The Strengthening Nuclear Security Implementation Initiative: Evolution, Status and Next Steps

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NSGEG

The "Strengthening Nuclear Security Implementation" initiative broke new ground at the 2014 Nuclear Security Summit in the effort to harmonize and strengthen the global nuclear security regime. This report discusses the significance of the initiative, the importance of expanding its signatories, and the need to demonstrate its implementation. The report benefits from the insights and experience of Nuclear Security Governance Expert Group (NSGEG) members and draws upon major themes of discussion at NSGEG workshops in Vienna, Austria (2014) and Washington, D.C. (2015). These workshops were sponsored by the Asan Institute for Policy Studies, Partnership for Global Security, and the Stanley Foundation as part of a continuing discussion on nuclear security governance.

Written by Bart Dal, Jonathan Herbach, and Kenneth N. Luongo

The Stanley Foundation

The Strengthening Nuclear Security Implementation Initiative: Evolution, Status and Next Steps

The "Strengthening Nuclear Security Implementation" initiative was spearheaded by the Netherlands, United States and South Korea at the 2014 Nuclear Security Summit in The Hague. It has been subscribed to by 35 NSS-participating states.[1] It represents a significant step forward in the signatory states' commitment to implement the fundamental objectives and recommendations of the International Atomic Energy Agency's (IAEA) Nuclear Security Series[2] documents in their national nuclear security regimes. These recommendations were approved by consensus of the IAEA's member states and form the basis of international best practices for nuclear security.

Although the IAEA recommendations at the core of the initiative are not binding on any state, a significant aspect of the initiative is that signatories commit to reflect the guidance in their legislative and regulatory structures. In addition, they commit to host peer reviews, such as IAEA's International Physical Protection Advisory Service missions (IPPAS), and to act on the recommendations that result from the reviews. Hosting IPPAS missions to check on the effective implementation of nuclear security measures will provide greater confidence in a state's nuclear security practices.

Therefore, this initiative moves signatories beyond the voluntary implementation of the IAEA's guidance, a significant step forward in building a unified international nuclear security regime. As a result, it will support the continuous improvement of the national and global nuclear security systems and increase international confidence in nuclear security.

Commitments

The Strengthening Nuclear Security Implementation initiative specifically requires states to:

- Subscribe to the fundamental principles ("Nuclear Security Fundamentals," *Nuclear Security Series No. 20*);
- Meet the intent of the recommendations contained in *Nuclear Security Series Nos. 13, 14* and *15* and to realize or exceed these objectives including through the implementation and enhancement of national regulations and other government measures;
- Continue to improve the effectiveness of their nuclear security regimes and operators' systems by conducting self-assessments and hosting peer reviews (e.g., IPPAS missions) periodically;

- Ensure that management and personnel with accountability for nuclear security are demonstrably competent.

In addition to these core obligations, there are an additional 14 commitments in the initiative (see Annex I), one or more of which subscribing states agree to take.

The IAEA recommendation documents have been prepared by nuclear security experts from more than 40 member states.[3] All member states have had the opportunity to comment on the content during a 120-day review procedure before publication. The *Nuclear Security Series No. 20* on the Objective and Essential Elements of a State's Nuclear Security Regime is endorsed by the IAEA Board of Governors and reflects a broad international consensus.

The *Nuclear Security Series No. 13*, also published as INFCIRC/225/Rev.5 in 2011, has for decades been the recognized basis for the physical protection of nuclear materials. The other two recommendation documents, *No. 14* (based on the Code of Conduct for the Safety and Security of Radioactive Sources) and *No. 15,* provide guidance for radioactive materials and associated facilities and materials out of regulatory control, respectively.

The collective intent of the recommendations that form the basis of the initiative is to help states establish a comprehensive and effective nuclear security regime. "Comprehensive" refers to the full gamut of measures—prevention, detection and response—to deal with criminal or other unauthorized acts involving nuclear and other radioactive materials and related facilities.

Importantly, when it comes to assessing implementation, subscribing states are making a general pledge not only to host peer reviews, but to host them "periodically." Read in conjunction with the commitment to act on recommendations resulting from the reviews, hosting reviews periodically would seem to mean that subscribing states intend to request regular follow-up missions to review their implementation of the suggested improvements.

The initiative does not, however, create legally-binding obligations. By subscribing to the initiative, individual states are making a political commitment. It is up to individual states to commit themselves and make the objectives in the guidance documents mandatory for their operators' nuclear security systems. Furthermore, the principle that nuclear security within a state is the responsibility of that state (contained inter alia in the amended Convention on the Physical Protection of Nuclear Material (CPPNM/A)) is not violated.

The initiative commits states to embed the IAEA recommendations in domestic rules, regulations and measures, but leaves it entirely up to each state how to accomplish

this. This is important because it provides flexibility in how a state will utilize the recommendations, thereby avoiding a mandate for how they are implemented. Many states already have robust legislation in place. Though there is no deadline for implementation included in the initiative, states deciding to subscribe are committing themselves to implementation within a reasonable timeframe.

One unique aspect of the initiative is the pledge by subscribing states to ensure "that management and personnel with accountability for nuclear security are demonstrably competent." The nuclear industry has echoed the importance of this point. Developing competence of staff at a nuclear or radiological facility is also part of a learning module under the IAEA educational program in nuclear security.

