



2019

Global Initiative to Combat Nuclear Terrorism

The Work of the GICNT from
the 2017 Tokyo Plenary to the
2019 Buenos Aires Plenary



GICNT

GLOBAL INITIATIVE
TO COMBAT
NUCLEAR TERRORISM

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About
GICNT

The GICNT is committed to strengthening global capacity to prevent, detect, and respond to nuclear terrorism.

The Global Initiative to Combat Nuclear Terrorism (GICNT) is a voluntary partnership of 88 nations and six international observer organizations that are committed to strengthening global capacity to prevent, detect, and respond to nuclear terrorism by conducting multilateral activities that strengthen the plans, policies, procedures, and interoperability of partner nations. All partner nations have voluntarily committed to implementing the GICNT Statement of Principles, a set of broad nuclear security goals encompassing a range of related objectives. The GICNT was established in 2006 and is co-Chaired by the Russian Federation and the United States.

The objectives of the GICNT are to:

- 1. Integrate collective capabilities and resources to strengthen the overall global architecture to combat nuclear terrorism.
- 2. Convene experience and expertise from the nonproliferation, counter-proliferation, and counterterrorism disciplines.
- 3. Provide the opportunity for nations to share information and expertise in a voluntary, nonbinding framework.

The GICNT works to achieve these objectives and address specific nuclear security topics through practical engagements and capacity building activities, including seminars, workshops, technical experts’ meetings, and discussion-based tabletop exercises (TTX) and operations-based field training exercises (FTX).

Event participants engage in cross-disciplinary dialogues that often include technical and scientific communities, national laboratories, customs, border security, law enforcement, emergency management and first responders, as well as security policy officials, public health officials, and regulatory agencies. Representatives integrate collective knowledge, experience and resources to strengthen the overall global security architecture.

The GICNT has developed numerous activities and products to promote exercises as a tool for sustaining and improving nuclear security capabilities, including by organizing multilateral discussion-based and field exercises.

The GICNT has supported the development of:

- Multilateral exercises that raise awareness of nuclear security challenges, bring together policy, technical, and operational experts from different fields and countries, and promote capacity building across GICNT focus areas;
- Bilateral and regional exercises, where countries organize national-level teams to enhance interagency coordination in responding to terrorist events involving radiological or nuclear (RN) material, while also strengthening bilateral and regional cooperation with other partners;
- Products and activities that demonstrate the importance of national nuclear security exercise programs and key resource considerations and models for developing, implementing, and sustaining such programs; and
- The GICNT’s Exercise Playbook, which contains realistic scenarios illustrating challenges related to the development of a comprehensive nuclear security program.

Implementation & Assessment Group

IAG Coordinator
FINLAND



Ambassador Jari Luoto
GICNT Implementation and Assessment Group Coordinator
Ministry for Foreign Affairs, Finland

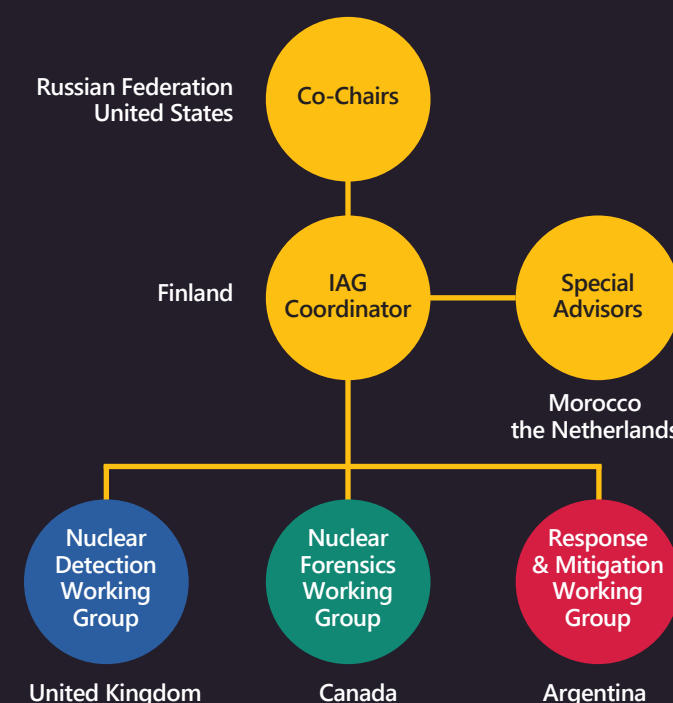


The Implementation and Assessment Group (IAG) is charged with implementing functional areas that have been identified by the Plenary Meetings as priorities and overseeing the efforts of the GICNT's Working Groups to organize activities that address those priority functional areas. Under the leadership of the IAG Coordinator – a position held by Spain, the Republic of Korea, the Netherlands and Finland – the IAG has continued to advance the GICNT's mission and serve as an important forum for promoting dialogue between policy, operational, and technical experts. The IAG is currently focused on developing and executing a flexible work program that produces practical results for the GICNT through three working groups: Nuclear Detection, Nuclear Forensics, and Response and Mitigation.

