

International Legal Framework for Strengthening Nuclear Security

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Abstract

Although nuclear security is primarily a national responsibility, the legal framework emerged and has been evolving because governments and international institutions recognize that threats to nuclear security have a global dimension. This imperative to work together gave rise to an international effort to build a nuclear-security framework to meet nuclear related threats. Its goal: a coordinated, consistent, sustainable fight against these threats. For the purpose of this paper, the legal framework for nuclear security constitutes a set of legally binding (“hard law”) and nonbinding (“soft law”) instruments which – in combination with other institutions and programs – strengthens nuclear security while helping the international community combat nuclear terrorism. International efforts to deter and prevent nuclear terrorism would be largely ineffective without criminalization of these crimes. States acting under these provisions define actions that threaten nuclear security as criminal offences in national law, and levy criminal or civil penalties commensurate with such serious offences. In this sense, nuclear forensics is key to successfully investigating and prosecuting such offences. The international legal framework for nuclear security provides a comprehensive umbrella under which to pursue such vitally important goals.

1. Introduction

The international legal framework is a product of multi-year efforts at a number of forums convened in pursuance of diverse objectives which left a legacy of inconsistencies, overlaps and duplications. Some of its major elements were developed during the Cold War period, while others subsequently emerged in the new threat environment resulting from major terrorist incidents, most dramatically the 9/11 attacks. The latter event represented a wake-up call in many respects, including the need for prompt and effective measures to remedy the most significant weaknesses in the existing legal framework – a legal framework that was not structured to address new threats coming from sub-state actors.

Another challenge in achieving further realignment and consistent implementation is that many basic terms and definitions in some of the key instruments have been revised, adjusted and expanded, with implications affecting key elements of the legal framework. For example, the term “nuclear security” as defined by the International Atomic Energy Agency in 2004 received a much wider meaning than previously understood. It is currently “the prevention and detection of, and response to, theft, sabotage, unauthorized access, illegal transfer or other malicious acts involving nuclear material, other radioactive substances or their associated facilities.” This new definition makes clear that nuclear security is focused on illegal or unauthorized acts. Its three essential functions for coping with such acts – namely, prevention, detection and response – are understood as extending beyond previous approaches that focused more narrowly on geographical, jurisdictional and procedural aspects. In addition, the new concept broadened the scope of nuclear security to cover not only materials for producing explosives, but also other radioactive materials that could be used in a radiological dispersal device (RDD). Most importantly, this shift in emphasis highlighted some previously dormant provisions, one of which is criminalization and nuclear forensics as a vehicle for successful prosecution.

2. A Growing Diversity of the Legal Instruments

The complexity of the legal framework was acknowledged by the IAEA Director General Yukiya Amano. As emphasized in his characterization, “the international legal framework on nuclear security has developed in a complex manner and now consists of a broad collection of legally binding and non-binding international instruments that at times may be considered as difficult to comprehend.” [“The International Legal Framework for Nuclear Security,” IAEA International Law Series No. 4, 2011] In recognition of these challenges, Indonesia, as a participant in the Nuclear Security Summits (NSS), volunteered to develop as a “gift basket” the National Legislation Implementation Kit on Nuclear Security designed to provide building blocks to countries intent to integrate relevant provisions of the international legal framework into their own national legislation.

Figure 1 illustrates the multi-tiered structure of the legal framework consisting of two major interactive clusters, i.e. binding “hard law” and nonbinding “soft law” with subcategories in each cluster.

