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Policy Memo

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SUBJECT: Nuclear Security and Information Sharing

On October 14–16, 2015, the Stanley Foundation gathered experts and policymakers from academia, government, international organizations, and civil society organizations at the Airlie Center in Warrenton, VA, for its 56th annual Strategy for Peace Conference. The conference featured autonomous roundtables focused on policy challenges in four key global issue areas: Climate Change, Human Protection from Mass Atrocities, Nuclear Security, and Global Governance.

This policy memo captures the major discussion points and policy recommendations from the roundtable on “Nuclear Security and Information Sharing” chaired by Anita Nilsson, President of AN & Associates. Additional information about this roundtable and others held as a part of the 56th annual Strategy for Peace Conference is available on our Web site: <http://www.stanleyfoundation.org/spc-2015.cfm>.

The need to share nuclear security-related information, while maintaining confidentiality of sensitive information, has been identified as an issue of paramount importance to strengthening global nuclear security. However, international nuclear security conventions only encourage, but do not formalize, the exchange of information among state parties and international organizations in a manner that would sustain effectiveness. While information exchange among signatories is emphasized in international legal instruments, the formal obligation covers only a minimum of information. Examination of the legal instruments and voluntary agreements and standards reveals untapped information sharing options to strengthening global nuclear security.

The information currently available is insufficient, and the resulting information gaps span across states as well as within industry supply chains. Effective interaction and cooperation among a broad range of stakeholders are essential for meeting nuclear security objectives and for maintaining a strong nuclear security culture. However, unless performed with care, there is a risk that releasing information and increasing transparency in nuclear security could potentially compromise security, with lower protection against theft, sabotage, or other unauthorized access.

In the roundtable discussion, chaired by Anita Nilsson, the group worked to identify providers and recipients of nuclear security information on the facility, national, and international levels, and to determine what kinds of nuclear security-related information are useful to each group. They also discussed the differences in sharing information during normal circumstances versus

in emergency situations and how increased, regularized, and sustained information exchange may strengthen security regimes nationally, regionally, and internationally. As a practical example, the group considered how information gleaned from International Physical Protection Advisory Service (IPPAS) missions is best leveraged to improve confidence.

This policy memo outlines the group's findings about information sharing in nuclear security.

A Matrix of Information Sharing

A draft matrix of nuclear security information sharing¹ was the basis of the group's consideration of the different providers and recipients of information and what kind of, or character of, nuclear security information is useful for each group. The group agreed that in order for it to be most useful the matrix should be organized to be complementary to the International Atomic Energy Agency (IAEA) Nuclear Security Series Implementing Guide No. 23-G on the Security of Nuclear Information. However, while the IAEA's guide is geared to maintaining confidentiality, the matrix's aim is to identify information that can be shared freely, thereby contributing to strengthening and building confidence about effective nuclear security.

There was also agreement that the matrix should highlight incentives and benefits to providing information and the value of the information shared to strengthened nuclear security. As a whole, the updated matrix (to be published with a forthcoming policy dialogue brief from the roundtable) and its introductory explanatory text, will address the value of providing information to enhance nuclear security globally, build public confidence, and underpin the standing of the operator or authority.

Balancing Information Sharing and Confidentiality

Nuclear security has a broad spectrum of stakeholders; some of them generate and provide information related to their responsibilities, others receive and use information in their work. Not all stakeholders are interested in or need the same kinds of information. When sharing information, a clear distinction has to be made between information that may be shared freely and information that must be protected and kept confidential. Participants agreed that trust, and sometimes personal relationships, between cooperating parties are vital to nuclear security information sharing.

Identifying the required flow of information for each stakeholder (from whom and to whom), and determining what kind of information needs to be communicated in each case allows the exchange of information that is necessary for building and maintaining confidence without compromising proprietary or classified information. Upon sharing information, the underlying authorization should be identified to provide legal certainty.

In the roundtable discussion, participants examined the dimensions of confidentiality. In finding a balance between transparency and confidentiality, factors such as the mosaic effect—when information from one dataset does not pose risk, but when coupled with other information does—have to be taken into consideration; finding a balance can provide boundaries to requests

¹ The matrix was initially developed for a subgroup of the Fissile Materials Working Group that in early 2015 developed policy recommendations related to the topic of "Information Sharing, Standards and Best Practices, and Security Culture." More information can be found here: www.fmwg.org/FMWG_Results_We_Need_in_2016.pdf.

for information, even with regards to legal instruments such as Freedom of Information Acts. When sharing data with a recipient, fragmented information can suffice, allowing the provider to hold back sensitive information. A good example is the report on the break in at the Y-12 National Security Complex in the United States, which openly acknowledged weaknesses and proposed actions without giving concrete examples and creating vulnerabilities. The need to restrict information is not voided in cases where information is restricted in one sphere, but available in another.

In determining the prerequisites to finding a balance between information sharing and confidentiality, the roundtable discussion found that:

- The nature and content of information that shall be shared is going to be different in emergency scenarios and routine calls, with impact on classification of need-to-know vs. sensitive information.
- In non-emergencies there is a need to maintain confidentiality of some types of information, including: information related to existing physical protection arrangements, transport routes, and personnel background, as well as data on security events abroad (not necessarily nuclear related) and events in other industries.
- Information sharing promotes building a nuclear security culture among all stakeholders. A culture of risk management in nuclear security encourages addressing, in an ongoing manner, all stakeholders in the assessment of the prevailing threat, while also capturing all sensitivities of safety, security, and transparency.