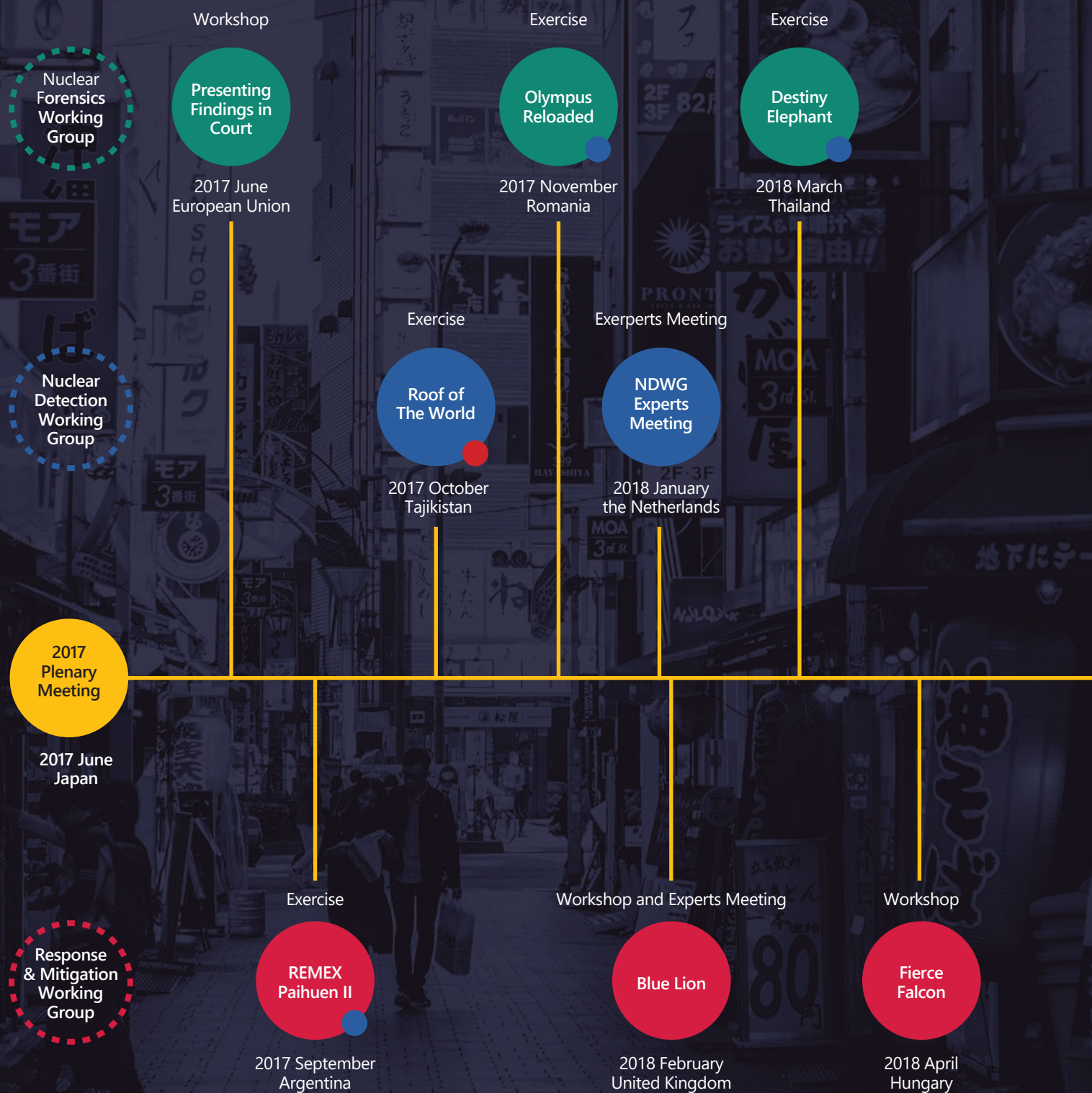
PHOTO:
2017 Tokyo Plenary Meeting

FROM THE IAG COORDINATOR

As the Implementation and Assessment Group Coordinator for years 2017-2019 it has been a great pleasure working with partner nations and the international observers with a series of successful events on many continents. Finland is extremely grateful for all the host countries and indeed to all GICNT partners for their active participation in these exercises, workshops and seminars in North and South America, Asia, Europe and Africa that have contributed both to development of national nuclear security capabilities and international cooperation. Success is the result of teamwork for which the Co-Chairs, Russia and the United States, and working group chairs, Argentina, Canada and United Kingdom deserve special thanks.



From the 2017 Tokyo Plenary



To the 2019 Buenos Aires Plenary



Nuclear Detection Working Group

Chaired by
UNITED KINGDOM



Vic Evans, Nuclear Detection Working Group Chair
Assistant Director Border Force
Home Office, United Kingdom

GICNT

The Nuclear Detection Working Group (NDWG) is building and enhancing national detection capabilities by providing practical deliverables to raise awareness, transferring knowledge and experience, and providing guidance to detection experts. The NDWG held 4 workshops and exercises with 39 countries and 3 agencies participating in one or more conference.

PHOTO:
2017 Roof of the World Exercise, Tajikistan

RECURRING THEMES

- Preparation through Training and Exercises
- Training Front Line Officers for Nuclear Detection
- Inter-Agency and Bilateral Coordination
- Sustaining Nuclear Detection Architectures
- Alarm Assessment and Reachback Support
- Multilateral Information Sharing

FROM THE CHAIR

I have thoroughly enjoyed working and collaborating with enthusiastic and knowledgeable colleagues from partner nations and organisations. It has been an honour and an unforgettable experience to either lead or participate in GICNT exercises and events aimed at improving nuclear security capabilities across the world.

My takeaways are:

1. Continuous improvement and sustainability are essential elements of an effective nuclear security architecture. Improve or else you go backwards!
2. It is not necessary to have huge budgets to make effective changes and enhancements. Be the best you can be!

