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1. IDENTIFICATION

Document Category: Nuclear Security Fundamentals

Working ID: NST072

Proposed Title: Objective and Essential Elements of a State's Nuclear Security Regime (NSS No. 20, Revision 1)

Proposed Action: revision of a publication:

Objective and Essential Elements of a State's Nuclear Security Regime (NSS No. 20), published in 2013

Review Committee(s) or Group: NSGC, EPreSC, NUSSC, RASSC, TRANSSC, WASSC

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2. BACKGROUND

The Nuclear Security Fundamentals on Objective and Essential Elements of a State's Nuclear Security Regime (NSS No. 20), hereinafter referred to as “the Fundamentals”, is the first tier of the IAEA Nuclear Security Series. Published in February 2013, it was the first document submitted for the Nuclear Security Guidance Committee’s (NSGC) approval. Together with the Nuclear Security Recommendations (NSS Nos. 13, 14, and 15), hereinafter referred to as “the Recommendations” it forms the basis for the national legislative and regulatory framework in many Member States.

In 2019, a review process for the Recommendations was initiated to determine whether revisions were necessary. The Fundamentals (NSS No. 20) were also reviewed as part of this process. A Consultancy Meeting was convened in June 2019 to review NSS No. 20, involving 21 experts from 14 Member States. The review concluded that, although some updates and clarifications might be needed, and identified items could be further considered or elaborated if a revision is undertaken, NSS No. 20 continues to be relevant and timely when used within the context of the entire Nuclear Security Series. In December 2020, during its 18th meeting, the NSGC recommended that a revision of NSS No. 20 be undertaken in parallel with the revision of the Recommendations. This recommendation was reiterated during the NSGC's 19th meeting, in June 2021.

Given the wide range of views on the scope of the Fundamentals revision observed following consultations with some of the NSGC members, the NSGC agreed that the possibility of revising the Fundamentals should be further explored through an inclusive process that would ensure input from all Member States. With this in mind, in 2022, two open-ended meetings of legal and technical experts, each including more than 80 participants from over 40 Member States, were held and a survey was organized for Member States, comprising of 98 open-ended questions, on a potential revision of the Fundamentals (NSS No. 20) as part of the analysis concerning the need and scope of the revision.

During the second open-ended meeting, participants agreed to recommend to the Deputy Director General of the Department of Nuclear Safety and Security that “*NSS No. 20 should be revised in the*

near term". The meeting participants were broadly satisfied with the scope and structure of NSS No. 20 and consequently agreed that *"the revision should be focused on clarity and consistency of the text and the definitions"*. The Meeting discussed, and reached consensus, that the following topics should be considered in a revision: information and computer security, insider threat, emerging threats and technologies, and the safety–security interface. Other topics, identified based on the information collected throughout the extensive review process, should be subject to further discussion during the revision process.

3. JUSTIFICATION FOR THE PRODUCTION OF THE PUBLICATION

It has been more than ten years since the publication of the Fundamentals in February 2013. Since then, 7 revisions and 26 new publications have been issued within the Nuclear Security Series, covering areas such as information and computer security, capacity building, nuclear security culture, threat assessment and insider threats.

While the Fundamentals remain largely applicable and relevant, there are some areas that require limited updates to improve its usability (see Annex).

The Fundamentals should be updated to include reference to the relevant legally binding and non-binding international instruments that form the international legal framework for nuclear security (e.g. the Convention on the Physical Protection of Nuclear Material (CPPNM) and its Amendment, the Code of Conduct on the Safety and Security of Radioactive Sources and the International Convention for the Suppression of Acts of Terrorism (ICSANT)), as appropriate. The revision should remain consistent with, and complement, the established legally binding international instruments. It should also reflect any revised terminology, as determined prior and during the revision.

4. OBJECTIVE

The current objectives of NSS No. 20 will remain unchanged:

"... to assist Member States in enhancing nuclear security by providing national policy makers, legislative bodies, competent authorities, institutions, and individuals involved in the establishment, implementation, maintenance or sustainability of a State's nuclear security regime with the objective and essential elements of the nuclear security regime."

