

TEN YEARS OF THE GLOBAL INITIATIVE TO COMBAT NUCLEAR TERRORISM (GICNT): STRENGTHS, CHALLENGES AND THE WAY FORWARD

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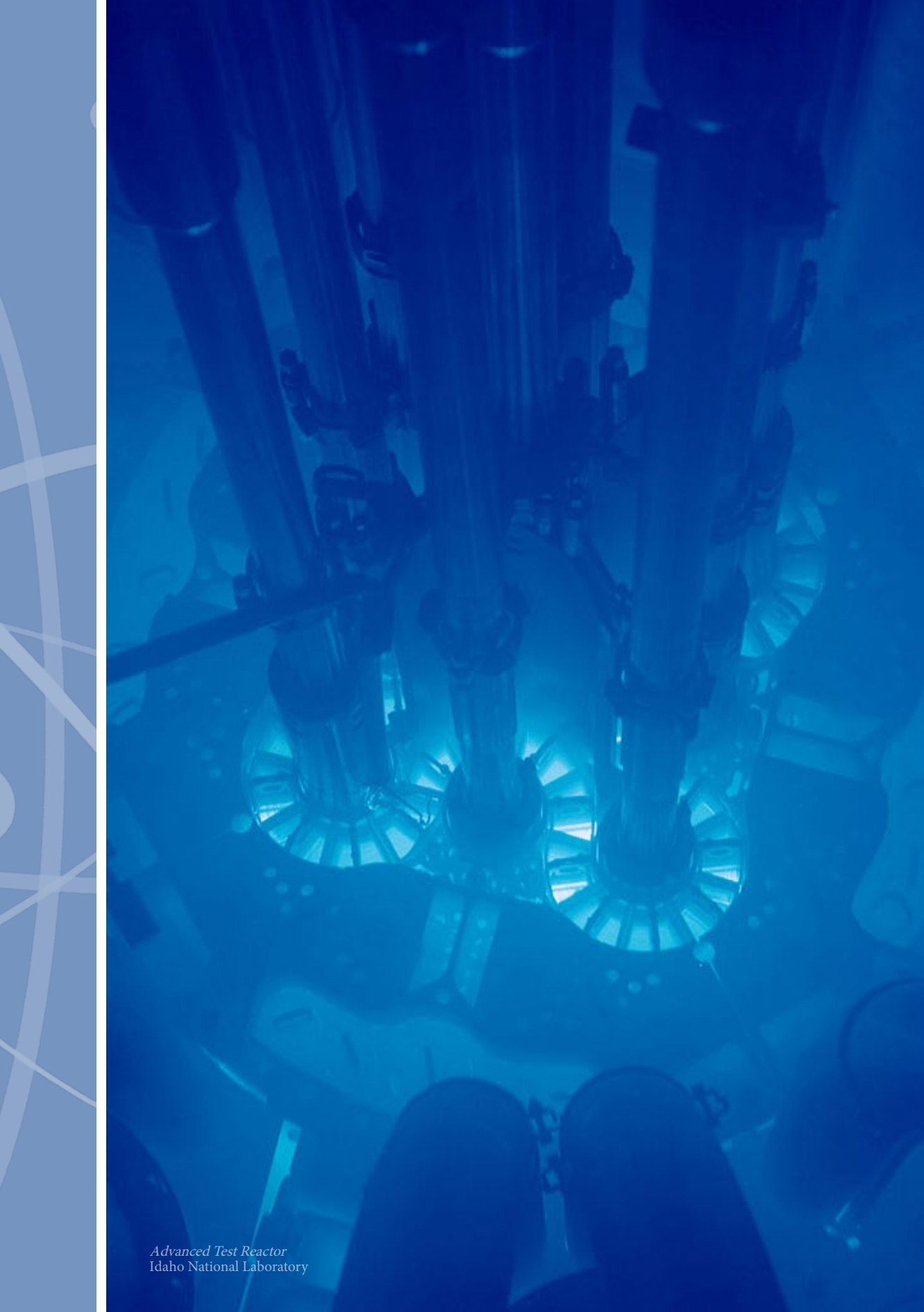
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EXECUTIVE SUMMARY

The Global Initiative to Combat Nuclear Terrorism (GICNT) is an international partnership that was launched in July 2006 by Russia and the US, with the purpose of reinforcing global capacity to prevent, detect and respond to nuclear and radiological terrorism. Membership in the GICNT is founded on commitment to a broad set of nuclear security principles, though in practice the partnership's activities have focused on three priority areas – nuclear detection, forensics and emergency response. On the occasion of the GICNT's tenth anniversary, this report reviews the partnership's evolution and contributions to nuclear security since its establishment and considers its future role in light of the evolving security environment, as well as its relationship to other nuclear security instruments.

Based on an analysis of the GICNT's operational structure and its past activities, the report identifies as the partnership's strengths its lasting momentum; broad and inclusive membership (including states with the largest stocks of fissile materials and representing six regions of the world); flexible hands-on approach focused on prac-

tical capacity-building; focus on materials out of regulatory control and post-nuclear security event scenarios; and contributions to awareness-raising and interoperability among partner states and their respective domestic agencies and institutions. Among the challenges facing the partnership, the report identifies limited participation in activities, lack of monitoring to assess partner state capacities, low visibility, and slow growth of membership in the last five years.

Looking forward, the report concludes with 10 recommendations for future themes and activities, such as increasing focus on legal and regulatory assistance aimed at helping states adhere to relevant international instruments; identifying radioactive source security as a new priority area (alongside detection, forensics and response); establishing engagement with the industry and medical community; increasing information sharing on partner state capabilities; and assessing and addressing emerging threats, such as cyber-attacks, as a potential priority area.

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1. INTRODUCTION

The Global Initiative to Combat Nuclear Terrorism (GICNT) is a voluntary international partnership launched in July 2006 by Russia and the US, with the purpose of reinforcing the global capacity to prevent, detect and respond to nuclear and radiological terrorism. The GICNT membership has since expanded to include 86 countries and five official observer organizations.¹ The GICNT has organized various multilateral activities designed to facilitate the implementation of key nuclear security principles that form the basis of the partnership. The GICNT complements and builds on other international nuclear instruments, notably the 2005 Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), the 1980 Convention on the Protection of Nuclear Material (CPPNM) and its 2005 amendment, as well as the United Nations Security Council Resolutions 1373 (2001) and 1540 (2004).

This report reviews the GICNT's evolution and contributions to nuclear security over its first decade of existence and considers the partnership's future role in light of the evolving security environment as well as its relationship to other nuclear security instruments. Chapter 2 of the report lays the groundwork by placing the GICNT in the broader nuclear security framework. It also describes the GICNT's membership and operational structure. Chapter 3 looks back at its evolution in the period of 2006-2016, highlighting key developments and achievements. This is

followed by an analysis in chapter 4 of the strengths and weaknesses of the partnership, with a particular focus on the GICNT's added value in relation to other nuclear security instruments. The fifth and final chapter focuses on the future of the GICNT and makes suggestions about potential new themes and activities in light of the preceding discussion, as well as based on consideration of the evolving threat environment. The material used for the report includes documents obtained through the GICNT website, reports, academic articles and expert interviews conducted specifically for this report.

The report has been written by SaferGlobe Finland and the Centre for Conflict and Security Law (University of Amsterdam). It was commissioned by the Ministries of Foreign Affairs of the Netherlands and Finland to inform the preparations for the GICNT High Level Anniversary Meeting (HLAM), to be held in June 2016 in the Netherlands. In addition, the project seeks to contribute more generally to the international discourse on nuclear security governance, where the GICNT is often mentioned in passing but rarely analysed in depth.

The views and opinions expressed in this publication are solely those of the authors and do not represent the views of the GICNT or any states or third parties involved in the GICNT.

1.1 GLOSSARY

CBRN = chemical, biological, radiological and nuclear (threats)
CBRN CoE = (EU) CBRN Risk Mitigation Centres of Excellence Initiative
CPPNM = Convention on the Physical Protection of Nuclear Material
CCSSRS = (IAEA) Code of Conduct on the Safety and Security of Radioactive Sources
FTX = field exercise
GICNT = Global Initiative to Combat Nuclear Terrorism
GIP = (GICNT) Global Initiative Information Portal
GP = G8 Global Partnership against the Spread of Weapons of Mass Destruction
HEU = highly-enriched uranium
HLAM = GICNT 10th Anniversary Meeting
IAG = (GICNT) Implementation and Assessment Group
IAEA = International Atomic Energy Agency
ICSANT = Convention for the Suppression of Acts of Nuclear Terrorism
INFCIRC = (IAEA) Information Circular
INSServ = (IAEA) International Nuclear Security Service
INSSP = (IAEA) Integrated Nuclear Security Support Plans
IPPAS = (IAEA) International Physical Protection Advisory Service
ITDB = (IAEA) Incident and Trafficking Database
JRC = (European Commission) Joint Research Centre
NAM = Non-Aligned Movement
NDWG = (IAG) Nuclear Detection Working Group
NFWG = (IAG) Nuclear Forensics Working Group
NSF = (IAEA) Nuclear Security Fund
NSS = Nuclear Security Summit
NPT = Treaty on the Non-Proliferation of Nuclear Weapons
NUSIMS = (IAEA) Nuclear Security Information Management System
RMWG = (IAG) Response and Mitigation Working Group
RN materials = nuclear and radioactive materials
SOP = (GICNT) Statement of Principles
TOR = (GICNT) Terms of Reference
TTX = tabletop exercise
WINS = World Institute for Nuclear Security
WMD = weapons of mass destruction

2. BACKGROUND AND GENERAL INFORMATION ON THE GICNT

The GICNT was launched 10 years ago, through a joint announcement by the Russian President Vladimir V. Putin and the US President George W. Bush on 15 July 2006, in St. Petersburg, Russia. Based on their shared perception of the threat of nuclear terrorism as “one of the most dangerous international security challenges,” they committed themselves to pursuing “the necessary steps with all those who share our views to prevent the acquisition, transport, or use by terrorists of nuclear materials and radioactive substances or improvised explosive devices using such materials, as well as hostile actions against nuclear facilities.”²

The first meeting of the GICNT was held three months later in Rabat, Morocco, in October 2006. At that meeting, 13 nations³ endorsed eight broad nuclear security objectives, known as the GICNT Statement of Principles (SOP). The SOP ranges from the accounting and detection of nuclear and radioactive (RN) materials and the security of civilian nuclear facilities to measures for preventing, criminalizing and responding to acts of nuclear terrorism. (For a shortened version of the full SOP, see Box 1.)

2.1 DEFINING THE GICNT

The GICNT defines itself as a “voluntary international partnership... committed to strengthening global capacity to prevent, detect, and respond to nuclear terrorism.”⁴ Alternatively, it can be characterized as an informal arrangement formed by sovereign states with a shared concern regarding the threat of nuclear terrorism, and a determination to work together to minimize that threat. In the words of Riccardo Alcaro, who describes the GICNT as one of the most innovative international measures in the area of nuclear security, the GICNT provides its partners with “a constantly upgraded blueprint to improve their capabilities,” based on the acknowledgement that the main responsibility for developing effective counter-terrorism measures rests on domestic authorities.⁵ Or, as Müller et al. write, the advantages of the GICNT for its members are “in the realm of obtaining useful information, familiarizing themselves with proven practices, and receiving training by experienced coaches on how to combat nuclear terrorism.”⁶

BOX 1: GICNT'S FOUNDING PRINCIPLES

1. Strengthen material accounting, control, and physical protection of nuclear and other radioactive (RN) materials;
2. Enhance civilian nuclear facility security;
3. Research and develop interoperable national detection capabilities for RN materials to prevent illicit trafficking;
4. Strengthen search, confiscation, and safe control capabilities over unlawfully held RN materials;
5. Prevent safe haven and the financing of nuclear terrorism;
6. Strengthen criminal and civil legal frameworks to provide liability for those involved in nuclear terrorism;
7. Improve response, investigation, and mitigation capabilities in cases of terrorist attacks involving the use of RN materials; and
8. Promote information sharing among participants pertaining to the suppression of acts of nuclear terrorism.

