

## **JOINT STATEMENT ON “STRENGTHENING NUCLEAR SECURITY IMPLEMENTATION” (INFCIRC/869) GUIDE FOR IMPLEMENTATION AND BUILDING CONFIDENCE**

The Joint Statement on “Strengthening Nuclear Security Implementation” (Joint Statement) was circulated as [INFCIRC/869](#) in October 2014 and open to all member states of the International Atomic Energy Agency (IAEA) to sign. The purpose of the Joint Statement is to encourage all countries to publicly commit to implement the essential elements of nuclear security and highlight the work of the IAEA in establishing internationally agreed nuclear security recommendations.

The Joint Statement contains four commitments and 14 optional proposed actions to establish and strengthen national nuclear security regimes and ensure continuous improvement on nuclear security. The four commitments in the Joint Statement together form a framework for each country’s nuclear security that is (a) grounded in a robust national nuclear security regime and a legal and regulatory framework for securing nuclear and radiological materials, (b) implemented by competent security professionals, and (c) strengthened through a cycle of continuous improvement based on self-assessments and external peer review. The four commitments should not be viewed as separate stand-alone commitments, though each is vital to effective security. Rather, they are interconnected and should be viewed as a whole, supported by the 14 optional proposed actions listed in the Joint Statement as well as other key actions.<sup>1</sup>

This paper provides guidance for implementing the Joint Statement, as well as ways to demonstrate implementation in a way that builds the confidence of others that countries are acting upon their commitments. The paper first summarizes each commitment, describing how those commitments fit together into a national framework and identifying the actions necessary to implement them. Second, the paper suggests a step-by-step analysis of how a country might undertake implementation of these commitments. Third, the paper suggests metrics to measure implementation and ways to build confidence that commitments are being implemented.

### **SUMMARY OF COMMITMENTS**

#### **Commitment 1: Subscribe to Nuclear Security Fundamentals**

The first commitment is for countries to subscribe to the IAEA Nuclear Security Fundamentals contained in [IAEA Nuclear Security Series No. 20](#) (NSS 20). By subscribing to NSS 20, countries commit to “implement, maintain and sustain an effective and appropriate nuclear security regime to prevent, detect and respond to nuclear

---

<sup>1</sup> The commitments are linked to the [IAEA Nuclear Security Series](#), a collection of documents that aid states in establishing a comprehensive, appropriate, and effective nuclear security regime, and IAEA services, including peer reviews such as the International Physical Protection Advisory Service (IPPAS). The series is made up of the Nuclear Security Fundamentals (NSS 20); three Recommendations (NSS 13, 14, and 15); a series of Implementation Guides; and a series of Technical Guides. IAEA services, including IPPAS missions, are directly related to the IAEA Nuclear Security Series in that they use these documents as a reference in their reviews. The Nuclear Security Fundamentals and the three Recommendations are the subject of the Joint Statement, with the commitments and actions described in the Joint Statement providing a framework for implementing an effective nuclear security regime as outlined in the Fundamentals.

security events.” NSS 20 sets out the elements of a nuclear security regime as follows:

1. State responsibility
2. Identification and definition of nuclear security responsibilities
3. Legislative and regulatory framework
4. International transport of materials
5. Offences and penalties
6. International cooperation and assistance
7. Identification and assessment of nuclear security threats
8. Identification and assessment of targets and potential consequences
9. Use of risk informed approaches
10. Detection of nuclear security events
11. Planning for preparedness for, and response to, a nuclear security event
12. Sustaining a nuclear security regime

A description of these elements is contained in NSS 20. The elements incorporate the full spectrum of actions a country must take as a first step in establishing a national framework for security. The other IAEA documents referenced in Commitment 2 below provide further guidance on implementing the national nuclear security regime.

Note that the [2005 Amendment](#) to the Convention on the Physical Protection of Nuclear Material (CPPNM) includes Fundamental Principles that are similar to the “essential elements” contained in NSS 20 and that IAEA Nuclear Security Series No. 13 (INFIRC/225/Rev. 5) provides details on how to implement the Fundamental Principles. Because the 2005 Amendment will enter into force on May 8, 2016, the Fundamental Principles will be mandatory for states party to the amended CPPNM.

