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Strengthening Radiation Protection for Transport-Related Radiation Emergencies Accidents and Malicious Events: Insights from ICRP Task Group 120

The International Commission on Radiological Protection (ICRP) Task Group 120 (TG120) is developing recommendations on protecting people and the environment across a wide spectrum of radiation emergencies and malicious events, complementing ICRP Publication 146 (2020) on large nuclear accidents. The scope includes emergencies during the transport of nuclear and radioactive materials, accidents at facilities, damage to sealed sources, and malicious acts such as radiological dispersal devices, targeted poisoning, and nuclear detonations. The consequences of armed conflict are also considered.

A graded approach has been taken to ensure protection strategies are broadly applicable, balancing radiological risk reduction with wider health, societal, environmental, and sustainability considerations. Case studies of past events have been used to capture both radiological parameters (radionuclides, pathways, doses, protective actions) and non-radiological dimensions (optimisation, psychosocial and economic consequences, stakeholder engagement, and communication effectiveness).

TG120 guidance distinguishes between preparedness, response, and recovery, with recent work focusing on the early response phase and now moving into the late response phase. Topics include urgent protective actions, responder protection, dosimetry, triage, decontamination, environmental monitoring, and psychosocial support. Emphasis is also placed on the interface between emergency planning and response and nuclear security requirements, recognising that coordinated approaches are essential for malicious events and transport threats.

This presentation will highlight TG120's transport-related recommendations and their impacts, illustrating how the work of the Task Group can strengthen radiological protection in practice. The forthcoming report, to be released for public consultation in 2026, will provide updated and expanded recommendations to be considered in the revision of the IAEA safety and security standards.

Country or International Organization

Instructions

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