

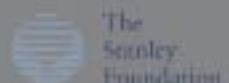
International Convention on Nuclear Security

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NSGEG 

This convention establishes an effective and sustainable international legal mechanism that allows for continuous improvement and adaptation of the global nuclear security regime. It addresses dangerous weaknesses that exist in the current regime by setting clear international security standards and allowing for the necessary assessment of their implementation. It supports the important work of the International Atomic Energy Agency (IAEA) and is open to all nations.

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An Effective and Sustainable Mechanism to Strengthen the Global Nuclear Security Regime

A Comprehensive Approach to Preventing Nuclear Terrorism

A terrorist nuclear attack using either fissionable or radiological materials will produce devastating international political, economic, and environmental consequences. It will impact the entire global community, including those least able to afford it.

Former United Nations (UN) Secretary General Kofi Annan said that an act of nuclear terrorism “would thrust tens of millions of people into dire poverty” and create “a second death toll throughout the developing world.” The shock caused by such an event would freeze international trade, travel, and investment for some time. Security concerns would become dominant politically, with resources for defense, security, and intelligence programs favored over those required for domestic needs and international development programs.

To date, the international response to the nuclear terrorism threat has been ad hoc and incomplete. The existing legally binding texts in this field, i.e., the international treaties and UN Security Council resolutions, do not constitute a comprehensive legal regime. And much of the global action has consisted of voluntary undertakings.

The most effective, efficient, and direct way to fill the dangerous gaps in the current nuclear security regime is through an International Convention on Nuclear Security (ICNS). This convention can address the weaknesses of the current regime, create a sustainable mechanism through which State Parties can assess the effectiveness of nuclear security governance and implementation, and allow for continuous improvements in global nuclear security over time and as new developments warrant action.

The ICNS will provide the following benefits:

- Create the framework for a comprehensive regime
- Supplement existing legal instruments and obligations without supplanting them
- Develop a mechanism for decision making and improvement through a Conference of the Parties (COP)
- Establish binding standards for securing nuclear and other radioactive material based on International Atomic Energy Agency (IAEA) recommendations that are now voluntary
- Support the work of the IAEA and all other international contributors to the nuclear security regime
- Provide a logical successor to the Nuclear Security Summit (NSS) process, but one open to all countries.

The ICNS can be negotiated and enter into force with a relatively small number of states and then grow into a convention with universal membership, following a precedent set by other international conventions that are dealing successfully with other complex threats to global well-being.

The Threat

Expert studies have concluded even a small nuclear explosion in a major city would immediately kill tens of thousands of people and cause even more deaths subsequently. The explosion would produce massive property destruction, and radiation would make an even larger area unusable for decades. The costs of the human casualties, displacement, and the cleanup of land and buildings would be in the hundreds of billions of dollars, if not more.

A radiological dispersal device or “dirty bomb” would produce few initial casualties but result in significant consequences for human health, property, and the environment. Radiological substances are used globally and widely in public facilities, including for medical, research, and industrial purposes. In the hands of terrorists, radioactive sources have considerable potential for malicious use to cause destruction, disruption, and fear. At least five terrorist groups, including Al Qaeda and the Islamic State (ISIS), have demonstrated interest in acquiring and using nuclear material or a nuclear weapon. Terrorists do not need to steal a nuclear weapon. An improvised nuclear device that would have explosive power comparable to the weapons used in Hiroshima or Nagasaki can be made from highly enriched uranium or plutonium being used for civilian purposes. A dirty bomb, which would disperse radioactive material across a large area, can be made from conventional explosives and radioactive sources used in universities, hospitals, or industry. ISIS recently stole 88 pounds of unenriched uranium compounds from a university laboratory in Mosul, Iraq.

The continued illegal movement of nuclear and other radioactive material is a cause for concern. Since 1993, the IAEA has logged roughly 2,000 cases of illicit or unauthorized trafficking of nuclear and other radioactive material. The IAEA data provides a clear indication that radioactive materials and substances are moving in illegal or unauthorized circumstances. This activity continues, with some 150 cases of illicit trafficking reported each year. At least 18 cases of confirmed thefts or loss of weapons-usable nuclear material have occurred, the latest in 2011.

The International Response to Date

The international community has taken a number of steps to address the threat of nuclear terrorism, but they are incomplete and rely largely on voluntary actions. The scope of the current regime includes international agreements, UN Security Council resolutions,

IAEA recommendations, and national actions. In addition, groups of like-minded states also have been assembled, such as the G-8 and the Global Initiative to Combat Nuclear Terrorism, which have taken useful steps toward strengthening nuclear security, but on a voluntary basis.

The NSS process, begun in 2010 at U.S. President Barack Obama's initiative, has taken the nuclear security issue to the highest political level. At three biannual summits, heads of state have gathered and agreed on a wide range of measures to address the threat of nuclear terrorism. The NSS process has yielded significant results, as about 6,000 tons of vulnerable nuclear material have been secured, states have brought forward initiatives and proposals to strengthen protection of both nuclear and other radioactive materials, and work plans have been identified to address the issues from a global perspective. A fourth, and most likely final, summit will be convened in the United States in 2016.