Status

The initiative was conceived as a new category of commitment at The Hague Summit. Previous summits in Seoul and Washington had consensus Communiqués and a form of voluntary national and multinational commitment making respectively called "house gifts" and "gift baskets." The Hague Summit also had a Communiqué and gift baskets, but the Dutch summit team wanted to create a new category of commitment through the initiative. It was clear, given the diversity of the 53 nations involved in the Summit, that the initiative would not get unanimous support. However, by the end of March 2014, with work continuing even during the Summit itself, two-thirds of the 53 NSS countries had finalized their internal approval processes and had signed on to the initiative. Several other nations, although positive, did not make the deadline and are considering committing themselves to it in the run-up to the 2016 NSS. The United States, as host of the 2016 Summit, has indicated that the initiative will remain open for further signatories through the final NSS.

Since its launching, additional countries outside the NSS process have indicated their interest in subscribing to the initiative, effectively opening the way to universalizing it. In September 2014, a meeting was convened in Vienna under a Dutch chair to discuss various options to give non-NSS countries the opportunity to subscribe to the initiative. The 35 subscribing states concluded that publication of the initiative by the IAEA as an Information Circular (INFCIRC) was the best option to meet this objective. Any member state, or a group of states, can request that the Agency publish an information circular, which is meant to bring matters of general interest to the attention of member states. This course of action also was advised in a Nuclear Security Governance Experts Group (NSGEG) paper in October 2014.[4]

A letter was submitted to the IAEA, and the initiative was published as INFCIRC/869 in October 2014. The INFCIRC invites and encourages all member states of the IAEA to sign on and express their commitment in writing to implement it. A template note

verbale was provided to facilitate states that would consider joining. The 35 subscribing states to the initiative confirmed their adherence to the INFCIRC in writing.

At a September 2014 meeting of the subscribing nations, a decision was made to actively approach countries in bilateral meetings or via diplomatic demarches to bring the new INFCIRC to their attention. A document was produced to support the outreach activities. This document gives a clear description of the initiative, accompanied by questions and answers derived from the Dutch, Korean and U.S. experience during the 2014 NSS. The overview and Q&A were intended as background information for participating states that were engaging in the outreach effort and for the information of the recipients of the outreach. The main objective was to make sure that the information from the 35 countries was clear and consistent and that frequently asked questions could be specifically answered.

At the beginning of 2015, two kick-off activities were conducted. One was an Open Information Session for all member states and the other was a statement that was prepared for the IAEA Board of Governors.

The Open Information Session was held on February 25, and was considered to be a success. The number of participants was high; 82 representative from 53 countries (of which 24 were new to the subject). Presentations were given by representatives from Chile and Morocco on the background of the INFCIRC/initiative and on the value of nuclear security implementation. The IAEA provided information on the assistance that is available for all member states in strengthening nuclear security on the national level.

On March 5, a statement on behalf of the 35 countries was given by the Dutch Permanent Representative in Vienna to the IAEA Board of Governors. The Ambassador informed the Board about INFCIRC/869, the intentions of the 35 signatories to reach out to other member states and the results of the Open Information Session that took place in February.

For the purpose of sharing information on outreach activities and discussing strategies, the 35 signatories agreed to convene every 2 or 3 months. These meetings are for the purpose of exchanging experiences and providing regular updates on the progress of the implementation of the INFCIRC/initiative in the various signatories' countries. Furthermore, joint statements that could be made within the General Conference and the Board of Governors could be discussed, circulated and approved at these meetings. The Netherlands agreed to continue coordination of these activities.

The joint activities, like meetings, the fine-tuning of documents and the organization of the Open Information Session have had an enormously positive impact on the participating countries. The diplomats in Vienna are now much more familiar with

the INFCIRC, a point that will be beneficial for future planned outreach activities. Next to the troika of summit hosts, a number of participating countries like Japan, Canada, Chile, Morocco and Mexico are actively engaged. This provides a good geographical representation and access to many regions in the world, political groups and other forums.

For example, in January 2015, Japan shared information on the INFCIRC/initiative at the ASTOP meeting (Asia Senior-level Talks on Non-Proliferation). Other nations have highlighted the initiative as part of their general messaging in relevant international contacts.

To date, only one country has been actively opposing INFCIRC/869, using the argument that its origins are in the "exclusive" NSS process and indicating that participating states might not be welcomed in the broader IAEA community of 162 states. While there clearly has been hesitation by some countries to support the INFCIRC as a result of its origin, the prospect of other countries joining the initiative in the short-term seems to be more favorable than unfavorable.

Expansion

The efforts to expand the participation in INFCIRC/869 have been focused on both NSS-participating states and those outside the NSS process. Unfortunately, no new countries have yet agreed to participate in the INFCIRC. In part, the intense activity surrounding the Iran Joint Comprehensive Plan of Action (JCPOA) consumed much of the time that could have been devoted to the effort to expand signatories. With the JCPOA now settled, a push for new subscribing states is expected in the lead up to the 2016 NSS.

Based on the information from the Permanent Missions to the IAEA in Vienna, the outreach focus has been more concentrated on contacting colleagues from countries that are not part of the NSS process. This has taken the form of delivering presentations or messages during international meetings and on resolutions in the IAEA General Conference and joint statements in the Board of Governors.