*Implementation Actions:*

Elements 1-5 and 7-12 of the nuclear security regime listed above will be implemented through the establishment of a legal and regulatory framework for securing nuclear and radiological materials and a program of training, assessments, and security culture, consistent with and informed by implementation of Commitments 2-4 below. In addition to the areas of focus identified in Commitments 2-4 below, areas of focus should include:

- assigning security responsibilities to competent authorities, operators, and other stakeholders;
- establishing requirements for licensing, oversight, and compliance; and
- defining offenses and penalties for acts involving nuclear and radioactive material, associated facilities or associated activities, including establishing jurisdiction over such offences and providing for prosecution or extradition of offenders.

Element 6 of the nuclear security regime listed above (International Cooperation and Assistance) will be implemented by participating in global efforts to strengthen security. These can include, but are not limited to, the following of the 14 optional proposed actions listed in the Joint Statement:

- contributing to development of IAEA guidance;

- providing technical support and assistance to other states;
- sharing good practices with other states through e.g., seminars, workshops, and table top/field exercises;
- promoting information exchange while respecting confidentiality;
- providing nuclear security experts for the conduct of IAEA IPPAS and INSServ missions;
- making financial or in-kind contributions to the IAEA Nuclear Security Fund;
- promoting research and development on nuclear security technologies and disseminating results consistent with their nonproliferation commitments and intellectual property rules;
- supporting or participating in the development of the WINS best practice guides and training activities; and
- improving cooperation with nearby states to improve international and regional nuclear security.

### **Commitment 2: Meet the Intent of IAEA Recommendations and the Code of Conduct**

The second commitment is for countries to “meet the intent of the recommendations” contained in the following four IAEA-based documents and “to realize or exceed these objectives including through the implementation and enhancement of national regulations and other government measures:”

- [IAEA Nuclear Security Series No. 13](#) (INFCIRC/225/Rev. 5) on physical protection of nuclear materials
- [IAEA Nuclear Security Series No. 14](#) (NSS 14) on security of radioactive materials
- [Code of Conduct on the Safety and Security of Radioactive Sources](#)
- [IAEA Nuclear Security Series No. 15](#) (NSS 15) on security of nuclear and other radioactive materials out of regulatory control

These four IAEA documents provide detailed guidance and recommendations for establishing and implementing a country’s legal and regulatory regime and framework for securing nuclear and radiological materials. As such, these documents provide additional steps for implementing Commitment 2 to subscribe to the Nuclear Security Fundamentals contained in NSS 20 (see above).

#### Implementation Actions:

Countries will fulfill this commitment by updating their laws and regulations for physical protection, control, and accounting of nuclear and radiological materials in use, storage, and transport against theft, and of nuclear facilities against sabotage, using the IAEA documents as a guide. Key areas of focus include, but are not limited to:

- processes for evaluation of the threat, including the development and updating of the design basis threat;
- application of principles such as graded approach and defense in depth;
- physical protection, control, and accounting measures to protect materials in use or storage against theft and sabotage;
- security of materials in transport against theft and sabotage;
- personnel reliability programs and trustworthiness measures; and

- detection, response, mitigation, and recovery capabilities (and coordination among the authorities and institutions with these capabilities).

Implementation can also include the following of 14 optional proposed actions listed in the Joint Statement:

- developing and enhancing cyber security measures concerning nuclear facilities;
- taking into account nuclear security at all stages in the life cycle of nuclear facilities; and
- maintaining effective emergency and contingency preparedness, response and mitigating capabilities, in a manner that addresses both nuclear security and safety.

### **Commitment 3: Continuous Improvement**

The third commitment is for countries to “continue to improve the effectiveness of their nuclear security regimes and operators’ systems by (a) conducting self-assessments; (b) hosting peer reviews (e.g., [IPPAS](#)) periodically; (c) acting upon the recommendations identified during these reviews.”

