

# ASSESSING PROGRESS ON NUCLEAR SECURITY ACTION PLANS

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## Abstract

Participants at the final Nuclear Security Summit in 2016 agreed on “action plans” for initiatives they would support by five international organizations and groups—the International Atomic Energy Agency, the Global Initiative to Combat Nuclear Terrorism, INTERPOL, the United Nations, and the Global Partnership Against the Spread of Weapons and Materials of Destruction. These institutions were supposed to play key roles in bolstering ongoing nuclear security cooperation after the summit process ended. The action plans were modest documents, largely endorsing activities already underway, and there have been mixed results in implementing them. To date, these organizations have not filled any substantial part of the role once played by the nuclear security summits.

## 1. INTRODUCTION

Multilateral cooperation plays a critical role in strengthening nuclear security, though each country with nuclear weapons, weapons-usable nuclear materials, dangerous radiological materials, or nuclear facilities is ultimately responsible for ensuring they are protected against theft or sabotage. International organizations and groups support this cooperation by facilitating bilateral and multilateral communication, supporting capacity-building activities, developing and strengthening norms, improving accountability, and providing technical support to states.

From 2010 through 2016, dozens of world leaders gathered for four summits focused on strengthening nuclear security around the globe. These summits encouraged national leaders to focus political attention on nuclear security and offer concrete pledges of new steps to improve nuclear security. They facilitated dialogue and information sharing. All of this led to significant improvements in measures to prevent nuclear theft and sabotage in many countries.

The summits, however, were never going to continue indefinitely. In 2016, at the fourth and final nuclear security summit, dozens of countries agreed to support action plans for five international organizations and groups. Participants hoped that these institutions—the International Atomic Energy Agency (IAEA), the United Nations (UN), INTERPOL, the Global Partnership Against the Spread of Weapons and Materials of Destruction, and the Global Initiative to Combat Nuclear Terrorism (GICNT)— would help lead international efforts to strengthen nuclear security after the summit process ended. Since the participating countries included only a portion of the memberships of these international organizations, the action plans could not direct what these organizations should do; instead, they represented pledges by the participating countries to support the steps outlined in the action plans in their roles as member states of these organizations.

To effectively sustain progress in strengthening global nuclear security, the action plans might have established a bold vision for the future or laid out approaches to continue summit practices such as regular pledges of new nuclear security steps and national reporting on nuclear security progress. Instead, the action plans largely endorsed activities that were already planned or underway. Even with that limited ambition, implementation of the action plans has had mixed results. All of the organizations have accomplished some elements of their plans, but critical elements of the plans have not been fulfilled. Many thought these action plans would serve as initial road maps for international efforts to continue strengthening nuclear security. As the plans fade further into memory, however, there is little indication they have driven significant nuclear security progress or will do so in the future.

This paper will review the key nuclear security activities of these five international organizations and groups since the 2016 summit and explore where the action plans may have led to action. (For further discussion, see [1].) It will assess some of the barriers that exist to achieving the goals of the action plans in these organizations. Finally, it will provide recommendations for how these five international institutions can contribute to further progress in strengthening nuclear security.

## 2. ACTION PLAN IN SUPPORT OF THE INTERNATIONAL ATOMIC ENERGY AGENCY

The IAEA action plan is especially important, as the summit participants expected the IAEA to play “the central role in strengthening the international nuclear security architecture,” concluding that a “strengthened role of the IAEA is crucial for the continuing delivery of outcomes and actions from the nuclear security summits.” [2] Since the end of the nuclear security summit process, the IAEA has continued its nuclear security roles, though it would be difficult to say that these have been substantially strengthened [3].

The IAEA’s Division of Nuclear Security has focused on its core activities of developing guidance documents; providing training; convening meetings on nuclear security; supporting regional nuclear security networks; collecting and providing data; and coordinating peer reviews and assistance to states. Over the almost four years since the last nuclear security summit, the Division of Nuclear Security has published nine documents in its nuclear security series, including implementation guides on security culture and information security; shared information and resources through the Nuclear Security Support Center network; conducted 15 International Physical Protection Advisory Service (IPPAS) peer review missions, more than a third of which were in countries with weapons-useable nuclear material [4]<sup>1</sup>; and hosted numerous workshops and two major international conferences focused on nuclear security.