Source: GICNT website / Statement of Principles

Although membership in the GICNT is based on a commitment to the above-described broad set of nuclear security principles, in practice the activities have focused on three priority areas – nuclear detection, forensics, and emergency response – mainly reflecting principles 3, 7 and 8 of the SOP. The military nuclear materials and facilities of the Non-Proliferation Treaty (NPT) parties are left out of the GICNT's scope of activities.

2.2 THE GICNT IN THE BROADER CONTEXT OF THE INTERNATIONAL NUCLEAR SECURITY FRAMEWORK

Despite significant improvements made during the last decades, the strengthening of the global nuclear security framework still remains a work in progress. The GICNT seeks to bridge existing gaps by means of informal inter-governmental cooperation focused on capacity-building. This is done in light of and in coordination with other nuclear security instru-

ments. As stated in the SOP, GICNT activities are to be consistent with “relevant international legal frameworks,” notably the Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), the Convention on the Physical Protection of Nuclear Material (CPPNM) and its 2005 amendment and the relevant United Nations (UN) Security Council Resolutions. The following discussion provides a brief overview of this broader context of international nuclear security efforts.

Historically, the most important international guidance on nuclear security has been the IAEA's 1975 *Recommendations for the physical protection of nuclear material*, also known as INFCIRC/225. The document was a response to the expansion of international nuclear trade in the 1970s, as well as to the fact that nuclear security is not explicitly part of the 1970 NPT. While Article I of the NPT can be seen to establish a standard of maintaining control over nuclear materials, it contains no specific demands concerning this issue. INFCIRC/225 also laid the foundation for the first legally binding

nuclear security instrument, the CPPNM, which entered into force in 1987. The CPPNM remains the only multilateral treaty focusing on the physical protection of nuclear material.⁷

Following increased concern that terrorists could obtain and seek to use radioactive materials, particularly in the wake of the end of the Cold War and subsequent reports of unaccounted radioactive material, states began to discuss both an amendment to the CPPNM and a draft treaty on nuclear terrorism. The terrorist attacks on 11 September 2001 in the US gave new impetus to actions aimed at preventing terrorist acquisition and use of RN materials. In this context, the UN Security Council adopted Resolution 1373 (2001) on counter-terrorism and Resolution 1540 (2004) on WMD nonproliferation. The CPPNM amendment was finalized in 2005, and it finally entered into force on 8 May 2016. ICSANT entered into force in 2007 and focuses on criminalizing acts of nuclear terrorism. Moreover, in 2009 the UN Security Council convened a summit meeting of heads of state and government and issued Resolution 1887, which among other things calls upon all states to raise security standards with respect to their nuclear material.⁸

Alongside these efforts, there have been informal initiatives, notably the GICNT, but also the Global Partnership against the Spread of Weapons and Materials of Mass Destruction (GP) and the Proliferation Security Initiative (PSI). In addition, US President Obama launched the Nuclear Security Summit (NSS) process in 2009. The process, consisting of a series of four top-level meetings at two-year intervals,⁹ served to elevate nuclear security to the top of the international security agenda. In the context of the Summit process, the important contributions of the GICNT were acknowledged not only in the consensus communiqués, but also in national commitments and joint statements of participating states. The 2014 NSS Communique, for instance, noted that both the GICNT and the GP had “expanded in membership and ... become valuable platforms for coordination and cooperation on nuclear security.”¹⁰ At the fourth and, for the

time being, final Summit in 2016, the GICNT was identified as one of the five international organizations and initiatives through which NSS-participating states will seek to continue promoting and advancing global nuclear security.¹¹ To this end, states adopted an action plan describing measures they would take as members of the GICNT, and would advocate the GICNT to pursue, going forward. The described measures concern the areas of capacity-building, cooperation among partners, table-top and field exercises, and collaboration and coordination with other relevant instruments.¹²

As a testimony to the commitment of GICNT partners to the promotion of nuclear security norms, the vast majority GICNT members are parties to the CPPNM and ICSANT, and almost three quarters of them have ratified the CPPNM amendment as of the time of writing this report.¹³ As for participation in other aforementioned initiatives, 60 per cent of the GICNT partner states participated in the NSS process, and all of the NSS-participating states are part of the GICNT with one exception.¹⁴ All of the GP members and partners are also part of the GICNT.¹⁵

2.3 GICNT PARTNER STATES AND OBSERVERS

2.3.1 PARTNER STATES

Currently the GICNT has 86 partner states, representing six different regions of the world, and including all 28 EU member states, nine Middle Eastern states, and countries with the largest stocks of fissile material. (For a full list of partner states and a map illustrating GICNT membership, see page 12.)

2.3.2 INTERNATIONAL ORGANIZATIONS

In addition to state participants, the GICNT has five official observers: the International Atomic Energy Agency (IAEA), the European

Union (EU), International Criminal Police Organization (Interpol), the United Nations Office on Drugs and Crime (UNODC) and the United Nations Interregional Crime and Justice Research Institute (UNICRI). International organizations may become observers to the GICNT after having provided a written letter of endorsement of the SOP, and upon co-chair consensus.

2.3.2.1 THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

The IAEA was the GICNT's first official observer. As noted above, the IAEA's key role in developing international nuclear security guidance can be traced to the early 1970s. This role was further strengthened in 2002 with the establishment of the IAEA's Office of Nuclear Security, now elevated to the level of Division, and the Nuclear Security Fund (NSF). The Division of Nuclear Security has assisted member states, for example, in implementing INFCIRC/225, reducing their highly-enriched uranium (HEU) stockpiles, and offering its International Physical Protection Advisory Service (IPPAS) to member states. The IAEA functions as depositary for the CPPNM and assists in the coordination of activities related to ICSANT. In 2000, and then in revised form in 2003, the IAEA published the Code of Conduct on the Safety and Security of Radioactive Sources (CCSSRS).¹⁶

2.3.2.2 THE EUROPEAN UNION (EU)

Given that nuclear safety and security are closely connected, the EU's nuclear security efforts can be traced to the 1957 Euratom treaty. However, a more structured EU approach to nuclear security began to emerge in 2006, as part of a broader focus on chemical, biological, radiological and nuclear (CBRN) issues. A 2009 action plan focused on prevention, detection, as well as preparedness and response to incidents involving CBRN materials, whereas a 2012 review recognized synergies between CBRN issues and the security of explosives (E), leading to a new focus on CBRN-E security. In 2010, the EU launched its CBRN

Risk Mitigation Centres of Excellence Initiative (CBRN CoE), which involves capacity-building activities with 52 non-EU countries.¹⁷ The initiative is funded by the European Commission and implemented jointly with UNICRI and the European Commission's Joint Research Centre (JRC). UNICRI and the JRC coordinate the initiative, in cooperation with the European Commission's Directorate General for Development and Cooperation and the European External Action Service (EEAS).¹⁸

2.3.2.3 INTERNATIONAL CRIMINAL POLICE ORGANIZATION (INTERPOL)

Interpol represents the international law enforcement community in the GICNT. In 2011, it created a Radiological and Nuclear Terrorism Prevention Unit (RadNucT) as part of its Chemical, Biological, Radiological, Nuclear and Explosives (CBRNE) Terrorism Prevention Programme. The programme maintains databases on CBRN incidents around the world.¹⁹ The RadNucT assists police services worldwide in the prevention of the malicious use of RN material as well as related law enforcement action. Interpol's strategy against RN terrorism is based on three main pillars: information sharing and analytical support; capacity-building and training, and operational and investigative support. Interpol cooperates closely with the IAEA, and it was an observer within the NSS process starting with the 2012 Summit in Seoul.²⁰

2.3.2.4 THE UNITED NATIONS OFFICE ON DRUGS AND CRIME (UNODC)

In the UNODC, the issue of nuclear terrorism falls under the responsibility of the Terrorism Prevention Branch (UNODC/TPB). The TPB provides legal technical assistance to states in the ratification and implementation of key international conventions and protocols related to terrorism, including those related to CBRN terrorism. Legislative assistance activities of the TPB include, among other things, contributing to awareness raising and reviewing, upon request, national implementation of the criminalization provisions of international legal instru-

MEMBER STATES OF GICNT

Afghanistan
Albania
Algeria
Argentina
Armenia
Australia
Austria
Azerbaijan
Bahrain
Belarus
Belgium
Bosnia
Bulgaria
Cambodia
Canada
Cabo Verde
Chile
China
Cote d'Ivoire
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Georgia
Germany
Greece
Hungary
Iceland
India
Iraq
Ireland
Israel
Italy
Japan
Jordan
Kazakhstan
Republic of Korea
Kyrgyz Republic
Latvia
Libya
Lithuania
Luxembourg
Republic of Macedonia
Madagascar
Malaysia
Malta
Mauritius

Mexico
Montenegro
Morocco
Nepal
Netherlands
New Zealand
Norway
Pakistan
Palau
Panama
Philippines
Poland
Portugal
Romania
Russian Federation
Saudi Arabia
Serbia
Seychelles
Singapore
Slovakia
Slovenia
Spain
Sri Lanka
Sweden
Switzerland
Tajikistan
Thailand
Turkey
Turkmenistan
Ukraine
United Arab Emirates
United Kingdom
United States
Uzbekistan
Vietnam
Zambia



ments focused on CBRN counter-terrorism, such as the CPPNM and the relevant UN Security Council resolutions. In addition to the UNODC's official observer status within the GICNT, the UNODC/TPB collaborates with the IAEA, the Biological Weapons Convention Implementation Support Unit (ISU), the UN Security Council Committee established pursuant to United Nations Security Council Resolution 1540 (2004) and its Group of Experts, the International Maritime Organization (IMO), the International Civil Aviation Organization (ICAO), and the Organization for the Prohibition of Chemical Weapons (OPCW).²¹

2.3.2.5 THE UNITED NATIONS INTERREGIONAL CRIME AND JUSTICE RESEARCH INSTITUTE (UNICRI)

UNICRI is a UN agency whose task is “to support countries worldwide in preventing crime and facilitating criminal justice.” Regarding the mitigation of CBRN risks, which is one of UNICRI's current priorities,²² it promotes a holistic and integrated approach that “incorporates all international, regional and national CBRN components into a common strategy.” In 2004, UNICRI launched its CBRN Risk Mitigation and Security Governance Programme.²³ UNICRI is responsible for implementing the EU CBRN Risk Mitigation CoE Initiative together with the European Commission's JRC.²⁴

2.4 OPERATIONAL STRUCTURE

Due to its informal character, the GICNT does not have a fixed bureaucratic structure. However, its operational functions, as well as the roles and responsibilities of its members, are outlined in a short, non-public Terms of Reference (TOR).

The GICNT is currently co-chaired by Russia and the US. GICNT co-chairs are (re-)elected every four years based on a majority vote among GICNT member states. They are responsible for coordinating, developing, and co-chairing the plenary meetings, and leading

outreach efforts. The co-chairs also oversee the activities of the Implementation and Assessment Group (IAG).

The IAG is an informal advisory body responsible for GICNT coordination and practical implementation of its shared principles. The IAG ensures that GICNT activities are integrated, coordinated with, and complementary to other international efforts. The IAG is led by a coordinator, who is chosen every two years and meets regularly with the co-chairs. The IAG reviews the GICNT's past achievements, makes recommendations about future priorities and organizes the annual IAG and the IAG mid-year review meetings. Since 2015, the IAG has been led by the Netherlands, which was preceded in this role by the Republic of Korea and Spain.

Regular GICNT meetings include biennial plenary meetings, and annual IAG and IAG mid-year review meetings. The plenary takes decisions based on consensus, provided that a quorum (the simple majority of partner states) is present. Issues may be put to a vote if consensus is not possible. Partner states have voting rights within the GICNT. Observers do not have the right to vote, but they may provide advice regarding GICNT activities. This rule of decision-making applies, *inter alia*, to IAG recommendations on priorities for the two-year period, as well as to the endorsement of policies, plans, procedures and/or best practices that come out of the IAG's work.

The IAG organizes its work through working groups, which it may establish upon the Plenary's direction. Reflecting the GICNT's priority areas, as defined in 2010-2011, there are currently three IAG working groups focused on nuclear detection, nuclear forensics, and emergency response and mitigation.

- The Nuclear Detection Working Group (NDWG) contributes to the development of partner states' capabilities to detect illicit trafficking of RN materials and devices by raising aware-



*Nuclear power plant's cooling chimneys in Jaslovské Bohunice, Slovakia.
János Korom Dr.*

ness, sharing know-how and providing guidance to relevant experts. Initially focused on border detection, NDWG activities have increasingly moved towards inland detection and law enforcement. The NDWG is led by Finland, who took over from the Netherlands as the Chair of the NDWG in 2015.