However, while clear progress has been made, it has been inadequate when compared to the danger of failure. It is vitally important to recognize that essential elements of an effective and sustainable global nuclear security regime to prevent nuclear terrorism are still missing. There are no agreed-on and binding standards for securing nuclear and other radioactive materials, and the international community as well as the general public depend on voluntary and opaque mechanisms for feedback on how well states are meeting their responsibility to secure these materials. Perhaps most importantly, there is no established process to provide sustained review of—and promote improvements in—the nuclear security regime as a whole.

In the aftermath of a nuclear terrorist incident, there can be no doubt that the current piecemeal approach to global nuclear security would be seen as woefully—and probably irresponsibly—deficient. There is no legitimate reason to wait for a catastrophe to occur before developing an integrated global regime to secure nuclear materials and prevent nuclear terrorism. With the NSS process almost certainly coming to an end in 2016, it is urgent to develop a mechanism that could provide the needed process for sustained review and improvements of the nuclear security regime beyond 2016 to address what is likely to be an escalating terrorist threat environment.

International Governance Now and in the Future

A large number of countries include nuclear power in their energy mix, and in almost all countries, radioactive substances are used in medical and industrial applications. This civil sector use of nuclear energy and radioactive isotopes is likely to grow, with increasing quantities of materials in use, storage, and transport. Strong, reliable, and effective governance is required to reach high standards in nuclear safety and security, and to ensure the use of nuclear technology for peaceful purposes.

An appropriate balance between national sovereignty and international responsibility, therefore, has to be found in order to establish more robust and sustainable nuclear security regimes, both nationally and internationally. A balance along those lines has already been developed within nuclear safety, in particular by the adoption of the Convention on Nuclear Safety. There is no logical reason for the nuclear security and nuclear safety regimes to differ in their basic structure, as they now do.

The awareness among the international community of the need for better protection of nuclear materials started to grow in the early and mid-1990s, a result of the collapse of the Soviet Union and many reports of illicit nuclear material trafficking. As early as 1999, IAEA member states initiated an effort to examine whether there was a need to strengthen the Convention on the Physical Protection of Nuclear Material (CPPNM). In parallel, within the auspices of the United Nations, negotiations started on an International Convention on the Suppression of Acts of Nuclear Terrorism (ICSANT), sometimes referred to as the “nuclear terrorism convention.”

Both efforts were completed in 2005, when the IAEA convened a conference at which an Amendment to the CPPNM was agreed to and the UN General Assembly approved ICSANT. The UN Security Council issued in 2004 Resolution 1540, addressing inter alia control of materials that may be used in or for the production of weapons of mass destruction. These conventions and resolutions are core elements in the current legal framework for nuclear security.

The two conventions cover all radioactive materials, complement each other in scope, and underline the need for international cooperation and assistance among State Parties. While ICSANT entered into force in 2007, the Amendment to CPPNM has not yet obtained the sufficient number of ratifications to enter into force.

Neither the Amendment to CPPNM nor ICSANT have a process established to periodically review and monitor effectiveness. A majority of State Parties may initiate, on an ad hoc basis, a process to consider a specific proposal. Although both the Amendment and ICSANT carry references to international recommendations and guidance, they do not establish standards for implementation.

The nuclear security guidance published by the IAEA, for nuclear material as well as other radioactive materials, is comprehensive and vital, but it is implemented on a voluntary basis. The top tier document, “Nuclear Security Fundamentals—Objective and Essential Elements of a State’s Nuclear Security Regime,” was approved by the IAEA Board of Governors and endorsed by the General Conference in 2012.

Gaps in the International Nuclear Security Regime

Despite this progress, the international legal framework has gaps and is not solid enough to provide an effective and sustainable global regime for nuclear security. A more ambitious step forward is needed to close existing gaps and to achieve a level of security commensurate with the risks and consequences of nuclear terrorism and to achieve a level of public confidence in the global security system. As with nuclear safety, there is a need for a binding international convention that will underscore the universal responsibility of states toward one another and the global economic and political system to maintain effective security for nuclear and other radioactive materials. This responsibility is in line with the recognized principle in international law that activities on one state's territory shall be undertaken in a way that does not affect other states negatively. A defective nuclear security situation in one state obviously is a potentially profound transboundary threat.

The international regime should build on existing relevant instruments and supply the elements that are lacking. These elements should include agreed-on and binding nuclear security standards, transparency (while protecting truly sensitive information), cooperation, reviews, and a competent body and process to both assess how standards and other commitments are implemented and provide continuous oversight and improvement of the regime.

The Choice of the International Convention Model

There are various ways to achieve the goal of stronger governance, including incrementally improving the current regime. This could eventually bring further progress, but its success is not a certainty. The most reliable, efficient, and direct way forward is to develop and negotiate an International Convention on Nuclear Security that can address the weaknesses of the current regime and create a mechanism through which State Parties can assess the effectiveness of nuclear security governance and develop ways to improve it.