In general, the IAEA has supported some activity, even if it is only a meeting or workshop, in each of the 13 broad areas addressed in its Action Plan, but the plan itself remains controversial.<sup>2</sup> Some IAEA member states who were not invited to the summits have not wanted the IAEA’s nuclear security programs to be driven by decisions from a summit process in which they had no voice. As a result, it has been difficult for the IAEA to pursue initiatives born out of the nuclear security summits. The IAEA has mostly not referred to the summits—apart from circulating 11 information circulars from participating states and a brief mention of the summits in annual General Conference resolutions [5].

Several points in the IAEA Action Plan simply committed participating states to “advocate” for the IAEA “continuing” to do things it was already doing [6]. Other points would involve changes. For example, the Action Plan calls for enhancing “the importance of nuclear security” at the IAEA; convening regular nuclear security-focused ministerial meetings to promote “political commitment, enhance awareness and keep momentum” on bolstering the global nuclear security architecture; providing “reliable and sufficient resources” for the IAEA’s nuclear security work, including states who approved the plan providing “political, technical and financial support” and continuing to contribute to the Nuclear Security Fund; participating states “periodically” hosting IAEA nuclear security reviews; encouraging entry-into-force of the amended Convention on the Physical Protection of Nuclear Material (CPPNM) and seeking its universalization; using IAEA mechanisms to communicate more information about nuclear security; expanding work to strengthen nuclear security culture; and working with the IAEA to minimize the use of highly-enriched uranium (HEU). There has been only limited progress in these areas since the 2016 summit:

- *Importance of nuclear security at the IAEA.* Contrary to the summit participants’ hopes, there is little evidence that the issue has increased in importance at the agency since the Action Plan was approved.

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<sup>1</sup> The 15 countries that have received IPPAS missions since 2017 are Paraguay, Uruguay, Madagascar, Belgium, Lebanon, Japan, Switzerland, France, Ecuador, the Democratic Republic of the Congo, Australia, Lithuania, China, Hungary, and Germany.

<sup>2</sup> The 13 categories are high-level support for the IAEA’s nuclear security activities; coordination role of the IAEA; convention on the protection of nuclear material and its 2005 amendment; provision of guidance; IAEA services for states; nuclear material; transport; response to nuclear security events; radioactive material; nuclear and other radioactive material out of regulatory control; nuclear security culture; nuclear forensics; and computer and information security.

Indeed, with the Agency no longer called upon to participate in global gatherings of national leaders, one could argue that the centrality of nuclear security within the overall IAEA agenda has declined.

