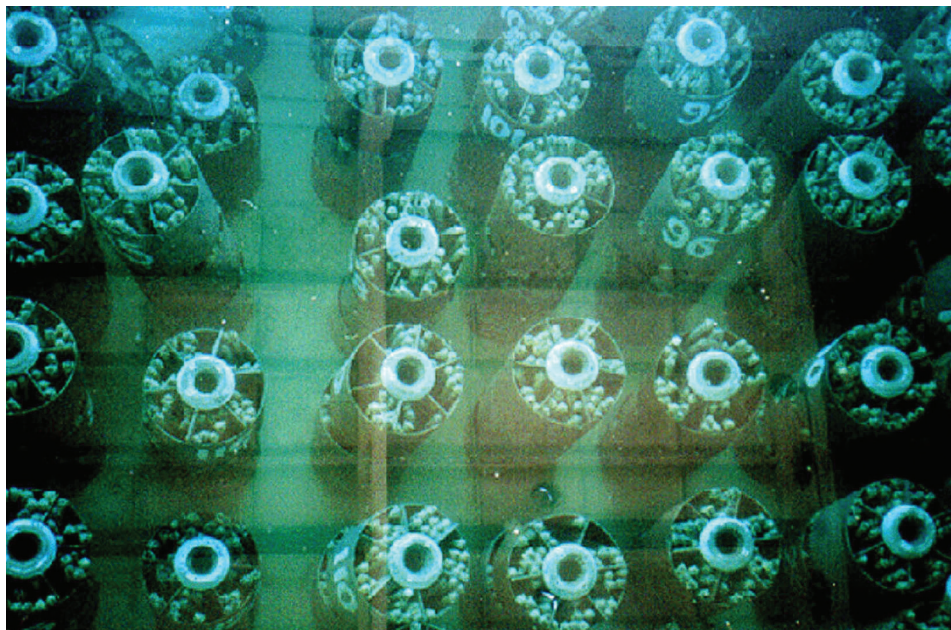
### WHY NUCLEAR SECURITY MATTERS

- Terrorist organizations such as al-Qaeda are clearly interested in acquiring and using nuclear weapons.
- The essential component of a nuclear weapon is fissile material—highly enriched uranium and separated plutonium.
- Enough fissile material is currently stockpiled around the world to produce in excess of 100,000 nuclear weapons. Much of this material is inadequately secured.
- Just a soccer ball-sized piece of highly enriched uranium would be enough for a terrorist to make a simple nuclear device.
- As nuclear power becomes an important means of diversifying energy portfolios and reducing carbon emissions, fissile material stockpiles are set to grow, raising the risk of theft or diversion.
- MacArthur's grantmaking to prevent nuclear terrorism focuses on denying terrorists access to fissile materials.

### WHAT WE FUND

#### Policy Research

In this element of our work the Foundation focuses on preventing nuclear terrorism by denying terrorists access to fissile materials—highly enriched uranium and plutonium.



Supported policy research projects aim to prevent the theft or diversion of fissile materials from military and civilian sites, and ensure that the inevitable growth in nuclear power does not increase the availability of fissile materials for terrorist groups.

In addition, we support a limited number of innovative projects that 1) seek to effectively address, in a stabilizing manner, the strategic implications of deeper reductions in nuclear arsenals; and 2) provide new insights and approaches to security challenges arising from

national efforts to acquire nuclear weapons (e.g. Iran and North Korea).

#### Advanced Education

Effective policymaking on nuclear security matters requires the best advice from diverse fields including the natural and social sciences, nuclear industry, and policy world, among others. It also entails public debate, which takes different forms in different countries but is rarely altogether absent. As a result, policymakers and the public need advice from experts capable of using their specialized expertise to inform policy decision-making and debates.

The Foundation supports a small group of grantees that provide advanced interdisciplinary training in the field of nuclear security at the graduate and post-doctoral levels. The goal of this program is to produce a small, but highly qualified, international group of nuclear security policy experts equipped to lead the future formulation of nuclear security policies and engage effectively in the public debate.

### REPRESENTATIVE GRANTS

#### *Policy Research*

NUCLEAR THREAT INITIATIVE, 2010  
\$1 million, much of which for its Nuclear Materials Security Index—a public benchmarking project of nuclear materials security conditions on a country-by-country basis, aimed in part at encouraging governments to take actions to reduce risks.

PROGRAM ON SCIENCE AND GLOBAL SECURITY, PRINCETON UNIVERSITY, 2012  
\$980,000 to discourage nuclear fuel reprocessing, support the minimization of highly-enriched fuel in Russia, and assess the proliferation risks of the small modular reactors being advocated by the nuclear industry.

CENTER FOR ENERGY AND SECURITY STUDIES (RUSSIA), 2012  
\$400,000 in support of a project to promote highly enriched uranium minimization in Russia.

AMERICAN ACADEMY OF ARTS AND SCIENCES, 2011  
\$280,000 in support of a project to counter the insider threat in nuclear facilities.

#### *Advanced Education*

BELFER CENTER FOR SCIENCE AND INTERNATIONAL AFFAIRS, HARVARD UNIVERSITY, 2011  
\$2.48 million to support the Project on Managing the Atom, which trains the next generation of nuclear security policy experts.

CENTER FOR INTERNATIONAL SECURITY AND COOPERATION, STANFORD UNIVERSITY, 2011  
\$2 million to help train future nuclear security policy experts.

CENTER FOR SCIENCE AND SECURITY STUDIES AT KING'S COLLEGE LONDON, 2011  
\$1.65 million to train future nuclear experts.

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### About The MacArthur Foundation

The John D. and Catherine T. MacArthur Foundation supports creative people and effective institutions committed to building a more just, verdant, and peaceful world. In addition to selecting the MacArthur Fellows, the Foundation works to defend human rights, advance global conservation and security, make cities better places, and understand how technology is affecting children and society.

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