5. SCOPE

The current scope of NSS No. 20 will remain broadly unchanged. Annex details the scope of anticipated changes.

The Fundamentals will continue to apply to nuclear material and other radioactive material, whether under or out of regulatory control, and their associated facilities and associated activities under the jurisdiction of the State.

As a top-tier publication, the Fundamentals is not expected to be frequently revised unless absolutely justified, to preserve the stability of this document.

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

The Fundamentals is the single first tier guidance in the Nuclear Security Series. It governs the Recommendations, and thus is connected and provides a basis to all other levels of the Nuclear Security Series publications.

To ensure a coordinated approach, this revision is anticipated to be conducted simultaneously with the revision of the Recommendations. This will guarantee that any revisions made to one of the publications will be subsequently noted and their implications considered across all related top-tier Nuclear Security Series publications. Additionally, this approach aims to improve consistency among the Recommendations publications and with the Fundamentals in order to provide an improved basis for the revision of existing lower-level guidance (e.g. Implementing Guides and Technical Guidance publications) and the development of new lower-level guidance.

Interfaces between Nuclear Security Series publications and the Safety Standards Series publications will also be noted, where appropriate.

The Divisions of the Nuclear Safety and Security Department will be consulted during the revision process as necessary.

7. OVERVIEW

The revision of the Fundamentals, while maintaining a high level of guidance and providing details appropriate for a top-tier publication, is expected to emphasize certain areas such as information and computer security, insider threats, interface with safety, security aspects of nuclear material accounting and control, emerging threats, and new technologies. This approach will ensure that the Fundamentals remain relevant for an extended period.

The table of contents of the publication will remain broadly unchanged, as follows:

1. INTRODUCTION

Background

Objective

Scope

Structure

2. NUCLEAR SECURITY OBJECTIVE

This section will define the overall objective of nuclear security and outline the objective of the State's nuclear security regime.

3. ESSENTIAL ELEMENTS OF A STATE'S NUCLEAR SECURITY

Essential Element 1: State responsibility

Essential Element 2: Identification and definition of nuclear security responsibilities

Essential Element 3: Legislative and regulatory framework

Essential Element 4: International transport of nuclear material and other radioactive material

Essential Element 5: Offences and penalties including criminalization

Essential Element 6: International cooperation and assistance

Essential Element 7: Identification and assessment of nuclear security threats

Essential Element 8: Identification and assessment of targets and potential consequences

Essential Element 9: Use of risk informed approaches

Essential Element 10: Detection of nuclear security events

Essential Element 11: Planning for, preparedness for, and response to a nuclear security event

Essential Element 12: Sustaining a nuclear security regime

4. DEFINITIONS

Although the essential elements will remain, their restructuring (e.g. merging or rearranging of content) for improved logical flow and clarity will be a subject for discussion during the revision process. There is also potential for inclusion of new essential elements or new content within the essential elements, as applicable, such as leadership and nuclear security management, physical protection, nuclear material accounting and control, information and computer security and the safety–security interface. Any changes to the essential elements should be addressed in a coordinated manner in the Recommendation-level publications of the NSS.

While NSS No. 20 was not co-sponsored by any international organization, recognizing the benefits of such collaboration the current revision of the document should consider co-sponsorship from EUROPOL, ICAO, INTERPOL, IMO, UNICRI, UNODC, WCO, and other relevant international governmental organizations, as appropriate. Annex IV of the [*Step-by-Step Preparation and Review Process. Manual for the Review Process for Draft Nuclear Security Series Publications and for the Application of the Strategies and Processes for the Establishment of IAEA Safety Standards \(SPESS B\)*](#) provides detailed information on co-sponsorship, its benefits, and associated process.