However, pursuing diplomats to support the INFCIRC can be difficult. The diplomatic representatives often do not have the proper insight into what the consequences are of the INFCIRC, which can lead to indecisiveness.

Another approach is reaching out to other key departments and authorities in a state. For example, approaching regulatory bodies (that actually have to do the real work on implementation) was very useful during the run-up to the NSS2014 in generating support for the initiative.

In assessing the options for convincing a nation to support the INFCIRC, it will be useful to be able to answer the following questions:

- Who is the responsible competent authority?
- Who is responsible for regulation and licensing?
- Is there a procedure for including the IAEA guidance in laws and regulations?
- What is the position of the nuclear or radioactive materials industry?
- Which NGOs may be helpful?
- Are there any workshops, seminars and conferences that can be used to promote the INFCIRC?
- Are there newspapers or magazines that are influential and prepared to write articles on the subject?

Making an inventory of all these potential opportunities can lead to a multifaceted, concrete plan of action that underscores the value of the INFCIRC in building national and international confidence and in contributing to strengthening the global nuclear security architecture.

Future Importance

The future of INFCIRC/869 has potentially significant implications for international nuclear security norm-development and institution-building depending on how broadly it is accepted by member states.

With respect to norm-development, the INFCIRC takes legally non-binding instruments (the fundamentals and recommendations of the IAEA Nuclear Security Series) and, while not changing the legal nature of the instruments, requires subscribing states to reflect them in their domestic systems. In this way, applicable provisions of the instruments will become law, or regulations, at the national level.

As more states make the explicit pledge to reflect these fundamentals and recommendations in national regimes, their role as the accepted standards of conduct will be reinforced.[5] A broad commitment to enacting the IAEA's fundamental principles and recommendations then would begin to create a harmonization in the international nuclear security regime that does not currently exist. The movement toward this standardization and harmonization across borders may ultimately create a movement toward a regime built upon comprehensive international obligations.

This evolutionary process of codifying the fundamentals and recommendations in concrete commitments will help to build confidence among subscribing and other states. It also will create political and moral pressures for other countries to join the process. Furthermore, from a legal perspective, while the INFCIRC does not create binding obligations, subscribing states are still bound by the principle of good faith to act in accordance with the commitments, which means in practice that states are internationally accountable for certain behavior.

In terms of institution-building, one of the main gaps that will be left upon conclusion of the NSS process is the opportunity for regular political engagement. The initiative and its evolution into an INFCIRC can offer a structure around which like-minded states can coalesce to carry the nuclear security political-level discussion and mission forward. This could include regularizing interaction among subscribing states, discussing implementation, enhancing information sharing and improving confidence-building. At some future point it also could include some sort of evaluation of compliance, including sharing the outcomes of peer reviews.

Relationship to Existing Instruments

There are precedents for the INFCIRC/initiative in the nuclear security area. The closest model, and one that is often invoked when discussing the form and method of expressing commitment without a binding obligation, is the Code of Conduct on the Safety and Security of Radioactive Sources (reflected in NSS14).[6]

The Code of Conduct, like the INFCIRC/initiative, occupies a middle ground between binding and non-binding agreements. It is clearly not meant to be a legally-binding instrument, but by expressing political commitment, it is expected that those states agreeing to it will act in accordance with it or reflect the provisions of it in their domestic systems. Under this Code, states are asked to express their commitment in writing, similar to the INFCIRC, and in this case 126 states have signed on to it.[7]

In arguing against the need for a formal treaty on radioactive source safety and security, states often refer to the adequacy of the Code of Conduct as a set of norms of behavior. In this regard, the INFCIRC/initiative is similar. In committing to it, subscribing states are expected to take national legal or regulatory measures to integrate the relevant Nuclear Security Series instruments into their domestic regimes, while not making the NSS fundamentals and guidelines legally binding.

The INFCIRC/initiative, however, does diverge from the Code of Conduct model, and the rest of the international nuclear security-related instruments, in three fundamental ways.

First, the scope of the INFCIRC/initiative is much broader than the Code of Conduct. Whereas the Code focuses solely on radioactive sources, the INFCIRC/initiative applies

to nuclear material, other radioactive material and related facilities. It, thereby, reinforces existing legally and politically binding commitments. By implementing the three recommendations documents that are central to the INFCIRC/initiative, states, in theory, will have established a comprehensive national nuclear security regime.

Second, the INFCIRC/initiative not only commits subscribing states to reflect the NSS recommendations in their domestic nuclear security regimes, it couples this with the periodic hosting of peer reviews, along with the conduct of self-assessments, to assess that the national regimes are in line with these commitments. There is no similar requirement under the Code of Conduct, and its implementation, as a result, is considered to have some weak spots. Without having undergone peer reviews, such as IPPAS or International Nuclear Security Advisory Service (INSServ) missions, there is no external assessment of whether states are complying with these international commitments. Therefore, coupling the commitment to the NSS documents with IAEA and self-assessments is an important step toward ensuring compliance.

A third, and an entirely new element contained in the INFCIRC/ initiative, is the requirement to ensure the demonstrable competence of management and personnel with accountability for nuclear security. At the facility level, the plant operator is primarily responsible for security and ensuring that these individuals are demonstrably competent. At the moment there is not a clear way to measure this competence. However, it has been suggested that the initiation of a certification program will help to build confidence both within and outside the state in the strength of the workforce.[8]

By committing initially to the initiative and now its INFCIRC form, the subscribing states are working toward the establishment of standards of conduct that are consistent with, and complement, various existing international obligations and recommendations. But, it combines these elements to create a more comprehensive approach to nuclear security.

