talking about Terrorism

She has interviewed some 75 terrorists; served as a US National Security Council Director and consulted on a Hollywood nuclear thriller based on her work.

Jessica Stern talks terrorism with the IAEA Bulletin.

Q: How big a threat is nuclear terrorism — the risks from so-called "dirty bombs" or even nukes in the hands of terrorists?

Nuclear terrorism remains a potent threat. We have known for some time that terrorist groups have been seeking weapons of mass destruction. There are various ways that terrorists could use nuclear and other radioactive materials: they could acquire a nuclear weapon from a nuclear State; they could acquire the necessary fissile material and produce a weapon on their own, creating an improvised nuclear device; they could attack a nuclear power plant; or they could create a radiation dispersal device, a so-called dirty bomb. The first possibility would be the most devastating, but it is also probably the least likely. Stealing a bomb would be difficult because of the generally high security of facilities where nuclear weapons are stored. And a State that gave nuclear weapons to terrorists would have to seriously consider the probability that the source of the bomb could be identified, so retaliation against the State would be likely. In this regard, the revelation that terrorist groups were carrying out reconnaissance missions at Russian nuclear-weapon storage sites in 2001 was troubling; but the terrorists' efforts quickly became known to security personnel.

The second possibility—the risk that terrorists will acquire nuclear-weapons usable materials—must be taken extremely seriously, especially in light of revelations about meetings between Pakistani nuclear scientists and al Qaeda, and about a clandestine effort to export nuclear technology run by the Khan network. Terrorists' dispersal of radioactive materials — either by attacking a nuclear plant or disseminating those materials with a homemade device—is the most likely scenario. Still, it is important to keep the threat in perspective. Dirty bombs are far more frightening than lethal.

The US government considered developing radiological weapons during the Second World War, but abandoned the project as impracticable. In contrast, chemical agents can be stored for a long time, and are easier to transport. That makes them more attractive to terrorists than radiation devices if the main objective is to kill many people.

But radioactive weapons can be effective instruments of terror because of their psychological impact. Many studies have shown that people have a dread of radiation out of proportion with the danger it poses to human health. The media also tend to highlight terrorist incidents, heightening dread and panic still further. We feel a gut-level fear of terrorism, and are prone to trying to eradicate the risk entirely, with little regard to the cost. In contrast, when risky activities are perceived as voluntary and familiar, danger is likely to be underestimated. On average, more than 100 US citizens a day die in car accidents. Yet people expose themselves to the risk because it is a voluntary act and drivers feel the illusion of control.

Q: What can be done to minimize the risks of nuclear terrorism?

First, we need to realize that this is a new kind of war. Our enemies deliberately target civilians. But uncertainty, dread and disruption are their most important weapons.

Our most important response, then, is an informed public that understands not only the risks we face, but also the role of fear.

But public education is only the first step. Many policy measures can reduce the likelihood and impact of such threats. Nuclear power plants must be secured. Evacuation and clean-up plans should be readied and hospitals should be prepared. Radiation detectors should be deployed at ports and borders. Tracking systems for radioactive isotopes must be improved. Despite the relatively low casualty rate for radiological attacks, the psychological impact will be far more devastating if governments are perceived to be unprepared.

Unconventional weapons, used in a total war, require an unconventional response. New agencies and organizations will have to be involved. Businesses will play an increasingly important role. The food industry needs to be aware that the enemy in this war will not be dressed as a soldier and may not carry a gun. Instead, the enemy in this new war might be seemingly innocent pregnant woman looking nothing like your fantasy of a terrorist — perhaps an insider working at a food processing plant aiming to steal radioactive sources or contaminate food products, for example.

terrorist ideology, in order to reduce the danger. This lack of interest strikes me as remarkably shortsighted. It will take a global effort to contain terrorism's spread. Part of what needs to be done is to reduce terrorist access to the materials of mass destruction by continuing the global effort to secure nuclear materials and expertise, including shutting down clandestine nuclear supplier networks, as I mentioned earlier. But we also need to study how terrorist ideologies spread, and why certain populations seem particularly susceptible to the idea that a good way to counter the seemingly unstoppable train of globalization and Americanization is through violence against civilians.

Terrorism is unquestionably evil, but I believe we have to try to understand what makes young men, and increasingly, young women, become terrorists. We won't be able to stop it if we just focus on the evil of terrorism and don't bother to try to understand the grievances that give rise to it.

Q: You did some work with Ted Turner's Nuclear Threat Initiative (NTI) and with India and Pakistan to help them improve security of nuclear weapons and materials, and in your recent book you cite vulnerabilities in Russia. How did you help those countries improve their nuclear security?