Roof of the World Exercise

Nuclear Detection Regional Exercise

2017
17-19 October

Dushanbe, Tajikistan

In October 2017, the Government of Tajikistan, in cooperation with the GICNT, developed the “Roof of the World” Regional Nuclear Detection Tabletop Exercise for law enforcement officials (including customs, border agents, federal and national police) and technical experts across the fields of nuclear detection and forensics throughout Central Asia. The exercise highlighted the work of regional partners in promoting the development of national nuclear detection architectures, identified challenges and best practices in developing a national exercise program, encouraged the sharing of best practices during an RN terrorist incident, and identified opportunities for future regional collaboration.

KEY FINDINGS

Quality Assurance
Partner Nations can develop long-term maintenance and quality assurance programs as a core component of Nuclear Security Detection Architectures (NSDAs) to ensure that detection equipment functions properly in advance of an incident.

National Training Programs
Partner Nations may implement national training programs with regular training cycles for authorities involved in the prevention, detection and response to nuclear security threats to continuously strengthen and enhance national nuclear detection architectures.

Nuclear Security Exercises
Partner Nationals should include senior levels of management in nuclear security exercises to build awareness of threats and capabilities, and test and improve coordination in a response to a terrorist attack involving RN material.

Boarder Guard Training
Partner Nations can provide regular and specific training to border guards on the detection equipment they use, including; basic facts about radiation, screening and smuggling methods, and potential safety hazards from radiation exposure.



CHALLENGES FOR FUTURE DISCUSSION:

- 1. Nuclear security experts may adapt existing response and incident management plans for nuclear security measures and response to incidents involving nuclear terrorism.
- 2. Sustained awareness of nuclear security challenges and threats among front line officers who face many cross-border threats and criminal activities.
- 3. Sustaining effective awareness of nuclear security plans and best practices is complicated by regular staffing changes.

Peak of Kinabalu Exercise

Detection and Response Regional Exercise

2018
7-9 August

Kota Kinabalu, Malaysia

Developed as a collaboration between the GICNT and the International Atomic Energy Agency (IAEA), the government Malaysia hosted the ‘Peak of Kinabalu’ Trilateral Nuclear Security Tabletop Exercise in Kota Kinabalu, Malaysia in August 2018. This exercise focused on the nuclear detection and response capabilities required to effectively manage and respond to security threats aimed at the critical locations within the shared maritime borders of Malaysia, Indonesia, and the Philippines. Participants in this exercise discussed the effectiveness of national and international coordination and communication with an emphasis on detection and response in the maritime environment.

KEY FINDINGS

Planning Best Practices
Partner National should review agency plans and protocols on a regular schedule (for example, annually or biannually) to update plans, identify areas for improvement, and ensure plans are aligned to current threats and capabilities.

Awareness of Plans through Training
Training programs and exercises should include guidance on agency plans and protocols to maintain awareness of national and agency protocols for all organizational levels. Agency and national level plans should be exercised on a regular basis as part of a national exercise program for nuclear security.

Logistical Support Considerations
Logistical and administrative support functions should be a component of national and agency level plans to support effective and sustained operations.

Bilateral Coordination and Regional Peer Exchanges
Regular meetings between officials and technical experts, written agreements between States and agencies, and joint peer exchanges, training, and exercises between partner States will help prepare for bilateral coordination during an RN terrorism event. Conducting nuclear security peer exchanges, joint training, and joint exercises with regional partner nations can strengthen bilateral coordination, foster the sharing of best practices and lessons learned, and facilitate trust.



CHALLENGES FOR FUTURE DISCUSSION:

- 1. Maintaining core knowledge and expertise of detection procedures and best practices in border patrols with frequent changes in personnel assignments and turnover.
- 2. Sustained awareness of nuclear security challenges and threats among front line officers who face many cross-border threats and criminal activities.
- 3. Maintaining equipment spread over a large geographic area with remote border crossings and harsh weather with extreme low temperatures is a persistent regional challenge.

Sentinel II Workshop

Developing
National
Nuclear
Security
Exercise
Programmes

2018
09-11 October

Vilnius, Lithuania

In October 2018, Lithuania and the United Kingdom hosted “Sentinel II”, under the auspices of the GICNT. Building on the outcomes of the Sentinel 2017 Workshop hosted by Bulgaria in collaboration with the United Kingdom, the Sentinel II workshop focused on the implementation of best practices for national nuclear security exercise programs, the exercise planning cycle, and exercise evaluation and improvement planning.

KEY FINDINGS

Exercise Development
Development of exercises should be informed by national risk assessments. In addition, at the earliest stage of the exercise planning process, it is crucial to link exercise evaluation and exercise objectives. Effective exercises have targeted objectives and scope. A common mistake is developing exercises that are overly complex and do not address specific capabilities or challenges.

Exercise Evaluation
Developing a strong exercise evaluation plan requires the identification of specific roles and responsibilities for documenting observations and how exercise objectives were met. It also requires rigorous tasking of assignments and a plan for ensuring follow through after the exercise. Completing the evaluation plan is the initial step for successfully achieving a continuous preparedness cycle. The results of the exercise must be disseminated to the people who have the power to implement relevant changes.