Through self-assessment and peer review, countries will identify opportunities to strengthen their overall nuclear security regime and legal and regulatory framework and the implementation of that framework based on the guidance contained in the relevant IAEA documents mentioned above (see Commitments 1 and 2). Recommendations arising from self-assessments and peer review should be implemented and follow-up reviews should assess how well those recommendations were implemented and identify further opportunities to strengthen security. Note that this cycle of assessment and implementation of recommendations should continue indefinitely given that nuclear security requires continuous improvement to respond to evolving threats and technologies.

#### Implementation Actions:

Countries can fulfill this commitment by:

- evaluating security measures, including through exercises and performance-testing on a regular basis;
- participating in national or international (bilateral, multilateral, or through the IAEA) peer reviews to assess the effectiveness of security arrangements;
- inviting follow-up peer reviews to assess progress in implementing recommendations from previous peer reviews.

### **Commitment 4: Demonstrable Competence**

The fourth commitment is for countries “to ensure that management and personnel with accountability for nuclear security are demonstrably competent.” Competence is intricately related to the first three commitments. First, effective implementation of a nuclear security regime and the legal and regulatory framework (Commitment 1 and 2) requires well-trained, competent professionals. Second, competence of security professionals must be strengthened on a continuous basis through self-assessments and peer review (see Commitment 3).

Implementation Actions:

Countries can fulfill this commitment by:

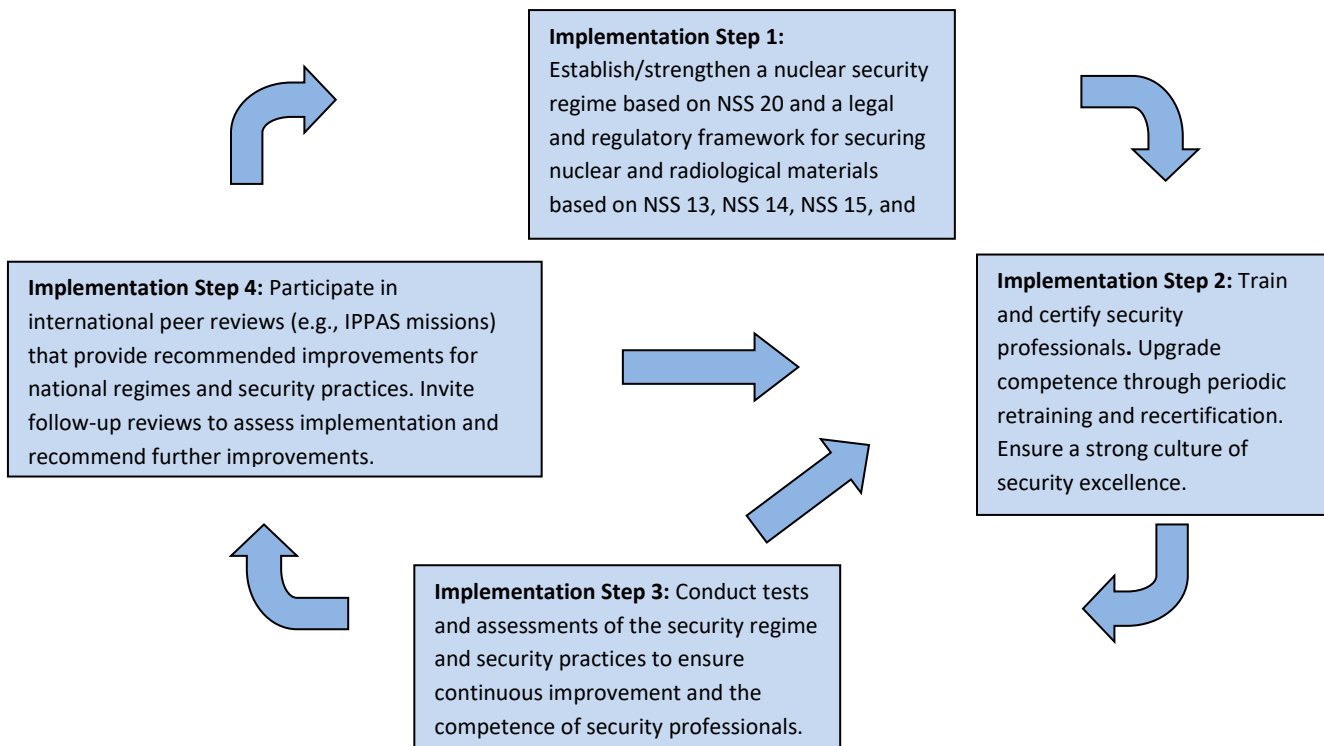
- establishing clear training, qualification, and competency requirements; and
- promoting and strengthening nuclear security culture.