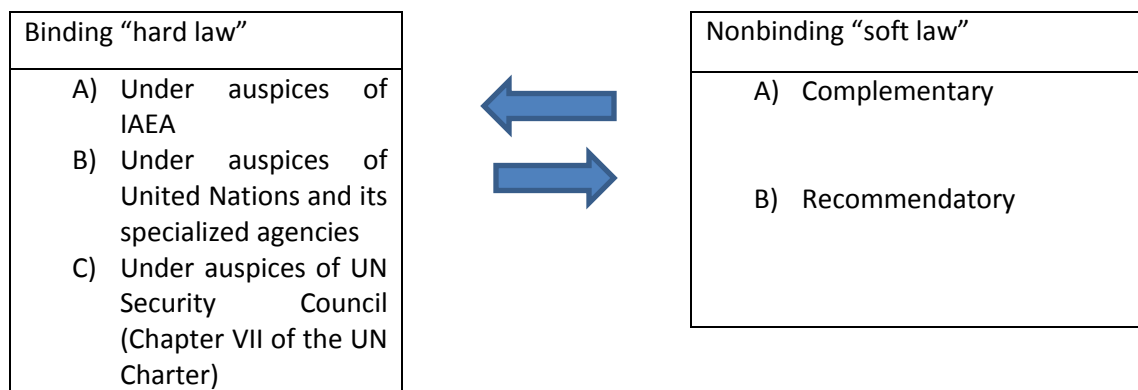


Figure 1: Multi-Tiered Structure of the Legal Framework for Nuclear Security

Instruments in the “hard law” cluster are binding and normally negotiated by states through an established diplomatic process. Obligations are typically specific and there are provisions for verification and enforcement to ensure compliance. Some instruments may involve sanctions for violations. “Soft law” elements are based on voluntary policy commitments either developed through informal consultations or proposed unilaterally. Their recommendations and guidance are typically discretionary while their verification or enforcement mechanisms are weak or nonexistent. Soft legal documents do not usually envisage specific sanctions for noncompliance but may involve review procedures.

Although “soft law,” non-treaty instruments have often been developed on an ad hoc basis and in a time-constrained manner, they have the potential for evolving into binding agreements, if and when circumstances warrant such a transition. Given the urgency of taking appropriate measures to maintain nuclear security and other considerations, the “soft law” approach typically provides a more flexible means of achieving prompt progress, largely because it avoids time-consuming formal negotiations and can attract participation by more state parties.

In the rapidly evolving threat environment of nuclear terrorism, these agreements often serve as grounds for testing innovative ideas and action before they are codified into binding norms. It is important that a balance be maintained between the “soft” and “hard” elements of the legal framework. This will include, initially, working with relevant states to ensure that “soft law” guidance documents are effectively implemented in national systems. Based on experience and demonstrated

need, the process of “hardening” selected non-binding agreements should be pursued in relevant international forums.

Accordingly, the distinction between “hard” and “soft” law instruments is less significant than how they are implemented in national law. If a state fails to accurately and completely incorporate the provisions of a “hard law” instrument into its domestic legal and regulating framework that instrument cannot be effectively implemented. On the other hand, if a state codifies a “soft law” document into its national laws and regulations and applies its terms in a rigorous manner, the results will be consistent with a “hard law” approach.

3. “Hard Law” Instruments

Binding “hard law” documents are broken down into three categories depending on the auspices under which they were developed and adopted.

- A. Most important instruments under the IAEA auspices are:
 - 1980 Convention on Physical Protection of Nuclear Material (CPPNM)* which applies to nuclear material used for peaceful purposes while in international transport and with some exceptions also to domestic use, storage and transport. *2005 Amendment to CPPNM* (yet to be ratified) extends the scope of the CPPNM to also cover nuclear facilities and nuclear material in domestic use, storage and transport as well as sabotage. The slow rate of ratification is a common challenge to many international instruments. Although the amendment sets forth general measures for physical protection of nuclear material, specific regulating requirements and enforcement measures must be adopted and applied by domestic bodies, some of which lack the legal and technical resources for effective implementation.
 - 1986 Convention on Early Notification of a Nuclear Accident* applies in the event of any accident involving specific facilities or activities of a state party from which a release of radioactive material occurs or is likely to occur and which has resulted or may result in an international trans-boundary release that could be of radiological safety significance to another state.
 - 1986 Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency* covers bilateral and multilateral assistance arrangements in connection with a nuclear accident or radiological emergency. These two instruments formally belong to the nuclear safety domain but there is a significant safety-security interface.
- B. The UN framework is comprised of the 19 universal legal instruments against terrorism of which at least two have direct relevance to nuclear security and nuclear terrorism. *2005 International Convention for the Suppression of Terrorist Bombing* creates a regime of universal jurisdiction over unlawful and intentional use of explosives and other lethal devices against various public places with intent to kill or cause serious bodily injury, or with intent to cause extensive destruction of the public place, through the release, dissemination or impact of toxic chemicals, biological agents or radiation or radioactive material. *2005 International Convention for the Suppression of Acts of Nuclear Terrorism* has a broader scope than the CPPNM and its 2005 Amendment to the extent that it criminalizes acts involving “radioactive material,” which includes not only nuclear material, but also other radioactive material. Several other universal anti-terrorism instruments have provisions which address nuclear security or may help address it with some of them developed within the organizational context of UN specialized agencies (e.g. International Maritime Organization, International Civil Aviation Organization) and designed to meet primarily their specific needs. Their common objective is to identify actions considered as offences, require state agencies to criminalize these offences in domestic law,