- The Nuclear Forensics Working Group (NFWG) assists partners in developing nuclear forensics capabilities, raising awareness and promoting cooperation and the sharing of best practices for nuclear forensics. The NFWG is led by Australia.
- The Response and Mitigation Working Group (RMWG) develops best practices and recommendations for

responding to emergencies caused by terrorist use of RN materials, so as to protect human life, health, and property. Initially, the RMWG focused on how a nation with limited capabilities can develop a robust response framework. The RMWG is chaired by Morocco.

The strategic planning of GICNT activities is discussed within an informal Leadership Team, which is currently comprised of the two co-chairs, the IAG coordinator, the three working group chairs, the host of the last plenary, as well as the GICNT special advisor. The special advisor is an ad-hoc position that was created in 2015 to provide advice to the current IAG coordinator regarding new ideas and activities for the partnership. The position is held and funded by the UK.

3. LOOKING BACK: KEY DEVELOPMENTS OF THE GICNT FROM 2006–2016

This chapter looks back at the key developments and achievements made by the GICNT in the period 2006-2016. In the 10 years since it was established, the GICNT has experienced an almost seven-fold increase in membership and has organized 85 multilateral events. Since 2010, the GICNT has also clarified its operational structure and narrowed down its thematic focus.

3.1 FORMATIVE YEARS: RAPID EXPANSION OF MEMBERSHIP

Following the joint US-Russian announcement in June 2006 and the adoption of the SOP at the GICNT's first meeting in October 2006, high-level meetings were held at frequent intervals: Turkey (February 2007); Kazakhstan (June 2007); Spain (June 2008); and the Netherlands (June 2009). This period was defined by a significant expansion of membership: by the summer of 2007 the GICNT had 51 members, and the number rose steadily to 73 in 2008, 75 in 2009 and 82 in June 2010. Membership thus increased more than six-fold in less than four years. The number of international

organizations also grew when the IAEA was joined as a GICNT observer by the EU in 2007, followed by Interpol and the UNODC in 2009. Since those early years, the process of expansion has slowed down: between 2011 and 2015 only four new partner states joined, and UNICRI joined as the fifth observer in 2015.²⁵

3.2 CONSOLIDATION OF OPERATIONAL STRUCTURE: THE IAG AND REVISED TOR (2010)

The plenary meeting in Abu Dhabi, the UAE, in June 2010 made an important decision by creating the Implementation and Assessment Group (IAG) in order to allow greater effectiveness in the coordination of GICNT activities. Spain was chosen to serve as the first IAG coordinator. In September of the same year, the first IAG meeting took place in Astana, Kazakhstan. The decision to create the IAG was based on revisions to the GICNT's Terms of Reference (TOR), likewise adopted at the 2010 Plenary. The revised TOR provided ad-

ditional structure to the GICNT by defining the decision-making process and establishing the roles and responsibilities of the IAG.

3.3 NARROWING THEMATIC FOCUS: THREE PRIORITY AREAS (2010–2011)

Simultaneously with the creation of the IAG in June 2010, the plenary defined for the first time nuclear detection and nuclear forensics as the two 'priority functional areas' of the GICNT. The decision was largely based on the fact that the IAEA was not yet actively working on these two specific areas. In effect, the Nuclear Detection Working Group (NDWG) and the Nuclear Forensics Working Group (NFWG) were subsequently established at the IAG meeting in September 2010. The two working groups were charged with the task of developing products, such as best practises and training material, relevant to their areas.

The chairmanship of the NDWG and NFWG was given to the Netherlands and Australia, respectively.

The Plenary meeting in Daejeon, Republic of Korea, in June 2011 decided to add response and mitigation as the third priority area alongside detection and forensics. Morocco was chosen to lead those efforts.²⁶ The decision was based on a proposal by the Spanish IAG coordinator, reflecting on the acknowledgement that, until that time, there had been no sustained international effort regarding emergency response to acts of RN terrorism. The Response and Mitigation Working Group (RMWG) first convened at the February 2012 IAG mid-year review meeting in Morocco.

Rather than promoting a broad agenda based on the SOP, the GICNT thus narrowed down its focus to three priority areas in 2010–2011. Box 2 (below) illustrates the relationship between the SOP and the three priority areas.

BOX 2: GICNT'S FOUNDING PRINCIPLES, WITH EMPHASIS ON PRACTICAL FOCUS AREAS

1. Strengthen material accounting, control, and physical protection of nuclear and other radioactive (RN) materials;
2. Enhance civilian nuclear facility security;
3. **Research and develop interoperable national detection capabilities for RN materials to prevent illicit trafficking (NDWG);**
4. Strengthen search, confiscation, and safe control capabilities over unlawfully held RN materials;
5. Prevent safe haven and the financing of nuclear terrorism;
6. Strengthen criminal and civil legal frameworks to provide liability for those involved in nuclear terrorism;
7. **Improve response, investigation, and mitigation capabilities in cases of terrorist attacks involving the use of RN materials (NFWG and RMWG);** and
8. **Promote information sharing among participants pertaining to the suppression of acts of nuclear terrorism (all IAG Working Groups).**

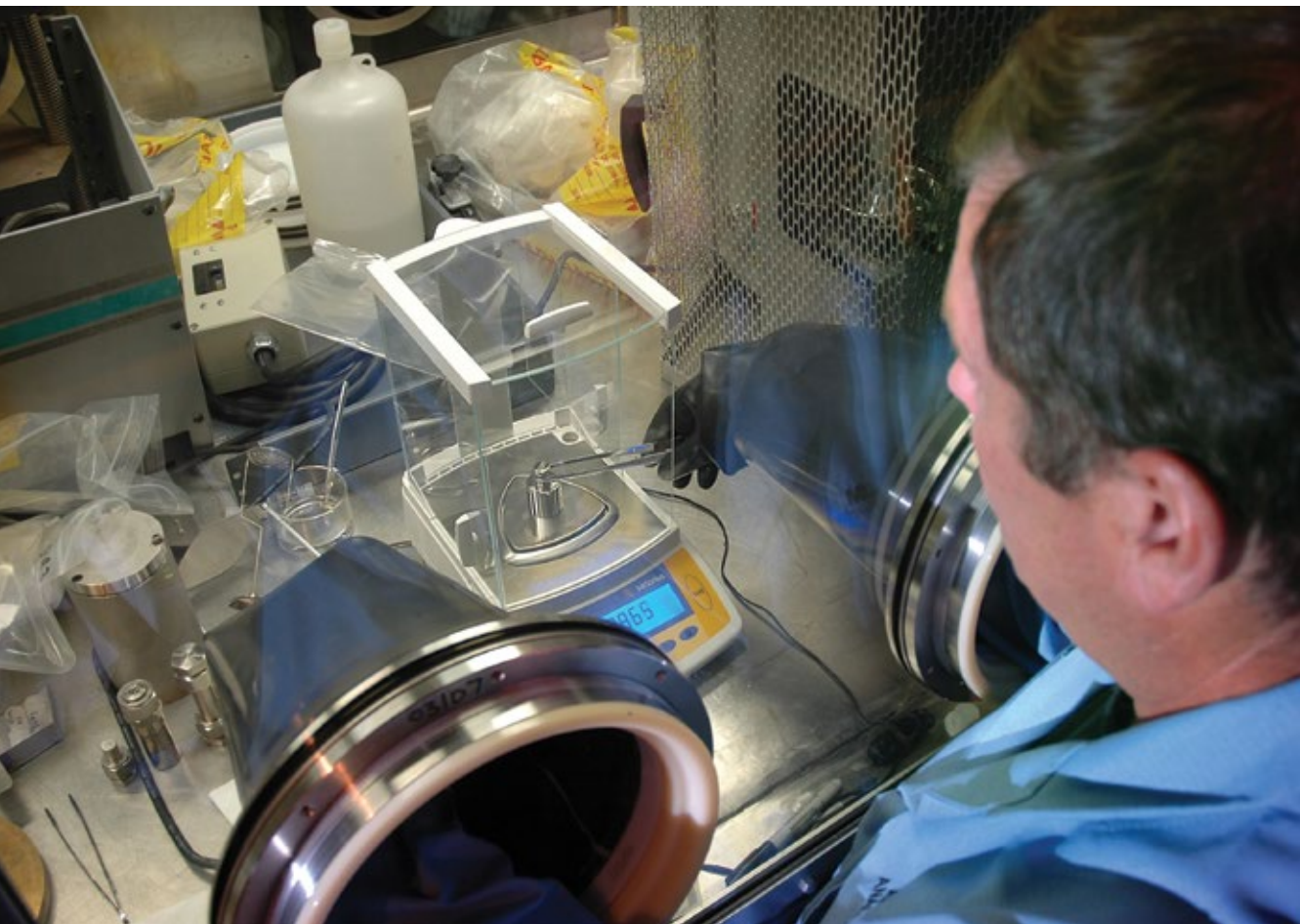
3.4 ACTIVITIES DEVOTED TO CAPACITY-BUILDING

The GICNT has organized various multilateral capacity-building activities aimed at facilitating the implementation of its key nuclear security principles in the partner states. As of April 2016, the GICNT had organized altogether 85 multilateral events in 30 countries. Most events were capacity-building activities, such as seminars and workshops (39 events), exercises (22 events) or exercise planning sessions (6 events).²⁷

Multilateral exercises consist of table-top exercises (TTX) and field exercises (FTX). They have focused predominantly on the three priority areas. The exercises that have been held

by the GICNT over the past 10 years are introduced in the timeline below (see Box 3).

At the plenary meeting in Mexico City in 2013, the newly-elected South Korean IAG Coordinator called for a greater regional focus with respect to the GICNT's capacity-building activities. The proposal was based on the results of a partnership survey, which highlighted the need to address specific nuclear security topics of the greatest interest to a particular region. At the same time, however, it was considered important that a regional orientation would not undermine the global nature of the GICNT, nor limit the participation and observation by all interested partners.²⁸ The importance of cross-disciplinary activities among the three working groups was likewise highlighted.²⁹ This reflected the acknowledgement that detection,



*Elemental and radiological analysis in a glovebox.
Idaho National Laboratory*

forensics and response are intricately connected and cannot be isolated from one another in practice.

Both the regional focus and cross-disciplinarity have been increasingly taken on board in the subsequent planning of GICNT events. Since early 2014, the GICNT has held three cross-disciplinary exercises.³⁰ The regional orientation was reflected, for example, in the ‘Paihuen’ exercise, organized jointly by Argentina and Chile in 2014. It was particularly prominent in the 2016 ‘Exercise Falcon’ in Abu Dhabi. However, this event was planned and organized in the framework of the EU’s CBRN initiative, though it was supported in part by the GICNT.

3.5 DOCUMENTS PRODUCED BY THE WORKING GROUPS

The three working groups have produced altogether eight guidance documents, which are available to GICNT partners through the Global Initiative Information Portal (GIIP).³¹ Between 2009 and 2014, the NDWG published four volumes in its Developing a Nuclear Detection Architecture Series: *Model Guidelines Document for Nuclear Detection Architectures*; *Guidelines for Awareness, Training, and Exercises*; *Guidelines for Planning and Organization*; and *Guidelines for Detection Within a State’s Interior*. The documents highlight a detection architecture design approach that takes into account different ways in which an adversary could transport RN material out of regulatory control.

In 2015, the NDWG produced a *Detection Exercise Playbook* which contains “a collection of realistic scenarios that illustrate key nuclear detection challenges and can be used to help partners organize national-level exercises to promote practical implementation of nuclear detection best practices.” The Playbook is intended to be a living document that can be further refined and updated based on addi-

tional case studies and exercises.³² Despite its title, the Playbook is not targeted exclusively at the NDWG, but serves as a general exercise organization guide for all IAG working groups.

