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Document Preparation Profile (DPP)
Version [1.0] dated [1 July 2022]

1. IDENTIFICATION

Document Category or batch of publications to be revised in a concomitant manner

[Nuclear Security Technical Guidance]

Working ID: **[leave blank until approval by the Coordination Committee]**

Proposed Title: **[Developing Nuclear Security Procedures for Responding to Criminal or Intentional Unauthorized Acts involving Nuclear or other Radioactive Material]**

Proposed Action: **[new publication]**

Review Committee(s) or Group: **[NSGC, EPResC]**

Technical Officer(s): **[Fei LIU, NSNS]**

2. BACKGROUND

Criminal or intentional unauthorized acts involving nuclear or other radioactive material may range in nature and complexity. For example, such acts include thefts or attempted thefts of nuclear or other radioactive material, trafficking of such material within a State or between States, preparatory acts by criminals intending to misuse nuclear or other radioactive material or the actual misuse or attempted misuse of such material.

This publication is intended to provide guidance to States on the development of nuclear security procedures to respond to criminal or intentional unauthorized acts involving nuclear and other radioactive material. These procedures are generally found within existing administrative and operational procedures, to include a State's criminal investigation procedures, national security plans or emergency response plans, depending on national circumstances. These procedures are necessary to enable a State to implement the functional outcomes outlined in Table 1 of *Developing a National Framework for Managing the Response to Nuclear Security Events* (NSS No. 37-G). Table 1 of NSS 37-G, while outlining these functional outcomes, does not contain sufficient detail to enable States to fully consider what is needed to develop appropriate response procedures. This proposed publication will provide that detail.

The benefit to States in developing nuclear security procedures for responding to such acts was recognized during the August 2014 Technical Meeting on the development of Nuclear Security Series No. 37-G. During this meeting, a number of participating Member States recommended that the Secretariat consider the development of a Technical Guidance publication in the Nuclear Security Series to specifically address the development of guidance in this area.

The development of this Technical Guidance publication was also supported by NSGC during its discussions on updating the Roadmap for NSS publications for NSGC's third term and again during discussions on the NSS Roadmap in November 2019.

The need for the development of this technical guidance is further reinforced by the demand for IAEA support in this area. As of January 2022, the Division of Nuclear Security has received 39 requests from States for IAEA support in this area.

3. JUSTIFICATION FOR THE PRODUCTION OF THE PUBLICATION

Paragraph 3.11 of the *Objective and Essential Elements of a State's Nuclear Security Regime* (NSS No 20), paragraph 6.3 of the *Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control* (NSS No 15) and paragraph 1.4 of NSS No 37-G make clear the need for a State to have detailed nuclear security procedures for responding to criminal or intentional unauthorized acts involving nuclear or other radioactive material, but do not contain sufficient detail to support the development of such procedures.

Similarly, Paragraphs 4.50 – 4.56 of the *Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5)* (NSS No 13) refer to the requirements for a State to ensure that its physical protection regime includes comprehensive measures to locate and recover missing or stolen nuclear material, including on-site and off-site operations, as well as the need to define the roles and responsibilities of State response organizations in locating and recovering missing or stolen nuclear material, but again does not contain sufficient detail to support the development of procedures to implement these comprehensive measures.

Paragraphs 4.1 and 4.14 of *Nuclear Security Recommendations on Radioactive Material and Associated Facilities (NSS No 14)* also refer to the need for a State to provide for a rapid response to any attempted or actual unauthorized access to radioactive material and discusses the need to respond effectively to, and investigate, such unauthorized access, but again do not contain sufficient detail on which to develop appropriate response procedures.

In accordance with NSS No 13, the IAEA has developed guidance on the contingency response to a nuclear security event at a nuclear facility in the publication *Developing a Nuclear Security Contingency Plan for Nuclear Facilities (NSS No 39-T,* however, this publication is focused on facility-level plans and procedures to *counter malicious acts* at nuclear facilities (at Para. 2.5) and does not address plans and procedures developed by a State's response organizations, which will be considered within this publication. While plans and procedures have different purposes and roles, they work together to achieve the overall goal, which is the implementation of plans *through* procedures.