Many international conventions of this kind contain some basic principles and have mechanisms for development of further commitments, which are normally contained in protocols subsequently attached to the convention. However, there is a significant difference between nuclear security and many other areas that have been the subject of conventions of this kind; to wit, a number of treaties and other instruments already exist that deal with some aspects of nuclear security and nuclear terrorism.

This draft ICNS does not attempt to include already existing treaties or other documents. Instead, it establishes essential basic principles and standards and creates mechanisms to eventually develop and adopt additional rules to be included in protocols attached to

the convention. The aim is to address gaps and supplement the existing rules, not to replace them.

Main Features of the International Convention on Nuclear Security

There are two significant elements of substance in the convention. The first is the Annex, which establishes a set of common standards for nuclear security regimes against which the performance of states can be measured. They have been taken from the IAEA Nuclear Security Fundamentals, which list the “Objective and Essential Elements of a State’s Nuclear Security Regime.” These standards are not legally binding in their present form, but they are the result of extensive discussions among IAEA member states and were endorsed by the IAEA Board of Governors and the General Conference in 2012. They, therefore, have significant international political legitimacy. These norms would be converted to legally binding rules by being attached as an Annex to the ICNS, in order to fill the need for common standards.

The second critically important feature of the convention is the establishment of the Conference of the Parties (Art. 9), which will be responsible for the continuous assessment, improvement, and development of the nuclear security regime. This includes both oversight of the implementation of existing obligations and a more dynamic role when it comes to identifying gaps in the regime and how to address them, e.g., by adopting protocols to the convention. The COP could, in effect, succeed the NSS process by providing a forum for examining the nuclear security regime as a whole. Differently from the NSS process, however, the convention and its mechanisms would be open to all states, and as with other conventions of this kind, the number of parties would most likely grow as states see value in the ICNS and decide to join it.

The convention should be seen as a living document that contains some basic principles and obligations, but it leaves the subsequent creation of a more effective international regime to the COP. It may take time before broad acceptance of the idea of an ICNS is achieved, and before the convention’s text is negotiated, adopted, and implemented. But even if the initial support for and action on a convention comes from a limited number of states, as has been the case for other widely adopted international conventions, the long-term goal should be the creation of a universal governance regime.

While the ICNS is being negotiated, it is essential to continue to effectively implement and, where possible, strengthen the current nuclear security instruments, e.g., by bringing the CPPNM Amendment into effect as soon as possible. This will not counteract the efforts to create an International Convention on Nuclear Security, but on the contrary would contribute to achieving the end goal of an effective global nuclear security architecture and regime.

International Convention on Nuclear Security

Preamble

The Parties to this Convention:

Affirming that all States have the right to develop and use nuclear energy for peaceful purposes;

Acknowledging that the need for energy continues to expand and that nuclear energy will continue to be an important part of the global energy mix;

Recognizing that the need for an effective international nuclear security regime is growing as nuclear energy is increasingly used to meet urgent needs, especially related to energy, development, and human health;

Recalling that the Declaration on Measures to Eliminate International Terrorism annexed to General Assembly resolution 49/60 of 9 December 1994 encouraged States to review urgently the scope of the existing international legal provisions on the prevention, repression, and elimination of terrorism in all its forms and manifestations, with the aim of ensuring that there is a comprehensive legal framework covering all aspects of the matter;

Deeply concerned that terrorist groups may exploit gaps in the current international nuclear security regime, and that acts of nuclear terrorism or other nuclear security events may result in the gravest consequences, including transboundary impacts, which may threaten international peace and security;

Recognizing that acts of nuclear terrorism may also seriously disrupt the international economy in ways that would create significant humanitarian problems and disadvantage in particular the most vulnerable members of the international community;

Noting the continued reports of illicit trafficking of nuclear and other radioactive materials, as well as other nuclear security events;

Recognizing the importance of the universal implementation of the Convention on the Physical Protection of Nuclear Material and its amendment, the International Convention for the Suppression of Acts of Nuclear Terrorism, the International Convention for the Suppression of Terrorist Bombings, and United Nations Security Council Resolution 1540;

Recalling that other international agreements are also relevant to an integrated approach, including the Convention on Early Notification of a Nuclear Accident, the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency,

the Convention on Nuclear Safety, and the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management;

Noting the central contribution of States' systems of accounting for and control of nuclear materials to preventing illicit trafficking of nuclear materials;

Appreciating the efforts of the United Nations to prevent nuclear terrorism;

Recognizing the leading role of the International Atomic Energy Agency (IAEA) in promoting the security of nuclear and other radioactive materials;

Further appreciating the efforts of other international organizations in promoting nuclear security;

Noting that a variety of initiatives to prevent nuclear terrorism by promoting the security of nuclear and other radioactive materials have been undertaken, including the Nuclear Security Summits, the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, and the Global Initiative to Combat Nuclear Terrorism;