The NFWG, for its part, has produced two guidance documents. *The Nuclear Forensics Fundamentals for Policy Makers and Decision Makers* (2012) seeks to “raise awareness of the importance of nuclear forensics to enhancing nuclear material security and discouraging illicit uses of nuclear and other radioactive material.”³² The second forensics document, *Exchanging Nuclear Forensics Information: Benefits, Challenges, and Resources* (2015), seeks to “increase awareness of the benefits and challenges of exchanging nuclear forensics information associated with a nuclear security event and identify potential mechanisms for enabling information exchange.”³⁴

In 2015, the RMWG produced *Fundamentals for Establishing and Maintaining a Nuclear Security Response Framework: A GICNT Best Practice Guide*. The document provides “a strategic-level reference and key considerations for the development of a national response framework for preparing to respond to and mitigate the impacts of a radiological or nuclear terrorism incident.”³⁵

The GICNT’s practical orientation has been further strengthened over the years, with a shift from developing new guidelines toward holding an increasing number of exercises. This has reflected the changing context: in the early years of the GICNT, few guidance documents were available, but the situation has since changed with the development and increasing number of publications in the IAEA’s Nuclear Security Series.³⁶ Despite some concerns of duplication (see the section on ‘Coordination between the GICNT, the IAEA and other nuclear security actors’ below), the IAEA has benefited from GICNT products – particularly the NDWG series – when developing guidance documents.³⁷

BOX 3: TIMELINE OF GICNT EXERCISES



1. Radiological dispersion device response TTX, Madrid, Spain, May 2008

2. **"Atom Anti-Terror 2008"** FTX on the security of nuclear facilities, Almaty, Kazakhstan, June 2008

2008



3. Radiological dispersion device response FTX, Ávila, Spain, October 2008

4. **"Blue Glow"** TTX on securing radiological material, Canberra, Australia, May 2009

2009



5. **"Cobalt"** TTX on information sharing, Utrecht, The Netherlands, November 2009

6. **"Golden Shield"** TTX on countering the financing of nuclear terrorism, Astana, Kazakhstan, September 2010

2010

7. **"Rabatt 2011"** TTX/FTX on detection/response to malevolent acts involving radioactive material, Rabat, Morocco, March 2011

2011

9. **"i-Hermes"** TTX on public messaging, Sydney, Australia, November 2011

8. Nuclear forensics TTX, Karlsruhe, Germany May 2011

2012



11. **"Toronto Radex 2012"** TTX on responding to radiological dispersion device attack, Toronto, Canada, May 2012



10. **"Iron Koala"** TTX on information sharing regarding nuclear smuggling, Sydney, Australia, May 2012

12. **"Guardian 2012"** FTX on countering acts of nuclear terrorism, Moscow, Russia, September 2012

23. **"Blue Raven"** TTX on emergency planning and response, London, the UK, November 2015

2016



21. **"Growing Tulip"** NFWG TTX involving a mock trial applying nuclear forensics, The Hague, The Netherlands, March 2015

19. **"Northern Lights"** NDWG TTX on law enforcement and investigation of illicit use of RN materials, Helsinki, Finland, January 2015

2015

18. **"Mystic Deer"** TTX on nuclear forensics fundamentals, Budapest, Hungary, October 2014

16. Detection alarm adjudication at ports FTX, Manzanillo, Mexico, February 2014



14. **"Blue Beagle"** TTX on nuclear forensics, London, the UK, January 2014

2014

2013



13. **"Remex 2013"** Joint Spanish-Moroccan TTX on response and mitigation, Madrid, Spain, April 2013

17. **"Paihuen"** joint Argentine-Chilean TTX on radiological emergency management, Buenos Aires, Argentina, August 2014



15. **"Tiger Reef"** joint NFWG/RMWG TTX on crime scene management, Kuala Lumpur, Malaysia, February 2014

20. **"Atlas Lion"** TTX exploring interfaces between the three working groups, Rabat, Morocco, February 2015

22. **"Radiant City"** joint NDWG/NDWG TTX on investigation of illicit use of RN materials, Karlsruhe, Germany, May 2015

24. **"Exercise Falcon"** inter-Arab TTX on detection, response and regional coordination, Abu Dhabi, the UAE, February 2016 (organised by UNICRI under the EU's CBRN CoE initiative, in partnership with the GICNT)

4. REFLECTING ON THE GICNT'S STRENGTHS AND CHALLENGES

This chapter analyses the strengths of and challenges faced by the partnership, keeping in mind the overview of past achievements from chapter 3, and drawing from expert interviews and a review of literature on the GICNT.

4.1 LASTING MOMENTUM AND DURABILITY

One of the key strengths of the GICNT has clearly been its durability and momentum. The partnership's activities have expanded over the years, and it only seems to have gained energy with time. An interviewee from the IAEA remarked that the Agency "remains struck by the increasing momentum of GICNT activities in recent years."³⁸ The GICNT's continuing momentum can be seen as an indication of the political will and priorities of its members, who seem to remain united in their concern regarding the threat of nuclear terrorism and determination to continue cooperating in order to prevent its harmful effects.

Here it is worth highlighting that the GICNT has offered a particularly stable platform for

US-Russian cooperation and leadership, which remains crucial for global nuclear security. Even in the present context of bilateral tensions, where issues related to non-proliferation have tended to become politicized in other fora, the two countries have remained focused on promoting their shared goals within the framework of the GICNT.

In addition to political will, the durability of the GICNT arguably also has to do with available resources. In general, those interviewed did not seem worried about the possibility that either a lack of funding or political will would decrease the GICNT's momentum. When asked about the challenges facing the GICNT, for instance, only one individual interviewed mentioned "limited resources."³⁹ The interviews conducted for this report also did not support previous claims, presented by Korbatov & al, that funding for GICNT activities would be insufficient or restricted only to one source.⁴⁰ Instead, it seems that funding is generally deemed sufficient, and it has been provided by several GICNT partner states and organizations.

- **Over the last decade, the GICNT has demonstrated remarkable durability and continuing momentum, reflecting the political commitment of its members to the shared goal of combating nuclear terrorism.**

4.2 BROAD AND INCLUSIVE MEMBERSHIP, BUT STAGNANT GROWTH IN RECENT YEARS

As noted earlier, the number of partner states in the GICNT has grown considerably over the last decade, from the original 13 participating states and one observer to 86 states and five observers. The broad membership is definitely one of the GICNT's strengths, and so is its inclusiveness: as Müller & al note, the GICNT membership "represents a mixture of great and small powers, industrialized and developing countries from all parts of the world."⁴¹ It is noteworthy that the membership includes all of the five permanent members of the UN Security Council and the recognized nuclear weapon states under the NPT, the so-called P5 countries (US, UK, Russia, China and France), as well as three states that are not parties to the NPT (India, Israel and Pakistan). Given that these eight countries are also the ones with the largest stockpiles of fissile material, their joint participation in the GICNT is particularly significant.⁴²

The GICNT's appeal can be explained by its informal nature and flexibility. As Jasper Pandza notes, the informal and voluntary nature of the GICNT and the openness of its activities to all partner states lowers the threshold to engage in capacity-building, as "many states find it hard to admit serious gaps in their ability to respond to a nuclear or radiological incident." He continues that the GICNT allows states to "improve their capabilities on a voluntary and almost cost-free basis."⁴³ Matthew Bunn (Belfer Center for Science and International Affairs) likewise notes that the GICNT is "open to any

state willing to commit to the principles, so is not much criticized on legitimacy grounds."⁴⁴ The threshold for joining the GICNT is indeed rather low: a state must send a written letter of endorsement of the SOP, after which its membership is approved by co-chair consensus.

However, there also seem to be limits to the GICNT's appeal. As noted earlier, the growth of its membership has slowed down in recent years. One explanation for this is that the GICNT already includes most countries with significant nuclear activities. The second reason might be the lack of awareness and pressing concern over nuclear terrorism. As Müller & al write, the kind of non-financial assistance that the GICNT offers its partners is appreciated by countries that "look at the terrorist threat as a real, practical concern."⁴⁵ Reversely, if they do not share the GICNT partners' assessment of the urgency of the threat, participating in the partnership would likely not be prioritized.

Third, the limits to the expansion of the GICNT membership can be understood in terms of the more general context of global nuclear politics. For instance, as Bowen & al note, "[s]ince the late 1990s the politics surrounding NPT debates over disarmament and non-proliferation have become increasingly divisive, with the NAM [Non-Aligned Movement] blocking moves... to strengthen non-proliferation measures in the absence of greater progress on nuclear disarmament by the five permanent members of the UN Security Council." They continue that "[m]any NAM states view the nuclear security agenda through this NPT lens, so the prospects of developing a stronger normative foundation in this realm... are unavoidably tied, and ultimately hostage, to NPT politics."⁴⁶ From this perspective, however, it is noteworthy that the GICNT does include 29 NAM members. At the same time, certain countries that possess significant amounts of fissile material, such as Iran and South Africa, remain outside of the GICNT.

- **The GICNT's membership base is broad, including the eight countries with the largest stocks of fissile material.**
- **Membership has not grown significantly in recent years, and some key countries remain outside of the GICNT.**

4.3 EFFECTIVENESS OF THE GICNT IN PROMOTING NUCLEAR SECURITY

Given the lack of international monitoring of states' capabilities in the area of nuclear security, the task of assessing the GICNT's impact is not a straightforward one. Moreover, the GICNT coexists with other efforts; hence it is somewhat difficult to distinguish the precise impact of the GICNT from that of other nuclear security instruments. For example, it could be noted that 13 GICNT partner states that had formerly not ratified the CPPNM have done so during the past 10 years, but any causal relation between this and GICNT membership would be difficult to establish.⁴⁷

Müller & al, who highlight this problem, argue that assessing the real impact of the GICNT would require, among other things, investigating "whether new countries that were formerly not very interested have strengthened their security culture, or whether only the same countries that have been active all along are the ones that contribute."⁴⁸ A brief look at the list of countries hosting GICNT events seems to point to the latter conclusion: of the 30 countries that have hosted the events over the last decade, for instance, only five⁴⁹ did not take part in the 2010 NSS.

Another indication of effectiveness is arguably the extent to which member states have participated in GICNT events. Although participation information is only available for half of the GICNT's past capacity-building activities (seminars, workshops and exercises), the average

number of states participating in those events is 19.⁵⁰ The range of participating states is nevertheless broad and the numbers vary significantly (from 5 to 49), reflecting the specific theme and location of each event. Indeed, it might not even be desirable or practical to have the entire GICNT membership participating in all events, particularly as multilateral events are increasingly targeted at particular regions. In addition to numbers, it can be argued that another sign of effectiveness is that the participating countries manage to send people with the most relevant expertise to the particular GICNT events: one interviewee for this report who wished to remain anonymous estimated that almost half of the GICNT partner states do this.

