

21st EAN Workshop - **Optimization of the transport of radioactive material**

More than 20 million packages of radioactive material are transported each year on public roads, railways, and ships, worldwide. The shipments are related to three main sectors: non-nuclear industry and research, the medical field, and the nuclear industry.

- Non-nuclear industry and research account of most transported packages, often for mobile equipment with radioactive sources like gamma radiography devices.
- Medical uses make up another important part of shipped materials like radiopharmaceutical products for healthcare.
- The nuclear industry is responsible for the remaining (~5%), supporting activities related to the fuel cycle stages.

Workers handling and shipping these radioactive matters, as well as those near the transport vehicles, may be exposed to ionizing radiation. People in the immediate vicinity of vehicles transporting (on site and off site) radioactive substances may also be exposed to ionizing radiation, though to a lesser extent than workers. Regulations are in place to protect workers, the public, and the environment from radiation. However, it must be recognized that as said by Mr. Grossi (Director General IAEA) "transport is a crucial moment: it's when nuclear and radioactive materials are on the move, before being able to reach their destination reliably and on time" [that mistakes and problems can arise more easily]. Consequently, it happens that incidents, accidents and thefts occur because some transport operators still insufficiently account for security and radiation safety to workers and the public. For instance, drivers transporting medical radioactive sources face higher exposure than those in other sectors (e.g. several events with individual exposures over 20 mSv/y have been reported in France recently). Thus, companies involved in the transport of radioactive substances must create sustainable radiological protection programs and regimes outlining radiation safety measures and the optimization of occupational and public exposures (implementing the ALARA principle). The national authorities must organize regular drills involving both regular and potential responders. Training and coaching of all those involved must be stepped up and is an essential element in improving the radiation protection culture.

The 21st EAN workshop this time entitled "**Optimization of the transport of radioactive material**" will examine the current situation in Europe and elsewhere in the world (contributions from AFAN, REPROLAM and ARAN regional networks are welcome) and will share experiences of improving the so-called radiation protection culture in these areas through the analysis of case studies and feedback experiences. At the end of the presentation sessions and work in small groups organized on this occasion, the participants will try to put forward a set of recommendations on optimizing radiation protection in the field of transport.

The workshop will take place in Petten (The Netherlands) from 23 to 25 April 2025.