Noting further the role of industry and other nuclear operators to ensure the effective security of their nuclear and other radioactive materials;

Recognizing that effective physical protection of nuclear and other radioactive materials used for non-civil purposes is the responsibility of the State possessing such materials and nuclear facilities, and expecting that such materials and facilities are and will continue to be accorded the most stringent physical protection;

Being convinced that States should be generally transparent to each other, their citizens, and the international community in how they implement security for nuclear and other radioactive materials;

Mindful of the importance that technical and financial assistance be made available to those States that may request it for the improvement of their nuclear security;

Recognizing that current international legal instruments, IAEA guidance, and initiatives by individual States or groups of States do not constitute a comprehensive and effective nuclear security regime; and

Being convinced that continued and expanded use of nuclear and other radioactive materials for peaceful purposes and prevention of nuclear terrorism requires a legal framework that supplements existing obligations and establishes a mechanism for the continuous improvement of the nuclear security regime;

Have agreed as follows:

Objective, Definitions, and Scope

Article - 1 - Objective

The objective of this Convention and any subsequent protocols thereto is to ensure effective security of nuclear and other radioactive materials by codifying a set of essential elements for national nuclear security regimes and establishing a mechanism for continuous review and improvement of the international nuclear security regime.

Article - 2 - Definitions

For the purposes of this Convention:

1. “Nuclear security” means the prevention and detection of, and response to, theft, sabotage, unauthorized access, illegal transfer or other malicious acts involving nuclear and other radioactive materials or their associated facilities and equipment.
2. All other terms relevant to this Convention are defined under “Definitions” in the Annex.

Article - 3 - Scope

This Convention shall apply to all nuclear and other radioactive materials used for civil purposes and the facilities in which they are contained and, to the extent possible, to such materials and facilities used for non-civil purposes.

Principles

Article - 4 - Principles

To achieve the objective of this Convention the following principles shall apply:

1. The responsibility for the implementation and maintenance of the nuclear security regime contained in this Convention rests entirely with States.
2. States have a fundamental responsibility to their citizens, other states, and the international community to ensure the security of nuclear and other radioactive materials within their jurisdiction and control.
3. An effective nuclear security regime shall be based on binding standards, a mechanism for review and continuous improvement, and means for cooperation and providing assistance.

Obligations

Article – 5 – National Nuclear Security Regime

Each Party shall establish a national nuclear security regime based on the Annex, which is an integral part of this Convention.

Article – 6 – Assessment and Reporting

1. The Parties shall regularly assess the effectiveness of their national security regimes.
2. The Parties shall regularly report on the implementation of their national nuclear security regimes, including on compliance with this Convention.
3. The Conference of the Parties as established in Article 9 shall adopt by consensus at its first meeting, procedures and mechanisms for the review of the reports referred to in paragraph 2 of this Article.

Article – 7 – Confidentiality

1. The provisions of this Convention shall not affect the rights and obligations of the Parties to protect sensitive information from disclosure.
2. The procedures and mechanisms of this Convention shall protect the confidentiality of sensitive information.

Article – 8 – Cooperation

The Parties shall cooperate, directly or through international organizations, in building capacity at the national, regional or international levels for the human resource development and technical support that are needed for the effective implementation of this Convention. The Conference of the Parties shall develop mechanisms for the provision of financial and other assistance to those Parties that may request it.

Conference of the Parties

Article – 9 – Conference of the Parties

1. The Conference of the Parties is hereby established to keep under continuous review the implementation of this Convention and shall:
 - (a) Review, discuss, and assess the effectiveness of the international nuclear security regime;

- (b) Exchange information on and discuss obstacles to and best practices for the effective implementation of elements of the nuclear security regime at national and international levels; and
 - (c) Consider and undertake any action necessary to address obstacles that have been identified and that may be required for the achievement of the objectives of this Convention.
2. A preparatory meeting of the Conference of the Parties shall be held not later than six months after the date of entry into force of this Convention. At the preparatory meeting the Parties shall decide the date of the first meeting of the Conference of the Parties.
 3. The first meeting of the Conference of the Parties shall be held as soon as possible but not later than 18 months after the date of entry into force of this Convention.
 4. At each meeting of the Conference of the Parties, the Parties shall determine the date of the next meeting. The interval between meetings shall not exceed three years.
 5. During the inter-sessional period between Conference of the Parties meetings a majority of the Parties may request an extraordinary meeting.
 6. Subsidiary bodies may be established by the Conference of the Parties.

Article - 10 - Procedural Arrangements

1. At its first meeting, the Conference of the Parties shall adopt Rules of Procedure and Financial Rules by consensus.
2. The Rules of Procedure and Financial Rules may be amended. Every effort should be made to adopt such amendments by consensus. Should this not be possible, the amendments shall be adopted by a two-thirds majority of all Parties to this Convention.

Article - 11 - Protocols

1. Any Party may propose a protocol to this Convention. The text of any proposed protocol shall be submitted to the Secretariat as established in Article 12. The Secretariat shall communicate to the Parties the text of any proposed protocol at least six months before a meeting of the Conference of the Parties at which the proposed protocol will be discussed.
2. The Parties shall consider the text. After adoption of the protocol by a simple majority of the Parties, the Secretariat will distribute it to all the Parties.