CHALLENGES FOR FUTURE DISCUSSION:

- 1. It is difficult to coordinate successfully coordinate a multi-agency exercise with various equities, personalities, and SOPs involved. All relevant stakeholders should be included and have the opportunity to provide relevant feedback. During the exercise, stakeholders must remain neutral, which is a challenge that training can solve. Lastly, observers may unintendedly play roles or provide unsolicited comments.
- 2. Determine method for gathering useful exercise feedback from participants and disseminate it to officials that can enact change.
- 3. Exercises must be realistic and appropriate to the most relevant threats and risks of RN terrorism.

Cunning Karl Workshop

Nuclear
Detection
Reachback
Support

2019
12-14 February

Karlsruhe, Germany

In February 2019, the European Commission’s Joint Research Centre (JRC) hosted the Nuclear Detection Reachback Support Workshop, “Cunning Karl”, under the auspices of the GICNT. The workshop brought together over 50 experts from 24 countries and featured expert presentations, case studies and several small group discussions. Participants discussed coordination, communication, and technical challenges and best practices for conducting reachback in support of radiological and nuclear detection operations and explored strategies for countries looking to integrate or enhance reachback support as part of their national nuclear security detection architectures.

KEY FINDINGS

Defining Reachback
Participants defined “reachback” as an offsite entity that provides advisory and coordination support for operational, technical, analytical, and/or scientific matters. This definition helped promote a better understanding of how experts used the term reachback.

Core Capabilities for Reachback
Participants also developed a list of core capabilities that would be essential for countries establishing or maintaining a national radiological and nuclear reachback support program or network. The list of core capabilities include, but are not limited to:

Legal frameworks for RN detection
Legal frameworks should serve as the foundation for a country’s national NSDAs and should include policies and plans for utilizing reachback entities to support Front Line Officers (FLOs) when radiological and nuclear material is detected.

Reachback Communication
FLOs and reachback personnel need a secure mechanism to share data and information and communicate with one another and with relevant international stakeholders. FLOs and reachback personnel need a common understanding of the

information that is necessary for each stakeholder, and should have a basic understanding of the common terminology needed to pass information.

Measurement Capability
FLOs should have adequate equipment to detect the presence of radiological or nuclear material, at a minimum a dose rate monitor should be available for initial detection. A spectroscopic measurement device should be used during secondary measurements. FLOs should be able to assess and adjudicate alarms within pre-determined parameters to mitigate the volume of alarms sent to reachback support.

Assessment Capability
Reachback entities should have the ability to analyze spectra and make conclusions from the detected material including whether it is a safety hazard. The reachback entity could be one person or a network of people at a university, government lab, scientific institution, et cetera.

CHALLENGES FOR FUTURE DISCUSSION:

Information Sharing
Participants discussed the need for a gamma spectra repository or library where experts could securely share spectral and associated metadata. This would be especially beneficial for the community of reachback scientists. Additional relevant information could be added to the library such as a list of common detection equipment, and gamma analysis software for countries looking to establish or enhance their detection and reachback capabilities.



Nuclear Forensics Working Group

Chaired by
CANADA



Dr. Ali El-Jaby, Nuclear Forensics Working Group Chair
Lead Technical Advisor, Directorate of Security and Safeguards
Canadian Nuclear Safety Commission

GICNT

The Nuclear Forensics Working Group (NFWG) concentrates on developing guidance and activities that raise awareness of nuclear forensics, assist partners to develop core capabilities, foster intergovernmental relationships, and share best practices. Since the 2017 Tokyo Plenary, the NFWG held 2 workshops and exercises with 37 countries and 5 organizations participating.

PHOTO:
2017 Olympus Reloaded Exercise, Romania

RECURRING THEMES

- Preparation Through Continuous Training and Planning
- Multilateral Collaboration
- Information Sharing
- Use of Subject Matter Experts
- Inter-Departmental/ Agency Coordination
- Maintaining Chain-of-Custody and Ensuring the Rules of Evidence
- Cross-Training with Detection and Response
- Analysis and Assessment of Material Outside of Regulatory Control

FROM THE CHAIR

I have had the honour and privilege to work with very talented and highly knowledgeable colleagues from all GICNT partner nations and observer organizations. Through our collective efforts, the NFWG has developed and delivered exercises and produced tools that focus on demonstrating how nuclear forensics can effectively support law enforcement and national security organizations in their counter-nuclear terrorism mission. Our aim has been, and will continue to be, to promote and facilitate the sharing of nuclear forensics technical and operational good practices, as well as to foster stronger cooperation and coordination between the scientific, technical, law enforcement, legal, and policy development communities of practice.

Presenting Nuclear Findings in Court

Workshop and Experts Meeting

2017
26 June

Karlsruhe, Germany

The Nuclear Forensics Working Group held a one-day workshop at the European Commission’s Joint Research Center in June 2017, for partners to share perspectives on considerations for preparing, producing, and presenting nuclear forensics findings in a court of law. The workshop addressed considerations for bilateral nuclear forensics cooperation, with a focus on how to ensure that evidence exchanged across international borders may be accepted in judicial proceedings.

KEY FINDINGS
Common Challenges

- How to convey findings and conclusions in a way that is easily understood by judge and jury.
- How to ensure the focus is on answering the investigative question.
- Recognizing that rules, procedures, and court systems may differ across multiple jurisdictions.
- How to define requirements for chain of custody and the rules of evidence.
- How to deal with evidence contaminated with RN material.
- How to raise awareness around low probability / high consequence events such as RN terrorism.

Training to Present Nuclear Findings in Court
Training is needed for both expert witnesses and prosecutors/judges:

- Expert witness training can prepare nuclear scientists on what to expect from cross-examination.
- Training for the prosecutors and other court officials on the terminology, value of the analysis, and approach to forensic evidence, et cetera.