The nature and complexity of the procedures required by a State's response organizations to respond to criminal or intentional unauthorized acts involving nuclear or other radioactive material is such that guidance on the development of such procedures is too detailed to be included in an implementing guide, such as NSS No 37-G. The development of this publication would enable this detailed guidance to be provided to States in a similar manner to that provided by NSS No 39-T and will complement NSS No 39-T where such acts take place within nuclear facilities.

4. OBJECTIVE

The objective of this publication is to provide technical guidance to States in developing nuclear security procedures for responding to criminal or intentional unauthorized acts involving nuclear or other radioactive material. This will build on the considerations set out in NSS No. 37-G on such procedures and provide detailed guidance on their development.

The proposed publication will address the development of detailed nuclear security procedures for responding to criminal or intentional unauthorized acts involving nuclear or other

radioactive material. The publication will assist States to determine their processes for assessing and responding to such acts.

The proposed publication will outline considerations for States in ensuring a graded approach when responding to criminal or intentional unauthorized acts involving nuclear or other radioactive material is taken when developing these procedures.

The intended audience will include nuclear security-focused policy and decision makers in competent authorities with responsibility for planning, developing or implementing their respective countries' national response plans for nuclear security events or be in a position to develop and sustain national response plans capabilities within their respective organizations, such as law enforcement and security organizations, as well as other entities and experts that are involved in planning and preparing to respond to such criminal acts involving nuclear or other radioactive material, including radiological assessors, first responders, technical support organizations and judicial bodies.

5. SCOPE

Criminal or intentional unauthorized acts involving nuclear or other radioactive material can be detected as a result of: information alerts (for example reports from members of the public who see / hear something suspicious) which, after investigation, are found to be inaccurate and do not require further intervention; information alerts (for example reports from members of the public or specific criminal information / intelligence) which after investigation, lead to the detection and prosecution of criminal activity, often without the presence of nuclear or other radioactive material ever being confirmed (such as credible plans to commit a criminal act using nuclear or other radioactive material where such material has not yet been acquired); information alerts which, after investigation, lead to the detection of nuclear or other radioactive material (for example where information of suspicious activity is received from a member of the public *or specific criminal information or intelligence is received,* which leads to the discovery of a stolen source or a device).which leads to the discovery of a stolen source or a device containing a stolen source is discovered during a routine law enforcement patrol); or an instrument alarm (for example at a border or during a targeted security operation) which is determined to be related to criminal activity.

Within the definition of nuclear security contained in NSS No 20, this publication will focus on the response to criminal or other intentional unauthorized acts *involving* nuclear material or other radioactive material, whereas criminal or intentional unauthorized acts *directed at* nuclear material or nuclear facilities sit within the scope of NSS No 39-T and are therefore outside the scope of this publication. Clearly facility contingency response plans and the nuclear security response procedures described within this publication should be complementary where a criminal act involving nuclear or other radioactive material takes place within a nuclear facility.

Procedures related to Radiological Crime Scene Management (RCSM) and Nuclear Forensics in support of Investigations are discussed in relevant Nuclear Security Series Implementing Guides, *Radiological Crime Scene Management* (NSS No. 22-G) and *Nuclear Forensics in Support of Investigations* (NSS No. 2-G, Rev.1) and are out of scope of this publication, however the need to coordinate such procedures with those related to the wider response to criminal or intentional unauthorized acts involving nuclear or other radioactive material will be reflected within the publication.

Similarly, procedures related to Expert Support for the Assessment of Alarms and Alerts for Nuclear and other Radioactive Material out of Regulatory Control will be covered in the

forthcoming IAEA Nuclear Security Series publication, currently referred to as NST062. Such procedures will be out of scope of this publication, however the need to coordinate such procedures with those related to the wider response to criminal or intentional unauthorized acts involving nuclear or other radioactive material will be reflected within the publication.

Where the detection of nuclear or other radioactive material in these circumstances triggers an emergency involving that material, the nuclear security procedures should be implemented as part of the overall emergency response. Although such emergency response plans are outside the scope of this publication, this publication is intended to provide for proper coordination with emergency response plans.