3. The requirements for the entry into force of any protocol shall be established by that instrument.
4. Only Parties to this Convention may be Parties to a protocol. Decisions under any protocol shall be taken only by the Parties to the protocol concerned. Any protocol to this Convention shall be binding only on the Parties to the protocol in question.

Article - 12 - Secretariat

1. The International Atomic Energy Agency will provide the Secretariat for the first meeting of the Conference of the Parties. The secretariat function for subsequent meetings will be decided by the Conference of the Parties.
2. The Secretariat shall:
 - (a) Prepare and service the meetings of the Conference of the Parties;
 - (b) Transmit to the Parties information received or prepared in accordance with the provisions of this Convention;
3. The costs associated with carrying out the functions referred to in the sub-paragraphs (a) and (b) above shall be borne by the Parties.
4. The Conference of the Parties may request that the Secretariat provide other services in support of the meetings of the Conference of the Parties, subject to the availability of resources.

Final Clauses

Article - 13 - Relationship to Other International Agreements

Nothing in this Convention shall affect the rights and obligations of the Parties contained in other international agreements.

Article - 14 - Resolution of Disagreements

In the event of a disagreement between two or more Parties concerning the interpretation or application of this Convention or its Protocols, the Parties shall consult within the framework of a meeting of the Conference of Parties with a view to resolving the disagreement. The Conference of the Parties may develop other mechanisms and procedures to resolve disagreements.

Article - 15 - Signature, Ratification, Acceptance, Approval, and Accession

1. This Convention shall be open for signature by all States at the Headquarters of the International Atomic Energy Agency in Vienna and at the Headquarters of the United Nations in New York from _____(date) until its entry into force.
2. This Convention is subject to ratification, acceptance or approval by the signatory Parties.
3. After its entry into force, this Convention will be open for accession by all States.
4. Instruments of ratification, acceptance, approval or accession shall be deposited with the Depositary.

Article - 16 - Entry into Force

1. This Convention shall enter into force on the thirtieth day following the date of deposit of the twenty-second instrument of ratification, acceptance or approval with the depositary.
2. For each Party ratifying, accepting, approving or acceding to the Convention after the date of deposit of the twenty-second instrument of ratification, acceptance or approval, the Convention shall enter into force on the thirtieth day after the deposit by such State of its instrument of ratification, acceptance, approval or accession.

Article - 17 - Amendments

1. A Party may propose amendments to this Convention for consideration by the Conference of the Parties. The proposed amendment shall be submitted to the Secretariat, which shall circulate it immediately to all Parties.
2. If a majority of the Parties so requests, the Conference of Parties shall consider the proposed amendment at its next meeting. The Parties shall make every effort to ensure that amendments to this Convention are adopted by consensus. If all efforts at consensus have been exhausted, and no agreement reached, the amendment shall as a last resort be adopted by a two-thirds majority vote of the Parties present and voting at the meeting. The amendment shall be submitted by the Depositary to all Parties for ratification, approval or acceptance.
3. The amendment shall enter into force for each Party that deposits the instrument of ratification, acceptance, or approval of the amendment on the thirtieth day after the date on which two thirds of the Parties have deposited their instruments of ratification, acceptance or approval with the depositary. Thereafter, the amendment

shall enter into force for any other Party on the day on which that Party deposits its instrument of ratification, acceptance or approval of the amendment.

4. Parties that adhere to the Convention after the entry into force of the amendment shall be bound by the amended Convention.

Article - 18 - Withdrawal

1. Any Party may withdraw from this Convention through written notification to the Depository, which shall circulate it to all Parties.
2. Withdrawal shall take effect after expiry of one year following the date of the circulation by the Depository of the written notification of withdrawal.

Article - 19 - Depository

The Director-General of the International Atomic Energy Agency shall be the Depository of this Convention and its protocols.

Article - 20- Authentic Texts

The original of this Convention, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Depository who shall send certified copies, thereof, to the Parties.

Annex

National Nuclear Security Regime Elements¹

Essential Elements of a National Nuclear Security Regime

1. State Responsibility

Responsibility rests with the State for meeting the requirements under Article 5 of this Convention by establishing, implementing, maintaining and sustaining a nuclear security regime applicable to nuclear material, other radioactive material, associated facilities, and associated activities under a State's jurisdiction.

2. Identification and Definition of Nuclear Security Responsibilities

Nuclear security responsibilities of competent authorities designated by the State, as described in Essential Element 3, including regulatory bodies and those competent authorities related to border control and law enforcement, and responsibilities for all authorized persons are clearly identified and defined. Provisions are identified and defined for appropriate integration and coordination of responsibilities within the nuclear security regime, as well as for the State's oversight to ensure the continued appropriateness of the nuclear security responsibilities.

