

PROJECT DEVELOPMENT &amp; FINANCE | MAY 9, 2016

## Amendment to the Convention on the Physical Protection of Nuclear Material Enters Into Force

On May 8, 2016, the amendment to the Convention on the Physical Protection of Nuclear Material (“CPPNM”), (“CPPNM Amendment”) entered into force. The CPPNM Amendment revises the CPPNM by seeking to further strengthen the international legal basis for nuclear security, including through applying physical protection levels to nuclear facilities. This publication explains the background to the CPPNM Amendment, as well as summarizes some of its main provisions and its impact on contracting parties. It also considers the concepts and standards enshrined in the CPPNM Amendment that warrant attention by nuclear licensees, their contractors and financial institutions doing business in the nuclear sector.

### Overview of the International Nuclear Security Regime

Unlike for nuclear safety, there is no international convention dedicated to nuclear security. Instead, there exist a number of diffuse nuclear security-related conventions and other instruments, including the:

- CPPNM and its Amendment;
- the International Convention on the Suppression of Acts of Nuclear Terrorism; and
- the UN Security Council’s Resolutions 1373 and 1540.

Of these, the primary instrument dedicated to nuclear security is the CPPNM, and now its Amendment.

While far-reaching in their respective areas, prior to the CPPNM Amendment, none of these instruments prescribed uniform international standards for nuclear security at nuclear facilities. Instead, according to the International Atomic Energy Agency (“IAEA”), the international legal framework has developed in a complex manner and consists of a broad collection of legally binding and non-binding international instruments that can be difficult to piece together.<sup>1</sup>

Recently, however, with a growing recognition that the ability to prevent, detect and respond to nuclear security threats within one state is affected by the adequacy of nuclear security measures taken by other States, particularly when nuclear material is transported across borders and in an era of global terrorism, the impetus for international

<sup>1</sup> Foreword, ‘The International Legal Framework for Nuclear Security, IAEA International Law Series No. 4, 2011,’ available at: [http://www-pub.iaea.org/MTCD/publications/PDF/Pub1486\\_web.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/Pub1486_web.pdf).

cooperation (as enshrined in international nuclear security conventions) has increased significantly, including due to the Nuclear Security Summits, the latest of which was held in Washington D.C. in March 2016.<sup>2</sup>

## **Background to the CPPNM Amendment**

### ***Structure and Purpose of the CPPNM***

The CPPNM entered into force on 8 February 1987. It consists of two main components. The first concerns the application of physical protection arrangements to nuclear material in international transport. The second concerns the prevention, detection and punishment of international offences relating to nuclear material. More specifically, the CPPNM primarily:

- prescribes “levels” at which contracting States must ensure that different categories of nuclear materials are protected during international nuclear transport, whether during the export, import or transit of such material through their respective territories,<sup>3</sup>
- requires contracting States to nominate a central authority and point of contact with responsibility for physical protection and coordinating recovery and response operations relating to the theft, loss, unauthorized removal, use or alteration of nuclear material (or the threat thereof);
- prescribes certain criminal offenses relating to, inter alia, theft and other unlawful dealings with nuclear material; and
- seeks to facilitate cooperation among contracting States to these ends.

Importantly, however, the scope of the CPPNM is restricted to nuclear material used for peaceful purposes while in international nuclear transport.<sup>4</sup> It does not apply to nuclear facilities or to nuclear material used for peaceful purposes but not in international transport. As such, the CPPNM has been considered to insufficiently address international cooperation in respect of the prevention of unauthorized possession of nuclear material.<sup>5</sup>

### ***Adoption and Ratification of the CPPNM Amendment***

Given these limitations, in 1999, a number of contracting States called for the CPPNM to be amended. Several IAEA-led expert meetings ensued, during which it was determined that there was “a clear need to strengthen the international physical protection regime.”<sup>6</sup> On 8 July 2005, following several international conferences, the CPPNM

<sup>2</sup> Ibid, page 1.

<sup>3</sup> Article 3, CPPNM Unofficial Consolidated Text produced by the IAEA, available at: <https://ola.iaea.org/ola/documents/ACPPNM/Unofficial-consolidated-text-English.pdf>.