Irrespective of whether or not a criminal or intentional unauthorized act triggers an emergency involving nuclear or other radioactive material, however, the development of detailed nuclear security procedures will ensure that law enforcement and technical support organizations have a clear understanding of their role in an effective response.

6. PLACE IN THE OVERALL STRUCTURE OF THE RELEVANT SERIES AND INTERFACES WITH EXISTING AND/OR PLANNED PUBLICATIONS

The proposed publication is Technical Guidance that complements and supplements existing nuclear security guidance, including the above-mentioned Implementing Guide NSS No. 37-G.

The publication will be consistent with other Nuclear Security Series publications that refer to the need to plan and prepare for responding to nuclear security events, including NSS No.20 and NSS No. 15).

As Technical Guidance for responding to criminal or intentional unauthorized acts involving nuclear or other radioactive material, the proposed publication will be an ‘interface document’ with emergency preparedness and response (EPR), as the acts being planned for may trigger an emergency involving nuclear or other radioactive material. Coordination with IAEA colleagues responsible for EPR will therefore be undertaken in the development of the publication.

The Technical Guidance is expected to make reference to at least the following IAEA publications (the list is not intended to be final or exhaustive):

1) Objective and Essential Elements of a State’s Nuclear Security Regime, IAEA Nuclear Security Series No. 20, IAEA, Vienna (2013).

2) Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5), IAEA Nuclear Security Series No. 13, IAEA, Vienna (2011).

3) Nuclear Security Recommendations on Radioactive Material and Associated Facilities, IAEA Nuclear Security Series No. 14, IAEA, Vienna (2011).

4) Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control, IAEA Nuclear Security Series No. 15, IAEA, Vienna (2011).

5) Planning and Organizing Nuclear Security Systems and Measures for Nuclear and Other Radioactive Material out of Regulatory Control, IAEA Nuclear Security Series No. 34-T, IAEA, Vienna (2019).

6) Developing a National Framework for Managing Response to Nuclear Security Events, IAEA Nuclear Security Series No. 37-G, IAEA, Vienna (2019).

7) Developing a Nuclear Security Contingency Plan for Nuclear Facilities, IAEA Nuclear Security Series No. 39-T, Vienna (2019).

8) Radiological Crime Scene Management, IAEA Nuclear Security Series No. 22-G, Vienna, (2014).

9) Nuclear Forensics in Support of Investigations, IAEA Nuclear Security Series No. 2-G (Rev. 1), Vienna, 2015.

10) Expert Support for the Assessment of Alarms and Alerts for Nuclear and other Radioactive Material out of Regulatory Control, IAEA Nuclear Security Series No. NST062, IAEA, Vienna (Forthcoming).

11) Preparation, Conduct and Evaluation of Exercises for Detection of and Response to Acts Involving Nuclear and Other Radioactive Material out of Regulatory Control, Nuclear Security Series No. 41-T, Vienna (2020).

12) Preparedness and Response for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GSR Part 7, IAEA, Vienna (2015).

13) Method for Developing Arrangements for Response to a Nuclear or Radiological Emergency, EPR-Method 2003, IAEA, Vienna (2003).

7. OVERVIEW

The proposed new publication would follow the below tentative table of contents:

1. **Introduction**
2. **Concept of operations for responding to criminal or intentional unauthorized acts involving nuclear or other radioactive material (CONOPs)**
    - Planning Assumptions
    - Roles and Responsibilities of Competent Authorities and other relevant Organizations
    - Resourcing Considerations for Competent Authorities and other relevant Organizations
3. **Developing nuclear security procedures for responding to criminal or intentional unauthorized acts involving nuclear or other radioactive material**
    - Assessment of information alerts
        - Information alert assessed to be inaccurate
        - Information alert assessed to be accurate
    - Assessment of instrument alarms
        - False Alarms
        - Innocent Alarms
        - Non-Innocent Alarms
    - Graded approach to information alerts assessed to be accurate and non-innocent alarms
    - Provision of Scientific Support to the Interdiction of Criminal or intentional unauthorized Acts involving nuclear or other radioactive material
    - Provision of Scientific Support to the Investigation of Criminal or intentional unauthorized Acts involving nuclear or other radioactive material
    - Procedures for Establishing Control of nuclear or other radioactive material

Procedures for information reporting to investigative and judicial bodies and nuclear security competent authorities
Considerations for inter-state information sharing, cooperation and assistance; return of material; and administrative issues related to judicial proceedings (i.e., jurisdiction, prosecution, and extradition)

4. **Infrastructure**
5. **Sustainability**

The **Introduction** will contain the Background, Objective, Scope, and Structure of the publication.