require states to establish jurisdiction over offenders and to prosecute or extradite them, and provide a mechanism for international cooperation. However, most instruments have not achieved universal adherence with many states not yet parties to them. Because institutional arrangements for monitoring implementation are absent or uneven, a number of them typically lack clear and predictable measures for imposing sanctions for non-compliance. In view of these inconsistencies and weaknesses, UN member states are negotiating an additional international treaty, a draft comprehensive convention on international terrorism which would complement the existing framework of international anti-terrorism instruments and would build on their key guiding principles.

- C. UN Security Council Resolutions adopted under Chapter VII of the UN Charter are therefore binding on all member states. Pursuant to article 48(2) of the UN Charter, "Such decisions shall be carried out by the Members of the United Nations directly and through their action in the appropriate international agencies of which they are members." A key resolution in this sub-category is UNSCR1540 (2004) designed to prevent weapons of mass destruction from falling into the hands of non-state actors. The rationale behind the resolution was to complement and reinforce existing legal instruments rather than replace them.

Seen in the context of previously established regimes, Resolution 1540 was meant to spur states to carry out their responsibilities under relevant instruments, enlist nongovernmental stakeholders in the fight against WMD terrorism, and widen that fight to include non-state groups. Specifically the resolution demanded from UN member states to establish domestic controls to prevent the proliferation of unconventional weapons and related materials, including measures pertaining to accounting, security, physical protection, border and law enforcement, and trade-related controls.

Critical support for efforts to meet challenges under UNSCR1540 comes from the 1540 Committee and the committee's group of experts. The committee, a subsidiary body of the UN Security Council, monitors compliance by reviewing country reports and connecting states in need of assistance. In 2011, the mandate of the committee was extended by 10 years.

Like any innovation, however, UNSCR1540 initially elicited a mixed reaction. One main reason for skepticism was that not all UN member states considered the threat of WMD terrorism and illicit trafficking in related materials to be their top priority. Some countries initially questioned the UN Security Council's role in addressing this threat, particularly the council's decision to impose binding nonproliferation and security obligations outside the traditional process of negotiations.

4. "Soft Law" Elements

The post September 11th imperatives to promptly respond to the new threat environment have resulted in adding a series of non-binding initiatives and documents related to nuclear security and nuclear counter-terrorism. Functionally, they can be divided into two sub-categories: complementary and recommendatory.

- A. Complementary are those which are largely designed to complement the binding "hard law" category by filling in gaps in their coverage and scope or facilitate their implementation. Examples include:
 - Global Initiative to Combat Nuclear Terrorism (GICNT)* was launched to develop partnership capacity to combat nuclear terrorism on a "determined and systematic basis," consistent

with national legal authorities and obligations they have under relevant international legal frameworks, notably the Nuclear Terrorism Convention, CPPNM and its Amendment as well as UNSCR 1540. GICNT's 85 partner countries have a shared commitment to accomplish on a voluntary basis, among other goals, the following: improve accounting, control and physical protection systems for nuclear and other radioactive materials, enhance security of nuclear facilities, improve the ability to prevent illicit trafficking, ensure national legal and regulatory frameworks to provide for the implementation of criminal and civil liability for terrorists. These goals are outlined in the eight-point Statement of Principles accepted by partner nations upon joining the Global Initiative. The GICNT has conducted over 50 multilateral activities to enhance partner countries' capacity consistent with its mandate.