Implementation can also include the following of the 14 optional proposed actions listed in the Joint Statement:

- domestic or regional training activities, e.g., through education, certification or qualification activities (such as that provided by the [World Institute for Nuclear Security \(WINS\)](#));
- sharing good practices with other states through, e.g., seminars, workshops, and table top/field exercises; and
- promoting nuclear security culture for management and personnel involved with nuclear security.

**IMPLEMENTING THE JOINT STATEMENT**

The chart below provides a visualization of how the four commitments and 14 optional proposed actions might be implemented. Note that whether a country begins at step 1 or a later step will depend on the maturity of the country’s existing nuclear program. Some countries new to nuclear energy may need to begin by establishing a nuclear security regime and a legal and regulatory framework, whereas other countries with well-developed programs may be able to start at steps 3 or 4 (self-assessment and peer review). However, regardless of the starting point, all countries with nuclear materials and facilities will progress through the steps on an ongoing basis to maintain a cycle of continuous improvement.



## **METRICS TO DEMONSTRATE IMPLEMENTATION AND BUILD CONFIDENCE**

This section identifies ways a country can demonstrate its implementation of the Joint Statement to build the confidence of others and provides a set of metrics by which to measure implementation. Because the commitments are interwoven, metrics and confidence-building measures will often apply to more than one commitment. For example, it is not possible to assess implementation of Commitment 1 without also looking at implementation of Commitments 2-4, which inform how a country can implement and continuously strengthen its nuclear security regime.

All of the actions below can be incorporated into national reporting through existing channels, such as the United Nations Security Council Resolution 1540 (UNSCR 1540) report or the Convention on the Physical Protection of Nuclear Materials (CPPNM) Article 14 report.<sup>2</sup>

To build confidence that countries are implementing the commitments contained in the Joint Statement, countries should undertake the following actions, as appropriate:

- **Nuclear Security Regime; Legal and Regulatory Framework:** Publish information about the legal and regulatory framework and other security practices, including, e.g.:
  - Publish a description of the competent authority and/or regulatory bodies with security responsibilities;
  - Publish laws, regulations, and licensing requirements (or summaries thereof) designed to prevent, detect, and respond to nuclear and radiological threats;
  - Publish annual reports of the competent authority and official reports summarizing security requirements, practices, and a program for sustaining the nuclear security regime, including information on training and personnel reliability programs; and
  - Publish a report describing how the legal and regulatory framework meets or exceeds the recommendations provided in IAEA guidance.
- **International Cooperation:** Publish information about international cooperation activities listed in Commitment 1 above in official reports and press releases.
- **Self-Assessments and Peer Review:**
  - Announce and/or publish non-sensitive summaries of self-assessment and peer review processes, their regularity, and the process by which recommendations are implemented;
  - Publish broad outlines of key findings and recommendations, including lessons learned (redacted to remove sensitive information where necessary); and
  - Publish regular updates on the progress of implementation of recommendations and plans for follow-on assessments.
- **Demonstrable Competence:**
  - Publish information about training activities and requirements;
  - Publish information about whether personnel are required to be certified, broad outlines of the

---

<sup>2</sup> At the 2016 Nuclear Security Summit, countries offered a [Consolidated National Nuclear Security Report](#) to assist countries in reporting under UNSCR 1540 and the CPPNM, as well as voluntary reporting of actions taken to fulfill the Joint Statement and other voluntary mechanisms. The purpose of the consolidated report is to reduce the reporting burden and provide a possible template that countries can use.

- certification program, and how many personnel have been certified (e.g., through the WINS Academy or through regional Centers of Excellence); and
- Describe activities designed to improve security culture and provide incentives for good security.