Good Practices

- Close cooperation between investigative authorities and experts to develop and implement analytical plans.
- Analytical plans are based on the requirements of what evidence needs to be collected and analyzed to prosecute the case.
- Define roles and responsibilities for each party in developing an examination plan.
- Experts should identify and define the scope of their expertise as narrowly as possible.
- It may be helpful, at a national level, to develop common language to convey level of confidence in findings.
- Relationship building is key in national and international coordination. Exercises are an important tool to this end.
- Experts should identify and define scope of their expertise as narrowly as possible.
- Review or establish bilateral legal frameworks for collaboration in advance.



Olympus Reloaded Exercise

Regional Exercise on Nuclear Forensic Support to Investigations

2017
07-09 November

Bucharest, Romania

In November 2017, the Government of Romania, in cooperation with the Nuclear Forensics Working Group developed the “Olympus Reloaded” Regional Exercise on Nuclear Forensics Support to Investigations. Olympus Reloaded brought together members of the law enforcement, regulatory, legal/prosecutorial, foreign affairs, and scientific and technical nuclear forensics communities of practice from throughout the Black Sea region. Participants examined and discussed challenges associated with investigating and building a case to prosecute criminal and terrorist acts involving RN material out of regulatory control.

The second event in the GICNT Law Enforcement Dialogue Series, this exercise built on the objectives and outcomes from the 2016 Exercise Olympus on nuclear detection and technical reachback. Olympus Reloaded addressed procedures, policies, and mechanisms for crime scene management, collaboration between law enforcement and nuclear forensic experts in the development and execution of an analytical plan, international exchange of information in support of an investigation, and the importance of implementing international legal frameworks for criminalizing nuclear terrorism and crime through national legislation.

KEY FINDINGS
International Agreements and Information Sharing

International treaty provisions should be implemented through national legislation. Implementing strong legal criminalization provisions will deter and may lead to the



successful prosecution of acts of terrorism and crime. Additionally, supporting legislation may also be required to set up necessary structures, define roles and responsibilities, and implement national policies and procedures. Moreover, bilateral and multilateral (regional) information exchange and collaboration agreements should be developed in advance. Such agreements should be tested and validated through exercises and workshops. Governments should establish all communications through a single authority to promote unified national/regional action.

National Response Planning

National response plans should clearly define roles and responsibilities (including the lead department/agency) for all involved in the investigation of a terrorist event involving RN material. Additionally, countries can establish protocols, agreements, and legal frameworks in advance of an RN incident to ensure timely exchange of information. National organizations and subject matter experts that have relevant technical reachback capabilities should be identified in advance as well.

Collaboration on Nuclear Forensics Activities

National training programs should be established with regular training cycles for all entities involved in the investigation of incidents involving RN material to ensure the necessary level of training on policies and procedures. Training can also identify connections between traditional and nuclear forensics, and common requirements or procedures that cross over between the two disciplines.

Nuclear Forensics in Support of Investigations

Prior to incidents, law enforcement, prosecutors, and technical experts should work together in formulating and prioritizing the right questions to advance the investigation. During incidents, personnel conduct all scientific and technical nuclear forensics activities in accordance with the rules of evidence to ensure the admissibility of evidence in court.

Destiny Elephant Exercise

Nuclear Forensics Exercise

2018
06-09 March

Bangkok, Thailand

In March 2018, Thailand, with support from Australia and New Zealand, hosted the “Destiny Elephant” Nuclear Forensics Exercise in Bangkok, Thailand. Participants engaged in a TTX to discuss technical, operational and policy-level considerations for coordinating national-level authorities during the investigation of an RN terrorist incident, while taking into account the central issues, challenges, and solutions associated with the rules of evidence. Key outcomes included defining the roles and responsibilities of the appropriate government organizations, identifying connections and commonalities between traditional and nuclear forensics, and raising awareness of technical and policy issues that can affect decision-making before and during an investigation of an incident.

KEY FINDINGS

Data Driven Decisions

A national mandate to establish a database-type tool should identify required resources, costs, and existing collections of data, information, and subject matter expertise that can be utilized. Data can be collected by developing a national mechanism to query de-centralized domestic databases. Databases must hold valid and updated information and be verified on a pre-established schedule.

Managing Expectations

Training should be given to working-level officials and technical subject matter experts on the importance of managing the expectations of senior leaders in order to support their decision making at all points of an investigation. Additionally, prior to any incident, and as an incident unfolds, response personnel should raise senior officials’ awareness of realistic time frames, technical/analytical capabilities and limitations, and the reliability of early information used to support an investigation.



Prepare Through Practice

Regular training and education for first responders, law enforcement personnel, and forensic examiners on proper procedures for handling physical evidence throughout an investigation (e.g., chain of custody) is imperative. Education should include implementing rules of evidence in exercises that include unique hazards associated with a radiological crime scene (e.g., personnel protection requirements, exposure risks, and time limitations) to develop necessary skills and expertise. Such exercises can identify and address gaps in capabilities, interagency coordination, and resources.

Subject Matter Experts in Data

Subject matter experts in data evaluation and comparative analysis should be identified in advance of an incident and their roles and responsibilities formally captured in relevant plans.