Code of Conduct on the Safety and Security of Radioactive Sources was originally developed under IAEA auspices to assist states in developing and maintaining high levels of safety and security for radioactive sources. Following the 11 September 2001 events, it was agreed that the Code of Conduct had to be revised to strengthen a number of security-related provisions and to address malicious and/or intentional misuse of radioactive sources. At the same time, member states agreed to develop an additional guidance on the import and export of radioactive sources which was included as Supplementary Guidance after endorsed in 2004 by the IAEA General Conference. In response to the invitation from the IAEA Director General, member states made political commitments in which they indicated their intention to implement this non-binding Code. As of late 2013, 119 member states have made such commitments, which signaled a wide support for initiating a process for upgrading the document to the "hard law" status. In October 2013, the International Conference on the Safety and Security of Radioactive Sources held in Abu Dhabi, United Arab Emirates discussed instruments and recommended that the IAEA should convene a working group to assess the merits of this option.

Nuclear Suppliers Group (NSG) is yet another non-binding complementary initiative with 45 members aimed to prevent nuclear exports for commercial and peaceful purposes from being used to make nuclear weapons. The group has developed and kept updating the guidelines for nuclear transfers (INFCIRC/254, Part 1) and guidelines for transfers of nuclear-related dual-use equipment, materials and technology (INFCIRC/254 Part 2) which serve as a basis recommended for national export control regulations or laws and proscribed lists. Moreover, their provisions are used as informal guidance in the matrix prepared by 1540 experts for evaluating compliance with UNSCR1540 requirements. The group of experts developed a matrix for each state which includes about 390 fields covering activities related to operative part of the resolution. There are multiple links that enable the NSG to interact with "hard law" instruments and provide inputs in their implementation.

Proliferation Security Initiative (PSI) is a global effort by 70 partner states to stop WMD trafficking, their delivery systems, and related materials to and from states and non-state actors of proliferation concern by interdicting transfers to the extent of their capabilities and legal authorities. When a country joins the PSI, it endorses the PSI Statement of Interdiction Principles, which commits participants to establish a more coordinated and effective basis for such interdiction. Previous discussion to transform the PSI into a formal, legally-binding instrument identified potential difficulties at least in the near term. One reason is that some states which currently render conditional cooperation – including in interceptions within their territorial boundaries – are reluctant to join as members, given their concerns about the domestic and diplomatic consequences of being involved in all interceptions that PSI might undertake. The focus on joint training activities and limited information-sharing without binding commitment has allowed many more states to join the

PSI that would otherwise have not been possible. So long as these activities build capability to enforce WMD and even dual-use related laws, many more countries would be willing to participate without formal adherence to a legally binding regime.

The above examples do not constitute an exhaustive list of “soft law” initiatives and documents. It would be appropriate to add to the list communiqués and documents of the 2010, 2012 and 2014 Nuclear Security Summits, G8 Global Partnership, and several more.

- B. Recommendatory sub-category of the “soft law” documents covers a wide variety of sources including UN General Assembly resolutions and non-Chapter VII resolutions of the Security Council, UN guidance documents, technical recommendations by the IAEA and UNODC and many others which upon codification or endorsement can contribute to guiding principles or standards for states or organizations to strengthen nuclear security. Examples include: *The United Nations Global Counter-Terrorism Strategy (A/RES/60/288)* was unanimously adopted in 2006 by the UN General Assembly as a comprehensive strategy to fight terrorism through strengthening the capacity of states and the role of the UN system. Nuclear security measures are addressed by provisions to prosecute or extradite perpetrators of terrorist acts, cooperate and coordinate in combatting nuclear smuggling, improve security and protection of vulnerable targets, share best practices in counter-terrorism capacity building and coordinate responses to terrorist attacks.
- IAEA publications in Nuclear Security Series (NSS)* are designed to assist states in implementing their obligations to strengthen nuclear security. The series has a four-tiered structure consisting at the top of 1) fundamentals (principles and essentials of nuclear security), followed by 2) recommendations (general approaches and application of fundamentals), 3) implementing guides (broad guides for implementation of recommendations), and 4) technical guidance (reference and training manuals for implementing guides). Examples in this series include “Objectives and Essential Elements of State’s Nuclear Security Regime,” which lists and explains 12 essential elements of a state’s nuclear security regime as well as “Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities” (INFCIRC/225/Revision 5). The latter covers the objectives of state’s physical protection regime, the elements of physical protection, the requirements for measures against unauthorized removal, and the requirements for measures against sabotage.