<sup>4</sup> Article 2.1, CPPNM.

<sup>5</sup> Paragraph 2, ‘Nuclear Security – Measures to Protect Against Nuclear Terrorism: Report by the Director General of the IAEA,’ dated 6 September 2005, available at: <https://www.iaea.org/About/Policy/GC/GC49/Documents/gc49inf-6.pdf>.

<sup>6</sup> Ibid, paragraph 3.

Amendment was adopted by consensus.<sup>7</sup> However, the CPPNM Amendment required ratification by two-thirds of the CPPNM's contracting parties before it could come into force.

The ratification process was initially gradual until, at the first Nuclear Security Summit in Prague in 2009, US President Obama launched his global nuclear security initiative. Classifying the risk of nuclear terrorism as "the most immediate and extreme threat to global security," President Obama stressed that a multi-faceted, global approach was urgently needed to confront it. With the added impetus resulting from such initiative, by the final Nuclear Security Summit in Washington D.C. in April 2016, the CPPNM Amendment had achieved the 102 ratifications necessary for it to enter into force.

### Effect of the CPPNM Amendment

The CPPNM, as amended, is intended "to achieve and maintain worldwide effective physical protection of nuclear material used for peaceful purposes and of nuclear facilities used for peaceful purposes; to prevent and combat offences relating to such material and facilities worldwide; and to facilitate co-operation among States Parties to those ends."<sup>8</sup> Most importantly, the CPPNM Amendment expands the application of the CPPNM beyond international transport of nuclear materials, to both nuclear facilities and nuclear material in peaceful domestic use, storage and transport.<sup>9</sup>

Although certain contracting States that previously ratified the CPPNM Amendment are likely to have already done so, with entry into force of the CPPNM Amendment, all contracting States will be obliged as a matter of international law to ensure that their respective national legislation implements the additional CPPNM Amendment obligations. Together, the CPPNM and CPPNM Amendment require contracting States to:<sup>10</sup>

- **Physical protection regime:** Establish, implement and maintain **an appropriate physical protection regime applicable to nuclear material and nuclear facilities** under its jurisdiction, with the aim of protecting against theft, ensuring measures are in place to locate any missing or stolen nuclear material, protect nuclear material and facilities against sabotage and mitigate any radiological consequences of sabotage.
  - This commitment includes establishing **a legal and regulatory framework to govern physical protection** and requires application of specific levels of physical protection (with such levels being set out in Annexes I and II).
  - In implementing these obligations, contracting parties are to apply, if reasonable and practicable, a set of **"Fundamental Principles of Physical Protection of Nuclear Material and Nuclear Facilities."**

<sup>7</sup> Ibid, paragraph 10. Such adoption was the outcome of a diplomatic conference in which eighty-eight states and the European Atomic Energy Community (Euratom) participated actively and an additional eighteen states and three intergovernmental organizations (namely the IAEA, United Nations and League of Arab States) participated as observers.

<sup>8</sup> Article 1A, CPPNM Consolidated Text.

<sup>9</sup> Article 3, CPPNM Consolidated Text.

<sup>10</sup> Article 2A, CPPNM Consolidated Text.

- These “Fundamental Principles” are introduced via the CPPNM Amendment and include principles relating to the responsibilities of the State and the license holders, security culture, defense in depth, quality assurance and confidentiality (see further discussion below).<sup>11</sup>
- **Import and export assurances:** Undertake **not to export or import nuclear materials or to allow transit through their territories of such materials unless they have received assurances that these materials will be protected** during international transport in accordance with the aforementioned levels of protection determined by the CPPNM.
- **Criminalize acts: Criminalize specified acts**, including unlawful possession or transport of nuclear material, theft, using or threatening to use nuclear material to cause harm and interfering with operations of nuclear facilities with the intent to cause harm. Each contracting State is to establish jurisdiction over these offences in the following circumstances:
  - where the offense is committed in its territory or on board a ship or aircraft registered in the state;
  - where the alleged offender is a national of the state;
  - where the alleged offender is present in its territory and is not extradited; or
  - when the state is involved in international nuclear transport as the exporting or importing state (optional).
- **Prosecution and extradition: Prosecute or extradite those accused of committing such acts.** Importantly, the offenses listed in the CPPNM, as amended, will be deemed to be included as extraditable offenses in any extradition treaty existing between contracting States. The CPPNM Amendment strengthens the extradition provision by stating that none of the offenses are regarded as a political offense and, as such, a request for extradition cannot be refused solely on the grounds that it concerns a political offense.<sup>12</sup>