Resolute Sentry Exercise

Joint Exercise on Nuclear Detection and Nuclear Forensics to Combat Nuclear Terrorism

2019
29 January – 01 February

Montréal, Canada

In January 2019, the governments of Canada and the United Kingdom hosted Exercise ‘Resolute Sentry’ as a joint initiative under the auspices of the GICNT, and in their respective capacities as Chairs of the Nuclear Forensics Working Group (NFWG) and Nuclear Detection Working Group (NDWG). The exercise scenario involved responding to a transnational radioactive material smuggling event whereby both Canada and the United Kingdom intercepted radioactive material at one of their ports-of-entry; and through appropriate information exchange protocols and mechanisms, both countries advanced their respective investigations into the radioactive material smuggling events. The exercise also explored how the domestic legal frameworks of Canada and the United Kingdom would prosecute such smuggling events, and how the incorporation of international legal instruments into domestic legal frameworks can support national, bi-national and extra-territorial prosecution efforts.

KEY FINDINGS

Alarm Adjudication Procedures

Partner nations should include procedures for the response to an alarm securing and isolating suspect source, alarm confirmation, comparison of readings, conduct of secondary examinations, and dispatch of appropriate agency notifications.

Threat-Based Planning

Partner nations should consider appropriate sequencing and tiered response levels that are commensurate with the assessed threat in National Response Plans.

Developing Key Relationships

Countries can develop and maintain relationships between technical agencies and law enforcement as part of national strategies to sustain nuclear security capabilities.



Preparing Plans and Protocols

Partner nations should consider including measures in plans and protocols to safely and securely maintain commerce and trade while also not alarming the public before conclusions are reached during an incident of nuclear terrorism or crime. Countries should also review and test protocols and measures intended to protect the health and safety of front line officers when responding to a nuclear detection alarm.

CHALLENGES FOR FUTURE DISCUSSION:

- 1. Agency level plans and protocols need to be periodically evaluated and updated to ensure adequate preparedness for incidents of nuclear terrorism and crime.
- 2. Protocols and models for the exchange of information between partner countries will often be unique to the countries involved. Participant discussions emphasized the need to develop information exchange plans and maintain protocols.

Response & Mitigation Working Group

Chaired by
ARGENTINA



Tomas Bieda, Response and Mitigation Working Group Chair
Director of Nuclear Security Policies and Non-Proliferation
Ministry of Energy and Mines, Argentina

RMWG

The Response and Mitigations Working Group (RMWG) examines best practices and techniques related to crises or emergencies when the immediate or potential threat exists to human life as a result of a radiological/nuclear terrorist threat or incident. The RMWG held 6 workshops/exercises with 50 countries and 3 organizations attending one or more workshops/exercises.

PHOTO:
2017 Paihuen II Exercise, Argentina

RECURRING THEMES

- Inter-Agency and International Coordination
- Incident Response Command and Control
- Joint Training for All Levels of Government
- First Response Capabilities and Training
- Incident Response Preparation
- Public Engagement and Messaging

FROM THE CHAIR

Nuclear Terrorism is a global threat, and we need to work together as a global community. After several exercises within the RMWG, it is clear that a key element of an effective response is developing a smooth interagency coordination. Everyone needs to know what to do, what their role is, and which agency does what. Also, an effective response relies on the joint training between law enforcement and technical personnel. We need to know our national and regional counterparts before an event could ever happen. Therefore, it is imperative to conduct regularly exercises or drills because an untested protocol is a dead one. Last but not least, communication through all levels and channels is essential for an effective response.

Paihuen II Field and Tabletop Exercise

Radiological
Emergency
Management
Exercise

2017
27-29 September

Bariloche, Argentina

The governments of Argentina and Chile hosted the Radiological Emergency Management Exercise (REMEX) “Paihuen II” in San Carlos de Bariloche, Argentina in September 2017. This multi-day exercise comprised of a TTX and a FTX focused on the validation of national-level and bilateral protocols to respond to a nuclear terrorist threat and incident. The exercise simulated the threat of a terrorist organization attempting to obtain radioactive material within the region for use in a Radioactive Dispersal Device to cause severe damage to the public, mass panic, and destabilize the region.

KEY FINDINGS

Bilateral Coordination

Effective bilateral coordination requires both strong relationships between institutions in each country and established mechanisms for exchanging information. Relationships and coordination between agencies (such as regulator to regulator) should be formalized by protocol or agreement so that such relationships can be sustained beyond any one particular individual.

Threat Assessments

National plans and priorities for nuclear security should be based on the greatest nuclear security threats to that particular country. Nuclear security threat analyses will involve many different institutions and areas of expertise and roles. Therefore, analyses should be developed as a coordinated effort with all essential stakeholders with a designated authority (such as an intelligence or security agency) that has the lead responsibility for developing such an analysis.



Incident Response Command and Control

Response to a RN terrorism event will involve multiple agencies and stakeholders. Effective command and control of a multi-agency response requires all personnel involved in the response to have knowledge and understanding of national protocols and their own agency’s protocols. Furthermore, personnel should have a working understanding of the national systems and protocols for incident command and control. Knowledge of such procedures requires regular training of staff and practical exercises of protocols and command and control functions.

Exercise Assessment and Evaluation

National level exercises are an important tool to validate the synchronization between agency level protocols and a national plan; and serve to increase awareness of inter-agency capabilities and on how required entities should coordinate together. Future GICNT activities might consider how exercise evaluation plans for national exercises might test and validate both national and agency level plans.