- *Ministerial meetings and political support.* The IAEA has continued to organize nuclear security conferences such as this one that include a ministerial-level meeting. The 2016 nuclear security conference proved again that the IAEA could serve as an important forum for expert discussions. But it also showed that it was more difficult for the IAEA to serve as a forum for in-depth discussion and decisions at the political level. Countries made no new major new nuclear security commitments; the ministerial meeting included only a string of five-minute statements with no genuine discussion; the ministerial declaration was even weaker than the statement from the 2013 ministerial; and very few countries made meaningful announcements about further progress.
- *Sufficient resources.* The Division of Nuclear Security is spending less money than it did at the end of the summit process, going from €38 million in its 2015-2016 fiscal year and again in 2016-2017, then falling to €28 million in 2017-2018, and €24 million in 2018-2019 [7]. Additionally, voluntary contributions through the Nuclear Security Fund, which make up a significant majority of the Division of Nuclear Security's budget, have not increased significantly since the end of the summit process [8].
- *Peer review.* Although the IAEA has continued to sustain the number of IPPAS missions it supported during the nuclear security summit process, the program has not expanded. Roughly the same number of countries are receiving IPPAS missions as did prior to 2016.
- *Support for the amended CPPNM.* Shortly after the end of the 2016 Nuclear Security Summit, enough countries ratified the amendment to the CPPNM for it to enter into force. This was a major victory for strengthening the global nuclear security architecture. The amendment expands the convention's scope to include protection of nuclear material in peaceful domestic use and storage and to sabotage of nuclear facilities. As per the amendment, there will be a conference in 2021 to review implementation. The Action Plan called for participating states to encourage all states to accept the amended convention, and the IAEA has emphasized universalization of participation. These efforts have contributed to 20 additional countries joining the amendment since the amended convention entered into force, bringing the total to 123 – leaving 37 parties to the original convention still to go [9]. The Action Plan called for those participants which were parties to the CPPNM to advocate for the IAEA to convene “regular review conferences” – but many Action Plan signatories, including the United States, are balking at supporting additional review conferences beyond 2021.
- *Communicating more information.* The Action Plan called for participants to use IAEA-managed information-sharing mechanisms to “build domestic, regional and international confidence in the effectiveness of national nuclear security regimes.” There has been little progress on such information sharing. A few countries, including Canada, Germany, Australia, Sweden, have released some of the results from their IPPAS missions. They are, however, exceptions to the rule. Most countries have not revealed any information about their nuclear security peer reviews or used other IAEA mechanisms to build expanded confidence in their nuclear security regimes. Nor is there strong evidence that the IAEA has pushed for greater information sharing.
- *Strengthening nuclear security culture.* Since 2016, the IAEA has continued a significant security culture program, offering a variety of training opportunities and workshops and publishing new guidance on how countries can assess security culture at a nuclear organization [10]. But the Action Plan participants had pledged to work to enhance security culture to the point that it would be “infused into all elements of national nuclear security regimes,” and there is little evidence that any of them have done so; the United States, for example, does not require operators to have a program in place to assess and strengthen security culture.
- *Minimizing HEU.* The IAEA has supported the removal of some HEU since the end of the summit process. Most notably, it has helped with the conversion of HEU reactors and the removal of HEU from Nigeria and Ghana.

Overall, it appears that the IAEA has not taken on the “strengthened role” in nuclear security that the states supporting the Action Plan envisioned, and the participating states have not pushed forward with all the actions they envisioned.

### 3. ACTION PLAN IN SUPPORT OF THE GLOBAL INITIATIVE TO COMBAT NUCLEAR TERRORISM

Founded in 2006, the GICNT is a group of countries working cooperatively on a range of activities designed to strengthen their capacity to prevent and counter acts of nuclear terrorism. Most of the group’s work has focused on issues such as preventing illicit nuclear and radiological trafficking, responding to incidents, law enforcement, and forensics to help identify the origin of seized materials. Members of the group, however, endorse a common set of principles that also include “accounting, control, and protection of nuclear material” and “security of civilian nuclear facilities.” As of the end of 2019, there were 89 members of the GICNT, three more than there were in 2016, and six international observers, one more than in 2016. The GICNT is co-chaired by the United States and Russia.

The GICNT Action Plan called for steps to “promote capacity building across the spectrum of nuclear security challenges,” particularly in GICNT’s three working group areas, nuclear detection, nuclear forensics, and response and mitigation. Overall, the Action Plan largely endorsed activities already planned or underway. The plan is divided into four sections: capacity building; cooperation among partners; scenario-based discussions, tabletop exercises, and field exercises; and coordination and collaboration. Despite the reference to addressing the full spectrum of challenges, the plan does not focus on physical protection or control and accounting for nuclear weapons, weapons-usable nuclear material, or high-consequence nuclear facilities—though the plan did suggest convening expert meetings to discuss possible activities “in other technical subjects or on cross-disciplinary issues” covered by the GICNT principles [11].