Given the difficulty of measuring the GICNT's impact, subjective and analytical assessments by informed observers can be used as indicators. The general perception seems to be positive,⁵¹ and the interviews conducted for this report suggest that the GICNT has indeed had a clear impact on government policies. For example, Bunn estimates that the GICNT "has gotten a large number of states to work together that otherwise would not necessarily have been inclined to," and that the GICNT "has kicked off a large series of exercises in different countries that would not have happened without it, which have identified weaknesses in [inter alia] emergency response and helped to fix them."⁵² An IAEA official – who argued that "there really is 'valued added' to the ambitious GICNT agenda" – likewise highlighted the GICNT's special contributions in the area of emergency response and promoting best practices, also pointing to its role in awareness-raising:

...there is increased confidence and understanding among the GICNT experts and policy community. In the past, there seemingly were more divergent views among GICNT participants on the role of a national response plan to a nuclear security event; now, all par-

*ties better understand, and are much more fluent in, what constitutes these capabilities and their relative advantages... the GICNT provides states an opportunity to share their approaches to establishing a nuclear security infrastructure – what worked and what did not. These messages are invaluable for promoting confidence and a common approach to nuclear security.*⁵³

William Tobey (former Deputy Administrator for Defense Nuclear Nonproliferation at the National Nuclear Security Administration, the US), for his part, suggested that the GICNT's potentially most important achievement is hardly visible to the outside, but yet crucial for international nuclear security: namely, the establishment and maintenance of day-to-day contacts that facilitate interoperability and information-sharing among participants. Such routine communication practices and an improved understanding of relevant legal issues are vital for effective international action when incidents occur.⁵⁴ Alcaro makes a similar observation when he writes that few international nuclear counter-terrorism measures “can be taken, or can be effective, in the absence of well-oiled mechanisms for cooperation among states.”⁵⁵

A Finnish participant in the NDWG, however, pointed out that, despite all the efforts, there is still a lot to improve regarding both information-sharing and awareness-raising within the GICNT countries. The key problem, from his perspective, is the incompatibility of information structures; each country wants to maintain its own system for storing data, and this is an obstacle to effective cooperation. He further explained that, although the resistance to harmonising databases has to do with the secret nature of the data, in reality you can share a system without sharing confidential information. As an example of the need for awareness-raising, he referred to the process of writing a recent European Commission report entitled “Information Sharing in a Nuclear

Security Event.” For this report, a questionnaire was sent to the 28 EU member states, but only 10 countries submitted answers.⁵⁶ Another interviewee also mentioned information-sharing among the challenges still facing the GICNT.⁵⁷

- **The general impression of the GICNT's effectiveness among commentators and respondents seems to be predominantly positive; its main contributions lie in capacity-building, awareness-raising, and improved interoperability.**
- **Given that the GICNT is but one of several nuclear security instruments and that there is no international monitoring system on the state of nuclear security in different countries, the real impact of the GICNT policies is difficult to assess.**
- **Information about partner states' participation in GICNT events, which arguably could give some indication of effectiveness, is not systematically gathered.**

4.4 FOCUS ON POST-EVENT SCENARIOS, RATHER THAN PREVENTION

As noted above, two interviewees highlighted the importance of emergency response when discussing the GICNT's impact on government policies. This arguably has to do with the fact that the GICNT is one of the few international instruments that focuses specifically on preparing for the aftermath of criminal acts involving nuclear or other radioactive material. Given that all of the three priority areas of the GICNT are mainly concerned with materials that have already fallen out of regulatory control, it can be said that a great portion of the GICNT activities has focused on ‘post-event’ scenarios, rather than on prevention. As a representative of the NDWG explained, “our focus has been on preparing

for a scenario where security measures in the facilities have been inadequate and exploited by traffickers or terrorists... In this kind of situation efficient nuclear detection measures are required. Detection is a kind of plan B for nuclear security to prevent further crimes.”⁵⁸

Some outside observers interviewed for this report believed that the GICNT should focus more on prevention, namely the security of nuclear and radiological facilities. Bunn argued that, “[a]lthough nuclear security is probably the most important tool for reducing the risk of nuclear terrorism, and is one of the GICNT principles, the GICNT has never focused much on nuclear or radiological security” in the sense of “actual security measures to prevent theft or sabotage of nuclear or radiological materials and facilities.” Bunn believes that this aspect has been overlooked by the GICNT due to an assumption that other agencies were already taking sufficient care of the security of facilities.⁵⁹ Tobey concurs, adding that “the IAEA has no jurisdiction over some nuclear facilities, and in any case it is a GICNT partner – why could the GICNT and the IAEA not do this together?”⁶⁰

To be sure, there has been one GICNT event – exercise ‘Atom Anti-Terror’ in Kazakhstan (June 2008) – that was specifically focused on the security of facilities. However, the officials involved in the GICNT activities that were interviewed for this report were somewhat cautious about including the security of nuclear facilities among the partnership’s future activities. Three officials noted that this has been the IAEA’s responsibility, and not part of the GICNT’s focus areas.⁶¹ One of them also thought that “the security of nuclear facilities is the forte of the IAEA,” and that it is better for each organization to focus on its own strengths.⁶² A fourth respondent stated that “nuclear facilities are already the most well-guarded facilities.”⁶³

- **The GICNT’s focus on post-event scenarios makes it stand out from other nuclear security instruments. It has done ground-breaking work**

particularly with respect to emergency response.

- **Some view the GICNT’s lack of attention to prevention as a shortcoming, while others suggest that the GICNT agenda should not be overstretched, as there are other instruments focused on prevention.**

4.5 BRINGING TOGETHER DIFFERENT SECTORS OF SOCIETY

Due to its nature as an inter-governmental, political partnership, the GICNT has the unique ability to bring together various sectors within the partner states that might otherwise not interact with each other or their counterparts in other partner states. As Bunn noted, the GICNT “has working-level groups, but it also brings together Deputy Minister-level people for the plenary meetings, so it has some ability to reach to the political levels of power.”⁶⁴ An interviewee from the IAEA remarked that the “IAEA profits from GICNT contacts to political establishments as well as law enforcement authorities within its member countries.” He argued that this had been the case particularly with respect to nuclear forensics where “establishing the ‘handshake’ between nuclear forensic science and national laws is essential.” He continued that, “[d]ue to the GICNT’s more political focus, many of the involved authorities differ from the authorities with technical contacts to the IAEA.” This puts the GICNT in a good position to, for instance, “assist in the promotion of [the amended CPPNM], as well as adherence to other legal instruments.” The official also praised “[t]he ability of the GICNT to raise advocacy for nuclear security among policy makers and the political audience.”⁶⁵

Although the importance of industry participation in the GICNT activities has been frequently highlighted, representatives from the industry seem to be largely absent from the GICNT activities. One reason for this is arguably that

industry participation is closely linked to the issue of the security of nuclear facilities, which – as noted above – has remained largely outside of the GICNT agenda.

- **The GICNT has a unique ability to bring together different sectors of society in the partner states, and to use its political leverage to raise awareness of nuclear security issues beyond the expert community.**
- **The industry nevertheless seems to be under-represented in the GICNT activities.**

4.6 COORDINATION BETWEEN THE GICNT, THE IAEA AND OTHER NUCLEAR SECURITY STAKEHOLDERS

In general, the interviewees for this report viewed the coordination between the GICNT and the IAEA as successful. One factor contributing to this coordination is that many experts attending the GICNT activities are also used as subject matter experts by the IAEA, which ensures consistency and alignment between the two organizations.⁶⁶ However, one former IAEA official thought that the Agency's participation in the GICNT activities "is not very active" and that "[t]he IAEA participates at the margins of the GICNT ... by giving briefings, etc..." She continued that this "may relate to the basic function of the IAEA to serve all member states, not only a group of them." When asked whether the cooperation between the two could be improved, she said "the coordination could be active rather than passive."⁶⁷

It also seems that the cooperation between the GICNT and the IAEA could be more effective when it comes to publishing guidance documents. As suggested earlier, the increasing focus on practical capacity-building over document-writing by the GICNT can be seen in terms of the growing number of publications in the IAEA's Nuclear Security Series during the

last decade. Indeed, an IAEA official noted that the existence of the parallel guidelines by the two organizations had caused "some possibility for confusion." However, it seemed that this problem had already been resolved; as he continued, the "concern has been communicated to the GICNT and, in this regard the GICNT has taken [sic] the past several years to development of tailored exercises, awareness events, and specialized topics that augment the fundamentals, recommendations and implementing guides produced by the IAEA."⁶⁸

At the same time, there still seem to be certain advantages to the GICNT publication process. The same interviewee also said that "[t]he GICNT is more agile in its ability to fashion specific topical answers to address the more immediate needs in nuclear security... since the IAEA publication process through its Nuclear Security Series remains protracted."⁶⁹ The same IAEA official suggested that GICNT products could be more "effectively integrated into the IAEA process," and that the GICNT should be "credited for their work." As an example, he referred to "[r]ecent GICNT reports on information sharing and presentation of nuclear evidence in a court of law" as 'invaluable'. He also mentioned GICNT offers "to help the IAEA strengthen its nuclear security peer review and advisory services, notably through contributions to the framework of the IAEA International Nuclear Security Service missions (INSServ)." Such support, he said, would be "extremely beneficial."⁷⁰

The IAEA official also pointed to a certain lack of transparency regarding the GICNT's strategic decision-making. While acknowledging the regular dialogue between the US, Russia and the IAEA Division of Nuclear Security regarding the GICNT, he suggested that it was not entirely "clear in Vienna how the GICNT decides and plans its priorities for the task groups and the implementation and advisory group."⁷¹

Finally, one respondent pointed out that there is still much to be done in avoiding the duplication of activities among organisations such as



Interpol, the GICNT, the IAEA and other instruments dealing with nuclear security. The current lack of coordination, he argued, may not lead to best use of funding, and it also places a burden on experts in the field, as the various events and nuclear security training offered by different actors are often repeating the same or similar outputs.⁷²

- **The GICNT's publication process is flexible and fast in comparison to the IAEA. The GICNT is therefore better equipped to produce documents on issues requiring immediate attention.**
- **In the past, the parallel GICNT and IAEA guidelines may have caused some confusion, but this problem seems to have been resolved.**
- **GICNT products could be utilized more efficiently by the IAEA as part of its own publication process.**
- **The GICNT's strategic decision-making process is not transparent to all observers.**

4.7 VISIBILITY AND OUTREACH

As noted earlier, the GICNT's contributions to global nuclear security have been acknowledged in the Nuclear Security Summits. The GICNT's role is also well-established in the political and expert communities involved in its activities. Beyond this, however, it can be

argued that the GICNT is not as visible as its contributions and broad membership would suggest. As Korbatov & al argue, the GICNT “lacks name recognition and prestige,” as well as “globally recognized accomplishments.”⁷³ The GICNT might also seem somewhat introverted to outside observers. As Müller & al point out, the GICNT website “is not very detailed and does not give details on activities,” and “[t]he information that is available to the general public is scarce.”⁷⁴ The GICNT's low profile was also raised by one of the interviewees for this report, who noted that information about the GICNT is limited.⁷⁵

The GICNT's relatively low profile is not necessarily a problem; after all, its capacity-building efforts are directed primarily at partner states, and they involve elements that may be confidential in nature. The GICNT's limited transparency could also be seen to be compensated by its broad membership, although this can be a problem in terms of outreach to new partners and sharing information with non-partners.⁷⁶

- **The GICNT's contributions to global security are acknowledged particularly within the international nuclear community and national expert communities in GICNT partner states.**
- **In the eyes of the broader public, the GICNT lacks visibility and transparency, which might impact negatively on outreach efforts.**

A billet of highly enriched uranium that was recovered from scrap processed at the Y-12 National Security Complex Plant. Original and unrotated.
{{PD-USGov}} [[Category:U

Group Photo from Toronto RADEX Exercise 2012
GICNT

Cascade of gas centrifuges used to produce enriched uranium. This photograph is of a the U.S. gas centrifuge plant in Piketon, Ohio from 1984
U.S. Department of Energy

5. THE WAY FORWARD FOR THE GICNT

Having provided an overview of the first ten years of the GICNT in the preceding sections, this final part of the report looks ahead and makes suggestions about potential new themes and activities in which the partnership can engage going forward. A couple of key questions will guide the discussion: Where can the GICNT make a particular contribution? Which potential additional activities or themes, particularly in the area of capacity-building, is the GICNT best positioned to take up? Are there certain areas of nuclear security that are currently within the purview of the IAEA or other nuclear security actors but may be better served, or supplemented, by GICNT action?

It is acknowledged that, particularly after the conclusion of the NSS process, the GICNT holds a unique position in the nuclear security framework as the only multilateral grouping of states focused specifically on combatting the threat of nuclear terrorism. This can be seen to make decisions about the GICNT's future direction all the more important. The 2016 NSS identified the GICNT as one of the five key international organizations and institutions (alongside the IAEA, UN, INTERPOL, and GP), for which action plans were endorsed reflecting Summit participants' intent to further strengthen their contributions to nuclear security. The commitment to

the work of the GICNT was also reflected in the national statements⁷⁷ and national progress reports⁷⁸ of a number of countries, and was incorporated in the gift basket on national nuclear detection architectures.⁷⁹

5.1 THREAT ENVIRONMENT

Before discussing the way forward for the GICNT, it is necessary to have a brief look at the evolving nature of the nuclear terrorism threat. While the determination of the specifics of the threat environment is the responsibility of national intelligence agencies, certain threats are generally acknowledged as being of international concern.

The main reasons that originally led to the establishment of the GICNT are still relevant today. Among them is the recognition of the existence of radical groups potentially unrestrained by moral consideration in their readiness to inflict mass casualties on civilians. This concern has been further highlighted in recent years by the rise of radical groups in the context of civil wars and the dissolution of state structures in Iraq and Syria. In particular, ISIS' unprecedented capacity for internal organi-

zation, territorial control, significant resources and demonstrated willingness to commit violent acts both within and outside the region can hardly be ignored when assessing the likelihood of nuclear terrorism in today's world.