3. Legislative and Regulatory Framework

The legislative and regulatory framework, and associated administrative measures, to govern the *nuclear security regime*:

- i. Establish *competent authorities*, including *regulatory bodies*, with adequate legal authority to fulfill their assigned nuclear security responsibilities;
- ii. Assign the nuclear security responsibilities identified in Essential Element 2 of each *competent authority*, including those of the *regulatory bodies* having nuclear security responsibilities, and provide these authorities with adequate and sufficient financial, human and technical resources to fulfill these responsibilities;
- iii. Establish measures to ensure proper coordination and communication among *competent authorities*, and between *competent authorities* and *authorized persons*, in fulfilling their nuclear security responsibilities;

¹ Reproducing the IAEA Nuclear Security Series No. 20 *Nuclear Security Fundamentals: Objective and Essential Elements of a State's Nuclear Security Regime* (Vienna: February, 2013).

- iv. Ensure that *regulatory bodies* have appropriate independence in their nuclear security decision making. Independence includes both functional and financial independence from the entities they regulate and from any other bodies that deal with the promotion or utilization of *nuclear material* or *other radioactive material*;
- v. Provide for the establishment of nuclear security regulations and requirements, and associated procedures for evaluating applications and granting *authorizations* or licenses;
- vi. Provide for the establishment of systems and measures to ensure that *nuclear material* and *other radioactive material* are appropriately accounted for or registered and are effectively controlled and protected;
- vii. Provide for the establishment of regulations and requirements for protecting the confidentiality of *sensitive information* and for protecting *sensitive information assets*;
- viii. Ensure that prime responsibility for the security of *nuclear material*, *other radioactive material*, *associated facilities*, *associated activities*, *sensitive information*, and *sensitive information assets* rests with the *authorized persons*;
- ix. Ensure that there are procedures for the State, or a designated entity, to assume the primary responsibility for security in the absence of *authorized persons*;
- x. Establish law enforcement systems and measures relevant to nuclear security. These systems and measures should include those for the export, import, and for border control of *nuclear material* and *other radioactive material*. This includes security procedures for transport that are consistent with the responsibilities as set forth in Essential Element 4 when international transportation is involved;
- xi. Take appropriate and effective steps to prevent, deter, detect, respond to, and otherwise combat illicit trafficking in *nuclear material* and *other radioactive material*; and
- xii. Establish verification and enforcement measures to ensure compliance with applicable laws, regulations and requirements, including the imposition of appropriate and effective sanctions.

4. International Transport of *Nuclear Material* and *Other Radioactive Material*

The responsibility of a State for ensuring that *nuclear material* and *other radioactive material* are adequately protected extends to the international transport thereof, until that responsibility is properly transferred to another State, as appropriate.

5. Offenses and Penalties Including Criminalization

A *nuclear security regime* includes measures for:

- i. Defining as offenses or violations under domestic laws or regulations those criminal or intentional unauthorized acts involving or directed at *nuclear material, other radioactive material, associated facilities or associated activities*;
- ii. Appropriately dealing with other acts determined by the State to have an adverse impact on nuclear security;
- iii. Establishing appropriate penalties that are proportionate to the gravity of the harm that could be caused by commission of the offenses or violations;
- iv. Establishing the jurisdiction of the State over such offenses or violations; and
- v. Providing for the prosecution or, as appropriate, extradition of alleged offenders.

6. International Cooperation and Assistance

A *nuclear security regime* provides for cooperation and assistance between and among States, either directly or through the IAEA or other international organizations, by:

- i. Making known designated points of contact for notification, assistance and cooperation;
- ii. Providing timely information as appropriate to States affected or likely to be affected or concerned about criminal or intentional unauthorized acts involving or directed at *nuclear material, other radioactive material, associated facilities or associated activities*, or credible threats thereof;
- iii. Providing timely response to requests for assistance on nuclear security-related matters, including requests for the recovery and protection of *nuclear material and other radioactive material*; requests for technical support, including nuclear forensic assistance; and requests for mutual legal assistance;
- iv. Cooperating and exchanging experiences and information, including on the establishment, implementation, maintenance and sustainability of *nuclear security systems*; and
- v. Ensuring through appropriate arrangements that *sensitive information* or other information exchanged in confidence is adequately and appropriately protected.

7. Identification and Assessment of *Nuclear Security Threats*

A *nuclear security regime* ensures that:

- i. *Nuclear security threats*, both internal and external to the State, are identified and assessed, including their credibility, regardless of whether the *targets* of internal *nuclear security threats* are within or outside the jurisdiction of the State;
- ii. The State's assessments of *nuclear security threats* are kept up-to-date; and
- iii. The State's assessments are used in implementing the State's *nuclear security regime*.

8. Identification and Assessment of *Targets* and Potential Consequences

A *nuclear security regime* ensures that:

- i. *Targets* under the State's jurisdiction are identified and assessed to determine if they require protection from *nuclear security threats*;
- ii. The assessment is based on the potential consequences should the *targets* be compromised; and
- iii. An up-to-date assessment of such *targets* is maintained.