GICNT participants have sustained their level of support for the Initiative since the end of the summit process. There is some evidence there has been a greater focus on preventing theft of nuclear material since the end of the summit process. At the GICNT’s 10th plenary meeting in 2017, Argentina identified the need for increasing international engagement focused on radioactive source security. It recommended that the GICNT bring together groups to “strengthen coordination, exchange best practices, and promote the importance of radiological source security.” This recommendation was endorsed by the GICNT’s Implementation and Assessment Group coordinator [12]. In principle, the group could take a similar approach in the future with respect to security for nuclear facilities or for plutonium and HEU. In addition, some participants in the plenary offered public statements reminiscent of those in the summit process that included information about their progress in implementing nuclear security measures. For example, Pakistan highlighted the accomplishments of its Nuclear Security Center of Excellence [13].

Participation in the GICNT has helped highlight the threat of nuclear and radiological terrorism, which has probably contributed to security culture in some countries. There is no publicly available evidence, however, that the GICNT activities have contributed significantly to security for nuclear facilities, transports, or materials, though the group’s activities have contributed to increasing capacity and coordination between governments in its three working group areas [14].

### 4. ACTION PLAN IN SUPPORT OF THE GLOBAL PARTNERSHIP AGAINST THE SPREAD OF WEAPONS AND MATERIALS OF MASS DESTRUCTION

In 2002, the Group of Eight (G8) industrialized democracies created the Global Partnership (GP), committing \$20 billion over ten years to dismantle and control nuclear, chemical, and biological weapons and materials. While the majority of the initial funding came from the United States, at least nine other countries have contributed to nuclear-related projects. The Global Partnership’s initial work focused almost exclusively on Russia and Ukraine, but when the initiative was renewed in 2011 and at subsequent summits, it expanded to a global focus on helping states build their nonproliferation and nuclear security capacities, helping them to fulfill their obligations under UN Security Council Resolution 1540. In 2014, summit participants kicked out Russia because of its seizure of Crimea and destabilization of eastern Ukraine, making the G8 back into the G7. Russia suspended nearly all nuclear security cooperation with the United States, and other Global Partnership participants’ work in Russia is

now very modest. The absence of Russia—the country with the largest nuclear stockpiles—diminishes the GP’s ability to play a central role in nuclear security.

The Global Partnership’s Action Plan mentions, among other initiatives, helping countries with bolstering nuclear security culture; reducing insider threats; strengthening transport security; and beefing up computer security. It also envisions working with the nuclear security Centers of Excellence [15]. The participants in the Global Partnership’s Nuclear and Radiological Security Sub-Working Group have undertaken a wide range of projects in these and related areas since then, amounting to tens of millions of dollars in planned expenditures. The largest projects are typically those funded by the United States; the largest nuclear security projects funded by other partners tend to be in the range of \$1-2 million. The Sub-Working Group has developed an expanded format for reporting on the purpose, status, participants, and funding of projects and is taking other steps to strengthen coordination of efforts. One significant effort, not officially part of the Global Partnership but developed through discussions there, is the Information Sharing Initiative for Ukraine, which allows all the different donors, recipients, and implementers working on projects in Ukraine to share information and increase their ability to learn lessons, find synergies, and avoid overlaps [16].

Some Action Plan items do not appear to have gone anywhere. The Action Plan, for example, calls for establishing a rapid-funding capacity, for expanding the group’s membership, and for raising the group’s profile with G7 leaders, but none of those appear to have happened since 2016. Uniquely among the five groups, Global Partnership participants have discussed the possibility of revising and updating the Global Partnership Action Plan, though as far as the authors are aware, no action on that has been taken.

The Global Partnership’s efforts are clearly contributing to nuclear security, including in the areas noted in the Global Partnership Action Plan. Equally clearly, the Global Partnership has not attempted to take on any substantial part of the role the summits played in discussing and deciding on the next steps in nuclear security.

## 5. ACTION PLAN IN SUPPORT OF THE INTERNATIONAL CRIMINAL POLICE ORGANIZATION INTERPOL

INTERPOL is the leading international agency for law enforcement cooperation. It has a sub-directorate that addresses nuclear, chemical, biological, radioactive, and explosive (CBRNE) crime and terrorism. That group is relatively small, with a staff of approximately 30 (including both substantive and administrative personnel) in the radiological and nuclear program [17].