The NSGEG has recommended that the standards of conduct embodied by the INFCIRC/initiative be codified in a framework convention, which would be legally binding.[9] In that way, the initiative would not be a goal in itself, but rather a catalyst for further improvement of global nuclear security and a logical step toward the further development of binding standards.

Institution-Building

The process of norm-development and harmonization embodied in the INFCIRC/ initiative can be expedited by establishing an institutional arrangement created by the states that have subscribed. Institutional arrangements supporting legally non-binding commitments can serve an essential function of increasing transparency, building confidence and strengthening compliance. The structure built around

the Code of Conduct offers an interesting example of institutionalization supporting a non-binding instrument.

A formalized process was established in 2006 for the "periodic exchange of information and lessons learned and for the evaluation of progress made by States towards implementing the provisions" of the Code of Conduct and the associated Import/Export Guidance. The voluntary mechanism was subsequently endorsed by the IAEA Board of Governors. It includes triennial international meetings organized by the IAEA Secretariat and regional meetings scheduled on an ad hoc basis by subscribing nations. The objectives of these meetings is to promote information exchange, assist states in implementation of the Code of Conduct and Import/Export Guidance, and invite and encourage more states to implement and politically commit to the two instruments. So it is a part confidence-building, part outreach effort.

This process, partially because it is not a required review procedure or part of a formal treaty, provides for greater flexibility, particularly in allowing for the participation of both IAEA member states and non-member states as well as those that have not yet made political commitments to the Code of Conduct and Import/Export Guidance. Such a process can serve both to increase the sense of obligation among states that have already committed to the instruments, thereby strengthening the compliance pull, and to incentivize those states that have not yet committed to do so.

Therefore, establishing an institutional support mechanism for the INFCIRC/initiative can facilitate continuous improvement in the nuclear security regime and help eliminate weak links that exist. Like the Code of Conduct process, regular interaction can specifically be focused on implementation, outreach and expanding subscription.

There have been suggestions to hold a gathering of INFCIRC/869 subscribing states (and possibly other member states) on the margins of the next international conference on nuclear security to be held at the IAEA in December 2016. If these international conferences continue on a triennial basis, it could offer a good opportunity to create a regular meeting forum on INFCIRC/869 and an opportunity to reach out to other states that have not yet subscribed to it.

Demonstrating Implementation

The implementation of the INFCIRC/initiative has four main elements and a list of 14 examples of additional good practices. However, there is no requirement in the initiative or the INFCIRC that countries demonstrate their implementation of its commitments once they commit to them beyond the requirements associated with peer review missions, such as IPPAS. This was an intentional decision by the sponsors, because countries are not in the habit of reporting on their nuclear security procedures and structures.

However, the value of the instrument is not just in the political commitment that it represents, but in the actual implementation of the IAEA recommendations. And, the commitment, undertaken in good faith by signatory states, obliges full implementation. Therefore, the demonstration of this implementation is important because it can help to build global confidence in the nuclear security system as well as begin to build a cross-border norm structure for what will constitute effective security policy and regulatory infrastructure and practices.

One obvious format for demonstrating implementation is to present a written report at the 2016 NSS. Given the breadth of the INFCIRC/initiative, it could be very labor intensive for nations to provide detailed information regarding their implementation of the commitments. It also is not clear to what institution or authority they would provide this information after the summit's end.

An alternative is to create a single report for all subscribing nations.[10] Another suggestion is to create and maintain a website through which states could post information, updates and concerns related to the implementation process.

A pared down start could focus on the original sponsors of the initiative—the U.S., Netherlands and South Korea—who could take the lead in demonstrating their implementation by submitting meaningful progress reports to the NSS or the IAEA. Ideally, these reports could be open for evaluation by outside experts.[11]

Checklist Approach

A further, and perhaps more acceptable option, is to create an implementation checklist that can be short and concise, but also informative. Some of the commitments may be more conducive to a checklist approach than others, but there could be room for additional information.[12]

Under this approach, the responses could be provided to the IAEA on a confidential basis or they could be made public or both. The checklist approach could be a way to get some momentum on demonstrating implementation. And this easy, initial step could lead to a more expansive provision of information in the future. Many of the checklist questions can be answered by governments, but some will require consultation with nuclear operators and owners and other stakeholders. Below are examples of how a state could quickly and easily provide yes or no answers to a checklist of questions on their implementation of the major obligations under the INFCIRC/initiative.[13]

Commitment 1: Subscribe to the fundamental principles set forth in IAEA Nuclear Security Series 20 (Objective and Essential Elements of a State's Nuclear Security Regime, "Nuclear Security Fundamentals").

States commit to establishing national nuclear security regimes and recognize that all nuclear and radioactive material require control and protection. Implementation may be demonstrated by answering the following questions:

- Have you developed and published national legislation acceding to the amended CPPNM/A and International Convention on the Suppression of Acts of Nuclear Terrorism (ICSANT) obligations?
- Can you provide proof of legislation or penal code provisions that identify offenses and punishment involving nuclear and radioactive material?
- Do you have a list of competent and independent regulatory authorities, and could you detail their specific responsibilities if necessary?