Illicit trafficking of RN materials and technologies likewise remains an ongoing concern. As the information reported to the IAEA's Incident and Trafficking Database (ITDB) demonstrates, "[t]he availability of unsecured nuclear and other radioactive material persists," "effective control is not uniformly implemented at all international border points," and "[i]ndividuals and groups are prepared to engage in trafficking this material."⁸⁰

One explanation for the relatively high number of incidents involving the illicit trafficking of radioactive material other than nuclear material in particular is that such materials are used extensively across different industries, medical facilities and research institutes around the world, and that the practices regarding their use, storage and disposal are often poorly regulated. Together with the relatively simple technology involved in building a radiological dispersal or radiation-emitting device, this can be seen to increase the likelihood of radiological terrorism.

In comparison, the possibility of terrorists acquiring nuclear weapons is more remote, given that the manufacture of such weapons requires the kind of technology, infrastructure, expertise and industry that are normally only available to states. Although a nuclear weapon could be stolen from a state by non-state actors, in practice this would be extremely difficult given the extensive security measures protecting military nuclear facilities. Nevertheless, even the most advanced security systems are potentially vulnerable to state failure and cyber-attacks.

Indeed, cyber-terrorism is perhaps the most prominent emerging threat in the nuclear realm. As facilities increasingly rely on computer systems to carry out a range of tasks – from business networks to monitoring and

control of operations – and adversaries are becoming more sophisticated, vulnerabilities to cyber-attacks are on the rise. For this reason, there is a growing focus on cyber security as it pertains to nuclear material and facilities. This is evidenced, for instance, in the IAEA's Nuclear Security Plan 2014-2017,⁸¹ the Ministerial Declaration from the IAEA's 2013 Nuclear Security Conference,⁸² and by the International Conference on Computer Security in a Nuclear World, convened by the IAEA in June 2015.

5.2 RECOMMENDATIONS

In light of the foregoing, this report makes 10 recommendations regarding the GICNT's future activities. Some of the recommendations are modest while others are more far-reaching. These recommendations are made bearing in mind the GICNT's action-oriented, hands-on and flexible character; the broad discretion allowed for by the SOP regarding the potential inclusion of new priority areas; as well as the evolving threat environment.

5.2.1 ENHANCING NATIONAL CAPABILITIES THROUGH LEGAL AND REGULATORY ASSISTANCE

The GICNT could contribute to legal and regulatory assistance aimed at helping states adhere to relevant international instruments as a central aspect of its capacity-building efforts.

As the preceding chapters of this report make clear, the work of the GICNT is aimed primarily at strengthening partner state capabilities in areas related to nuclear security. In addressing capability gaps, the GICNT can play an important role in promoting and facilitating implementation of the relevant international legal instruments. These include the amended CPPNM, ICSANT, Security Council resolutions 1373 and 1540, and the CCSSRS. Legal assistance is an overarching area that corresponds to, inter alia, Principles 1, 2 and 6 of the SOP.

Thus far only a few GICNT multilateral events have been organized that have had a legal focus, and often then specifically in relation to the three priority areas.⁸³ As not all GICNT partner states have ratified or acceded to the amended CPPNM or ICSANT, the GICNT should help partner states take the necessary actions to become parties to and effectively implement the relevant conventions. Those partner states that have ratified and implemented the conventions are in a position to share experiences and lessons learned in the development of legal and regulatory frameworks for nuclear security.

Both the IAEA and UNODC offer legislative assistance to states upon request. The GICNT should not duplicate these efforts, but rather actively encourage partner states to make use of legislative assistance programs. Additionally, the GICNT could organize, perhaps on a regional level, legislative assistance workshops in partnership with the IAEA and UNODC aimed at helping states develop domestic legislation in accordance with the relevant international instruments.

Another aspect of legal and regulatory assistance is applying the terms of the conventions in practice. Even if states are parties to a treaty, it may not always be clear to them how the treaty is to be applied in various scenarios. Moreover, states may not always be fully aware of their specific obligations pursuant to the range of provisions under relevant conventions. It would seem that the GICNT is perfectly suited to applying its workshop and scenario-based exercise approach to this issue. Such activities could similarly be undertaken on a regional basis, thus incorporating any additional regional obligations. For example, states could be asked to determine the actions they are obligated to carry out under the relevant legal instruments in connection with various scenarios. This type of experience would prove invaluable should the range of provisions of these instruments need to be invoked.

5.2.2 RADIOLOGICAL SOURCE SECURITY AS A NEW PRIORITY AREA

The GICNT could take on a greater role in increasing the security of radioactive sources among partner states.

While the security of nuclear facilities is an area largely covered by the IAEA, radioactive source security has received much less attention in the international nuclear security regime. Indeed, there is no legally-binding international instrument related to the security of radioactive sources. As for the CCSSRS and its supplementary Guidance on the Import and Exports of Radioactive Sources, they are not legally-binding, and the Code's practical implementation has been less than optimal.

Radioactive source security therefore represents one potential new priority area where the GICNT could make a real contribution. The strengthening of such security measures clearly falls under the scope of the SOP. Given the complexity of the task of ensuring the security of the millions of radioactive sources around the world,⁸⁴ a new working group could be established that would initially focus on considering the related challenges and identifying ways in which the GICNT could help to meet them. There are several options in terms of which particular issues related to radioactive source security the GICNT could focus on. Given that the security and disposal of radioactive material other than nuclear material remains a significant challenge, especially in the former Soviet space and Central Asia,⁸⁵ it would make sense to target related activities toward such regions.

What would eventually follow would be practical cooperation based on the specific needs and abilities of partner states. The GICNT could, in other words, serve as a platform through which to promote and facilitate the implementation of a range of operational radiological security concepts. However, this would necessarily mean expanding participation to

include actors from the industry and medical facilities.

5.2.3 ENGAGING INDUSTRY AND THE MEDICAL COMMUNITY

The GICNT could seek to enhance engagement with industry and the medical community through, for instance, increasing their direct participation in partnership activities where appropriate.

Until now, GICNT activities have been focused primarily on state-to-state cooperation, as well as trans-governmental cooperation among various authorities and experts (ministries, nuclear regulators, customs officials, as well as technical and legal experts). However, industry also has an important role to play in the development of national capacity to combat nuclear terrorism and fulfilling the GICNT principles. Industry participation in relevant GICNT activities could serve to enhance awareness of the threat of nuclear terrorism and of the importance of preventive action.⁸⁶ The need for such general awareness-raising is particularly acute in light of the conclusion of the Nuclear Security Summit process, which for the past six years has ensured high-level attention to nuclear security.

The need to engage the industry has also been highlighted by the current IAG coordinator, who has proposed identifying options for promoting the participation of industry representatives in GICNT activities.⁸⁷ Active involvement by industry representatives would certainly be beneficial for the GICNT's mission. For example, industry representatives can provide essential technical expertise and make an important contribution to exercises and specialized training related to national response strategies. Engaging the industry would be particularly important were the GICNT to take on radioactive source security as a new priority area, as suggested above.

In addition to a role for various industrial sectors, a new focus on radioactive source security

would point to the need to involve the medical community in relevant GICNT activities, with consideration of public health as a topic for further discussion and work, and inviting the World Health Organization (WHO) as an observer to appropriate GICNT activities. In addition to the potential new radioactive source security efforts, closer cooperation with the medical community would benefit the work of the RMWG in particular.

Given the multitude of actors both in the industrial and public health fields, it would of course be impossible to directly engage all relevant actors. However, one possible solution would be to approach relevant associations representing various actors working in the same sector. One could also focus on a particular issue, such as the security of isotopes and radioactive sources at medical facilities, and invite practitioners to take part in a related exercise.

5.2.4 ASSESSING CYBER THREATS AND CONSIDERATION OF CYBER SECURITY AS A FUTURE PRIORITY AREA

The GICNT could have added value in working to highlight and address, in coordination with other relevant institutions and initiatives, emerging threats such as cyber-attacks.⁸⁸

At the 2014 IAG meeting in Seoul, South Korea, participating states held a strategic planning discussion to consider potential new focus areas for future GICNT activities. Particularly in connection with Principle 2 (security of civilian nuclear facilities), a possible role for the GICNT in the area of cyber security was raised. This reflected the general acknowledgement of the need to improve and raise awareness of cyber security capabilities at the state and facility level, as highlighted in the IAEA's Nuclear Security Plan and at the 2013 Nuclear Security Conference.

Though cyber security is often thought of only in the context of facility security (which, as noted earlier, has in practice been exclud-

ed from the GICNT's scope of activities), cyber-attacks could potentially affect detection and response and mitigation capabilities, not to mention various other aspects of national nuclear security systems, making cyber security an over-arching issue with a potential to impact all of the existing GICNT priority areas. Given that the threat of cyber-attacks is still an emerging issue, certainly in the nuclear sphere, the GICNT could begin to explore the topic in a systematic way.

It has been suggested that the GICNT lacks the necessary expertise on cyber security.⁸⁹ However, the potential added value of GICNT action in this area seems clear. The GICNT could begin to assess the threat by facilitating discussion among states and involving contributions from prominent cyber security experts. Such experts could also be invited to other GICNT events, where appropriate, to shed light on the relevance of cyber security for the specific topics covered in those events. In other words, particular attention could be paid to whether and how cyber-attacks could affect the GICNT's priority areas.

Depending on the evolution of political circumstances and the initial assessment of GICNT partners regarding the relevance of cyber threats to its priority areas, the GICNT could in the future decide on a longer-term engagement with the topic by establishing a new working group on cyber security. In principle, ensuring the necessary expertise to deal with cyber security issues would not seem to be impossible, as partner states can identify at the national level and bring in cyber security experts to work alongside nuclear security experts. Assuming that such expertise can be provided, the GICNT would be well-positioned to undertake activities, such as workshops or scenario-based exercises, aimed at investigating and raising awareness of cyber threats and devising best practices and approaches that can be used to inform, for instance, the development of relevant guidance by the IAEA.⁹⁰

5.2.5 INFORMATION SHARING ON PARTNER STATE CAPABILITIES

Partner states could be encouraged to share information on the state of their technical capabilities in each of the priority areas, as well as more general information, where possible, on domestic nuclear security regimes.

Sharing information on technical capabilities, and more broadly on national nuclear security regimes, would specifically serve the dual purposes of monitoring progress in the GICNT priority areas and helping to identify where more action is needed. In addition, information sharing in general, while being mindful of national security sensitivities and confidentiality, would help build confidence in the strength of partner state systems and strategies. Bearing in mind the role of the GICNT in supporting relevant international legal frameworks, it would be highly beneficial to have a picture of the state of affairs within partner states and to be able to measure the contribution made by GICNT-facilitated collaboration to building partner state capacities. The GIIP already provides a platform through which states could share such information, which could be done, for example, by means of specific questionnaires developed by the working groups. Indeed, the NFWG is already planning to utilize the GIIP to uplift a self-assessment tool, which could serve as a model for other working groups.

In the interest of avoiding duplication, it should be noted that reporting on aspects of national nuclear security regimes is already done pursuant to Security Council Resolution 1540 and required under the CPPNM.⁹¹ Furthermore, the IAEA has developed a Nuclear Security Information Management System (NUSIMS), which is a voluntary tool that, among other things, assists states with assessing their nuclear security systems based on the Nuclear Security Series guidance documents and other relevant instruments. Information gathered through NUSIMS is for self-assessment purposes only, though,

and not meant to be shared with other states. Nonetheless, NUSIMS questionnaires cover areas that overlap with GICNT priority areas, such as response to nuclear security events and nuclear security detection architectures. Synergies could be found between states compiling information for filling in NUSIMS questionnaires and sharing the relevant elements of such information with other GICNT partner states. In other words, there are already mechanisms for collecting more general information on states' nuclear security regimes and practices under the auspices of the IAEA. Hence the GICNT could, at least initially, focus on establishing information sharing on aspects that are of practical relevance to GICNT priority areas.

5.2.6 IAEA-GICNT RELATIONSHIP

The GICNT and IAEA could pursue even closer coordination, while ensuring complementarity and avoiding duplication of efforts.