9. Use of Risk-Informed Approaches

A *nuclear security regime* uses risk-informed approaches, including in the allocation of resources for *nuclear security systems* and *measures* and in the conduct of nuclear security related activities, that are based on a *graded approach* and *defence-in-depth*, which take into account the following:

- i. State's current assessment of the *nuclear security threats*, both internal and external;
- ii. Relative attractiveness and vulnerability of identified targets to *nuclear security threats*;
- iii. Characteristics of the *nuclear material*, *other radioactive material*, *associated facilities* and *associated activities*; and
- iv. Potential harmful consequences from criminal or intentional unauthorized acts involving or directed at *nuclear material*, *other radioactive material*, *associated facilities*, *associated activities*, *sensitive information* or *sensitive information assets*, and other acts determined by the State to have an adverse impact on nuclear security.

10. Detection of *Nuclear Security Events*

A *nuclear security regime* ensures that *nuclear security systems and measures* are in place at all appropriate organizational levels to detect and assess *nuclear security events* and to notify the relevant *competent authorities* so that appropriate response actions can be initiated, including:

- i. At *associated facilities*;
- ii. During conduct of *associated activities*;
- iii. At *major public events or strategic locations*, including locations of critical infrastructure, as designated by the State;
- iv. In searches for, recoveries of, or discoveries of *nuclear material or other radioactive material* that is missing or lost or otherwise out of *regulatory control*; and
- v. Within the State's territory or on board its ships or aircraft, and at its international borders.

11. Planning for, Preparedness for, and Response to a *Nuclear Security Event*

A *nuclear security regime* ensures that relevant *competent authorities* and *authorized persons* are prepared to respond, and respond appropriately, at local, national, and international levels to nuclear security events by:

- i. Developing arrangements and response plans for ensuring:
 - a. Rapid and effective mobilization of resources in response to a *nuclear security event*;
 - b. Effective coordination and cooperation during response to a *nuclear security event* among all those carrying out response functions (including intelligence, law enforcement, crime scene investigation, and nuclear forensics) and between the security and safety aspects of the response;
 - c. Effective use of relevant international emergency assistance and response systems; and
 - d. Investigation of any *nuclear security event* and, as appropriate, prosecution or extradition of alleged offenders.

- ii. Periodically exercising, testing, and evaluating the plans for effectiveness by relevant *competent authorities* and *authorized persons* with the aim of ensuring timely implementation of comprehensive measures to:
 - a. Mitigate and minimize harmful consequences to persons, property, society, and the environment from *nuclear security events*;
 - b. Locate, recover, and secure *nuclear material* and *other radioactive material* that is out of *regulatory control*;
 - c. Feed back into the preparedness process, including into the response plans, the results of exercises and tests of the plans, and of experience.

12. Sustaining a *Nuclear Security Regime*

A *nuclear security regime* ensures that each *competent authority* and *authorized person* and other organizations with nuclear security responsibilities contribute to the sustainability of the regime by:

- i. Developing, implementing, and maintaining appropriate and effective integrated management systems including quality management systems;
- ii. Demonstrating leadership in nuclear security matters at the highest levels;
- iii. Developing, fostering and maintaining a robust *nuclear security culture*;
- iv. Allocating sufficient human, financial and technical resources to carry out the organization's nuclear security responsibilities on a continuing basis using a risk informed approach;
- v. Routinely conducting maintenance, training, and evaluation to ensure the effectiveness of the *nuclear security systems*;
- vi. Having in place processes for using best practices and lessons learned from experience;
- vii. Establishing and applying measures to minimize the possibility of *insiders* becoming *nuclear security threats*;
- viii. Routinely performing assurance activities to identify and address issues and factors that may affect the capacity to provide adequate nuclear security, including cyber security, at all times.

Definitions

This section contains the definitions of italicized terms used in this Annex. The definitions given below may not necessarily conform to definitions adopted elsewhere for international use. Examples have been added to some definitions in order to assist the reader in understanding the definition. When examples are given they are not intended to be exhaustive, or to limit the definition in any manner.

Associated activity - The possession, production, processing, use, handling, storage, disposal or transport of *nuclear material* or *other radioactive material*.

Associated facility - A facility (including associated buildings and equipment) in which *nuclear material* or *other radioactive material* is produced, processed, used, handled, stored or disposed of and for which an *authorization* is required.

Authorization - The granting by a *competent authority* of written permission for operation of an *associated facility* or for carrying out an *associated activity*, or a document granting such permission.

Authorized person - A natural or legal person that has been granted an *authorization*. An *authorized person* is often referred to as a 'licensee', or 'operator'.

Competent authority - A governmental organization or institution that has been designated by a State to carry out one or more nuclear security functions.

— *Example: Competent authorities* may include *regulatory bodies*, law enforcement, customs and border control, intelligence and security agencies, health agencies, etc.

Defence in depth - The combination of successive layers of *nuclear security systems* and *nuclear security measures* for the protection of targets from *nuclear security threats*.