Unlike safety and nonproliferation, the international legal framework for nuclear security has no single treaty or convention that establishes a basic legal regime for addressing nuclear security or terrorism. Rather, it is a continuously evolving web of instruments and documents with different status and scope. The process of streamlining and rationalizing the overall legal framework will require addressing a number of challenges including continued refocusing on sub-state actors, slow ratification and lack of universality, substantive and procedural discrepancies, conflicting interpretations, insufficient monitoring and reporting, inadequate domestic implementation, and poor horizontal coordination. Much work is yet to be done to accomplish this task.

5. Criminalization and Nuclear Forensics

Without an effective, enforceable legal framework and relevant measures at the state level, international efforts to prevent nuclear terrorism and ensure the security of nuclear materials and facilities will be well-intentioned, but largely ineffective. It is important to continue to develop a wide

range of both criminal and civil instruments that would deter the perpetrators of acts threatening nuclear security. One of the principal concerns surrounding the need for the accelerated use of criminal prosecution against nuclear smugglers and security violators is its apparent ineffectiveness. Successful prosecution and convictions, in most cases, require extensive investigative work, high burden of proof, the establishment of criminal intent and effective presentation of the above in court. Sometimes consideration of secrecy prevents a successful investigation while the involvement of individuals from several countries, unresolved cross-border issues, unclear jurisdiction and the reluctance to share the information necessary for prosecution lead to ineffective penalties and failed convictions.

The existing legal framework in its entirety has provisions whereby state parties should identify actions threatening nuclear security and establish them as criminal offences in national law, with appropriate criminal or civil penalties commensurate with the serious nature of these offences. These provisions are found in several “hard law” instruments including CPPNM (article 7); CPPNM 2005 Amendment (new article 7); Nuclear Terrorism Convention (articles 2 and 5), UNSCR1373 (para 2c) and UNSCR 1540 (para 3d). In addition, under GICNT principle 6, partner states are committed to ensure adequate national legal and regulatory framework sufficient to provide for the implementation of appropriate criminal and, if applicable, civil liability for terrorists and those who facilitate acts of nuclear terrorism. Likewise, the Communique of the 2014 Nuclear Security Summit in The Hague underscores the need for legislative measures to enable national prosecutions in the context of illegal trafficking. Other “soft law” documents have similar provisions and provide sufficient flexibility for governments to collaborate and exchange information in a manner consistent with their legislation.

In this sense, nuclear forensics represents the principal method for analyzing materials used to commit crimes and tracking these materials to the culprit. As evidentiary procedure it is the examination of nuclear and other radioactive material, or other evidence that is contaminated by radioactive material, in the context of legal proceedings under international or national law related to nuclear security. Prevention, detection, and response are the three main steps in maintaining nuclear security and combatting nuclear terrorism. Nuclear forensics helps keep nuclear materials under control by providing clues into their history. It thus contributes to effective measures for preventing the loss of nuclear material from the same source. Forensics can also deter. If investigators undertake collaborative forensics projects under the international legal framework, they can drive up risks for potential perpetrators. Greater prospects of being detected and punished translate into deterrence.

6. Conclusion

The diversity and multi-functionality of the international legal framework make it possible to successfully prosecute those who are involved in a theft, diversion and use of nuclear material for acts of terrorism. There are at least three preconditions for accomplishing this mission, i.e. recognition by governments that nuclear terrorism is a global menace, the government’s commitment to collaborate and provide assistance including nuclear forensics and the establishment of an effective national legal mechanism. Once these elements are in place, the international legal framework can provide an umbrella under which to pursue vitally important goals of protection, enforcement, criminalization and prosecution.

Reference

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- 6) "Preventing Terrorist Acts: A Criminal Justice Strategy Integrating Rule of Law Standards in Implementation of United Nations Anti-Terrorism Instruments," UNODC, 2006.