Blue Lion Workshop

Recovery and
Consequence
Management
Workshop and
Exercise

2018
06-08 February

London,
United Kingdom

In February 2018, the Government of the United Kingdom developed this workshop as part of the National Frameworks Series to deepen GICNT partner understanding of the impacts of immediate response actions on the long-term effects of a RN terrorist attack. Participants discussed models and best practices for responding to a terrorist attack involving radioactive material and focused on planning for early response actions that may ease the transition to recovery and long-term impacts of such an attack. Workshop facilitators conducted a TTX, to examine initial understanding of partners’ respective responses to a Radiological Dispersal Device.

KEY FINDINGS

Immediate Response

Local leaders should be engaged during all aspects of response and recovery to ensure an effective recovery. Training for first responders should take an all-hazards approach to help them plan and anticipate scenarios upon arriving on-scene. Early first responder assessment and screening capabilities can mitigate negative long-term recovery consequences. Lastly, response leaders should have prior agreements on when to share information with the public and what information should be shared. This includes pre-incident and consequence mitigation messaging strategies are multidisciplinary and critical.



Recovery

Planning for recovery should begin with the initial response. Existing response capabilities for other types of disasters can be applied to responses to a radiological or nuclear terrorist incident. During these types of incidents, life-saving organizations, operations, and actions are always the immediate priority, and proactive protection of related infrastructure and assets is a response action that will significantly impact recovery. Recovery plans must articulate and realistically describe a potentially indefinite process. The local community must identify recovery plan priorities as recovery planning and early emergency intervention can limit the scope and cost of recovery.

Public Engagement

Countries should inform the public about the immediate response actions the public could independently take (i.e. self-decontamination at home, shelter in place). This includes maintaining and regaining public confidence and can be supported by communicating frequently with the public during the immediate response and continuing to communicate with smaller targeted audiences throughout the recovery; pre-approved, expert-informed, coordinated messages can support these efforts in advance. One example is to prepare recovery handouts in advance for distribution to the public in the event of an attack. Also, environmental monitoring programs should include clear timelines and exposure benchmarks to maintain public trust.

Information Sharing

Termination of the emergency requires arrangements for the return to what may be a “new normal” of community, social, and economic activity. Information sharing protocols should be developed and exercise them so that senior leaders can coordinate and develop a common operating picture. Consider what information to share with international partners to provide appropriate assurances and/or request/respond to offers of international assistance

Fierce Falcon Exercise

Radiological Source Security and Theft Response Workshop

2018
10-12 April

Budapest, Hungary

In April 2018, the Government of Hungary, in partnership with the GICNT and the U.S. Department of Energy (DOE), hosted “Fierce Falcon”, a Radiological Source Security and Theft Response Workshop in Budapest, Hungary. The workshop focused on the best practices associated with immediate site and local law enforcement response to an attempted or actual theft of radioactive material. Participants discussed key factors that impact radioactive source security and theft response, including search and recovery.

KEY FINDINGS

Importance of Joint-Trainings
Interagency training and regular communication with law enforcement helps maintain sustainability of response plans and ensures accuracy of points of contact. Therefore, joint law enforcement/technical expert cross-training should be held to avoid having an actual incident be the first meeting of officials. These trainings should begin with basic awareness training for law enforcement, with potential further steps in which the training becomes progressively more advanced. Trainings can prioritize so that all involved agencies understand the national framework and are aware of roles and responsibilities as defined by the national response plan.

Multilateral Training
Partner Nations can establish personal relationships/networks, as these are critical to facilitating response time, no matter the size of the country. These relationships include in joint trainings with neighboring countries to familiarize agencies and their counterparts with corresponding response protocols.

Training at All Levels of Government
Response training coordination should happen at all levels (vertical and horizontal). If the national decision-making process involves individuals at a senior political level, countries should ensure that these individuals are involved in response training and also brought into the response procedures to an incident as early as possible. Lastly, a best practice is regular background checks of responder personnel to mitigate insider threat.

Media Engagement
Partner Nations understand using the media for recovery of a missing radioactive source might be a good tactic, but there is likely a trade-off between efficiency/awareness and “over informing,” which could cause public panic.



Jaguar Negro Exercise

National Field Exercise and GICNT Workshop

2018
29-31 May

Mexico City, Mexico

In May 2018, Mexico’s Ministry of Foreign Affairs hosted a GICNT workshop to exchange national models, best practices, and lessons learned from “Jaguar Negro” and support outreach to countries that have not yet joined the GICNT. On May 29-30, 2018, Mexico’s National Nuclear Research Institute (ININ) hosted the “Jaguar Negro” exercise. Participants from other GICNT partner nations and countries in the region observed both days of the exercise and discussed outcomes at the GICNT workshop.

The first day of the exercise simulated a customs checkpoint, where officials detected the presence of radioactive material and a driver set off a Radiological Dispersal Device after the vehicle moved to secondary inspection. Mexico tested its emergency response capabilities and communications protocols, including first responder priority actions, setting up safety and security perimeters, evacuating and decontaminating affected personnel, and managing the crime scene and recovering evidence. The second day of “Jaguar Negro” focused on investigating and prosecuting the attack from the previous day, collecting evidence from the crime scene, and procedures to maintain chain of custody.



- KEY FINDINGS**
- First responders need sustained education on risks and precautions involving RN emergencies.
 - Technical experts should develop means to better communicate technical information in easily understood non-technical language for first responders.
 - Plans for chain of custody and transfer of evidence should be consistent with national penal codes.
 - Training and exercise programs should be sustained across different government agencies and political administrations.
 - Plans should consider linkages between RN terrorism responses and responses to conventional emergencies (e.g. national disasters).
 - Inventory tracking for equipment is vitally important to ensure equipment is mobilized and utilized appropriately.
 - Evaluators from across agencies should be used in exercises to better evaluate communication and coordination between agencies and evaluate a whole-of-government response.
 - Relationships between nuclear research and forensics experts and investigators and prosecutors must be sustained over time to better understand one another’s capabilities and needs in the event of an RN terrorism response.