Graded approach - The application of *nuclear security measures* proportionate to the potential consequences of criminal or intentional unauthorized acts involving or directed at *nuclear material*, *other radioactive material*, *associated facilities* or *associated activities* or other acts determined by the State to have an adverse impact on nuclear security.

Insider - An individual with authorized access to *associated facilities* or *associated activities* or to *sensitive information* or *sensitive information assets*, who could commit, or facilitate the commission of criminal or intentional unauthorized acts involving or directed at *nuclear material*, *other radioactive material*, *associated facilities* or *associated activities* or other acts determined by the State to have an adverse impact on nuclear security.

Major public event - A high profile event that a State has determined to be a potential *target*.

Nuclear facility - A facility (including associated buildings and equipment) in which *nuclear material* is produced, processed, used, handled, stored or disposed of and for which an *authorization* or license is required.

Nuclear material - Any material that is either *special fissionable material* or *source material* as defined in Article XX of the IAEA Statute.

- ***Special fissionable material***: Plutonium-239; uranium-233; *uranium enriched in the isotopes 235 or 233*; any material containing one or more of the foregoing; and such other fissionable material as the Board of Governors shall from time to time determine; but not including *source material*.
- ***Uranium enriched in the isotopes 235 or 233***: Uranium containing the isotopes 235 or 233 or both in an amount such that the abundance ratio of the sum of these isotopes to the isotope 238 is greater than the ratio of the isotope 235 to the isotope 238 occurring in nature.
- ***Source material***: Uranium containing the mixture of isotopes occurring in nature; uranium depleted in the isotope 235; thorium; any of the foregoing in the form of metal, alloy, chemical compound, or concentrate; any other material containing one or more of the foregoing in such concentration as the Board of Governors shall from time to time determine; and such other material as the Board of Governors shall from time to time determine. (Note: *source material* does not include ore or ore residue.)

Nuclear security culture - The assembly of characteristics, attitudes and behaviours of individuals, organizations and institutions which serve as a means to support, enhance, and sustain nuclear security.

Nuclear security event - An event that has potential or actual implications for nuclear security that must be addressed.

Nuclear security measures - Measures intended to prevent a *nuclear security threat* from completing criminal or intentional unauthorized acts involving or directed at *nuclear material, other radioactive material, associated facilities, or associated activities* or to detect or respond to *nuclear security events*.

Nuclear security regime - A regime comprising:

- The legislative and regulatory framework and administrative systems and measures governing the nuclear security of *nuclear material, other radioactive material, associated facilities* and *associated activities*;

- The institutions and organizations within the State responsible for ensuring the implementation of the legislative and regulatory framework and administrative systems of nuclear security;
- *Nuclear security systems and nuclear security measures* for the prevention of, detection of and response to *nuclear security events*.

Nuclear security system - An integrated set of *nuclear security measures*.

Nuclear security threat - A person or group of persons with motivation, intention and capability to commit criminal or intentional unauthorized acts involving or directed at *nuclear material, other radioactive material, associated facilities or associated activities* or other acts determined by the State to have an adverse impact on nuclear security.

Operator - Any person, organization, or government entity licensed or authorized to undertake the operation of an *associated facility* or to perform an *associated activity*.

Other radioactive material - Any *radioactive material* that is not *nuclear material*.

Radioactive material - Any material designated in national law, regulation, or by a *regulatory body* as being subject to *regulatory control* because of its *radioactivity*. In the absence of such a designation by a State, *radioactive material* is any material for which protection is required by the current version of the International Basic Safety Standards.²

Regulatory body - One or more authorities designated by the government of a State as having legal authority for conducting the regulatory process, including issuing *authorizations*.

Regulatory control - Any form of institutional control applied to *nuclear material or other radioactive material, associated facilities, or associated activities* by any *competent authority* as required by the legislative and regulatory provisions related to safety, security, or safeguards.

- *Explanation*: The phrase ‘out of *regulatory control*’ is used to describe a situation where *nuclear material* or other *radioactive material* is present in sufficient quantity that it should be under *regulatory control*, but control is absent, either because controls have failed for some reason, or they never existed.

Sensitive information - Information, in whatever form, including software, the unauthorized disclosure, modification, alteration, destruction, or denial of use of which could compromise nuclear security.

Sensitive information assets - Any equipment or components that are used to store, process, control or transmit *sensitive information*.

— *Example: Sensitive information* assets include control systems, networks, information systems and any other electronic or physical media.

Strategic location - A location of high security interest in the State which is a potential target for terrorist attacks using *nuclear material* or *other radioactive material*, or a location at which *nuclear material* or *other radioactive material* that is out of *regulatory control* is located.

Target - *Nuclear material, other radioactive material, associated facilities, associated activities*, or other locations or objects of potential exploitation by a *nuclear security threat*, including *major public events, strategic locations, sensitive information*, and *sensitive information assets*.

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The views expressed in this document do not necessarily reflect those of individual NSGEG members or their institutions.

Nuclear Security Governance Experts Group (NSGEG)

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