



What the Commission Report says on:

COUNTERING NUCLEAR TERRORISM: OVERALL STRATEGY

The significant and continuing fear internationally of nuclear terrorism – shared by the public and decision-makers alike – is well justified. There are terrorist actors in existence who would, if they could, cause massive and indiscriminate havoc in almost any one of the world's major cities. And there is every reason to fear that they can match that intent with capability. There is quite a high risk that they could produce a “dirty bomb”, combining conventional explosives with radioactive material, to devastating psychological effect. The risk is very much smaller that they could produce a far more physically destructive nuclear explosion, given the scale of the technical and logistical problems that would have to be overcome. But it is not negligible. And the possibility of cyber attacks on nuclear command and control centres is growing ever more significant.

Counter-Terrorism Strategy Generally.

Effectively countering terrorism of any kind involves a complex mix of protection, policing, political, peacebuilding and psychological strategies, coordinated both nationally and internationally. While the latter three are crucial in addressing the underlying causes of terrorist behaviour, the most immediately important in dealing with the threat of nuclear terrorism are “protection” (involving airline travel, border protection and all the rest of the familiar homeland security measures, both at home and abroad, needed to deny potential access by terrorists to the materials they need) and “policing” (embracing everything necessary for the detection and apprehension of those planning or carrying out terrorist attacks, from intelligence gathering to, in very extreme cases, military operations).

The need to set very clear normative guidelines, to have the maximum possible degree of policy integration across national borders, and to continually share information and best practices,

has been better recognized and followed up in the nuclear area than most others, with the two major nuclear powers, the U.S. and Russia, playing a necessary and important leadership role, notably in the *Global Initiative to Combat Nuclear Terrorism (GICNT)* announced by Presidents Bush and Putin in July 2006 during the G8 Summit in St Petersburg. *The Global Summit on Nuclear Security* to be hosted by President Obama in April 2010 will be a major opportunity to take stock of this and other initiatives launched in recent years and to accelerate their effective implementation.

Securing Loose Weapons and Material. The problem of “loose nukes” – securing weapons and material that, by virtue of the way in which it is manufactured, transported or stored, may be vulnerable to apprehension by terrorist groups – requires a variety of solutions. Many general non-proliferation measures are squarely relevant here, including the Nuclear Suppliers Group and the Proliferation Security Initiative, the proposed Fissile Material Cut-off Treaty, and the development of proliferation-resistant technology.

The following are some of the more important other specific nuclear security measures that have been taken, and still need to be taken or further strengthened, in the form of binding U.N. resolutions, treaties, and other programs, arrangements and initiatives [discussed fully in Section 13 of the report]:

- *IAEA Nuclear Security Guidelines* (document INFCIRC/225) and *Illicit Trafficking Data Base (ITDB)*...
- *Convention on the Physical Protection of Nuclear Material (CPPNM)* (1987 on)...
- *Cooperative Threat Reduction (Nunn-Lugar) Programs (CTR)* (1993 on)...

The full text of *Eliminating Nuclear Threats: A Practical Agenda for Global Policymakers*, Report of the International Commission on Nuclear Non-proliferation and Disarmament, Co-chairs Gareth Evans and Yoriko Kawaguchi (November 2009), is available at www.icnnd.org

- *UN Security Council Resolution 1540* (2004)...
- *International Convention for the Suppression of Acts of Nuclear Terrorism* (2005)...

“Dirty Bombs”: Improved Control of Radioactive Material. The use of radioactive material for terrorist purposes is proscribed at the international level by the 2005 International Convention for the Suppression of Acts of Nuclear Terrorism, noted above, but most attention in recent times has focused on measures of a practical kind to limit the availability of the huge range of radioactive material now in medical, research and commercial use which could be misused for such purposes.

In response to a number of serious radiation accidents in earlier years resulting from high activity sources that had been lost, stolen or abandoned, there was initially developed, through the IAEA, the Code of Conduct on the Safety and Security of Radioactive Sources in 2000... The 2003-revised Code, to which 95 states have so far made a commitment, includes new provisions relating to national registers of high-activity sources; the international trade in radioactive sources; strengthened security requirements; confidentiality of information; and the prompt notification to potentially affected states of incidents of loss of control of sources, or incidents with potential trans-boundary effects...

Some have suggested that the Code of Conduct be converted into a legally binding Convention. But when comparing the Code with the conventions adopted under IAEA auspices in recent years – including those on Nuclear Safety and on the Physical Protection of Nuclear Material – it is apparent how much more detailed and prescriptive is the Code. This has been of great value to those charged with its implementation, and is probably not replicable in a binding convention. The Commission agrees with those professionals who say that the priority must continue to be the unglamorous work of assisting states in revising or updating their legislation and licensing practices, promoting awareness among users and other stakeholders, implementing and sustaining adequate and appropriate safety and security provisions throughout the lifecycle of radioactive materials, and engendering good safety and security culture.

Nuclear Forensics. Most governments are well aware of the risks of nuclear terrorism, and the need for effective policing at both the domestic and

international levels, but there has been very variable performance in translating that basic awareness into action. Information and intelligence remains the key to effective police action, but despite the requirements of the Convention for the Suppression of Acts of Nuclear Terrorism, the willingness of states to share nuclear-related information is at best minimal. Efforts should continue to be made to establish an intelligence clearing house which would provide a mechanism by which countries might be willing not only to share their intelligence, but also provide the know-how for other countries to interpret and deal with it...

One of the most important and encouraging recent developments in the area of police detection is the emergence of the science of nuclear forensics, still in its relative infancy but deserving encouragement from the ground up. This involves the analysis of nuclear materials recovered either from the capture of unused materials, or from the radioactive debris following a nuclear explosion, so as to identify the sources of the materials and the industrial processes used to obtain them. In the case of an explosion, nuclear forensics can also reconstruct key features of the nuclear device.

The ability to identify and trace specific nuclear materials and techniques would have a strong deterrent function both generally and in respect of nuclear terrorism. The Nuclear Smuggling International Technical Working Group should be provided with adequate resources to greatly expand the work it has been doing since 1995 to significantly improve international cooperation in both developing nuclear forensics as a science and pursuing nuclear forensic investigations. The concept of a shared international database, with relevant states contributing “fingerprints” of their nuclear materials, warrants active consideration. Individual governments also need to make the necessary effort to improve their own nuclear forensics capabilities.

Recommendations:

All states should agree to take further measures to strengthen the security of nuclear materials and facilities, including early adoption of the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material and the most recent international standards, accelerated implementation of the Cooperative Threat Reduction and associated programs worldwide, and greater commitment to international capacity building and information sharing.

On the control of material useable for “dirty bombs”, further efforts need to be made to cooperatively implement the Code of Conduct on the Safety and Security of Radioactive Sources, with assistance to states in updating legislation and licensing practice, promoting awareness among users, and generally achieving a safety and security culture.

Efforts should continue to be made to establish an intelligence clearing house which would provide a mechanism by which countries might be willing not only to

share their intelligence, but also provide the know-how for other countries to interpret and deal with it.

Strong support should be given to the emerging science of nuclear forensics, designed to identify the sources of materials found in illicit trafficking or used in nuclear explosions, including through providing additional resources to the Nuclear Smuggling International Technical Working Group.

[Sections 4,13, Recs 27,29-31]