The section on **Concept of operations for responding to criminal or intentional unauthorized acts involving nuclear or other radioactive material (CONOPs)** will consider the planning assumptions, roles and responsibilities of responding agencies and resourcing considerations for responding agencies, which are necessary to ensure that a State develops an effective CONOPs from which it can build its procedures to respond to criminal or intentional unauthorized acts involving nuclear or other radioactive material

The section on **Developing nuclear security procedures for responding to criminal or intentional unauthorized acts involving nuclear or other radioactive material** will describe how to develop procedures to undertake an assessment of information alerts and instrument alarms to determine whether a criminal or intentional unauthorized act involving nuclear or other radioactive material is taking, or has taken place, the adoption of a graded approach to non-innocent alerts and alarms and the development of response measures (as outlined in NSS 37-G) and provision of scientific advice for interdiction, investigation and measures for establishing control of nuclear or other radioactive material seized during the response. In addition, considerations related to information reporting to investigative, judicial bodies and nuclear security competent authorities, as well as considerations for inter-state information sharing, and cooperation and assistance; return of material; and administrative issues related to judicial proceedings (i.e., jurisdiction, prosecution, and extradition) will be highlighted.

The **Infrastructure** section will discuss the infrastructure which sits 'behind' a State's planning and preparedness for responding to criminal or intentional unauthorized acts involving nuclear or other radioactive material, including the establishment of appropriate levels of authority, appropriate legislative provisions, appropriate policies, single- and multi-agency response plans and procedures and arrangements for accessing international cooperation and assistance.

The **Sustainability** section will discuss how the planning and preparedness measures in relation to the response to criminal or intentional unauthorized acts involving nuclear or other radioactive material can be sustained in the longer term through, for example, budgetary allocation, regular training, human resource management and exercises and drills to test and update plans and procedures.

8. PRODUCTION SCHEDULE: Provisional schedule for preparation of the publication, outlining realistic expected dates for each step *(fill the column corresponding to your proposed publication and delete the other columns)*:

	A*	B*	C*
STEP 1: Preparing a DPP	DONE	DONE	DONE
STEP 2: Internal review of the DPP (Approval by the Coordination Committee)		June 2022	

STEP 3: Review of the DPP by the review Committee(s) (Approval by review Committee(s))		November 2022	
STEP 4: Review of the DPP by the CSS (approval by CSS) or information of the CSS on the DPP			
STEP 5: Preparing the draft publication		December 2022 – June 2023	
STEP 6: First internal review of the draft publication(Approval by the Coordination Committee)		July 2023	
STEP 7: First review of the draft publication by the review Committee(s) (Approval for submission to Member States for comments)		November 2023	
STEP 8: Soliciting comments by Member States		December 2023 – March 2024	
STEP 9: Addressing comments by Member States		March 2024 – June 2024	
STEP 10: Second internal review of the draft publication (Approval by the Coordination Committee)		June 2024	
STEP 11: Second review of the draft publication by the review Committee(s) (Approval of the draft)		November 2024	
STEP 12: (For Safety Standards) Editing of the draft publication in MTCD and endorsement of the draft publication by the CSS (For nuclear security guidance) DDG's decision on whether additional consultation is needed, establishment by the Publications Committee and editing		January 2025	
STEP 13: Approval by the Board of Governors (for SF and SR only)			
STEP 14: Target publication date		End 2025	

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- *Column A for Safety Fundamentals, Safety Requirements and Safety Guides.*
- *Column B for Nuclear Security Series publications*
- *Column C for TECDOCs, safety reports and other publications*

9. RESOURCES

The resources for the preparation of this publication will be based on nuclear security extra-budgetary funding. There will be five Consultancy Meetings to develop the material and act on comments received during the publication development process.