Commitment 2: Meet (or go beyond) the intent of the recommendations of NSS13 (Nuclear Security Recommendations on Physical Protection of Nuclear Materials and Nuclear Facilities; also INFCIRC225/Rev5), NSS14 (Nuclear Security Recommendations on Radioactive Material and Associated Facilities and The Code of Conduct on the Safety and Security of Radioactive Sources), and NSS 15 (Nuclear Security Recommendations on Nuclear and Other Radioactive Materials out of Regulatory Control).

In this commitment implementation may be demonstrated by communicating that national regulations and directives are in place to oblige operators to implement NSS13-15, including:

- Do you have domestic regulations with specific references to NSS13, 14 and 15 requirements?
- Do you have arrangements for the establishment of a coordinating body to handle issues for materials out of regulatory control?
- Do you implement measures and requirements that will ensure control, protection and accounting, the interface between safety and security, access to related information and measures taken to ensure security of radioactive materials in transport?
- Do you have active and effective programs to ensure the qualification of staff (e.g., operators, industry and medical establishments)?

Commitment 3: Continue to improve the effectiveness of national nuclear security regimes.

- Continued and sustainable nuclear security effectiveness requires periodic reviews, assessments, tests and internal reporting systems of events. Exercises are essential for maintaining an effective response system, technical support for equipment is necessary (particularly in nuclear smuggling prevention), and facilities must have

established nuclear security policies to ensure internal company effectiveness. Implementation may be demonstrated by communicating on the following actions and plans:

- Are you prepared to do a comprehensive national assessment periodically (perhaps every 3 years)?
- Will you implement recommendations and improvements that follow these assessments?
- Do you provide regular control tests of databases and reporting procedures?
- Do you exercise and test at both a national and facility level (inclusive of both physical protection systems and response measures after a theft has occurred)?
- Do you periodically review the transport security involving radioactive materials?
- Are you willing to accept international reviews (IPPAS, INSServ) every 5 years?
- Do you maintain an effective nuclear and radiological accountancy and control system with the state communicating the objectives, goals and main requirements of the accounting system?
- Have you established a facility-to-facility network, which will enable informal interactions and practical information exchange?

Commitment 4: Ensure competent and accountable management and staff.

Effective security culture should be established in company policies, and procedures and routines should be visibly supported by management. Implementation of security culture and staff competence may be demonstrated by considering the following questions:[14]

- Do you require security measures to be established in company policy?
- Do you require clear communication between management and operational staff on security responsibilities?
- Are operational staff made aware of security expectations and required performance indicators by operators?
- Do operators perform evaluations of staff in security measures (management and operational)?
- Do you require nuclear security qualification for different staff categories?

- Do you certify that the training programs ensure that staff have adequate competency?
- Do you compile evidence of staff qualification?
- Do you communicate with other states on information regarding human resource development?

One way to ensure competence would be through required certifications of facility employees with nuclear security responsibilities. For example, a state could include such certifications as part of the licensing process for nuclear facility operators or shippers. The World Institute for Nuclear Security (WINS) has designed a WINS Academy program to support demonstrable competence through certification. Subscribing states could encourage their domestic nuclear industries to make use of this program as part of fulfilling their commitments under the INFCIRC/initiative.

Additional Implementation Actions

Beyond the four categories of major obligations under the INFCIRC/initiative, there are also 14 additional actions that are identified. Subscribing states have pledged to take one or more of them. Whether states have taken such actions also could be demonstrated by means of a checklist that changes each action into a yes/no question, as illustrated below.

1. Do you contribute to the development of IAEA nuclear security guidance documents?
2. Do you provide technical support and assistance to other states (bilateral and multilateral)?
3. Do you maintain and continuously improve domestic or regional training activities, including through education and certification or qualification of activities?
4. Do you share good practices with states, including through seminars, workshops and exercises while respecting confidentiality?
5. Do you promote information exchange while respecting the confidentiality of sensitive information?
6. Can you provide nuclear security experts to conduct INSServ and IPPAS missions?
7. Have you developed and enhanced cyber security measures concerning nuclear facilities?
8. Do you take into account nuclear security at all stages in the life cycle of facilities?

9. Do you maintain effective emergency and contingency preparedness and response and mitigation capabilities in a manner that addresses both safety and security?
10. Do you make financial or in-kind contributions to the IAEA Nuclear Security Fund?
11. Do you promote R&D on nuclear security technologies and share results, consistent with nonproliferation commitments and IP laws?
12. Do you promote nuclear security culture for management and personnel?
13. Have you supported or participated in the development of WINS best practices guides and training?
14. Have you improved cooperation with nearby states to support the strengthening of nuclear security?

Recommendations

The Strengthening Nuclear Security Implementation initiative from the 2014 NSS and its conversion into IAEA INFCIRC/869 have broken new ground in the effort to harmonize and strengthen the global nuclear security regime. While neither document legally binds a signatory state to take action, by agreeing to the documents, there is a political commitment to implement their intent in a nation's nuclear security legislation and regulations. However, the INFCIRC/initiative is suffering from two significant issues.

First, while 35 states signed on to the initiative at The Hague Summit, since then no other nation has agreed to the terms. While the original signatories are an impressive group of nations, it is imperative that other IAEA member states agree to adhere to INFCIRC/869. It is necessary both for the purpose of demonstrating support and momentum for the effort and its objectives and for creating a path toward a strengthened and unified international nuclear security regime.

