

Practical Measures to Avoid a Nuclear Storm

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Many observers of the aftermath of Hurricane Katrina have likened the storm's impact to that of a nuclear attack. In fact, horrible as was the devastation along the American Gulf Coast, it pales in comparison with what even a single nuclear bomb manufactured and detonated by a terrorist could have wrought.

Although two types of fissile materials--highly-enriched uranium (HEU) and plutonium--can be used to build nuclear weapons, for technical reasons it would be far easier for a terrorist to use HEU to fabricate a crude but devastating nuclear device. Highest priority, therefore, should go to impeding access by non-state actors to the hundreds of tons of HEU stored in dozens of countries.

This May, Sweden joined Iceland, Lithuania and Norway at the 2005 Review Conference on the Nuclear Non-Proliferation Treaty in calling on countries to secure, consolidate, reduce, and eventually eliminate the use of HEU for civilian purposes. This goal was echoed a month later, when former Swedish Prime Minister Ingvar Carlsson joined the 14 other former heads of state in the InterAction Council in calling on all states to "eliminate highly enriched uranium in the civilian nuclear sector as soon as technically feasible. The initiative gained further momentum last month at the General Conference of the International Atomic Energy Agency (IAEA) where many states expressed support for this important objective.

Fortunately, HEU has few commercial uses. They include fuel for some high-powered research reactors and a small number of nuclear propelled Russian icebreakers. In addition HEU currently is used as the source for some medical isotopes, which are produced by bombarding uranium targets. In most, if not all of these cases, however, low-enriched uranium can be substituted for HEU, thereby reducing potential terrorist access to this dangerous material.

Consistent with the goal of reducing global stocks of HEU in the civilian nuclear sector, the United States, Russia, and the IAEA have been actively promoting the return of U.S. and Soviet origin HEU that is currently located in about four dozen countries. Although this repatriation effort, known as the Global Threat Reduction Initiative, has made considerable progress, there remain two facilities in the heart of Europe that still have fresh HEU fuel—in Belarus and Ukraine. To date, Washington and Moscow's efforts to persuade Minsk and Kiev to return this material to Russia have not met with success, and it may be necessary to approach the issue from a broader European perspective. In

particular, it could be useful to engage those European countries such as Sweden that historically have maintained good relations with Belarus and Ukraine, possibly as intermediaries or honest brokers vis a vis Belarus, and as parties who would provide long-term guarantees about peaceful nuclear research cooperation were the two countries to part with their relatively small but still dangerous stocks of HEU.

This country-specific effort would be facilitated if more states were to join the global, non-discriminatory approach to eliminating civilian use of HEU as advocated by all of the Nordic states and the United States, among others. Unfortunately, some European countries, while embracing the principle of the Global Threat Reduction Initiative, are reluctant to convert all of their own civilian nuclear operations to low-enriched uranium. Germany, for instance, has only promised to convert its new FRM-2 research reactor, which began operation in early 2004, to what it refers to as "medium" enriched uranium (less than 50% enriched) before the end of 2010. France also continues to build a new research reactor in Cadarache, which is designed to operate on HEU, although it has indicated its readiness to convert the reactor to low-enriched fuel as soon as technically feasible.

It is unlikely that in the foreseeable future we will be able to prevent nature from unleashing horrific hurricanes or tsunamis. It is well within our power, however, to reduce the risk of man-made nuclear disasters such as those that might be inflicted by terrorists. The international community can and must take action today, including practical steps to secure, consolidate, reduce, and, eliminate civilian stockpiles of highly-enriched uranium.