The INTERPOL Action Plan was written in close coordination with what INTERPOL was already hoping to do; INTERPOL staff have used the Action Plan as a road map for future activities and a demonstration of high-level backing for the ideas included. Like the others, however, the INTERPOL plan largely endorsed activities already underway. INTERPOL has made progress in each of the four areas its Action Plan highlights: data services and information sharing; support to investigations; capacity building; and expanded support for INTERPOL’s nuclear security work. Under Project Geiger, INTERPOL has improved its collection and analysis of public-source information on incidents related to the illicit use of nuclear or radioactive materials. It has run training courses and table-top exercises for police, customs, border security agencies, public health groups, partners, and regulatory bodies on preventing and responding to nuclear or radioactive incidents. Project Stone provides technical support and training for detecting and intercepting illicit nuclear materials in the Caribbean. This project includes plans to include follow-up assessments to determine the success of training sessions that occurred years ago. INTERPOL staff describe support for nuclear security activities as stronger than it was in the past [18].

Because budgets for the nuclear security program are not published separately, it remains unclear if the Action Plan goal of expanded funding for INTERPOL’s nuclear security funding has been accomplished. The Action Plan pledged that participants would contribute additional resources to INTERPOL’s nuclear and radiological efforts. The primary donors to INTERPOL are the United States, Canada, and the United Kingdom. The sources of funding for INTERPOL’s nuclear security work and the proportion of funding from each country have not changed significantly since the end of the summit process. While funding for CBRNE within INTERPOL is reportedly adequate, it was in jeopardy in 2016 when the U.S. Federal Bureau of Investigation cut its funding [19].

The Action Plan suggests that INTERPOL help police investigations by publishing “a comprehensive study of scams and hoaxes” related to nuclear smuggling [20]. This document is currently being reviewed by partner countries. Another goal in its Action Plan was to develop an e-learning module for nuclear security. This project was started but left incomplete because some intended recipient countries did not have the capacity to support e-learning.

The INTERPOL CBRNE program primarily focuses on coping with material that is already out of regulatory control, not on preventing theft or sabotage. Overall, it appears that many of the steps envisioned in INTERPOL’s Action Plan have been accomplished. INTERPOL’s small program makes a modest but real contribution to law enforcement’s capacity to respond to nuclear smuggling and terrorism and to law enforcement agencies’ understanding of nuclear and radiological terrorism threats.

## 6. ACTION PLAN IN SUPPORT OF THE UNITED NATIONS

The United Nations has played a more limited role in nuclear security. In 2004, the UN Security Council unanimously approved Resolution 1540 (UNSCR 1540), which legally obligated all UN member states to make it a crime to help terrorists with nuclear, chemical, or biological weapons, and to take a range of steps to improve controls over such weapons and related materials. This included a legal requirement that all UN member states provide “appropriate effective” security and accounting for all stocks of nuclear weapons and weapons-usable materials in their possession. The UN was also the forum for the negotiation of the International Convention on the Suppression of Acts of Nuclear Terrorism (ICSANT), completed in 2005. Since then, however, the UN has not attempted to be a major forum for decision-making on nuclear security or devoted substantial resources to helping states with on-the-ground nuclear security implementation.

The UN has long had a Panel of Experts supporting a Committee on implementation of UNSCR 1540, and they have worked with states both to convince them of the importance of implementing the resolution’s requirements and to help match donor-state assistance to recipient needs. Most of the effort, however, has focused on areas where states had no law or program at all in a required area, and states handling nuclear material all had at least *some* system for its security when UNSCR 1540 was passed. As a result, only a very modest portion of the panel’s effort has focused on the nuclear security obligations.