8. PRODUCTION SCHEDULE:

Provisional schedule for preparation of the publication, outlining realistic expected dates for each step:

STEP 1: Preparing a DPP	DONE
STEP 2: Internal review of the DPP (Approval by the Coordination Committee)	Aug 2024
STEP 3: Review of the DPP by the review Committee(s) (Approval by review Committee(s))	Q4 2024
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	Jan 2025 – Feb 2027
STEP 6: First internal review of the draft publication (Approval by the Coordination Committee)	Mar 2027
STEP 7: First review of the draft publication by the review Committee(s) (Approval for submission to Member States for comments)	Jun 2027
STEP 8: Soliciting comments by Member States	Jul – Oct 2027
STEP 9: Addressing comments by Member States	Nov 2027 – Feb 2028
STEP 10: Second internal review of the draft publication (Approval by the Coordination Committee)	Mar 2028

STEP 11: Second review of the draft publication by the review Committee(s) (Approval of the draft)	Jun 2028
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	Jul – Dec 2028
STEP 13: Approval by the Board of Governors (for SF and SR only)	Mar 2029
STEP 14: Target publication date	Q2 2029

9. RESOURCES

Three Consultancy Meetings are likely to be needed, some of which may be convened virtually, as deemed appropriate. Additionally, about two Technical Meetings covering all four publications might be necessary to better address Member States' feedback on proposed revisions.

To ensure a coordinated revision of the Fundamentals and the Recommendations, and to harmonize the four drafts, meetings with the Chairs of the meetings to be conducted, potentially including a limited number of additional technical experts, are likely to be needed. These meetings may also be held virtually.

The technical officers assigned to the revision of the top-tier publications (the Fundamentals and the Recommendations) should communicate regularly on each other's progress.

Additionally, the Secretariat will provide timely updates to the lead committee on the progress of the revision of the Fundamentals and the Recommendations, and will keep it informed about the meetings scheduled for the revision and their outcomes.

ANNEX

Drawing on the results of the review process for NSS No 20, the following gaps should be addressed in the limited revision of the Fundamentals:

- Revise unclear and inconsistent definitions;
- Ensure consistency of terminology within the publication and with the Recommendations;
- Ensure that the term 'nuclear security' is clearly and explicitly defined and included in the Definitions section of the publication;
- Ensure consistency of concepts with the Recommendations publications, in cases where the inconsistencies are likely to lead to difficulties for States in implementing the guidance therein;
- Consider refining the objective of a nuclear security regime to improve its clarity;
- Consider enhancing or adding a limited amount of text to account for experience gained during the last decade, as well as developments in the following areas, in cases where the guidance provided in the existing text is not adequate to support lower-level, more detailed guidance:
 - Information and computer security;
 - Insider threats;
 - Emerging threats;
 - New and emerging technologies that could be used to strengthen nuclear security systems, while keeping the publication overarching and technology-neutral;
 - Safety–security interface;
 - Security aspects of nuclear material accounting and control;
 - Sustainability and resilience of nuclear security regime including in unplanned situations for which continuity of operations is needed (e.g. pandemics and natural disasters).

Additionally, other topics, identified based on the information collected throughout the extensive review process (e. g. nuclear security culture, supply chain, security aspects of import and export of nuclear material and other radioactive material, coordinated responsibility), should be subject to further discussion during the revision process.

Keeping in mind the importance of the stability of the Fundamentals for States, the revision should be limited and should primarily be focused on clarity and consistency of the text and the definitions. The revision should generally avoid any changes that alter the structure of the publication (i.e. the top section level structure, as outlined in the Overview section of this DPP) or its level of detail. For any proposed changes, it should be carefully considered whether or not the existing language in the publication is broad enough that further information could simply be added in lower-level publications without the need to edit the Fundamentals.

As noted in the main text of the DPP, an extensive review process, involving discussions during the meetings of NSGC¹, bilateral consultations, consultancy meeting, two open-ended meetings and a survey of Member States, was undertaken prior to the preparation of the DPP. The results and

¹ The topic of the revision has been a subject of extensive discussion since NSGC-18.

conclusions of those discussions and review are recorded and can be found summarized in the Chairs' Reports for these meetings. They will be made available to the experts that will participate in drafting and they will be considered during the revision process.