I was involved in helping to formulate a vision for NTI when it first began. And then NTI funded Stanford Professor Scott Sagan and me to look at whether there was a way to help India and Pakistan improve security of nuclear weapons materials, in the same way we had done and, in fact, we continue to do for the former Soviet States. I had been involved in the effort to secure nuclear materials in the

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Terrorism is a form of psychological warfare, requiring a psychologically informed response. Our hardest challenge is not to overreact—the terrorists' fondest hope—and not to give in to fears. We will need to find the right balance between civil liberties and public safety.

Q: Are States doing enough to combat the roots and reach of terrorism?

The answer is a resounding 'no.' There is still a great deal of debate in my country about whether it is necessary to consider the causes of terrorism, or the broad appeal of

former Soviet Union. And, it just seemed like a good idea to try to do it in Pakistan.

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I went to Pakistan and Scott went to India. The Pakistanis were very forthcoming and really wanted assistance with personnel reliability, in particular. Personnel reliability involves helping to ensure that custodians of nuclear materials and nuclear weapons do their jobs, that they are reliable, that they don't suddenly start getting involved in Islamist groups that might be fighting the Pakistani government or someone else.

When the extent of A. Q. Khan's nuclear network became clear, I couldn't help but wonder whether our contacts in Pakistan's nuclear establishment had any knowledge about what the former head of Pakistan's nuclear program was up to — whether they were worried about precisely what transpired — Islamist-leaning scientists becoming private proliferators.

Q: Can you tell us about your involvement with the film *The Peacemaker*? Were you surprised to find your life influencing a film?

After a two-year postdoctoral position at the Lawrence Livermore National Laboratory analyzing terrorism and weapons of mass destruction, I became the National Security Council's (NSC's) director for Russian, Ukrainian and Eurasian affairs. As it turned out, nobody at the NSC was really working on the aspect of nuclear security I wanted to work on — the possible theft of nuclear materials or weapons and the threat of terrorism. I was fortunate that some of the world's foremost experts on nuclear smuggling and terrorism — including the physicist Frank von Hippel and the nuclear expert Matthew Bunn — were working in the government at that time. But perhaps because there was so little understanding of the importance of these threats, and perhaps because many of the important issues were highly technical, their voices were not being heard and their expertise was not being properly utilized. They helped me a great deal.

One day the NSC press office asked me to meet with a famous journalist from *Vanity Fair* named Leslie Cockburn. They warned me that Leslie was a skilled investigator known for her ability to ferret out information that might embarrass the White House. Leslie had spent time in Russia and saw that security conditions for nuclear-weapons components were poor. She was interested in the possibility that nuclear weapons or their components might be stolen and used by terrorists. The situation was dangerous, she reasoned, and she wanted to know what the White House was doing to protect the American people.

I explained to Leslie that I was just as concerned as she was and that many people from all over the government were meeting regularly to try to solve the problem. I told her how the United States government had carried out a mission to airlift a large cache of nuclear-weapons material out of Kazakhstan. There was enough material there to make dozens of bombs, and the government of Kazakhstan was afraid it could be stolen. I told her that I was running an interagency group called the Nuclear Smuggling Group, which met regularly to discuss reported incidents of nuclear theft and to develop national policies. Leslie listened and took notes. She seemed impressed that there were so many people in different parts of the government who took the problem seriously. After the interview was over I went back to work. I was too busy to think much more about it.

Several months later I got a call from DreamWorks, the entertainment company that Steven Spielberg founded with two colleagues. Without telling me, Cockburn and her husband wrote a movie based on my experiences and persuaded DreamWorks to make it. In the film starring Nicole Kidman and George Clooney, the two search for nuclear weapons around the world. I was on the set as a consultant. I saw the film as a kind of "op-ed," intended to warn the world about the dangers of nuclear terrorism and the need to take action to thwart the threat. But prior to 9/11, few people took terrorism seriously, and the film did not do as well as it undoubtedly would have had it been released after the attacks.

Jessica Stern is a US expert on terrorism and author of Terror in the Name of God: Why Religious Militants Kill (2006)*—a book that shares her analysis of five years of interviews with over 75 members of extremist groups. She is a lecturer in public policy at Harvard University, served as director for Russia, Ukraine and Eurasian Affairs at the National Security Council and was the Superterrorism Fellow at the Council on Foreign Relations.*

The author defines terrorism as "an act or threat of violence against non-combatants with the objective of exacting revenge, intimidation, or otherwise influencing an audience."