Second, neither the initiative nor the INFCIRC contains any provision for demonstrating the implementation of the commitments contained in the documents beyond periodic and confidential IAEA procedures. The political commitment to implement the intent of these nuclear security fundamentals and recommendations is important, and in many cases signatory states already have incorporated these provisions into their national legal and regulatory systems. But, there is an opaqueness about this implementation that raises concerns about the adequacy of global nuclear security.

Both the expansion of signatories and the demonstration of implementation are important next steps in this process. With the final NSS scheduled for Washington in April 2016, there needs to be a strong push from the 35 signatories on both of these issues.

To support these objectives the following recommendations are offered.

Expand Signatories

- Continue diplomatic outreach through the IAEA, bilateral and multilateral interactions, and through periodic meetings with non-signatories.
- Reach out beyond diplomatic channels to engage key departments and authorities in a state, for example, regulatory bodies.
- Establish an institutional arrangement for the INFCIRC/869 by the states that have subscribed to it. This can demonstrate the enduring value of adherence, attract new supporters and build international confidence in the nuclear security regime.

Demonstrate Implementation

Signatory States

- Have the original sponsors of the initiative—the U.S., Netherlands and South Korea—demonstrate their implementation by submitting meaningful progress reports to the 2016 NSS or the IAEA.
- Create a checklist of questions on implementation of the obligations that requires just a yes or no answer.
- Establish certification programs for facility employees.

In addition, a number of suggestions have been offered as part of the commitment demonstration process.[15]

Governments

- Establish a certification option for engineering degrees across a network of universities.
- Provide experts to be trained in regional courses for IPPAS missions and resources to help address IAEA capacity issues with performing reviews.
- Task industry with producing management statements that explain the relationship between militaries and entities guarding nuclear power facilities.
- Encourage better understanding of facility-to-facility contacts, potentially using World Association of Nuclear Operators (WANO) and WINS.

IAEA

- Encourage synthesis between security and safeguards information sharing.
- Review IPPAS mission structures to assess if they are achieving their peer review goals.

- Make general statements on the adequacy of a state's accountancy and control procedures through existing safeguards requirements.

Nongovernmental Organizations

- Develop specific guidance to allow for the communication of confidence-building information while protecting truly sensitive information.
- Develop a methodology for self-assessment by states.
- Determine what the indicators are of good security culture and how to measure progress.
- Track implementation of the INFCIRC/initiative.
- Form working groups to explore the additional actions mentioned in the initiative text.
- Establish regional groups on nuclear security.

About the Authors

Bart Dal is working for the Ministry of Foreign Affairs of the Netherlands and is the chairman of the IAEA Nuclear Security Guidance Committee. He previously worked for the Dutch Nuclear Inspectorate as the National Coordinator for Nuclear Security and Safeguards. He serves as special technical advisor within the Sherpa team of the Nuclear Security Summits.

Jonathan Herbach is a lecturer in public international law and a research fellow specializing in nuclear security and arms control. In preparation for the 2014 Nuclear Security Summit in The Hague, he advised the Ministry of Foreign Affairs of the Netherlands on issues related to the international legal framework for nuclear security.

Kenneth N. Luongo is the president and founder of the Partnership for Global Security and the Center for a Secure Nuclear Future. He previously served as the Senior Advisor to the U.S. Secretary of Energy for Nonproliferation Policy and the Director of the Office of Arms Control and Nonproliferation at the U.S. Department of Energy.

ANNEX

IAEA
Atoms for Peace

Information Circular

INFCIRC/869
Date: 22 October 2014

General Distribution
Original: English

Communication Received from the Netherlands Concerning the Strengthening of Nuclear Security Implementation

Joint Statement on Strengthening Nuclear Security Implementation

1. The Secretariat has received a note verbale from the Permanent Mission of the Kingdom of the Netherlands, dated 9 October 2014, in which the Permanent Mission on behalf of the Governments of Algeria, Armenia, Australia, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Georgia, Germany, Hungary, Israel, Italy, Japan, Kazakhstan, Lithuania, Mexico, Morocco, the Netherlands, New Zealand, Norway, Philippines, Poland, the Republic of Korea, Romania, Spain, Sweden, Turkey, Ukraine, United Arab Emirates, the United Kingdom, the United States of America and Viet Nam, requested that the Secretariat bring the note verbale and its attachment to the attention of all IAEA Member States.

2. In light of this request, the text of the note verbale, as well as the attachment thereto, are hereby reproduced for the information of all Member States.

INFCIRC/869
Attachment

Kingdom of the Netherlands

Joint Statement on Strengthening Nuclear Security Implementation

The Permanent Mission of the Netherlands to the United Nations Organizations in Vienna presents its compliments to the International Atomic Energy Agency and, on behalf of the Governments of Algeria, Armenia, Australia, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Georgia, Germany, Hungary, Israel, Italy, Japan, Kazakhstan, Lithuania, Mexico, Morocco, the Netherlands, New Zealand, Norway, Philippines, Poland, the Republic of Korea, Romania, Spain, Sweden, Turkey, Ukraine, United Arab Emirates, the United Kingdom, the United States of America and Vietnam, has the honor to request that the IAEA Secretariat bring the following note verbal and its attachment to the attention of all IAEA Member States.