The GICNT is well-positioned to reinforce the nuclear security work of the IAEA and supplement it through intensive and detailed technical collaboration in which the Agency is not able to engage, whether due to resource constraints or because such activities fall outside of its statutory role. Again, it is worth mentioning that the GICNT is better suited to identifying and meeting immediate nuclear security needs than the IAEA. The GICNT can convene meetings and discuss topical issues in a way which the IAEA cannot. Such agility can serve to support IAEA activities, for instance in terms of outreach and building awareness on the challenges associated with material out of regulatory control, including developing detection capabilities and national response strategies which correspond to the GICNT priority areas.

Additionally, the GICNT could devote resources to assisting the IAEA with relevant programs. For instance, the IAEA works with member states to develop Integrated Nuclear Security Support Plans (INSSP), which are tailored to a state's specific needs and provide a platform for nuclear security work that needs to be im-

plemented.⁹² The actual implementation of INSSPs requires a significant amount of resources and entails an element of capacity-building to achieve the identified improvements. This is an area in which GICNT resources and technical expertise could contribute to the IAEA's activities.

5.2.7 PROFESSIONAL DEVELOPMENT

The GICNT could promote professional development and certification for personnel involved in nuclear security activities.

During the interviews conducted for this report, the GICNT's potential role in promoting professional development and certification was raised.⁹³ As part of their regulatory frameworks, the GICNT partner states could indeed be encouraged to include professional certification of people directly involved in nuclear security-related activities, including those with detection, forensics and response roles. Encouraging such certification of professional capabilities could be an over-arching theme for the (relevant) activities of the three working groups, the purpose being to ensure competence with respect to highly technical subject matter through professional recognition. To explore the benefits of a training approach based on certification, the GICNT could collaborate with the IAEA and the World Institute for Nuclear Security (WINS) and thereby benefit from their experiences and expertise.

5.2.8 INCREASING VISIBILITY

The GICNT should seek to increase its visibility in the interest of preserving attention to nuclear security.

The profile of the GICNT will potentially be raised now that the NSS process has come to an end. Increased visibility of the partnership could serve to preserve attention to nuclear security that will undoubtedly decrease without consistent high-level attention. The GICNT can play a role in continuing to increase general public awareness of the threat of nuclear

terrorism and in building confidence nationally, regionally and internationally in actions being taken to strengthen nuclear security.

5.2.9 EXPANDING (AND ENHANCING) PARTNERSHIP

The GICNT should continue to expand membership and encourage active participation by partner states.

There should be a sustained outreach effort to attract like-minded states to sign on to the SOP. All states could benefit from multilateral cooperation to build national capabilities to combat nuclear terrorism, and the voluntary nature of the GICNT means that the threshold for participation is quite low. Most importantly, membership entails coalescing around the commitment to implement a set of nuclear security principles thereby demonstrating “buy-in” to the need for strengthening nuclear-related counter-terrorism efforts.

Even though the partnership benefits from broad participation, this could also involve some drawbacks. For instance, the more diverse the group of GICNT partner states becomes, the more likely it is that national interests will diverge, possibly complicating coordination efforts in some areas. As noted before, major GICNT decisions are made by consensus at plenary meetings. Although this may temper enthusiasm for further expansion of membership, the potential impediments are outweighed by the prospect of enhanced nuclear security capabilities in a larger group of states.

Signing up to the SOP alone is insufficient for ensuring effectiveness, rather active participation in the GICNT’s collaborative efforts is essential. Prohibitive costs and/or time con-

straints, however, may sometimes preclude states from taking part in multilateral activities around the world. Continuing focus in the future on the organization of activities at the regional level could ameliorate these obstacles and, at the same time, allow for specific regional security challenges to be identified and addressed.

Outreach to prospective partner states, perhaps also on a regional basis, would entail building awareness of the threat of nuclear terrorism and emphasizing the added value of participation in the GICNT to enhance national and international security. Plenary meetings in the early years of the GICNT considered outreach strategies, and at least one regional outreach event has been organized,⁹⁴ but more could be done in terms of further expanding GICNT membership.

5.2.10 REGIONAL AND CROSS-DISCIPLINARY ORIENTATION

The GICNT could continue to strengthen its regional and cross-disciplinary orientation.

As noted in chapter 3 of this report, the GICNT has pursued a more regional and cross-disciplinary orientation in its activities since 2013. Both of these goals enjoy broad support and have been increasingly taken on board in the subsequent planning of the GICNT events, even though not that many regional events have thus far been organized. Hence this orientation should continue to guide GICNT activities in the future. The regional focus should nevertheless not limit imagination regarding the possibility of forming different groupings based on some common denominator other than geography.

ANNEX: LIST OF GICNT EVENTS

PLENARY MEETINGS

1	Rabat, Morocco	October 2006
2	Ankara, Turkey	February 2007
3	Astana, Kazakhstan	June 2007
4	Madrid, Spain	June 2008
5	The Hague, The Netherlands	June 2009
6	Abu Dhabi, the UAE	June 2010
7	Daejeon, the Republic of Korea	June 2011
8	Mexico City, Mexico	May 2013
9	Helsinki, Finland	June 2015

IAG MEETINGS

10	Astana, Kazakhstan (inaugural IAG meeting)	September 2010
11	Cordoba, Spain (Mid-Year IAG meeting)	February 2011
12	Daejeon, the Republic of Korea	June 2011
13	Marrakech, Morocco (Mid-Year IAG meeting)	February 2012
14	Madrid, Spain	February 2013
15	Seoul, the Republic of Korea	July 2014
16	Rabat, Morocco (Mid-Year IAG meeting)	February 2015
17	Sydney, Australia	May 2016

EXERCISES

18	Radiological dispersion device response TTX, Madrid, Spain	May 2008
19	"Atom Anti-Terror 2008" FTX on the security of nuclear facilities, Almaty, Kazakhstan	June 2008
20	Radiological dispersion device response FTX, Ávila, Spain	October 2008
21	"Blue Glow" TTX on securing radiological material, Canberra, Australia	May 2009
22	"Cobalt" TTX on information sharing, Utrecht, The Netherlands	November 2009
23	"Golden Shield" TTX on countering the financing of nuclear terrorism, Astana, Kazakhstan	September 2010
24	"Rabatt 2011" TTX/FTX on detection/response to malevolent acts involving radioactive material, Rabat, Morocco	March 2011
25	Nuclear forensics TTX, Karlsruhe, Germany	May 2011

26	"i-Hermes" TTX on public messaging, Sydney, Australia	November 2011
27	"Iron Koala" TTX on information sharing regarding nuclear smuggling, Sydney, Australia	May 2012
28	"Toronto Radex 2012" TTX on responding to radiological dispersion device attack, Toronto, Canada	May 2012
29	"Guardian 2012" FTX on countering acts of nuclear terrorism, Moscow, Russia	September 2012
30	"Remex 2013" Joint Spanish-Moroccan TTX on response and mitigation, Madrid, Spain	April 2013
31	"Blue Beagle" TTX on nuclear forensics, London, the UK	January 2014
32	"Tiger Reef" joint NFWG/RMWG TTX on crime scene management, Kuala Lumpur, Malaysia	February 2014
33	Detection alarm adjudication at ports FTX, Manzanillo, Mexico	February 2014
34	"Paihuen" Joint Argentine-Chilean TTX on radiological emergency management, Buenos Aires, Argentina	August 2014
35	"Mystic Deer" TTX on nuclear forensics fundamentals, Budapest, Hungary	October 2014
36	"Northern Lights" NDWG TTX on law enforcement and investigation of illicit use of RN materials, Helsinki, Finland	January 2015
37	"Atlas Lion" TTX exploring interfaces between the three working groups, Rabat, Morocco,	February 2015
38	"Growing Tulip" NFWG TTX involving a mock trial applying nuclear forensics, The Hague, The Netherlands	March 2015
39	"Radiant City" joint NDWG/NDWG TTX on investigation of illicit use of RN materials, Karlsruhe, Germany	May 2015
40	"Blue Raven" TTX and workshop on emergency planning and response, London, the UK	November 2015
41	"Exercise Falcon" inter-Arab TTX on detection, response and regional coordination, Abu Dhabi, the UAE (organized by UNICRI)	February 2016
42	"Kangaroo Harbour" Emergency Planning and Response TTX and Workshop, Sydney, Australia	May 2016

EXERCISE PLANNING

43	Paris, France	April 2008
44	Arlington, the US	November 2008
45	Seoul, the Republic of Korea	April 2009
46	Budapest, Hungary	January 2010
47	Exercise Planning, Design and Evaluation Seminar, Moreton in Marsh, the UK	May 2011
48	Exercise Planning, Design and Evaluation Seminar, Moreton in Marsh, the UK	November 2011
49	Rabat, Morocco 2016 (planning for Falcon exercise, organized by UNICRI)	January 2016

WORKSHOPS, CONFERENCES, SEMINARS

50	Seminar on the Promotion of Accession to the International Counter-Terrorism Conventions and Protocols, Tokyo, Japan	March 2007
51	Asia-Pacific Seminar on Combating Nuclear Terrorism, Sydney, Australia	May 2007
52	Nuclear Terrorism Law Enforcement Conference, Miami, the US	June 2007
53	GIIP Working Group meeting, Garmisch-Partenkirchen, Germany	August
54	Conference on Cooperation of Intelligence, Security and Law Enforcement Services in Detecting, Preventing and Investigating Acts of Nuclear Terrorism, Russia	September 2007

55	Workshop on Anti-Nuclear Smuggling Assistance, London, the UK	September
56	Workshop on Mo-99 Production Using LEU, Sydney, Australia	December
57	Workshop on Implementation of the CoC and the EU Directive on the Safety and Security of High-Activity Radioactive Sources, Munich, Germany	December 2007
58	Radiation Emergency Response Workshop, Beijing, China	December
59	Seminar on Response to Malicious Acts Involving Radioactive Materials, Rabat, Morocco	February
60	Global Nuclear Detection Architecture Document Workshop, Washington DC, the US	March
61	Conference on Securing Radioactive Sources, Ottawa, Canada	June 2008
62	Global Initiative Information Portal Advisory Committee Meeting, Tallinn, Estonia	June 2008
63	Material Control and Accounting and Physical Protection Workshop, Nashville, the US	July 2008
64	Workshop on the Best Practices to Ensure Security of Nuclear Materials, Irkutsk, Russia	August
65	Design Basis Threat Seminar: Control, Accounting, and Physical Protection of Nuclear Materials, Ust-Kamenogorsk, Kazakhstan	September 2008
66	Conference on Legal Issues Related to Combating Trafficking of RN Materials, Garmisch-Partenkirchen, Germany	September 2008
67	Conference to Promote Awareness Among the Scientific Community of the Dangers of Knowledge Proliferation, London, the UK	October 2008
68	Colloquium on Radiological and Nuclear Detection for the Prevention of Terrorism, Paris, France	December 2008
69	Workshop on Radiological Source Security and Safety in the Pacific, Port Vila, Vanuatu	April 2009
70	Workshop on Current Progress in Detecting and Responding to the Illicit Transport and Trafficking of RN Materials, Seoul, the Republic of Korea	April 2009
71	Model Guidelines Document for Nuclear Detection Architectures Follow-On Workshop, Garmisch-Partenkirchen, Germany	April 2009
72	Seminar on Preventing Illicit Trafficking in RN Materials, Rabat, Morocco	March
73	Workshop on Implementing Nuclear Detection Architectures, Garmisch-Partenkirchen, Germany	March 2010
74	Symposium on the Enhanced Detection of Special Nuclear Material, London, the UK	March
75	Workshop on Nuclear Forensics and the Legal Aspects of Combating RN Terrorism, Jerusalem, Israel	June 2010
76	Best Practices Guide for Awareness, Training and Exercises Relevant to RN Detection Workshop, Zadar, Croatia	October 2011
77	Africa Outreach Seminar, Rabat, Morocco	November
78	Joint NFWG and RMWG Meeting, Ispra, Italy	October
80	The 2nd Symposium on Enhanced Detection of Special Nuclear Material, London, the UK	November
81	NDWG Guidelines Development Workshop, Lviv, Ukraine	November
82	NDWG Workshop, Athens, Greece	October
83	NDWG Workshop, Garmisch-Partenkirchen, Germany	April 2014
84	NFWG Meeting, Vilnius, Lithuania	April 2014
85	RMWG Meeting, Paris, France	May 2014
86	“Sugong Bagani: Envoy Warrior”: RMWG Public Messaging for Emergency Management Workshop, Manila, Philippines	April 2015
87	NFWG Experts Meeting, South Carolina, the US	October
88	10th Anniversary Planning Discussion, London, the UK	November
89	NDWG Experts Meeting, Helsinki, Finland	January
90	10th Anniversary Meeting, The Hague, The Netherlands	June 2016

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NOTES

1 The International Atomic Energy Agency (IAEA), the European Union (EU), International Criminal Police Organization (Interpol), the United Nations Office on Drugs and Crime (UNODC) and the United Nations Interregional Crime and Justice Research Institute (UNICRI).