Panda Warrior Workshop

Combating Nuclear Terrorism and Emergency Response at Major Public Events

2018
16-19 October

Beijing, China

In October 2018, China hosted the Workshop on Combating Nuclear Terrorism and Nuclear Emergency Response at Major Public Events ‘Panda Warrior’ as part of RMWG National Framework Series. Participants analyzed and discussed how planning for security at major public events (MPE) fits into national security frameworks; identified best practices for planning and implementing security procedures at major public events; and discussed the capabilities needed during an event to detect and respond to a RN terrorism threat.

KEY FINDINGS

Immediate Response
Establish a Methodical Planning Approach for Nuclear Security at MPEs

The planning process for RN security measures at a MPE should start well in advance of the event, typically 1-2 years before an MPE. Advanced planning will allow for sufficient time to develop plans, integrate agency stakeholders, test plans, and implement security measures. Nuclear security measures should be integrated into the overall MPE security plans and operations.

Leverage Partnerships to Strengthen National Capabilities

Countries should partner with bilateral, regional, and international organizations and resources in advance of an MPE. Such partnerships may address identified gaps or resource needs; and provide expertise and experience from past MPE security operations.

Establish a Comprehensive Training and Exercise Program

Regular training and exercises prepare personnel and identify gaps in plans and protocols. Conducting them in advance of an MPE can serve to build a community of trust among participating entities.



CHALLENGES FOR FUTURE DISCUSSION:

- 1. After an MPE, consider an assessment of nuclear security measures employed during the MPE and identify areas for improvement. Such an assessment may be used to enhance security measures at future MPEs and may also provide valuable lessons learned that may further improve the national response framework and overall national capabilities for nuclear security.
- 2. Many countries have well-tested and implemented plans for responding to complex disasters and terrorism incidents. The principles of incident response coordination generally apply for all incidents, and nuclear security experts adapt existing response and incident management plans to respond to incidents involving nuclear terrorism. In other cases, specific nuclear security measures may be added to existing national security plans with specific provisions for RN technical and safety measures during an incident response.

Valiant Eagle Workshop

Response Coordination and Legal Frameworks

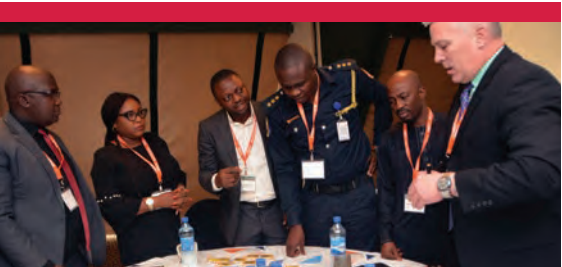
2019
9-11 April

Abuja,
Nigeria

On April 9-11, 2019, Nigeria hosted the “Valiant Eagle” Response Coordination and Legal Frameworks Workshop, co-sponsored by the United Nations Office of Counter-Terrorism (UNOCT). The workshop brought together over 70 experts from 17 countries and featured expert presentations, case studies, and several small group TTX discussions. Participants discussed challenges and shared best practices related to regional coordination and legal frameworks for responding to RN incidents.

KEY FINDINGS

- Nations should adapt existing response and incident management plans for incidents involving nuclear terrorism. Specific nuclear security measures may also be added to existing national security plans with specific provisions for RN technical and safety measures during an incident response. The use of existing disaster response mechanisms for RN response can further support an all-hazards, all-threats, whole-of-government approach to disaster and terrorism response.
 - National frameworks for nuclear security should include concepts of operation for multi-agency coordination, lead authority, and RN technical support and advice to senior leadership.
 - Relevant agencies should have their own established protocols and procedures. A national-level framework should integrate agency level plans into a unified national effort for RN preparedness and response.
- Personnel, including first responders, law enforcement officials, and technical and scientific experts, should have a working understanding of the national systems and protocols for incident command and control, including determining lead authority at various stages during an incident response. Knowledge of such procedures requires regular training of staff and practical exercises of protocols and command and control functions.



- First responders should be aware of basic RN response procedures in addition to their standard operating procedures, including those related to the preservation of evidence.
- During a nuclear security event, nations should deliver a unified public message through a central authority, as outlined in the national response plans and protocols, to ensure communication consistency and to manage public risk perceptions.
- Nations that are party to the relevant international legal instruments, such as the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) and the Convention on the Physical Protection of Nuclear Material and its Amendment (CPPNM/A), should incorporate the requirements and provisions of the instruments into national legislation.
- Effective bilateral coordination requires both strong relationships between institutions in each country, and established formal mechanisms for exchanging information. Information sharing and coordination between agencies (such as regulator to regulator) should be formalized by protocol or agreement.
 - Prepare for bilateral coordination through regular meetings between officials and technical experts, and joint peer exchanges, training, and exercises between partner states.
- Nations should consider plans and protocols for submitting assistance requests to international organizations and regional partners for both capacity-building purposes and during a nuclear security incident.

The Global Initiative to Combat Nuclear Terrorism (GICNT) is a voluntary international partnership of 88 nations and six international organizations that are committed to strengthening global capacity to prevent, detect, and respond to nuclear terrorism.

**For more information about the
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GICNT.org

