IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Webinar on Nuclear Security Implications for Uncrewed Aerial, Ground, and Maritime Systems

Organized by the

IAEA Division of Nuclear Security

Wednesday 20 March 2024
Time: 09:00-11:30, Vienna (Austria) Time

&

Thursday 21 March 2024
Time: 16:00-18:30, Vienna (Austria) Time

Duration: 2.5 hours

Information Sheet

Introduction

An understanding of the nuclear security implications of Uncrewed Aerial Vehicles (UAVs) and broader uncrewed systems is needed given the rapid advancement of the field. Coupled with their increasing prevalence, there is an urgency for a proactive and adaptive approach to address the nuclear security implications of these systems. Aerial, ground, and maritime platforms equipped with advanced sensors enable continuous, real-time monitoring, providing unprecedented situational awareness and search capabilities. By integrating these tools into nuclear security frameworks, the detection and response to possible threats, as well as the tracking of nuclear and other radioactive materials that have been lost, stolen, or damaged. It is important to acknowledge the dual nature of uncrewed systems, as their technological advancements also pose potential risks, including the risk of exploitation by malicious actors. Maintaining robust nuclear security measures to address emerging threats requires careful consideration of both the benefits and risks associated with uncrewed systems in the face of current global events.

This webinar is part of a series of IAEA activities addressing the need for improved research, development, guidance, and international cooperation on uncrewed systems applications for nuclear security. Following the Technical Meeting on the Use of UAS for Radiation Detection and Surveillance, and the Technical Meeting on Nuclear Security Countermeasures for Uncrewed Aerial Vehicles this event will explore the aerial, ground and maritime domains.

The webinar both on Wednesday 20 March and Thursday 21 March will have the same programme on the same subject area and will commence with a presentation establishing a common lexicon and frame the context in the design basis threat process. Following this, speakers will delve into each domain, providing concise summaries of the current state of the art, alongside discussions on the potential benefits and threats posed to nuclear security by aerial, ground, and maritime unmanned systems. Following the domain presentations, the focus will shift to mitigation strategies and regulatory considerations.

Objectives

This webinar aims to bolster the awareness and comprehension of Member States regarding the nuclear security implications stemming from the utilization and potential threats posed by unmanned aerial, ground, and maritime systems. Additionally, discussions will encompass mitigation strategies and regulatory concerns.

Target Audience

The webinar is intended for competent authorities' personnel with responsibilities in nuclear security, expert organizations, policy makers, regulators, front-line officers, and researchers.

Working Language

English.

Registration

Please register for the webinar using this link no later than **18 March 2024.**

After the registration and acceptance of your participation, you will receive an electronic mail containing information on how to access the webinar by following a hyperlink to join the WebEx meeting or calling in by phone.

Registration link for the session on Wednesday 20 March:

https://iaea.webex.com/weblink/register/r9d7f31ad275d45f8cfe7fe90a5d8eb52

Registration link for the session on Thursday 21 March:

https://iaea.webex.com/weblink/register/ra4a164de1dcc1b550687ea1265a14382

For additional help regarding registration, please contact Mr Mark D. Ladd, Division of Nuclear Security (DST@iaea.org) and Ms Magdalena Tonnellier (M.Tonnellier@iaea.org), Division of Nuclear Security.

The webinar presentation slides will be made available for viewing after the event at the IAEA's Nuclear Security Information Portal (NUSEC). Instructions to access the portal will be provided during the webinar.

Webinar Programme

Opening Remarks and Introduction

Mr Mark D. Ladd, *Nuclear Security Officer (Emerging Technologies), Materials Outside Regulatory Control Section, Division of Nuclear Security, Department of Nuclear Safety and Security, IAEA*

Nuclear Security Implications of Uncrewed Systems: Design Basis Threat Context and General Definitions of Uncrewed Systems.

Mr Juraj Vaclav, *Head, Nuclear Materials Division, Nuclear Regulatory Authority of the Slovak Republic, Slovak Republic*

Uncrewed Ground Systems

Ms Nur Aira Abd Rahman, *Research Officer, Malaysian Nuclear Agency, Malaysia*

Uncrewed Aerial Systems

Mr Iain Burns, *Security Operations, EDF Energy, United Kingdom*

Uncrewed Maritime Systems

Mr Ben Soon, *Senior Principal Engineer, Home Team Science and Technology Agency, Singapore*

Break (10 minutes)

Mitigation Options

Mr David Novick, *Principal Member Technical Staff, Sandia National Laboratories, United States of America*

Regulatory Issues

Ms Stacy Prasad, *Senior Security Risk Analyst, Nuclear Regulatory Commission, United States of America*

Discussion - Questions and Answers

Facilitator: Mr Robert Olsen, *Associate Nuclear Security Officer (Science & Technology),*

Division of Nuclear Security, Department of Nuclear Safety and Security, IAEA

Concluding Remarks and Live Poll

Mr Mark D. Ladd, *Nuclear Security Officer (Emerging Technologies), Materials Outside Regulatory Control Section, Division of Nuclear Security, Department of Nuclear Safety and Security, IAEA*