2 Joint Statement by U.S. President George Bush and Russian Federation President V.V. Putin Announcing the Global Initiative to Combat Nuclear Terrorism, Office of the Press Secretary, White House, 15 July 2006.

3 In addition to Russia and the US, they included Australia, Canada, China, France, Germany, Italy, Japan, Kazakhstan, Morocco, Turkey and the UK.

4 Main page / GICNT website.

5 Alcaro 2009, 106.

6 Müller & al 2014, 69.

7 See e.g. Bowen & al 2012, 358-359 and Tobey 2012, 6-8.

8 Whereas Resolution 1373 “requires states to adopt ‘relevant international conventions and protocols to combat terrorism’ and recognizes the threat posed by international terrorism and by WMD materials and their trafficking,” Resolution 1540 requires them not to provide “any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery.” (Bowen & al 2012, 361-362). Resolution 1887 calls upon states “to share best practices with a view to improved safety standards and nuclear security practices and raise standards of nuclear security to reduce the risk of nuclear terrorism” (Resolution 1887, UN Security Council, 24 September 2009).

9 Summits have taken place in 2010 in

Washington, DC, US; in 2012 in Seoul, South Korea; in 2014 in The Hague, the Netherlands; and in 2016 once again in Washington.

10 “The Hague Nuclear Security Summit Communiqué,” 25 March 2014.

11 Nuclear Security Summit 2016 Communiqué, 1 April, 2016.

12 Nuclear Security Summit 2016, Action Plan in Support of the Global Initiative to Combat Nuclear Terrorism, 1 April 2016.

13 Of the 86 GICNT partner states, 81 are parties to the CPPNM and ICSANT, and 58 have ratified the CPPNM amendment. (See “Partner Nations List”, GICNT website; CPPNM Status, IAEA website; “International Convention for the Suppression of Acts of Nuclear Terrorism”, UN website, and CPPNM Amendment Status, IAEA website.)

14 Of the 86 GICNT partner states, 52 have participated in the NSS. Of the 53 NSS-participating states, 52 are part of the GICNT. (See “Partner Nations List” / GICNT website, and “Participating Countries & Regulators” Belfer Center for Science and International Affairs.)

15 In addition to the G7/8, the GP includes Australia, Belgium, the Czech Republic, Denmark, Finland, Ireland, Netherlands, New Zealand, Norway, Poland, South Korea, Sweden, and Switzerland. (See “Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (‘10 Plus 10 Over 10 Program’),” NTI website).

16 Bowen & al 2012, 360-361; Boureston & Ogilvie-White 2010, 6.

17 Council of the European Union, 12 November 2009; Council of the European Union, 29 November 2012; “Securing Dangerous Material”, European Commission; CBRN Risk Mitigation Centres of Excellence Initiative website.

18 UNICRI website / CBRN Centres of Excellence.

19 “Interpol Radiological and Nuclear Terrorism Unit Overview and Lessons Learned from the Investigations Training Course in Poland”, ppt-presentation, May 2012.

20 Interpol website / CBRNE.

21 “Tackling Chemical, Biological, Radiological and Nuclear Terrorism”, UNODC website.

22 UNICRI website / About UNICRI.

23 UNICRI website / CBRN Risk Mitigation and Security Governance Programme.

24 UNICRI website / CBRN Centres of Excellence.

25 For information on the Plenary meetings and the expansion of membership, see GICNT website / Official Statements.

26 Joint Co-Chair Statement, GICNT Plenary Meeting, Daejeon, 30 June 2011.

27 The remaining 16 were Plenary (9) and IAG meetings (7).

28 Joint Co-Chair Statement, GICNT Plenary Meeting, Mexico City, 24 May 2013.

29 Joint Co-Chair Statement, GICNT Plenary Meeting, 24 May 2013.

30 Tiger Reef, February 2014 (NFWG/RMWG); Atlas Lion, February 2015 (all Working Groups) and Radiant City, May 2015 (NDWG/NFWG).-

31 The Global Initiative Information Portal (GIIP) is a web portal used for communication and information sharing among GICNT members and as a repository for all GICNT activities. It also enables virtual meetings, or “webinars”, among IAG working groups. Access to GIIP is limited to the representatives of GICNT partner states and observers.

32 Joint Co-Chair Statement, GICNT Plenary Meeting, Helsinki, 17 June 2015.

33 Joint Co-Chair Statement, GICNT Plenary Meeting, Mexico City, 24 May 2013.

34 Joint Co-Chair Statement, GICNT Plenary Meeting, Helsinki, 17 June 2015.

35 Joint Co-Chair Statement, GICNT Plenary Meeting, Helsinki, 17 June 2015.

36 While in 2006 the IAEA had published only two guidance documents in its Nuclear Security Series, by 2015 that number was 25 (IAEA website / Nuclear Security Series Publications).

37 See Nuclear Security Systems and Measures for the Detection of Nuclear and Other Radioactive Material Out of Regulatory Control (Foreword), 2013.

38 Anonymous IAEA official, email interview, 25 December 2015.

39 Gyungsik Min (Former IAG Coordinator), email interview, 16 February 2016.

40 See Korbatov & al 2015, 73.

41 Müller & al 2014, 65.

42 See e.g. International Panel for Fissile Materials website.

43 Pandza 2011, 137-138.

44 Bunn, email interview, 5 January 2016.

45 Müller & al 2014, 69.

46 Bowen & al 2012, 356-357.

47 These include Bahrain, Cambodia, Cabo Verde, Cote d’Ivoire, Georgia, Iraq, Jordan, Kyrgyzstan, Montenegro, Palau, Saudi-Arabia, Singapore and Vietnam. The GICNT members that have yet to become parties to the CPPNM are Malaysia, Mauritius, Nepal, Sri Lanka, Thailand and Zambia. (IAEA website / CPPNM Status)

48 Müller & al 2014, 68.

49 Croatia, Estonia, Greece, Hungary and Lithuania.

50 Participation information is available for 34 events out of altogether 70 workshops/seminars/exercises held in 2007–spring 2016. In exercises, the average number was 20, in exercise planning 32, and seminars and workshops 17. As for Plenary and IAG meetings, it was 38 and 35, respectively.

51 For example, Pandza’s conclusion in 2011 was that the GICNT had been “fairly effective in facilitating the sharing of expertise for the purpose of mutual capacity building” (Pandza 2011, 137-138). Müller & al, for their part, contend that, “even of the GICNT has not produced anything new, the duplication has reinforcement effect and the potential to strengthen security norms” (Müller & al 2014, 68).

- 52 Bunn, email interview, 5 January 2016.
- 53 Anonymous IAEA official, email interview, 25 December 2015.
- 54 Tobey, skype interview, 8 January 2016.
- 55 Alcaro 2009, 103-104.
- 56 Informal interview with an anonymous representative (A) of the NDWG, 14 January 2016.
- 57 Gyungsik Min (Former IAG Coordinator), email interview, 16 February 2016.
- 58 Anonymous representative (B) of the NDWG, skype interview, 8 January 2016.
- 59 Bunn, email interview, 5 January 2016.
- 60 Tobey, skype interview, 8 January 2016.
- 61 Anonymous representative (B) of the NDWG, skype interview, 8 January 2016; Anonymous representative (C) of the NDWG, 13 January 2016; Gyungsik Min (Former IAG Coordinator), email interview, 16 February 2016.
- 62 Gyungsik Min (Former IAG Coordinator), email interview, 16 February 2016.
- 63 Anonymous representative (D) of the NDWG, 13 January 2016.
- 64 Bunn, email interview, 5 January 2016.
- 65 Anonymous IAEA official, email interview, 25 December 2015.
- 66 Comments to the draft version of this report by Vic Evans, 25 February 2016.
- 67 Anonymous former IAEA official, email interview 16 February 2016.
- 68 Anonymous IAEA official, email interview, 25 December 2015.
- 69 Anonymous IAEA official, email interview, 25 December 2015.
- 70 Anonymous IAEA official, email interview, 25 December 2015.
- 71 Anonymous IAEA official, email interview, 25 December 2015.
- 72 Comments to the draft version of this report by Vic Evans, 25 February 2016.
- 73 Korbатов & al 2015, 73.
- 74 Müller & al 2014, 70.
- 75 Anonymous former IAEA official, 16 February 2016.
- 76 See Müller & al 2014, 67;70.
- 77 See national statements by Argentina, Australia, Canada, Finland, Morocco, Pakistan, Spain and Ukraine. Available at <<http://www.nss2016.org/2016-national-statements/>>.
- 78 See national progress reports of Algeria, Argentina, Armenia, Australia, Azerbaijan, Canada, Chile, Finland, France, Germany, Hungary, India, Israel, Italy, Japan, Jordan, Kazakhstan, Lithuania, Mexico, Morocco, the Netherlands, South Korea, Romania, Singapore, Spain, Switzerland, Thailand, Ukraine, UAE, the UK and the US. Available at <<http://www.nss2016.org/2016-progress-reports/>>.
- 79 See e.g. Finland's Statement on National Nuclear Detection Architectures, website of the Finnish Ministry of Foreign Affairs <http://www.formin.fi/public/download.asp?ID=156370&GUID=%7BDD8E6E6A-64EC-4A1C-8443-DF56F6C41061%7D>
- 80 IAEA website: Incident and Trafficking Database
- 81 GOV/2013/42-GC(57)/19
- 82 Ministerial Declaration, International Conference on Nuclear Security: Enhancing Global Efforts, adopted on 2 July 2013.
- 83 According to the list of multilateral activities (GICNT website): Seminar on the Promotion of Accession to the International Counter-terrorism Conventions and Protocols (held in Japan in March 2007), Conference on Legal Issues Related to Combatting Trafficking of Materials for Development of Nuclear/Radiological Devices (held in Germany in September 2008), Nuclear Forensics and Related Legal Frameworks Workshop (held in Israel in June 2010), and "Glowing Tulip": International Conference and Mock Trial on Nuclear Forensics (held in the Netherlands in March 2015).
- 84 See e.g. Jansson, Mark & Charles D. Ferguson: "Revisiting radioactive source security," November 2012 <<http://thebulletin.org/revisiting-radioactive-source-security>>, (accessed Feb 2016).
- 85 Phone interview with an anonymous Russian expert, 10 March 2016.

86 According to the list of multilateral activities (GICNT website), one such event was held: Engagement of Scientists, Engineers, and Technicians Working With Nuclear Materials (held in the United Kingdom in October 2008), aimed at promoting “awareness of the threat of nuclear terrorism to technical experts from government, industry, professional institutions, and academia.”

87 See Joint Co-Chair Statement, Global Initiative to Combat Nuclear Terrorism, 2015 Plenary Meeting. <http://www.gicnt.org/content/downloads/meetings/2015_Joint_Co-Chair_Statement_FINAL.pdf>, accessed Feb 2016)

88 The 2016 NTI Nuclear Security Index showed that nuclear facilities in many countries lack effective measures against potential cyber threats. <http://ntiindex.org/wp-content/uploads/2016/03/NTI_2016-Index-Report_MAR-25-2.pdf> (accessed Apr 2016).

89 This point came up, for example, in interviews with Dr. Roger Howsley, Executive Director of WINS.

90 This could include, for instance, the sixth revision of INFCIRC/225 or an update of Nuclear Security Series No. 17.

91 Only 12 states parties to the CPPNM have provided the obligated information.

92 For a description, see “Integrated Nuclear Security Support Plan (INSSP),” available at <<http://www-ns.iaea.org/security/inssp.asp?s=4>> (Accessed Feb 2016).

93 Phone interview with Roger Howsley 21 January 2016.

94 2nd Plenary Meeting (held in Turkey, February 2007), 4th Plenary Meeting (held in Spain, June 2008), African Outreach Event (held in Morocco in November 2011).

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