Recognizing that responsibility for nuclear security rests with the States, the aforementioned IAEA Member States have pledged to make every effort to achieve further progress with regard to the global nuclear security system, the role of the IAEA, security of nuclear materials and facilities and radioactive sources including during transportation, combating illicit trafficking, nuclear forensics, nuclear security culture, information security, international cooperation, and synergy between nuclear security and safety. Since nuclear security remains a national responsibility, it is incumbent upon each State to establish the appropriate legal framework, governance structure, and measures it sees fit to advance nuclear security.

International principles and guidelines can help States establish or improve their national nuclear security regime. IAEA assists, upon request, States' efforts in this regard, as is recalled in the Ministerial Declaration adopted in 2013 at the IAEA International Conference on Nuclear Security. The IAEA Nuclear Security Series publications contain objectives and essential elements of a State's nuclear security regime, along with recommendations. The Nuclear Security Series document NSS20, describing the 'Nuclear Security Fundamentals', was endorsed by the IAEA Board of Governors and welcomed by the General Conference.[1] It reflects a broad international consensus. The IAEA recommendation documents NSS13, NSS14 and NSS15 have been prepared by nuclear security experts from more than 40 member States.

The aim of the Joint Statement on Strengthening Nuclear Security Implementation is for States (hereafter referred to as "Subscribing States"), at their own discretion, to meet the intent of the essential elements of a nuclear security regime and to commit to the effective and sustainable implementation of the principles therein. Such commitment does not alter the non-binding status of the IAEA Nuclear Security Series documents. States may commit themselves voluntarily to implement the intent of the individual recommendations.

[1] See OP 8 of GC(56)/RES/10

The public commitment to subscribe to the fundamental principles of nuclear security set out in NSS20 and to commit to meet the intent of the recommendations contained in the IAEA Nuclear Security Series should result in improved nuclear security. Such a commitment could also serve as a role model worldwide of excellent and transparent behavior.

IAEA Member States wishing to subscribe to this Joint Statement on Strengthening Nuclear Security Implementation are asked to inform the IAEA Secretariat via note verbal, and request for such official communication to be circulated as an INFCIRC document to all IAEA Member States.

The Permanent Mission of the Netherlands avails itself of this opportunity to renew to the International Atomic Energy Agency the assurances of its highest consideration.

Attachment: Joint Statement

Vienna, 9 October 2014

To the International Atomic Energy Agency

Joint Statement

The following States: Algeria, Armenia, Australia, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Georgia, Germany, Hungary, Israel, Italy, Japan, Kazakhstan, Lithuania, Mexico, Morocco, the Netherlands, New Zealand, Norway, Philippines, Poland, the Republic of Korea, Romania, Spain, Sweden, Turkey, Ukraine, United Arab Emirates, the United Kingdom, the United States of America and Vietnam, aiming for an effective and sustainable nuclear security regime, commit themselves to:

1. **Subscribe to the fundamental principles** ("Nuclear Security Fundamentals") set forth in the Nuclear Security Series NSS 20, on the Objective and Essential Elements of a State's Nuclear Security Regime;

2. **Meet the intent of the recommendations** contained in the following documents and to realize or exceed these objectives including through the implementation and enhancement of national regulations and other government measures:

    c. NSS13 (INFCIRC225/Rev.5): "Nuclear Security Recommendations on Physical Protection of Nuclear Materials and Nuclear Facilities;

    d. NSS14: "Nuclear Security Recommendations on Radioactive Material and Associated Facilities" and The Code of Conduct on the Safety and Security of Radioactive Sources;

    e. NSS15: "Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control;

3. **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;

4. **Ensure** that management and personnel with accountability for nuclear security are demonstrably competent;

Additionally, subscribing States intend to contribute to the continuous improvement of nuclear security through one or more of the following actions:

- Contribute to the development of II I AEA nuclear security guidance documents;

- Provide technical support and assistance to other States through bilateral and multilateral cooperation;
- Maintain and continuously improve domestic or regional training activities, for instance through education, certification or qualification activities;
- Share good practices with other States through, for example, seminars, workshops, and table top / field exercises while respecting confidentiality;
- Promote information exchange while respecting confidentiality;
- Provide nuclear security experts for the conduct of IAEA *International Nuclear Security Advisory Service* (INSServ), and *International Physical Protection Advisory Service* (IPPAS) missions;
- Develop and enhance cyber security measures concerning nuclear facilities;
- Continue to take into account nuclear security at all stages in the life cycle of nuclear facilities;
- Maintain effective emergency and contingency preparedness, response and mitigation capabilities; in a manner that addresses both nuclear security and safety;
- Make financial or in-kind contributions to the IAEA Nuclear Security Fund;
- Promote research and development on nuclear security technologies and disseminating results consistent with their non-proliferation commitments and intellectual property rules;
- Promote nuclear security culture for management and personnel involved with nuclear security;
- Support or participate in the development of World hstitute for Nuclear Security best practice guides and training activities;
- Improve cooperation with nearby States to improve international and regional nuclear security.

Endnotes

[1] Algeria, Armenia, Australia, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Georgia, Germany, Hungary, Israel, Italy, Japan, Kazakhstan, Lithuania, Mexico, Morocco, the Netherlands, New Zealand, Norway, Philippines, Poland, the Republic of Korea, Romania, Spain, Sweden, Turkey, Ukraine, United Arab Emirates, the United Kingdom, the United States of America and Vietnam.