In principle, UNSCR 1540, with its legal obligation on all states to provide effective security and accounting for all nuclear weapons and weapons-usable nuclear materials, could be a very important element of the global nuclear security framework, covering as it does all UN member states and both military and civilian nuclear materials. But so far, the resolution and the UN’s activities to implement it have had a very limited impact on changing on-the-ground security for nuclear weapons and materials. Since the resolution was passed, no one has defined what essential elements must be in place for nuclear physical protection and accounting systems to be “appropriate” and “effective.” UN member states have not given the panel either the authority or the resources to assess the appropriateness and effectiveness of states’ nuclear security systems [21].

The Action Plan for the United Nations focused on four key areas: national implementation, assistance, coordination and cooperation, and outreach, all focused on either UNSCR 1540 or ICSANT [22]. Like the others, the document largely reaffirmed the limited UN activities already taking place.

Where the Action Plan mentioned specific new initiatives, the record on follow-through is mixed. For example, the Action Plan called on parties to ICSANT to convene a review meeting for the convention’s 10th anniversary. The meeting took place in December 2017, though it was not widely attended. The Action Plan also pledged that summit participants would contribute to the UN Trust Fund for Global and Regional Disarmament Activities. There are no public indications that there has been any significant increase in such contributions. The UN Secretary-General’s sweeping agenda for disarmament, released in 2018, does not mention nuclear security, UNSCR 1540, the danger of nuclear terrorism, or any of the nuclear security conventions [23].

The Action Plan called on the participants to use the “opportunity” of the 2016 review of UNSCR 1540 to enhance its implementation. The review was completed in December 2016, but the resulting resolution did not call for any new or strengthened nuclear security-related activities [24]. Since the review, the 1540 Committee’s activities on nuclear security have focused on participation in workshops or meetings—where in most cases nuclear

security is one issue among many and receives only modest attention. The Action Plan also emphasized making efforts to expand membership in ICSANT; 12 states have become parties to ICSANT since the Action Plan was approved, bringing the total to 116 [25].

Overall, although the UN implemented some of the activities called for in its Action Plan, it seems clear that the UN is not currently serving as a forum for states to discuss and make decisions about the next steps in nuclear security.

## 7. RECOMMENDATIONS

The five action plans laid out at the 2016 Nuclear Security Summit have not led to much new action. Much of what has been done was already planned or underway when the Action Plans were written, and only a fraction of the new items called for in the plans have occurred. In the four years since the 2016 summit, there have been no further international nuclear security decisions, commitments, or initiatives, and only a tiny number of additional countries have joined on to the initiatives that came out of the summit process. The global nuclear security framework does not appear to be undergoing any significant further evolution. Overall, the remaining international mechanisms for agenda-setting and issue framing appear to be insufficient.

There is a need for each of these institutions to recommit and build upon the objectives set out in these action plans. New or strengthened initiatives are needed to support sharing nuclear security information, making new commitments, and focusing on activities that will result in actual nuclear security improvements on the ground.

**Develop new action plans.** Nearly four years after the end of the nuclear security summits, it is time for each of the five leading international nuclear security organizations to develop new nuclear security action plans. All five of these institutions should ask outside, independent parties to assess their nuclear security work, including but not limited to how effectively the actions called for in the 2016 plans were implemented. The assessments should include what was accomplished, what goals were left unfulfilled, and how much of what was done actually contributed to strengthening on-the-ground nuclear security measures to prevent nuclear theft and sabotage. Building from these assessments, each of the five groups should work to identify the most useful steps it could take to strengthen nuclear security over the next five years and establish specific, measurable, time-bound goals to accomplish them. Drafts of these new plans should be presented at a meeting of all five groups, focused on identifying gaps, ensuring greater coordination, and reducing overlaps. Unlike the previous plans that were born out of an exclusive process, these action plans would be developed by the institutions themselves, helping to bolster their legitimacy. The development of these plans can be integrated with existing processes, such as the IAEA's triannual development of its nuclear security plan.