There was general agreement that stakeholders providing information should include: the non-governmental expert community, technical experts, technology or equipment developers and manufacturers, policy makers, a country's allies, international organizations (e.g. Interpol, IAEA), financial stakeholders and investors, insurance companies, emergency planners, nuclear materials accounting and control, and importers/exporters.

Finally, participants expressed that cyber security threats are the next big challenge. The implications of the cyber threat to the management of information at nuclear facilities and by governments and supporting infrastructure are clear. There is a need for governments and industry to take action and work towards a significantly reduced cyber threat by introducing and maintaining an adequate information technology structures designed to mount effective cyber security.

The Role of IPPAS Missions

International Physical Protection Advisory Service (IPPAS) missions have the objective to generate and promote better nuclear security. Missions generate information that is relevant for many nuclear security stakeholders including regulators, operators, the IAEA and the public. As the purpose of an IPPAS mission is to equip states to strengthen their national nuclear security regime, the peer review and advice is based on international guidelines and recognized best practices.

Participants agreed that, while IPPAS missions are not mandatory, they are the best mechanism currently in place to ensure a state's compliance with international nuclear security guidelines. There was general agreement on the need to provide incentives for states to request a mission and, subsequently, invite a follow up mission to review progress on the implementation of recommendations. Such application of IPPAS would lead to a larger number of missions, strengthen IPPAS as a tool, and increase global nuclear security.

IPPAS reports are classified by the IAEA as highly confidential, and the distribution of the report is determined by the host country. Participants agreed that much of the information included in an IPPAS report refers to the national nuclear security regime (i.e., the essential elements of the nuclear security infrastructure in a country²) and the official physical protection requirements (e.g. the regulatory system, with licensing or reporting requirements), which is not sensitive and could be shared openly.

Participants concluded that a number of measures would facilitate nuclear information sharing regarding non-sensitive information from IPPAS mission reports. Two are: designating an information portal where IPPAS information is stored and accessible, and implementing a database on best practices.

Participants also discussed the dilemma in reporting information from an IPPAS mission. The group considered whether simple information from an IPPAS mission could be reported or referred to. For example, the number of recommendations generated was identified as one option. However, the picture of nuclear security derived from this measure may not be accurate. Countries that allow deeper access to information will get more recommendations (by default) than a country that restricts what kind of information to share with the IPPAS team. The latter case is likely to generate fewer recommendations. If reported in number of recommendations, the more restrictive country may be perceived as having more effective nuclear security, although in reality it may be the contrary. Finding a way to incentivize countries to provide missions access to more information and to be receptive of the resulting recommendations is an important step. This is particularly important for follow-up missions.

Recommendations for Strengthening Nuclear Security Information Sharing

Establishing effective and balanced best practices on information sharing can be achieved within the framework of established legal international instruments, along with necessary voluntary arrangements. The following were the recommendations from the roundtable discussion for strengthened information sharing:

- **Consolidate reporting requirements.** Each agreement comes with its own reporting requirements. With reporting requirements for UN Security Council Resolution 1540 and the Convention on the Physical Protection of Nuclear Materials (CPPNM), as well as those that will be required under the Amended CPPNM, countries are stressed to provide different sets of information in different contexts, while facing overlap. Creating an opportunity for consolidated and more consistent reporting provides an incentive for participation while avoiding reporting fatigue.

² IAEA Nuclear Security Series No. 20; Objective and Essential Elements of a State's Nuclear Security Regime

- **Promote increased, more effective reporting, particularly through forthcoming Matrix of Nuclear Security Information.**

The incentives and benefits to providing and sharing information is an important tool to strengthened nuclear security, at facilities, in nations, and internationally.

- **Encourage periodic IPPAS missions with information sharing.** Taking past, present, and requested missions into account, it is clear that IPPAS is a key contributor to monitoring the effectiveness of nuclear security globally and as implemented nationally. In anticipation of a high number of IPPAS missions in the future, attention should be given to identifying how IPPAS results may be compiled and shared to contribute to a process aimed at assessing nuclear security effectiveness; at facilities, nationally, or globally.

The analysis and recommendations included in this Policy Memo do not necessarily reflect the view of the Stanley Foundation or any of the conference participants, but rather draw upon the major strands of discussion put forward at the event. Participants neither reviewed nor approved this document. Therefore, it should not be assumed that every participant subscribes to all of its recommendations, observations, and conclusions.

For further information, please contact Jennifer Smyser at the Stanley Foundation, 563-264-1500.

About The Stanley Foundation

The Stanley Foundation advances multilateral action to create fair, just, and lasting solutions to critical issues of peace and security. The foundation's work is built on a belief that greater international cooperation will improve global governance and enhance global citizenship. The organization values its Midwestern roots and family heritage as well as its role as a nonpartisan, private operating foundation. The Stanley Foundation does not make grants. Online at www.stanleyfoundation.org.