[2] "Objective and Essential Elements of a State's Nuclear Security Regime," IAEA Nuclear Security Series No. 20, 2013, http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1590_web.pdf; "Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5)," IAEA Nuclear Security Series No. 13, 2011, http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1481_web.pdf; "Nuclear Security Recommendations on Radioactive Material and Associated Facilities," IAEA Nuclear Security Series No. 14, 2011, http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1487_web.pdf; and "Nuclear Security Recommendations on Nuclear and Other Radioactive Material Out of Regulatory Control," IAEA Nuclear Security Series No. 15, 2011, *http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1488_web.pdf*.

[3] The process entails drafting of the documents by the IAEA Secretariat in cooperation with member state experts, followed by review and approval by the Nuclear Security Guidance Committee, to which each IAEA member state may nominate a member, and culminating in a 120-day formal review by member states.

[4] Bart Dal and Jonathan Herbach, "Increasing Commitment to the Strengthening Nuclear Security Implementation Initiative," Workshop Discussion Paper, NSGEG, October 2014.

[5] At the press conference announcing the Initiative during the 2014 NSS, U.S. Energy Secretary Ernest Moniz described the Nuclear Security Series guidelines as "the closest thing we have to international standards" for nuclear security. See: Sebastian Sprenger, "Nearly Three Dozen Nations Sign Hague Statement on Nuclear Security Framework," Global Security Newswire, March 25, 2014, *http://www.nti.org/gsn/article/nearly-three-dozen-nations-sign-hague-statement-nuclear-security-framework/*.

[6] The procedure for states expressing political commitment in writing to support the Code of Conduct is laid out in a resolution of the IAEA General Conference (GC (47)/RES/7.B). In the case of INFCIRC/869, the procedure is not formalized to this degree, but the concept for expressing support is similar.

[7] Number of supporters as of the date of this publication.

[8] WINS Academy, *www.wins.org*.

[9] John Bernhard, Kenneth C. Brill, Anita Nilsson, and Shin Chang-Hoon, "International Convention on Nuclear Security," Policy Report, NSGEG, March 2015, *http://www.nsgeg.org/ICNSReport315.pdf*.

[10] Adapted from NSGEG workshop discussions.

[11] Ibid.

[12] A form of this checklist is included in "Responsibility Beyond Rules: Leadership for a Secure Nuclear Future," Policy Report, NSGEG, March 2013, *http://www.nsgeg.org/NSGEG_Responsibilty_Beyond_Rules_2013.pdf*.

[13] These questions are based on proposals made by Anita Nilsson and Kenji Murakami, "Implementing the Strengthening Nuclear Security Implementation Initiative," Workshop Discussion Paper, NSGEG, October 2014.

[14] These questions are more suitable for the operators of nuclear facilities, and they should answer them.

[15] Adapted from NSGEG workshop discussions.

NSGEG Members

(in alphabetical order)

1. Rodrigo Alvarez
   Institute of Advanced Studies (Chile)
2. Irma Arguello
   The NPSGlobal Foundation (Argentina)
3. John Bernhard
   Former Ambassador to IAEA (Denmark)
4. Kenneth Brill
   Former Ambassador to IAEA (U.S.)
5. Bart Dal
   Ministry of Foreign Affairs of the Netherlands and IAEA Nuclear Security Guidance Committee
6. Trevor Findlay
   Carleton University, Ottawa, (Canada) and Managing the Atom Project, Belfer Center, Harvard Kennedy School (U.S.)
7. Han Yong-Sup
   Korea National Defense University (South Korea)
8. Roger Howsley
   World Institute for Nuclear Security (Austria)
9. Caroline Jorant
   SDRI Consulting (France)
10. Jun Bong-geun
    Korea National Diplomatic Academy (South Korea)
11. Togzhan Kassenova
    Carnegie Endowment for International Peace (U.S.)
12. Lee Dong Hwi
    Institute of Foreign Affairs and National Security (South Korea)
13. Anya Loukianova
    The Stanley Foundation (U.S.)

14. Kenneth Luongo
    Partnership for Global Security (U.S.)

15. Kenji Murakami
    Tokyo City University (Japan)

16. Yosuke Naoi
    Integrated Support Center, Japanese Atomic Energy Agency for Nuclear Nonproliferation and Nuclear Security (Japan)

17. Anita Nilsson
    AN & Associates, LLC (Sweden)

18. Everett Redmond
    Nuclear Energy Institute (U.S.)

19. Andrew Semmel
    Partnership for a Secure America and AKS Consulting (U.S.)

20. Sharon Squassoni
    Center for Strategic and International Studies (U.S.)

21. Shin Chang-Hoon
    The Asan Institute for Policy Studies (South Korea)

22. Page Stoutland
    Nuclear Threat Initiative (U.S.)

23. Yoo Hosik
    Korea Institute of Nuclear Nonproliferation and Control (South Korea)

Nuclear Security Governance Experts Group (NSGEG)

The NSGEG is a multi-sector coalition of experts with diverse nuclear experience that has developed more than 50 recommendations for improving nuclear security. The NSGEG is a project of the Asan Institute for Policy Studies, Partnership for Global Security, and the Stanley Foundation.

NSGEG