Rad Resilient City Project

Overview and Status Update

May 19, 2011
Two decades after the end of the Cold War, we face a cruel irony of history—the risk of a nuclear confrontation between nations has gone down, but the risk of nuclear attack has gone up.

President Barack Obama, Remarks at the Nuclear Security Summit, April 13, 2010

WHAT IS THE GOAL OF THE PROJECT?

To provide leaders from high terrorism risk cities with a checklist of preparedness actions that could save tens of thousands of lives or more following a nuclear detonation through adequate protection against radioactive fallout.

WHY IS THIS PROJECT NEEDED?

Nuclear terrorism is a real threat. The world’s fissile materials today total about 1.6 million kilograms of highly enriched uranium and 500,000 kilograms of plutonium—enough to make more than 125,000 crude nuclear bombs. Detonation of a crude nuclear device in a U.S. city could kill tens of thousands of people, dislocate millions, and inflict significant material and moral damage.

This possibility demands effective contingency planning, because a 100% success rate in prevention cannot be guaranteed, and because the potential damage would be intolerable in humanitarian and political terms. Experts generally concur, however, that the U.S. is not well prepared to respond to such a catastrophe. In FY2008, nuclear incident management constituted only 1.3% of U.S. nuclear weapons-related appropriations.

Recent federal studies suggest that many lives could be saved if first responders and the public took appropriate actions in the hours and days immediately following a nuclear terrorist event. Tens of thousands of deaths due to radioactive fallout exposure could be prevented if the public understood 3 things: a nuclear detonation has occurred, they should immediately seek adequate shelter, and they should await further information before evacuating.

However, most Americans are not familiar with correct safety measures against radioactive fallout, nor are local emergency management structures fully equipped to instill this knowledge meaningfully either before or after an incident. Important federal guidance is emerging to remedy these gaps, but emergency professionals are on their own to piece together lengthy documents and to translate generic guidance into actionable preparedness and response plans. In the current economic environment, emergency officials have limited resources with which to take on planning for new, complex hazards.

The Rad Resilient City Project converts new federal guidance, scientific reports, and other technical information into clear and actionable steps for cities.

WHAT IS THE PROJECT’S APPROACH?

The Rad Resilient City Project will develop and promote a set of actions against which high terrorism risk cities can improve their readiness to protect resident populations from fallout. The project will provide both a model vision of population-level preparedness as well as practical steps to mark gains by jurisdictions working with different baselines. By implementing the project’s checklist (such as the interim one below), a locality will have prepared both the emergency management infrastructure and the larger population to save tens of thousands of lives following a nuclear detonation.
FALLOUT RESILIENCE CHECKLIST

- ACTION 1: Obtain broad community backing for nuclear event preparedness to sustain the program over time and to magnify its impact in an incident.
- ACTION 2: Conduct a pre-event public education program to inform the public about the effects of a nuclear detonation and how people can protect themselves.
- ACTION 3: Enable building owners and operators—from individual householders to skyscraper managers—to assess shelter attributes and to teach others.
- ACTION 4: Strengthen the region’s ability to deliver actionable public warnings following a nuclear detonation through well-chosen technologies and organizational procedures.
- ACTION 5: Establish a rapid system for mapping and monitoring the Dangerous Fallout Zone to inform public warnings about appropriate protective actions.
- ACTION 6: Develop planning strategies and logistical capabilities to support a large-scale, phased evacuation.
- ACTION 7: Integrate, test, and conduct training on the above elements of a comprehensive fallout preparedness and public warning system.

WHAT KNOWLEDGE INFORMS THE PROJECT?

The Nuclear Resilience Expert Advisory Group constitutes the project’s brain trust. Members include seasoned decision makers at local and federal levels of government; practitioners in emergency management, public health, public safety, radiation control, and law enforcement—all from high terrorism risk jurisdictions; representatives from business, community, and volunteer sectors; and subject matter experts in health physics, disaster sociology and psychiatry, vulnerable populations, public education, public warning and evacuation. Recommendations will reflect the experience and professional judgment of this Expert Advisory Group, as well as evidence obtained by the review of prevailing federal guidance on radiological and nuclear incident response; technical reports from key practitioner organizations (e.g., NCRP, CRCPD); and select local radiological emergency plans.

HOW WILL THE WORK MOVE FORWARD? WHAT IMPACT WILL THE PROJECT HAVE?

The Rad Resilient City Project’s fallout preparedness checklist and supportive technical materials will be published in the fall of 2011. The Center for Biosecurity will then lead efforts to disseminate and encourage implementation of the checklist by holding instructional workshops for elected officials, emergency responders, and community leaders in high risk jurisdictions and by conducting briefings at major professional association meetings and conferences in 2011-2012. The project will provide community leaders in and out of government with a unified vision of fallout preparedness as well as concrete steps for its implementation. By singling out fallout preparedness as an achievable priority objective, the project can create momentum for high risk jurisdictions to tackle other nuclear readiness, response and recovery issues like the surge in demand for medical services, search and rescue capabilities, and the sheltering of mass, displaced populations.
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