## What This Means for Industry

While the CPPNM Amendment primarily imposes obligations on contracting parties (ie. States) or their respective nuclear regulatory authorities, it also requires States to in turn impose certain obligations directly on license holders.

To prepare for the introduction of the CPPNM Amendment, license holders (whether nuclear facility operators, nuclear material shippers or others) may take particular note of explicit reference to the **license holder’s prime responsibility for the implementation of physical protection of nuclear material or nuclear facilities**.<sup>13</sup> This responsibility is based largely on the aforementioned “Fundamental Principles.”

In order to comply with both this prime responsibility and the CPPNM Amendment more broadly, license holders will need to (and, where relevant, will need to ensure that their contractors and sub-contractors):

<sup>11</sup> Article 2A.3, CPPNM Consolidated Text.

<sup>12</sup> Paragraph 10, CPPNM Amendment, inserting a new Article 11A to the CPPNM.

<sup>13</sup> Paragraph 6, CPPNM Amendment, inserting a new Article 2A to the CPPNM.

- reconsider the **design, maintenance and improvement of systems of physical protection** of nuclear material and nuclear facilities, where appropriate co-operating with the relevant regulator(s), IAEA and other relevant international organizations;
- reconsider “**defense-in-depth**” for physical protection of nuclear material and nuclear facilities, to ensure the existence of several layers and methods of protection that must be overcome or circumnavigated by any adversary;
- review, and if necessary revise or develop, **quality assurance policies and programmes** relating to physical protection;
- review, and if necessary revise or develop, **emergency procedures and arrangements**. In particular, license holders must plan for an unauthorized removal of nuclear material or sabotage of nuclear facilities or nuclear material, and attempts or threats thereof. This will require close collaboration with relevant State authorities;
- review, and if necessary revise or develop, a positive, institutional **nuclear security culture policy** within license holder organizations;
- review, and if necessary revise or develop, **confidentiality policies**, to prevent the unauthorized disclosure of information which could compromise the physical protection of nuclear material and nuclear facilities; and
- work with regulators to ensure that the license holder’s arrangements satisfy the relevant CPPNM requirements.

For other entities that are not the primary license holders, the CPPNM Amendment contains concepts and standards that warrant attention, particularly for contractors and sub-contractors doing business with license holders. It may also be prudent for companies that have policies for doing business in the nuclear sector (whether individually or through common initiatives such as the Nuclear Power Plant Exporters Principles of Conduct)<sup>14</sup> to consider whether any amendments should be made to these policies to take into account and facilitate compliance with the CPPNM Amendment. It would be equally prudent for commercial banks and lending institutions to review their lending policies and guidelines against the CPPNM Amendment to ensure that enhanced nuclear security requirements are appropriately addressed.

<sup>14</sup> See: <http://nuclearprinciples.org/the-principles/>.

## Concluding Remarks

Yukiya Amano, Director-General of the IAEA, has reportedly stated that bringing the CPPNM Amendment into force will be the single most important step which the world can take to strengthen nuclear security.<sup>15</sup> With the IAEA scheduled to convene a review of the CPPNM Amendment in 2021, the effectiveness of the CPPNM Amendment in promoting international nuclear security will ultimately be judged by its implementation. Notwithstanding this, any instrument that promotes uniform international standards in order to reduce vulnerability to nuclear terrorism must be viewed positively.

<sup>15</sup> According to any announcement by the IAEA on 13 June 2014, available at: <https://www.iaea.org/newscenter/news/securing-nuclear-materials-way-forward>.

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