**Establish an additional senior-level forum for discussing the next steps in nuclear security at a senior level and strengthen existing forums.** Since the end of the summits, none of the five organizations have succeeded in establishing a forum for international nuclear security decision-making. The Nuclear Security Contact Group, also established at the 2016 summit, has offered a forum for lower-level discussions of some nuclear security issues but has been unable to impart much momentum or political support to nuclear security initiatives. Several existing institutions or fora could be strengthened to support a more effective dialogue:

- *Create a nuclear security working group within the GICNT.* Accounting, control, and physical protection of nuclear materials, and security for civilian nuclear facilities are key GICNT's core principles, but the initiative has never focused much on them. The GICNT brings together key parties: it is co-led by the United States and Russia (representing practically the only related area where the two still cooperate), has all but a few of the states with weapons-usable nuclear material or nuclear power plants participating, and is open to all states willing to endorse its principles. In activities such as its exercise program and its development of documents on topics such as nuclear forensics, it has shown it can function reasonably effectively and encourage dialogue at a technical level. A GICNT working group could be an important supplement to existing nuclear security frameworks, organizing activities, developing documents, and suggesting the next steps to be pursued.

- *Seek to make the upcoming review conference of the amended physical protection convention as focused and action-oriented as possible.* There are already concerning signs that the review conference for the amendment to the CPPNM may not focus on strengthening the global nuclear security architecture or improving nuclear security in signatory countries. There is still time for interested states to work with the IAEA to produce a conference that focuses specifically on steps states have taken to meet the physical protection convention's requirements and on the next steps to be taken. For example, states with interests in particular issues, such as security culture, insider threat protection, or security for military stocks (referenced in the convention's preamble) could form working groups that could prepare reports for the full conference, and possibly develop new voluntary commitments. Interested states could voluntarily prepare detailed reports on their approaches to nuclear security for discussion at the conference—similar to the reports on nuclear safety measures that states prepare for discussion at review conferences for the Convention on Nuclear Safety (CNS).
- *Work with the IAEA to revise the approach to its nuclear security conferences so that there is actual discussion of proposed initiatives at the ministerial meetings.* At its nuclear security conferences in 2013 and 2016, and again this week, the IAEA gathered ministerial-level representatives from countries all over the world, but there was little discussion beyond each making a brief formal statement. Several years are now available before the next conference to develop a different approach. For future meetings, interested states should work with the IAEA to build an approach, in which ministers could actually discuss key nuclear security issues with each other, perhaps using some of the tactics to enhance discussion developed at the different nuclear security summits.
- *Once a year, hold a meeting of the Nuclear Security Contact Group at the level of deputy ministers.* Although not one of the five action plan institutions, the Nuclear Security Contact Group established at the 2016 nuclear security summit is perhaps the most functional and focused international forum remaining for states to discuss the next steps in nuclear security. Since the summit process has ended, its membership has expanded modestly, and the group has continued regular dialogue on nuclear security. It is unclear whether this dialogue has had a tangible impact on states' nuclear security decisions, however. Without the driving deadlines and access to the highest levels of authority provided by the summits, the pace of accomplishment in the Contact Group has been slow. It would make sense, perhaps once a year, to elevate the discussion in the Contact Group to a higher political level, perhaps bringing deputy minister-level officials together to move the nuclear security agenda forward.

**Establishing a forum for discussing non-sensitive threat information.** As IAEA guidance documents make clear, belief in and understanding of the threat is fundamental to a strong nuclear security culture. Fortunately, international discussions of the threat have expanded in recent years. These discussions can help motivate action, inform decisions leading to stronger nuclear security arrangements, and build trust between participants. The IAEA has developed workshops to help states think through what threats they will require nuclear operators to protect against. At the GICNT's 10th plenary meeting in 2017, members were briefed on nuclear security threats. In 2019, INTERPOL briefed Global Partnership members on threats. These briefings should take place regularly and states could volunteer to provide non-sensitive information they have about the threat. Such discussions should include sharing information about nuclear security incidents and lessons learned from those incidents. Any of the five institutions could assist in this effort.

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